綠創新科技
Green Ideas Technology

ChLCD Display APP
Product Guide

Generated: November 21, 2026

Online version (latest): https://chlcd.green-ideas.com.tw/en/product/

Contents

1. Overview 2
- Introduction 3
- About cholesteric LCDs 5
- Models and specifications 7
- Glossary 10

2. Getting started 13
- Installation and setup 14
- Connecting to the device 18
- Management interface tour 21

3. Content 25
- Image gallery and displaying images 26
- How images are processed 34
- PDF collage 37
- Image sets 41

4. Automation 47
- Schedules 48
- Image change frequency in detail 55
- Light schedules and lights 60
- Physical buttons and gestures 63
- Presenter remote 69

5. Power and sleep 71
- Sleep and wake-up 72
- Power control and storage 78
- Battery 80

6. Display and hardware 84
- Scan direction and refresh modes 85
- Startup screen and screen language 88
- Screen orientation and G-sensor 92
- Status LED 95
- Hardware warnings 98

7. System and maintenance 100
- Time, time zone and time sync 101
- Network settings 104
- Device info and monitoring 115
- System logs 118
- Software update (OTA) 122
- TCON firmware update 128
- CMS connection and control 130
- Switching between CMS and standalone 143
- Export / import settings 145
- Factory reset 150

8. Cluster 154
- Cluster: managing devices together 155
- Cluster tools for multiple devices 164

9. Troubleshooting 173
- Find by symptom 174
- Connection and management interface 177
- Display and refresh 179
- Schedules and time 182
- Power, sleep and battery 184
- Updates and maintenance 186
- Message reference 188
- FAQ 194

10. Appendix 197
- Specifications and limits 198
- What data is kept and erased 202

© 2025-2026 Green Ideas Technology | All rights reserved

1. Overview

© 2025-2026 Green Ideas Technology | All rights reserved

Product overview

ChLCD Display APP is the management software for cholesteric LCD signs. The device broadcasts its own Wi-Fi hotspot; once you connect with your phone or computer, you can upload images, set up schedules and change device settings in your browser, **with no internet connection at all**. If there is Wi-Fi on site, the device can also connect to the on-site network so you can manage it from that network.

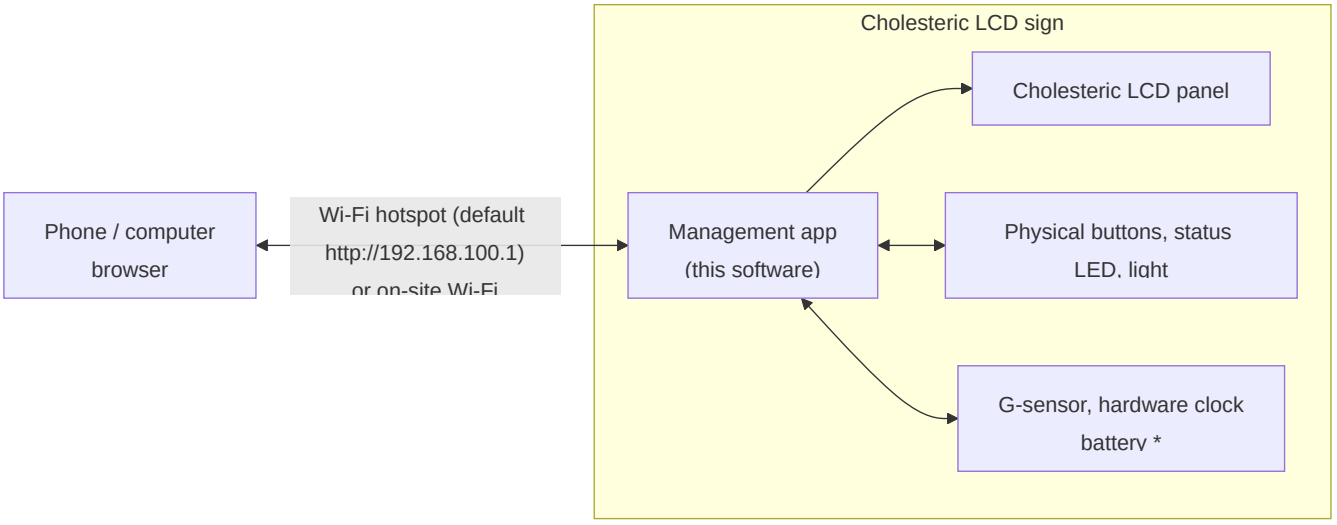
This manual is written from the actual behavior of the management interface and explains each feature's operation, defaults, limits and caveats one by one. To get started quickly, see Getting started; if you run into a problem, go straight to Troubleshooting.

Main features

Feature	Description	Section
Image gallery	Upload images, preview them, adjust rotation and fit, and display them on the panel manually	Image gallery and displaying images
PDF collage	Arrange multiple PDF pages into one image, replacing a physical notice board	PDF collage
Image sets	Group images and put them in order	Image sets
Schedules	Change images automatically by time, with multiple schedules	Schedules
Light schedules	Turn the light on and off automatically (models with a light)	Light schedules and the light
Physical buttons and presenter remote	Switch images, clear the screen, show the connection QR code; you can also change images with a presenter remote	Physical buttons and gestures, Presenter remote
Sleep	Saves power automatically when idle and wakes up before a schedule	Sleep and wake-up
Auto-rotate	Turns the screen the right way up according to how the sign is mounted	Screen orientation and G-Sensor
Battery monitoring	Charge level, health and protection status (battery models)	Battery
Network	Three modes: hotspot, on-site Wi-Fi, and concurrent	Network settings
Cluster	Devices discover each other and are managed together	Cluster
Multi-panel bulletin board	Bulletin board, media library and installation of the 3 × 31.5" model	Bulletin board, Media library, Installation
CMS connection	Managed on site and remotely by CMS at the same time; "control" decides who is in charge of the screen (devices with the CMS component)	CMS connection and control
Export / import settings	Save settings, photos, image sets and schedules to one file, or restore them to this device	Export / import settings
Software update	Upgrade by uploading an update file in the management interface	Software update

© 2025-2026 Green Ideas Technology | All rights reserved

System architecture



* Depends on the model

- The device is the server; all images and settings are stored on the device.
- The management interface is a web page; you don't need to install any app.
- Several phones can connect at the same time, and their screens stay in sync in real time.

Supported models

Size	Models
13.3-inch	Indoor white, outdoor bus-stop frame
24.8-inch	Outdoor gray-black frame, outdoor bus-stop frame
27.6-inch	Indoor frameless, outdoor gray-black frame, outdoor bus-stop frame
32-inch	Indoor frameless, outdoor gray-black frame, outdoor bus-stop frame

For differences in resolution, battery, indicator lights and so on between models, see Models and specifications.

Management interface language

The management interface supports **Traditional Chinese, English and Japanese**. The first time you open it, the language is chosen automatically from your browser language, and you can switch it at any time at the top right. The language of the startup screen on the device panel is set separately; see Startup screen and screen language.

Version

This manual is written for version **1.11.0**. Older versions may lack some features; for the changes in each version, see the release notes on the Downloads page, or "What's New in This Version" under "Settings → Software Update" in the management interface.

© 2025-2026 Green Ideas Technology | All rights reserved

How cholesteric LCDs work

A cholesteric LCD works differently from a phone or TV screen. Once you understand its characteristics, you'll see why many of this product's features are designed the way they are.

Keeps the image without power (bistable)

A regular screen needs constant power to show an image. A cholesteric LCD, once a refresh finishes, **keeps the image on screen even after the power is cut**.

This means:

Characteristic	What it means for you
Showing static content uses almost no power	The panel is powered only while the image changes and is switched off as soon as the refresh is done. Battery models can run for a long time
The image stays during sleep	Even when the device sleeps, or is shut down, the panel still shows the last image
Clear the screen before shutdown	If you cut power without clearing the screen, the panel stays on the same image for a long time. That's why the system clears the screen before shutting down, restarting, or switching modes
No frequent refreshes needed	The "change frequency" only decides how often the content changes. A low frequency won't make the image disappear

Reflective display, no backlight

A cholesteric LCD displays by reflecting ambient light instead of emitting its own:

- It's clearly visible in bright places, even in direct sunlight outdoors.
- In dim places it needs external lighting. Some models can be fitted with an optional light, which you can then control automatically with a light schedule.
- It's easy on the eyes, which suits notices and signage that people look at for a long time.

Refreshing takes time

A cholesteric LCD changes images more slowly than a regular screen. **Refreshing one image takes a while** (it depends on the model and refresh mode, for example about 6 seconds on the 13.3-inch, about 16 seconds on the 27.6-inch, and about 20 seconds on the 32-inch). The first time you display an image on the panel, it also takes a little extra time to convert it.

Because of this:

- The panel **can handle only one refresh at a time**. Other image changes requested during a refresh are rejected, not queued, so wait until the refresh finishes before doing anything else. (Page changes from the physical buttons and the presenter remote are an exception; see Physical buttons and gestures.)
- It isn't suited to video or animation; it's suited to static content that changes on a schedule.
- Don't change images too often. For typical signage, once every 10 minutes or more is recommended.

© 2025-2026 Green Ideas Technology | All rights reserved

Display quality

- Designs with high contrast, large text, and bold lines look the clearest.
- Small text, light colors, and large gradients may not stand out as much on the panel as they do on a computer screen.
- Check important content on the actual device, not just in the web preview.

Refresh modes

The panel driver board supports several different refresh waveforms. Which modes each panel can use, and which one is the default, is determined by the manufacturer's panel compatibility list; most panels have only one mode and need no adjustment. See Scan direction and refresh mode.

Use and storage tips

- Before leaving the device unused for a long time, clear the screen and then shut it down. See Long-term storage.
- If ghosting from the previous image appears, clear the screen first and then display the image again.
- On the 32-inch frameless model, you can turn on the Edge Mask to slow down liquid-crystal degradation along the panel edges.

Related sections: Product overview, How images are processed

© 2025-2026 Green Ideas Technology | All rights reserved

Models and specifications

The same management software supports models of several sizes and uses. The model is set during factory installation and determines the panel resolution, the hardware, and which features appear in the management interface.

Model overview

Use	Style	Panel resolution	Status LED	Battery	Light control	Edge Mask
Indoor	13.3-inch white	1024 × 768	Single full-color LED	No	No	No
Indoor	27.6-inch frameless	1920 × 1080	Two single-color LEDs	No	No	No
Indoor	32-inch frameless	1920 × 1080	Two single-color LEDs	No	No	V
Outdoor	24.8-inch gray-black frame	1530 × 1080	Two single-color LEDs	Optional	Optional	No
Outdoor	27.6-inch gray-black frame	1920 × 1080	Two single-color LEDs	Optional	Optional	No
Outdoor	32-inch gray-black frame	1920 × 1080	Two single-color LEDs	Optional	Optional	No
Outdoor	13.3-inch sign-post frame	1024 × 768	None	Optional	Optional	No
Outdoor	24.8-inch sign-post frame	1530 × 1080	None	Optional	Optional	No
Outdoor	27.6-inch sign-post frame	1920 × 1080	None	Optional	Optional	No
Outdoor	32-inch sign-post frame	1920 × 1080	None	Optional	Optional	No

- The **refresh mode** depends on the panel model, not the device model. Most panels have only one refresh mode. See Scan direction and refresh mode.
- The **light** is optional equipment; devices that have it can control it from the management interface. See Light schedule and light.
- **Panel resolution** is the panel's native size in landscape. In portrait, width and height are swapped, for example 1920 × 1080 becomes 1080 × 1920.
- All models support: image gallery, PDF collage, image sets, schedules, physical buttons, sleep, G-Sensor settings, time settings, network, system logs, export / import settings, software update, Tcon firmware, and factory reset.

Multi-panel bulletin board

The multi-panel bulletin board model with three 31.5" panels manages content with different screens from this guide; see Multi-panel bulletin board. System settings such as network, updates and logs still follow this guide.

Features shown or hidden by model

The management interface shows or hides the following features automatically depending on the model:

Feature	Shown when	Otherwise
Battery icon in the top-right corner, "Battery"	Models with a battery	Not shown
"Light Schedule" menu, light bulb icon in the top-right corner	Devices with the optional light installed	Not shown
"Edge Mask" on the "Tcon Scan Mode" page	32-inch frameless	That row is not shown

© 2025-2026 Green Ideas Technology | All rights reserved

Feature	Shown when	Otherwise
"Mode Switcher"	Devices with the CMS module installed	Not shown
Status LED indications	Models with status LEDs	Check the management interface instead

Status LEDs

Type	Models	Description
Single full-color LED	13.3-inch white	Shows states by color (green: standby, blue: refreshing, white: starting up, ...)
Two single-color LEDs	Frameless 27.6-inch / 32-inch, gray-black frame 24.8-inch / 27.6-inch / 32-inch	Shows states by lighting pattern; the two LEDs correspond to the Previous / Next buttons
None	Sign-post frame 13.3-inch / 24.8-inch / 27.6-inch / 32-inch	No status LED

See Status LEDs for the LED pattern of each state.

Recommended image sizes

Model	Landscape	Portrait
13.3-inch	1024 × 768	768 × 1024
27.6-inch, 32-inch	1920 × 1080	1080 × 1920
24.8-inch	1530 × 1080	1080 × 1530

You can check the size actually in use under "Effective resolution" in Device info.

Common specifications

Item	Specification
Connection	Device Wi-Fi hotspot (5 GHz at the factory, WPA2 / WPA3); it can also connect to on-site Wi-Fi. See Network settings
Management interface	Open in a browser; the default when connected to the hotspot is `http://192.168.100.1`
Management interface languages	繁體中文, English, 日本語
Device screen languages	繁體中文, English, 日本語
Physical buttons	2 (Previous, Next)
Internet	Not required

© 2025-2026 Green Ideas Technology | All rights reserved

See Specifications and limits for more limits and values.

The model is set at the factory

The model and the factory language are set during installation and are not changed by a factory reset. If the features don't match the model (for example, a model with a battery shows no battery icon, or the whole screen orientation is always off by 90°), the installation settings may be wrong. Contact technical support.

Related: Product overview, Specifications and limits, Status LEDs

© 2025-2026 Green Ideas Technology | All rights reserved

Glossary

Listed in Chinese stroke order and English alphabetical order.

Chinese terms

Term	Description
Clear screen (M0 Reset)	Wipes the whole panel to a single background color. Most panels clear to white; some firmware clears to black, also called clearing to black. The system clears the screen automatically before shutdown, reboot and mode switching; you can also do it manually. See Image gallery and displaying images
Refresh, display an image on the panel	Shows an image on the panel. Each refresh takes some time (depending on the model and refresh mode, for example about 6 seconds on 13.3-inch, about 16 seconds on 27.6-inch, about 20 seconds on 32-inch)
Refresh QR Code	Shows the connection startup screen on the panel again
Refresh mode	The waveform the panel uses to refresh; the menu shows it by effect as "Standard refresh", "Fast refresh" or "High contrast". The available modes depend on the panel model, and most panels have only one. See Scan direction and refresh mode
Next Run	When the schedule triggers next
Disabled, Paused	The schedule currently won't trigger. The card view says "Disabled" and the table says "Paused"; they mean the same thing
Effective resolution	The screen size after taking the device orientation into account. Width and height swap in portrait
Sleep	The power-saving state the device enters when idle: hotspot off, image kept, wakes up automatically before a schedule. See Sleep and wake-up
Fixed Orientation	The orientation the screen uses when G-Sensor auto-rotate is off
Cluster	Several devices on the same network paired together; from any one of them you can view and operate the others. See Cluster: managing devices together
Cluster member	A device that has been paired into the cluster
Conflict	Two or more enabled schedules are due to trigger at the same moment; the one listed later is skipped this round
Light	The light is optional equipment
Status LED	The indicator light on the device that shows its operating status. See Status LEDs
Scan direction	The direction the panel refreshes in: top to bottom, bottom to top, interleave
Image gallery	All uploaded images
Image collection	Same as "image set". Some screens in older versions used this name; the screens now all say "image set"
Image set	An ordered group of images that schedules and buttons step through. See Image sets
Startup screen	The screen shown on the panel at startup, with two connection QR codes
Light schedule	A schedule that turns the light on or off automatically at set times
Standalone mode	The mode in which you manage the device on site through its hotspot or the on-site network (the mode this manual covers)

© 2025-2026 Green Ideas Technology | All rights reserved

Term	Description
Skipped	The panel was refreshing when the schedule triggered, so no image change happened this round; it plays at the next successful trigger. If it keeps getting skipped, move the times apart
Change frequency, trigger frequency	How often a schedule triggers. See Schedule frequency in detail
Fit mode	How an image is handled when its aspect ratio differs from the panel: Fit, Fill, Stretch, Crop
Schedule	A schedule that automatically moves to the next image in the image set by time. See Schedules
Hotspot	The Wi-Fi broadcast by the device itself; once your phone connects, you can open the management interface. It's also one of the three network modes (hotspot only, the factory default). See Network settings
Wi-Fi mode	The network mode in which the device connects to the on-site Wi-Fi and the hotspot is off
Concurrent	The network mode in which the device connects to the on-site Wi-Fi and keeps the hotspot at the same time
Presenter remote	An off-the-shelf presentation clicker; once its USB receiver is plugged in, you can change images and open the presenter remote menu. See Presenter remote
Bistable	The property of cholesteric LCDs that keeps the image without power
Edge mask	On 32-inch frameless models, a border added around the panel to slow down edge degradation
Firmware	The internal program of the panel driver board (Tcon)
Factory reset	Deletes all images, schedules, settings and Wi-Fi networks added by users, and returns the hotspot to this device's factory values. See Factory reset

English terms and abbreviations

Term	Description
BMS	Battery Management System, which handles battery charging, discharging and protection
CMS, CMS central control mode	CMS is a Content Management System; our product is the E-Paper Content Management System. It manages many devices from one web console: sending images remotely, changing images on a timer with playlists and schedules, monitoring each device's connection status and alerts, managing devices in groups, and updating device software remotely. CMS central control mode is the mode in which a CMS manages the device remotely. See E-Paper Content Management System, CMS connection and control, CMS / standalone mode switching
Cron, cron expression	A format for describing schedule times, for example `*/10 * * * *` means every 10 minutes
dBm	Unit of Wi-Fi signal strength; the closer to 0, the stronger
EXIF	Shooting information stored in a photo, including the shooting orientation
G-Sensor	Orientation sensor that detects how the sign is mounted
NTP	A way of setting the time automatically over the network
OTA	Software update by uploading an update file in the management interface
RTC	Hardware clock that keeps time while the device is asleep or powered off

© 2025-2026 Green Ideas Technology | All rights reserved

Term	Description
SOC	Battery remaining charge, in percent
SOH	Battery health, in percent
SSID	Wi-Fi network name. In this manual it mostly means the name of the device's hotspot, which you can change in Network settings
Tcon	Panel driver control board

© 2025-2026 Green Ideas Technology | All rights reserved

2. Getting started

© 2025-2026 Green Ideas Technology | All rights reserved

Installation and setup

Just want to get started quickly?

Using the device for the first time and just want to put an image on it? See Getting started first. This page is the complete setup procedure for installers.

This page takes you from power-on to the signage rotating images automatically, in about 15 minutes. Each step links to detailed instructions.

What you need

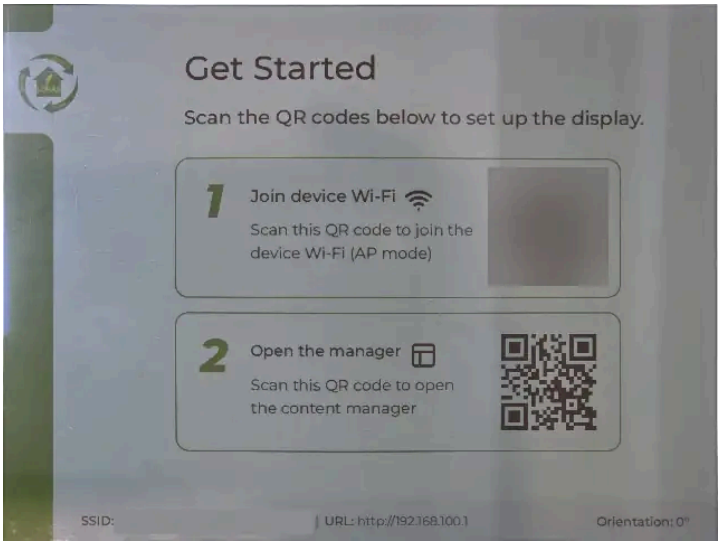
- A phone that supports **5 GHz Wi-Fi**, or a laptop.
- The images you want to show (JPG or PNG, ideally made at the recommended size for your model).
- The hotspot password (on devices freshly installed with 1.11.0 or later, it's printed on the hotspot label on the device; for other devices, ask your installer. You can also scan the QR code on the startup screen without typing the password).

Step 1: Power on and connect

1. Connect the power to turn it on. The status LED flashes (starting up), and within about 1 minute the panel refreshes to the **startup screen**. When it's done, the status LED stays on (standby).
2. Scan the **step 1 QR code** on the startup screen with your phone's camera to join the device's Wi-Fi.
3. Once your phone shows it's connected, scan the **step 2 QR code** to open the management interface.
   - You can also type `http://192.168.100.1` directly in your browser (the hotspot's default address).
4. If your phone says "No internet", choose **Use without internet / Stay connected**.

The startup screen looks like this (portrait and landscape layouts depending on the model, with the same content):

© 2025-2026 Green Ideas Technology | All rights reserved

27.6-inch, 32-inch	13.3-inch
	

The Wi-Fi QR code in these pictures contains the hotspot password, and the hotspot name (SSID) at the bottom is different on every device, so both are masked here. They are shown normally on the actual screen.

See Connecting to the device for details.

Step 2: Check the time and time zone

Schedules run on the device's time, so set it first:

1. In the left menu, tap **Settings** → **Time Settings**.
2. Check that "Time zone" is correct. If not, press **Change** next to "Device Timezone" to change it.
3. Press **Sync Local Time** to set the device's time from your phone. If the button is grayed out, turn off NTP auto-sync first.
4. When you're done, **leave this page** (keeping it open stops the device from going to sleep).

See Time, time zone and clock sync for details.

Step 3: Check the screen orientation

1. Place the signage in the orientation it will actually be displayed in (landscape or portrait).
2. `Orientation:` at the bottom of the startup screen shows the orientation the system has detected. The screen should be upright.

© 2025-2026 Green Ideas Technology | All rights reserved

3. If the signage will be mounted in a fixed position, you can go to **Settings → G-Sensor Settings** to turn off auto-rotate and choose a fixed orientation.

See Screen orientation and G-Sensor for details.

Step 4: Upload images

1. In the left menu, tap **Image Display**.
2. In the image gallery, press **Upload** (the up arrow) → **Upload Images**, and select several images at once.
3. Wait until "All images uploaded successfully" appears.

If you have PDF material to show, you can use **Upload PDF** to make a collage image. See PDF collage for details.

Step 5: Try displaying an image

1. Tap an image in the image gallery and check how it looks in the preview box. If the proportions don't match, adjust the fit mode.
2. **Tap the image in the preview box → Display Now**.
3. Wait for the panel to refresh (depending on the model and refresh mode, for example about 6 seconds on the 13.3-inch, about 16 seconds on the 27.6-inch, about 20 seconds on the 32-inch). The panel shows the image, and "Refreshing..." disappears from the preview box.

See Image gallery and displaying images for details.

Step 6: Create an image set

1. In the left menu, tap **Image Set → Create Image Set**.
2. Enter a name (for example "Lobby rotation") → **Save**.
3. The image selection window opens automatically. Tap the images **in the order you want them to play → Add N**.
4. Press **Done, back to list**.

See Image sets for details.

Step 7: Create a schedule

1. In the left menu, tap **Schedule → New Schedule**.
2. Enter a schedule name and select the image set you just created.
3. For the image change frequency, choose "Fixed interval: Every 10 min", or adjust it as needed.
4. Press **Create**.

The schedule starts changing images at the next scheduled time (for example :10, :20, ... past the hour). The countdown on the card tells you how long until then. See Schedules for details.

Step 8 (optional): Turn on sleep to save power

For battery models, or signage that's usually left unattended, we recommend turning on sleep:

1. Go to **Settings → Sleep Settings**, turn on "Enable Sleep", and choose 5 minutes.
2. The device sleeps when idle and wakes up automatically before a schedule to change the image.
3. The hotspot turns off during sleep. The next time you want to manage the device, press a physical button to wake it up first.

© 2025-2026 Green Ideas Technology | All rights reserved

See Sleep and wake-up for details.

Done

The signage now rotates images automatically on schedule. For day-to-day management:

What you want to do	Where to go
Add or replace images	Image Display → Upload; Image Set → Add Images
Show a particular image for now	Image Display → tap the preview box to display the image
Pause rotation	Schedule → turn off the switch at the bottom of the card
Let other people on site connect	Press a physical button to bring up the QR code screen. See Physical buttons and gestures
Update the software	Software update

© 2025-2026 Green Ideas Technology | All rights reserved

Connecting to the device

The device doesn't need the internet. Out of the factory it broadcasts its own Wi-Fi hotspot; you connect your phone or computer to that hotspot and open the management interface in a browser.

This page covers connecting through the hotspot (the factory-default "Hotspot" mode). Once the device is set to join the on-site Wi-Fi ("Station" or "Concurrent" mode), your phone can also join the same on-site Wi-Fi and open the management interface at the address the on-site network assigned to the device; see Network settings.

Requirements

Item	Requirement
Phone / computer	Supports **5 GHz Wi-Fi** (the device hotspot uses 5 GHz out of the factory; older devices that support only 2.4 GHz won't see it)
Browser	A recent version of Chrome, Safari, Edge, etc.
Network	No internet needed

How to connect

Method 1: Scan the QR codes on the startup screen (easiest)

1. After the device starts, the panel shows the startup screen. If the panel isn't showing the startup screen, bring it up with the physical button gesture (default: long-press any button for 1.5 seconds, then **release immediately**); see Physical buttons and gestures.
2. Scan the **step 1** QR code with your phone camera. When your phone asks whether to join the Wi-Fi, choose "Join".
3. Wait until your phone shows it is connected to the device's Wi-Fi.
4. Scan the **step 2** QR code to open the management interface.

Method 2: Connect manually

1. In the Wi-Fi settings of your phone or computer, find the device's hotspot name (shown as `SSID:` at the bottom of the startup screen; usually the device name).
2. Enter the hotspot password (see Hotspot password below; once connected, you can also see it in the hotspot settings of the management interface).
3. Open a browser and go to `http://192.168.100.1` (the hotspot's default address; if someone changed the IP address in the hotspot settings, use the new address instead).

> **Use http, not https**
>
> Type `http://192.168.100.1`. Some browsers change it to `https://` automatically, which won't connect. Make sure the address bar starts with `http://`.

Phones that have connected before

Once your phone remembers the device's Wi-Fi, it usually connects automatically the next time you're nearby. Bookmark `http://192.168.100.1` or add it to your home screen so it's easy to open next time.

© 2025-2026 Green Ideas Technology | All rights reserved

Hotspot password

The hotspot name and password can be changed in the hotspot settings of the management interface. If they've never been changed, the password is the factory password:

Device	Factory hotspot password
Devices freshly installed and shipped from 1.11.0 on	**Different for every device**, randomly generated at installation and printed on the label on the device body
Devices shipped earlier and upgraded to 1.11.0 by software update	Keep their original password; the software update doesn't change it, so phones on site still connect. Ask the installer for it

- A factory reset returns the hotspot name and password to **this device's own** factory values. For a device with a label on its body, that's the password on the label.
- Once you change the hotspot password, the password on the label no longer applies; if you forget the new password, a factory reset takes you back to the password on the label (it deletes the device's data; see Factory reset).

Keep the label on the device body

The startup screen is usually covered by the slideshow images, so when you forget the hotspot password, the label on the device body is where to find the factory password. Don't peel it off, and don't let it appear in public photos.

Your phone keeps switching to another network

The device hotspot has no internet. When some phones notice "this Wi-Fi can't reach the internet", they switch back to another Wi-Fi or mobile data automatically, and the management interface can't be reached.

Phone	What to do
iPhone	After connecting to the device Wi-Fi, if a "No Internet Connection" notice appears, choose to **keep using** this network
Android	When connecting, if "This network has no internet access. Stay connected?" appears, choose **Stay connected**; or turn off "Switch to mobile data automatically / Smart network switch" in the advanced Wi-Fi settings

When the management interface detects that the connection was lost, it shows "Lost connection to the device" and reminds you to reconnect to the device's Wi-Fi.

Connection lost notices

Notice	When it appears
Yellow "Lost connection to the device" notice at the top of the page	The live connection to the device has been lost for more than 6 seconds
"That action did not take effect — the device is unreachable" notification at the top right	The action you just sent got no response

- The notice includes the device's Wi-Fi name, so you know which hotspot to reconnect to.
- The notice disappears automatically once the connection comes back or any action succeeds.

© 2025-2026 Green Ideas Technology | All rights reserved

- Automatic reconnection stops trying after about 3 minutes; after that, press "Reconnect" or refresh the page.
- If your phone really is connected to the device Wi-Fi but nothing responds, the device may have **gone to sleep** or be **powered off**. Press a physical button to wake it up.

Several people connected at once

- Several phones or computers can connect at the same time, and everyone's screen stays in sync in real time (uploads, deletions, setting changes, refresh status).
- The panel can handle only one refresh at a time. When two people display images at the same time, the later one is rejected ("Send failed, device may be busy").
- While someone has the management interface open, the device must be idle for at least 15 minutes before it goes to sleep; see Sleep and wake-up.

Pages behave oddly after a software update

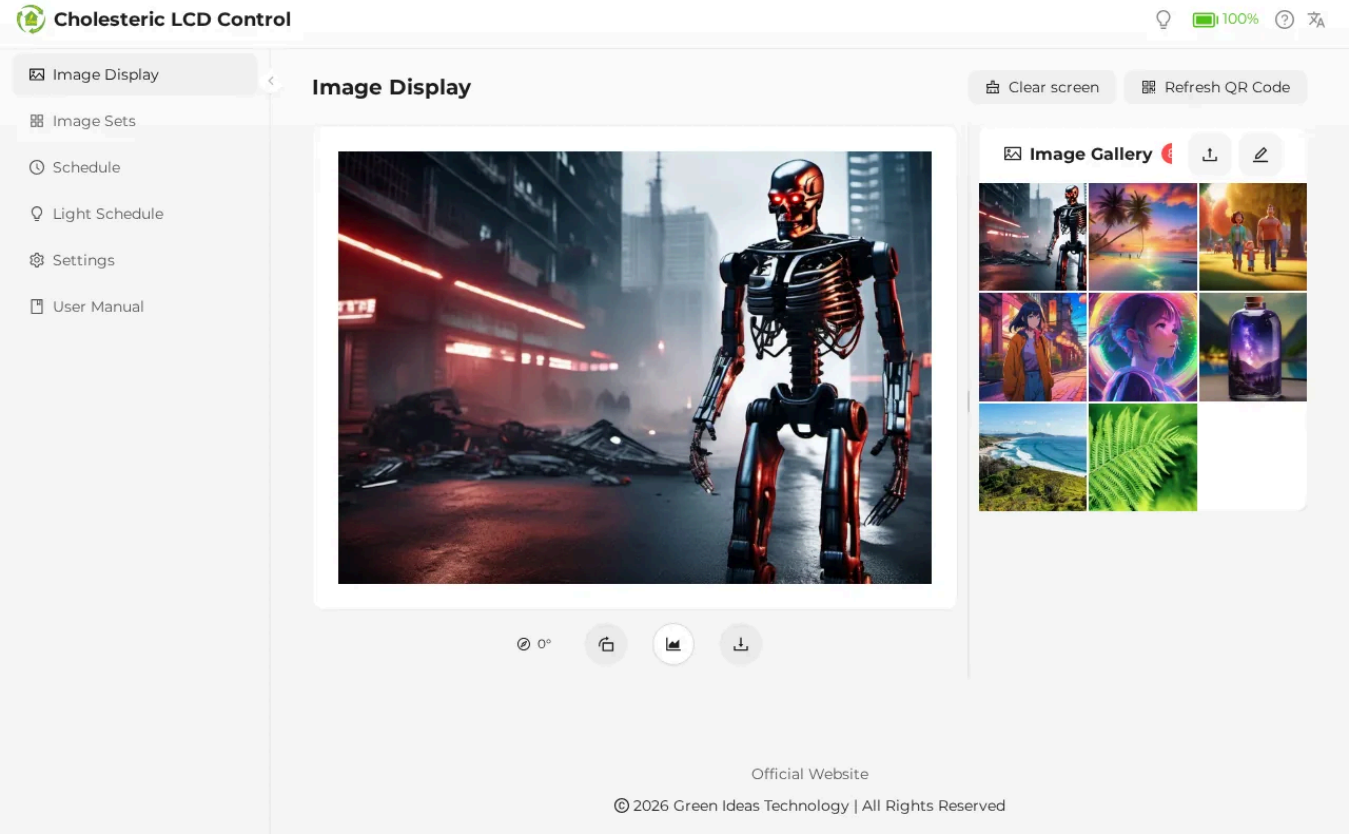
After a software update, a browser still showing an old page reloads once automatically when you switch pages, to load the new version. If the page still shows errors, refresh it manually, or close the tab and open it again.

Related: Network settings, Startup screen and screen language, Troubleshooting: connection and management interface

© 2025-2026 Green Ideas Technology | All rights reserved

Management interface tour

Screen layout



Location	Contents
Left menu	Main features (on a phone, tap the three-line icon in the upper left to open it)
Upper right	Light bulb (models with a light), battery (battery models), "?" User Guide, language switch
Top of the page	Notices appear when needed: connection lost (yellow), hardware fault (red), sleep countdown (dialog)
Footer	Company name and a link to the official website

Left menu

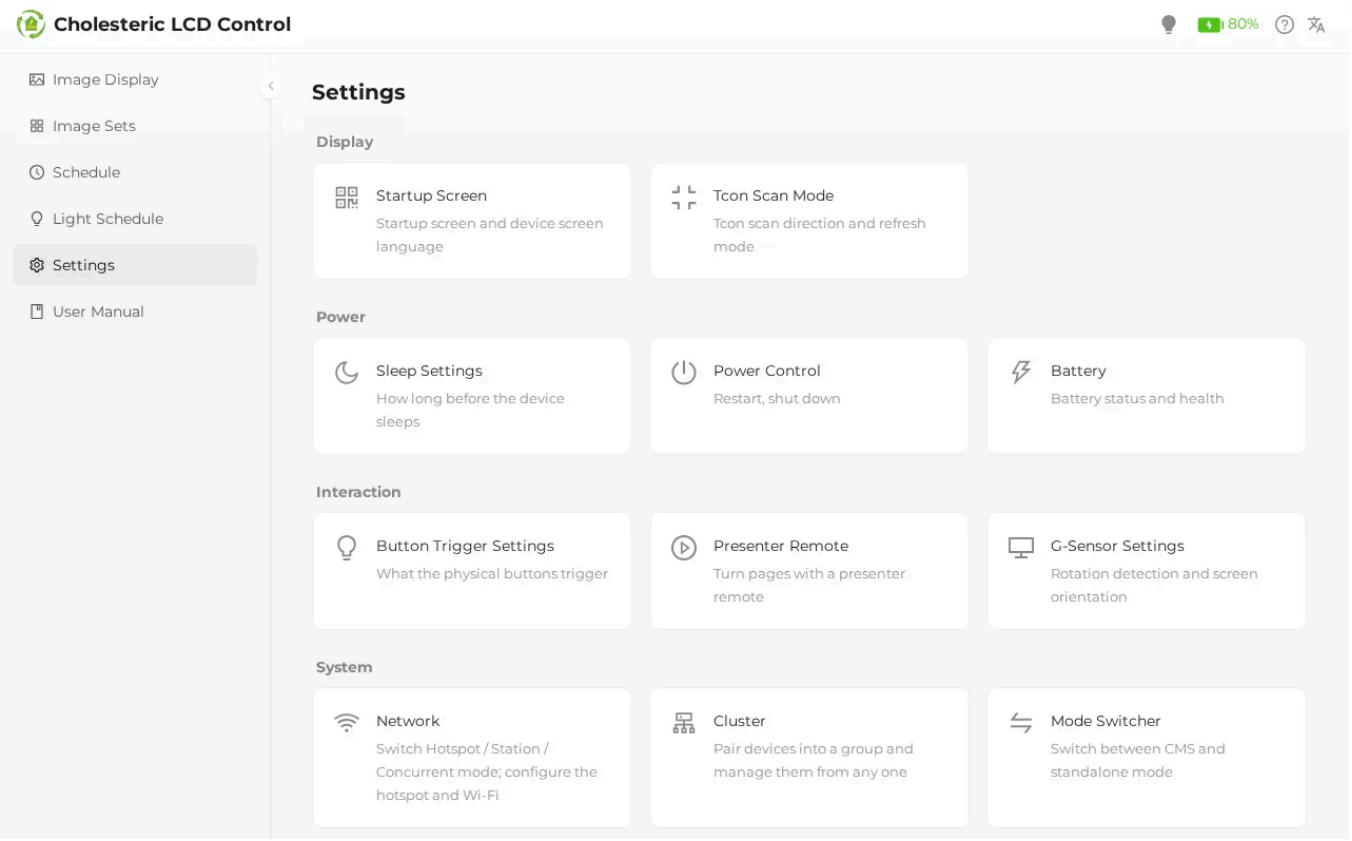
Menu	Purpose
Image Display	Image gallery, upload, preview, display an image on the panel, clear the screen, refresh the QR code (the home page when you open the management interface)
Image Sets	Create and manage image sets
Schedule	Create and manage automatic image-change schedules
Light Schedule	Turn the light on and off automatically (models with a light only)

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Menu	Purpose
Settings	All device settings (see below)
User Manual	A short built-in guide on the device

Settings page

The "Settings" page groups all settings into four groups. On a computer they're shown as cards with a one-line description; on a phone they're shown as a list. Click an item to open its subpage; the back arrow in the upper left of the subpage returns to Settings.



Group	Item	Description
Display	Startup Screen	Startup QR code screen and screen language
	Tcon Scan Mode	Scan direction, refresh mode, edge mask
Power	Sleep Settings	How long before the device sleeps
	Power Control	Restart, shut down
	Battery Info	Battery status (battery models)
Interaction	Button Trigger Settings	Physical button gestures
	Presenter Remote	Turning pages with a presenter remote, how images change
	G-Sensor Settings	Auto-rotate and fixed orientation

© 2025-2026 Green Ideas Technology | All rights reserved

Group	Item	Description
System	Network	Switch between hotspot / Wi-Fi / concurrent mode, set up the hotspot and Wi-Fi
	Cluster	Devices discovering each other, network check
	CMS Connection	CMS server, connection test, control (devices with the CMS component)
	Mode Switcher	Switch to CMS mode (devices with a CMS module)
	Time Settings	Time, time zone, NTP
	System Logs	View logs, download the full logs
	Tcon Firmware	Panel driver board firmware
	Export / Import	Save settings, photos, image sets and schedules to one file, or restore them from a file to this device
	Software Update	Release notes, OTA update, **factory reset**
	Device info	Versions, specifications, storage, live load

Features a model doesn't have don't appear on the Settings page. See Models and specifications.

Change the management interface language

Click the language icon in the upper right and choose **繁體中文**, **English**, or **日本語**.

- The first time you open it, the language is chosen automatically from your browser's language.
- Your choice is saved in the browser on this phone / computer. Each person sets it separately, without affecting anyone else.
- The management interface language is separate from the language of the startup screen **on the device screen**; change the latter in Startup screen settings.

User Guide

The **?** (User Guide) in the upper right takes you to the Image Display page and walks you through the main areas step by step.

Using it on a phone

- Tap the **three-line** icon in the upper left to open the menu; tap outside the menu to close it.
- On the Image Display page, the image gallery is below the preview frame; scroll down. Tapping a thumbnail scrolls back to the top automatically to show the preview.
- The editing toolbar (rotate, fit mode, download) is collapsed by default; tap the gray bar under the preview frame to expand it.
- To drag to reorder (image sets, schedule cards), press and hold the **drag handle** before dragging; swiping on the list just scrolls the page.
- Longer windows (for example PDF collage) need scrolling down to see the next step and confirm buttons.

Several people at once

When several people have the management interface open at the same time, everyone's screen syncs in real time: uploads, deletions, settings changes, panel refresh status, and so on. The panel can handle only one refresh at a time. If two people display an image at the same time, the one

© 2025-2026 Green Ideas Technology | All rights reserved

who sent it later gets "Send failed, device may be busy".

Common on-screen messages

Message	Meaning
Lost connection to the device	The connection between your phone and the device dropped. See Connecting to the device
Orientation sensor (G-sensor) fault / Real-time clock (RTC) fault	The hardware can't be read. See Hardware warnings
Cannot identify the panel; refreshing is paused / Panel model not supported; refreshing is paused / Machine data does not match the panel	There is a problem with the panel model or the model data. See Hardware warnings
The device is about to sleep	Idle countdown; press "Keep Awake" to cancel. See Sleep and wake up
Response status:number	The device returned an error code. See Message reference
Sorry, the page you visited does not exist.	Wrong URL; press "Back Home"

For the full list of messages, see Message reference.

© 2025-2026 Green Ideas Technology | All rights reserved

3. Content

© 2025-2026 Green Ideas Technology | All rights reserved

Image gallery and displaying images

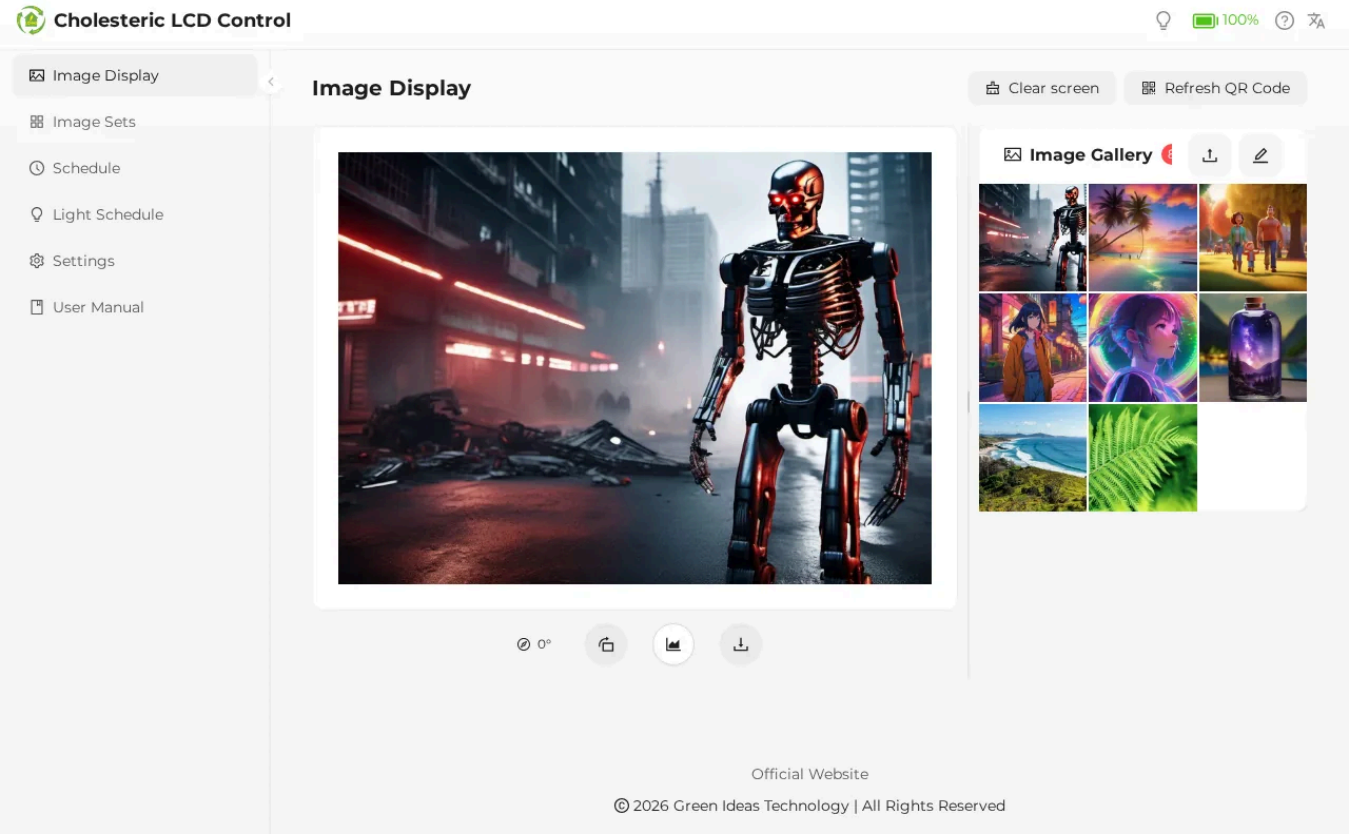
> Navigation: Main menu → **Image Display** (the home page when you open the management interface)

The "Image Display" page is the one you'll use most day to day: upload images, preview them, adjust rotation and fit, and manually display an image on the cholesteric LCD panel.

Page layout

Area	Location	Purpose
Top-right buttons	Page title bar	**Clear screen**, **Refresh QR Code** (only icons at phone width)
Preview box	Left (top on phones)	Shows the selected image in the same aspect ratio as the panel. Tap the image to display it on the panel
Edit controls	Below the preview box	Orientation tag, Rotate Image, Adjust Fit Mode, Download Original
Image gallery	Right (bottom on phones; scroll down)	All uploaded images

- On wide screens (about 1200 px or more), the preview box and the image gallery sit side by side; on narrower screens they're stacked.
- When they sit side by side, you can **drag the divider between them** to change their widths; the number of thumbnails per row in the gallery follows. The browser remembers the width you set.
- On a phone, after you tap a thumbnail in the image gallery, the page scrolls back to the top so you can see the preview box now shows that image.



© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

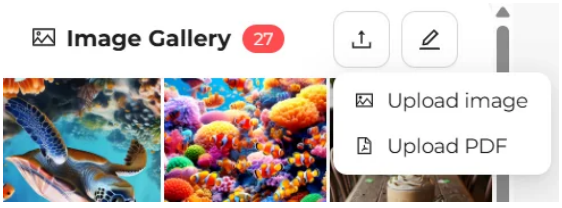
Image gallery

The number next to the image gallery title is the total number of images. Images are shown as a grid of thumbnails, **with the most recently uploaded first**. The image gallery currently doesn't support drag-and-drop reordering.

- On a computer, hovering over a thumbnail shows the rotation angle (for example `90°`), the fit mode (`FIT` / `FILL` / `STRETCH` / `CROP`), and the original file name (if it is too long, only one line is shown, cut off with "..."). Phones have no hover state, so these tags aren't visible there.
- The thumbnail currently being refreshed to the panel is covered by a spinner.
- When several people (several phones) have the management interface open at once, any upload, deletion, or image setting change by one person updates everyone else's screen automatically.
- If a thumbnail fails to load, a gray image icon is shown.
- When the image gallery is empty, it shows "Click the "↑" button to upload images".

> **Thumbnails don't rotate**
>
> A thumbnail is created only once, at upload. If you later change the angle with "Rotate Image", the thumbnail keeps its original orientation. To see the actual angle, check the preview box or the angle tag shown on hover.

Upload images



1. Tap **Upload** (the up-arrow icon) at the top right of the image gallery.
2. Choose **Upload Images** from the menu. (For "Upload PDF", see PDF collage.)
3. Select images in your phone's or computer's file picker. **You can select several at once.**
4. Each image shows its upload progress at the front of the image gallery (a circular percentage plus "Uploading..."). The system uploads at most 2 images at the same time; the rest wait in line.
5. When everything is done, the result appears:
   - All succeeded: "All images uploaded successfully"
   - Any image failed: "Upload completed, some images failed", and the failed image shows a red ✕ and "Upload failed"

After uploading, the image gallery reloads automatically. You don't need to refresh the page.

Supported formats and sizes

Item	Specification
Recommended formats	**JPG, PNG** (most common, best compatibility)
Also supported	BMP, GIF (first frame only), WebP, TIFF
Not supported	**SVG** (shows an upload failure), **HEIC/HEIF** (the iPhone's default photo format)
File size	No MB limit

© 2025-2026 Green Ideas Technology | All rights reserved

Item	Specification
Image dimensions	Up to about **80 million pixels** (80 MP), for example 10000 × 8000. JPG can handle larger photos (the system scales them down while decoding), for example photos taken in a phone's 200-megapixel mode can be uploaded too; PNG and BMP fail if they're over the limit
Number of images	No software limit; limited by the device's storage space
File name	Up to 255 characters

iPhone photos

iPhones take photos in HEIC format by default. When you pick images straight from the Photos app, iOS usually converts them to JPG before uploading. If the upload fails, go to iPhone "Settings → Camera → Formats" and choose "Most Compatible", or convert the photos to JPG first.

PNGs with transparent backgrounds

The panel has no concept of "transparent", so transparent areas of a PNG become a solid color (usually black). If you need a white background, fill the transparent background with white on your computer before uploading.

Portrait photos taken on a phone

The system automatically straightens photos based on their built-in orientation information (EXIF), so you don't need to rotate portrait photos taken on a phone manually.

Common reasons uploads fail

Symptom	Cause	What to do
"Upload failed" + "Response status:400"	The file isn't an image, or it's an SVG	Use JPG/PNG instead
"Upload failed" + "Response status:413"	The image has too many pixels (PNG, BMP, etc. over about 80 million)	Reduce the image dimensions before uploading
"Upload failed" + "Response status:500"	The file is damaged, the format can't be read (for example HEIC), or the device storage is full	Export it again as JPG; check the free space in Device info
"Lost connection to the device"	Your phone left the device hotspot or the connection dropped	Reconnect to the device hotspot and upload again

When you upload large images, the system converts only one image at a time, so displaying and previewing images may be a little slower during that time. This is normal.

Preview images

Tap any thumbnail in the "Image Gallery", and the preview area simulates how that image will look when refreshed on the panel (with rotation, scaling, and cropping applied). Note: for actual display colors and the edge mask, check the physical panel.

- Tapping a thumbnail only changes the preview. It does **not** display the image on the panel.
- The preview box's aspect ratio changes instantly with the device's orientation (G-Sensor).

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

- The preview box shows a scaled-down version, at most 800 pixels on the long side; the panel uses the full resolution.
- When you change images, the preview box first shows a blurry small thumbnail, then switches to the sharp image once the preview is ready.
- On the 32-inch frameless model, the black frame from the "Edge Mask" does **not** appear in the preview, only on the panel.

When you open the page, the preview box shows what the panel currently displays:

Preview box shows	Meaning
An image	The panel currently shows this image
"Currently showing the QR code startup screen"	The panel currently shows the startup connection screen
"Screen is currently blank (reset)"	The screen has been cleared, or the device restarted and hasn't displayed any image yet

Whenever any source starts refreshing the panel (web page, schedule, physical button, device rotation), the preview box automatically switches to the image being refreshed.

Edit controls

On wide screens the controls are always expanded; on phones and tablets they're collapsed by default. Tap the **gray bar** below the preview box to expand or collapse them. Until you select an image, the buttons are grayed out and can't be tapped.

Control	Description
Orientation tag (compass icon + angle)	The device's current orientation (detected by the G-Sensor), not the image's rotation angle. Shown in blue when it isn't 0°; hover to see the current effective resolution
Rotate Image	Each tap rotates 90° clockwise (0° → 90° → 180° → 270° → 0°)
Adjust Fit Mode	Opens four options: "Fit/Fill/Stretch/Crop"
Download Original	Downloads the original file you uploaded (with the same file name as when it was uploaded)

Rotate Image

Each tap of **Rotate Image** rotates the image 90° clockwise. On success you'll see "Image rotated to 90°".

- Rotation **doesn't change the original file**. It only records "how many degrees to rotate this image", so you can rotate it back at any time.
- The rotation angle is stored with the image itself: from then on, whether the image is displayed manually, by a schedule, or with a button, this angle is used.
- After rotating, **the panel doesn't refresh automatically**. Tap the preview box again to display it on the panel.

Fit mode

When an image's aspect ratio differs from the panel's, the system uses the "fit mode" to decide how to place it on the screen:

Mode	Effect	Best for
Fit (default)	Shows the whole image without distortion; leftover edges are **filled with black**	Posters and images with important text that must not be cropped

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Mode	Effect	Best for
Fill	Enlarges the image to fill the whole screen without distortion; the overflow is cropped from the center outward	Photos and backgrounds
Stretch	Stretches the image straight to the panel size, **which distorts it**	Images whose aspect ratio is already almost the same as the panel's
Crop	Same effect as "Fill"	Same as "Fill"

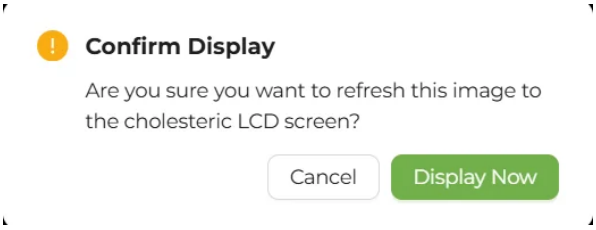
On success you'll see "Fit mode changed to "Fill"". As with rotation, the setting is stored with the image and doesn't refresh the panel automatically. For details on processing, see How images are processed.

Tips for creating images

Create images at the panel's effective resolution (for example, a 1920 × 1080 panel in portrait is 1080 × 1920). Then no cropping or padding is needed, and you get the best result. For each model's resolution, see Models and specifications.

Display an image on the panel

1. Select the image you want in the image gallery and check how it looks in the preview box.
2. **Tap the image in the preview box.**
3. The "Confirm Display" window appears: "Are you sure you want to refresh this image to the cholesteric LCD screen?" Tap **Display Now**.
4. "Command sent, processing in background..." appears, and the preview box shows the panel's current stage in turn:
   - **Preparing, Powering on, Starting up**: a spinner
   - **Transferring**: a progress bar showing how much of the image has been sent to the panel
   - **Refreshing**: a scan line sweeps across the preview in the same direction and at the same pace as the panel; the picture brightens as it finishes
   - **Agitating**: an extra step after refreshing on some panels
5. When the panel finishes refreshing, the stage display disappears. The expected time adjusts itself to the recent refreshes on this device.



"Command sent" doesn't mean "already refreshed"

The message in step 4 only means the device has received the command and started processing it. The panel's actual refresh takes a while (it depends on the model and refresh mode, for example about 6 seconds on the 13.3-inch, about 16 seconds on the 27.6-inch, and about 20 seconds on the 32-inch; the first time you display an image, converting it takes a little extra time). Wait until the stage display disappears from the preview box before doing anything else.

When the panel is busy

The cholesteric LCD panel **can refresh only one image at a time**, and the device **doesn't queue requests**: any new request received during a refresh is rejected immediately.

- The web page shows "Send failed, device may be busy", usually along with "Response status:409".

© 2025-2026 Green Ideas Technology | All rights reserved

- The device's status LED blinks briefly to show it's busy (see Status LEDs).
- Actions that use the panel include: displaying an image from the web page, clearing the screen, refreshing the QR code, a schedule changing the image, switching images with a physical button or the presenter remote, and automatic redrawing after the device is rotated. While any of these is in progress, the others are rejected.
- Exception: page changes from the physical buttons and the presenter remote are not rejected; depending on the "When changing pages" setting, they stop the current refresh or wait for it to finish. See Physical buttons and gestures.

What to do: Wait for the current refresh to finish ("Refreshing..." disappears from the preview box and the status LED returns to standby), then try again.

When a refresh fails

When a refresh fails (for example, because the panel cable is loose), the web page shows "The screen could not be refreshed. Please try again later; if it keeps happening, check the system logs." The spinner disappears and the panel doesn't change. You can also check in these ways:

- **Status LED**: when a refresh fails, the LED blinks 3 times (red blinking on full-color LED models). See Status LEDs.
- **System logs**: go to System Logs and filter by the "ERROR" level to see why it failed.

For troubleshooting, see Troubleshooting: display and displaying images.

Clear screen

Tap **Clear screen** at the top right of the page (this runs an M0 Reset; depending on the panel/firmware, the resulting background may be white or black), and the panel is cleared to a single background color.

- Success: "Screen cleared", and the preview box shows "Screen is currently blank (reset)".
- Failure or panel busy: "Failed to clear the screen".
- After clearing, the panel keeps this background color until the next time an image is displayed or a schedule changes the image.

When to use it: to clear the screen before long-term storage, to start fresh when ghosting appears, or when you don't want to show anything for a while. For the full long-term storage steps, see Power control and storage.

Refresh QR Code

Tap **Refresh QR Code** at the top right of the page, and the panel shows the startup connection screen again (QR codes for Wi-Fi and the management page). How long it takes depends on the model and refresh mode, for example about 6 seconds on the 13.3-inch, about 16 seconds on the 27.6-inch, and about 20 seconds on the 32-inch.

- Success: "QR Code screen refreshed", and the preview box shows "Currently showing the QR code startup screen".
- Failure or panel busy: "Failed to refresh QR Code screen".

When to use it: to let other people on site scan the code with their phones to connect. You can also trigger it with a physical button gesture; see Physical buttons and gestures.

> **Screen clears and QR codes triggered from other sources**
>
> When the screen clear or QR code is triggered by a physical button, before sleep, or before shutdown, the matching button on the web page also shows a spinner, but the success/failure message appears only in the browser where someone actually tapped the button.

© 2025-2026 Green Ideas Technology | All rights reserved

Delete images

1. Tap the **pencil** icon at the top right of the image gallery to enter edit mode.
2. Tap the images you want to delete (you can select several; selected thumbnails shrink and get a check mark at the top left).
   - **Grid icon**: select all; tap it again when all are selected to deselect all.
3. Tap the red **trash can** (the number at its top right is how many are selected; it can't be tapped when nothing is selected).
4. Confirm "Are you sure you want to delete N selected image(s)?" and tap **Delete**.
5. On success you'll see "Successfully deleted N image(s)", and edit mode closes automatically.

To cancel, tap ✕ at the top right to leave edit mode.

Deleting images also affects

- The images are removed from **all image sets**. The confirmation window lists "These images will also be removed from the following image sets:", with "N removed, M left" for each image set. An image set that becomes empty is marked "Will become empty", and if a schedule is using it, you're warned "Will become empty; N schedule(s) using it will have nothing to show".
- Schedules that use those image sets start again from the first image of the set next time.
- Deleting does **not** change what the panel currently shows; the panel keeps showing the same image until the next image change.
- Deletion can't be undone. If you need the images, back them up first with "Download Original".

Download Original

Select an image and tap **Download Original** in the edit controls to download the original file you uploaded, with the same file name as when it was uploaded. Images created by a PDF collage download with the PDF's file name (for example `menu.jpg`, `menu-1.jpg`).

Messages

Message	Meaning
All images uploaded successfully	All images have been added to the image gallery
Upload completed, some images failed	At least one failed; check the status of each image
Command sent, processing in background...	The device has accepted the display command and the panel is refreshing
The screen could not be refreshed. Please try again later; if it keeps happening, check the system logs.	The panel refresh failed; see When a refresh fails
Send failed, device may be busy	The panel is handling another refresh; try again later
Image rotated to N° / Image rotation failed	Result of the rotation setting
Fit mode changed to "..." / Fit mode change failed	Result of the fit mode setting
Successfully deleted N image(s) / Deletion failed / Batch deletion failed, please try again later	Result of the deletion
Screen cleared / Failed to clear the screen	Result of clearing the screen

© 2025-2026 Green Ideas Technology | All rights reserved

Message	Meaning
QR Code screen refreshed / Failed to refresh QR Code screen	Result of refreshing the QR code
Response status:number	An error code returned by the device, often shown together with the messages above; see the message reference

Related sections: How images are processed, PDF collage, Image sets, Troubleshooting: display and displaying images

© 2025-2026 Green Ideas Technology | All rights reserved

How images are processed

This page explains the processing an image goes through between upload and appearing on the panel. Knowing these steps helps you make images that look best on the panel and figure out "why the panel looks different from the original."

Processing overview

```
Uploaded original
  | ① Turned upright automatically using the photo orientation data (EXIF)
  | ② Converted to RGB (transparent areas become a solid color)
  | ③ Rotated according to the "Rotate Image" setting (0°/90°/180°/270°)
  | ④ Fitted into the current effective screen size according to the "fit mode"
  | ⑤ Rotated back to the panel's native orientation according to how the device is mounted
  | ⑥ Edge mask added (32-inch frameless models only)
  ▼
Panel image file ──▶ refreshed onto the cholesteric LCD panel
```

The preview frame shows the result up to step ④, that is, "what you see standing in front of the panel."

① Automatic upright

When a phone takes a photo, it records the shooting orientation in the photo (EXIF). The system first uses this to turn the photo upright, so photos taken in portrait on a phone don't need manual rotation. If the orientation data is corrupted, the system treats it as not rotated and doesn't fail the upload.

② Color

- All images are converted to RGB. **Transparent areas in PNGs become a solid color** (usually black); they are not filled with white automatically.
- The management interface itself doesn't apply grayscale, contrast or dithering; color images are passed to the panel driver in their original colors, and the driver converts them into what the panel can display. The actual result depends on the panel model.

> **Design tips**
>
> A cholesteric LCD displays by reflecting ambient light, so high-contrast designs with large text and thick lines are clearest. Small text, light colors and large gradients may be less visible on the panel than on a monitor. Check important content on the actual device.

③ Rotation

"Rotate Image" rotates the **image content**, with clockwise as positive. It doesn't change the original file; it only stores an angle, which is applied each time the screen image is generated.

④ Fit mode

The system fits the image into the "effective screen size", that is, the width and height after taking the device orientation into account. For example, when a 1920 × 1080 panel is mounted in portrait, the effective screen size is 1080 × 1920.

Taking a 4:3 photo on a 16:9 landscape screen as an example:

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Mode	Result
Fit	The whole photo is shown in the middle, with **black bars** on the left and right
Fill / Crop	The photo is enlarged to fill the screen, with part cut off at the top and bottom
Stretch	The photo is stretched horizontally, so people look wider

- The default is "Fit".
- "Crop" and "Fill" currently have exactly the same effect.
- Scaling uses a high-quality algorithm, but enlarging very small images still makes them blurry. Use images at least as large as the panel resolution whenever possible.

⑤ Device orientation

The panel hardware has a fixed native orientation. When the device is mounted in portrait or upside down, the system rotates the result of step ④ once more so the screen is the right way up for viewers. This step follows the orientation detected by the G-sensor or the fixed orientation you set; see Screen orientation and G-Sensor.

When the device orientation changes while the panel is showing an image, the system automatically refreshes the same image again in the new orientation (if the panel is busy at that moment, this re-refresh is skipped; display the image again manually).

⑥ Edge mask (32-inch frameless models)

On 32-inch frameless models, the system draws a border of the specified width and color around the image sent to the panel, to slow down LCD degradation at the panel edge. This border **appears only on the panel, not in the preview frame**. For the settings, see Scan direction and refresh mode.

Cache: why the first display is slower

The first time each combination of "image + rotation + fit mode + device orientation (+ edge mask)" is displayed on the panel, the system has to convert it into a panel image file first; after that, the same combination uses the file already generated, which is faster.

- After you change the rotation or fit mode, or the device turns, the first display converts the file again.
- A power cut during conversion doesn't leave a damaged file; it is regenerated automatically the next time you display the image.
- These converted files are deleted along with the image.

Preview images

The preview images on the web page are separately generated smaller versions (up to 800 pixels on the long side), used only for display in the browser. They don't affect image quality on the panel.

Recommended image sizes

Model	Panel resolution	Recommended size (landscape)	Recommended size (portrait)
13.3-inch	1024 × 768	1024 × 768	768 × 1024
27.6-inch, 32-inch	1920 × 1080	1920 × 1080	1080 × 1920

© 2025-2026 Green Ideas Technology | All rights reserved

Model	Panel resolution	Recommended size (landscape)	Recommended size (portrait)
24.8-inch	1530 × 1080	1530 × 1080	1080 × 1530

You can check the actual effective resolution under "Effective resolution" in Device info or in the tooltip of the orientation label in the edit control bar.

For each model, see Models and specifications.

Related: Image gallery and displaying images, Screen orientation and G-Sensor, Characteristics of cholesteric LCDs

© 2025-2026 Green Ideas Technology | All rights reserved

PDF collage

> Navigation: main menu → **Image Display** → **Upload** in the image gallery → **Upload PDF**

A PDF collage arranges several pages of a PDF in a grid and turns them into one (or more) images that fit the panel. Use it to put notices, menus, price lists, meeting materials and similar documents straight onto the signage, in place of a physical bulletin board.

The resulting images work exactly like any other uploaded image: they appear in the image gallery, and you can add them to an image set, rotate them through a schedule, rotate them, or change their fit mode.

Limits

Item	Limit	Message when exceeded
File format	PDF only	Not a PDF file (content-type: ...)
File size	50 MB	PDF file is X.XMB, over the 50MB limit
Total pages in the PDF	60 pages	PDF has N pages, over the 60-page limit
Pages you can select at once	30 pages	You can select up to 30 pages (appears only when you press "Next")
Files per upload	1	—
Encrypted (password-protected) PDFs	Not supported	An error message in English is shown
How long an unfinished collage is kept	4 hours	PDF session not found: ...

Very large files

A file larger than 50 MB is still uploaded to the device in full before it is rejected, which can take a while over a phone connection. Check the file size first, or use a PDF tool to keep only the pages you need before uploading.

Steps

1. Upload the PDF

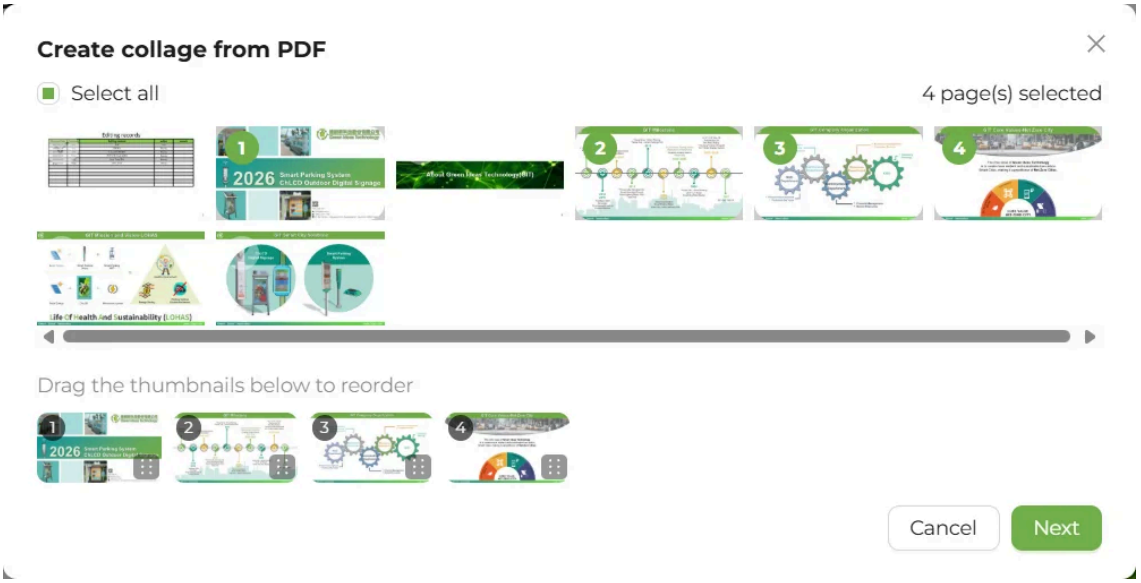
1. In the image gallery, press **Upload** → **Upload PDF**.
2. Select one PDF file.
3. While uploading, "Uploading PDF..." is shown. The system creates a thumbnail for each page, which takes a moment when there are many pages.
4. When it finishes, the "Create collage from PDF" window opens.

If the upload fails, the reason is shown; if there is no reason, "PDF upload failed" is shown.

2. Select pages and their order

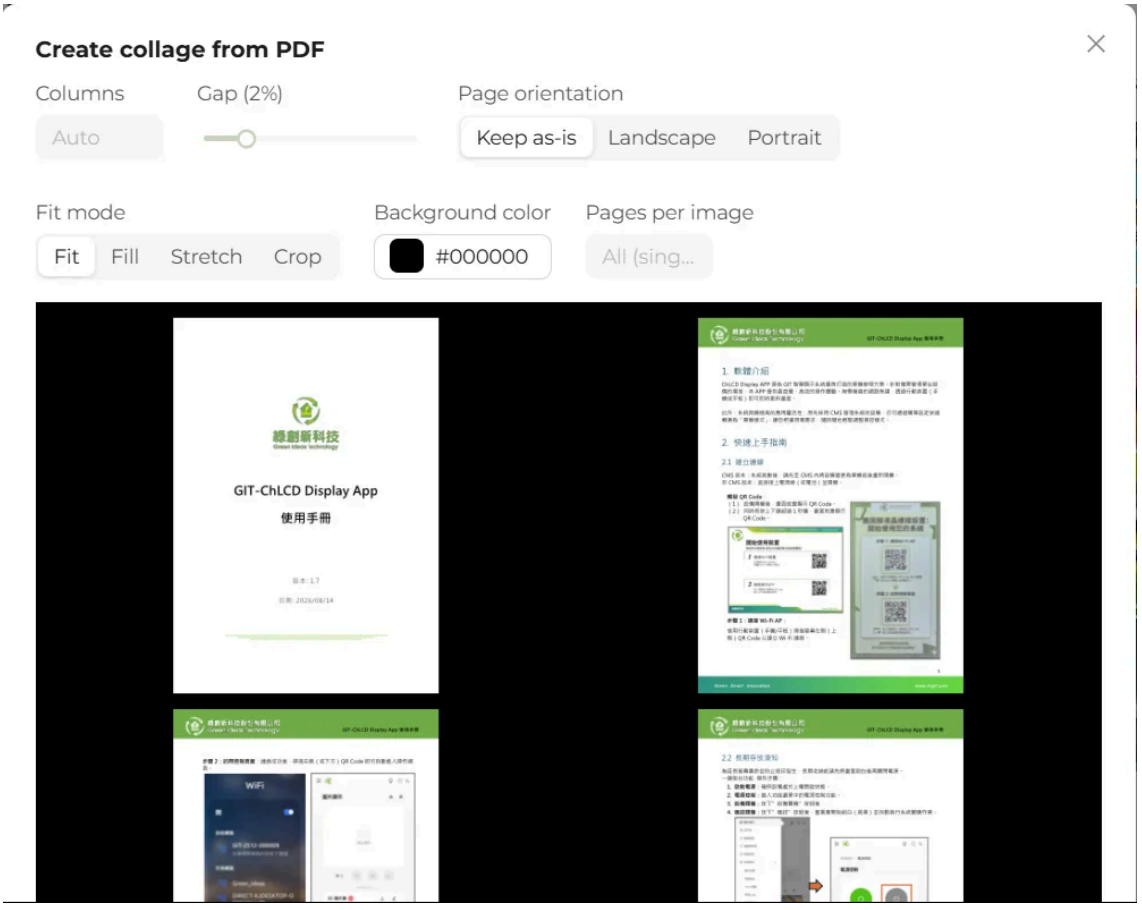
1. The window lists thumbnails of all pages. **Tap** the pages you want in the collage. A selected thumbnail shows its **selection order** in the top-left corner.
2. To use every page, check **Select all** (check it again to switch to "Deselect all"). The right side shows "N page(s) selected".
3. Once you have selected pages, a sorting area appears below (with the hint "Drag the thumbnails below to reorder"). Drag a thumbnail to change its position in the collage (press and move slightly before dragging starts).
4. Press **Next**. If no page is selected, you are prompted "Please select at least one page".

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com



3. Adjust the layout and preview

Step 2 generates a preview automatically. Every time you change an option, the preview is regenerated, and the options are briefly unavailable while it is being generated.



© 2025-2026 Green Ideas Technology | All rights reserved

Option	Default	Range	Description
Columns	Auto	1 to the number of selected pages	Leave blank for automatic: the system picks the layout with "the fewest empty cells and cell proportions closest to the page proportions"
Gap (N%)	2%	0 to 10%, in steps of 0.5%	Spacing between pages and around the outer edge, as a percentage of the short side of the screen. 0 means no gaps at all
Page orientation	Keep as-is	Keep as-is / Landscape / Portrait	Forces every page into landscape or portrait. Useful for laying out portrait A4 pages in landscape, or the other way around
Fit mode	Fit	Fit / Fill / Stretch / Crop	How each page is placed in its own cell; works the same as fit mode
Background color	Black	Any color; "Common colors" offers black, white, and gray	The color of the collage background and the blank space in cells
Pages per image	All (single collage)	1 to the number of selected pages	Leave blank to combine all pages into one image; enter a number to make one image for every N pages

- When "Pages per image" is set to fewer than the selected pages, you see "N page(s) selected, will create M image(s) (previewing image 1)". **Only the first image is previewed**; the others are created with the same layout rules.
- The collage background and blank space in cells follow "Background color", **black** by default. The color you pick is remembered in the browser on this phone or computer and used again for your next collage.
- You can tap the preview image to enlarge it.
- If the preview fails, the reason is shown, or "Failed to generate preview".

4. Create

1. When the preview looks right, press **Create**.
2. On success, "N image(s) created" is shown, the window closes, and the new images appear at the front of the image gallery.
3. To change the pages, press **Back**. Your selected pages and their order are kept.

If you press **Cancel** or close the window, the temporary data for this PDF upload is deleted as well.

The resulting images

Item	Description
Size	The effective screen size **at the time of creation** (taking the device's orientation into account)
Format	JPG
File name	The uploaded PDF's file name, for example `menu.jpg`; when split into several images, `menu-1.jpg`, `menu-2.jpg`, …
Rotation / fit mode	0° / Fit (same as any newly uploaded image)

© 2025-2026 Green Ideas Technology | All rights reserved

Set the device in its final orientation first

The size of a collage image depends on the device's orientation when you create it. Place the device in the orientation it will actually be displayed in (landscape or portrait) before creating the collage. If you turn it afterward, the collage is rescaled like any other image and may show black bars.

Layout tips

Content	Suggested settings
Single-page poster	Select only 1 page, fit mode "Fit"
2 A4 pages on a landscape panel	2 columns, gap 1–2%
4 A4 pages on a portrait panel	2 columns (2 × 2), gap 1%
Many pages, small text	Use "Pages per image" to split them into several images, then rotate them with an image set

Text on the panel must be large enough to read. The more pages you combine, the smaller each page becomes; check readability on the actual device, and reduce the pages per image if the text is too small.

FAQ

Q: "Lost connection to the device" appears while uploading a PDF? When a large file takes more than 60 seconds to upload over a phone connection, the web page assumes the connection has dropped. The device may actually still be processing it. Make the PDF smaller (delete pages you don't need, lower the resolution of embedded images) and upload it again.

Q: Two people uploaded PDFs at the same time, and one of them failed? Processing several PDFs at once can cause them to interfere with each other. Have one person upload at a time, and start the next file only after the previous one is done.

Q: The collage was left open for a long time without confirming, and then "PDF session not found" appeared? An unfinished collage is kept for 4 hours, and restarting the device also clears it. Upload the PDF again.

Q: "Creation failed" appears when I press Create? Upload the PDF again and repeat the steps (the temporary data from this upload has been deleted, so you can't continue from the previous step). Afterward, check the image gallery and delete any collage images you don't need.

Related: Image gallery and displaying images, Image sets

© 2025-2026 Green Ideas Technology | All rights reserved

Image sets

> Navigation: Main menu → **Image Sets**

An image set is "an ordered list of images". Schedules and the physical buttons both step through images one after another in the order of an image set. The images themselves are stored in the image gallery; an image set only records "which images are used and in what position".

Wording on screen

The management interface calls it "Image Set" everywhere. Some places on schedule cards and in button settings in older versions said "photo set"; it means the same thing.

Image sets and the image gallery

Item	Description
One image can go into several image sets	Yes. For example, the same notice image can be in both a "Weekdays" and a "Weekends" image set
The same image twice in one image set	No. Images already in the image set are skipped when you add them, and you can't select them again on the selection screen
Removing an image from an image set	Only takes it off the list; **the image stays in the image gallery**
Deleting a whole image set	Only deletes the list itself; **the images stay in the image gallery**
Deleting an image in the image gallery	The image is automatically removed from **all** image sets
Number of image sets, number of images per image set	The software sets no limit; in practice it's limited by the device's storage
Image set name	Required, up to 100 characters; names can repeat (but avoid duplicates so you don't pick the wrong one in a schedule)

Image set list

Open "Image Sets" to see all image sets, sorted by **creation time, newest first**.

Column	Description
Name	Image set name
Images	How many images it currently contains
Actions	Two buttons: target icon (button binding) and trash can (delete)

- **Click anywhere on a row** to open that image set's management screen (there's no separate "Manage" button in the list).
- On a phone-width screen, "Create Image Set" in the upper right shows only a **+** icon.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Name	Images	Actions
Lobby	4	
TEST	5	
測試	9	
TEST2	8	

Target icon: set as the button-controlled image set

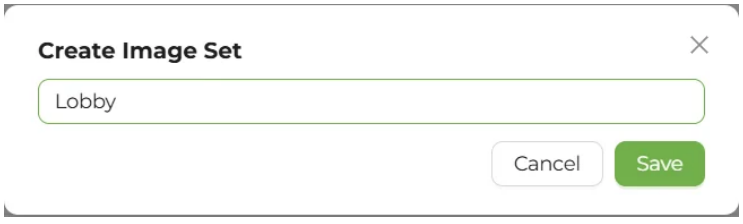
By default, the "Previous" and "Next" physical buttons on the device switch through the **whole image gallery**. Press an image set's target icon to limit button switching to that image set.

Action	Message on screen
Press the target icon on an unbound image set	Set as the button-controlled image set
Press it again on the bound image set (button shown in the theme color)	Unbound, buttons will cycle through the whole gallery
Saving fails	Failed to update button binding

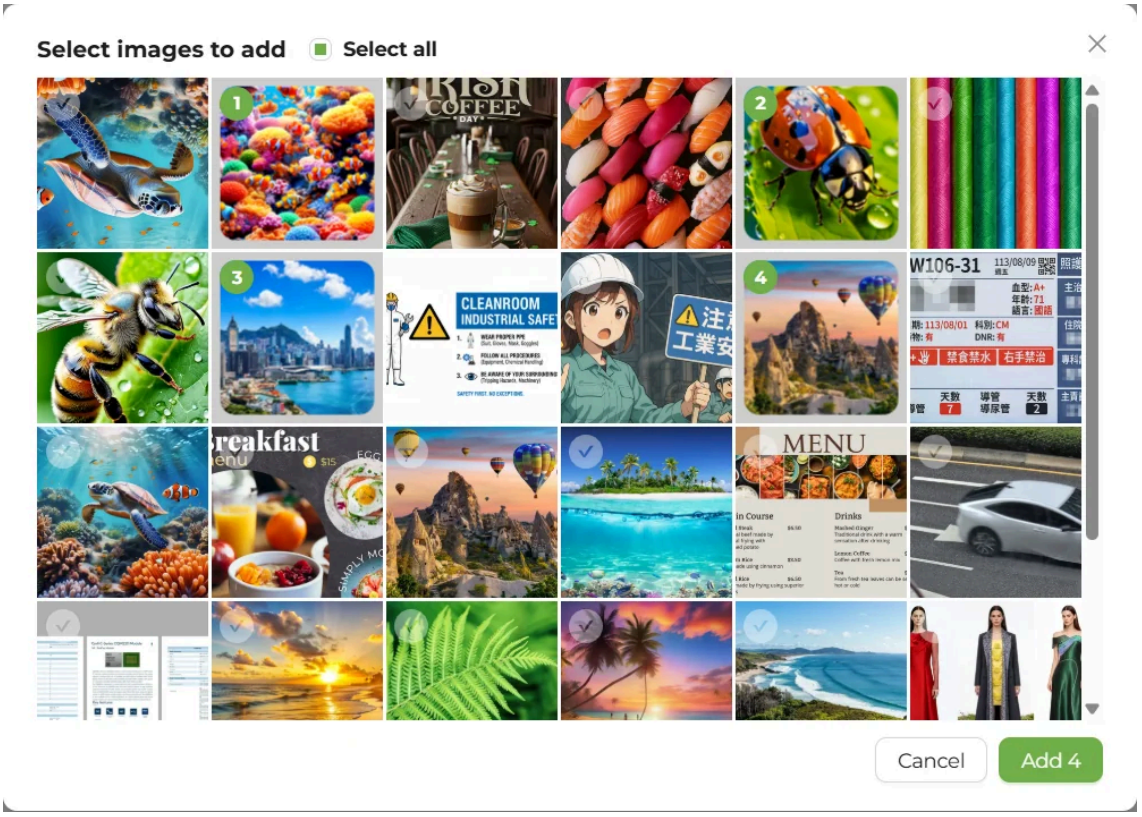
Only **one** image set can be bound at a time; binding another one automatically replaces the current one. You can also change the same setting under "Bound Image Set" in Physical buttons and gestures.

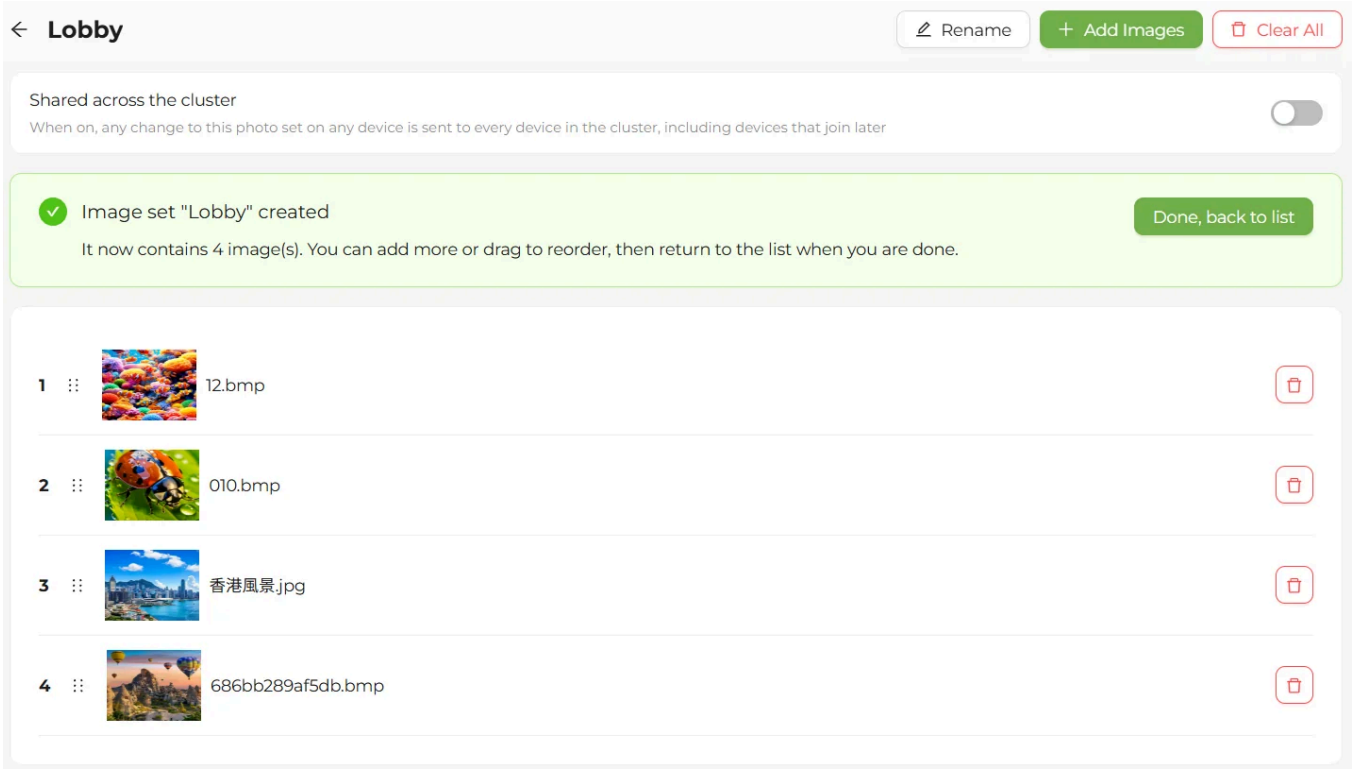
Create an image set

1. In the image set list, press **Create Image Set** in the upper right.
2. In the "Create Image Set" window, enter a name (required) and press **Save** or just press Enter.
3. When it's created, "Image set created successfully" appears, and the system **opens this image set automatically and opens the image selection window right away**.
4. Check the images you want to add and press **Add N**.
5. A notice at the top of the page, 'Image set "name" created', tells you how many images it has. Once the order looks right, press **Done, back to list**.



© 2025-2026 Green Ideas Technology | All rights reserved





The order you add is the order you click

While you select images, each thumbnail shows a number for the order you clicked it; after adding, the images are appended to the end of the image set in that order. If you deselect one in the middle, the numbers after it move up automatically. So to play images in a specific order, just click them in that order; no need to drag them afterward.

© 2025-2026 Green Ideas Technology | All rights reserved

Name is required

If the name is empty (or only spaces), "Please enter image set name" appears and the image set isn't created. A name longer than 100 characters shows "Failed to create image set".

Name in the presenter remote menu

The device screen's font includes only some characters. If a name contains characters the screen can't draw, you'll see a hint while typing it: "The presenter menu on the device cannot draw some characters in this name; it will be shown as "Photo set N"." See Presenter remote menu.

You can also **create an image set right inside** the schedule form while creating a schedule, without leaving the schedule page. See Schedules.

Manage the images in an image set

Click an image set in the list to open its management screen. The title is the image set name; the back arrow in the upper left returns to the list.

Buttons in the upper right:

Button	Purpose
Rename	Opens the "Edit Image Set" window to change the name; on success shows "Image set updated successfully"
Add Images	Opens the "Select images to add" window
Clear All	Appears only when the image set has images; removes all images at once (the images stay in the image gallery)

Each image is one row, showing in order: **number** (starting at 1), drag handle, thumbnail, original file name, and a red trash can. When the image set is empty, it shows "No images in this set".

Add images

1. Press **Add Images** to open "Select images to add".
2. Click the images you want to add. Images already in the image set are marked and can't be selected again.
3. To select many at once, check **Select all** next to the title (it selects only images not yet added); press **Deselect all** to clear the selection.
4. Press **Add N** (the button is disabled when nothing is selected).
5. On success, "Successfully added N images" appears; new images are always **appended to the end**.

If the image gallery has no images yet, the window shows "No available images in gallery". Upload some in the image gallery first.

Change the playback order

Press and hold the **drag handle** on the left of an image and drag it up or down to change the order (it moves only up and down). The change takes effect as soon as you let go; there's no need to save.

- If it fails, "Reorder failed" appears and the screen reloads to restore the original order.
- The new order **takes effect immediately** for the next image of schedules and button switching; you don't need to set up the schedule again.
- On a phone, make sure you hold the handle before dragging; swiping on the list just scrolls the page.

Remove a single image

1. Press the red trash can on the right of the image.

© 2025-2026 Green Ideas Technology | All rights reserved

2. In the "Confirm Remove" window (Are you sure you want to remove this image from the set?), press **Remove**.
3. On success, "Successfully removed 1 images" appears.

The image is only taken out of the image set; it stays in the image gallery.

Clear all

Press **Clear All** → press **Clear** in the "Confirm Clear" window; on success "Image set cleared" appears. The image set itself and the images in the image gallery are kept.

Delete an image set

1. In the image set list, press the trash can on that row.
2. Confirmation window: "Are you sure you want to delete this image set? (Images will not be deleted)". Press **Delete**.
3. On success, "Image set deleted" appears.

Deleting an image set a schedule is using

When a schedule or the button switching is using this image set, the confirmation window also warns you:

- "These schedules use this image set. After deleting it they will stop changing images until you choose another image set:", followed by a list of those schedules.
- "This image set is bound to the buttons. After deleting it, the buttons will switch through the whole gallery instead."

After deletion:

- Schedules that use it **are not deleted** and still trigger on time, but since there's no image set, **the image doesn't change**; the schedule card shows "No image set selected".
- To make the schedule work again, edit it and choose an image set again (the "Image Set" field is required; you can't save without it).
- The button switching automatically goes back to switching through the whole image gallery.

How an image set decides the "next" image

Schedules and button switching both move forward in image set order:

1. The first time, it starts from the **first image**.
2. After that, it moves to the **next image** each time.
3. After the last image, it **goes back to the first image** and continues.
4. If the "current image" has been removed from the image set, the next time starts again from the first image.
5. If the image set has only one image, the same image is refreshed every time, so it looks like "the image didn't change". Put at least two images in an image set used by a schedule.
6. If a schedule uses an empty image set, nothing is displayed on the panel afterward; if button switching is bound to an empty image set, it automatically goes back to the image gallery.
7. After switching to a different image set, the system first checks whether the "current image" is also in the new image set: if it is, it moves on to its next image in the new image set; if not, it starts from the first image of the new image set.

FAQ

Q: Is the order in an image set related to the order in the image gallery? No. Each image set has its own order, and they don't affect each other.

© 2025-2026 Green Ideas Technology | All rights reserved

Q: I pressed "Edit Image Set" in the schedule form, and when I came back the form was empty? "Edit Image Set" jumps to the image set management page and leaves the schedule page, so an unsaved schedule form isn't kept. If you only want to add images, press "Choose images" next to it instead; it lets you add them right on the schedule page.

Q: After I delete an image from the image gallery, do I need to tidy up the image sets manually? No. The image is removed from all image sets automatically.

Related sections: Image gallery and displaying images, Schedules, Physical buttons and gestures

© 2025-2026 Green Ideas Technology | All rights reserved

4. Automation

© 2025-2026 Green Ideas Technology | All rights reserved

Schedules

> Navigation: Main menu → **Schedule**

Schedules let the device change images automatically by time. Each schedule is tied to one image set and one "change frequency". **Each time it's due, the screen changes to the next image in the image set.**

How it works

Once you understand these points, you'll understand everything schedules do:

1. **Each trigger changes only one image.** A schedule doesn't "play continuously during a time range"; it "moves to the next image at each point in time". For example, "Every 10 min" means the image changes every 10 minutes.
2. **Loops through the image set in order.** It starts from the first image and goes back to the first after the last one. See How an image set decides the "next" image.
3. **Multiple schedules run independently.** All enabled schedules fire at their own frequency and don't replace each other.
4. **The panel handles only one image at a time.** Refreshing one image on a cholesteric LCD takes a while (it depends on the model and refresh mode, for example about 6 seconds on the 13.3-inch, about 16 seconds on the 27.6-inch, and about 20 seconds on the 32-inch). Image change requests that arrive during a refresh are skipped; see Simultaneous triggers and skipped changes.
5. **Times follow the device's time zone.** Schedules are calculated in the time zone set on the device, not your browser's time zone; see Time zone.
6. **Schedules are kept after a restart.** Schedules are stored in the device's database and remain after a restart or power loss.
7. **They run on time even during sleep.** A sleeping device wakes up automatically before the next schedule; see Sleep and wake-up.

Page overview

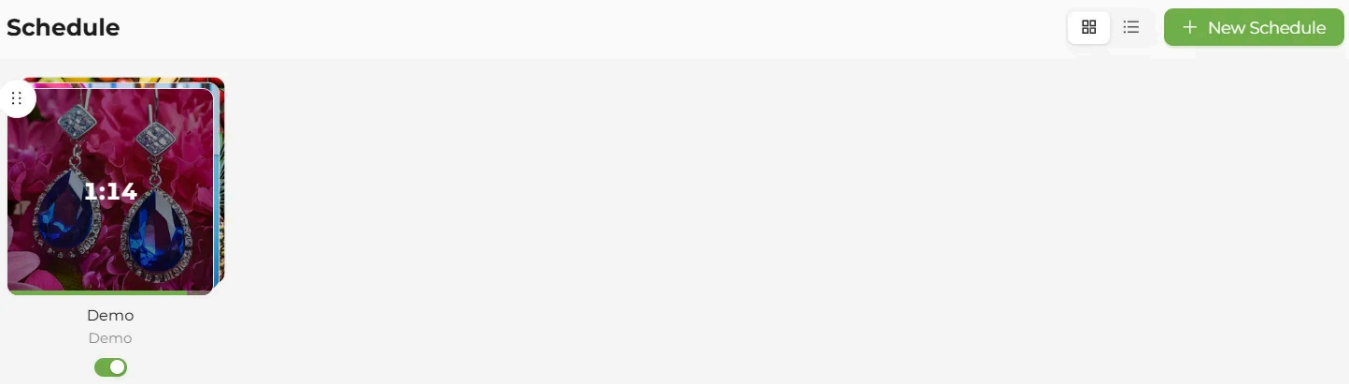
At the top right of the schedule page are two view buttons and the "New Schedule" button:

Button	Description
Grid icon	Card view (default): one card per schedule, showing the next image to play and a countdown
List icon	Table view: lists all schedules with their detailed fields in a table
New Schedule	Create a new schedule (only the + icon at phone width)

- The view isn't remembered; reloading the page returns to card view.
- The schedule list updates automatically every 30 seconds, and immediately after a schedule changes an image.
- When there are no schedules yet, "No schedules yet" is shown.

© 2025-2026 Green Ideas Technology | All rights reserved

Card view



Each schedule is a square card:

Location	Content
Card front	**The next image to be played.** The two cards stacked behind it are "the one after next" and "the one after that", so you can see the upcoming order at a glance
Center of the front	Countdown to the next image change (`min:sec`, or `hr:min:sec` if over 1 hour). The countdown fades out when you hover over the card so you can see the image clearly
Thin bar at the bottom of the card	Progress bar: grows from "the last image change" to "the next image change"; when it's full, the image changes
Round button at the top left	Drag handle for changing the order
Below the card	Schedule name ("Unnamed" if there's no name) and image set name
Small switch below the name	**Enable/disable the schedule directly.** One tap takes effect immediately; you don't need to open the edit window

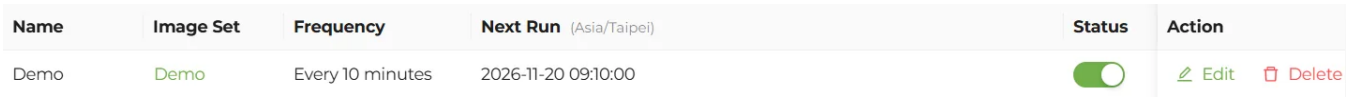
States that may appear on the card front:

Shown	Meaning
Dark overlay + spinner	This schedule is refreshing the panel
Red ✕ (about 2 seconds)	This round's image change was skipped; see Simultaneous triggers and skipped changes
Gray overlay "Disabled"	The schedule is disabled and won't fire
Orange vignette	Predicted to fire at the same moment as another schedule; this one is ordered first and will run
Red vignette + "Conflict"	Predicted to fire at the same moment as another schedule; this one is ordered later and will be skipped this round
Image icon (no thumbnail)	The image set is empty, or no image set is selected

Tapping the card (the image area) opens the "Edit Schedule" window. When an image finishes refreshing, the card plays a "card draw" animation and the next image moves to the front.

© 2025-2026 Green Ideas Technology | All rights reserved

Table view



Column	Description
Name	Schedule name; "Unnamed" if there's no name
Image set	Tappable; jumps straight to that image set's management screen
Change frequency	Describes the frequency in words, for example "Every 10 min"; shows the raw cron expression if it can't be parsed
Next Run	Date and time of the next image change (shown in the device time zone); shows "Paused" when the schedule is disabled. Hidden on narrower screens
Status	Enable/disable switch
Actions	"Edit" and "Delete" (only icons at phone width)

The table lists schedules in their order, but you can only drag to reorder in card view.

"Disabled" and "Paused"

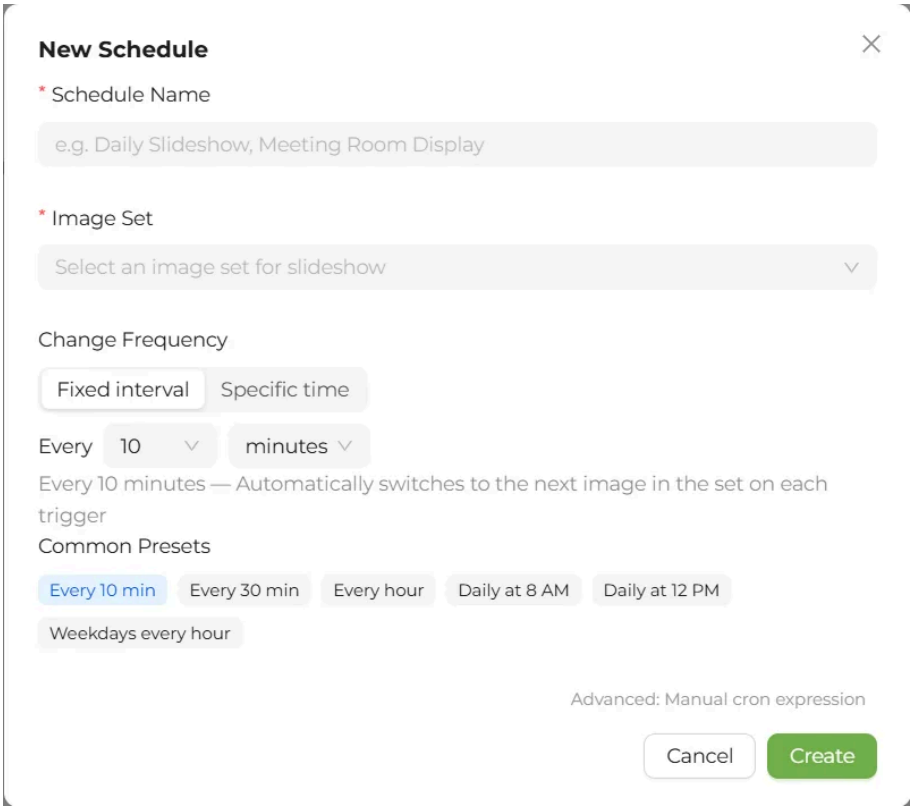
Card view says "Disabled", and the table's next run column says "Paused". Both mean the same thing: this schedule won't fire for now.

Create a schedule

1. Tap **New Schedule** at the top right.
2. Fill in the "New Schedule" form:

Field	Required	Description
Schedule Name	Yes	For example "Daily Slideshow" or "Meeting Room Display". If left blank, you'll see "Please enter a schedule name"
Image set	Yes	Choose the image set to play. Options show "name (N images)", and you can type to search. If none is selected, you'll see "Please select an image set"
Change Frequency	Yes	Defaults to "Fixed interval: Every 10 min"; see Change frequency settings in detail

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com



3. Tap **Create**. On success you'll see "Schedule created".

New schedules are **enabled by default** and placed after all other schedules.

> **The image doesn't change right after you create a schedule**
>
> A schedule changes the image for the first time only at its next trigger time. With "Every 10 min", the times are :00, :10, :20... every hour; if you create it at 9:03, the first change happens at 9:10. To see a result right away, first display an image manually from the image gallery.

Create an image set and choose images in place

You can prepare an image set from the schedule form without leaving the page:

- **Create an image set:** open the "Image Sets" drop-down. At the bottom there's a "New image set name" box. Type a name and tap **Create** (or press Enter). On success you'll see "Image set created and selected", and it's selected automatically.
- **Add images:** after choosing an image set, **Choose images** appears next to the field label. Tap it to open "Choose images to add", check the images, and tap **Add N**. On success you'll see "Added N image(s)". You can only add images here; to remove or reorder them, go to the image set page.
- **Edit an image set: Edit Image Set** next to the label jumps to the image set management page. **This leaves the schedule page, and any unsaved form content is lost.**

When you choose an empty image set, a reminder appears below the field: "This image set has no images yet, so nothing will be shown when the schedule fires. Remember to add images first." Next to it, **Choose images now** lets you add images directly. This is only a reminder; it doesn't stop you from saving.

Edit a schedule

- **Card view:** tap the card's image area.

© 2025-2026 Green Ideas Technology | All rights reserved

- **Table view:** tap **Edit** in that row.

The "Edit Schedule" window has the same fields as when creating one, plus an "Enable" switch. When you're done, tap **Save**. On success you'll see "Schedule updated".

- After changing the change frequency, the next trigger time is recalculated using the new frequency.
- When you edit and save a disabled schedule, it stays disabled and doesn't start running again on its own.
- After switching to another image set, if the previous "current image" is also in the new image set, playback continues with the image after it; otherwise it starts from the first image in the new image set.

Enable and disable

You can switch this in three places:

1. The small switch below the card name (fastest; one tap takes effect immediately)
2. The "Status" switch in table view
3. The "Enable" switch in the edit window (you need to tap Save)

On success you'll see "Schedule enabled" or "Schedule paused"; on failure, "Operation failed".

A disabled schedule:

- Doesn't change images.
- **Doesn't** wake the device from sleep.
- When enabled again, continues from the next point in time and picks up where it left off before it was disabled.

Delete a schedule

1. Open the schedule's edit window (in card view, tap the card; in table view, you can also tap "Delete" in that row directly).
2. Tap the red **Delete** at the **bottom left** of the window.
3. Confirm "Are you sure you want to delete this schedule?" (deletion can't be undone) and tap OK.
4. On success you'll see "Schedule deleted", and the window closes automatically.

The cards deliberately have no delete button, to avoid accidental taps while dragging to reorder on a phone. Deleting a schedule doesn't delete the image set or images.

Order and "conflict" warnings

In card view, press and hold the drag handle at the top left of a card to change the schedule order. If it fails, you'll see "Failed to update priority" and the order is reverted.

What the order actually does:

- Decides the display order of cards and table rows.
- When two or more enabled schedules fire **at the same moment**, decides which one runs: the one ordered first runs (shown with an orange vignette), and the ones ordered later are skipped this round (shown with a red vignette and "Conflict").

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

The one ordered later is skipped

When two schedules fire at the same time, **the one ordered first runs**, and the one ordered later, marked "Conflict", is skipped this round. If you want both to change images, the best approach is to stagger their times, for example one at :00 and the other at :05.

Simultaneous triggers and skipped changes

Refreshing one image on a cholesteric LCD panel takes a while, and **the panel doesn't accept new image change requests during a refresh**. So if the panel is busy when a schedule fires, that round is skipped:

Common cause	Description
Two schedules fire at the same moment	The one ordered later (marked "Conflict") is skipped this round
Someone is displaying an image manually when the schedule fires	The schedule is skipped this round
Someone presses a physical button to switch images when the schedule fires	The schedule is skipped this round
The device is redrawing the screen after being rotated	The schedule is skipped this round

When a change is skipped:

- A **red** ✕ briefly appears in the center of the card (about 2 seconds).
- This schedule's "current image" **doesn't advance**; it's played the next time the schedule fires successfully. If it keeps getting skipped, stagger the times.
- The device's status LED briefly shows busy; see Status LEDs.

Image changes missed during power loss, restart, and sleep

Situation	What happens to missed image changes
During sleep	The device wakes up automatically about 3 seconds before the next schedule and changes the image on time. If it finds an overdue image change after waking up, it **makes up for it once right away**
Waking the device from sleep with a physical button	Same as above: a missed image change is made up once right away
Power loss or restart	After startup, image changes missed by **2 minutes or less** are made up once; those missed by more than 2 minutes are skipped, and the schedule waits for the next point in time
Many missed changes	It doesn't make up many changes in a row; at most one
Fully shut down	No schedules run while the device is shut down, and it doesn't turn itself on

Time zone

Schedule times **follow the device's time zone**. If your browser's (phone's or computer's) time zone differs from the device's, a yellow notice appears at the top of the schedule page:

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

> **Timezone mismatch** — Your browser's time zone (Asia/Taipei) differs from the device's time zone (UTC). Schedule times follow the device's time zone. Do you want to sync the device's time zone to your browser's time zone?

Tap **Sync to Asia/Taipei** (showing your browser's time zone) to change the device's time zone to match yours. On success you'll see "Device timezone updated to ...". You can also tap × to close the notice (only for this visit to the page). You can also change the time zone in Time Settings.

After you change the device's time zone, existing schedules keep the clock times they were set to and fire according to the new time zone (for example, a schedule that ran at 8:00 every day still fires at 8:00 in the new time zone). You don't need to save them again. Disabled schedules stay disabled.

The table's "Next Run" is shown in the **device's time zone**, matching the device's actual clock time, and isn't affected by your browser's time zone.

Tips

- **Put at least two images in an image set used for a schedule.** With only one, the same image is refreshed every time.
- **Stagger the times of multiple schedules** so they don't fire at the same moment and get skipped.
- **Don't set the frequency too high.** Refreshing one image on the panel takes a while (it depends on the model and refresh mode, for example about 6 seconds on the 13.3-inch, about 16 seconds on the 27.6-inch, and about 20 seconds on the 32-inch), and every refresh uses power. For typical signage, changing every 10 minutes or more is recommended. Be especially careful on battery models; see Battery.

Messages

Message	When it appears
Schedule created/Schedule updated/Schedule deleted	Action succeeded
Schedule enabled/Schedule paused	Enabled state changed successfully
Creation failed/Update failed	Saving failed. Common causes: the cron expression entered in advanced mode is invalid, or the selected image set was just deleted
Please fix the cron expression	The "Specific time" editor setting is invalid
Please enter a schedule name/Please select an image set	Required field not filled in
Operation failed	Enabling/disabling failed
Deletion failed	Deletion failed
Failed to update priority	Drag-and-drop reordering failed and was reverted
Failed to load schedules/Failed to load image sets	Loading data failed, usually because the connection dropped; reload the page

Related sections: Change frequency settings in detail, Image sets, Sleep and wake-up, Troubleshooting: schedules and time

© 2025-2026 Green Ideas Technology | All rights reserved

Change frequency settings in detail

The "Change Frequency" of a schedule and the "Trigger Frequency" of a light schedule are set up the same way. This page explains each way to set it, the rules behind it, and examples for common needs.

Four ways to set it

Method	Best for	Where
Fixed interval	Changing "every N minutes / every N hours"	Choose "Fixed interval" with the toggle above the frequency field
Specific time	"At a certain time every day", "on certain days of the week", "on a certain day of the month", and so on	Choose "Specific time" with the toggle above the frequency field
Common Presets	Applying common settings with one tap	The "Common Presets" tags at the bottom of the form
Advanced cron	If you know cron syntax and need a special combination	"Advanced: Manual cron expression" at the bottom right of the form

Whichever method you use, the setting is stored on the device in the same format (a cron expression). A plain-language description appears live below the frequency field, for example "Every 10 min". Use this line to check that the setting does what you expect.

Fixed interval

It appears as "Every [number] [minutes/hours]", where both are drop-downs.

Unit	Numbers you can choose
minutes	1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30
hours	1, 2, 3, 4, 6, 8, 12

Why only these numbers

A fixed interval is **aligned to the clock**:

- **Every N minutes**: starts at minute 0 of each hour, runs every N minutes, and starts over at the next full hour. Example: every 15 minutes → :00, :15, :30, :45 of each hour.
- **Every N hours**: starts at 0:00 each day, runs on the hour every N hours, and starts over at 0:00 the next day. Example: every 3 hours → 0:00, 3:00, 6:00, 9:00, 12:00, 15:00, 18:00, 21:00.

Because the count starts over every hour (60 minutes) and every day (24 hours), only numbers that divide 60 or 24 evenly keep the interval **always the same length**. For example, "every 7 minutes" would reach the next hour's :00 only 4 minutes after :56, so the interval would vary, which is why it isn't offered.

> **Need "every 45 minutes" or "every 90 minutes"?**
>
> The current settings **don't support** intervals like these. A fixed interval can only use numbers that divide 60 minutes or 24 hours evenly.

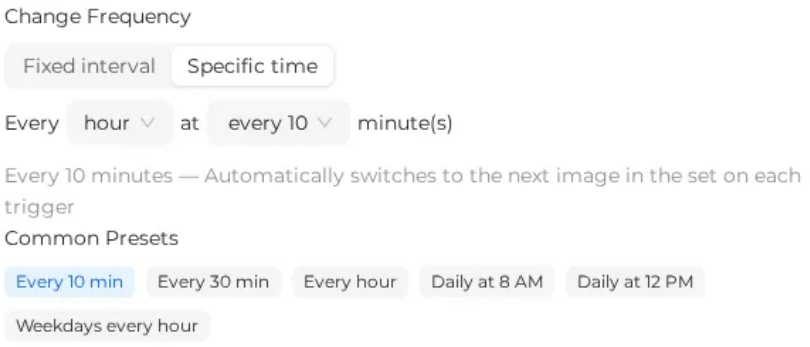
© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Other fixed interval behavior

- New schedules default to "Fixed interval: Every 10 min".
- When you switch units, if the current number isn't valid for the new unit (for example switching "10 minutes" to hours), it changes to 1 automatically.
- When you switch from "Specific time" back to "Fixed interval", if the existing setting isn't in interval format, it resets to every 10 minutes.
- When you edit an existing schedule, if its setting happens to be in fixed interval format, it opens in the "Fixed interval" view; otherwise it opens in "Specific time".

Specific time

Build a time rule with drop-downs. The first drop-down chooses the period ("every" what), and the fields after it change accordingly:



Period	What you can set	Example
Every minute	No other fields	Once a minute
Every hour	Which minute	Minute 30 of every hour
Every day	Hour, minute	8:00 every day
Every week	Day of week, hour, minute	9:00 every Monday, Wednesday, and Friday
Every month	Day of month, hour, minute	0:00 on the 1st of every month
Every year	Month, day, hour, minute	0:00 on January 1 every year

Most fields allow **multiple selections**. For example, selecting 8, 12, and 18 for the hour fires once each at 8:00, 12:00, and 18:00 every day.

If the setting is invalid, you'll see "Please fix the cron expression" when you save.

Common Presets

Tap a preset to apply it. The preset currently in use turns blue.

Schedules:

Preset	Equivalent to
Every 10 min	`*/10 * * * *`
Every 30 min	`*/30 * * * *`

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Preset	Equivalent to
Every hour	`0 * * * *`
Daily at 8 AM	`0 8 * * *`
Daily at 12 PM	`0 12 * * *`
Weekdays every hour	`0 * * * 1-5`

Light schedules:

Preset	Equivalent to
Daily at 7 AM	`0 7 * * *`
Daily at 8 PM	`0 20 * * *`
Daily at 10 PM	`0 22 * * *`
Weekdays at 7 AM	`0 7 * * 1-5`

Advanced: enter a cron expression manually

Tap the gray "Advanced: Manual cron expression" at the bottom right of the form, and the field turns into a text box where you can type a cron expression directly. "Back to selection mode" on the right returns you to the graphical settings.

Notes

- The text box supports a single-line cron expression only; each schedule can have only one.
- Don't add line breaks, and don't enter several expressions or comments in the same field. Otherwise the schedule may fail to save or may not run properly.

Advanced mode isn't checked as you type

The text box doesn't check the format as you type. A format error shows up as "Creation failed" or "Update failed" only when you tap "Create" or "Save". After typing, first check that the plain-language description below the field is correct; if the description just shows the raw text you typed, the system can't understand the expression.

Cron expression format

It has 5 fields separated by spaces:

```
┌──────── minute (0–59)
│ ┌──────── hour (0–23)
│ │ ┌──────── day of month (1–31)
│ │ │ ┌──── month (1–12)
│ │ │ │ ┌ day of week (0–7, where 0 and 7 are Sunday; English abbreviations sun, mon…sat also work)
│ │ │ │ │
*/10 * * * *
```


© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Symbol	Meaning	Example
`*`	Every	`*` in the hour field = every hour
`,`	List	`8,12,18` in the hour field = 8:00, 12:00, and 18:00
`-`	Range	`9-17` in the hour field = 9:00 through 17:00
`/`	Interval	`*/15` in the minute field = every 15 minutes

- The smallest unit is the **minute**; you can't set seconds.
- Anything other than 5 fields, values out of range, `*/0`, and similar are rejected.
- A date that never occurs (for example February 31) doesn't cause an error, but the schedule never fires, and the table shows "Paused".

Common examples

Need	Cron expression
Every 5 minutes	`*/5 * * * *`
Every 30 minutes from 9:00 to 17:30 every day	`*/30 9-17 * * *`
8:00, 12:00, and 18:00 every day	`0 8,12,18 * * *`
9:00, 10:30, 12:00, and 13:30 every day (irregular times)	Needs two schedules: `0 9,12 * * *` and `30 10,13 * * *`
Weekdays at 8:00	`0 8 * * mon-fri`
Every hour on weekends	`0 * * * sat,sun`
0:00 on the 1st of every month	`0 0 1 * *`
9:00 on the first day of each quarter	`0 9 1 1,4,7,10 *`

Known issue with the day-of-week field

Fixed in 1.11.0: numeric days of the week were off by one day

In version 1.10.0 and earlier, if the day-of-week field of a cron expression **used numbers** (0–6), the schedule actually fired **one day later** (for example, `0 7 * * 1-5` actually fired Tuesday to Saturday). The "Weekdays every hour" and "Weekdays at 7 AM" presets in "Common Presets" were affected too.

From **1.11.0**, numbers in the day-of-week field follow standard cron numbering: 0 and 7 are Sunday, 1 is Monday ... 6 is Saturday. When you update to 1.11.0, existing schedules created with numeric days of the week are corrected automatically, and disabled schedules stay disabled. You don't need to set them up again.

How to choose a frequency

Situation	Recommendation
Typical shop or hallway signage	Change images every 10–30 minutes

© 2025-2026 Green Ideas Technology | All rights reserved

Situation	Recommendation
Menus and price lists (only need changing during business hours)	Specify business hours, for example `*/30 10-21 * * *`
Different content at fixed times (breakfast/lunch)	One schedule per time period, each with its own image set, with times staggered
Battery power	The more often images change, the more power is used. Change every 30 minutes or more, and combine with sleep

A cholesteric LCD doesn't need constant refreshing to keep its image (see How cholesteric LCDs work). The "change frequency" only decides how often the content changes; a low frequency won't make the image disappear.

Related sections: Schedules, Light schedules and the light, Time, time zone, and time sync

© 2025-2026 Green Ideas Technology | All rights reserved

Light schedule and light

> Navigation: main menu → **Light Schedule**; or the **light bulb icon** in the top-right corner of the management interface

Applicable models

The light is **optional**. The "Light Schedule" menu and the light bulb icon appear only on devices with the light installed; devices without it don't show them.

With the light installed, the signage is easy to read even in dim surroundings. You can turn it on and off by hand or automatically with a schedule. The light has only two states, **on / off**; there is no brightness adjustment.

Light bulb in the top-right corner: manual on/off

Icon	State	When tapped
Solid yellow light bulb	The light is on (tooltip "Light is on, click to turn off")	Turns the light off
Outlined light bulb	The light is off (tooltip "Light is off, click to turn on")	Turns the light on
Gray light bulb	Currently controlled by a light schedule (tooltip "Currently controlled by light schedule, click to go to schedule page")	Goes to the Light Schedule page without switching

- The light's state updates in real time; when someone else switches it, your screen updates too.
- Your manual setting is remembered. After a restart (when no light schedule is enabled), the light returns to the last state you set by hand.
- As long as **any light schedule is enabled**, you can't switch the light by hand. To control it manually, disable all light schedules first.
- You can also switch the light with the presenter remote: press "Volume +" to turn it on and "Volume -" to turn it off, or toggle "Light" in the presenter remote menu. Here too, you can't switch it while a light schedule is enabled.

Light schedule

A light schedule turns the light on or off at a set time. **Each schedule performs its action only once, at the moment it triggers**; the light then stays that way until the next schedule changes it. So you usually pair one "Turn On" schedule with one "Turn Off" schedule:

Schedule Name	Action	Trigger Frequency
Morning on	Turn On	Daily at 7 AM
Evening off	Turn Off	Daily at 10 PM

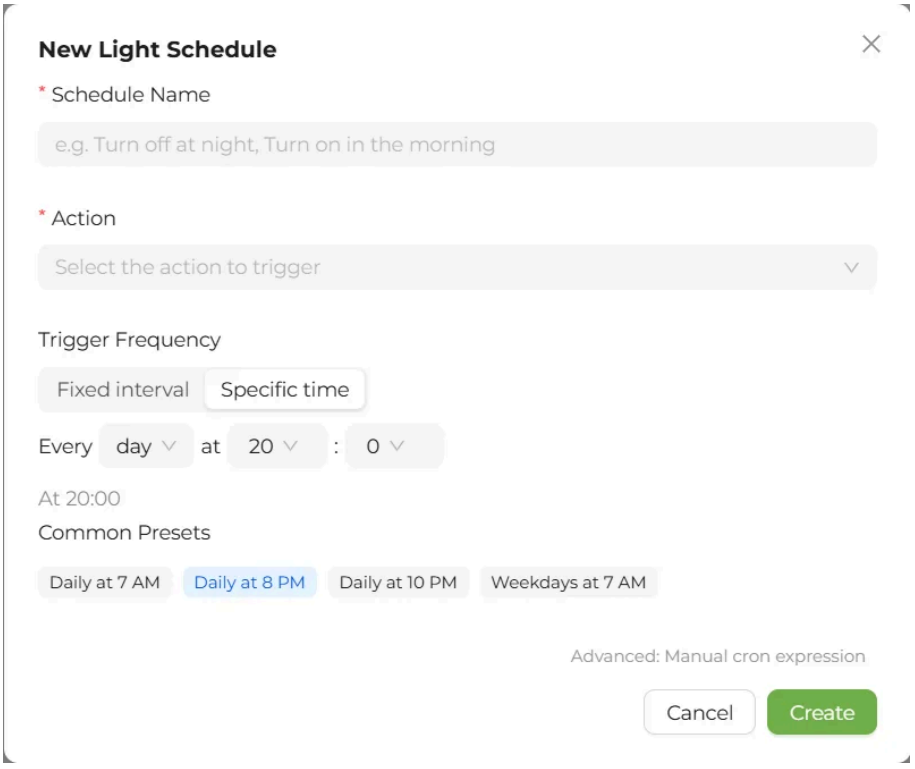
Adding a schedule

1. On the Light Schedule page, press **New Schedule**.
2. Fill in "New Light Schedule":

Field	Required	Description
Schedule Name	Yes	For example "Turn off at night", "Turn on in the morning"

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Field	Required	Description
Action	Yes	Turn On / Turn Off
Trigger Frequency	Yes	Defaults to "Daily at 8 PM". See Image change frequency in detail for how to set it



3. Press **Create**. On success, "Schedule created" is shown. A new schedule is enabled by default.

Page columns

The light schedule has a table view only:

Column	Description
Name	Shows "Unnamed" if there is no name
Action	"Turn On" (gold) or "Turn Off" (gray)
Trigger Frequency	Described in words
Next Run	Shown in the device time zone; shows "Paused" when disabled
Status	Enable / disable switch
Actions	Edit, Delete

After adding or changing a schedule, the light changes right away

After you add, change, enable, disable or delete a light schedule, the system **immediately corrects** the light's state based on "whether the most recent event that should have happened by now is turning on or turning off".

© 2025-2026 Green Ideas Technology | All rights reserved

> Example: at 9 PM you add "turn off daily at 8 PM". Because the light should already have been turned off at 8 PM today, the light **turns off right away**.

This is by design, to keep the light's state consistent with the schedule.

The light turns on right away after you create your first "Turn On" schedule

When you create light schedules for the first time, if you create a "Turn On" schedule first, the light **turns on immediately, whether or not that schedule is enabled**, and stays on until you create the matching "Turn Off" schedule. When setting up for the first time, we recommend creating the "Turn On" and "Turn Off" schedules together in one go.

After all light schedules are disabled

- The light **stays in the state last set by a schedule** and doesn't change right away.
- The light bulb icon can switch the light by hand again.
- At the next restart, the light is set to **the last state you set by hand** (which may differ from the current state).

Sleep and light schedules

- Sleep doesn't turn the light off: if the light is on when the device goes to sleep, it **stays on** during sleep. To save power, turn the light off by hand first, or set up a Turn Off schedule.
- Light schedules also wake a sleeping device automatically before they trigger.
- Light events missed during sleep are not run afterward; when the device wakes up, it corrects the light to the state it should be in at that time.

Tips

- Set one Turn On and one Turn Off schedule to form a complete daily cycle.
- **Don't set Turn On and Turn Off for the same minute**; the result is unpredictable.
- When you edit and save a disabled light schedule, it stays disabled and doesn't re-enable itself.

Messages

Message	Meaning
Schedule created / Schedule updated / Schedule deleted	The action succeeded
Schedule enabled / Schedule paused	The enabled state was switched successfully
Creation failed / Update failed	Saving failed; a common cause is an invalid cron expression in advanced mode
Please enter a schedule name / Please select turn on or turn off	A required field is empty
Please fix the cron expression	The frequency setting is invalid
Operation failed / Deletion failed	The action failed; reload the page and try again

Related: Image change frequency in detail, Sleep and wake-up, Models and specifications

© 2025-2026 Green Ideas Technology | All rights reserved

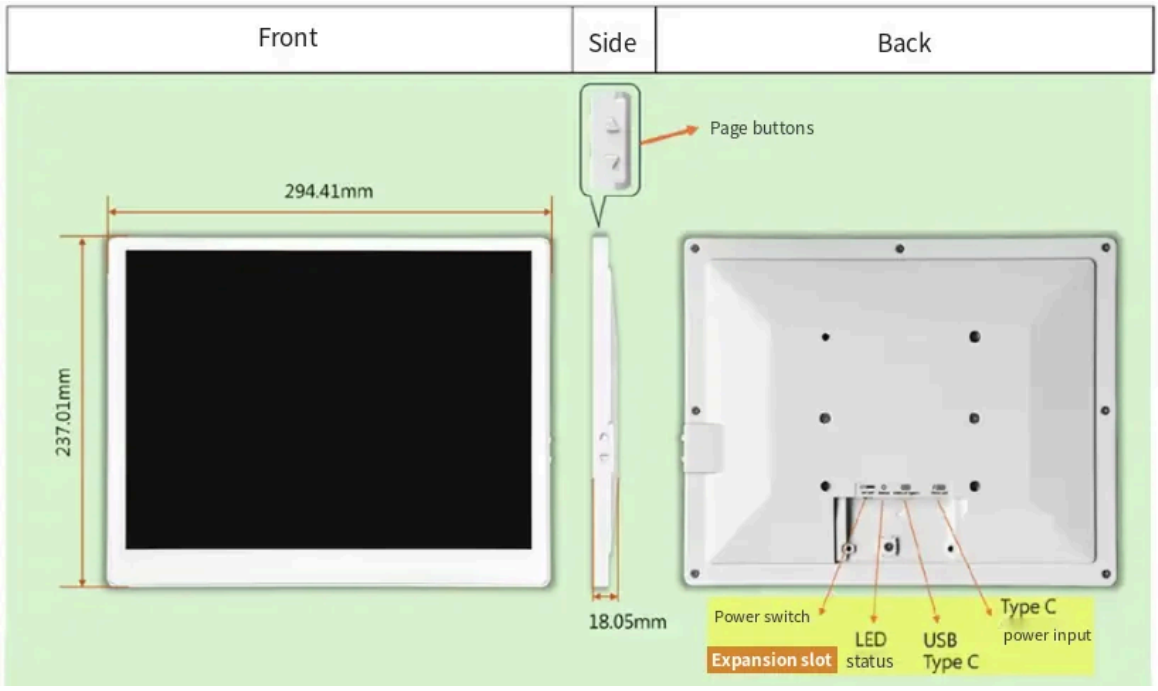
Physical buttons and gestures

> Navigation: Settings → Interaction → **Button Trigger Settings**

The device has two physical buttons: the **Previous button** and the **Next button**. Besides switching images, you can use gestures to clear the screen, show the QR code, wake up the device, and do a factory reset. You can also connect a presenter remote to change pages.

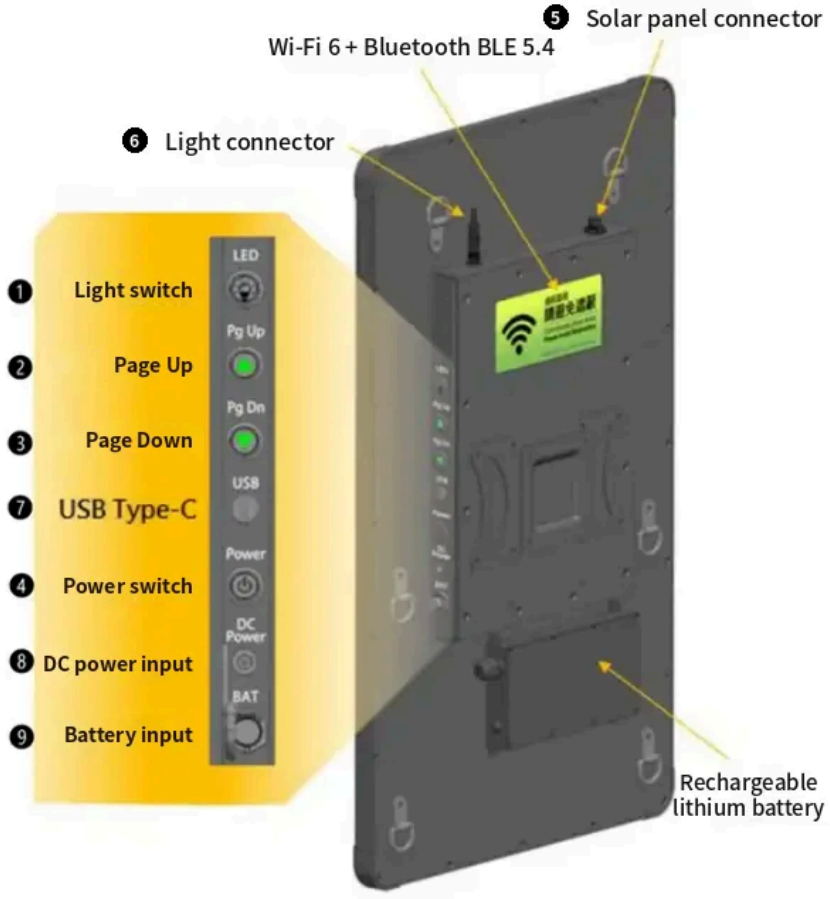
Button location

13.3-inch: The two buttons are on the side of the device, where the "Side" view in the figure below is labeled "page buttons". The upper one is the Previous button and the lower one is the Next button.



27.6-inch, 32-inch: The buttons are on the control panel on the side of the device. "Pg Up" is the Previous button and "Pg Dn" is the Next button. The light switch, power switch, and connectors on the panel are not part of the button functions on this page.

© 2025-2026 Green Ideas Technology | All rights reserved



Button functions at a glance

Function	Default action	Can be changed
Go to the next image	Press the "Next button" once	No
Go to the previous image	Press the "Previous button" once	No
Clear the screen	**Double-press** either button (the gap must be longer than 0.3 seconds)	Yes
Show the QR code startup screen	**Long-press** either button **for 1.5 seconds**	Yes
Wake up a sleeping device	Press either button	No
Factory reset	**Hold** either button **for 40 seconds**	No

The long press and the factory reset are the same gesture

"Long-press for 1.5 seconds to show the QR code" and "hold for 40 seconds to factory reset" are both **holding one button down**; the only difference is how long. After you press, this happens over time:

Time held	What happens
1.5 seconds	The QR code startup screen starts refreshing (**it triggers without releasing**)

© 2025-2026 Green Ideas Technology | All rights reserved

Time held	What happens
3 seconds	The status LED starts blinking fast (red on full-color LEDs): the factory reset countdown has started
40 seconds	Factory reset: all images, schedules and settings are erased

To bring up the QR code, release as soon as the screen starts refreshing

Releasing at any time within 40 seconds cancels the factory reset; a QR code refresh that has already started is not affected. If the LED starts blinking fast, the countdown has started: release immediately.

- If "Long Press Duration" is set to 3 seconds or more, you will see the factory reset's fast blinking **first** and the QR code refresh **after** it. This is normal; just release.
- Pressing the other button as well cancels the factory reset countdown.
- For the full description of the factory reset, see Factory reset.

Switching images

- Press the "Next button" or "Previous button" once to switch; the image after the last one is the first one.
- After you press, the device waits for the "Double-tap Max Interval" (default 0.3 seconds) to make sure you're not double-pressing (the gap must be longer than 0.3 seconds) before it starts switching.
- If two presses are too close together (within 0.3 seconds), the second one is ignored to prevent accidental presses.
- Switching refreshes the panel (this depends on the model and refresh mode, for example about 6 seconds on 13.3-inch, about 16 seconds on 27.6-inch, about 20 seconds on 32-inch). If you press again while the previous image is still refreshing, what happens depends on "When changing pages" on the presenter remote settings page (default "Switch immediately"); see Changing pages during a refresh.
- On models with two single-color LEDs, only the LED on the side you pressed breathes when switching, so you can tell which button you pressed. See Status LEDs.

Button switching range

Setting	Switching range
Bound Image Set: "None (whole gallery)" (default)	Switches through all images in image gallery order
Bound to an image set	Switches in order only within that image set

- If the bound image set is deleted or empty, it automatically goes back to switching through the whole image gallery.
- If the image gallery has no images at all, the buttons don't display anything, and the status LED blinks quickly 3 times.
- You can also set the same thing with the target icon in the Image sets list.

Button switching and schedules

After you switch with the buttons, schedules keep running as usual; at the next scheduled time, the scheduled image is displayed.

Changing pages during a refresh

"What to do when you press next/previous on the presenter or the physical buttons while the previous page is still refreshing. "Switch immediately" stops the current refresh and starts the new page (a small part of the new image may remain on screen); "Wait" lets the current refresh finish, and rapid presses keep only the last page."

© 2025-2026 Green Ideas Technology | All rights reserved

"When changing pages"	Pressing again while the previous image is still refreshing
Switch immediately (default)	Stops the current refresh right away and refreshes the new image instead. A small part of the new image may remain on screen at first, then the new image replaces it
Wait for it to finish	Waits for the current refresh to finish before changing. If you press several times in a row, only the last image is kept

- This setting is on the "Presenter Remote" settings page and is **shared by the physical buttons and the presenter remote**.
- When the panel is refreshing something other than an image change (for example refreshing the QR code or clearing the screen), both settings wait for it to finish before changing; it isn't stopped.
- Only page changes from the physical buttons and the presenter remote are handled this way. Schedules, displaying an image from the management interface, and the clear-screen and QR code gestures are still rejected while the panel is busy.

Customizable gestures

Clear Screen Trigger

"Set the button gesture that triggers reset (clear the screen)"

Refresh QR Code Trigger

"Set the button gesture that refreshes the QR code startup screen"

Both have these two fields:

Field	Options	Description
Trigger Mode	Both buttons — short press	Press both buttons together and release within 1 second
	Both buttons — long press	Hold both buttons together for 1 second
	Double-tap same button	Press the same button twice; the gap must be longer than the "Double-tap Max Interval" setting
	Single button long press	Hold one button for the "Long Press Duration"
Applies to Button	Either button / Prev button / Next button	Can't be selected when the trigger mode is a two-button gesture

Gesture	Default
Clear the screen	Double-tap same button (the gap must be longer than 0.3 seconds), either button
Refresh QR Code	Single button long press, either button

Gesture Timing Thresholds

"Adjust the timing that qualifies a "long press" or "double tap""

Setting	Default	Range
Long Press Duration	1.5 seconds	0.3–10 seconds (in steps of 0.1)

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Setting	Default	Range
Double-tap Max Interval	300 milliseconds	100–1000 milliseconds (in steps of 50)

"Double-tap Max Interval" is actually a minimum interval

The name on screen says "Max Interval", but it's actually the **minimum interval** between two presses: the gap between them has to be longer than this time (default 0.3 seconds) to count as a double press. The gap here is the time **from releasing the first press to pressing the second time**.

- "Both buttons — long press" is always 1 second and isn't affected by "Long Press Duration".
- "Double-tap Max Interval" also decides how long a single press waits before switching images: the longer you set it, the slower a single press responds.

Saving and when changes take effect

- Dropdowns save as soon as you change them; the two number fields save when you **leave the input box**.
- On success, "Settings saved" appears and the change **takes effect immediately**; no restart needed.
- If you set clearing the screen and the QR code to conflicting gestures (for example both "double-press either button", with a gap longer than 0.3 seconds), the system automatically adjusts the other one and shows "Gesture ranges overlapped — the other side was adjusted automatically to avoid a conflict".

Factory reset (hold for 40 seconds)

Holding either button for 40 seconds performs a factory reset, which deletes all images, image sets, schedules, and settings.

Hold time	Status LED	Description
0–3 seconds	(depends on current state)	If the gesture is set to single button long press, the QR code refresh triggers at 1.5 seconds
3 seconds	**Starts blinking quickly** (red fast blinking on the full-color LED)	Factory reset countdown starts
40 seconds	**Stays on** (solid red on the full-color LED)	Factory reset starts; do not cut power

- **Release the button** within 40 seconds, or **also press the other button**, to cancel; the LED goes back to normal.
- Models without a status LED (bus-stop frame models: 13.3 / 24.8 / 27.6 / 32-inch) can also be reset with the buttons, but there's no LED indication.
- For what a reset deletes and keeps, see Factory reset.

Release after the QR code appears

By default, "long-press for 1.5 seconds to show the QR code" and "hold for 40 seconds to factory reset" use the same action. Once the QR code appears, **release right away**; don't keep holding. If the status LED starts blinking quickly, the factory reset countdown has started, so release immediately.

Wake up

When the device is asleep, press either physical button to wake it up. See Sleep and wake up.

© 2025-2026 Green Ideas Technology | All rights reserved

FAQ

Q: The buttons don't respond?

- The panel is refreshing when you use the clear-screen or QR code gesture: the status LED blinks quickly 2 times. Wait until the refresh finishes, then press. (Page changes aren't rejected; see Changing pages during a refresh.)
- The image gallery has no images: the status LED blinks quickly 3 times. Upload images first.
- The device is asleep: the first press wakes it up; operate it after it wakes.
- None of the above: restart the device; if it still doesn't respond, contact technical support.

Q: Why is there a delay after a single press before the image changes? The system first has to make sure you're not "double-pressing" (the gap must be longer than 0.3 seconds), so it waits for the "Double-tap Max Interval" (default 0.3 seconds) before starting. Then the panel refresh itself takes some time (depending on the model and refresh mode, for example about 6 seconds on 13.3-inch, about 16 seconds on 27.6-inch, about 20 seconds on 32-inch).

Q: The clear-screen or QR code gesture never works? Check the current trigger mode and button in Button Trigger Settings; the fixed gestures from older versions may have been changed.

Related sections: Presenter remote, Image sets, Light schedule and light, Status LEDs, Factory reset

© 2025-2026 Green Ideas Technology | All rights reserved

Presenter remote

> Navigation: Settings → Interaction → **Presenter Remote**

After you plug in the USB receiver of a commercially available presenter remote (page-turner), you can use the presenter remote to go to the previous/next image, and also bring up the "presenter remote menu" on the screen.

Presenter remote settings page

Setting	Default	Description
Enable presenter remote control	On	"Plug in the remote's USB receiver to switch to the previous/next image. Turn off when not in use."
Connection	—	"Whether the remote's receiver is detected": "Off", "Connected: name", "No presenter remote detected"
Key mapping	—	"Next image", "Previous image"
When changing pages	Switch immediately	"Switch immediately" or "Wait for it to finish"; see Changing pages during a refresh
Key test	—	Press any key on the presenter remote to check that the device receives it. While the feature is off, "Enable presenter remote control first" is shown

- The presenter remote switches within the same range as the physical buttons (Button switching range).
- A page change with the presenter remote counts as activity and restarts the idle time for sleep.

Presenter remote keys

Key	Normal screen	While the menu is open
Page Down (PgDn)	Next image	Move down
Page Up (PgUp)	Previous image	Move up
Tab	Open the presenter remote menu	Run the selected item
Enter	—	Close the menu
Volume + / Volume -	Turn the light on/off (models with a light)	Turn the light on/off (models with a light)

Key names on the presenter remote vary by brand; the device recognizes the keys the presenter remote sends. You can check what each key sends in "Key test".

Presenter remote menu

Pressing Tab overlays a vertical menu on the **left side** of the screen, with a thin band and arrow marking the selected item:

Item	Action
Show QR Code	Closes the menu and shows the QR code startup screen

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Item	Action
Clear screen	Closes the menu and clears the screen
Pick a photo	First choose "All photos" or an image set, then pick an image from the thumbnails (film strip) stacked vertically on the left; press Tab to display that image and close the menu
Light (models with a light)	Turns the light on/off. While a light schedule is enabled, "Scheduled" is shown and it can't be switched
Restart	First opens a confirmation ("Restart now?") with "Cancel" selected; choose "Restart" and press Tab again to clear the screen and restart
Shut down	Same as above with "Shut down now?"; choose "Shut down" and press Tab again to clear the screen and shut down

- Moving the arrow refreshes only the thin strip with the arrow, which is much faster than a full refresh.
- The menu closes automatically after a period with no key presses: 10 seconds for the menu, 30 seconds for Pick a photo.
- When the menu closes, the image that should currently be shown is fully redrawn. Schedule image changes that come due while the menu is open are noted, and the latest image is drawn directly when the menu closes.
- Pressing Tab while the panel is refreshing another screen doesn't open the menu.
- Pick a photo lists only image sets that contain images. If an image set's name contains characters the device screen's font can't draw, the menu shows it as "Photo set N" (N is the order in which the image set was created); you're told about this when naming it in Image sets.

Volume keys turn the light on/off quickly

Without opening the menu, press "Volume +" on the presenter remote to turn the light on and "Volume -" to turn it off. While a light schedule is enabled, the light is controlled by the schedule and the volume keys don't change it.

Related sections: Physical buttons and gestures, Light schedule and light, Image sets, Sleep and wake up

© 2025-2026 Green Ideas Technology | All rights reserved

5. Power and sleep

© 2025-2026 Green Ideas Technology | All rights reserved

Sleep and wake up

> Navigation: Settings → Power → **Sleep Settings**

Sleep puts the device into a low-power state when no one is using it, and wakes it up automatically when it needs to change the image. On battery-powered models, this is the most important feature for extending battery life.

Sleep is off by default

From the factory, "Enable Sleep" is **off**. When you want to save power, turn it on manually on the Sleep Settings page.

What the device does while asleep

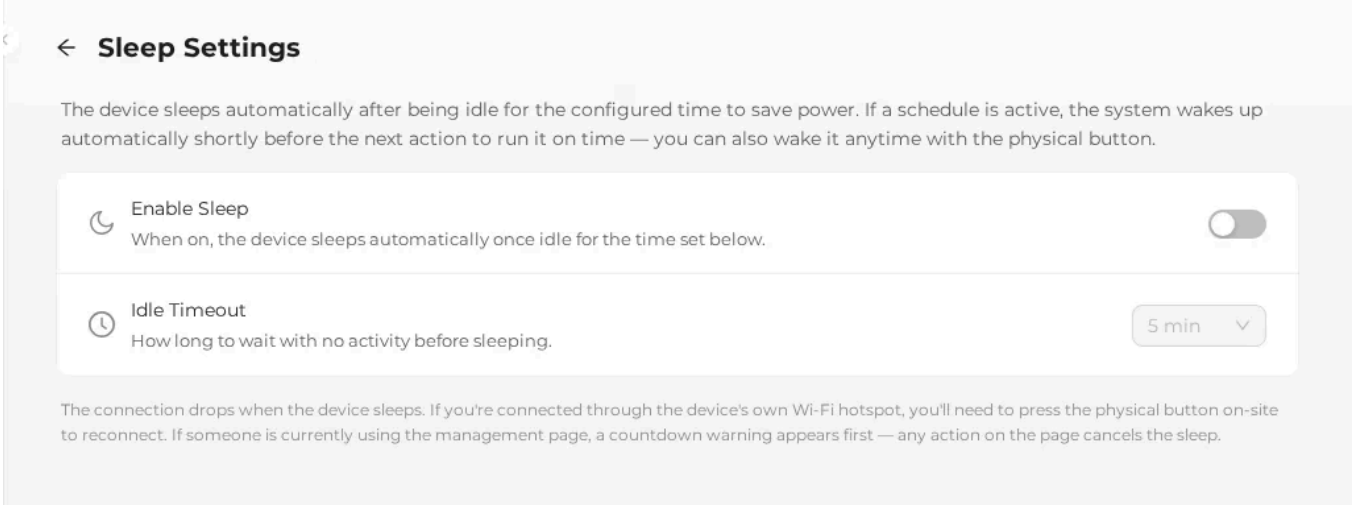
Item	State during sleep
Processor	Paused (system suspended); uses almost no power
Panel image	**Keeps the current image**. A cholesteric LCD holds its image without power, so it looks the same as when the device is awake
Wi-Fi hotspot	**Off**. Phones are disconnected and can't find the hotspot
Management interface	Unavailable
Status LED	**Off** (to tell "asleep" apart from "frozen")
Light (optional)	**Stays as it was before sleep**. If the light was on when the device went to sleep, it stays on. See Light schedule and light
Schedule	The device wakes up automatically before the next schedule to run it

The startup screen is cleared first

If the panel is currently showing the **QR code startup screen**, the device clears the screen to white before sleeping. Because the hotspot is off during sleep, leaving the QR code up would make people think they can still scan it to connect. Regular images stay on screen and are not cleared.

© 2025-2026 Green Ideas Technology | All rights reserved

Settings



Setting	Default	Options	Description
Enable Sleep	Off	On / Off	When on, the device sleeps automatically after being idle for the time below
Idle Timeout	5 minutes	3 minutes, 5 minutes, 10 minutes	How long without any activity before the device sleeps. You can't change this when "Enable Sleep" is off

- Changing the switch takes effect immediately and shows "Sleep enabled" or "Sleep disabled".
- Changing the time takes effect immediately and shows "Idle timeout updated".
- If loading fails, you see "Failed to load sleep settings"; if saving fails, you see "Failed to save".

When the device goes to sleep

There is only one trigger for sleep: **the idle time runs out**. There's no "sleep now" button, and no scheduled sleep such as "sleep at a certain time every day".

The device checks every 10 seconds and goes to sleep only when all of these conditions are met:

1. "Enable Sleep" is on.
2. The idle time has reached the threshold (see below).
3. The panel is not currently refreshing.
4. The next schedule is more than 5 seconds away.
5. If someone has the management interface open, the countdown warning was not canceled.
6. If any schedule is enabled, the hardware clock (RTC) can set an automatic wake-up.

If any condition isn't met, the device doesn't sleep and checks again 10 seconds later.

Idle threshold: it matters a lot whether someone has the management interface open

Situation	Actual idle threshold
No one has the management interface open	The time you set (3 / 5 / 10 minutes)

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Situation	Actual idle threshold
Someone has the management interface open (any page)	**At least 15 minutes**, plus a 60-second countdown warning

This keeps the device from suddenly going to sleep and dropping the connection while someone is looking at the management page without clicking anything. So when you test sleep, **close all browser tabs** (or take your phone off the hotspot); only then will the device sleep after the 3 / 5 / 10 minutes you set.

What counts as "activity"

These actions reset the idle time and start counting again:

- Any action in the management interface (opening a page, uploading, changing settings, displaying an image on the panel...)
- Opening the management interface (a browser connecting to the device)
- Changing the image, clearing the screen, or showing the QR code with the physical buttons
- Pressing a button on the presenter remote
- Pressing "Keep Awake" in the sleep countdown window
- Waking the device from sleep with a button

These **don't count** as activity and don't prevent sleep:

- Automatic image changes by a schedule
- The device being woken up by a scheduled time
- The management interface updating battery, LED, and device status, and the time on the "Time Settings" page, in the background

---

Countdown warning before sleep

When someone has the management interface open and the idle threshold is reached, a warning window pops up on every open page:

> **The device is about to sleep** No activity detected. The device will sleep in 60 seconds. Sleeping ends this connection, and the device has to be woken with its physical button. Choose Keep Awake if you are still working.

- Press **Keep Awake**: cancels this sleep and restarts the idle time.
- Any action in the management interface during the countdown also cancels this sleep.
- You can't close this window by clicking outside it or pressing ESC.
- If all pages are closed during the countdown, the device goes to sleep right away without waiting for the countdown to finish.

When no one has the management interface open, there's no warning at all; the device goes to sleep as soon as the idle time runs out.

How to wake up the device

Wake-up method	Description
Scheduled time arrives	The device wakes up automatically about 3 seconds before the trigger time of the nearest **enabled** schedule (schedule or light schedule)
Press a physical button	Press a physical button on the device at any time to wake it up

- If there are no enabled schedules, the only way to wake the device is to press a physical button.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

- Disabled schedules **don't** wake up the device.
- The network (a phone connecting, scanning the QR code) **can't** wake up the device, because the hotspot is off during sleep.

After waking up

When woken up by a scheduled time:

1. The system time is corrected from the hardware clock (RTC).
2. Due schedules run (changing the image, or turning the light on/off).
3. The status LED returns to standby.
4. After the image changes, if no one connects, the device goes back to sleep within about 10 seconds and waits for the next schedule.

When woken up by a button:

1. Same as above: the time is corrected and missed schedules run.
2. The idle time starts counting from this point, so you have enough time to connect to the management interface.

Reconnecting after wake-up

1. When the device wakes up, the Wi-Fi hotspot restarts; **wait a few seconds** before it shows up in the list.
2. Your phone usually reconnects to the remembered hotspot automatically; if not, select the device's Wi-Fi manually.
3. Go back to the management interface. If "Lost connection to the device" appears at the top of the page, press **Reconnect** or reload the page.

How missed schedules are handled

Schedule type	After waking from sleep
Schedule	An image change that is already overdue is **made up once right away** (even if several were missed, only one is made up)
Light schedule	Not made up. Instead, the device decides from the "current time" whether the light should be on or off, and sets it to the correct state directly

---

When sleep is blocked

Situation	Description
Sleep switch is off	Off is the factory default
Someone has the management interface open	The threshold becomes at least 15 minutes + a 60-second countdown
The panel is refreshing	The device checks again after the refresh finishes
The next schedule is within 5 seconds	Not worth sleeping; the device just waits for the schedule
A schedule is enabled, but the hardware clock (RTC) can't be found	The system first tries to repair it; if that fails, the device doesn't sleep and shows "Real-time clock (RTC) fault" at the top of the page, so that schedules aren't left unable to wake it after sleep

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Situation	Description
Very frequent schedules (for example every minute)	Each time the device wakes up and changes the image, the next schedule arrives before idle time builds up again, so it actually sleeps only briefly

To find out why the device didn't sleep, search the system logs for `取消休眠` (sleep canceled); the log records why sleep was blocked.

Sleep vs. shutdown vs. clearing the screen

	Sleep	Shutdown	Clear the screen
Panel image	Keeps the current image (the QR code screen is cleared first)	Clears the screen, then shuts down	Shows a single solid color (black or white)
Power use	Very low	None	Same as standby
How to resume	Woken up automatically by a schedule, or press a physical button	Restore power / turn on on-site	Display the next image
Schedule	Runs as usual	Doesn't run	Runs as usual
Best for	Everyday power saving	Long-term storage, transport	Temporarily blanking the screen

Recommended settings

Scenario	Recommendation
Battery-powered models	Turn on sleep and choose 3 or 5 minutes; set schedules to 30 minutes or longer
Plugged in, need to connect from a phone at any time	You can turn sleep off
Placed in a busy area, managed only occasionally	To wake it up immediately, press a physical button; or wait until an enabled schedule wakes it up, then connect within range of the hotspot
Schedule changes the image every minute	Sleep still saves some power, but the device sleeps only briefly. Lengthen the schedule interval to save more power.

After sleep, you can only reconnect on-site

If you manage the device through its own hotspot, you can't reconnect remotely once it's asleep; you have to press a physical button on-site to wake it up. Where remote management matters more, consider turning sleep off or setting a longer idle time.

Related system behavior

- Before sleeping, if any schedule is enabled, the device first checks that the hardware clock (RTC) can set an automatic wake-up. If the RTC can't be found, the system first tries to repair it; if that fails, the device **doesn't go to sleep** and shows a red "Real-time clock (RTC) fault" warning at the top of the page, so that schedules are never left unable to wake it. When no schedule is enabled (waking only by button), the device sleeps as usual. See Hardware warnings.
- The system clock pauses during sleep and is corrected from the hardware clock after wake-up, so schedules still run at the correct time.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Related sections: Power control and storage, Battery, Schedules, Troubleshooting: power, sleep, and battery

© 2025-2026 Green Ideas Technology | All rights reserved

Power control and storage

> Navigation: Settings → Power → **Power Control**

The Power Control page offers two functions: "Reboot" and "Shut Down".

Factory reset isn't here

The factory reset entry is at the bottom of the "Settings → System → **Software Update**" page. See Factory reset.

Reboot

When to use it: the management interface behaves strangely, a feature is stuck, or you want to reload after changing settings.

1. In the "Reboot Device" row, press **Reboot**.
2. Confirm "Rebooting will temporarily disconnect all connections. Continue?".
3. The device first **clears the screen**, then reboots. The confirm button shows a spinner until clearing finishes.
4. On success, "The system will reboot shortly" appears.
5. The management interface disconnects and "Lost connection to the device" appears at the top of the page. After about 1 minute, reconnect to the device (hotspot or on-site Wi-Fi) and refresh the page.

What the panel shows after the reboot:

Startup screen setting	Panel after reboot
"Show QR Code startup screen on boot" on (default)	Shows the QR code startup screen
Off	Stays white until the next scheduled image change or until you display an image manually

The original image doesn't come back automatically after a reboot

The page says: "Restart the system to try to recover from a software issue. It returns to the startup screen when done, and schedules continue as usual." After a reboot the panel shows the startup screen or white and **does not automatically show the image from before the reboot**. If you have a schedule, the image changes at the next scheduled time; if not, display an image manually.

Shut down

1. In the "Shutdown Device" row, press the red **Shut Down**.
2. Confirm "After shutdown, the device needs to be manually restarted. Continue?".
3. The device first **clears the screen**, then shuts down. On success, "The system will shut down shortly" appears.
4. Battery models notify the power board, which cuts the power after about 20 seconds.

You can't power it back on remotely

Shutting down **cuts the power completely**. Unlike sleep, it can't be woken by a schedule or a button. After shutdown, someone has to handle the power on site to start it again. If you only want to save power, use sleep instead.

© 2025-2026 Green Ideas Technology | All rights reserved

Recommended way to shut down

Press **Shut Down** in the management interface first, and remove the power after the status LED goes off. On 27.6-inch and 32-inch models you can also shut down by **holding the power switch on the device for 4 seconds**.

Why the screen is cleared before shutdown and reboot

A cholesteric LCD **keeps the last image indefinitely** after power is removed. If power is cut without clearing the screen, the panel stays on the same image for a long time. So before shutdown, reboot and switching to CMS mode, the system clears the screen at the highest priority:

- Any refresh in progress is stopped, and clearing the screen goes first.
- If clearing fails, it retries automatically 2 times.
- If it still fails, the system **still shuts down or reboots** so the device doesn't get stuck unable to shut down. In that case the panel may still show the old image; check that the screen is normal after the next startup.

When a battery model is shut down by holding the power button, it also clears the screen before cutting power.

Long-term storage

Before leaving the device unused for a long time, moving it, or sending it for repair, follow these steps:

1. On the "Image Display" page, press **Clear screen**, wait for "Screen cleared", and check that the panel has been cleared to a single background color (black or white).
2. In "Power Control", press **Shut Down** and wait for the status LED to go off.
3. Disconnect the external power as instructed for your model.
4. Store it in a dry place out of direct sunlight.

Although the shutdown process clears the screen too, clearing it manually first and checking with your own eyes keeps the panel from being left with an old image if clearing fails.

Messages

Message	Meaning
The system will reboot shortly	The reboot command was run
The system will shut down shortly	The shutdown command was run
Reboot requested. The screen will be cleared before restarting.	Same as above (shown in some cases)
Shutdown requested. The screen will be cleared before shutting down.	Same as above (shown in some cases)
System action failed. Please try again later.	The command failed

Related: Sleep and wake-up, Battery, Factory reset

© 2025-2026 Green Ideas Technology | All rights reserved

Battery

> Navigation: Settings → Power → **Battery Info**, or click the battery icon in the upper right of the management interface

Applicable models

The battery icon and the "Battery Info" page appear only on models with the optional battery. Models without a battery don't show them. See Models and specifications.

Battery icon in the upper right

The upper right of the management interface always shows the battery level, updated every 30 seconds; it updates immediately when the charging state changes.

Display	Meaning
Battery icon + "NN%"	Current battery level. Hovering shows "Battery: NN%"
Green	Battery level above 50%
Yellow	Battery level 21%–50%
Red	Battery level 20% or below
Lightning bolt icon	Charging
Gray warning icon + "--"	**Battery data can't be read** (not 0%). Hovering shows "Battery service unavailable — tap for details"

Click the icon to open the Battery Info page.

"--" is not the same as "0%"

"--" means battery data can't be read (the battery management system isn't responding, no battery is connected, and so on); "0%" means the battery level really was read as 0. If you see "--", open the Battery Info page and check "Data health".

Battery Info page

The page has three tabs: **Overview**, **Monitor**, and **Details**. In the upper right you can choose how often the data updates (10 seconds, 30 seconds, 1 minute, 5 minutes; default 1 minute), or press the refresh icon to update right away (on success it shows "Battery info updated").

Overview

Item	Description
Battery	Remaining battery percentage in large type, with the charging state below (see the table below)
Time left / Time to full	Remaining run time (when discharging) or time to full charge (when charging), estimated from the present current
Remaining	In Ah
Charging power / Discharging power	In W

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Item	Description
Temperature	Temperature measured by the battery management system (°C)
Voltage	In V
Health	Based on SOH: 90% or above "Good", 75% or above "Fair", below 75% "Check", unreadable "Unknown"
Cycle Count	Number of charge/discharge cycles
Current	In A

Estimated times change

"Estimated from the present current; actual time varies with usage." When the device displays images or the light is on, the current rises and the estimated time drops instantly. Treat it as a reference, not a guaranteed run time.

If data can't be read, all values show "-", not 0.

Charging state	Meaning
Charging	External power is connected and the battery is charging
Fully charged	External power is connected and the battery is fully charged. The battery level shows **100%**
Plugged in, not charging	External power is connected, but the battery isn't charging right now
On battery	No external power; the device runs on the battery

- After the battery is fully charged, the level reported by the battery management system often stays at 99%. When external power is connected and the battery is fully charged, the upper right and the Overview show 100%; "SOC" on the "Details" tab still shows the raw value reported by the battery management system.
- Older battery boards can't report whether external power is connected; in that case only "Charging" or "On battery" is shown.

Monitor

Live trend charts, including: health (SOH), cycle count, number of samples, temperature and total voltage trends, a current gauge, charging/discharging power, and remaining and estimated full capacity.

The trends **cover only the samples taken while this page is open** (up to 180); reloading starts over. This is not a long-term history of the battery.

Details

Full values for troubleshooting: charging state, battery level (SOC), health (SOH), remaining capacity, total voltage, current, temperature, cycle count, voltages of cells 01–06, spread (difference between the highest and lowest cells), protections and alarms, firmware version, battery management system time, data health, and the BMS status raw value.

Footer note: "These values come straight from the battery board (BMS) and are meant for troubleshooting. The temperature is measured on the board, not ambient."

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Data health

Display	Meaning	What to do
Normal	Data is read normally; values are reliable	—
Data out of date	The battery management system hasn't sent new data for too long; values may be old	Reload later; if it keeps happening, restart the device
No battery detected	The battery management system responds, but all values are 0; usually the battery isn't connected	Check that the battery is in place and the connector is properly attached
Battery management system not responding	The battery management system doesn't respond	Check the battery management system and the cable, and restart the device
Battery management system not found	Can't connect to the battery management system	Hardware connection problem; contact technical support
Legacy service (not reported)	The battery service on the device is an older version and can't tell whether the data is reliable	Available after you update the software

If the battery service can't be reached at all, the page shows "Battery Service Unavailable: Cannot connect to battery service. Please check hardware connection or service status." and you can press **Retry**.

Protections and alarms

"Protections and alarms" lists the items the battery management system has currently triggered. When everything is normal, it shows a green check with "All normal".

- **Red tag = protection**: the battery management system has stepped in and cut off charging or discharging. This is an abnormal situation.
- **Yellow tag = alarm**: the BMS is reporting a warning, but no protection has been triggered and the battery is still working normally. For example, "Overvoltage Alarm" when the battery is nearly full is normal.
- **Blue tag = information**: a notice about a normal state, not an abnormality. Currently the only one is "Fully charged" (the battery is fully charged).

Type	Items
Protection (red)	Undervoltage, Overvoltage, Charge Overcurrent, Secondary Charge Overcurrent, Discharge Overcurrent, Secondary Discharge Overcurrent, Discharge Overload, Charge Short Circuit, Discharge Short Circuit, Charge Over-temperature, Discharge Over-temperature, MOS Over-temperature, Charge Timeout
Alarm (yellow)	Undervoltage Alarm, Overvoltage Alarm, Charge Low Temperature, Discharge Low Temperature, Discharge High Temp Alarm, Charge High Temp Alarm, Discharge Overcurrent Alarm, Charge Overcurrent Alarm
Information (blue)	Fully charged

If a red protection tag appears

Write down the time, the tag name, each cell voltage, and the "BMS Status Raw Value", stop using the device, and contact technical support. Don't disassemble the battery or change any protection settings yourself.

© 2025-2026 Green Ideas Technology | All rights reserved

If a yellow alarm tag appears

The BMS is reporting a warning and no protection has been triggered yet, but you can't conclude from the color alone that the battery is definitely fine. Write down the warning name, the time, and the related readings; if it persists or keeps coming back, contact technical support.

Battery and power saving

- The panel is powered only **while an image is being displayed**, and power is cut when it's done; a cholesteric LCD holds its image without power, so showing a still image uses almost no power.
- Power is mainly used by: how often images are displayed, the system running, the Wi-Fi hotspot, and the light (on models with a light).
- The most effective ways to save power: turn on sleep and change images less often in your schedules.
- The management interface has no low-battery auto-shutdown setting; when the battery is too low, the battery management system's hardware protection cuts the power. At 20% or below, the icon in the upper right turns red; charge as soon as possible.

FAQ

Q: The battery in the upper right shows "--"? Battery data can't be read. Open the Battery Info page, check "Data health", and follow the table above.

Q: The battery shows 0%, but the device is still running? If the device has an older battery service, it shows 0% when it can't read data. After you update to the latest software, it can tell "really empty" apart from "can't be read".

Q: Do I need to do anything about a yellow "Overvoltage Alarm"? It's normal when the battery is nearly full; no action needed. Only the red "Overvoltage" protection means the battery management system has stepped in.

Q: The estimated run time keeps jumping around? The estimate is based on the current at that moment: the current is high while displaying images and low when idle, so the number changes accordingly. This is normal.

Related sections: Sleep and wake up, Power control and storage, Troubleshooting: power, sleep, and battery

© 2025-2026 Green Ideas Technology | All rights reserved

6. Display and hardware

© 2025-2026 Green Ideas Technology | All rights reserved

Scan direction and refresh mode

> Navigation: Settings → Display → **Tcon Scan Mode**

This page controls how the panel driver board (Tcon) refreshes the screen, including "Scan Direction", "Refresh Mode" (shown only for some 13.3-inch panels), and "Edge Mask", which is specific to 32-inch frameless models.

In most cases, keep the defaults. Change these only if the screen displays incorrectly or the manufacturer recommends it.

Saving and when changes apply

- Every field is **saved automatically as soon as you select it**; there is no save button. "Scan mode saved" appears on success, "Failed to save" on failure.
- "Changes to scan direction and refresh mode take effect on the next refresh, not immediately." After making a change, go to the image gallery and display an image to check the result.

Scan direction

"Controls the Tcon DC register scan direction. The default “Top to Bottom” is suitable for most panels."

Option	Description
Top to Bottom (default)	Refreshes from top to bottom
Bottom to Top	Refreshes from bottom to top
Interleave	Refreshes in an interleaved order

- Applies to refreshes of regular images and the startup screen (QR code screen).
- Clearing the screen is not affected by the scan direction.
- The old "Curtain" option has been removed; after an upgrade it changes back to "Top to Bottom" automatically.

Refresh mode

"Choose how the screen updates. Fast refresh switches images quicker; high contrast gives better contrast but switches more slowly."

Which refresh modes each panel can use is **determined entirely by the manufacturer's panel compatibility list**: the system reads the firmware version of the panel driver board (Tcon) to identify the panel model, then looks up the available modes and the default in the list. The system doesn't try refreshing to find out on its own.

Option	Description
Standard refresh	The regular refresh method
Fast refresh	Switches images faster
High contrast	Better contrast, but switches images more slowly

- **Most panels have only one refresh mode; in that case the "Refresh Mode" row isn't shown**, and there's nothing to set.
- Currently only two 13.3-inch panels have two modes to choose from:

© 2025-2026 Green Ideas Technology | All rights reserved

Panel	Available modes
13.3-inch (one model)	Standard refresh (default), Fast refresh
13.3-inch (another model)	Fast refresh, High contrast (default)

- The option marked "**- Default**" in the menu is this panel's default mode.
- A mode chosen in an older version that this panel no longer has is changed back to the default automatically.

No images are displayed when the panel model can't be read

When the panel model (Tcon firmware) can't be read, or the model isn't in the manufacturer's compatibility list, the system can't tell which refresh mode to use, so it **pauses displaying images** and shows a warning at the top of the management interface:

Warning at the top of the page	Meaning
Cannot identify the panel; refreshing is paused	The Tcon firmware version can't be read. The system keeps retrying in the background and resumes displaying images once it can read it
Panel model not supported; refreshing is paused	This panel's model isn't in the manufacturer's compatibility list; a software update is needed

In this case the "Refresh Mode" row isn't shown either. If the warning doesn't go away, contact technical support; see Hardware warnings.

Edge mask

Applicable models

32-inch frameless models only. This row doesn't appear on other models.

"Overlays a black border around the panel edges on every refresh, to mitigate LCD degradation at the edge on this model."

Setting	Default	Range	Description
Color (swatch)	Black `#000000`	Any color	Click the swatch to choose; saved when you release after choosing
Width	2 px	0–100 px	Same width on all four sides; **0 turns it off**

- The edge mask applies to every image sent to the panel: regular images, the startup screen, and the mode-switching screen.
- **The web preview doesn't show the edge mask**; it is visible only on the panel.
- Clearing the screen is not affected (clearing wipes the whole panel).
- Changes take effect on the next refresh.

FAQ

Q: I changed a setting, but the screen didn't change? Settings apply on the next refresh. Display an image to check.

Q: I can't find the "Refresh Mode" row? This panel has only one refresh mode, so there's nothing to choose. Only two 13.3-inch panels offer a choice.

© 2025-2026 Green Ideas Technology | All rights reserved

Q: The screen looks wrong after choosing a different refresh mode? Change back to the mode marked "- Default".

Q: I can't find the edge mask? Only 32-inch frameless models have this setting.

Related: How images are processed, Characteristics of cholesteric LCDs, Tcon firmware update

© 2025-2026 Green Ideas Technology | All rights reserved

Startup screen and screen language

> Navigation: Settings → Display → **Startup Screen** (page title: "Startup Screen Settings")

The startup screen is the connection guide shown on the panel when the device starts up, so on-site staff can scan it with a phone to connect to the device and open the management interface. What it shows depends on the network mode; see Startup screen and network mode. The description below starts with the factory "Hotspot" mode.

What the startup screen shows

Area	Content
Title	Get started with your device
Subtitle	Scan the codes step by step to start your cholesteric LCD experience!
Step 1: Join the device Wi-Fi	First QR code: after scanning, your phone joins the device's Wi-Fi hotspot automatically (no need to type the password)
Step 2: Open the device management page	Second QR code: after scanning, the management interface address opens (in Hotspot mode usually `http://192.168.100.1`)
Bottom info bar	`SSID:` (name of the network to join), `URL:` (management interface address), `Orientation:` (the screen orientation the system currently detects)

- The layout adjusts automatically to the panel size and how the device is mounted (there are separate layouts for landscape and portrait).
- The `SSID` `URL` `Orientation` labels in the bottom info bar are always in English and are not affected by the language setting.

Scan directly with your phone camera

The camera app on iPhone and most Android phones can scan QR codes directly. Scan step 1 first to connect to Wi-Fi, **wait until your phone shows it is connected**, then scan step 2.

Startup screen and network mode

The QR codes and address on the startup screen always point to a network the device can **actually be reached on right now**:

Network mode	First card (step 1)	Second QR code and `URL:`	`SSID:` at the bottom
Hotspot	The hotspot's Wi-Fi QR code; scan it to join directly	The hotspot's management address	Hotspot name
Station	**No Wi-Fi QR code**; instead "Use the same Wi-Fi": "Make sure your phone is on the same Wi-Fi network as the device", with the name of the on-site network	The address the on-site network assigned to the device	On-site network name
Concurrent	Follows the "Address shown in Concurrent mode" setting (see the table below); by default the same as Station mode	Same as left	Same as left

- Station mode shows no Wi-Fi QR code: the device doesn't print the on-site network's password on the screen. First join the same on-site Wi-Fi with your phone yourself, then scan the second QR code.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

- If Concurrent mode is set to "Wi-Fi address" but the device isn't connected to the on-site Wi-Fi yet, the hotspot's details are shown instead (in Concurrent mode the hotspot is always on).
- In Station mode, after starting up, the device waits a while to get an address from the on-site network; if it never gets one, **the startup screen isn't drawn**, so that it never shows an address that can't be reached.

Address shown in Concurrent mode

> Navigation: Settings → Display → **Startup Screen**

"Which network the startup screen's QR code and URL point to. Hotspot mode always shows the hotspot and Station mode always shows the Wi-Fi address; only Concurrent mode can choose."

Setting	Default	Options	Description
Address shown in Concurrent mode	Wi-Fi address	"Wi-Fi address", "Hotspot address"	After you change it, "Address source updated" appears

Updated automatically after network changes

While the panel **is showing the startup screen**, it is redrawn automatically with the new content after any of these changes is completed:

- Switching the network mode
- Changing the hotspot name, password or other hotspot settings
- Changing "Address shown in Concurrent mode"

If the panel is showing another image, it isn't interrupted; the new content appears after you press **Refresh QR Code** or at the next startup.

Show QR code startup screen on boot

When enabled, the system first shows a startup screen with the Wi-Fi connection and control page QR codes after it boots. When disabled, if the device already has an **enabled and valid** schedule (an image set is selected and the image set contains images), the device goes straight into the slideshow after it boots.

Setting	Default	Description
Show QR Code startup screen on boot	On	Saved as soon as you toggle it; shows "Startup screen enabled" or "Startup screen disabled"

- This setting takes effect at the **next startup**.
- When it is off, the panel **keeps the last image from before shutdown** at startup (usually white, because the screen is cleared before shutdown), and the schedule then decides what to show.
- Even when it is off, you can still bring up the QR code screen at any time:
  - **Refresh QR Code** at the top right of the Image Display page
  - A physical button gesture (default: long-press any button for 1.5 seconds); see Physical buttons and gestures
- If the panel is showing the QR code screen when the device goes to sleep, the screen is cleared first (so nobody scans the code while the device is asleep).

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Panel language

"Language of everything the device panel shows: startup and mode-switch screens, CMS info cards, engineering mode and error screens. Set separately from the language of this admin interface. Takes effect the next time a screen is drawn."

Option	Description
Traditional Chinese	
English	
Japanese	

- The factory default language is decided at installation.
- After you change it, "Screen language updated" appears, but the screen is **not redrawn right away**. To see the new language immediately, go to the Image Display page and press **Refresh QR Code**.
- This only affects the screens on the **device panel**. To change the language of the management interface (browser), use the language menu at the top right; see Management interface tour.

Why there are two languages

The device sits at the customer's site, and its screen is for people there to read; the management interface is used by the installers, and the two languages are often different. For example, a sign at a trade show in Japan may show Japanese on its screen while engineers in Taiwan manage it in the Chinese interface.

Mode-switching screen

On devices with the CMS module, when switching to CMS mode the panel shows a "Mode Switcher" explanation screen (current mode, mode after switching, and a restart notice). It uses the same language setting as the startup screen. See CMS / standalone mode switching.

FAQ

Q: I scanned the Wi-Fi QR code but can't connect?

- Your phone must support **5 GHz Wi-Fi**; the device hotspot uses 5 GHz out of the factory.
- The device may be asleep (hotspot off). Press a physical button to wake it up first.
- Make sure you are scanning the QR code **currently shown** on the device, not an old photo or screenshot.

Q: The second QR code doesn't open the web page? Your phone may have switched back to another network automatically because "this Wi-Fi has no internet." See Connecting to the device.

Q: The screen has only one QR code, and the first card shows just a network name? The device is in "Station" mode (or Concurrent mode set to "Wi-Fi address"). First connect your phone to the on-site Wi-Fi named on the card, then scan the second QR code; see Startup screen and network mode.

Q: The QR code screen doesn't appear after startup? Check whether "Show QR Code startup screen on boot" is on. You can also press "Refresh QR Code" or use the button gesture to bring it up.

Q: I changed the language, but the screen still shows the old one? The language takes effect the next time the screen is shown. Press "Refresh QR Code" to show it again.

© 2025-2026 Green Ideas Technology | All rights reserved

Q: What is Orientation at the bottom of the screen? The device orientation the system currently detects (0°/90°/180°/270°). It is useful when the screen orientation is wrong; see Screen orientation and G-Sensor.

Related: Connecting to the device, Physical buttons and gestures, Network settings

© 2025-2026 Green Ideas Technology | All rights reserved

Screen orientation and G-Sensor

> Navigation: Settings → Interaction → **G-Sensor Settings**

The device has a built-in orientation sensor (G-sensor) that detects whether the sign is in landscape, portrait, or upside down, and turns the screen the right way up automatically. You can also turn off auto-rotate and fix the screen in one orientation.

Two kinds of "rotation"

	Device orientation (this page)	Image rotation
Where	Settings → G-Sensor Settings	The "Rotate Image" button on the Image Display page
Applies to	The output orientation of the whole panel	The content of a single image
How it is set	Detected automatically, or fixed manually	Set manually, stored per image
Use	Turn the screen the right way up however the sign is mounted	The image itself is tilted or in the wrong orientation

The two are independent and add up. When the screen orientation is wrong, first decide whether it is "the whole device's orientation" or "one particular image" that is wrong.

Enable G-Sensor auto-rotate

"When enabled, the screen rotates automatically based on physical orientation."

Setting	Default
Enable G-Sensor Auto-Rotate	On

Saved as soon as you toggle it; shows "G-Sensor enabled" or "G-Sensor disabled".

How auto-rotate works

1. The system reads the orientation sensor every 0.3 seconds. It decides the device has turned only after detecting the same new orientation twice in a row (about 0.6 seconds).
2. Once the turn is confirmed:
   - The panel is showing an image → it automatically **refreshes the same image again** in the new orientation.
   - The panel is showing the QR code startup screen → the startup screen is redrawn in the new orientation.
   - The panel is white (screen cleared) → nothing happens.
3. The preview frame and orientation label on the web page update too.

Orientation	Description
0°	Landscape (original orientation)
90°	Rotated 90° clockwise
180°	Upside down
270°	Rotated 90° counterclockwise

© 2025-2026 Green Ideas Technology | All rights reserved

No rotation when lying flat

When the sign is **lying flat on a table** (screen facing up), the sensor can't tell the orientation, so the system keeps the current orientation. Stand the sign up before adjusting.

If the panel is busy when the device turns

If the panel is refreshing another image at the moment the device turns (for example, a schedule is changing images), this automatic re-refresh is skipped and the screen stays in the old orientation. Wait for the refresh to finish, then display an image manually.

Fixed orientation

When you turn off "Enable G-Sensor Auto-Rotate", the "Fixed Orientation" option appears:

"When disabled, the screen is fixed at the selected orientation."

Option	Default
0° (Landscape), 90° (Clockwise), 180° (Inverted), 270° (Counter-clockwise)	0°

Saved as soon as you select it (no message on success; "Failed to save" on failure).

When to use it: the sign is mounted on a wall and never moves, or sensor interference makes the screen keep turning back and forth.

Changing it doesn't refresh the panel

After you turn auto-rotate on or off, or change the fixed orientation, **the panel is not redrawn right away**. Go to the Image Display page and display an image, or press "Refresh QR Code", to see the new orientation on the panel.

After you turn off auto-rotate and choose a fixed orientation, the fixed orientation you chose is kept after a reboot as well (including the startup screen).

Devices without a G-sensor

- If "This hardware has no G-Sensor" appears at the top of the page, the switch can't be used.
- If a red "Orientation sensor (G-sensor) fault" appears at the top of the page, the sensor can't be read; see Hardware warnings. Temporary workaround: turn off auto-rotate and use a fixed orientation.

Mounting orientation and models

Each model mounts its main board at a different angle inside the case. This is set at the factory during installation; you don't need to, and can't, change it. If **the whole device is always off by 90° or 180°**, the wrong model may have been chosen at installation. Contact technical support.

FAQ

Q: The screen is upside down or rotated 90°?

1. Check the G-Sensor settings: when enabled, the screen follows how the device is actually mounted; when disabled, it follows "Fixed Orientation".
2. After changing the setting, display an image for it to take effect.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

3. If only one image is in the wrong orientation, it's that image's "Rotate Image" setting.
4. Check `Orientation:` at the bottom of the startup screen to see which orientation the system currently detects.

Q: I turned the sign but the screen didn't turn with it?

- Make sure auto-rotate is enabled.
- Is the sign lying flat? Stand it up.
- Was the panel refreshing when you turned it? Display an image manually.
- The panel doesn't refresh automatically when it is currently white.

Q: The screen keeps turning by itself? This can happen when the sign is mounted at an angle close to the boundary between two orientations (for example, tilted 45°). Straighten it, or use a fixed orientation.

Related: How images are processed, Image gallery and displaying images, Hardware warnings

© 2025-2026 Green Ideas Technology | All rights reserved

Status LEDs

The status LED on the front of the device shows different patterns depending on what the device is doing, so you can tell the device's state without looking at the screen.

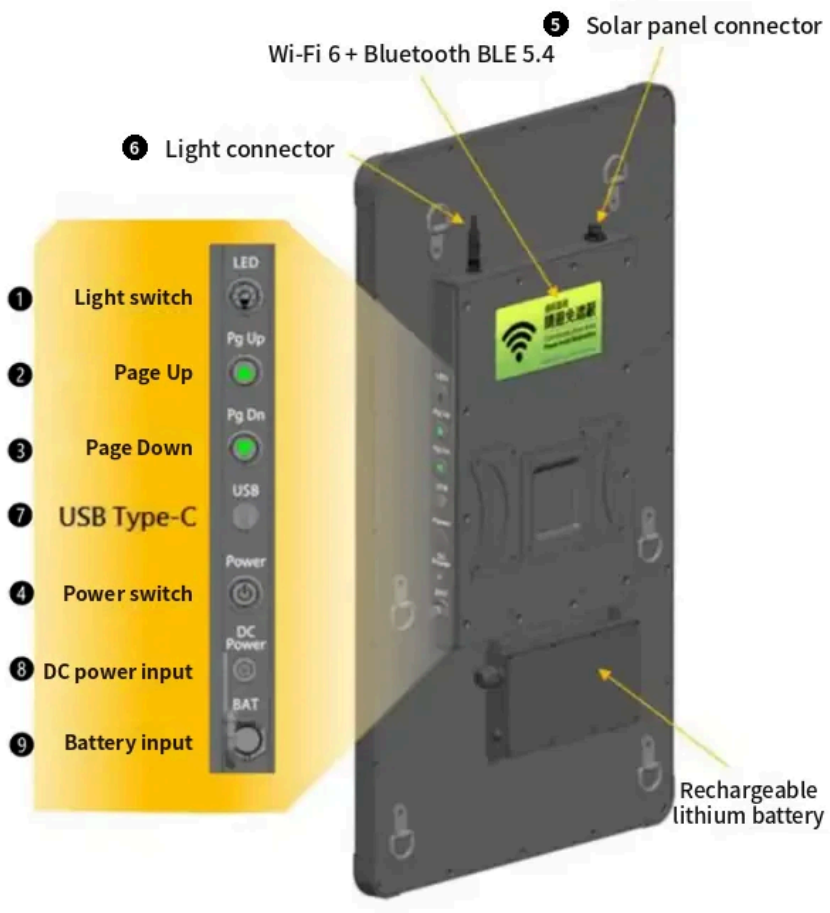
Depending on the model, there are two kinds of LED hardware: **two single-color LEDs** (frameless 27.6 / 32-inch, gray-black frame 24.8 / 27.6 / 32-inch) and a **full-color LED** (13.3-inch white models). Bus-stop frame models (13.3 / 24.8 / 27.6 / 32-inch) have no status LED.

Two single-color LEDs

Applicable versions

Applies to management program **version 1.7.2 and later**.

These models have **two** green LEDs: the lights of the two buttons "Pg Up" and "Pg Dn" on the control panel on the side of the device (lit green in the figure below). The upper "Pg Up" is the Previous button, and the lower "Pg Dn" is the Next button. In most states the two LEDs change together:



State	LED pattern	Description
Standby	● ● Solid on	The device is in normal standby
Refreshing	● ● Breathing	The panel is refreshing; how long it takes depends on the model (see Additional notes below)

© 2025-2026 Green Ideas Technology | All rights reserved

State	LED pattern	Description
Starting up	● ● Slow blinking	The app is starting
Sleep	○ ○ Off	The device is in power-saving sleep
Device busy	● ● 2 quick blinks	Another operation is in progress; try again shortly
Operation failed	○ ○ 3 quick blinks	Displaying the image failed, or the image gallery has no images when switching with the buttons. Check the system logs
Factory reset in progress	● ● Continuous fast blinking	A button has been held for more than 3 seconds; keep holding to 40 seconds to factory reset. **Release to cancel**

When you press the **Previous / Next** button, only that button's LED breathes and the other stays off, so you can confirm which button you pressed:

Button	LED pattern	Description
Previous	● ○ Upper "Pg Up" LED breathes	Switching to the previous image
Next	○ ● Lower "Pg Dn" LED breathes	Switching to the next image

Full-color LED

Applicable versions

Applies to management program **version 1.9.0 and later**.

On the 13.3-inch model, the LED is next to the connectors on the back of the device, at the position labeled "Status".



State	LED color / pattern	Description
Standby	● Solid green	The device is in normal standby
Refreshing	● Blinking blue	The panel is refreshing, about 6 seconds
Starting up	● Slow blinking white	The app is starting
Sleep	○ Off	The device is in power-saving sleep

© 2025-2026 Green Ideas Technology | All rights reserved

State	LED color / pattern	Description
Device busy	2 quick orange blinks	Another operation is in progress; try again shortly
Operation failed	3 quick red blinks	Displaying the image failed, or the image gallery has no images when switching with the buttons. Check the system logs
Factory reset countdown	Continuous fast red blinking	A button has been held for more than 3 seconds; keep holding to 40 seconds to factory reset. **Release to cancel**
Factory reset in progress	Solid red	A factory reset is running; do not cut power

Additional notes

- **"Device busy" and "Operation failed" are one-time signals**; after blinking, the LED returns to its previous state (usually standby).
- **Refresh time** varies by model and refresh mode, for example about 6 seconds on 13.3-inch, about 16 seconds on 27.6-inch, about 20 seconds on 32-inch.
- When you use a button gesture to **clear the screen or show the QR code**, both LEDs breathe together on models with two single-color LEDs; only a single press to switch to the previous / next image lights just the side you pressed.
- **During a software update (OTA)**, the management program stops for a while and the LED turns off; when the update finishes and the program restarts, it shows the "Starting up" blinking.
- "Starting up" ends as soon as the APP has finished starting, and the LED switches to standby; the same applies to devices with the startup screen turned off, which no longer stay in "Starting up".
- When you **change images** with a physical button or presenter remote while the previous image is still refreshing, "Device busy" isn't shown; instead, depending on the "When changing pages" setting, the current refresh is stopped or the device waits for it to finish. See Physical buttons and gestures.
- For the factory reset countdown, see Physical buttons and gestures.
- On models without a status LED (bus-stop frame models: 13.3 / 24.8 / 27.6 / 32-inch), none of the states above are shown; check the management interface instead.

© 2025-2026 Green Ideas Technology | All rights reserved

Hardware fault warnings

When the management interface detects that a hardware component can't be read and automatic recovery has failed, or that there is a problem with the panel or the model data, it shows a red warning **at the top of every page**. The warning stays visible and disappears automatically once the component is working again. You don't need to close it.

Warning types

Orientation sensor (G-sensor) fault

> The orientation sensor was not detected. Automatic recovery was attempted but did not succeed. The screen may not rotate automatically. Restart the device; if this message still appears after restarting, contact technical support.

Impact:

- The image doesn't rotate automatically when you turn the device.

What to do:

1. Restart the device from Power Control.
2. If the warning still appears after restarting, contact technical support.
3. Until it's fixed, you can go to G-Sensor Settings, turn off auto-rotation, and use "Fixed Orientation" instead so the image stays in the correct direction.

Real-time clock (RTC) fault

> The real-time clock chip was not detected. Automatic recovery was attempted but did not succeed. Time correction while the device is offline may be inaccurate. Restart the device; if this message still appears after restarting, contact technical support.

Impact:

- The automatic wake-up from sleep can't be set. When there are enabled schedules, the device **doesn't go to sleep**, so that a schedule is never left unable to wake it (it also tries to recover once before going to sleep). When there are no enabled schedules, it sleeps as usual and can only be woken with a physical button.
- The time can't be corrected from the hardware clock, so the system time may gradually drift.

What to do:

1. Restart the device.
2. If the warning still appears after restarting, contact technical support.
3. Until it's fixed, regularly correct the time with "Sync Local Time" in Time Settings.

Cannot identify the panel; refreshing is paused

> The TCON firmware version of the panel cannot be read, so the device cannot tell which refresh mode this panel needs and does not refresh it. It keeps retrying automatically. This usually means an incomplete installation or a panel connection problem; if it persists, contact technical support.

Impact:

- Displaying images, schedules and changing images with the buttons don't refresh the panel.

What to do:

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

1. The system retries automatically in the background; once the panel model is read, the warning disappears and refreshing resumes.
2. If it keeps appearing, restart the device; if it still appears, contact technical support.

For refresh modes, see Scan direction and refresh mode.

Panel model not supported; refreshing is paused

> The model of this panel is not in the compatibility list from the manufacturer, so the device cannot tell which refresh mode it needs and does not refresh it. Contact technical support for a software update.

Impact: Same as above: the panel isn't refreshed.

What to do: Contact technical support and give them "Tcon Firmware Version" from Device info. A software update is usually needed.

Machine data does not match the panel

> The model data (screen size) of this device does not match the model reported by the panel. The wrong model settings may have been installed, or the panel was replaced. The device still works, but images and the rescue screen may be the wrong size. Please contact technical support to check the model data.

Impact:

- The device still works, but displayed images may be the wrong size.

What to do: Contact technical support to check the model data.

How the system detects and recovers automatically

This is how the G-Sensor and RTC are checked (for the panel model warnings, see each item above):

1. The system keeps checking in the background whether the G-Sensor and RTC can be read.
2. When one can't be read, it retries every 2 seconds.
3. After 5 consecutive failures, it tries to re-initialize the component automatically, up to 3 times.
4. Only if the component still can't be read after 3 re-initializations does the warning appear (about 30 seconds after the fault starts).
5. Once the component recovers, the warning disappears automatically.

Most temporary read problems are fixed automatically in step 3, and no warning appears. A warning means automatic recovery didn't succeed.

What to provide when you contact technical support

- When the warning appeared
- Whether it still appears after restarting
- A screenshot of the "About device" page in Device info (device name and all versions)
- WARNING and ERROR level entries from System Logs (you can get them with "Download full logs")

Related sections: Screen orientation and G-Sensor, Time, time zone, and time sync, Sleep and wake-up, Scan direction and refresh mode

© 2025-2026 Green Ideas Technology | All rights reserved

7. System and maintenance

© 2025-2026 Green Ideas Technology | All rights reserved

Time, time zone and clock sync

> Navigation: Settings → System → **Time Settings**

Schedules, waking from sleep and system logs all run on the device's time. **On first installation, after moving to another time zone, or after the device has been without power for a long time, make sure the time and time zone are correct before setting up schedules.**

Page information

The top of the page shows:

Item	Description
Time (large text)	The device's current time `HH:mm` and date
Time zone	For example `Asia/Taipei (UTC+08:00)`
Sync Status	"Synced (NTP)" or "Not Synced"

The page updates automatically every 60 seconds; press **Refresh** in the top-right corner to update it right away ("Time updated" is shown). These automatic updates don't count as "someone using the device", so keeping this page open doesn't stop the device from going to sleep.

Three ways to set the time

Method	Best for	Limitation
Sync Local Time	**Most situations**: sets the time from your phone or computer	Not available while NTP is on
Set time manually	When you need a specific time	Not available while NTP is on
Set time automatically (NTP)	When the device is connected to an on-site Wi-Fi network with internet access	Can't sync when the device has only its own hotspot

Sync Local Time (recommended)

"Immediately sync the device's time to your browser's current local time"

1. Make sure the time on your phone or computer is correct.
2. Press **Sync Local Time**.
3. On success, "Time synchronized successfully" is shown.

Set time manually

1. Under "Set time manually", press **Change**.
2. In the window, use "Select date" and "Select time" (hours:minutes:seconds). You must choose both; otherwise you are prompted "Please select date and time".
3. Press **Confirm**. On success, "Time set successfully" is shown.

Manual time uses your browser's time zone

The date and time you choose are interpreted in **your phone's or computer's time zone**. If the two time zones differ (for example, your phone is on Taiwan time and the device is on UTC), make them match first, or use "Sync Local Time" instead.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Set time automatically (NTP)

"When on, the device automatically syncs its clock via an NTP server; manual time setting is disabled while syncing"

- When it's on, "Sync local time" and "Set time manually" are disabled (to avoid conflicting with automatic clock sync).
- On success, "NTP auto-sync enabled" / "NTP auto-sync disabled" is shown; on failure, "Failed to update NTP setting".
- When the device runs only its own hotspot ("Hotspot" mode), it has no outside network, so it **can't reach a time server**, and the sync status will always be "Not Synced". In that case, keep it off and use "Sync Local Time" instead.
- Only when the device is connected to an on-site Wi-Fi network with internet access in "Station" or "Concurrent" mode can it set the time automatically with NTP. See Network settings.
- If you see "The service failed to start — another time-sync service on this device (e.g. ntpd) may be using the same network port" after turning it on, another time service on the device is conflicting. Contact technical support.

NTP servers

On the "NTP servers" row you can enter your own time servers (for example a time server inside your company). When none is entered, the row shows "System default (...)", meaning the servers built into the device are used.

1. On "NTP servers", press **Set**.
2. Enter a host name or IP and press Enter. You can add several, **up to 5**.
3. Press **Save**. "NTP servers saved" is shown.

Clear them all and save to go back to the system default.

Sync status

While NTP is on, the sync status at the top of the page also shows:

Shown	Meaning
Last synced time (server)	When the clock was last synced successfully, and which server was used
Not synced since boot. Check the network and NTP servers	No sync has succeeded since the device started. Check that the device can reach the network and that the servers you entered are correct

---

Device Timezone

"Sets the device's timezone, affecting displayed time and when schedules run"

1. Under "Device Timezone", press **Change**.
2. In "Search timezone...", type a city name (for example Taipei, Tokyo) and select the time zone.
3. Press **Save Timezone** (the button is grayed out when nothing has changed).
4. On success, "Scheduled jobs switched to new timezone" is shown.

If "Timezone saved, but scheduled jobs require a service restart to apply" is shown, restart the device from Power Control.

You can also sync the time zone in one step from the "Timezone mismatch" notice on the schedule page. See Schedules — Time zone.

After you change the time zone, existing schedules and light schedules keep the clock times they were set to and trigger according to the new time zone. You don't need to save them again.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Hardware clock (RTC)

The device has a hardware clock (RTC) that keeps running while the device is asleep or shut down:

- When waking from sleep, the system corrects its time from the hardware clock, so sleep doesn't make the clock fall behind.
- The system also corrects the system time from the hardware clock regularly.
- If the hardware clock can't be read, a red "Real-time clock (RTC) fault" warning appears at the top of the page, and the time may gradually drift. If any schedule is enabled, the device **doesn't go to sleep** (so that schedules aren't left unable to wake it). See Hardware warnings.

What a wrong time affects

Feature	Effect
Schedules, light schedules	Trigger at the wrong actual time
Waking from sleep	Wakes up by the schedule time, so a wrong time means waking at the wrong time
System logs	Recorded times are wrong, making it hard to match events when troubleshooting

When you move the time forward by more than 2 minutes, schedules in the skipped period are not run afterward; the device simply waits for the next scheduled time.

FAQ

Q: The sync status is always "Not Synced"? NTP can't sync when the device has no outside network, which is normal. As long as the time itself is correct, it doesn't affect use.

Q: The "Sync Local Time" button is grayed out? "Set time automatically (NTP)" is on. Turn off NTP first, then sync.

Q: The time drifts again after a while? The hardware clock may have a fault or its battery may be depleted. Check whether an RTC fault warning appears at the top of the page; if so, follow the warning or contact technical support.

Related: Schedules, Sleep and wake-up, Troubleshooting: schedules and time

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Network settings

> Navigation: Settings → System → **Network**

This page decides how the device connects: broadcasting only its own hotspot, joining the on-site Wi-Fi, or both at once. The hotspot name and password, the list of on-site Wi-Fi networks and the phones currently on the hotspot are all managed here too.

Network overview

When you open the "Network" page, you see a list of settings:

Item	Shows	Action
Network mode	The current mode: one of "Hotspot", "Station" and "Concurrent"	Click the mode you want to switch to
Hotspot	The hotspot name and "N device(s) connected"; when the hotspot is off, "Hotspot is currently off"	Press "Configure" to open "Hotspot"
Wi-Fi	When connected, the network name and address; when not connected, "Not connected · N saved network(s)"; when the list is empty, "No network configured yet"	Press "Configure" to open "Wi-Fi"
Ethernet	The adapter name and address, or "Cable unplugged"	Press "Configure" to open "Ethernet". **This row appears only when an adapter is detected**
Allow DFS channels	A switch; see Allow DFS channels	"Updated" appears after you toggle it

When a feature is restricted (for example, the hotspot channel is forced to change), the reason is written in a warning color under the affected row; see Network status notices.

While viewing another device in the cluster

"Network" can only be used in this device's own management interface. When you view another device from the cluster, this item on the Settings page shows "Open this page on that device".

The three network modes

Mode	What the device does	How your phone reaches the management interface	Best for
Hotspot (factory default)	Broadcasts only its own Wi-Fi hotspot and doesn't join any outside network	Join the device's hotspot and open `http://192.168.100.1` (the hotspot's default address)	No network on site, a single device or a few, temporary demos
Station	Joins the on-site Wi-Fi, **with the hotspot off**	Join the same on-site Wi-Fi with your phone and open the address the on-site network assigned to the device	Devices installed permanently at a site with a network, managed on the same network as other equipment

© 2025-2026 Green Ideas Technology | All rights reserved

Mode	What the device does	How your phone reaches the management interface	Best for
Concurrent	Joins the on-site Wi-Fi **and keeps the hotspot**	Either way: join the hotspot, or join the same on-site Wi-Fi	Normally using the on-site network, but keeping the hotspot as a backup way in

"Station" needs at least one network saved under On-site Wi-Fi first; if you click it while the list is empty, "No Wi-Fi network yet" appears; press "Add one" to add a network first. "Concurrent" can be selected before any network is saved: the hotspot stays on and your phone stays connected, and the device joins the site Wi-Fi once you add it.

In Concurrent mode the hotspot is affected by the on-site network

In Concurrent mode the device's Wi-Fi adapter can use only one channel at a time, so the hotspot channel **follows the on-site Wi-Fi** and can't be chosen. If the on-site Wi-Fi is on 2.4 GHz, the hotspot becomes 2.4 GHz too. See Network status notices.

Switching the network mode

1. Under "Network mode", click the mode you want to switch to.
2. A "Switch to “mode name”" confirmation window appears, describing the consequences of this switch (see the table below).
3. Press "Switch".
4. The screen shows "Applying network settings...": "Do not close this page or unplug the device. A brief disconnect on your phone is normal; the result appears once it reconnects."
5. On success, "Switched to “mode name”" appears; if the device got a new address, "New address: ..." is shown as well.

How each switch affects your phone

Switch	Confirmation window text	Phones connected through the hotspot
Hotspot → Station	"The hotspot will shut down, and phones or tablets connected through it will be disconnected."	Not disconnected during the trial connection; after a successful switch the hotspot stays on for 5 more minutes, see the next section
Hotspot → Concurrent	"The device will join the Wi-Fi network and keep its hotspot; the hotspot channel will follow the Wi-Fi network, which may briefly interrupt connections."	The hotspot stays, but may drop briefly and reconnect automatically
Station → Hotspot	"The device will leave the Wi-Fi network and keep only its own hotspot. Anyone using this page through the Wi-Fi network will be disconnected."	(The hotspot was off.) Anyone working through the on-site Wi-Fi is disconnected; join the device's hotspot instead
Concurrent → Hotspot	Same as above	The hotspot stays; anyone working through the on-site Wi-Fi is disconnected
Concurrent → Station	"The hotspot will shut down, and phones or tablets connected through it will be disconnected."	**Disconnected immediately**, with no grace period
Station → Concurrent	"The device will join the Wi-Fi network and keep its hotspot; the hotspot channel will follow the Wi-Fi network, which may briefly interrupt connections."	(The hotspot was off.) The hotspot turns back on

© 2025-2026 Green Ideas Technology | All rights reserved

When switching to "Station" or "Concurrent", the confirmation window also says: "The device first tries the Wi-Fi network (up to about 30 seconds). If it cannot connect it rolls back, leaving no half-applied settings." and "Once done, reconnect your phone to the same Wi-Fi and open the new address to see the result."

From Hotspot to Station: the hotspot stays on for 5 minutes

After a successful switch from "Hotspot" to "Station", the hotspot doesn't disappear right away. The result page shows "The hotspot stays on for 5:00, then shuts down automatically." and starts counting down. This time lets you:

1. Note the new management address on the result page.
2. Switch your phone to the same on-site Wi-Fi.
3. Open the management interface at the new address and check that it works.

Once everything is fine, you can press "Done — close the hotspot now" to close it early; on success, "Hotspot closed" appears. You don't have to press it: the hotspot closes automatically when the countdown ends.

Note the new address before leaving the hotspot

Once the hotspot is closed, the device can only be found through the on-site Wi-Fi. If you forget the new address, look at the startup screen on the device panel (in Station mode the startup screen shows the on-site network address, see Startup screen and network mode), or ask the network administrator to look it up on the router.

If the switch fails

If the trial connection fails, the device automatically returns to the previous mode. The screen shows "Could not switch to “mode name”", "Rolled back to the previous settings." and the reason, with a "Check Wi-Fi settings" button:

Reason	What to do
Reason: wrong password.	Enter the password again in Network properties
Reason: network not found — it may be out of range.	Check the network name and that the router is on, or move the device closer to the router
Reason: connected, but no address was assigned.	The on-site network didn't assign an address to the device; ask the network administrator, or use a static IP
Reason: this network uses a DFS channel, which is not allowed alongside the hotspot.	See Allow DFS channels
Reason: timed out. / Reason unknown.	Try again later

Other notices:

Notice	Meaning
The network is still applying an earlier change. Please try again shortly.	The previous network change hasn't finished yet
The network service is not responding. Please try again later.	The device's network functions are still starting or temporarily busy
No result yet	No result arrived after a long wait: "Make sure your phone is back on the device’s network and refresh, or check the Network page for the current state."

© 2025-2026 Green Ideas Technology | All rights reserved

Hotspot settings

> Navigation: Settings → System → Network → Hotspot → **Hotspot**

Hotspot status

The hotspot name is shown in large text at the top of the page, with "N device(s) connected" below it. In "Station" mode the hotspot is off, and this area shows "Currently in Station mode — the hotspot is off" instead.

The QR code icon next to the name ("Show QR code") opens the "Scan to join Wi-Fi" window: "Scan with a phone camera to join without typing the password." This is a quick way to let other people on site connect.

Connection details

Field	Description
WiFi Name	The hotspot name; can be copied
Password	Masked with "•" by default; press the eye icon to show it, and copy it while shown
Security type	The hotspot's encryption; see Security type
Channel	The channel the hotspot uses. When set to automatic it shows "Auto (currently N)"; in Concurrent mode it shows "N (follows the Wi-Fi network)"
Band	For example "5 GHz"
IP Address	The device address; can be copied
MAC Address	The hardware address of the device's Wi-Fi adapter

Mask the password before sharing screenshots

The password and the QR code from "Show QR code" both let anyone connect directly to the device, and anyone on the hotspot can use the management interface. Before sharing a screenshot with others, make sure the password is masked, and don't share the QR code screen.

Changing the hotspot name and password

1. Press the edit icon ("Edit hotspot") at the top right of "Connection details".
2. Change the fields (see the table below). Advanced fields are under "Advanced"; click to expand it.
3. Press "Save and restart hotspot".
4. "Save hotspot settings?" appears: "The hotspot restarts after saving, so connected devices will disconnect and must rejoin with the new name or password. If you are using the hotspot right now, reconnect to see the result. If the startup screen is showing, its QR code updates automatically." Press "Save and restart".
5. The screen shows "Restarting the hotspot...": "Your phone will disconnect briefly. Join “new name” and reopen this page; the result appears automatically."
6. Rejoin the hotspot with the new name and password and reopen the management interface; you'll see "Hotspot updated".

If you press save without changing anything, the window simply closes and the hotspot isn't restarted.

© 2025-2026 Green Ideas Technology | All rights reserved

Setting	Range	Description
Name (SSID)	1–32 bytes (a CJK character takes 3)	The name shown in your phone's Wi-Fi list. Hidden hotspots aren't supported
Password	8–63 characters	The hotspot has no "unencrypted" option; a password is always required
Security type (advanced)	One of three	See the next section
IP address (advanced)	An IPv4 address	"This is also the address of the management page". Default `192.168.100.1`
Subnet mask (advanced)	For example `255.255.255.0`	The range of addresses the hotspot gives to phones
Channel (advanced)	"Auto" or 1, 6, 11, 36, 40, 44, 48, 149, 153, 157, 161, 165	1, 6 and 11 are 2.4 GHz; the rest are 5 GHz. Can't be changed in Concurrent mode: "In Concurrent mode the Wi-Fi network decides the channel"

If a value has the wrong format, an error appears, for example "Name must be 1–32 bytes (a CJK character takes 3)", "Password must be 8–63 characters" or "Invalid address, e.g. 192.168.100.1".

If saving fails, "Hotspot update failed" and "Restored the previous settings." appear, and the hotspot keeps its previous name and password.

Changing the IP address changes the management interface address too

The hotspot's IP address is the management interface address. After changing it, open the new address (for example, after changing it to `192.168.50.1`, open `http://192.168.50.1`); old bookmarks stop working.

When choosing channel 1, 6 or 11

These three are 2.4 GHz channels. Once the hotspot moves to 2.4 GHz, connections are slower than on 5 GHz, and devices that support only 5 GHz can't find the hotspot. Unless you have a specific need, keep "Auto".

Security type

Option	Description in the interface
WPA2/WPA3 mixed (default)	"Both old and new phones can connect. Recommended."
WPA2-Personal AES	"WPA2 only. Phones without WPA3 support can still connect."
WPA3-Personal AES	"WPA3 only. Older phones without WPA3 support will not be able to connect. If that happens, use the rescue hotspot on the device to change it back."

The hotspot **offers no open (unencrypted) option**: anyone on the hotspot can operate this device, so the hotspot password is the only protection.

When you change the security type, the QR codes on the startup screen and in "Show QR code" switch to the matching format, so scanning them still joins directly.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Hotspot factory values

Item	Factory value
Name	The device name (set during installation)
Password	Depends on the device; see Connecting to the device — Hotspot password
Security type	WPA2/WPA3 mixed
IP address	`192.168.100.1`
Band	5 GHz
Internet	Not provided (your phone may show "No internet"; this is normal)

Connected devices

The lower part of the "Hotspot" page lists every phone or computer currently on the hotspot, updated automatically every 30 seconds:

Shows	Description
MAC address	The network adapter address of that phone or computer
IP address · rate	The address the hotspot gave it and the connection rate
Signal bars + dBm	Signal strength; the closer the number is to 0, the stronger (for example, -45 dBm is stronger than -75 dBm)

When no device is connected, "No devices connected" appears. Phone names aren't shown here.

This list shows only phones on the **hotspot**. Phones or computers that open the management interface through the on-site Wi-Fi don't appear here.

Device details and disconnecting

Click a device to open "Device details" on the right, showing the MAC address, Received, Sent, IP Address, Signal (dBm) and Rate.

Press the red **Disconnect** → confirm "Disconnect this device?" (It can join again — this is not a block.) → on success, "Device disconnected" appears.

- This only kicks the device off; if the phone remembers the hotspot, it usually reconnects automatically. To keep it from connecting again, change the hotspot password.
- If you kick off **the phone you're using**, you're disconnected immediately.
- If the button is grayed out with the notice "The hotspot control interface is not enabled on this device yet; it becomes available after a restart.": older devices need to be **restarted once** after a software update before this feature can be used.

On-site Wi-Fi

> Navigation: Settings → System → Network → Wi-Fi → **Wi-Fi**

This is where you manage the on-site Wi-Fi networks the device should join (for example, a shop's or company's wireless network). The page has three rows:

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Row	Description
Current connection	When connected, shows the network name and "Connected, secured" or "Connected, open network"; press "Properties" for details. When not connected, shows "Not connected to any Wi-Fi network"
Show available networks	"Scan for nearby Wi-Fi and connect"; scanning starts when you expand it
Manage known networks	"Add, remove and edit networks (N saved)"; press "Manage"

In "Hotspot" mode, the first row shows "Hotspot-only mode": "Not connecting — switch to Station or Concurrent mode to use Wi-Fi", with a "Switch mode" button next to it; "Show available networks" can't be used either ("Scanning is unavailable in hotspot-only mode"). You can still go to "Manage known networks" and use "Add network" to save networks in advance.

Connecting from nearby networks

1. Expand "Show available networks"; the screen shows "Scanning — this takes about 10 seconds...".
2. The list shows nearby networks and their signal strength. Networks with a lock icon need a password; saved ones are marked "Saved".
3. Click a network, enter the password (8–63 characters) and press "Connect". Open networks need no password.
4. The device first tries to connect and saves the network only if it succeeds; on success, "Saved" appears.

If you don't see the network you want, press "Rescan", or press "Add manually" to type it in yourself (hidden networks must be added this way). Clicking a saved network shows "This network is already saved"; press "Properties" to open its settings.

Adding a network

Press "Add network" on the "Manage known networks" page, or "Add manually" under "Show available networks":

Field	Description
Name (SSID)	The network name; upper and lower case must match exactly
Security type	"Open", "WPA2-Personal AES", "WPA3-Personal AES", "WPA2/WPA3 mixed"; default "WPA2/WPA3 mixed" ("Accepts both WPA2 and WPA3; fits most routers.")
Password	8–63 characters; not needed for "Open"
Hidden network	Turn on if the router doesn't broadcast its name

Press "Test and save". The device first tries to connect to the network:

- If it connects: the network is saved and "Saved" appears.
- If it can't connect: **the network isn't saved**, and the window shows "Not saved." with the reason (for example "Reason: wrong password."); fix it and press the button again.

You can also press "Pick from scan results" to pick a network from the nearby list instead and then enter its password.

IP and DNS aren't set when adding; change them afterwards in that network's Network properties.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Passwords can only be written, never shown

Once an on-site Wi-Fi password is stored on the device, **no screen ever shows it again**; the network properties page only says "Set". If you forget the password, ask the network administrator; it can't be retrieved from the device.

Known networks and priority

The "Manage known networks" page lists all saved networks. The one currently in use is marked "Connected", and those preset on the production line are marked "Factory".

"Networks are tried in order; higher ones win." Use "Move up" and "Move down" on each row to change the order. When several known networks are in range, the device joins the one highest in the list.

Click a network name or the arrow on the right to open that network's Network properties.

Network properties

Each saved network has its own properties page (titled "network name properties"). In the upper part, each row has its own "Edit" button:

Row	Shows	When editing
Password	"Set"	A "Change password" window: enter the new password (8–63 characters) and press "Test and save"
Security type	The current encryption	Choose the new encryption. The password field says "Leave blank to keep the current password"; in cases such as changing from "Open" to an encrypted type, "This change requires re-entering the password" appears
IP assignment	"Automatic (DHCP)", or "Manual address Mask Gateway"	See the next section
DNS server assignment	"Automatic (DHCP)", or the manually set DNS servers	See the next section

When you change the password, security type or IP, the device reconnects to test it ("Changing the IP reconnects the device. If it cannot connect, the previous settings are restored automatically."). If it fails, the window shows "Not saved." with the reason, and the previous settings are not affected.

The lower part is read-only information: Name (SSID), Source ("Factory" or "Added by user"), Hidden network; for the network currently in use it also shows Band, Signal, Address, Gateway and DNS servers.

IP assignment and DNS server assignment

IP assignment (press "Test and save"):

Option	Description
Automatic (DHCP)	The on-site router assigns the address (default)
Manual	Fill in "Address" (for example 192.168.1.50), "Subnet mask" (for example 255.255.255.0) and "Gateway". The gateway must be in the same subnet

DNS server assignment (press "Save"):

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Option	Description
Automatic (DHCP)	Uses the DNS servers the router hands out (default). With a static IP: "A static IP has no router to hand out DNS, so Automatic means no DNS"
Manual	"Preferred DNS", "Alternate DNS", "Third DNS": "Tried in order, up to 3. When set, only these are used and the router's are ignored"

Changing only the DNS takes effect immediately, without reconnecting.

Check with the network administrator before using a static IP

If the address you enter is the same as another device's on site, or isn't in the router's subnet, the device may not be able to connect. Ask the on-site network administrator for an address reserved for this device.

Deleting a network

On the network properties page, press the red "Forget this network" → confirm "Delete this network?" ("The device will no longer join it automatically.") → "Deleted" appears.

Networks marked "Factory" can't be deleted; the button is grayed out with the notice "Factory networks cannot be deleted".

Before deleting all networks

Both "Station" and "Concurrent" modes rely on this list to connect; if you delete the network in use, the device can no longer reach the on-site network. Switching to CMS mode also needs at least one network in the list; see CMS / standalone mode switching.

Ethernet

Applicable models

Standard models have no wired network. The "Ethernet" row appears on the "Network" page only when the device detects an Ethernet adapter. If you open this page directly and there is no adapter, "No Ethernet adapter detected" appears.

Each adapter shows its name and "Connected" or "Cable unplugged". You can change "IP assignment" and "DNS server assignment" (same options as for on-site Wi-Fi); below them are Physical address (MAC), Link speed, Address, Gateway and DNS servers.

Confirm within 60 seconds after changing the IP

When you change the IP of the wired network while working through that very cable, you're disconnected as soon as the change is made, and the device has no way of knowing whether you can still reach it. So:

1. The edit window says: "If you are using this cable to reach the device, the connection will drop after the change. Note the new address and open this page from it within 60 seconds to press “Confirm”, otherwise the change is reverted automatically."
2. After applying, "Applied — waiting for confirmation" appears and tells you which address to open.
3. Open "Network → Ethernet" from the new address. The top of the page shows "Change to adapter name awaits confirmation" with the seconds remaining; press "Confirm".
4. On success, "Confirmed — the settings are kept" appears. Without confirmation within 60 seconds, the previous settings are restored automatically.

Changing only the DNS needs no confirmation.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Allow DFS channels

DFS is the "radar detection" that some 5 GHz channels require, and some on-site routers use these channels.

Setting	Default	Description
Allow DFS channels	Off	"When on, the device can join a Wi-Fi network on a DFS channel, but the hotspot briefly drops if radar is detected."

- **Off (default)**: while the hotspot is on, the device avoids DFS channels when joining the on-site Wi-Fi. If the router's 5 GHz has only DFS channels, the device may join its 2.4 GHz instead, or the switch fails with "Reason: this network uses a DFS channel, which is not allowed alongside the hotspot."
- **On**: the device can join routers on DFS channels, but the hotspot may then be turned off ("The Wi-Fi uses a radar-detection (DFS) channel, so the hotspot is off").
- Pure "Station" mode (hotspot off) isn't affected by this setting.

Network status notices

These notices appear under the affected row on the "Network" page:

Notice	Meaning
Hotspot channel follows the Wi-Fi network and cannot be chosen	Normal in Concurrent mode
Hotspot is limited to 2.4 GHz	The on-site Wi-Fi is on 2.4 GHz, so the hotspot moved to 2.4 GHz too. Devices that support only 5 GHz can't see the hotspot
The Wi-Fi uses a radar-detection (DFS) channel, so the hotspot is off	With "Allow DFS channels" on, the on-site Wi-Fi landed on a DFS channel
To keep the hotspot, the device joins on a channel without radar detection	With "Allow DFS channels" off, the device joined on another channel to keep the hotspot
The hotspot subnet overlapped the Wi-Fi network and was adjusted automatically	The on-site network happens to use the same subnet as the hotspot, so the hotspot switched to another subnet automatically. **The hotspot's management address changes with it**; check the new IP Address in "Hotspot"

The network after a factory reset

After a factory reset:

Item	Result
Hotspot name, password, security type and other settings	Back to this device's factory values
On-site Wi-Fi networks added by users	Deleted
On-site Wi-Fi networks marked "Factory"	Kept
Allow DFS channels	Back to off

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

See Factory reset.

Signal and distance tips

- 5 GHz signals pass through walls less well; work within sight of the device.
- When the signal is below about -75 dBm, uploading images or updating software may be slow or interrupted; move closer to the device.

Related: Connecting to the device, Startup screen and screen language, CMS / standalone mode switching, Export / import settings, Device info and monitoring

© 2025-2026 Green Ideas Technology | All rights reserved

Device info and monitoring

> Navigation: Settings → System → **Device info**

This page shows the device's versions, specifications, storage, and live load; you'll need it when you contact technical support. It has four tabs: "**About device**", "**Monitor**", "**Software info**" and "**Status**".

The page updates itself every second while it is open; there is nothing to refresh by hand. Values that can't be read show "-".

About device

Field	Description
System Version	Version of the device's operating system
Device name	Shows the current Wi-Fi hotspot name (at the factory this is the device's identifying name; if you change the hotspot name in Network settings, this changes with it). **Give this name when you contact technical support**
Storage	Used / total capacity (GB) and free space. Turns red when usage exceeds 90%
Panel size	The panel's native resolution, for example 1920 × 1080
Effective resolution	The resolution for the current orientation, for example 1080 × 1920 when placed in portrait. **Use this size when you make images**
Memory	Used / total memory (GB)
2D GPU	Model of the 2D GPU that processes images (scaling, rotation) and its video memory size
Tcon Firmware Version	Firmware version of the panel driver board. Shows "Error" if it can't be read. When the panel model can be read, the panel model code and the available refresh modes are shown below it (for example `V00077 · M1 / M2`); you can include this when you contact technical support
Software version	Version of the software on the device
Uptime	Time since startup, for example "3 days 5 hours"

Footer note: "Support may ask for these details. Version numbers change after a software update."

Monitor

Recording starts as soon as the page opens: one sample per second, and the charts scroll smoothly to the left. The trend keeps only the samples from this visit; reloading the page starts over.

Card	Description
CPU Usage	Processor usage with a trend chart and the lowest / highest values; the processor clock is in the upper right
Memory Usage	Memory usage with a trend chart; used / total memory is in the upper right
System Temperature	System temperature (°C). The colour goes from green to red as it rises (green below 50°C, red from 85°C, where the processor starts to slow down)

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Card	Description
2D GPU usage	How busy the 2D GPU that processes images is; its clock is in the upper right. It rises briefly only when a new image is converted; a slideshow of images already converted does not use it
CMA usage	How much of the contiguous memory (CMA) used by the panel and image processing is in use; used / total is in the upper right
Storage Information	Used / total capacity, a progress bar, and free space

The 2D GPU and CMA cards appear only on devices that support them.

Software info

One item per row, with the version below the title.

Item	Description
Software version	Version of the software on the device. If the page in your browser is still from before an update, "This page is out of date, please reload" is shown below it
System Version	Version of the device's operating system
Kernel version	Linux kernel version
Tcon Firmware Version	Firmware version of the panel driver board
GPU driver version	Version of the 2D GPU driver
Display, Network, Cluster, CMS, Peripherals, System services	Name and version of every system component in each category, for example `wifi-manager 0.3.1`. Categories this device doesn't have are not shown

Status

Details you are often asked to copy down when contacting support or troubleshooting on site.

Item	Description
Serial number	The serial number written at the factory, the same as on the device label. Devices without factory data show "None"
Model number, Part number, Configuration code, Lot number, Hardware version, Board serial number, Panel serial number, PD trigger serial number	Factory data; items that aren't there are not shown
Model profile	The model chosen at installation
Chip serial number	The processor chip's unique serial number
Wi-Fi IP address, Hotspot IP address, Ethernet IP address	One address per line, IPv4 and IPv6; a network that isn't connected shows "None"

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Item	Description
Wi-Fi MAC address, Hotspot MAC address, Ethernet MAC address	Hardware address of each network interface
Bluetooth address	Address of the Bluetooth chip
eMMC storage life	How much of the built-in storage's life is used (for example "0–10% used") and the state of its reserved blocks. If it says "80% used, plan a replacement" or "almost used up", contact technical support
M33 coprocessor, HiFi4 DSP	Whether each coprocessor is running
Hardware watchdog	Whether it is on and its timeout; if the system hangs longer than that, the device restarts by itself
Uptime	Time since startup

Managing storage

The device's storage holds images, system programs, and temporary update files. Running out of space can make uploads, displaying images, or software updates fail.

Usage	Recommendation
90% or below	Normal
Over 90% (shown in red)	Delete images you don't need, and keep enough space for software updates

To free up space: delete images you no longer use in the image gallery. Besides the original file, each image also has a thumbnail and a converted file for the panel; these are all removed when you delete the image.

Related sections: Network settings, System logs, Software update

© 2025-2026 Green Ideas Technology | All rights reserved

System logs

> Navigation: Settings → System → **System Logs**

The system log records events from the management app: image refreshes, schedules, sleep, errors and so on. When something goes wrong, the log is the most important clue for finding the cause, and technical support often asks you for it.

The page

The title shows "Total N entries, approx. X MB" (the size is an estimate). Below the title, one line gives a **summary of the last 24 hours**: "Last 24 hours: Errors N · Warnings N". The numbers are links: clicking one filters the list to the errors (or warnings) of the last 24 hours.

Buttons at the top right:

Button	Description
Download full logs	Packs the complete logs and the device status into one file, see Downloading the full logs
▼ next to Download full logs	"Black box incidents" in this menu opens the incident window, see Black box incident packages
Refresh (↻)	Reloads the list and the summary and shows a "reloaded" message

Log list

- **The newest entry is at the top**, **grouped by date**: each day has a header (date, weekday and the number of entries that day). The header stays pinned at the top while you scroll, so you always know which day you are looking at.
- A batch is loaded at a time, and **scrolling to the bottom loads the earlier entries automatically**; there is no button to press.
- Each row: time (hour:minute:second), message and actions. Messages are not shortened; entries from the CMS component start with "CMS ·".
- **Identical messages in a row are merged into one row** marked "×N". Click "×N" to see the time of each occurrence.
- The **row colour shows the level**:

Level	Colour	Meaning
DEBUG	Blue	Debugging detail (usually absent on production devices)
INFO	Green	Ordinary events, such as why the device did not sleep
WARNING	Yellow	Something went wrong but was retried, recovered or worked around automatically
ERROR	Red	Cannot recover by itself and needs attention, for example an image refresh failed
CRITICAL	Purple	A serious error, for example the white refresh before shutdown failed

- Actions:
  - Eye icon **View full message**: shows the level, the full time and the complete text, which you can copy.
  - Copy icon **Copy**: copies in the format `[time] [level] [Thread] message` (merged rows include "×N") and shows a "copied to clipboard" message.

Filtering logs

The filters sit in one row and **apply as soon as you change them**:

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Filter	Description
Level	"All (incl. INFO)", "Warnings and above" or "Errors and above". **The default is "Warnings and above".** To see ordinary events (for example why the device did not sleep), choose "All (incl. INFO)"
Time range	"1 hour", "Today", "24 hours", "7 days", "All" or "Custom"; the default is "All". "Custom" shows a date-time range picker. Times are the device's time
Source	"App" or "CMS"; leave it empty for both
Keyword search	Matches the message text, case-insensitive. Press Enter or the magnifier to apply

Handy queries

- Click "Errors N" in the summary line: see the errors of the last 24 hours
- Level "All (incl. INFO)" with the keyword `取消休眠`: see why the device did not go to sleep
- Level "Warnings and above" with the time range of the problem: quickly spot what went wrong

Downloading the full logs

When you report a problem to technical support, **press Download full logs at the top right of the page and send the downloaded file to support**. You do not need to filter or tidy the logs yourself.

1. Press **Download full logs** to open the dialog.
2. Press **Pack and download** and wait about 30 seconds (the screen shows "Packing the full logs, this takes about 30 seconds...").
3. When the browser has downloaded the file, send it to technical support.

The file holds the complete logs on the device (system records, App logs, incident packs) and the current device status, and **contains no passwords**. It is **not affected by the filters on screen**, so it is always complete. If packing fails, wait a moment and try again.

Clearing the logs

> Navigation: Settings → System → **Clear logs**

"Clear logs" has moved from the System Logs page to the System Settings page, so it is not pressed by accident before you report a problem.

1. In System Settings, press **Clear logs**.
2. In the confirmation dialog, confirm the clean-up message (this cannot be undone) and press **Confirm**.
3. The number of entries cleaned up is shown.

Clean-up rules:

1. Entries older than **180 days** are deleted.
2. If the logs are still over about **500 MB**, the oldest entries are deleted until they are under the limit.

Logs are not cleaned up automatically

These rules are applied only when you press "Clear logs"; nothing is deleted automatically. On a device in long-term use, clear the logs once in a while. When you are reporting a problem, **download the full logs first, then clear**.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Black box incident packages

The device always keeps the **last 10 minutes** of system records and status (this is the "black box"). When something goes wrong, it automatically saves an "incident package" with the 10 minutes before, the moment itself, and up to 10 minutes after. This happens when:

- A program crashes or keeps restarting
- The network adapter disappears
- The system kernel reports an error
- Temperature, memory or storage goes over a threshold
- CMS images fail to refresh 3 times in a row
- The CMS component disappears
- A software update fails and is rolled back to the old version
- A factory reset happens

To view and download:

1. On the System Logs page, press ▼ next to "Download full logs" at the top right and choose **Black box incidents** to open the window.
2. The list shows each package's "Time", "Triggers", "Size" and "Status". "Collecting" means the 10 minutes after the event are not over yet; it becomes "Done" afterwards.
3. Press **Download** on a row and give the file to technical support. When there are no packages, the window shows "No incidents".

"Refresh" in the window reloads the list. A package over the size limit is marked "* The package exceeded its size limit; less important messages were dropped first." If the black box cannot be read, the window shows "Cannot reach the black box (the service is not running)."

Item	Description
Software update, factory reset	Incident packages are **kept** (the factory reset itself also leaves a package)
Count and size limit	At most 20 packages, 50 MiB in total. When over the limit, the oldest are deleted automatically

Log upload

> Navigation: Settings → System → **Log upload**

When on, this device sends its system logs to the company log server so technical support can find problems quickly. Passwords and similar values are masked before sending. It is **off by default**, and while off nothing is sent.

Open the dialog from the "Log upload" row, turn on the "Log upload" switch, fill in the fields below and press "Save" (it shows "Saved"):

Field	Description
Upload URL	The address of the log server
Environment name	A name that tells which environment this device belongs to

Press "Test connection" to check that the server can receive. Success shows "Test succeeded; the server accepted the line"; failure shows "Test failed: {reason}".

The dialog and the row show the current status:

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Item	Description
Status	"Healthy": sending works. "Connecting": trying to connect. "Cannot connect": the server cannot be reached, with the reason ("Last error")
Last success	When the last successful send happened, for example "just now" or "5 min ago"; "never" if it has not succeeded yet
Lines sent, Lines omitted, Lines dropped	Sent: lines the server received. Omitted: when one service writes too many lines in a short time, the extra lines are not sent, to avoid flooding. Dropped: the server was unreachable for too long and the buffer on the device filled up, so the oldest lines were discarded

When the server cannot be reached

When the server is temporarily unreachable, the device keeps retrying slowly and nothing else is affected. Turning "Log upload" off stops all sending.

Notes

- Log times are recorded with the device's time. If the device's time is wrong, the log times are wrong too, so check Time Settings first.
- Detailed records of software updates and factory resets are not here (the management app itself is stopped at that point); technical support looks at them separately.
- Factory reset deletes all system logs.

Sending logs to technical support

1. Note roughly when the problem happened.
2. Press **Download full logs** and send the downloaded file to technical support.
3. Include a description of the problem and a screenshot of Device info.

Related chapters: Device info and monitoring, Troubleshooting

© 2025-2026 Green Ideas Technology | All rights reserved

Software update (OTA)

> Navigation: Settings → System → **Software Update**

A software update adds new features and fixes problems on the device. The whole process is done in the management interface: first download the update file to your phone or computer, then connect back to the device and upload it.

Before you update

Item	Description
Download the update file	Download the latest version from the Downloads page of this site. The file name is `chlcd-update-v<version>.tar.gz` (about 35 MB)
Check the current version	Write down the current software version in Device info
Power	Make sure **power won't be cut** during the update; on battery models, check that the battery is sufficiently charged or plug in the power first
Storage	Make sure the device's storage is not over 90%
Connection	Stay close to the device with a good signal (the roughly 35 MB file is uploaded twice)

Downloading needs internet access

The device's hotspot has no internet access. **Download the update file to your phone or computer somewhere with internet access first**, then connect to the device's Wi-Fi to update.

Safari on Mac

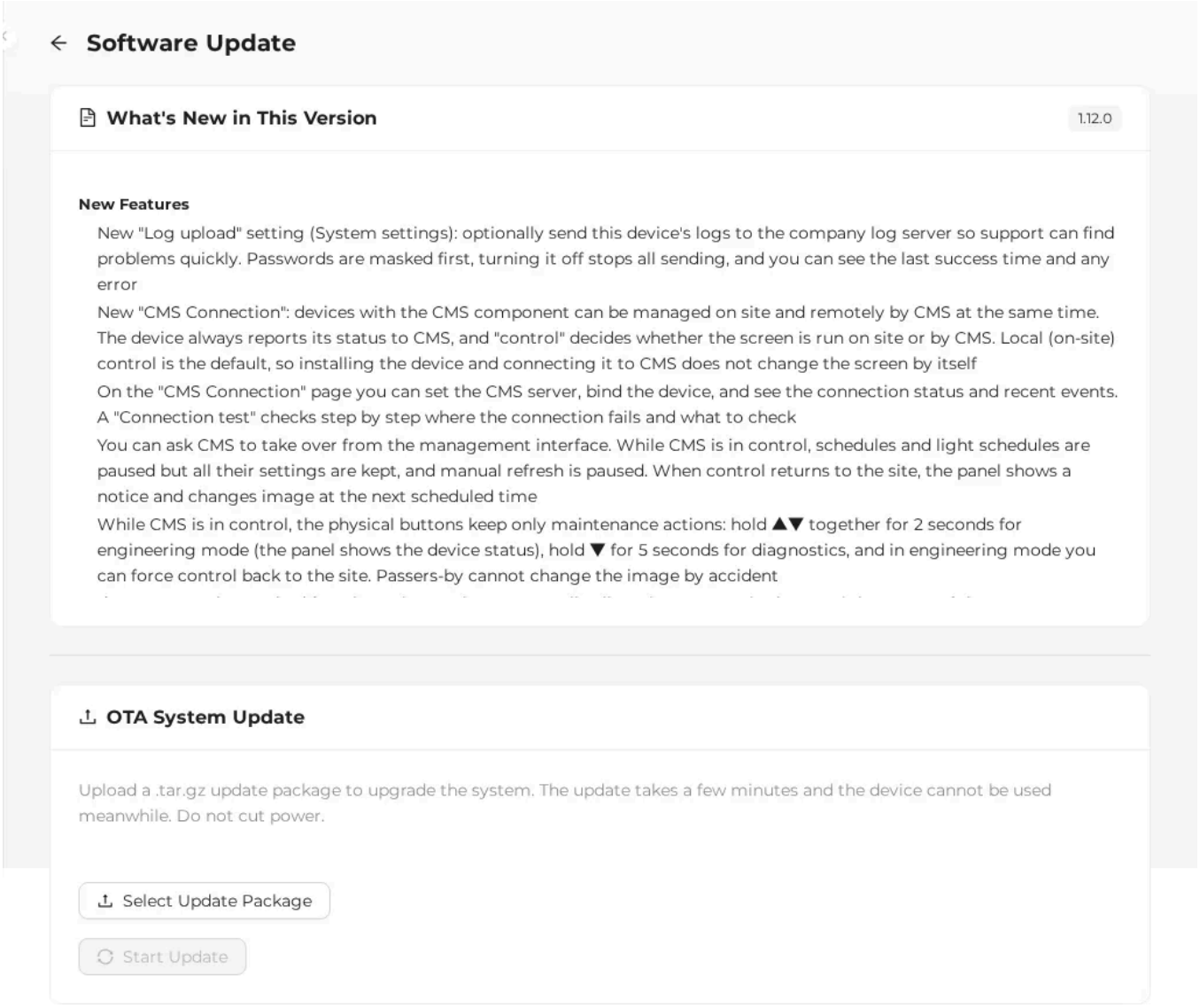
Safari may automatically unpack a `.tar.gz` into a folder or a `.tar` file after downloading, and then it can't be uploaded. In Safari, go to "Settings → General" and uncheck "Open 'safe' files after downloading", or use Chrome to download.

The page

The Software Update page has three sections from top to bottom:

1. **What's New in This Version**: the release notes for the currently installed version, with the current version in the upper right. Shown in the management interface language, or in Traditional Chinese if that language isn't available.
2. **OTA System Update**: where you upload the update file.
3. **Factory Reset**: the red section. See Factory reset.

© 2025-2026 Green Ideas Technology | All rights reserved



The version number in the upper right of the screenshot is hidden; the actual screen shows the current version.

Update steps

1. Press **Select Update Package** and choose the downloaded `.tar.gz` file.
   - If the file name doesn't end in `.tar.gz`, "Please select a .tar.gz update package" appears.
2. "Selected: file name" and "Reading update package info..." appear. At this point the system uploads the file once and reads the package contents.
3. When reading is done, a preview appears:
   - **Version:** `current version → new version`
   - **What's New**: the release notes for the new version
4. Press **Start Update**.
5. In the confirmation window "Update system to version X.Y.Z? The device will reboot during the update — do not cut power.", press **Confirm Update**.
6. Upload progress (percentage) is shown.
7. When the upload finishes, a waiting screen appears: "Installing update, please wait..." "Will reconnect automatically after reboot".
8. When it's done, the result appears automatically.

© 2025-2026 Green Ideas Technology | All rights reserved

Don't cut power or close the page during the update

The waiting screen waits up to 5 minutes. During that time, keep the device powered, keep your phone connected to the device's Wi-Fi, and don't close the page.

Update result

Result	Screen	Next step
Success	Green check "Update Successful", "Updated to version X.Y.Z", and the new release notes	Press **Back**; the page reloads automatically into the new interface
Failure	Red cross "Update Failed", with the reason for the failure in the subtitle	The device automatically goes back to the original version; check the actual version in Device info. See "If the update fails" below
Can't confirm	Yellow "Update Result Unconfirmed": "The device restarted but no update record could be read. Current version is X.Y.Z; please verify under Device Info."	Check in Device info whether the software version is the new version
Connection timed out	"Connection timed out: the device still can't be reached after 5 minutes. Please check the device status manually."	See "If the connection times out" below

- "Updated to version X.Y.Z" is shown only when the update succeeds.
- If the update is rejected before installation starts (for example, the current version is too old, there isn't enough storage, or the model data check didn't pass), **"Update Failed" appears right away** with the reason; you don't have to wait 5 minutes. In this case nothing on the device has been changed.
- The reason for the failure is given in the interface language, for example "Not enough storage space: 250 MB needed, only 80 MB free. Delete unused photos and try again" or "Updating the database failed. The device is back on its previous version". Include this text when you contact technical support.
- When updating from a version before 1.11.0, the result page is shown by the old version you're updating from, so the reason is still a technical message in English.

What the device does during the update

1. Checks whether the current version can be upgraded directly to the new version.
2. Checks whether there is enough storage. If not, it first clears temporary files left by the updater itself; if there still isn't enough, it **doesn't update** and the device stays as it is.
3. Checks whether this device's model data can be carried over; if anything is missing or doesn't make sense, it **doesn't update** and the device stays as it is.
4. Backs up the current version.
5. Pauses the management program (the management interface disconnects for a while; **the Wi-Fi hotspot stays up**, and the status LED turns off).
6. Installs the new program and required components (the new version uses a separate program environment; the original version's program and components are kept untouched).
7. Upgrades the database structure (all data is kept).
8. Updates the management interface files.
9. Restarts the management program and confirms it works (waits up to 90 seconds).
10. Records the result once it's confirmed; if any step fails, it **restores automatically** to the version before the update.

- The update only restarts the management program; it **doesn't reboot the device**, so your phone usually stays connected to the Wi-Fi.

© 2025-2026 Green Ideas Technology | All rights reserved

- Exception: the **first** time a unit from an earlier production batch is updated to 1.13.2 or later, the system first adjusts one setting, the device **restarts once by itself**, and the update finishes automatically after startup. Start the update once; the whole process takes about 6 minutes. Don't cut power; your phone will lose the Wi-Fi connection for a while. Later updates don't restart the device.
- When the management program restarts, if "Show QR Code startup screen on boot" is on, the panel shows the startup screen (refresh time depends on the model and refresh mode, for example about 6 seconds on 13.3-inch, about 16 seconds on 27.6-inch, about 20 seconds on 32-inch). After that, the schedule takes over, or you display an image manually.

What's kept after an update

Item	After the update
Uploaded images	Kept
Image sets, schedules, light schedules	Kept
All settings (sleep, buttons, G-Sensor, startup screen, refresh mode...)	Kept
Installation settings such as model and screen language	Kept; settings added in the new version are filled in with default values
Wi-Fi hotspot name and password	Kept. Devices already shipped do **not** switch to a per-device factory hotspot password after the update
Time zone and time	Kept
System logs	Kept

If the update fails

When an update fails, the device automatically:

1. Rolls the database structure back to the version before the update.
2. Switches back to the program from before the update and the components it uses.
3. Restarts and confirms it works.

Your images, schedules, and settings are not affected. We recommend:

1. Checking in Device info that the version is back to what it was before the update, and reading the reason for the failure on the result screen.
2. Making sure the file is a complete file downloaded from the official website; download it again and retry.
3. If it still fails, write down the current version, the version you're updating to, and the time of the failure, and contact technical support.

If the connection times out

If the device still can't be reached after waiting more than 5 minutes, possible causes are:

Cause	What to do
Your phone has left the device's Wi-Fi	Reconnect to the device's Wi-Fi and check the version in Device info
The update is taking longer	Wait a few more minutes, reload the page, and check the version in Device info

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Cause	What to do
First update to 1.13.2 or later on a unit from an earlier production batch (the device restarts once by itself; about 6 minutes in total)	The update is still running; don't cut power. After the device has restarted, reconnect to the device's Wi-Fi and check the version in Device info
The device's current version is too old (before 1.6.5) to upgrade directly	The device keeps running the original version. Install the 1.6.5 update file first, then update; see Download updates
Device problem	Check the status LED and the panel, and contact technical support

"Start Update" stays grayed out after choosing a file

If the version preview never appears after you choose a file, and "Start Update" can't be pressed:

Message on screen	Cause
This file is not a valid update package. Please check that the download is complete	The file isn't a valid update package (for example, you downloaded the installation package, or the file is incomplete), or the connection dropped during upload
The update package is larger than 128 MB and cannot be used	The file is too large (official update packages are never that large)

Download the update file again, move closer to the device, and try again.

Can I downgrade?

Update packages aren't limited to upgrades, but **installing a version older than the current one is not recommended**. An older program may not understand the newer data structure, so installation fails and is rolled back automatically. If you need to downgrade, contact technical support first.

Messages

Message	Meaning
Please select a .tar.gz update package	The file name isn't `.tar.gz`
Please select an update package first	No file has been selected yet
This file is not a valid update package. Please check that the download is complete	The update package contents can't be read
The update package is larger than 128 MB and cannot be used	The file is too large
Upload failed: The update package is larger than the 128 MB limit	The file is too large; it isn't a valid update package
Upload failed: Checksum mismatch...	The file is damaged or incomplete; download it again
Upload failed: The update package has no manifest.json	It isn't a valid update package
Update Successful / Update Failed / Update Result Unconfirmed	Update result
Connection Timed Out	The result couldn't be confirmed within 5 minutes

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Related sections: Downloads, Device info and monitoring, Troubleshooting: updates and maintenance

© 2025-2026 Green Ideas Technology | All rights reserved

Tcon firmware update

> Navigation: Settings → System → **Tcon Firmware** (the page title is "Tcon Firmware Management")

Tcon is the panel's driver control board. It converts images into signals the panel can display. Tcon firmware and software update are two different things:

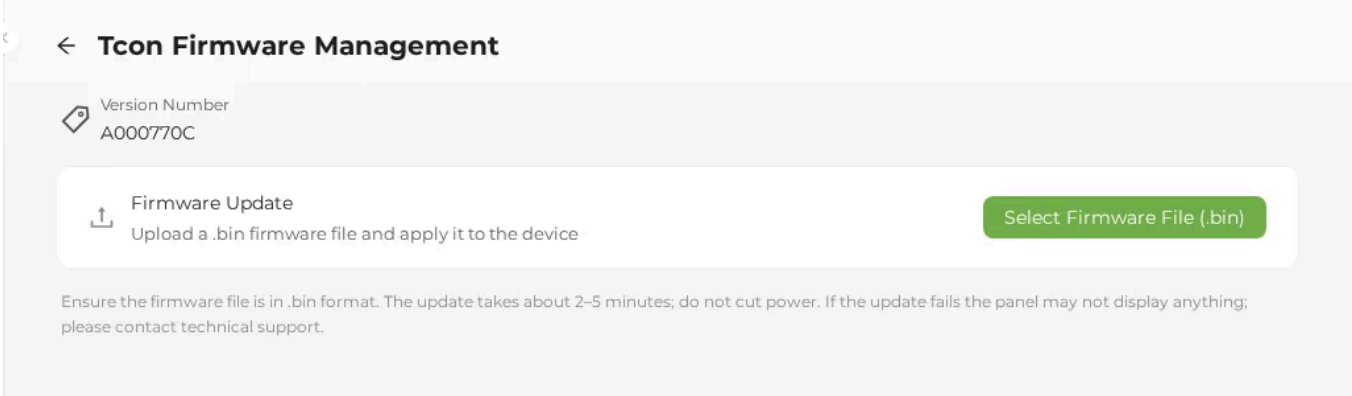
	Tcon firmware	Software update (OTA)
What it updates	Panel driver board	Management program and management interface
File format	`.bin`	`.tar.gz`
When it's needed	Only when the manufacturer tells you to	When a new version is available

Update only when the manufacturer tells you to

Tcon firmware is closely tied to the panel model. The wrong firmware can stop the panel from displaying properly. **Update only when the manufacturer or technical support tells you to, and use the file they provide.**

Check the current version

When you open the page, the "Version Number" is read and shown automatically.



Shown	Meaning
Version Number	The current Tcon firmware version
Unknown	The version information can't be read
Read Failed	An error occurred while reading (along with "Failed to read firmware version")

The current version is also shown as "Tcon Firmware Version" in Device info.

Update steps

1. Write down the current firmware version.
2. In the "Firmware Update" row, tap **Select Firmware File (.bin)** and choose the file provided by the manufacturer.
   - If the file isn't a `.bin` file, you'll see "Only .bin firmware files are accepted".

© 2025-2026 Green Ideas Technology | All rights reserved

3. In the confirmation window "Confirm Firmware Update: About to upload firmware file: file name", with the red reminder "Do not interrupt power or operate the device during the update", tap **Confirm Update**.
4. "Updating firmware, please wait..." appears. This takes about **2–5 minutes**.
5. On success you'll see "Firmware update successful" and the version number is read again; on failure you'll see the reason or "Firmware update failed".
6. After the update, go to the image display page and display an image to check that the panel works properly.

During the update

- Don't cut the power or close the page.
- Don't display images, clear the screen, or do anything similar.
- The update takes at most about 5 minutes.

After the update

- The available refresh modes depend on the panel model (Tcon firmware version). The device reads the panel model again **right after the update**. See Scan direction and refresh mode.
- If the panel displays incorrectly after the update, contact technical support right away and provide the version numbers from before and after the update.

Notes

The page says: "Ensure the firmware file is in .bin format. The update takes about 2–5 minutes; do not cut power. If the update fails the panel may not display anything; please contact technical support." After updating, always check the actual image on the panel instead of relying only on the "update successful" message.

Related sections: Device info and monitoring, Scan direction and refresh mode

© 2025-2026 Green Ideas Technology | All rights reserved

CMS connection and control

> Navigation: Settings → System → **CMS Connection**

A device with the CMS component can be managed on site and remotely by a CMS (content management system) at the same time. This page explains what the CMS component is, how "control" changes hands, every field on the CMS Connection page, how to read the connection test, and what you see on site while CMS is in control.

Applicable models

"CMS Connection" appears on the Settings page only on devices with the CMS component installed. These devices do **not** show "Mode Switcher"; for the old switching method, see CMS / standalone mode switching.

What the CMS component is

The CMS component is a small program on the device that **is always running** and keeps in touch with CMS:

- It registers with CMS (binding) so that CMS recognises this device.
- It reports status once a minute, including connection quality, battery level and temperature. The CMS back office can always see the device, so it never shows up as "missing".
- It receives the images CMS wants to show and hands them to the device to display on the panel.

The CMS component and this management interface **exist side by side**. The standalone features (image gallery, image sets, schedules, buttons, status LED) are always there. The only difference is who is in charge right now, which we call **control**.

Control: local and CMS

	Local control	CMS control
What the panel shows	Decided on site: displaying images manually, schedules, paging with the buttons	Decided by CMS
Images sent by CMS	Not shown	Shown
Schedules and light schedules	Run as usual	**Paused**, but still editable; settings are kept
Status reports to CMS	Yes	Yes
Management interface	Everything available	Some features paused, see Features paused while CMS is in control

- A newly installed device starts in **local control**. Entering the CMS address and connecting to CMS does not change the screen by itself.
- After a restart or power loss, the device keeps the control it had before.

From local to CMS control

There are three ways:

© 2025-2026 Green Ideas Technology | All rights reserved

Method	Condition
Press "Ask CMS to take over" on the CMS Connection page	The device is bound and can reach CMS, see Asking CMS to take over
A "take over" command from the CMS back office	Available once the CMS back office offers this operation
Automatic takeover the first time CMS sends an image to this device	A CMS address was set during installation, and the device is bound

A device that is part of a cluster video wall cannot be taken over by CMS. Remove it from the video wall first.

Back to local control

Once CMS is in control, as a rule **only CMS can hand control back**. A few exits remain so that a device never gets stuck if CMS fails:

Method	Notes
CMS back office hands control back	The normal way
CMS has not been in touch with the device for 7 days in a row	Returns to local control automatically
Forcing local control on site in engineering mode	Done with the physical buttons, see Forcing local control
"Force back to local control" on the "Developer" tab of the management interface	Requires a reason; meant for maintenance staff troubleshooting

After either of the last two methods (forcing local control), **CMS cannot take over again for 30 minutes**, so that on-site staff have time to troubleshoot. During this time, "Control" on the CMS Connection page shows "CMS takeover is temporarily not accepted until {time}." ({time} is the end time). Pressing "Ask CMS to take over" on site during this time lifts the restriction immediately.

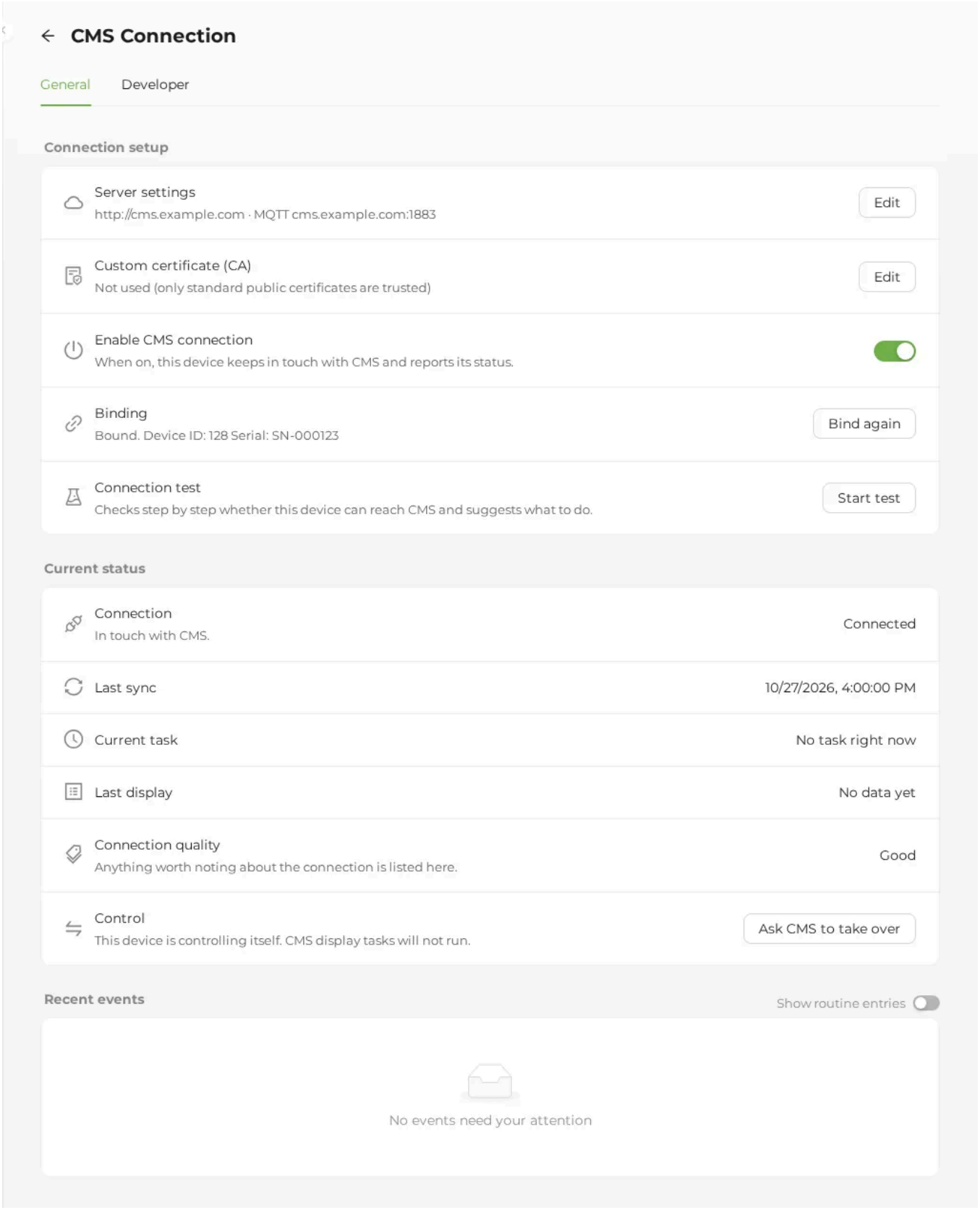
What the panel shows when control returns to local

When control returns to local, the panel shows the "Switched to standalone control" notice: "This device is no longer controlled by the CMS. The display updates at the next schedule." The notice includes connection QR codes that on-site staff can scan to reach the management interface.

The notice stays on screen until the next scheduled time, when it is replaced by the scheduled image. The image does not change the moment control is handed back.

© 2025-2026 Green Ideas Technology | All rights reserved

The CMS Connection page



The page has two tabs, "General" and "Developer". For day-to-day use you only need "General".

© 2025-2026 Green Ideas Technology | All rights reserved

Connection setup

Item	Description
Server settings	Shows the current CMS address and MQTT host. Press "Edit" to change them; fields are listed below
Enable CMS connection	"When on, this device keeps in touch with CMS and reports its status." When off, the device does not contact CMS at all
Binding	When bound, shows the "Device ID" and "Serial". If not bound yet, press "Bind"; if bound, you can press "Bind again". Binding is not possible while "Enable CMS connection" is off
Custom certificate (CA)	Shows the CA certificate in use. Only needed when CMS uses a certificate issued by your hospital or company, see Custom certificate (CA)
Connection test	Press "Start test" to check step by step whether the device can reach CMS, see Connection test

The "CMS server settings" dialog:

Field	Description
CMS address	The CMS web address, starting with `http://` or `https://`, for example `https://cms.example.com`. Required
MQTT host	The server used for instant notifications. Usually the same machine as CMS. Enter a host name (used with the port below), or the address given by CMS, for example `wss://cms.example.com/mqtt` or `mqtts://cms.example.com:8883`. When you enter an address, the port in it is used. Required
MQTT port	Usually 1883 without encryption and 8883 with `https://` (encrypted connection). When the CMS address switches between `http://` and `https://`, 1883/8883 switches with it. Required
MQTT username	Leave blank unless CMS requires one
MQTT password	If one is already set, the dialog shows "A password is set. Leave blank to keep it." Once saved on the device, the password is never shown again

Using https://

With an `https://` address the device verifies the CMS server certificate, and MQTT also uses an encrypted connection. If CMS uses a self-signed certificate on a hospital network, first upload that certificate's CA under "Custom certificate (CA)" on this page; otherwise the "Encrypted connection (TLS)" step of the connection test fails.

Custom certificate (CA)

If CMS uses a certificate issued by your hospital or company (`https://`), upload the CA certificate that issued it so the device trusts this CMS. A CMS with a standard public certificate does not need this, and the row shows "Not used (only standard public certificates are trusted)".

Press "Edit" on the "Custom certificate (CA)" row to open the "Custom certificate (CA)" dialog, then press "Upload CA certificate" and choose a `.pem` or `.crt` file. After a successful upload it shows "Certificate replaced".

Item	Description
What is shown	The certificate name, expiry date and source, for example "{name}, expires {date} (uploaded here)"

© 2025-2026 Green Ideas Technology | All rights reserved

Item	Description
Source	"uploaded here": uploaded on this page. "factory setting": set at installation. "set by support": set by a technician
Expiring soon	Within 30 days of expiry it shows "expires in {days} days"; after that it shows "expired, cannot connect to CMS"
Remove uploaded certificate	Press "Remove uploaded certificate" and confirm to go back to the factory certificate setting. It shows "Back to the factory setting"

These files are rejected, with a reason:

File	Message in short
Server certificate (not a CA)	"This is a server certificate, not a CA certificate". Ask the CMS administrator for the CA that issued it
Contains a private key	Rejected for security. Only the CA certificate is needed, no private key
Expired CA	An expired CA cannot be used to connect. Obtain a new CA
Not a certificate, incomplete, too large	The file must be a text (PEM) certificate, up to 64 KB

After changing it

After replacing or removing the certificate, use the connection test to confirm the device can reach CMS. A factory reset removes an uploaded certificate. It cannot be changed while CMS is in control; return to local control first.

Current status

Item	Description
Connection	"Connected": in touch with CMS. "Connecting": trying to connect. "Not connected yet": has never connected successfully; run the connection test first. "Waiting to connect": connected before but cannot reach CMS right now; the device retries automatically and the screen is not affected. "Off": "Enable CMS connection" is turned off, so the device does not contact CMS. "Checking": checking the connection
Last sync	When the device last fetched the latest task from CMS
Current task	How far the image from CMS has got, for example "Downloading image" or "Updating screen". Shows "No task right now" when there is none
Last display	Whether the most recent CMS image was shown successfully
Connection quality	Lists anything worth noting about the connection (see the table below); otherwise shows "Good"
Control	Whether the device is in local or CMS control, and since when. In local control this row has the "Ask CMS to take over" button

Items that "Connection quality" may list:

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Item	What it means
"Weak Wi-Fi signal", "Very weak Wi-Fi signal"	The Wi-Fi signal at the device is not strong enough; the access point may need to be moved
"Some network packet loss", "Severe network packet loss"	Data is often lost on the network
"Wi-Fi access point keeps switching", "Wi-Fi access point refused the connection"	The device keeps switching between access points, or an access point will not let it connect
"Local network gateway unreachable", "Address lookup failed", "Network address settings problem"	A problem with the site network itself
"CMS server unreachable", "CMS often times out", "CMS returned errors"	The network works, but CMS cannot be reached or answers abnormally
"Instant-notification connection keeps dropping", "Instant-notification connection unstable"	The connection that receives instant notifications from CMS (MQTT) is unstable
"Device clock differs from CMS"	The device's time is too far from the time on CMS
"Wi-Fi connection service unstable", "Network recovery was run automatically", "Device restarted unexpectedly", "App has not reported in"	Conditions the device detected itself, for maintenance staff

Items not in this table are shown as their English code.

Recent events

Lists events that need attention, labelled "Notice" or "Action needed". Turn on "Show routine entries" to include "Routine" entries too. Events are never shown in red, so on-site staff do not think the device is broken.

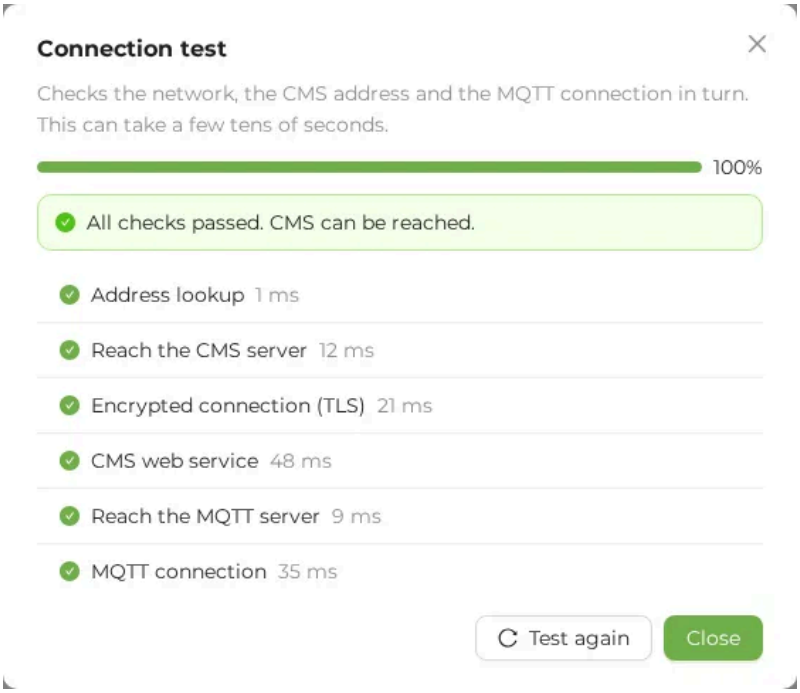
Developer tab

For maintenance staff troubleshooting: the full connection status, all events, "Last connection test" (expand it to see the original messages from the CMS component), and "Force back to local control". Regular users do not need this tab.

Connection test

After you press "Start test", six steps are checked in turn. This takes a few tens of seconds. When everything passes, the dialog shows "All checks passed. CMS can be reached."

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com



When a step fails, it is marked with a warning icon and a suggestion; later steps that depend on it are skipped. Work from the top down to the **first failed step**, fix it, then press "Test again".

Step	What it checks	If it fails, check
Address lookup	Turns the CMS address name into an IP	Whether the device is connected to a network (see Network settings); whether DNS on the site network works; you can also set CMS by IP address
Reach the CMS server	Whether the CMS address and port can be reached	Whether the CMS server is on; whether the address and port are correct; whether a firewall in between allows the connection
Encrypted connection (TLS)	For an `https://` address, whether an encrypted connection can be set up and the CMS certificate is trusted. Passes directly for `http://` (no encryption)	A self-signed certificate on a hospital network needs its CA set up on the device first; the address must match the name on the certificate; whether the device clock is correct; whether this port is https
CMS web service	Whether CMS answers normally	Whether the address points to CMS itself (not another website); whether the CMS service is running; whether `http://` / `https://` matches the CMS setup
Reach the MQTT server	Whether the MQTT host and port can be reached	Whether the MQTT server is running; whether the port (usually 1883 without encryption, 8883 with encryption) is open. Without MQTT, CMS still works, but new tasks arrive more slowly
MQTT connection	Whether the MQTT server accepts this device	Whether the MQTT username and password are correct; the MQTT server's access settings; with `https://`, MQTT must also use the encrypted port (usually 8883)

If the whole test runs out of time, only one row appears, "Whole test": the network is very slow or a step got stuck. Check each item, starting with the network.

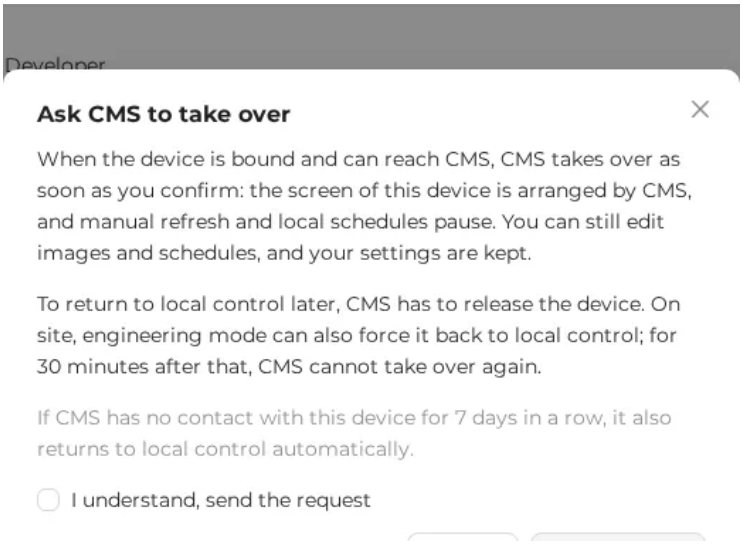
© 2025-2026 Green Ideas Technology | All rights reserved

The suggestion for each step is shown in the language of the management interface and has the same content as the table above. The original messages from the CMS component can be viewed under "Last connection test" on the Developer tab.

Asking CMS to take over

Conditions: "Enable CMS connection" is on, the device is bound, and it is in local control. Otherwise the button is greyed out.

1. On the "Control" row, press "Ask CMS to take over".
2. Read the explanation and tick "I understand, send the request".
3. Press "Send request".



When the device is bound and can reach CMS, CMS takes over **immediately** after you send: "CMS now controls this device." appears and "Control" changes to "Controlled by CMS". The dialog also explains how to return to local control later.

Result	Cause
"The request did not go through. Please check the connection first."	The device cannot reach CMS right now, is not bound, or is part of a cluster video wall. Run the connection test first

Features paused while CMS is in control

While CMS is in control, a notice appears at the top of the affected pages. All settings are kept and work as usual once control returns to local.

Page	While CMS is in control
Image Display	You can upload, edit and manage images, but manual refresh (clear screen, show image, etc.) is greyed out
Image Sets	Available as usual
Schedule	You can create and edit schedules, but they **do not run**
Light Schedule	You can create and edit light schedules, but they **do not run**
Tcon Scan Mode	View only

© 2025-2026 Green Ideas Technology | All rights reserved

Page	While CMS is in control
Sleep Settings	Hidden. The device does not go to sleep while CMS is in control
Battery	View only
Cluster	View only; changes made to this device from other devices through the cluster are refused
Network	You can set up Wi-Fi, but cannot switch to hotspot or concurrent mode, see Turning on the hotspot
Other settings pages (time settings, software update, etc.)	Available as usual

Also:

- When you open the management interface, the home page goes straight to "CMS Connection".
- The presenter remote cannot change pages.
- The physical buttons keep only the functions listed in the next section.

Physical buttons

While CMS is in control, the physical buttons keep **only** the functions below. Paging, clearing the screen and showing the QR code do nothing, so that patients or passers-by cannot change the screen by accident. In local control the buttons work as described in Physical buttons and gestures.

Action	Function
Hold both buttons for 2 seconds	Enter engineering mode; do it again in engineering mode to leave
Hold the Next button for 5 seconds	Show a diagnostics card without entering engineering mode
In engineering mode, press the Previous button 5 times within 4 seconds	Force local control
In engineering mode, press the Next button 5 times within 4 seconds	Turn the hotspot on for 30 minutes, see Turning on the hotspot
Hold any button for 40 seconds	Factory reset (same as in local control)

The LED flashes quickly while you hold the Next button

From the 3rd second, the LED starts flashing quickly. This is the factory-reset countdown warning. Once the diagnostics card starts refreshing at 5 seconds, **let go**. Do not keep holding until 40 seconds.

Engineering mode

For on-site maintenance staff to check the device. In engineering mode:

- The panel shows the engineering mode info card (no QR code) with: control, CMS connection, device ID, display task, software version, network (IP and Wi-Fi name), system (CPU, temperature, memory), panel, and time. It is updated every 60 seconds when the content changes.
- The bottom of the card says "Hold ▲▼ 2 s to exit Press ▲ 5 times: force local Press ▼ 5 times: hotspot on/off". ▲ is the **Previous button** and ▼ is the **Next button**.

© 2025-2026 Green Ideas Technology | All rights reserved

- The card text (also on the device info and diagnostics cards) follows the panel language (繁體中文, English, 日本語), and the CMS connection status is described in words, for example "Network OK, cannot reach CMS".
- The LED switches to the engineering-mode blinking, see Status LED.
- Images CMS sends during this time are held back and continue after you leave engineering mode.

When you leave engineering mode, the panel returns to what it showed before.

The text on the info cards is **always in Traditional Chinese** and does not follow the startup screen language.

Forcing local control

Use this when CMS has failed, its address is wrong, or on-site staff need to troubleshoot:

1. Hold both buttons for 2 seconds to enter engineering mode (the panel shows the engineering mode info card).
2. Within 4 seconds, press the Previous button 5 times.
3. The device leaves engineering mode and returns to local control, and the panel shows the "Switched to standalone control" notice.

For the next 30 minutes CMS cannot take over again. To let CMS take over, press "Ask CMS to take over" on the CMS Connection page, or wait 30 minutes and take over from the CMS back office.

> **Different from rescue mode**
>
> Holding both buttons for **10 seconds** starts network rescue mode, which is a different operation. Forcing local control only works after entering engineering mode first, so it does not happen by accident.

Turning on the hotspot

While CMS is in control, the device's hotspot is **off by default**. To connect a phone to the management interface on site:

1. Hold both buttons for 2 seconds to enter engineering mode.
2. Within 4 seconds, press the Next button 5 times.
3. The hotspot turns on and turns off by itself after 30 minutes.

The engineering mode info card shows the hotspot state and the time it will turn off. When control returns to local, the network mode goes back to what it was before CMS took control.

While CMS is in control, the Network page cannot switch to hotspot or concurrent mode.

Updating the software from CMS

CMS can update this device's software remotely, without a visit:

- The update package is checked before it is installed.
- If the new version fails to start, the device automatically returns to the previous version.
- The result is reported to CMS. While the update runs, CMS shows the device as "updating".

For updating on site, see Software update (OTA).

© 2025-2026 Green Ideas Technology | All rights reserved

Signs on the panel

Startup info card

When a device under CMS control starts up, it does not show the startup screen with QR codes. Instead it shows a startup information card, with the same content as the engineering mode card, and a line saying that the panel is controlled by CMS and will update shortly. It is replaced once the CMS image arrives.

The small triangle in the top-right corner

When CMS is in control and the device has **not been in touch with CMS for 30 minutes in a row**, a small triangle with an exclamation mark appears in the top-right corner of the CMS image on the panel. It is small and does not cover the main content; it only tells maintenance staff that the device is currently out of touch with CMS.

- It disappears automatically once the connection is back.
- It is drawn only on CMS images, never on the startup screen or on images shown in local control.
- After a restart, the 30 minutes start again.

If you see the triangle, run the connection test on the CMS Connection page.

CMS images keep failing to refresh

When CMS images keep failing to reach the panel, the device first restarts its panel service by itself. If it still fails, it clears the panel and shows a discreet error screen. The next CMS image that refreshes successfully replaces it.

Status LED

Once "Enable CMS connection" is on, the LED in standby shows the **CMS connection status** (in both local and CMS control). While refreshing, starting up or sleeping, the usual LED patterns apply, see Status LED.

Full-colour LED (13.3-inch white models):

Status	LED	Description
Connected	Solid green	In touch with CMS; same as normal standby
Starting	White blinking (about every 1 second)	The CMS component has just started
Connecting	Slow blue blinking (about every 1.6 seconds)	Connecting to CMS
Poor connection	Solid amber	Connected, but something about the connection is worth noting
Cannot reach CMS	Slow yellow blinking (about every 2 seconds)	Problem with the network or CMS; run the connection test
Engineering mode	Fast blue blinking (about every 0.5 seconds)	In engineering mode
Updating	Amber blinking (about every 0.7 seconds)	Updating software

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Status	LED	Description
CMS component not running	🟠 Fast yellow blinking	The CMS component itself has been stopped for more than 60 seconds; the LED is never red. It returns to normal when the component comes back

Dual single-colour LEDs (27.6-inch, 32-inch and similar models) have no colour, so the blinking speed tells the states apart:

Status	LED	Description
Connected	🟢🟢 Solid	In touch with CMS
Starting	🟢🟢 Blinking (about every 0.6 seconds)	The CMS component has just started
Connecting	🟢🟢 Slow blinking (about every 1.6 seconds)	Connecting to CMS
Poor connection	🟢🟢 Very slow blinking (about every 3 seconds)	Connected, but something about the connection is worth noting
Cannot reach CMS	🟢🟢 Blinking (about every 0.9 seconds)	Problem with the network or CMS; run the connection test
Engineering mode	🟢🟢 Fast blinking (about every 0.5 seconds)	In engineering mode
Updating	🟢🟢 Blinking (about every 0.7 seconds)	Updating software
CMS component not running	🟢🟢 Short blinks	The CMS component itself has been stopped for more than 60 seconds. It returns to normal when the component comes back

The factory-reset countdown LED takes priority over all of the above.

Connection status shows at most a yellow warning, never red; red is used only for the factory-reset countdown and failed refreshes.

FAQ

I entered the CMS address. Why hasn't the screen changed?

The default is local control, so images sent by CMS are not shown. Check that "Connection" shows "Connected" and "Binding" shows the device as bound, then press "Ask CMS to take over" or have CMS take over.

"Ask CMS to take over" is greyed out

All of these must be true: "Enable CMS connection" is on, the device is bound, and it is in local control. If it is not bound, press "Bind"; if binding fails, run the connection test first.

Are schedule settings erased while CMS is in control?

No. Schedules and light schedules are only paused and can still be edited. After control returns to local, they run as usual from the next scheduled time.

© 2025-2026 Green Ideas Technology | All rights reserved

CMS is down and the device keeps showing an old image. What can I do?

The device keeps showing the last image (a cholesteric LCD keeps its image without power). If you need to change the screen on site, force local control in engineering mode and then use the management interface. If CMS cannot reach the device for 7 days in a row, the device also returns to local control automatically.

If the network drops briefly, does the panel show an error screen?

No. The panel never shows an error or offline screen. Only after 30 minutes in a row without contact with CMS does the small triangle appear in the top-right corner of the CMS image.

Are CMS settings kept after a factory reset?

A factory reset clears the binding, any CMS address changed in the management interface, and control, so the device goes back to "local control, not bound". The CMS address set during installation is kept, and after the reset the device binds again with it automatically. The same goes for the MQTT username and password: values set at installation (production) are kept, while values changed in the management interface return to the factory values after a reset. See Factory reset.

Where do I set which CMS this device connects to?

On site, use "Server settings" on this page. Devices that were shipped with a CMS address need no further setup.

Related: CMS / standalone mode switching, Network settings, Physical buttons and gestures, Status LED, Cluster

© 2025-2026 Green Ideas Technology | All rights reserved

CMS / standalone mode switching

> Navigation: Settings → System → **Mode Switcher**

Applicable models

"Mode Switcher" appears on the Settings page only on devices with the CMS module installed. If you don't see it, the device supports standalone mode only.

Devices with the CMS component do not need to switch

This page describes the old way of switching. Devices with the new CMS component do not show "Mode Switcher" and use the "CMS Connection" page instead: the standalone features and CMS work side by side, and "control" decides who is in charge of the screen. See CMS connection and control. If such a device still receives a switch request, it shows "This device has the built-in CMS component. Please set it up on the "CMS Connection" settings page".

The two modes

	Standalone mode	CMS central management mode
How it's managed	On site, connect your phone to the device's hotspot and use the management interface	Managed remotely and centrally by a content management system (CMS)
Network	The device broadcasts its own Wi-Fi hotspot; no internet needed	The device connects to a specified Wi-Fi network; a stable network is required
This management interface	Available	**Not available**
Best for	One or a few devices; no network on site	Managing many devices centrally

Everything in this manual describes standalone mode features.

Switching from standalone mode to CMS mode

CMS mode relies on the on-site Wi-Fi to reach the CMS system, so before switching, "Wi-Fi" in Network settings must contain at least one saved network. While the list is empty, the "Switch" button is grayed out and the top of the page shows:

> **Cannot switch to CMS yet**
> CMS mode needs the device online, but no network is saved under “Wi-Fi”. Add one first, then come back.

Press "Set up Wi-Fi" to add a network, then come back to this page to switch.

Check before switching

- After switching, the device's Wi-Fi hotspot disappears, **you lose your connection to this device, and this management interface can no longer be used**.
- **You can't switch back to standalone mode from this page**; it has to be done through the CMS system or by your administrator.
- Make sure the CMS management system is ready to take over this device first.

© 2025-2026 Green Ideas Technology | All rights reserved

1. On the "Switch to CMS Mode" row, press the red **Switch** button.
2. Read the warning: "After switching to CMS mode, the device will connect to the default Wi-Fi network and be managed by the central server. This control page will become unavailable and you will lose connection to the device."
3. Type lowercase `confirm` in the input box.
4. Press **Confirm Switch to CMS Mode** (available only when the text is typed correctly).
5. "Switching Mode..." and a progress bar are shown, with the reminder "Do not close this page or disconnect power".
6. On success, "Mode Switch Initiated" is shown.

During the switch, the device:

1. Shows a "mode switching" information screen on the panel (current mode, mode after switching, and that it will restart after switching). Its language follows the startup screen settings.
2. Sets the next startup to use CMS mode.
3. Clears the panel and restarts.

From then on, the device is managed by the CMS system, and the CMS decides what the panel shows.

> **Your data is not deleted**
>
> Switching modes doesn't delete the images, image sets, schedules and settings from standalone mode.

If the switch fails

Situation	Cause
You're returned to the original page with "Response status:500"	The panel is refreshing, or something went wrong during the switch. Wait for the panel to finish refreshing and try again
"Cannot switch: The sbc-display module is not installed. Switching functionality is unavailable."	This device doesn't have the CMS module installed
"Already in CMS Mode"	The device is already in CMS mode
"Cannot switch to CMS yet", with the "Switch" button grayed out	The "Wi-Fi" list has no networks; first add one in Network settings

Switching from CMS mode back to standalone mode

"The system is currently running in CMS mode. To switch back to Standalone mode, please use the CMS system or contact your administrator."

Related: Startup screen and screen language, Connecting to the device, Network settings

© 2025-2026 Green Ideas Technology | All rights reserved

Export / import settings

> Navigation: Settings → System → **Export / Import**

Save this device's settings, photos, image sets and schedules in one `.zip` file. You can later import it back into the same device (backup and restore), or import it into another device so both have the same content.

What's in the file

Item	Included	Description
Photos	Included	The uploaded original files, with their rotation, fit mode and image gallery order; thumbnails and the converted files for the panel are regenerated automatically after import
Image sets	Included	Name, the photos they contain and their order
Multi-panel bulletin board	Included (multi-panel models)	Each panel's playlists, layouts, time slots and the pause after manual selection, plus the media library files and their publish and unpublish times. Panel wiring and registration are not included; use Export installation settings on the Installation page. This part is skipped when imported into a model that is not a multi-panel model
Schedules	Included	Name, frequency, image set used, enabled or not
Light schedules	Included	Name, frequency, on or off, enabled or not
User settings	Included	Startup screen, screen language, refresh mode, scan direction, edge mask, sleep, button gestures, presenter remote (including page-turn behavior), G-Sensor and screen orientation, manual light state
Hotspot settings	Included	Hotspot name, security type, channel, and "Allow DFS channels"
Hotspot password	**Only included when an export password is set**	Encrypted with the export password and put in the file; see Export password
Wi-Fi networks you've added	Names only	**Wi-Fi passwords can't be exported.** On import only the names of these networks are listed; you need to add them again yourself under "Network"
Model data (screen size, battery, LEDs, etc.)	Not included	Belongs to the device itself; importing doesn't change it
Brand	Not included	Same as above
Cluster	Not included	Same as above
System logs	Not included	—
Time zone, time	Not included	—
Network mode, Ethernet settings	Not included	—

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Exporting a settings file

1. Press **Export** to the right of "Export settings".
2. If you want, enter an "Export password (optional)", then enter the same password in "Enter the export password again". If you don't need one, just leave them blank.
3. Press **Export**. The screen shows "The download has started", and your browser downloads the file.

The file name has the format `chlcd-backup-<device name>-<yyyymmdd>-<hhmm>.zip`.

- The file is about as large as all the original photo files together (photos aren't compressed again).
- When exporting, the device first assembles the whole file in its own storage; if there isn't enough space, "Export failed. Please try again later" appears.
- With many photos, downloading on a phone can take a while; a computer is recommended.

Export password

When exporting	Hotspot password in the file	When importing
With an export password	Encrypted and put in the file	You must enter the same export password to import; the hotspot password is replaced with the one in the file too
Without an export password	No password stored at all	No password needed; the hotspot name and other settings are applied as usual, and **this device keeps its current hotspot password**

- The export password must be at least 4 and at most 128 characters. If the two entries differ, "The two export passwords do not match" appears.
- The export password isn't stored on the device. **If you forget it, you can't import from this file** (you can only export a new one).
- The export password protects only the hotspot password. Photos, image sets, schedules and settings in the file are **not encrypted**; keep the file as carefully as you would the photos.

Importing a settings file

Importing replaces, it doesn't merge

"Importing replaces this device's photos, image sets, schedules and settings. The current ones will be deleted." If you need to keep the current content, export a settings file from this device first.

1. Press **Import** to the right of "Import settings".
2. Choose a `.zip` file you exported earlier. A progress bar is shown while it uploads. **Nothing has been changed yet at this point.**
3. Check the details on the screen:

Field	Content
Source	The name and screen resolution of the device that exported the file
Exported at	When the file was exported
Contents	Number and total size of photos, and the number of image sets, schedules and light schedules

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

4. Depending on the situation, these notices appear:

Notice	When it appears
The source device has a different screen size. Photo display settings may need adjusting.	The two devices have different screen resolutions
The hotspot will change to "hotspot name". Phones or computers on the hotspot will be disconnected and need to join the new one.	The file contains hotspot settings
Wi-Fi passwords cannot be exported. Add these networks again under Network after importing: (network names)	The source device has Wi-Fi networks added by users

5. If the file has an export password, enter it in "Enter the export password" (you can't go on without it).
6. Press the red **Replace and import**. The screen shows "Importing...", then "Imported. Restarting...". During this time, "Please keep this page open".
7. When "Import complete" and the number of imported photos, image sets and schedules appear, press **Done**; the page reloads.

If you decide not to import, press **Cancel** in steps 3–5; the uploaded file is discarded and this device isn't affected.

Import order

The import runs in the order below; the earlier a step, the less it can affect existing data:

1. The file format and export password are checked. **If the password is wrong, it stops here with nothing changed yet**, and you can enter the password again and retry.
2. The device checks whether its storage can hold all the new photos. If not, it stops with nothing changed yet.
3. The new photos are added. If this step fails, the photos just added are deleted and the original photos are not affected at all.
4. The new image sets, image gallery order, settings and schedules are created. All the original content is still there at this point; if this step fails, everything just created is removed and the settings go back to their original values, **so the device is the same as before the import**.
5. Only once all the new content is in place are the original image sets, schedules and photos deleted.
6. The hotspot settings are applied (last, because as soon as the hotspot changes, phones on it are disconnected).
7. The management app restarts so that all settings take effect.

If you're connected through the hotspot, reconnect after importing

When the hotspot name or password is replaced, your phone or computer is disconnected at step 6. Connect to the hotspot name from the file: for a file with an export password, the hotspot password is also replaced with the source device's; without one, the password is still this device's original one. After reconnecting, refresh the page.

The management interface waits up to 3 minutes for the device to restart, and shows "Import complete" even if it doesn't come back in time; reconnect and check that the numbers are right.

Notes after the import

The completion screen may include these notes:

Note	Meaning
The image set of schedule "name" is not in the file; skipped	The image set this schedule uses isn't in the file, so the schedule wasn't created

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Note	Meaning
Network settings were not applied: ...	Photos, image sets, schedules and settings were imported, but the hotspot settings couldn't be applied; check under "Network"
Import complete, but some of the original photos, image sets or schedules were not fully deleted; you can delete them manually	The file's content was imported; only some of the original content wasn't deleted. Delete it manually on the image gallery, image sets or schedules page

Also:

- If the image set bound to a button isn't in the file, the button goes back to the whole image gallery.
- For a file exported by an older version, any settings it lacks keep this device's current values.

Copying one device's settings to another

1. Export a settings file on the device that is already set up. To carry the hotspot password over too, set an export password.
2. Connect to the other device and import the file.
3. As the notice says, add the on-site Wi-Fi again under "Network" (the password is needed).

Both devices end up with the same hotspot name

Importing also replaces the hotspot name with the source device's. If the two devices are in the same place, phones can't tell which one to join; after importing, rename the hotspot of one of them under "Network".

- Neither device's model, brand, cluster settings or system logs are changed.
- You can import between models with different screen sizes, but photo display settings may need adjusting.

Limits

Item	Description
File size	No fixed limit; depends on the device's free space
Space needed to upload	The file size plus about 50 MB
Space needed to apply	The size of all new photos plus about 50 MB. The uploaded file still takes up space at this point, so in practice you need free space of about twice the total photo size
Simultaneous imports	Only one file waiting to be imported is kept; uploading another replaces the previous one
Version	Files exported by older versions can be imported; to import a file from a newer version, first update this device to that version
Cluster	This page can't be used while you're viewing another device from the cluster; connect directly to the device you want to export from or import into

© 2025-2026 Green Ideas Technology | All rights reserved

Error messages you may see

Message	Meaning	What to do
Export failed. Please try again later	Something went wrong during export, for example not enough storage for the file	Delete unused photos and try again
The export password needs at least 4 characters	The export password is too short	Enter at least 4 characters, or leave it blank
Upload failed. Please check the file and try again	The upload was interrupted or the connection is unstable	Check the connection and choose the file again
Not enough storage space for this settings file	The device doesn't have enough free space for the uploaded file	Delete unused photos and try again
This file is not an exported settings file	Wrong file selected	Choose the `.zip` downloaded from "Export settings"
This file is not an exported settings file, or it is damaged	Not a `.zip` file, or the file is damaged	Download or export it again
The settings file is damaged	The file's content has been altered or is incomplete	Export it again
The settings file is incomplete: N photos are missing	Some photos are missing from the file	Export it again
This settings file comes from a newer app version. Update this device first, then import it	The source device runs newer software than this one	First run a software update on this device, then import
Wrong export password, or the file is damaged	The export password you entered is wrong	Enter it again; this device's data wasn't changed
Not enough storage space: about X MB needed, Y MB free	The photos in the file don't fit	Delete unused photos on this device and try again; this device's data wasn't changed
This import could not be found. Please upload the file again	The uploaded file is no longer on the device (for example, another file was uploaded after it)	Choose the file again
Import failed. Nothing on this device was changed	Some other error occurred during the import; the half-imported content was removed	Try again later; this device's data wasn't changed

Related: Data retention and what gets deleted, Factory reset, Image sets, Software update

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Factory reset

A factory reset deletes all user content and settings and returns the device to its state right after installation. Use it when handing the device over to another organization, or when the settings are a mess and you want to start over.

This is not the first step for ordinary problems. If you have connection or display problems, first try rebooting and Troubleshooting.

What is deleted and what is kept

Item	After a factory reset
All uploaded images (including thumbnails and converted files)	**Deleted**
Image sets	**Deleted**
Schedules, light schedules	**Deleted**
Multi-panel media library (uploaded documents)	**Deleted**
Multi-panel lists, layouts, time-slot schedules and publish settings	**Deleted** (each panel goes back to an empty default list)
Multi-panel panel wiring	Kept (registrations and swaps are not lost)
All settings (sleep, button gestures, G-Sensor, startup screen, refresh mode, scan direction, edge mask, manual light state)	**Back to defaults**
Screen language	Back to the language set at installation
System logs	**Deleted**
Black box incident packages	Kept (this reset is itself recorded as a package), see Black box incident packages
Model	Keeps the setting from installation
Wi-Fi hotspot name and password	**Back to this device's factory values**, see The hotspot password returns to the factory password
Wi-Fi networks added by users	**Deleted**
Networks preset at the factory	Kept
Network mode	Back to the factory default
Cluster	Leaves the cluster; cluster settings are **cleared**
Time zone, time, NTP switch	Kept
Software version	Kept (not downgraded)
Tcon firmware	Kept

© 2025-2026 Green Ideas Technology | All rights reserved

Cannot be undone

Data can't be recovered after a factory reset. To keep your content, first export a settings file with Export / import settings: photos, image sets, schedules, settings and hotspot settings are all in it, and you can import it back afterwards.

The settings file can't carry Wi-Fi passwords. For any Wi-Fi network you'll need to add again after the reset, make sure you have its password at hand first.

The hotspot password returns to the factory password

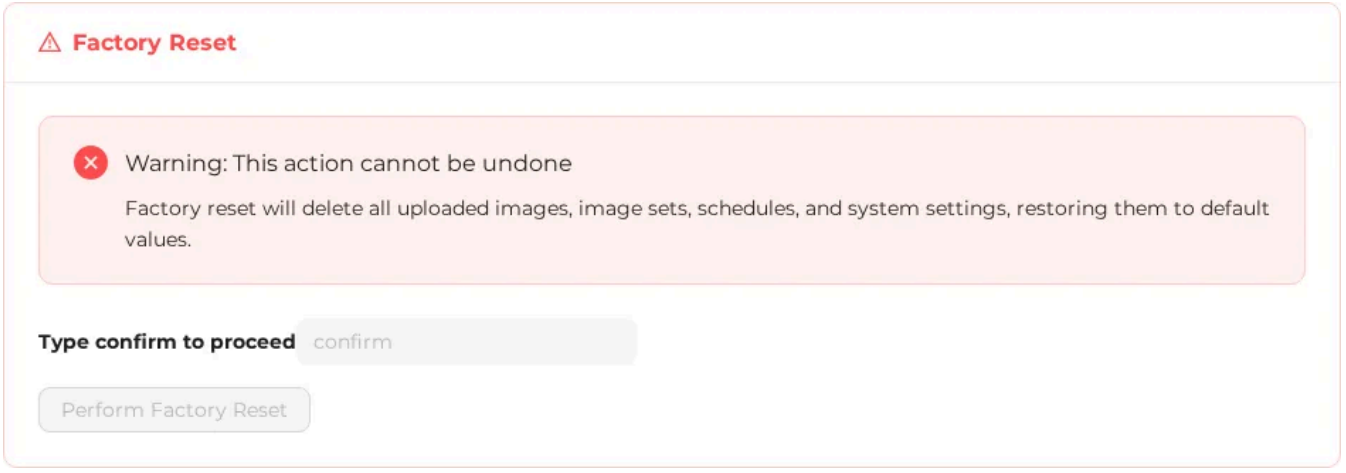
A factory reset returns the hotspot name, password and other hotspot settings to this device's factory values. If you changed the hotspot name or password under "Network", connect to the factory hotspot after the reset.

Device	Factory hotspot password
Devices freshly installed from 1.11.0 on	Different for every device, printed on the hotspot label on the device body
Devices updated from older software	Keep their original factory password; software updates don't change it

- The first QR code on the startup screen joins the factory hotspot directly, without typing the password (after the reset the startup screen is back to its default, "On").
- If the hotspot label is lost and you don't know the factory password, contact technical support.

Method 1: From the management interface

> Navigation: Settings → System → **Software Update** → the red "Factory Reset" section at the bottom of the page



1. Read the warning: "Factory reset will delete all uploaded images, image sets, schedules, and system settings, restoring them to default values."
2. In the "Type confirm to proceed" box, type `confirm` in lowercase (the border turns red if you type it wrong).
3. Press **Perform Factory Reset** (you can press it only after typing correctly; **there is no second confirmation after you press it**).
4. "Resetting to factory defaults, please wait..." and "Will reconnect automatically after reboot" appear.
5. When done, "Factory Reset Complete" appears; this takes about 1–2 minutes.

© 2025-2026 Green Ideas Technology | All rights reserved

Where to find it

Although the description of "Power Control" on the Settings page says "factory reset", the actual entry is at the bottom of the "**Software Update**" page.

Method 2: With a physical button

On the device, **hold down any physical button for 40 seconds**:

Hold time	Status LED
3 seconds	Starts blinking fast (red on full-color LEDs); the countdown begins
40 seconds	Steady on (red on full-color LEDs); the factory reset starts

- Releasing the button before 40 seconds, or pressing another button as well, cancels it.
- At 1.5 seconds the QR code startup screen refreshes first (the early part of the same gesture). This is normal; keep holding. See The long press and the factory reset are the same gesture.
- Useful when you've forgotten how to connect or the management interface won't open.
- Models without an indicator light can also use it, just without LED feedback. Time it and hold for the full 40 seconds.

What happens during a factory reset

1. The current data is first backed up temporarily.
2. The management app is stopped, and images, the database and logs are deleted.
3. The configuration files are restored to their contents at installation.
4. The network is reset: the hotspot returns to its factory values and Wi-Fi networks added by users are deleted.
5. The device leaves the cluster and its cluster settings are cleared (if it is in a cluster, the other members are notified first).
6. The management app is restarted, and the system waits up to 90 seconds to confirm it runs normally.
7. On success, the temporary backup is deleted; **on failure, the images, database and settings are restored**.

If step 4 or 5 fails, the factory reset as a whole isn't stopped; everything else is completed as usual.

The network and cluster are not restored

If step 7 fails, the images, database and settings are restored; a network that has already been reset and a cluster that has already been left are not put back.

When it's done:

- The panel shows the QR code startup screen (the startup screen setting is back to its default, "On").
- The hotspot name and password are back to their factory values. If you had changed them, your phone disconnects: connect to the factory hotspot (see The hotspot password returns to the factory password) and the web page reconnects automatically.
- If the device needs to be on the on-site Wi-Fi, add the network again under "Network".
- Check the time again, then upload images and create image sets and schedules again.

© 2025-2026 Green Ideas Technology | All rights reserved

If it fails

Message	Meaning	Fix
Factory reset failed, please try again later (right when you press the button)	The reset process couldn't start; nothing on the device was changed	Try again later, or reboot the device and try again
Failure with the subtitle `app failed to start after reset`	The app couldn't start after the reset; the images, database and settings were restored automatically	Contact technical support
Connection Timed Out	The result couldn't be confirmed within 5 minutes; the most common cause is that the hotspot returned to its factory values and your phone disconnected	Connect to the factory hotspot and refresh the page to check

Versions before 1.11.0 falsely report a failure

In older versions, right after you press "Perform Factory Reset", the web page may immediately show "Factory reset failed, please try again later", even though the factory reset actually goes ahead. This is fixed in 1.11.0. If you see this message on an older version, wait 1–2 minutes and refresh the page to check; don't press the button again right away.

Related: Export / import settings, Data retention and what gets deleted, Physical buttons and gestures, Software update

© 2025-2026 Green Ideas Technology | All rights reserved

8. Cluster

© 2025-2026 Green Ideas Technology | All rights reserved

Cluster: managing devices together

> Navigation: Settings → System → **Cluster**

A cluster lets several devices on the same network find each other and pair up as a group. Once they are paired, **you can connect your phone or computer to any one of them and view and control the others**, and send image sets and schedules to several devices at once. Each device still runs on its own: its images, schedules and sleep carry on as usual. The cluster just saves you from connecting to each device one by one.

Typical uses: a few screens next to a shop counter that should play the same slideshow, or several screens on one floor of an exhibition hall that you want to manage from one place.

The cluster is new in 1.11.0 and is **off by default**. The tools for working on several devices at once (one-click sync, batch actions, rolling update, overview wall and so on) are described in Cluster tools for multiple devices.

Before you start

Requirement	Details
Enable the cluster on every device	Turn on "Enable cluster" on each device's own "Cluster" page. A device that has not enabled it cannot be found
Connect to the site network	The device must be connected to the site Wi-Fi in "Wi-Fi" or "Concurrent" mode, or plugged into a network cable. **Hotspot-only mode cannot form a cluster**; see Waiting for the network
Same network	We recommend connecting all devices to **the same Wi-Fi**, or all to the wired network. Devices on different subnets may not be able to reach each other
No "client isolation" on the Wi-Fi	Some Wi-Fi networks (guest networks in particular) block devices on the same Wi-Fi from connecting to each other. In that case, ask your network administrator to turn off client isolation for that Wi-Fi
Software version	Versions before 1.11.0 have no cluster feature. We recommend updating every device in the cluster to the same version. Some actions do not work on devices with an older version (the screen says "Older version; update it...")

Check with "Network check" first

If you are not sure whether the site network will work, use the Network check on the Cluster page first. Enter the IP address of another device and it tells you, step by step, where things get stuck. You can run the check before the cluster is enabled.

The Cluster page

The top of the Cluster page is a list of settings; below it is the "Devices in the cluster" grid. "Refresh" in the upper right reloads the status right away (the page also refreshes itself every 10 seconds).

Item	When it appears	Details
Enable cluster	Always	A switch. When you turn it on, an "Enable the cluster?" confirmation appears first
Cluster name	This device is in a cluster	Click "Rename" to change it, up to 64 characters
Activity log	This device is in a cluster	Click "View"; see Activity log

© 2025-2026 Green Ideas Technology | All rights reserved

Item	When it appears	Details
Network check	Always	Click "Check"; see Network check
Manage several devices	This device is in a cluster that has other members	Overview wall, batch actions, rolling update, change pages together, tile a large image, copy settings; see Cluster tools for multiple devices
Devices in the cluster	The cluster is enabled	One tile per device, with this device first and "Add device" as the last tile

Device tiles

Each tile shows a small screen, drawn portrait or landscape to match that device's actual aspect ratio, so you can tell which device is which. Below it are the name, the model ("This device" is added for the device you are connected to), the resolution and software version, and the IP address.

What you see	Meaning
The tile is faded and the screen icon has a gray dot in the corner	This device is not responding right now
The screen icon has a yellow dot in the corner	This device has a problem (for example an identity problem); the reason is shown in "Details"

Clicking a tile opens "Details", which lists the model, location, version, IP address, network (hotspot / Wi-Fi / concurrent) and the time of the last response. If there is a problem, the reason is shown at the top.

The "More" menu in the upper right of a tile:

Option	Details
Details	Same as clicking the tile
Rename	Change this device's "Name" and "Location (optional)", up to 64 characters each. The location is used for grouping; see Groups
Flash it	Helps people on site recognize that device; see Find this device
Network check	Runs a network check on this device (for a device that is not responding, this is the first item in the menu)
Remove from cluster	Only on other devices' tiles; see Removing a device and leaving the cluster
Leave cluster	Only on this device's own tile

Devices that are not responding have no "Flash it".

Enabling the cluster

1. Go to Settings → System → **Cluster**.
2. Turn on the "Enable cluster" switch.
3. The "Enable the cluster?" confirmation says "Paired devices on the same network will be able to control each other." Click **Enable**.
4. On success, "Cluster enabled" is shown.

© 2025-2026 Green Ideas Technology | All rights reserved

Do this once on every device that will be part of the cluster. Once enabled, a device announces itself on the network so that other devices with the cluster enabled can find it.

Waiting for the network

If this device does not yet have a usable site network after you enable the cluster, a yellow notice appears below "Enable cluster":

Notice	Cause and what to do
This device only runs its hotspot and is not on the site network. Switch to Wi-Fi or concurrent mode under Network, or plug in a cable.	Hotspot-only mode cannot form a cluster. Switch modes in Network settings, or plug in a network cable
No address on the site network yet. Check that Wi-Fi is connected or the cable is plugged in.	Already in Wi-Fi or concurrent mode, but not connected yet
Cannot read the network status; the network service may still be starting.	May appear briefly right after startup; wait a moment and check again

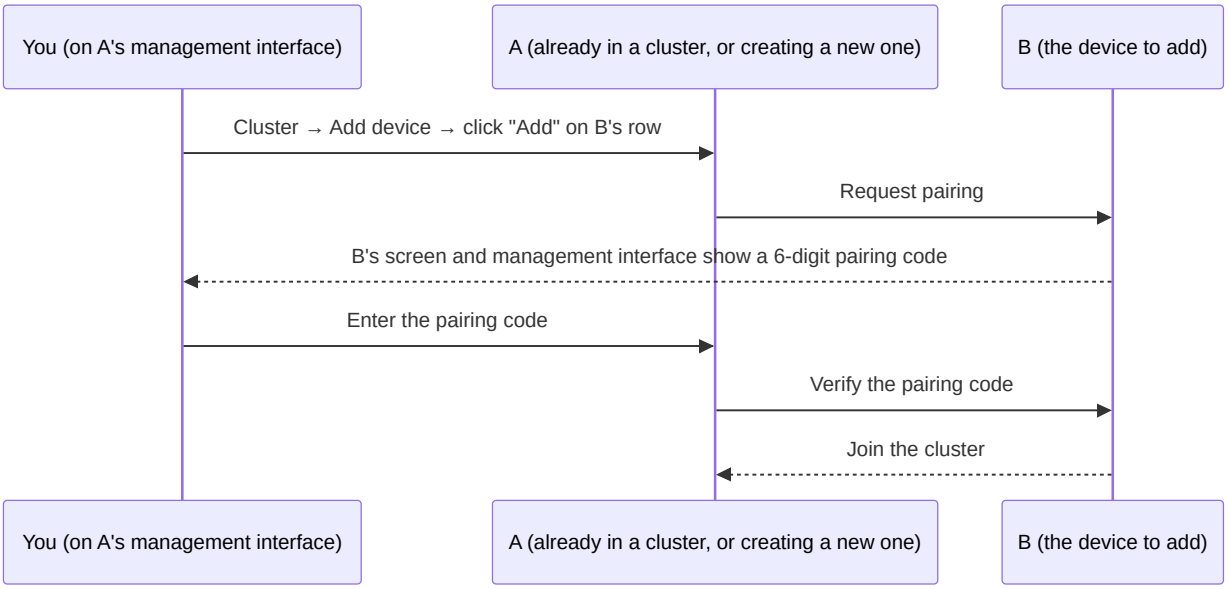
As soon as the network is up, the cluster starts working on its own. You do not need to enable it again.

The cluster service is not running

If "The cluster service is not running. Everything else keeps working." appears at the top of the Cluster page, the background service that handles the cluster is not running. Images, schedules and other features keep working. You can click "Retry"; if it keeps happening, restart the device or contact technical support.

Adding and pairing devices

Pairing is the only way to add a device to a cluster. Stand next to **the device you want to add**, and connect your phone or computer to **any device that is already in the cluster** (when you set up a cluster for the first time, connect to any one of the devices).



Steps

1. On the Cluster page, click the last tile, **Add device**.

© 2025-2026 Green Ideas Technology | All rights reserved

2. The "Add device" page lists devices found on the network that are not yet in this cluster, each with its name, model, resolution, version and IP. Rows that can be added have **Add** on the right.
3. Click **Add** for the device you want to add.
   - If **this device is not in any cluster yet**, "Name the cluster" appears first: enter a name (up to 64 characters, for example "1st floor") and click **Next**. When pairing succeeds, this device and the other one form a new cluster. You can rename it later on the Cluster page.
   - If this device is already in a cluster, you go straight to the next step and the other device joins the current cluster.
4. A banner with the pairing code appears over **the other device's screen**. If someone has the other device's management interface open, a "Pairing code" window also pops up there, saying "“Your device's name” wants to add this device to a cluster. Enter this code on that device:" with a countdown.
5. Enter the 6 digits in the "Enter pairing code" window on your side. It submits automatically once all 6 digits are entered, or you can click **OK**.
6. On success, "Added “other device's name”" is shown and you return to the Cluster page. The other device's web page shows "Joined the cluster", and the banner disappears from its screen, which goes back to what it was showing.

The pairing code is never sent over the network. Only someone standing next to that device who can see its screen knows it. This is how you confirm that the device you are adding is the one in front of you.

Pairing code limits

Item	Rule
Valid for	5 minutes. After it expires, click "Add" again
Wrong code	Each pairing code allows 3 tries. A wrong code shows "Wrong code. N tries left"
3 wrong tries	The pairing code becomes invalid. The other device's web page shows "Too many wrong codes; the code is no longer valid"; your side shows a message that pairing has ended
Repeated invalid codes	If 3 pairing codes become invalid within 10 minutes, the other device stops accepting pairing for 5 minutes, and shows "Too many wrong pairing codes. Try again in N seconds" during that time
Pairing at the same time	A device can only pair with one device at a time. If the other device is already pairing with another one, "This device is pairing with “name”" is shown
Cancel	Pairing ends when you close the "Enter pairing code" window on your side, or click "Cancel" on the other device's web page

Devices that cannot be added

In the "Add device" list, a device that cannot be added has no "Add" button. Instead, the reason is shown:

Reason	What to do
Already in this cluster	No need to add it again
Older version; update it before adding	Update that device's software first
In another cluster; it must leave that one first	A device can belong to only one cluster at a time. Use "Leave cluster" on that device's Cluster page, or have its cluster remove it
Not responding	Check that the device is on, not asleep, and that its network is working

When the list is empty, it shows "No other devices yet. They also need the cluster enabled and must be on the same network." The page searches again every 10 seconds.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

This device has no cluster, but the other device is already in one

The other device shows "In another cluster; it must leave that one first". If what you actually want is to add **this device** to the other device's cluster, connect to the other device (or any device in its cluster) instead and add this device from "Add device" there.

Adding manually

Some networks stop devices from discovering each other automatically. In that case, click **Add** under "Add manually" at the bottom of the "Add device" page, enter the other device's IP address (for example `192.168.1.30`), and click **Add**. The other device must also have the cluster enabled.

- On success, the other device appears in the list above. Then click "Add" to pair as usual.
- If it fails, the window shows "Could not add it:" followed by the step-by-step results of the Network check.
- If the format of what you entered is wrong, "Enter an IP address or host name" is shown.

Network check

The network check goes through the network between this device and another one, step by step, and tells you why they cannot connect. You can open it from "Network check" on the Cluster page, from the tile menu, or from Details.

The following items are checked in order. If an earlier item fails, the later ones are marked "Not checked: an earlier step failed":

Check	Common causes when it fails
This device is on the site network	This device is in hotspot mode, or is not yet connected to Wi-Fi or a network cable
Both devices are on the same subnet	Only a warning: the two devices may be on different Wi-Fi networks. We recommend putting them on the same network
The other device can be reached	The other device is off, asleep, the address is wrong, or the Wi-Fi has "client isolation" on. The two devices may also be on different networks with no route between them
The other device has the cluster enabled	The other device is on, but the cluster is not enabled
Versions are compatible	One of the devices has a version that is too old; the screen says which one to update
The devices can find each other automatically	Only a warning: the network blocks automatic discovery, so use Adding manually instead. Not checked when this device does not have the cluster enabled yet

For each failed item, the reason and a suggested fix are explained in plain language below it.

Viewing and controlling other devices from one device

When this device is in a cluster, a device menu is added to the **header** of the management interface. The button shows the name of the device you are currently viewing. Open it to see all devices in the cluster, with this device first.

1. Click the device menu in the header.
2. Choose another device. The page reloads, and from then on **every page shows that device's data**: image gallery, image sets, schedules, settings, device info and so on. Whatever you do is done on that device.
3. A blue banner "Working on “name” (model)" appears at the top of the page to remind you that you are not working on this device.
4. To come back, click **Back to this device** on the banner, or choose this device in the device menu.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

What the menu shows	Meaning
The model or size under the name	Can be chosen
Faded, "Not responding"	This device cannot be reached right now and cannot be chosen
Faded, "Asleep (expected to wake at HH:MM)" or "Asleep (wakes when a button is pressed)"	This device is asleep; see During sleep and network switching
Faded, "Switching networks; expected back within a minute"	This device is switching networks
Faded, "Older version; update it to view it from here"	Update that device first
Faded, "Identity problem; rejoin the cluster from that device"	See Identity problem
A red dot in the upper right of the button	A device needs attention; see Alerts

If devices have a "Location" filled in, the menu lists them in sections by location.

The browser remembers the device you chose

After you choose another device, the same browser stays on that device the next time you open the management interface. The device name in the header and the blue banner tell you which device you are working on. If the remembered device is no longer in the cluster, it goes back to this device automatically.

View only

If the banner says "Viewing “name” · view only", that device's version only supports viewing, not control from another device. Update that device to control it.

Actions you can do directly

After choosing another device, you can view and use the following pages as usual, with the same effect as connecting to that device directly:

- Image display and the image gallery (upload, display an image on the panel, clear the screen, delete), PDF collage, image sets
- Schedules, light schedules and the light
- Sleep settings, button trigger settings, presenter remote, G-Sensor settings, startup screen, and display settings such as scan direction and refresh mode
- Time settings, system logs, device info, battery info
- Software update, Tcon firmware

Uploaded files (images, update packages and so on) can be up to 128 MB.

Actions that ask for confirmation first

The following actions take the device offline for a while or carry some risk. A confirmation window appears before they are sent, and they run only after you click "OK":

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Action	Confirmation window	Afterwards
Restart	"Restart “name”?": it restarts and cannot be reached for about a minute	The upper right shows "Waiting for “name” to come back...", then ""“name” is back online" when it returns. If it has not come back after 5 minutes, ""“name” has not come back after 5 minutes. Please check its power and network on site." is shown
Software update (upload an update package)	"Update the software on “name”?": it restarts after the update and cannot be reached for a while	The Software Update page waits for it to come back and shows the result
Tcon firmware update	"Update the panel firmware on “name”?": do not turn off that device during the update	—

After you change that device's **sleep settings**, you are reminded that ""“name” may go to sleep soon after this change and become unreachable for a while."

Actions that must be done on that device's own page

The following features **cannot** be used from another device. You must connect to that device directly:

Feature	Why
Network (mode, hotspot, Wi-Fi)	Changing the network drops the connection right away
Cluster	The Cluster page always shows the status of the device you are connected to
Mode switch (CMS / standalone)	Switching leaves standalone management
Export / import settings	Importing replaces everything on the device and restarts it, and the file has to be uploaded or downloaded on that device's own page
Shut down	A device that has shut down cannot be turned on remotely
Factory reset	A factory reset makes that device leave the cluster

When another device is chosen, "Network", "Cluster", "Mode Switcher" and "Export / Import" on the Settings page are faded and their description changes to "Open this page on that device". If you click a button like this on other pages, "Open that device's own page to do this" is shown.

Messages you may see when working on another device

Message	Meaning
"name" is not responding	That device is off, has left the network, or the network is down
"name" is asleep and should wake up in about N min / "name" is asleep (press a button on it to wake it up)	That device is asleep, and the action was not sent
"name" is switching networks and should be back in about N min	Try again later

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Message	Meaning
"name" runs an older version. Update it to view it from here (or control it)	Update that device first
"name" did not respond in time	That device can be reached, but it took too long to respond
"name" refused this device's request	Verification failed, usually because that device no longer recognizes this one (for example, it was removed). Refresh and try again; if it keeps happening, rejoin the cluster
This device is not in the cluster	The device you chose is no longer a member
The file is larger than 128 MB	The uploaded file is too large
Not enough storage space to receive this file	This device does not have enough storage to pass the file on

During sleep and network switching

Before a device goes to sleep or switches networks, it tells the other devices in the cluster, so they know it is "temporarily away" rather than broken.

Situation	What other devices see
Asleep, with a schedule that will wake it up	"Asleep (expected to wake at HH:MM)", with the time shown by your phone's or computer's clock
Asleep, with no schedule (wakes only when a button is pressed)	"Asleep (wakes when a button is pressed)"
Switching network modes	"Switching networks; expected back within a minute"
Wakes up	Once the network is back, it tells the other devices on its own and can be chosen again

- A device that is temporarily away cannot be chosen for viewing, and does not appear among the targets you can choose for sync, batch actions and other jobs. These actions **are not sent automatically after it wakes up**; do them again after it wakes up (the result page has "Resend to failed devices" and "Redo the failed devices" for this).
- If the notice cannot be sent (for example because the network is already down), sleep or network switching is not blocked; the other devices just mark it "Not responding" after about 3 minutes.
- A device that leaves without notice (power cut, network cable unplugged) is marked "Not responding" after about 3 minutes without a response.

Sleep timing

- While you use this device to work on another one, **this device** also counts as in use and does not go to sleep in the middle of what you are doing.
- Just viewing another device **does not** count as someone using that device, so it still goes to sleep according to its own sleep settings. However, the countdown warning before sleep, "The device is about to sleep", appears on your screen, and clicking "Keep Awake" delays that device's sleep. See Sleep and wake up.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Removing a device and leaving the cluster

Action	How	Confirmation window
Remove another device	"More" on that device's tile → "Remove from cluster" → **Remove**	"Remove “name” from the cluster?"
Have this device leave	"More" on this device's tile → "Leave cluster" → **Leave**	"Leave the cluster “cluster name”?"
Turn off the cluster	Turn off the "Enable cluster" switch. If this device is still in a cluster, it leaves first and then turns off → **Leave and turn off**	"Turning off the cluster leaves “cluster name”"

- After a device is removed or leaves, other devices can no longer control it, and it can no longer see this cluster.
- **That device's own images and settings are not affected**; it just no longer belongs to the cluster.
- To join again, it must be **paired again** from a device in the cluster using "Add device".
- The next time someone opens the Cluster page of a removed device, "This device left the cluster" appears once, saying which device removed it.
- A factory reset makes this device leave the cluster first and returns it to the cluster-off state.

Identity problem

Each device has its own cluster identity. If the entire storage of one device is copied to another, the two devices end up with the same identity. "Details" then says "The same identity appears on another machine (the storage may have been copied), so it is not being synced. Rejoin the cluster from that device." To fix it, have that device leave the cluster and pair it again.

If a device loses its cluster identity data, it leaves the cluster on its own, and the Cluster page shows "This device’s cluster identity data was lost, so it left the cluster “cluster name”. Rejoin when needed."

Related sections: Cluster tools for multiple devices, Network settings, Sleep and wake up, Software update (OTA), Factory reset

© 2025-2026 Green Ideas Technology | All rights reserved

Cluster tools for multiple devices

> Navigation: Settings → System → **Cluster** → "Manage several devices"; one-click sync is in the upper right of the **Image Sets** and **Schedule** pages

Once devices form a cluster, besides switching from one device to work on another, you can also do the same thing on several devices at once. This page describes these multi-device tools.

The "Manage several devices" section appears only when **this device is in a cluster that has other members**. All the tools below are started from the device you are connected to, which then sends the work to the chosen devices one by one or all at once.

Tools at a glance

Tool	Where	What it does
One-click sync ("Sync to other devices")	Upper right of the Image Sets and Schedule pages	Copies image sets or schedules (with their images) to other devices
Shared across the cluster	Image set management screen	Keeps one image set the same on all devices; later changes are synced automatically
Overview wall	Manage several devices	See every device's current screen, battery level and version on one page
Batch actions	Manage several devices	Select several devices and change the image, clear the screen, switch schedules or restart them in one go
Rolling update	Manage several devices	Upload an update package once and update the devices one by one
Change pages together	Manage several devices	A group of devices shows the same image of the same image set together
Tile a large image	Manage several devices	Splits one large image and assembles it into a wall across several devices placed side by side
Copy settings	Manage several devices	Applies this device's settings to other devices
Find this device, groups, alerts, activity log	Cluster page	Recognize devices on site, group them, get alerts, see who changed this device

Choosing target devices

Sync, batch actions, rolling update, change pages together and copy settings all use the same device list to choose targets:

- **Select all**: selects every device that can currently be chosen.
- **Model filter**: when the cluster has different models or resolutions, a drop-down above the list lets you show only one of them (default "All models").
- **Group buttons**: when devices have a "Location" filled in, a button for each location appears above the list. Click one to select the whole group.
- Devices that cannot be chosen are faded and show the reason:

Reason	Meaning
Not responding	That device cannot be reached right now

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Reason	Meaning
Temporarily away / asleep / switching networks	That device has announced that it is temporarily away; see During sleep and network switching
Older version; update it...	That device's version does not support this action
Identity problem; rejoin the cluster from that device	See Identity problem

Results per device

After you send the job, the window lists the progress and result of each device: "Waiting", "In progress", "Done", "Skipped", or the reason it failed.

Result	Meaning
Not responding	That device cannot be reached
Asleep (expected to wake at HH:MM); resend after it wakes	That device is asleep
Busy; try again later	That device is refreshing its panel or handling other work
Not found	That device has no image set or schedule with the given name
Older version; update it first	Update that device first
Timed out	It took too long and did not finish
Not started because an earlier device failed	The rolling update stopped after the previous device failed
Failed	Some other reason, with an explanation after it

When it is done, if some devices failed, you can click "Redo the failed devices" (for sync, "Resend to failed devices") to run it again on just those devices. **Failed devices are not retried automatically**. For example, when a device that was asleep wakes up, you have to click it again.

Results are kept only on this device

Job progress and results are stored only on the device you are connected to. After this device restarts, the result page shows "This job is no longer available (this device may have restarted)". Content already sent to the other devices is not affected.

One-click sync

Copies this device's image sets or schedules, along with the images in them, to other devices in the cluster.

The "Sync to other devices" button appears:

- In the upper right of the **Image Sets** list, and in the upper right of the image set management screen (the image set you have open is selected by default)
- In the upper right of the **Schedule** page

The button appears only when this device is in a cluster, has other members, and **no other device is chosen in the header**: the source of a sync is always the device you are connected to. At phone width, only the send icon is shown.

© 2025-2026 Green Ideas Technology | All rights reserved

Steps

1. Click **Sync to other devices**.
2. "Content": select the image sets or schedules to send. When you sync schedules, the image sets and images they use are sent along with them. Click **Next**.
3. "Devices": select the target devices and click **Next**.
4. "Same name": choose what happens when the other device already has an item with the same name (default "Do not send").

Option	Effect
Do not send	That device stays as it is; the result lists the duplicate names
Save as a copy	A number is added to the name, for example "Lobby (2)"
Overwrite	Replaced with this device's content; the replaced images stay in that device's image gallery. Choosing this brings up an "Overwrite?" confirmation. It cannot be undone

5. Click **Send**. The top of the window shows how much will be sent this time, for example "1 photo sets, 0 schedules, 12 images (35.2 MB)", and below it the progress of each device, such as "Sending images 3/12".

Sync rules

- **Devices are sent to one at a time, in order**. A failure on one device does not affect the next.
- **Original images** are sent, and each device converts them for its own resolution and settings, so different models can sync with each other.
- Images the other device already has are not sent again; only the missing ones are added.
- Each device applies everything at once only after all the images have arrived. If it fails partway, everything added to that device this time is removed and its existing content is left untouched.
- A sync only stores data. It **does not make the other device change its image right away**.
- Synced schedules keep their original enabled/disabled state. A newly created schedule is placed after all the other schedules on that device, so it does not take over the schedule that device is currently playing. With "Overwrite", that device keeps its original order.

Why a sync might fail

Message	What to do
That device is receiving another sync; resend later	A device can receive only one sync at a time
Not enough space: needs N MB, only N MB free	Free up space in that device's image gallery first
Items with the same name already exist; nothing was sent: name	"Same name" was set to "Do not send"
Not responding (it may be off, asleep or off the network)	Check that device's status and resend
Older version; update it to receive syncs	Update that device first

Image sets shared across the cluster

Once an image set is set to "Shared across the cluster", it is sent to every device in the cluster, and from then on **changes or deletion on any device are applied to every device**. Devices that join the cluster later also receive all shared image sets automatically.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

How to set it up

1. Go to **Image Sets** and click the image set you want to share to open its management screen.
2. Turn on the "Shared across the cluster" switch.
3. At "Share this photo set across the cluster?", click **Share**.
4. "Now shared; it will be sent to the other devices shortly" is shown. In the image set list, "Shared" is shown under this image set's name.

The "Shared across the cluster" switch appears only when this device is in a cluster and no other device is chosen in the header.

Sharing rules

Situation	Result
Changed on any device (images added, removed, reordered, renamed)	Sent to the other devices about 20 seconds after the first change; several changes in that time are combined into one
This image set is deleted on any device	It is deleted on the other devices too; **the images stay in each device's image gallery**
An image used in the image set is deleted on any device	Counts as a change to the image set; the image is removed from the image set on the other devices too
"Shared across the cluster" is turned off	"No longer shared (copies on other devices are kept)" is shown. This device just stops taking part; the copies on other devices are kept
A device is asleep or not responding	Missed changes are applied when it comes back: every device compares notes with the other members every 10 minutes
A new device joins the cluster	It receives all shared image sets automatically
A device already has an image set with the same name that is not shared	A copy is saved with a number added to the name, for example "Lobby (2)"

Do not change the same shared image set on two devices at the same time

If two devices each change the same shared image set before they have compared notes, only one of the changes is kept and the other is overwritten. Finish your changes on one device and wait until the other devices have received them before changing it again.

Overview wall

> Navigation: Cluster → Manage several devices → **Overview wall** → "View"

See what is currently on every device's screen, plus battery level and version, on one page, updated every 30 seconds. When devices have a "Location" filled in, they are shown in sections by location.

What the card shows	Meaning
A thumbnail of the current screen	The image that device is showing right now
QR start screen	That device is showing the startup screen
No image shown	That device is not showing an image from the image gallery right now
Could not read the screen	That device can be reached, but its screen information cannot be read

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

What the card shows	Meaning
Not responding / Asleep…	That device cannot be reached or is temporarily away
Battery level in the upper right	Shown only on models with a battery
Bottom	Name and version ("This device" is added for the device you are connected to)

Click any card to switch to that device, the same as choosing it in the device menu in the header. You can then work on it directly.

Batch actions

> Navigation: Cluster → Manage several devices → **Batch actions** → "Start"

Select several devices and do the same action on all of them at once. All the selected devices run it **at the same time**, so screen actions change together.

Action	Details
Clear the screen	Clears the panel to a single background color
Show the QR start screen	Shows the startup screen on the panel
Show the first image of a photo set	Enter an image set name (this action is selected by default)
Turn a schedule on	Enter a schedule name
Turn a schedule off	Enter a schedule name
Restart	Asks "Restart these N devices?" before sending

- Image sets and schedules are looked up **by name** on each device, so each device needs an image set or schedule with the same name (usually one that was synced or shared to it). While you type, the names on this device are listed for you to choose from. If a device cannot find it, its result shows "Not found"; an empty image set also counts as not found.
- Batch actions do not include this device itself as a target.

Rolling update

> Navigation: Cluster → Manage several devices → **Rolling update** → "Start"

Upload an update package once and have the devices in the cluster update **one by one**, stopping as soon as any device fails.

1. Click "Choose the update package (.tar.gz)" and choose the update file. Only `.tar.gz` is accepted.
2. Select the devices to update. They are updated in the order of the list.
3. Click **Start updating**.

Update rules

- Each device goes through "Sending the update package" → "Updating (restarts)" → "Done" in turn.
- **The next device starts only after the current device has finished updating and has come back with the correct version.**
- Devices that are already on this version are "Skipped", for example "Already 1.11.0".
- If any device fails, the update stops and the remaining devices are marked "Not started because an earlier device failed".

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

- Each device gets up to 10 minutes; after that, "The update was not confirmed as finished within 10 minutes" is shown.
- You can click "Stop" while it is running: it stops after the current device finishes, and the rest are not updated.
- **This device itself is not in the list.** After all the other devices are updated, update this device yourself from its Software update page.

Try one device first

We recommend selecting just one device first, and updating the others once you have confirmed it works. A single device updates the same way as in Software update (OTA) (which data is kept, and going back to the old version on failure).

Change pages together

> Navigation: Cluster → Manage several devices → **Change pages together** → "Start"

Have a group of devices show the same image of the same image set together, or move to the next image together at regular intervals. This device can join the group too.

1. Enter an image set name and choose an image set that **every device has** (for example a shared or synced one).
2. Choose how:
   - "Show the first image, then change manually"
   - "Switch to the next image together on a timer": enter the number of seconds, 60 seconds by default, **at least 30 seconds**, at most 86400 seconds (one day).
3. Select the devices and click **Start**. All devices show the first image together.
4. Once started, the window shows "“image set” image N". You can click "Previous" or "Next", or enter an image number and click "Show this one". Each device's result shows "Shown (N images)" or the reason it failed.

Rule	Details
Different numbers of images	Devices with fewer images start over from the first one
When images change	This device tells all devices to change at the same moment; it does not rely on each device's clock
Each device's own schedules	Each device's own schedules still run as usual and may replace the image shown by change pages together. If needed, turn those schedules off first with Batch actions
This device's sleep	While timed page changes are running, each change counts as this device being in use

Timed page changes continue after you close the window

If you chose "Switch to the next image together on a timer" and then close the window, the timed page changes keep running in the background on this device, so you do not need to keep the web page open. While it is running, the "Change pages together" row on the Cluster page says "Running: “image set” changes together every N s". Click "Start" to return to this window, where you can check the progress or click "Stop".

Tile a large image

> Navigation: Cluster → Manage several devices → **Tile a large image** → "Start"

Split one large image and assemble it into a wall across several devices placed side by side. It works best with the same model, all placed in the same orientation.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Creating a layout

1. Click "New layout" and enter a layout name (up to 60 characters, for example "Lobby wall").
2. Set the number of "rows" and "columns", 1 to 6 each. A new layout starts with 1 row and 2 columns.
3. Choose the device for each cell (this device can be used too). A device can be in only one cell; cells can be left empty.
4. Click **Save layout**. On success, "Layout saved" is shown.

Saved layouts are listed at the top of the page as "name (rows×columns)". Click one to load it; the trash icon next to it deletes it. Layouts are stored on the device you are connected to. Layout names must be unique; a duplicate shows "A layout with this name already exists".

Sending the large image

1. Click "Choose the image" and choose an image. Once chosen, the large image is previewed with a grid on top showing which device each cell is.
2. Click **Split and send** (the layout is saved automatically first).
3. This device splits the image into equal parts and sends them to each device in turn, and **once everything has been sent, all devices show their parts together**.
4. If everything succeeds, "All sent and shown together" is shown. If some failed, "Some devices did not finish; see below" is shown, with the result for each device. A device that received its part but could not show it is marked "Sent, but not shown" with the reason.

How the image is split

- Each cell is an equal share of the whole image (1/columns of the width × 1/rows of the height). The bezels between screens are not taken into account.
- Each device displays its part in "fill" mode, filling its own screen, so **the edges may be trimmed slightly**. It is best if the large image's aspect ratio is close to that of the whole wall.
- The part of the image for an empty cell is not shown.
- The part each device receives is saved as the image set `拼接：layout name`. Sending again overwrites this image set.

Copy settings

> Navigation: Cluster → Manage several devices → **Copy settings** → "Start"

Applies this device's current settings to other devices. Select the categories to apply ("Sleep", "Buttons" and "Start screen and language" are selected by default), select the target devices, and click **Apply**.

Category	What is applied
Sleep	Whether sleep is enabled, and how long the device stays idle before sleeping
Buttons	The trigger method and button for clearing the screen and refreshing the QR code, the long-press duration, the double-press interval, and the bound image set
Presenter	Whether the presenter remote is enabled, and how the presenter remote / physical buttons change pages (switch immediately or wait until done)
Start screen and language	Whether the startup screen is shown, the screen language, and the address shown on the startup screen
Time zone	The device time zone

- Scan mode, refresh mode and edge mask depend on the panel and **are not applied**.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

- The image set bound to the buttons is looked up **by name** on the other device. If that device has no image set with the same name, its buttons are set to no bound image set (switching through the whole image gallery), and the result notes "That device has no “name”, so the buttons are not bound to an image set".
- Copy settings does not include this device itself as a target.

Find this device

Click **Flash it** in the "More" menu of a device's tile on the Cluster page, so that people on site can tell which device it is:

- A banner with the name appears over that device's screen and its status LED flashes for 15 seconds, after which the original image is shown again. The web page shows ""name” is showing its name and flashing its light for 15 seconds".
- When that device's panel is busy (refreshing, or with a pairing code or the presenter remote menu open), only the LED flashes, and the web page shows ""name" is busy, so only its light flashes for 15 seconds".
- If the name contains characters the screen font cannot show, the banner shows the IP address in large text instead.
- Devices that are not responding do not have this option.

Groups

Use "Rename" in the tile menu to fill in a "Location" for each device (for example "Front desk, 1F"), and the devices are grouped by location:

- The tiles on the Cluster page, the device menu in the header and the overview wall are all divided into sections by location. Devices without a location go under "Ungrouped", listed last.
- When choosing target devices, a button for each location appears above the list. Click one to select the whole group.
- If no device has a location filled in, there are no sections.

Alerts

A yellow "Needs attention" appears above "Devices in the cluster" on the Cluster page, and a red dot appears in the upper right of the device menu button in the header:

Alert	Condition
"name" has not responded for N hours	No response for more than 1 hour. Devices that announced they are asleep are not counted
"name" is down to N% battery	Battery level below 20%
"name" has an identity problem; rejoin it from that device	See Identity problem

Click a name in an alert to open that device's details.

Activity log

> Navigation: Cluster → **Activity log** → "View"

Lists the changes **other devices** in the cluster have made to this device, such as "Changed the image", "Changed a slideshow schedule", "Received a sync" and "Restarted". Each entry shows the time, which device made it and the address of the user who did it, for example "From “Counter left” (user 192.168.1.20)". Actions that did not succeed are marked "Failed (status code)".

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

- Only actions that change this device are recorded. Just viewing is not recorded, and neither are actions done by connecting to this device directly.
- The page shows the latest 200 entries. Entries are kept for 90 days, up to 5000 entries; older entries beyond that are deleted automatically.
- When another device is chosen in the header, you see that device's activity log.
- When there are no entries yet, "No other device has changed this one yet" is shown.

Related sections: Cluster: managing devices together, Image sets, Schedules, Software update (OTA), How images are processed

© 2025-2026 Green Ideas Technology | All rights reserved

9. Troubleshooting

© 2025-2026 Green Ideas Technology | All rights reserved

Find by symptom

Find the symptom that matches yours and follow the link for detailed troubleshooting steps.

Basic troubleshooting order

1. **Check the status LED**: the LED tells you what the device is doing right now. See Status LEDs.
2. **Check the notices at the top of the page**: yellow connection notices, red hardware warnings.
3. **Check the system logs**: filter by the ERROR level to find the cause of a failure. See System Logs.
4. **Restart**: most temporary problems go away after a restart. See Power Control.
5. **Contact technical support**: have the required information ready.

Connection and management interface

Symptom	See
My phone can't find the device's Wi-Fi	Connection and management interface
Connected to the Wi-Fi but the web page won't open	Connection and management interface
"Lost connection to the device" keeps appearing	Connection and management interface
The web page disconnects after a while	Connection and management interface
The page shows errors after an update	Connection and management interface

Screen and displaying images

Symptom	See
The panel doesn't change after displaying an image	Screen and displaying images
"Send failed, device may be busy"	Screen and displaying images
The image is cut off, has black bars or is distorted	Screen and displaying images
The screen is upside down or turned 90°	Screen and displaying images
Image upload failed	Screen and displaying images
I changed a setting but the screen didn't change	Screen and displaying images
The panel shows ghosting or doesn't display correctly	Screen and displaying images
The buttons don't respond	Screen and displaying images

Schedules and time

Symptom	See
The image didn't change at the scheduled time	Schedules and time

© 2025-2026 Green Ideas Technology | All rights reserved

Symptom	See
A schedule runs at the wrong time	Schedules and time
A weekday schedule runs on Saturday	Schedules and time
A card shows a red ✕ or "Conflict"	Schedules and time
The light doesn't turn on or off on schedule	Schedules and time
The device's time is wrong	Schedules and time

Power, sleep and battery

Symptom	See
The device never goes to sleep	Power, sleep and battery
The device won't wake up from sleep	Power, sleep and battery
Schedules didn't run during sleep	Power, sleep and battery
The battery shows "--" or 0%	Power, sleep and battery
The status LED keeps flashing	Power, sleep and battery

Updates and maintenance

Symptom	See
Software update failed	Updates and maintenance
"Start Update" stays grayed out	Updates and maintenance
"Connection Timed Out" appears during an update	Updates and maintenance
The factory reset button can't be pressed	Updates and maintenance
A factory reset was triggered by accident	Updates and maintenance
Not enough storage space	Updates and maintenance

Before contacting technical support

Item	How to get it
Device name, versions	Screenshot of the "About device" tab in Device info
When the problem happened	As precisely as possible, to the minute
Steps to reproduce	What you did, what you expected, what actually happened
Status LED state	LED color and flashing pattern, or a short video
System logs	Entries from before and after the problem, download the full logs

© 2025-2026 Green Ideas Technology | All rights reserved

Item	How to get it
Screenshots	Error messages in the management interface (mask the hotspot password before sharing)

© 2025-2026 Green Ideas Technology | All rights reserved

Troubleshooting: connection and management interface

Your phone can't find the device's Wi-Fi

Check in order:

1. **Does your phone support 5 GHz?** The device hotspot uses 5 GHz at the factory; older phones, and some tablets and laptops, that support only 2.4 GHz won't see it at all. Use a newer phone, or ask the administrator to change the hotspot channel to 2.4 GHz (1, 6, 11) in Network settings.
2. **Is the device in "Station" mode?** In this mode the hotspot is off; connect through the on-site Wi-Fi instead. See Network settings — The three network modes.
3. **Is the device asleep?** While asleep, the hotspot is off and the status LED is off. Press a physical button once to wake it up, wait a few seconds, then search again.
4. **Is the device powered off?** If the status LED is off and the buttons don't respond, it may be off or out of power. Check the power.
5. **Has the device switched to CMS mode?** The hotspot isn't broadcast in CMS mode; see CMS / standalone mode switching.
6. **Did the device just start or wake up?** The hotspot needs a little time to start. Wait 1 minute, then search again.
7. **Can't find the hotspot name?** The hotspot name is shown as `SSID:` at the bottom of the startup screen. If the panel isn't showing the startup screen, bring it up with the physical button gesture (default: long-press any button for 1.5 seconds, then **release immediately**).
8. If everything above is fine and you still can't find it, restart the device (turn the power off and on). If that doesn't solve it, contact technical support.

Connected to Wi-Fi but the web page won't open

1. **Is the address correct?** When connected to the device hotspot, the default address is `http://192.168.100.1` (if the hotspot address has been changed in Network settings, use the new address). It starts with `http`, not `https`.
2. **Did your phone switch away automatically?** The device hotspot has no internet, so your phone may switch back to another Wi-Fi or mobile data. Go back to Wi-Fi settings, check that you're still connected to the device, and choose "Stay connected"; see Connecting to the device.
3. **Try turning off mobile data.** Some phones send data over mobile data when Wi-Fi has no internet. Turn mobile data off temporarily.
4. **Did the device just start?** The management app needs a little time to start. Wait 1 minute, then refresh.
5. **Try another browser** (Chrome, Safari).

"Lost connection to the device" keeps appearing

This notice means the connection between your phone and the device was lost:

Possible cause	Fix
Your phone switched to another network automatically	Go back to Wi-Fi settings and choose the device hotspot again
Too far from the device, weak signal	Move closer to the device; check the signal strength in Network settings
The device went to sleep	Press a physical button to wake it up; once the hotspot is back, press "Reconnect"
The device is updating software or rebooting	Wait for it to finish, then press "Reconnect"
The device is powered off	Handle the power on site

Automatic reconnection stops after about 3 minutes; after that, press **Reconnect** or refresh the page.

© 2025-2026 Green Ideas Technology | All rights reserved

Disconnected after using it for a while

Most likely the device went to **sleep**. While someone has the management interface open, the device shows "The device is about to sleep" with a countdown after 15 minutes of idle time, and goes to sleep unless you press "Keep Awake".

- If you want to keep working, press **Keep Awake** during the countdown.
- If you need to manage the device for a long time, you can temporarily turn off sleep in Sleep settings and turn it back on when you're done.

Page errors after a software update

After a software update, an old page that is still open reloads once automatically when you switch pages. If it still shows errors or a blank screen:

1. Refresh the page manually.
2. Still wrong: close the tab and type the management interface address again (`http://192.168.100.1` by default when connected to the hotspot).
3. Still wrong: clear the browser cache and try again.

"That action did not take effect" appears after an action

When this notification appears, first check the image gallery, schedules or settings. If the action didn't complete, it's most likely because the connection was lost. Reconnect to the device's Wi-Fi, then **do it again**. It stays visible while disconnected and closes automatically when the connection comes back.

You see "Response status:number"

This is an error code returned by the device. It usually comes with another message in plain language; go by that message. For what the codes mean, see Message reference.

Related: Connecting to the device, Network settings, Sleep and wake-up

© 2025-2026 Green Ideas Technology | All rights reserved

Troubleshooting: screen and displaying images

The panel doesn't change after displaying an image

1. **Wait a moment.** Refreshing one image takes some time (depending on the model and refresh mode, for example about 6 seconds on the 13.3-inch, about 16 seconds on the 27.6-inch, about 20 seconds on the 32-inch), and the first time you display an image it also needs a little time to convert. Wait until "Refreshing..." disappears from the preview box.
2. **Check the status LED:**
   - 2 quick flashes (orange on the full-color LED): the panel is busy and this request was rejected. Wait for the refresh to finish and display the image again.
   - 3 quick flashes (red on the full-color LED): **refresh failed**.
3. **If the refresh failed**, the web page shows "The screen could not be refreshed. Please try again later; if it keeps happening, check the system logs.". Go to System Logs and filter by the ERROR level to see the cause. Common causes:
   - Loose panel ribbon cable
   - Device storage is full (check in Device info)
   - The original image file is corrupted: delete it and upload it again
4. Try pressing **Clear screen** first to confirm that the panel can clear the screen.
5. If clearing the screen also fails, restart the device; if it still fails, contact technical support.
6. If "Cannot identify the panel; refreshing is paused" or "Panel model not supported; refreshing is paused" appears at the top of the page, the system doesn't display images for now. See Hardware warnings.

Send failed, device may be busy

The panel can refresh only one image at a time, and new requests during a refresh are rejected (they are not queued). The panel may be in use because:

- Someone else is displaying an image
- A schedule is changing the image at that moment
- Someone pressed a physical button or the presenter remote
- The device was just turned and is redrawing

Wait for the current refresh to finish (depending on the model and refresh mode, for example about 6 seconds on the 13.3-inch, about 16 seconds on the 27.6-inch, about 20 seconds on the 32-inch; the status LED returns to standby), then try again.

The image is cut off, has black bars or is distorted

Symptom	Cause	Solution
Black bars at the top and bottom or the sides	Fit mode is "Fit" and the image proportions differ from the panel	Switch to "Fill", or remake the image in the panel's proportions
The edges of the image are cut off	Fit mode is "Fill" or "Crop"	Switch to "Fit", or keep important content in the center of the image
The image is stretched wide or tall	Fit mode is "Stretch"	Switch to "Fit" or "Fill"

© 2025-2026 Green Ideas Technology | All rights reserved

Symptom	Cause	Solution
A PNG background turns black	Transparent backgrounds become a solid color	Fill the transparent background with white before uploading

After changing the fit mode or rotation, you must display the image again for it to take effect. The best approach is to make images at the recommended size. See How images are processed for details.

The screen orientation is wrong

1. **Only one image is the wrong way?** On the Image Display page, select the image, adjust it with "Rotate Image", and display it again.
2. **Everything is the wrong way?** Go to G-Sensor Settings:
   - Auto-rotate on: **stand the signage upright** (orientation isn't detected while it lies flat) and turn it to the correct orientation.
   - Auto-rotate off: check that "Fixed Orientation" is correct.
   - After a change, display an image again or refresh the QR code for it to take effect.
3. After you turn off auto-rotate and set a fixed orientation, the screen orientation may again follow how the device is physically placed **when it restarts**. Check it again.
4. "Orientation sensor (G-sensor) fault" appears at the top of the page: restart the device, or use a fixed orientation instead.
5. `Orientation:` at the bottom of the startup screen shows the orientation the system has detected, which you can use for comparison.
6. Every orientation is always off by 90° or 180°: the model may have been set incorrectly during installation. Contact technical support.

Image upload failed

Message	Cause	Solution
Response status:400	Not an image file, or an SVG	Use JPG or PNG instead
Response status:413	The image has too many pixels (more than about 80 million for PNG, BMP and so on; JPG can be larger)	Reduce the size, or convert it to JPG, and upload again
Response status:500	The file is corrupted, the format can't be read (such as iPhone HEIC), or storage is full	Convert to JPG and upload again; check storage space
Lost connection to the device	The connection dropped during the upload	Reconnect and upload again

See Image gallery and displaying images — Uploading images for details.

I changed a setting but the screen didn't change

The following settings **take effect only on the next refresh**; the screen is not redrawn immediately:

- Image rotation and fit mode
- Scan direction, refresh mode, Edge Mask
- G-Sensor on/off and fixed orientation
- Screen language (the startup screen has to be shown again)

After a change, display an image on the Image Display page, or press "Refresh QR Code".

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

The panel shows ghosting or doesn't display correctly

1. Press **Clear screen**, then display the image again.
2. Changed the refresh mode recently (only some 13.3-inch panels offer a choice)? Change it back to the mode marked " - Default".
3. Updated the Tcon firmware recently? Contact technical support and provide the version number.
4. Edge problems on the 32-inch frameless model: you can turn on or widen the Edge Mask.

The buttons don't respond

Status LED	Cause	Solution
2 quick flashes	The panel is refreshing (clear screen or QR code gesture)	Wait for the refresh to finish, then press again. Changing pages isn't rejected; see Changing pages during a refresh
3 quick flashes	There are no images in the image gallery (when switching images)	Upload images first
Off	The device is asleep	The first press wakes it up; press again once it's awake
No change at all	The button service has a problem	Restart the device

- After one press, the system waits about 0.3 seconds before changing the image (to make sure you are not double-pressing; presses must be more than 0.3 seconds apart), and then the refresh takes some more time (depending on the model and refresh mode, for example about 6 seconds on the 13.3-inch, about 16 seconds on the 27.6-inch, about 20 seconds on the 32-inch).
- If the clear-screen or QR code gestures don't respond, check the current gesture settings in Button trigger settings.

Related: Image gallery and displaying images, Screen orientation and G-Sensor, Status LEDs

© 2025-2026 Green Ideas Technology | All rights reserved

Troubleshooting: schedules and time

The schedule time came but the image didn't change

Check in order:

Check	Where to look	Fix
Is the schedule disabled?	The card shows "Disabled" and the table shows "Paused"	Turn on the switch at the bottom of the card
Is the image set empty?	The card has no thumbnail, only an image icon	Add images to the image set
Was the image set deleted?	The card shows "No image set selected"	Edit the schedule and choose an image set again
Does the image set have only one image?	The same image is refreshed every time, so it looks unchanged	Add more images
Just created and the first time hasn't come yet	Check the card countdown or "Next Run"	Wait for the first time
This round was skipped	The card briefly flashed a red ✕	It plays at the next successful trigger; if it keeps getting skipped, move the times apart
Wrong device time	Time settings	Correct the time
Device powered off	Status LED off, buttons don't respond	Schedules don't run while the device is off

The schedule runs at the wrong time

1. **Wrong time zone.** Schedules run on the device time zone. When the "Timezone mismatch" notice appears on the schedule page, press "Sync to ...". You can also change it in Time settings.
2. **Device time is wrong.** Go to Time settings and press "Sync Local Time".
3. **"Next Run" looks wrong.** "Next Run" in the table is shown in the device time zone. If the time is off from what you expect by a few hours, the device time zone is usually set wrong; check the time zone first.

A weekday schedule runs on Saturday and not on Monday

In version 1.10.0 and earlier, when **days of the week are written as numbers** in a cron expression, the actual trigger day is shifted one day later (for example, `1-5` becomes Tuesday to Saturday). **This is fixed in 1.11.0**, and existing schedules with numeric days are corrected automatically after the update.

Fix: Update the device to 1.11.0 or later. If it's still wrong after the update, edit the schedule and pick the days again in the "Specific time" editor. See Known issue with the day-of-week field.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

A red ✕ or "Conflict" appears on the card

Display	Meaning	Fix
Red ✕ (about 2 seconds)	The panel was busy when it was time to change images this round, so it was skipped	It plays at the next successful trigger; if it keeps getting skipped, move the times apart
Red vignette + "Conflict"	Due to trigger at the same moment as another schedule; this one is listed later and will be skipped this round	Move the two schedules' times apart, for example one at :00 and one at :05

See Schedules — simultaneous triggers and skips.

"Creation failed" or "Update failed" when saving a schedule

- If you typed a cron expression manually in advanced mode, the format may be wrong. Check the description below the field: if it shows exactly what you typed, the format is wrong.
- The image set you chose may have just been deleted by someone else. Choose it again.
- Press "Back to selection mode" to use the graphical settings instead; that usually avoids errors.

The light doesn't turn on and off on schedule

1. Check that the schedule is enabled and that "Next Run" is correct.
2. A light schedule runs only once, at the moment it triggers; in between, the light stays in its last state. Check that you have both an on schedule and an off schedule.
3. If on and off are set to the same minute, the result is unpredictable. Move them apart.
4. Did you edit a disabled light schedule? It may have become enabled again automatically. Check its status switch.
5. For day-of-week conditions, see "A weekday schedule runs on Saturday" above.

See Light schedules and the light.

Tapping the light bulb icon does nothing and jumps to the schedule page

While any light schedule is enabled, you can't turn the light on or off manually (the bulb is gray). To control it manually, disable all light schedules first.

The device time is wrong

1. Go to Time settings and press "Sync Local Time". If the button is gray, turn off "Set time automatically (NTP)" first.
2. "Real-time clock (RTC) fault" appears at the top of the page: the hardware clock has failed, the time will gradually drift and the device can't wake up from sleep automatically. Reboot; if it still appears, contact technical support. See Hardware warnings.
3. NTP showing "Not Synced" is normal (the device has no external network) and doesn't affect use.

Related: Schedules, Schedule frequency in detail, Time, time zone and time sync

© 2025-2026 Green Ideas Technology | All rights reserved

Troubleshooting: power, sleep and battery

The device never goes to sleep

Check	Description
Is sleep turned on?	The factory default is **off**; turn it on in Sleep settings
Does anyone have the management interface open?	While anyone has any page open, the device must be idle for at least 15 minutes, plus a 60-second countdown. Close all tabs when testing
Is the schedule very frequent?	With an image change every minute, there's almost no chance to sleep
Is the panel refreshing all the time?	The device doesn't sleep while refreshing
Is there a "Real-time clock (RTC) fault" warning?	When there are enabled schedules but the hardware clock can't be found, the device doesn't sleep (so that schedules can still wake it). Reboot; if it still appears, contact technical support

Search the system logs for the keyword `取消休眠` (sleep canceled) to see why the device didn't go to sleep.

The device won't wake up from sleep

1. Press a physical button once and wait a few seconds.
2. If the status LED is still off and the buttons don't respond, the device may be **powered off** or **out of power** (on battery models, the battery management system cuts the power when the charge is too low). Connect power and turn it on.
3. If your phone can't connect after it wakes up, the hotspot needs a few seconds to restart. Wait a moment, then connect.

Schedules didn't run during sleep

1. **Is the schedule enabled?** Disabled schedules don't wake the device.
2. **Is there a "Real-time clock (RTC) fault" warning?** When there are enabled schedules, a device with a hardware clock fault doesn't go to sleep; a device that was already asleep before the warning appeared may not wake up automatically, so wake it with a button. Reboot; if it still appears, contact technical support.
3. **Are the device time and time zone correct?** Check in Time settings.
4. Light schedule events missed during sleep aren't run afterward, but after waking up the light is corrected to the right state for the current time.

The battery shows "--" or 0%

Display	Meaning	Fix
Gray "--"	Battery data can't be read	Check "Data health" in Battery info
Data health "No battery detected"	The battery may not be connected	Check the battery connector
Data health "Battery management system not responding" or "Battery management system not found"	The battery management system or its cable has a problem	Reboot; if it's still wrong, contact technical support

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Display	Meaning	Fix
Data health "Data out of date"	The battery management system hasn't sent data for too long	Refresh later
0% (shown in red)	Really out of power, or an older battery service can't read the data	Charge it; after a software update the two cases can be told apart
"Battery Service Unavailable"	Can't connect to the battery service	Press "Retry", or reboot

A red protection tag appears on the battery

The battery management system has cut off charging or discharging. Note the tag name, each cell voltage and the raw BMS working status, stop using the device and contact technical support. A yellow "alarm" means the BMS reported a warning without triggering protection yet, but you can't judge that the battery is definitely fine from the color alone. See Battery — protections and alarms.

The status LED keeps blinking

Status LED	Possible cause	Fix
Slow blink (slow white blink on full-color LEDs)	Starting up	Wait for startup to finish. If "Show QR Code startup screen on boot" is off, the LED may not switch to standby until the first refresh; just display an image
Continuous fast blink (fast red blink on full-color LEDs)	**A button is being held down, and the factory reset countdown has started**	Release the button immediately. Check whether something is pressing on the button
Breathing (blinking blue on full-color LEDs) for a long time	The panel is refreshing	Refresh time depends on the model and refresh mode, for example about 6 seconds on 13.3-inch, about 16 seconds on 27.6-inch, about 20 seconds on 32-inch; if it takes more than 2 minutes, reboot

I shut it down but wanted to restart it

You can't power the device on remotely after shutdown; someone has to handle the power on site. To save power normally, use sleep.

The panel didn't turn white after shutdown or reboot

The system clears the screen before shutdown and reboot, and retries 2 times if it fails; if it still fails, it shuts down anyway so shutdown can complete. After startup, first press "Clear screen" to check that the panel is normal, and check the system logs.

Related: Sleep and wake-up, Power control and storage, Battery

© 2025-2026 Green Ideas Technology | All rights reserved

Troubleshooting: updates and maintenance

The software update failed

When an update fails, the device has already **restored automatically** to the version before the update; images, schedules and settings are not affected.

1. Check in Device info that the version is back to the one before the update, and read the reason for the failure shown on the result screen.
2. **Download the update file again** from the Downloads page (the file may not have downloaded completely).
3. Check that storage is not over 90% and that the device has stable power.
4. Move close to the device and try again where the signal is good.
5. If it still fails, note the current version, the version you're updating to and when it failed, and contact technical support.

If the update is rejected before installation starts (for example, there isn't enough storage or the current version is too old), the result screen shows "Update Failed" and the reason right away, and nothing on the device has been changed. See Software update — Update result.

"Start Update" stays gray

If no version preview appears after you choose a file, and "This file is not a valid update package. Please check that the download is complete" or "The update package is larger than 128 MB and cannot be used" appears, the system can't read this update package:

Possible cause	Fix
The file you chose isn't an OTA update package	Check that the file name is `chlcd-update-v<version>.tar.gz`
The file didn't download completely	Download it again
The browser unzipped the file automatically (Safari on Mac)	Turn off Safari's "Open 'safe' files after downloading", or download with Chrome instead
The connection was lost during upload	Move closer to the device and choose the file again

"Connection Timed Out" during the update

If the result still can't be confirmed after more than 5 minutes:

1. Check that your phone is still connected to the device's Wi-Fi.
2. Refresh the page and check the software version in Device info:
   - It's the new version → the update succeeded.
   - It's still the old version → the update didn't happen, or it was restored automatically.
3. Devices below version 1.6.5 can't be upgraded directly and stay on their current version. Install the 1.6.5 update file first, then the latest version; see Download updates.

The management interface behaves oddly after the update

Refresh the page. If there's still a problem, close the tab and open it again; see Connection and management interface — page errors after a software update.

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

The factory reset button can't be pressed

You must type `confirm` in lowercase (with no spaces) in the box for the button to become active. The border turns red if you type it wrong.

A factory reset was triggered by accident

Holding any physical button for 40 seconds triggers a factory reset:

- When the status LED starts blinking fast (after holding for 3 seconds), **release immediately** to cancel.
- Once it has been triggered (LED steady on), it can't be canceled. When it's done, correct the time again, upload images, and create image sets and schedules again.
- If it's triggered by accident often, check whether something is pressing on the button, or whether the device is mounted where the button is easily bumped.

See Factory reset.

Can't connect to the original hotspot after a factory reset?

This is normal. A factory reset returns the hotspot name and password to **this device's factory values** and deletes the Wi-Fi networks added by users; the time zone and time, and the model, are kept. If the hotspot was changed earlier under "Network", connect to the factory hotspot instead; see Factory reset — The hotspot password returns to the factory password.

Running out of storage

Storage in Device info turns red when it's over 90%. Low storage can cause uploads, refreshes and software updates to fail.

1. Go to the image gallery and delete images you no longer use (download the originals of any you need to keep first).
2. Go to System logs and clean up expired logs (download the full logs first if you need to keep them).
3. If there still isn't enough space, contact technical support.

The display is wrong after a Tcon firmware update

Contact technical support right away and give them the firmware version numbers from before and after the update. Don't try other firmware files yourself.

Related: Software update, Factory reset, Device info and monitoring

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Message reference

Messages that may appear in the management interface, grouped by feature. You can also use the search at the top right of this site and type the message text you see.

Site-wide notices

Message	Meaning	What to do
Lost connection to the device	The live connection to the device has been down for more than 6 seconds	Make sure you're connected to the device's Wi-Fi and tap "Reconnect". See Connecting to the device
That action did not take effect — the device is unreachable	No response after the action was sent	First check the image gallery, schedules, or settings to see the result; retry only if it wasn't done
The device is about to sleep	60-second idle countdown	Tap "Keep Awake" to cancel. See Sleep and wake-up
Orientation sensor (G-sensor) fault	The orientation sensor can't be read	Restart the device. See Hardware fault warnings
Real-time clock (RTC) fault	The hardware clock can't be read	Restart the device. See Hardware fault warnings
Cannot identify the panel; refreshing is paused	The Tcon firmware version can't be read, so images aren't displayed for now; the system keeps retrying	If it keeps appearing, restart the device or contact technical support. See Hardware fault warnings
Panel model not supported; refreshing is paused	The panel model isn't on the factory compatibility list	Contact technical support to update the software
Machine data does not match the panel	The screen size in the model data doesn't match the panel	Contact technical support to check the model data
Battery service unavailable — tap for details	Battery data can't be read	See Battery
Request failed.	The device reported that the action failed	Reload the page and try again
Sorry, the page you visited does not exist.	Wrong URL	Tap "Back Home"

Error codes

"Response status:number" is an error code returned by the device, usually shown together with a text message:

Code	Meaning	Common situations
400	The content sent is invalid	Uploading a file that isn't an image, an unsupported format, an incomplete update package
404	Not found	The image was deleted, the feature doesn't exist on this model, the temporary PDF has expired

© 2025-2026 Green Ideas Technology | All rights reserved

Code	Meaning	Common situations
409	Conflict or busy	The panel is refreshing; turning the light on or off manually while a light schedule is enabled
413	Too large	The image has too many pixels, the PDF is over 50 MB, the update package is over 128 MB
500	Internal device error	Damaged file, storage full, processing failed
503	Service temporarily unavailable	The battery service isn't responding, the hotspot control interface isn't enabled yet

Image display

Message	Meaning
All images uploaded successfully	Upload finished
Upload completed, some images failed	At least one failed
Upload failed	This image failed to upload; see Image upload fails
Command sent, processing in background...	The display command was accepted and the panel is refreshing
Send failed, device may be busy	The panel is handling another refresh
The screen could not be refreshed. Please try again later; if it keeps happening, check the system logs.	The panel refresh failed. See Image gallery and displaying images — When a refresh fails
Refreshing...	The panel is refreshing
Screen cleared / Failed to clear the screen	Result of clearing the screen
QR Code screen refreshed / Failed to refresh QR Code screen	Result of showing the startup screen
Screen is currently blank (reset)	The panel is currently cleared to a single background color (black or white)
Currently showing the QR code startup screen	The panel currently shows the startup screen
Image rotated to N° / Image rotation failed	Rotation result
Fit mode changed to "..." / Fit mode change failed	Result of the fit mode setting
Successfully deleted N image(s) / Deletion failed / Batch deletion failed, please try again later	Deletion result
These images will also be removed from the following image sets:	Reminder before deleting images, listing the affected image sets

PDF collage

Message	Meaning
Uploading PDF...	Uploading

© 2025-2026 Green Ideas Technology | All rights reserved

Message	Meaning
PDF upload failed	Upload failed
Not a PDF file (content-type: ...)	The selected file isn't a PDF
PDF file X.XMB exceeds the 50MB limit	File too large
PDF has N pages, exceeding the 60-page limit	Too many pages
You can select up to 30 pages	Too many pages selected
Please select at least one page	No pages selected
PDF session not found: ...	The temporary file has expired (4 hours) or the device has restarted; upload again
Failed to generate preview	Preview generation failed
N image(s) created / Failed to create	Creation result

Image sets

Message	Meaning
Image set created successfully / Failed to create image set	Creation result (fails if the name is over 100 characters)
Please enter image set name	Name not filled in
Image set updated successfully / Failed to update image set	Rename result
Image set deleted / Failed to delete image set	Deletion result
These schedules use this image set. After deleting it they will stop changing images until you choose another image set:	Reminder before deleting an image set
This image set is bound to the buttons. After deleting it, the buttons will switch through the whole gallery instead.	Reminder before deleting an image set
The presenter menu on the device cannot draw some characters in this name...	The name is shown as "Image set N" in the presenter remote menu
Successfully added N images / Failed to add images	Result of adding images
Successfully removed N images / Failed to remove images	Result of removing images
Image set cleared / Failed to clear image set	Clearing result
Reorder failed	Drag-and-drop reordering failed and was reverted
Set as the button-controlled image set	The physical buttons now switch images within this image set
Unbound, buttons will cycle through the whole gallery	The physical buttons switch through the whole image gallery again
No images in this set	The image set is empty

© 2025-2026 Green Ideas Technology | All rights reserved
www.3rgit.com

Message	Meaning
No available images in gallery	Upload images first

Schedules / light schedules

Message	Meaning
Schedule created/Schedule updated/Schedule deleted	Action succeeded
Schedule enabled/Schedule paused	Enabled state changed
Creation failed/Update failed	Saving failed (invalid cron format, image set doesn't exist)
Please fix the cron expression	Invalid frequency setting
Please enter a schedule name/Please select an image set/Please select turn on or turn off	Required field not filled in
Operation failed	Enabling/disabling failed
Failed to update priority	Drag-and-drop reordering failed
Timezone mismatch	The browser and device time zones differ; see Schedules — Time zone
Device timezone updated to … / Failed to sync timezone	Time zone sync result
This image set has no images yet, so nothing will be shown when the schedule fires.	Reminder that you picked an empty image set
Image set created and selected / Added N image(s)	Creating an image set / adding images from the schedule form succeeded
Conflict	Expected to fire at the same time as another schedule; this one is ordered later and will be skipped this round
Disabled / Paused	The schedule won't fire for now
No image set selected	The schedule has no image set (the image set may have been deleted)

Settings

Message	Page	Meaning
Sleep enabled/Sleep disabled, Idle timeout updated	Sleep Settings	Settings saved
The system is about to restart/The system is about to shut down	Power Control	Command executed
System action failed. Please try again later.	Power Control	Command failed
Settings saved	Button Trigger Settings	Settings saved and in effect immediately
Gesture ranges overlapped — the other side was adjusted automatically to avoid a conflict	Button Trigger Settings	Two gestures conflicted and were corrected automatically

© 2025-2026 Green Ideas Technology | All rights reserved

Message	Page	Meaning
G-Sensor enabled/G-Sensor disabled	G-Sensor Settings	Settings saved
This hardware has no G-Sensor	G-Sensor Settings	No orientation sensor
Startup screen enabled/Startup screen disabled, Screen language updated	Startup Screen Settings	Settings saved
Scan mode saved	Tcon Scan Mode	Settings saved (takes effect the next time an image is displayed)
Time synchronized successfully/Time set successfully	Time Settings	Time sync complete
NTP auto-sync enabled/NTP auto-sync disabled	Time Settings	NTP setting saved
The service failed to start — another time-sync service on this device…	Time Settings	Time service conflict; contact technical support
Scheduled jobs switched to new timezone	Time Settings	Time zone updated
Timezone saved, but scheduled jobs require a service restart to apply	Time Settings	Restart the device
Device disconnected/Could not disconnect the device	Network	Disconnect result
The hotspot control interface is not enabled on this device yet; it becomes available after a restart.	Network	Available after a restart
Presenter remote control enabled/disabled, Page switching updated	Presenter Remote	Settings saved
Enable presenter remote control first	Presenter Remote	Must be enabled before the button test
Copied to clipboard	System Logs	Copied
Firmware update successful/Firmware update failed	Tcon Firmware	Update result
Only .bin firmware files are accepted	Tcon Firmware	Wrong file format
Failed to read firmware version	Tcon Firmware	Read failed
Battery info updated/Battery Service Unavailable	Battery Info	Read result

Software update / factory reset

Message	Meaning
Please select a .tar.gz update package	The file name doesn't end in `.tar.gz`
Reading update package info…	Reading the update package
This file is not a valid update package. Please check that the download is complete	The update package contents can't be read
The update package is larger than 128 MB and cannot be used	The file is too large

© 2025-2026 Green Ideas Technology | All rights reserved

Message	Meaning
Installing update, please wait... / Will reconnect automatically after reboot	Update in progress
Update Successful / Update Failed / Update Result Unconfirmed	Update result; see Software update
Connection Timed Out	The result couldn't be confirmed within 5 minutes
Upload failed: checksum mismatch...	The file is damaged; download it again
Upload failed: update package exceeds the 128 MB limit	Not a valid update package
Resetting to factory defaults, please wait...	Factory reset in progress
Factory Reset Complete	Done
Factory reset failed, please try again later	Failed

Mode switching

Message	Meaning
Switching Mode...	Switching; don't close the page or cut the power
Mode Switch Initiated	The device will restart and switch to CMS mode
Cannot switch: sbc-display module not installed	This device has no CMS module
Already in CMS Mode	The device is already in CMS mode
Cannot switch to CMS yet	No Wi-Fi network has been saved yet; CMS mode needs the device to be connected to a network

© 2025-2026 Green Ideas Technology | All rights reserved

FAQ

General

Q: Do I need an internet connection to use it? No. The device broadcasts its own Wi-Fi hotspot, and you manage it directly once your phone is connected. If there is Wi-Fi on site, you can also connect the device to the on-site network ("Station" or "Concurrent" mode); see Network settings. You need the internet to download software update files (download them on a phone or computer, then reconnect to the device and upload them).

Q: Do I need to install an app? No. Just open the management interface in the browser on your phone or computer; when you're connected to the device's hotspot, the default address is `http://192.168.100.1`.

Q: Can several phones manage it at the same time? Yes, and everyone's screen stays in sync in real time. But the panel can refresh only one image at a time, so when several people display images at once, the later request is rejected.

Q: Can I manage it remotely? In standalone mode you can only manage it within range of the hotspot, or when you're on the same on-site network as the device. If you need to manage many devices centrally and remotely, ask about the CMS central management solution. See CMS / standalone mode switching.

Q: Can I change the hotspot name or password? Yes. Change the name, password, security type and channel in the hotspot settings under "Settings → System → Network". See Network settings — Changing the hotspot name and password. A factory reset returns the hotspot to this device's factory values.

Q: Which languages does the management interface support? 繁體中文, English and 日本語; switch in the top-right corner. The language of the startup screen on the device itself is changed separately in "Startup Screen Settings".

Images

Q: Which image formats are supported? JPG and PNG are recommended. You can also use BMP, GIF (first frame), WebP and TIFF. SVG and the iPhone HEIC format are not supported.

Q: Is there a size limit for images? There is no file size (MB) limit, but an image can't have more than about 80 million pixels (for example 10000 × 8000). JPG photos can be larger (the system scales them down while decoding), so even a photo taken in a phone's 200-megapixel mode can be uploaded.

Q: What size should I make my images? Match the panel's effective resolution: 13.3-inch 1024 × 768, 27.6-inch / 32-inch 1920 × 1080, 24.8-inch 1530 × 1080 (swap width and height in portrait).

Q: Can it play videos or animated GIFs? No. A cholesteric LCD takes some time to refresh one image (depending on the model and refresh mode, for example about 6 seconds on the 13.3-inch, about 16 seconds on the 27.6-inch, about 20 seconds on the 32-inch), so it is only suited to still images. A GIF shows only its first frame.

Q: Can I display a PDF? Yes. Use "Upload PDF" to turn the pages into a collage image. See PDF collage.

Q: Why does it take so long after I display an image? It's how cholesteric LCDs work: the time to refresh one image depends on the model and refresh mode, for example about 6 seconds on the 13.3-inch, about 16 seconds on the 27.6-inch, about 20 seconds on the 32-inch. The upside is that once refreshed, the image stays on screen without using power.

Q: Can I sort the image gallery? The image gallery itself can't be sorted (newly uploaded images come first). If you need a particular playback order, create an image set and arrange the images in it.

© 2025-2026 Green Ideas Technology | All rights reserved

Schedules

Q: Does a schedule "keep rotating images during a period of time"? No. Each time the scheduled time arrives, it switches to the next image in the image set and keeps it until the next scheduled time.

Q: Can I set "every 45 minutes"? The current settings **don't support** it. A fixed interval can only be a number that divides evenly into 60 minutes or 24 hours. See Image change frequency in detail.

Q: What happens if two schedules trigger at the same time? The one higher in the list runs, and the one lower in the list (marked "Conflict") is skipped this time. We recommend staggering their times. See Simultaneous triggers and skipped runs.

Q: What is schedule priority for? Dragging to reorder sets the display order and also decides which one runs when they trigger at the same time: the one higher in the list runs, and the one lower in the list is marked "Conflict" and skipped this time.

Q: Do schedules still run while the device is asleep? Yes. The device wakes up automatically about 3 seconds before a schedule.

Q: Are schedules kept after a power loss? Yes. Schedules and all settings are stored on the device and work as usual after it restarts.

Sleep and power

Q: Why doesn't the device sleep even though sleep is on? The most common reason is that someone has the management interface open (it then needs to be idle for at least 15 minutes). See The device never goes to sleep.

Q: Does the image disappear during sleep? No. A cholesteric LCD keeps its image without power. Only the QR code startup screen is cleared before sleep (to a single background color, black or white).

Q: How do I reconnect after the device goes to sleep? Press a physical button once to wake it up, wait a few seconds for the hotspot to start again, then connect.

Q: What's the difference between shutting down and sleep? After shutting down, someone has to handle the power on site to turn it back on, and schedules don't run; sleep can be ended automatically by a schedule or a button press. Use sleep to save power day to day.

Q: How long does the battery last? It varies a lot depending on the image change frequency, whether sleep is on, and whether the light is used. "Time left" in the management interface is estimated from the current draw and is for reference only.

Buttons

Q: What can the two physical buttons do? Switch to the previous / next image, clear the screen, show the connection QR code, wake up the device, and factory reset (hold for 40 seconds). You can also connect a presenter remote to change images. See Physical buttons and gestures.

Q: After holding a button to bring up the QR code, the status LED started flashing quickly? That means the factory reset countdown has started. **Let go right away.** Holding it for the full 40 seconds erases all data.

Updates and maintenance

Q: Where do I download software updates? On the Downloads page of this website.

Q: Will an update erase my images and schedules? No. A software update keeps all images, image sets, schedules and settings.

Q: Can a failed update brick the device? If an update fails, the device automatically restores the previous version and restarts.

© 2025-2026 Green Ideas Technology | All rights reserved

Q: What does a factory reset erase? All images, image sets, schedules, settings and logs, and the Wi-Fi networks added by users are deleted; the hotspot name and password return to this device's factory values. The time zone and model are kept. See Factory reset.

Q: Does the device recover by itself if the management app or the system hangs? Yes, with nothing to configure. If the management app stops responding, it restarts by itself within about a minute. If the whole system stops responding, the hardware restarts the device automatically. The records from before and after the problem are saved in a black box incident package.

Q: What should I provide when contacting technical support? See Before contacting technical support.

© 2025-2026 Green Ideas Technology | All rights reserved

10. Appendix

© 2025-2026 Green Ideas Technology | All rights reserved

Specifications and limits

This page collects the numeric specifications, defaults and limits of the management software for quick reference.

Display

Item	Specification
Panel resolution	1024 × 768 (13.3-inch), 1920 × 1080 (27.6-inch / 32-inch), 1530 × 1080 (24.8-inch)
Screen orientation	0°, 90°, 180°, 270°
Auto-rotation detection	Read every 0.3 seconds; switches only after the same orientation is read 2 times in a row (about 0.6 seconds)
Refreshing one image	Depends on the model and refresh mode, for example about 6 seconds on the 13.3-inch, about 16 seconds on the 27.6-inch, about 20 seconds on the 32-inch
Showing the QR code startup screen	Depends on the model and refresh mode, for example about 6 seconds on the 13.3-inch, about 16 seconds on the 27.6-inch, about 20 seconds on the 32-inch
Simultaneous refreshes	1 (other requests during a refresh are rejected, not queued; the exception is changing images with a physical button or presenter remote, which stops the current refresh or waits for it to finish, depending on the "When changing pages" setting)
Refresh modes	Standard refresh, Fast refresh, High contrast; depends on the panel model. Most panels have only one, and only two 13.3-inch models offer a choice
Scan direction	Top to Bottom (default), Bottom to Top, Interleave
Fit modes	Fit (default), Fill, Stretch, Crop
Maximum side of the web preview	800 pixels
Edge Mask width	0–100 px (default 2 px; 32-inch frameless only)

Images

Item	Specification
Recommended formats	JPG, PNG
Also supported	BMP, GIF (first frame), WebP, TIFF
Not supported	SVG, HEIC / HEIF
File size limit	None
Pixel limit	About 80 million pixels (80 MP); JPG images are scaled down while decoding, so larger photos can be handled (for example a phone's 200-megapixel mode)
Uploading	Multiple selection; 2 images upload at a time, the rest wait in line
Maximum number of images	None (limited by storage space)

© 2025-2026 Green Ideas Technology | All rights reserved

Item	Specification
File name length	255 characters
Thumbnail	300 × 300

PDF collage

Item	Specification
File size limit	50 MB
Total page limit	60 pages
Pages selectable at once	30 pages
Columns	Auto, or 1 to the number of selected pages
Gap	0–10% (default 2%)
Output format	JPG, sized to the effective resolution at the time of creation; the file name is the PDF's file name
Background color	Black by default; you can choose another
Unfinished work kept for	4 hours

Image sets and schedules

Item	Specification
Image set name	Required, up to 100 characters
Number of image sets, images per image set	No limit
Number of schedules	No limit
Smallest schedule unit	1 minute
Fixed interval (minutes)	1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30
Fixed interval (hours)	1, 2, 3, 4, 6, 8, 12
Default frequency for a new schedule	Every 10 minutes (light schedule: daily at 8 PM)
Catch-up after a restart	A run missed by 2 minutes or less is run once
Catch-up after waking from sleep	Schedules run once to catch up; light schedules are corrected to the current time

Sleep

Item	Specification
Default	Off
Idle time options	3, 5 (default), 10 minutes

© 2025-2026 Green Ideas Technology | All rights reserved

Item	Specification
When someone has the management interface open	At least 15 minutes idle
Countdown before sleep	60 seconds (when someone has the management interface open)
Early wake-up before a schedule	About 3 seconds
Does not sleep when the next schedule is less than	5 seconds away

Physical buttons

Item	Specification
Number of buttons	2 (Previous, Next)
Single-press debounce	0.3 seconds
Single-button long press threshold	0.3–10 seconds (default 1.5 seconds)
Maximum double-press interval	100–1000 ms (default 300 ms; actually the minimum interval between two presses)
Both buttons held together	Fixed at 1 second
Factory reset	Hold either button for 40 seconds (status LED warning from 3 seconds)

Network

Item	Specification
Network modes	Hotspot (factory default), Wi-Fi, concurrent
Hotspot band	5 GHz at the factory; the channel can be "Auto" or 1, 6, 11 (2.4 GHz), 36, 40, 44, 48, 149, 153, 157, 161, 165 (5 GHz); in concurrent mode it follows the on-site Wi-Fi
Hotspot security type	WPA2/WPA3 mixed (default), WPA2-Personal AES, WPA3-Personal AES; open (unencrypted) isn't offered
Hotspot name	1–32 bytes (one Chinese character takes 3)
Hotspot password	8–63 characters
Hotspot address	192.168.100.1 by default; can be changed
Management interface	`http://192.168.100.1` by default when connected to the hotspot (HTTP, port 80)
Internet	Not provided by the hotspot
Disconnection notice	Shown after 6 seconds without a connection
Automatic reconnection	Stops after about 3 minutes

© 2025-2026 Green Ideas Technology | All rights reserved

Software update and maintenance

Item	Specification
Update package format	`.tar.gz`
Update package size limit	128 MB
Lowest version that can upgrade directly	1.6.5
Update wait limit	5 minutes
Tcon firmware format	`.bin`
Tcon firmware update time	About 2–5 minutes
Factory reset confirmation	Type lowercase `confirm`

Logs

Item	Specification
Loading	Loaded automatically when you scroll to the bottom
Full log download	One file with the complete logs and device status (not affected by the filters on screen)
Cleanup rule	Older than 180 days, or more than about 500 MB (applied when you clean up manually)
Automatic cleanup	None

Monitoring and battery

Item	Specification
Device info refresh interval	10 seconds, 30 seconds, 1 minute (default), 5 minutes, 10 minutes
Battery page refresh interval	10 seconds, 30 seconds, 1 minute (default), 5 minutes
Battery icon (top right) refresh	Every 30 seconds
Trend sample limit	180 samples (only while the page stays open)
Battery level colors	Green > 50%, yellow 21–50%, red 20% or below
Storage warning	Shown in red when usage is above 90%

Languages

Item	Supported
Management interface	繁體中文, English, 日本語
Device screen (startup screen, mode switching screen)	繁體中文, English, 日本語

© 2025-2026 Green Ideas Technology | All rights reserved

Data retention and what gets deleted

This page explains what data is stored on the device and which data each operation (deleting, software update, importing a settings file, factory reset, mode switching) affects.

Data stored on the device

Category	Content
Images	Uploaded original files, thumbnails, converted files for the panel
Image sets	Image set names, the images they contain and their order
Schedules	Schedules and light schedules (name, frequency, enabled state, which image is currently playing)
User settings	Sleep, button gestures, G-Sensor, startup screen, screen language, refresh mode, scan direction, edge mask, manual light state
System logs	Operation records of the management app
Installation settings	Model, factory language (decided at installation)
System settings	Wi-Fi hotspot name and password, Wi-Fi networks added by users, time zone, time

All data is stored on the device itself and is never uploaded to any cloud service.

Effect of each operation

Data	Delete an image	Delete an image set	Software update	Import a settings file	Factory reset	Switch to CMS mode
Images	That image is deleted	Kept	Kept	**Replaced with the file's**	**Deleted**	Kept
Image sets	That image is removed	That image set is deleted	Kept	**Replaced with the file's**	**Deleted**	Kept
Schedules	Kept (restarts from the first image)	Kept (but images won't change)	Kept	**Replaced with the file's**	**Deleted**	Kept
User settings	Kept	Kept (button binding goes back to the whole image gallery)	Kept	**Replaced with the file's**	**Back to defaults**	Kept
System logs	Kept	Kept	Kept	Kept	**Deleted**	Kept
Model	Kept	Kept	Kept	Kept	Kept	Kept

© 2025-2026 Green Ideas Technology | All rights reserved

Data	Delete an image	Delete an image set	Software update	Import a settings file	Factory reset	Switch to CMS mode
Wi-Fi hotspot name and password	Kept	Kept	Kept	Name replaced with the file's; password replaced only if the file has an export password	**Back to factory values**	Kept
Wi-Fi networks added by users	Kept	Kept	Kept	Kept	**Deleted**	Kept
Time zone, time	Kept	Kept	Kept	Kept	Kept	Kept
Software version	—	—	Upgraded	Kept	Kept	Kept
Current panel image	Unchanged	Unchanged	May become the startup screen	May become the startup screen	Becomes the startup screen	Screen cleared, then CMS takes over

Knock-on effects of deleting

- **Deleting an image**: it is also removed from all image sets; schedules that use it start again from the first image in the image set next time.
- **Deleting an image set**: schedules that use it aren't deleted, but they won't change images because they have no image set. Choose an image set again.
- **Deleting a schedule**: image sets and images are not affected.

The delete confirmation dialog doesn't mention these knock-on effects, so check before you delete.

Backup tips

With Export / import settings you can save photos, image sets, schedules, settings and hotspot settings in one file, then import it back when needed, or import it into another device.

Content	How to back it up
Images, image sets, schedules, settings, hotspot settings	"Export settings"
Wi-Fi passwords	Can't be exported; keep your own record
System logs	Save the records you need first with "Download full logs"

Privacy and security

- The hotspot password can be viewed under Network settings → “Hotspot”. Cover the password and QR code before sharing screenshots.
- Anyone connected to the device hotspot can open the management interface. Give the hotspot details only to people who need to manage the device.

© 2025-2026 Green Ideas Technology | All rights reserved

- An exported settings file contains your photos and settings, and nothing in it is encrypted except the hotspot password. Keep it safe.
- Before transferring or disposing of the device, run a factory reset to delete all content.

Related: Export / import settings, Factory reset, Software update, Image sets

© 2025-2026 Green Ideas Technology | All rights reserved