

UCMA/Pi

Home Assistant Add-on for Cytech Comfort

Installation and User Manual

Version 1.0 | 2026

Contents

Contents.....	2
1. Introduction.....	4
1.1 Key Features.....	4
1.2 Requirements.....	4
2. Hardware Overview and Installation.....	5
2.1 What's in the Box.....	5
2.2 The UCMA/Pi Module.....	5
2.3 Connectors and Ports.....	6
Ethernet Port (RJ45).....	6
UCM Bus Connector.....	6
USB Port.....	6
HDMI Port.....	6
Terminal Blocks (Blue).....	6
2.4 LED Indicators.....	6
2.5 UCM ID Setting.....	6
2.6 The UCM Cable.....	7
2.7 Installation Steps.....	7
3. First-Time Setup.....	9
3.1 Accessing Home Assistant.....	9
3.2 Creating a User Account.....	9
3.3 Home Location.....	10
3.4 Analytics Settings.....	11
3.5 Detected Integrations.....	11
3.6 Home Assistant Dashboard.....	12
3.7 Adding More Users.....	12
Logging in as the New User.....	13
Setting Up the Mobile App for the New User.....	13
Changing a Password.....	13
Removing a User.....	13
4. Add-ons.....	14
4.1 Pre-installed Add-ons.....	14
5. Configuring the Cytech Comfort Add-on.....	15
5.1 Info Page.....	15
5.2 Configuration — MQTT Settings.....	15
5.3 Configuration — Comfort System Settings.....	16
5.4 Comfort Registers.....	17
6. Loading the Comfort Configuration File (CCLX).....	19
6.1 Exporting the CCLX File.....	19
6.2 Accessing the Web UI.....	19
6.3 Uploading the CCLX File.....	20
6.4 Validating and Applying.....	20
7. Comfort Alarm Dashboard.....	22
7.1 Desktop View.....	22
Alarm Status.....	22
Arming and Disarming.....	22
Zone Status.....	22
Armed Night Mode.....	23
Alarm Message Log.....	24
7.2 Mobile View.....	24
8. Comfort Entities.....	26
8.1 Zones and Outputs.....	26
8.2 Counters, Flags and Sensors.....	26

9. System Info.....	28
9.1 Battery and Power.....	28
9.2 System Voltages.....	28
9.3 System Info Details.....	29
10. Mobile App Setup (Home Assistant Companion).....	30
10.1 Installing the App.....	30
10.2 Connecting to Your Home Assistant.....	30
10.3 Logging In.....	31
10.4 Naming the Device.....	32
10.5 Connection Security.....	33
10.6 Push Notifications.....	34
10.7 Alarm Message Log on Mobile.....	35
10.8 Companion App Settings.....	36
11. Remote Access with Tailscale.....	38
11.1 Setting Up Tailscale on the UCMA/Pi.....	38
11.2 MagicDNS — a Fixed Name for Your Home Assistant.....	40
11.3 Installing Tailscale on Your Phone or PC.....	40
12. Troubleshooting.....	41
12.1 Module Does Not Start / No LEDs.....	41
12.2 Cannot Access Home Assistant in the Browser.....	41
12.3 Comfort System Not Connecting.....	41
12.4 Zone Names Show as "Zone01", "Zone02", etc.....	41
12.5 Cannot Arm — "Zone Not Ready" Message.....	41
12.6 Cannot Access Home Assistant Remotely.....	41
12.7 Push Notifications Not Arriving.....	42
Appendix A: Default Settings Summary.....	43
Appendix B: Access URLs.....	44

1. Introduction

The UCMA/Pi is a compact add-on module for the Cytech Comfort alarm system. It contains a Compute Module 4 (CM4) Raspberry Pi running Home Assistant OS (HAOS). Connecting the UCMA/Pi to your Comfort system gives you full integration with Home Assistant, allowing you to monitor and control your alarm from any web browser or smartphone — at home or remotely.

This manual covers initial setup, configuration of the Cytech Comfort add-on, loading your Comfort database, and using the Home Assistant interface on desktop and mobile.

1.1 Key Features

- Pre-installed with Home Assistant OS — no additional software required.
- Cytech Comfort MQTT Bridge — connects Comfort to Home Assistant using MQTT.
- Mosquitto MQTT Broker — built-in, pre-configured for local communication.
- Tailscale VPN — secure remote access without port forwarding.
- Home Assistant Companion App — full mobile access on Android and iOS.
- Push notifications for alarm events: arm, disarm, zone alerts, and more.
- Direct access to Comfort entities: zones, outputs, flags, counters, sensors, timers.

1.2 Requirements

- A Cytech Comfort alarm panel with the UCM module installed and powered.
- A network router with a spare Ethernet port.
- A PC or smartphone on the same network, with a modern web browser.
- The Comfort configuration file in CCLX format, exported from the Comfort PC software.
- An email account for creating a Tailscale account (for remote access only).

2. Hardware Overview and Installation

This chapter describes the UCMA/Pi hardware, its connectors, indicators, and how to install it in the Cytech Comfort panel before proceeding to the software setup.

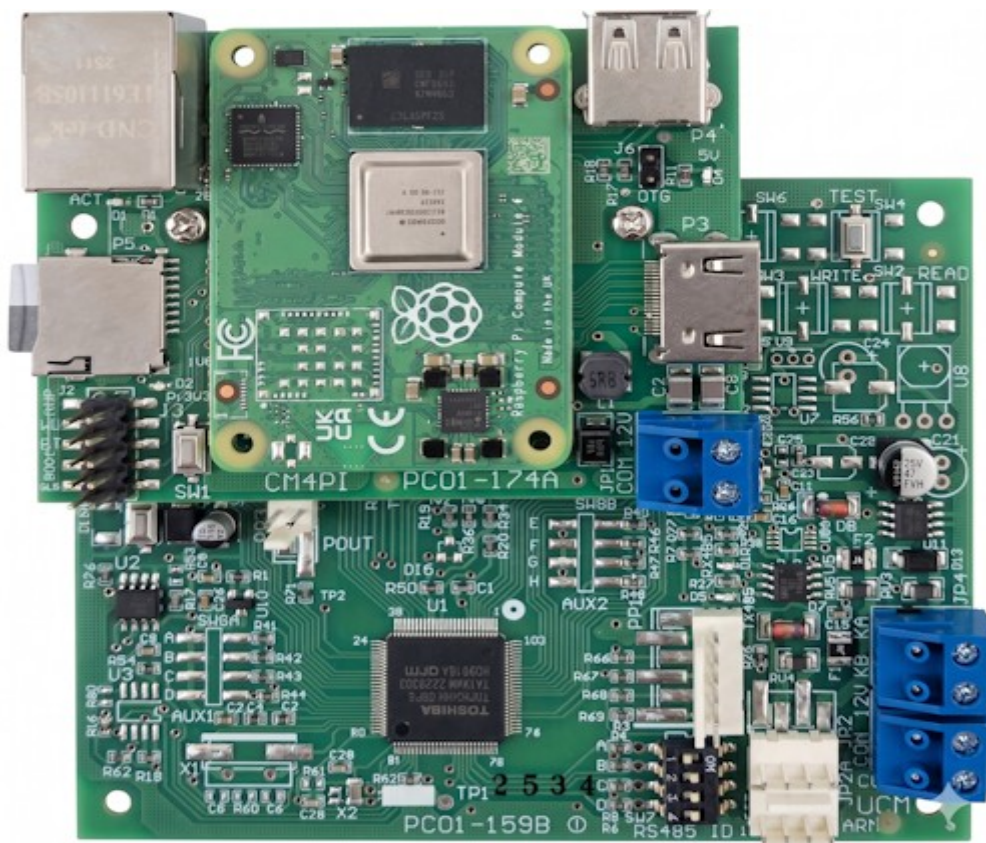
2.1 What's in the Box

- UCMA/Pi module (PCB with Raspberry Pi CM4)
- UCM connection cable (white, with 4-pin connectors at each end)
- This manual

Note: The UCMA/Pi is powered entirely by the Comfort panel via the UCM bus. No external power supply or USB power is required during normal operation.

2.2 The UCMA/Pi Module

The UCMA/Pi is built around the Raspberry Pi Compute Module 4 (CM4), mounted on a carrier board designed to interface directly with the Cytech Comfort UCM bus. The board provides all connections needed for installation.



UCMA/Pi module — top view

2.3 Connectors and Ports

Ethernet Port (RJ45)

Located on the top-left edge of the board. This is the main network connection. Connect a standard Ethernet cable from this port to your network router or switch. A reliable wired connection is strongly recommended — do not use Wi-Fi for the UCMA/Pi.

UCM Bus Connector

The white 4-pin connector on the board connects to the Cytech Comfort UCM bus via the supplied cable. This cable carries both data (for communication with Comfort) and power (to run the module). See Section 2.5 for connection details.

USB Port

One USB 2.0 port is provided for maintenance purposes — for example, connecting a keyboard when accessing the module directly. This is not required for normal operation.

HDMI Port

A micro-HDMI port is provided for direct display output during maintenance. Not required for normal operation — Home Assistant is accessed via the network browser interface.

Terminal Blocks (Blue)

The blue screw terminal blocks on the right side of the board provide additional connection points. Refer to the wiring label on the board for pin assignments.

2.4 LED Indicators

The UCMA/Pi has several LEDs that indicate the status of the module:

D4 (green) — 5 V power — lit continuously when the module is receiving power from the UCM bus.

D2 (red) — 3.3 V power — lit continuously when the on-board 3.3 V regulator is active.

D1 (green) — Activity — flashes during SD card / storage activity. Rapid flashing on first boot is normal.

Ethernet LEDs — Located on the RJ45 port. Green = link active; amber/flashing = data activity.

Note: On first power-on, the D1 activity LED will flash continuously for several minutes while Home Assistant OS initialises. This is normal. Do not remove power during this process.

2.5 UCM ID Setting

Each UCM device on the Comfort bus must have a unique ID. The UCMA/Pi UCM ID is set by the SW7 DIP switch on the board. The factory default is ID 1, which is reserved for the Cytech Configurator software. Set the UCMA/Pi to ID 2 (or any other free ID) before connecting it to the bus.

Use the table below to set SW7 DIP switches 1–4 for the required UCM ID. DIP-5 through DIP-8 should remain OFF.

ID	DIP-1	DIP-2	DIP-3	DIP-4
1	ON	ON	ON	ON
2	OFF	ON	ON	ON
3	ON	OFF	ON	ON
4	OFF	OFF	ON	ON
5	ON	ON	OFF	ON
6	OFF	ON	OFF	ON
7	ON	OFF	OFF	ON
8	OFF	OFF	OFF	ON

Important: Do not connect the UCMA/Pi to the Comfort bus if another device already has the same UCM ID. Duplicate IDs will cause communication errors on the entire bus.

2.6 The UCM Cable

The supplied cable connects the UCMA/Pi to the Comfort panel's UCM bus port. It has identical 4-pin connectors at each end. The cable can be plugged in either way — the connectors are keyed to prevent incorrect insertion.



UCM connection cable — supplied with the UCMA/Pi

2.7 Installation Steps

Follow these steps to physically install the UCMA/Pi before proceeding to the software setup in Chapter 3.

1. Power off the Comfort panel at the mains before handling the module.
2. Set the UCM ID jumpers to a unique, unused ID (default is 1). See Section 2.5.
3. Mount the UCMA/Pi in the Comfort panel enclosure using the provided fixing points.
4. Connect one end of the UCM cable to the UCM Bus connector on the UCMA/Pi board.
5. Connect the other end of the cable to an available UCM port on the Comfort panel.
6. Connect an Ethernet cable from the RJ45 port on the UCMA/Pi to your network router or switch. Route the cable neatly out of the panel enclosure.
7. Insert the pre-programmed micro SD card into the micro SD card slot on the UCMA/Pi board until it clicks into place.
8. Restore power to the Comfort panel. The UCMA/Pi will start automatically. Allow up to 5 minutes on first boot for Home Assistant OS to initialise.

Tip: After powering on, you can confirm the UCMA/Pi has started by checking your router's connected-device list for a new device named "homeassistant".

3. First-Time Setup

When you power on the UCMA/Pi for the first time and open it in a browser, Home Assistant runs a one-time onboarding wizard. This section walks you through each step.

3.1 Accessing Home Assistant

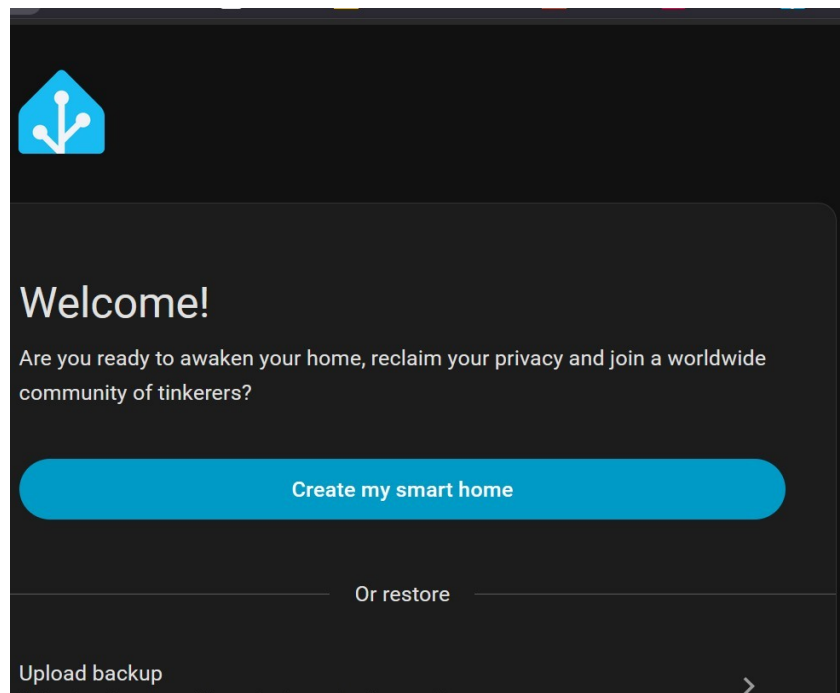
Connect the UCMA/Pi to your router via Ethernet, then open a web browser on any device on the same network and navigate to:

`http://homeassistant.local:8123`

If this address does not resolve, find the module's IP address in your router's device list and use:

`http://<IP address>:8123`

The Home Assistant welcome screen appears.

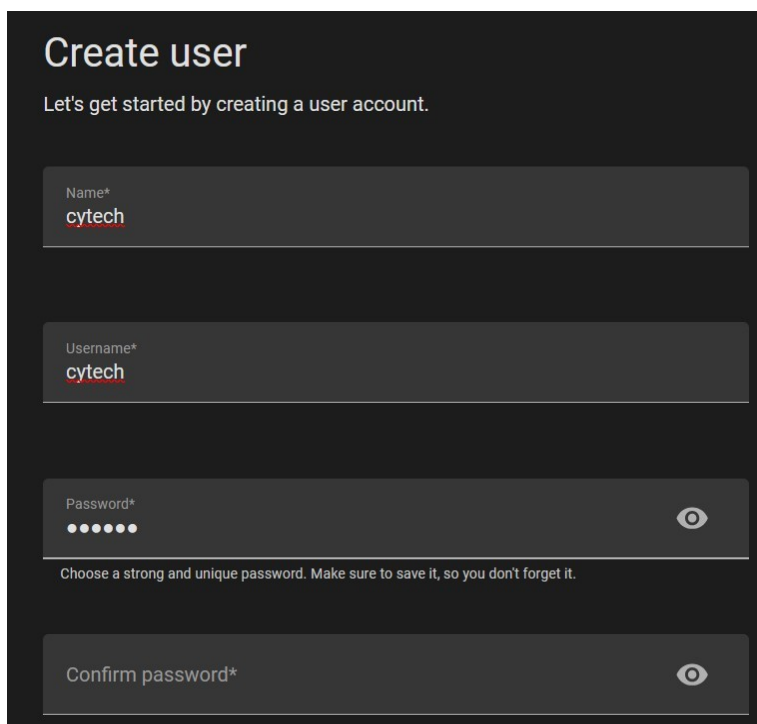


Home Assistant welcome screen

3.2 Creating a User Account

Click "Create my smart home". You will be asked to create an administrator account. Enter a display name, username, and a strong password, then click "Create account".

Note: The default username shown is "cytech". You may use any username, but record your credentials carefully — there is no password-recovery option without direct access to the module.

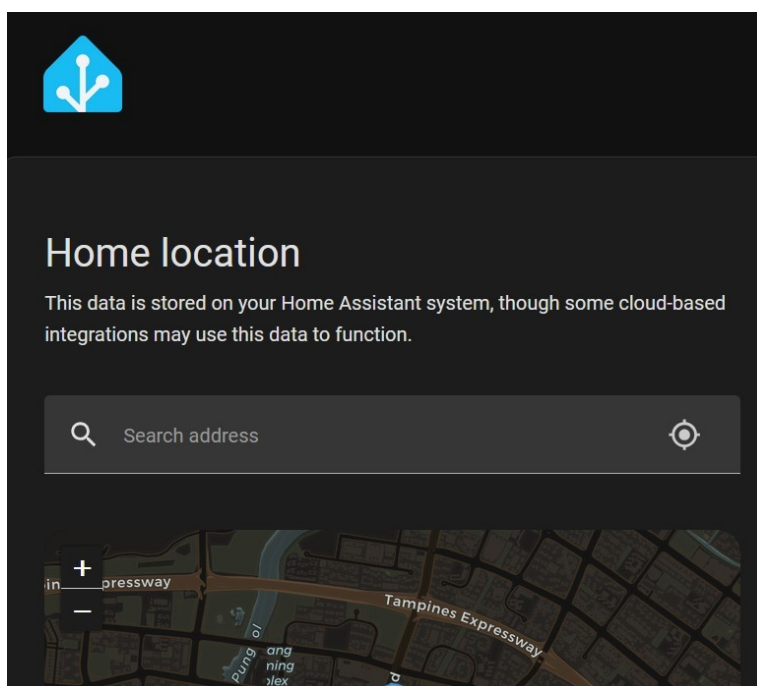
A dark-themed screen titled "Create user" with the subtitle "Let's get started by creating a user account." It features four input fields: "Name*" with "cytech" entered, "Username*" with "cytech" entered, "Password*" with five dots and a toggle icon, and "Confirm password*" with a toggle icon. A note below the password field says "Choose a strong and unique password. Make sure to save it, so you don't forget it."

Create user — enter name, username, and password

3.3 Home Location

Home Assistant requests your home address or coordinates. This data is stored locally and used for time-based automations (sunrise/sunset) and the map view. It is not shared externally unless you enable cloud integrations.

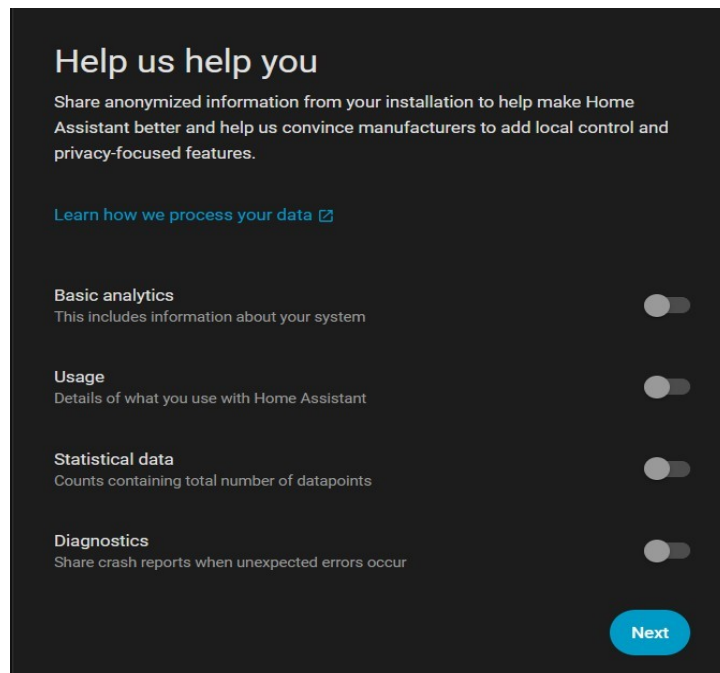
Search for your address in the search box, or drag the pin on the map to your location. Click "Next" when done.

A dark-themed screen titled "Home location" with the subtitle "This data is stored on your Home Assistant system, though some cloud-based integrations may use this data to function." It features a search bar with a magnifying glass icon and the text "Search address", and a map below it showing a street grid with a blue pin. The map includes labels for "Tampines Expressway" and "Punggol".

Set home location

3.4 Analytics Settings

Home Assistant offers to send anonymous usage statistics to its developers. All options are disabled by default. You can leave them off and click "Next" to continue.

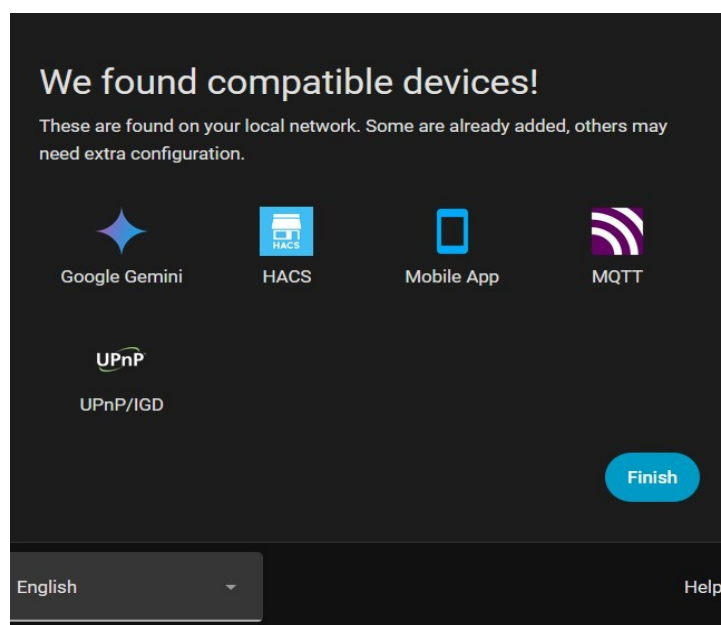


Analytics and diagnostics — all options can be left off

3.5 Detected Integrations

Home Assistant scans your network for compatible devices and services. It may detect items such as HACS, the Mobile App integration, MQTT, and UPnP/IGD. Click "Finish" to complete the wizard.

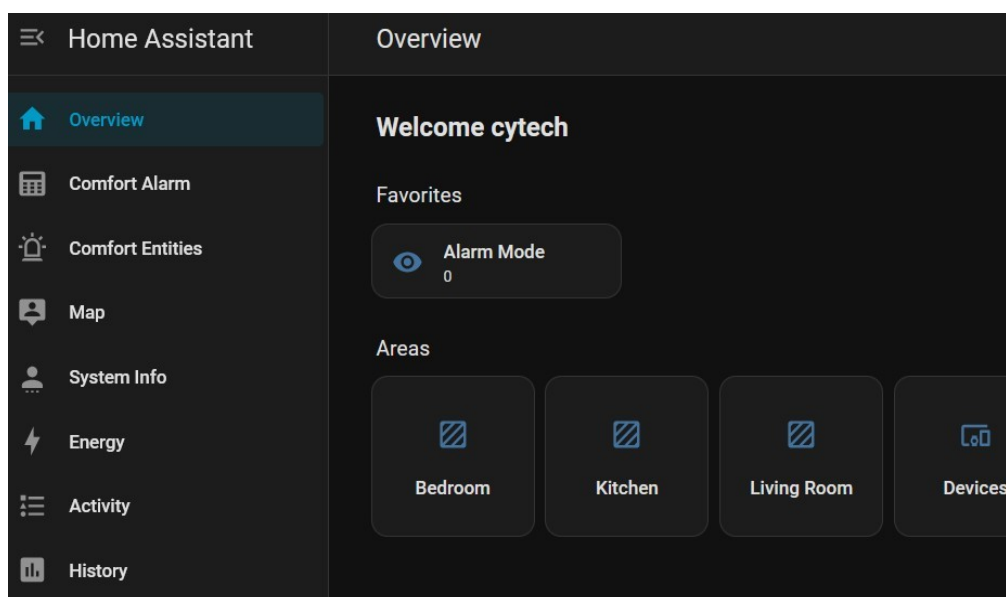
Note: You do not need to act on the detected devices at this stage. The Cytech Comfort integration is configured separately in Chapter 5.



Detected compatible devices on the network

3.6 Home Assistant Dashboard

After the wizard, you arrive at the main dashboard (Overview). The left sidebar provides navigation to all pages. The Cytech Comfort pages — Comfort Alarm and Comfort Entities — appear in the sidebar once the Comfort add-on is configured.



Home Assistant Overview page — Comfort Alarm and Comfort Entities in the sidebar

3.7 Adding More Users

Additional users can be created so that family members or other installers can log in to Home Assistant with their own credentials. Each user can be given a standard (non-administrator) role to limit their access.

To add a new user:

1. In the left sidebar, click Settings.
2. Select People, then click the Add Person button at the bottom of the page.
3. Enter the person's display name and click Create.
4. On the person's profile page, scroll down to the Allow Login section and toggle it on.
5. Enter a username and a strong password for that person. Leave the Administrator toggle off for standard users.
6. Click Update to save. The new user can now log in from any browser or the Companion mobile app using their credentials.

Note: Only administrator accounts can change settings, install add-ons, or create further users. Standard users can view dashboards and control devices, but cannot modify the system configuration.

Logging in as the New User

The new user opens a browser and goes to the Home Assistant address (e.g. <http://homeassistant.local:8123>). They enter their username and password to log in. On first login, Home Assistant may ask them to confirm their name and optionally set a profile picture — this can be skipped.

Setting Up the Mobile App for the New User

Each person who wants to use the Companion app on their phone must log in with their own account. The new user should install the Home Assistant Companion app on their phone, open it, enter the server address, and log in with their own username and password. Notifications, device tracking, and the dashboard will then be linked to that user's account.

Changing a Password

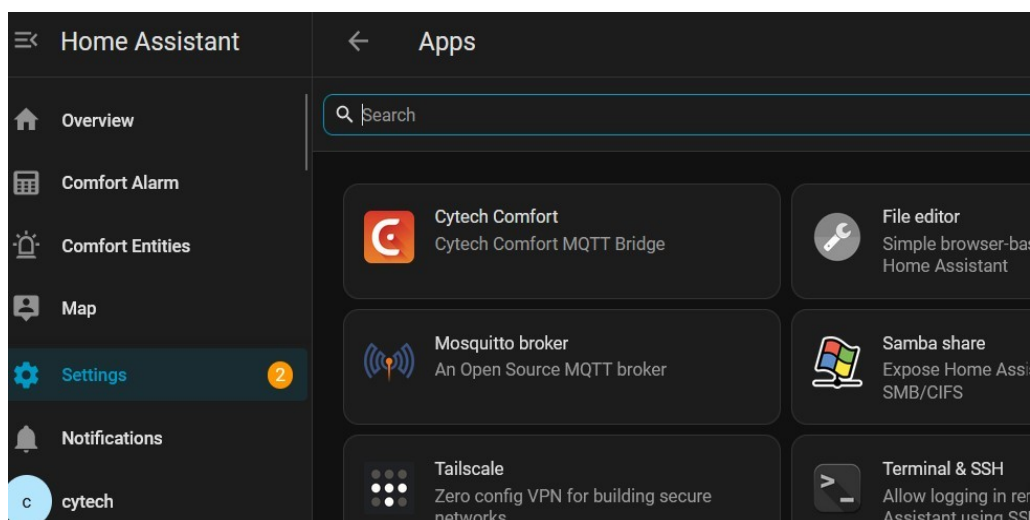
Any user can change their own password by clicking their username at the bottom of the left sidebar, then selecting Security. Enter the current password, then the new password twice, and click Change Password.

Removing a User

To remove a user, go to Settings → People, click the person's name, scroll to the bottom, and click Delete. This removes their login access but does not delete any automations or history associated with their account.

4. Add-ons

Add-ons are applications that run inside Home Assistant and extend its capabilities. The UCMA/Pi comes with several add-ons pre-installed. To view them, go to Settings → Add-ons in the sidebar.



Installed add-ons — Cytech Comfort, Mosquitto, Tailscale, and more

4.1 Pre-installed Add-ons

Cytech Comfort — The Cytech Comfort MQTT Bridge. This is the core add-on that connects the Comfort alarm system to Home Assistant. It must always be running.

Mosquitto Broker — An open-source MQTT message broker. Handles all communication between the Cytech Comfort add-on and Home Assistant. Pre-configured for local use.

Tailscale — A zero-configuration VPN for secure remote access to Home Assistant from outside your home network. See Chapter 11 for setup.

Terminal & SSH — Provides command-line access to the module. For advanced users only.

Samba Share — Exposes the Home Assistant configuration folder as a Windows network share, allowing file access from a PC on the same network. For advanced users only.

File Editor — A browser-based text editor for Home Assistant configuration files. For advanced users only.

5. Configuring the Cytech Comfort Add-on

Before the Cytech Comfort add-on can communicate with your alarm panel, it must be configured with the correct MQTT and Comfort settings. To open the add-on, go to Settings → Add-ons, then click "Cytech Comfort".

5.1 Info Page

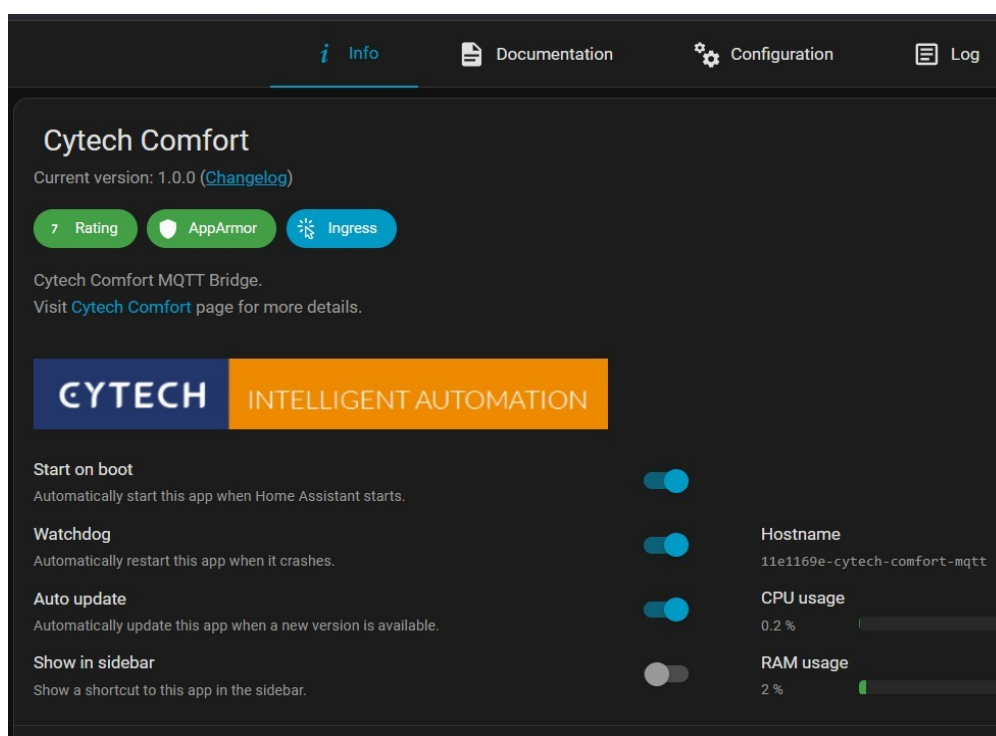
The Info page shows the current version, CPU and RAM usage, and the following controls. Enable them as shown:

Start on boot — Enable. The add-on will start automatically whenever Home Assistant restarts.

Watchdog — Enable. Home Assistant will automatically restart the add-on if it crashes.

Auto update — Enable. The add-on will update itself when a new version is released.

Show in sidebar — Optional. Adds a direct link to the add-on in the sidebar.



Cytech Comfort add-on — Info page

5.2 Configuration — MQTT Settings

Click the "Configuration" tab. Fill in the MQTT broker settings first:

MQTT Broker Address — Leave as "core-mosquitto" (default, recommended). This uses the built-in Mosquitto broker and no changes to Mosquitto are required. Only change this if you are using a separate external MQTT broker.

MQTT Broker Username — Leave as the default value. This matches the pre-configured Mosquitto broker credentials and does not need to be changed.

MQTT Broker Password — Leave as the default value. This matches the pre-configured Mosquitto broker credentials.

MQTT Broker Port — 1883 for standard unencrypted TCP (default). Other options: 1884 (WebSocket), 8883 (TCP over SSL), 8884 (WebSocket over SSL).

MQTT Transport Protocol — Select TCP (default). Use WebSockets only if your network setup requires it.

The screenshot shows the 'Configuration' tab of the Cytech Comfort add-on interface. Under the 'Options' section, there are four configuration fields:

- MQTT Broker Address***: Set to 'core-mosquitto'. Below the field is a note: 'The MQTT Broker Hostname or IP address in IPv4 format or use the default local Home Assistant 'core-mosquitto' broker.'
- MQTT Broker Username**: Set to 'cytech'. Below the field is a note: 'The MQTT Broker Username used for authentication.'
- MQTT Broker Password**: Represented by six dots. Below the field is a note: 'The MQTT Broker Password.'
- MQTT Broker Port**: Set to '1883'. Below the field is a note: 'MQTT Broker TCP port. Range from 1024 - 65535 (Default 1883). Common Port Defaults: Normal MQTT - 1883 (Unencrypted), MQTT over WebSocket - 1884 (Unencrypted), Normal MQTT over WebSocket with SSL - 8883 (Unencrypted), Normal MQTT over WebSocket with SSL - 8884 (Unencrypted)'.

Cytech Comfort add-on — MQTT broker configuration

5.3 Configuration — Comfort System Settings

Scroll down for the Comfort-specific settings:

Comfort User Login ID — The Comfort user code the bridge uses to log in to the panel. The default is 1234 (Comfort User 1). The user must have at least Read-Only access; for arming, disarming, and output control, a user with full access is required. Login IDs are 4 to 6 digits.

Battery Update Target ID — The device ID to query when the Battery Update button is pressed. Default: 1.

Global Log Verbosity — Controls the detail level of the add-on log. Use INFO for normal operation; switch to DEBUG only when troubleshooting.

MQTT Transport Protocol

☒ TCP

☐ WebSockets

Use TCP or WebSockets as transport (Default TCP).

Comfort User Login ID

••••

Cytech Comfort User Login ID with at least Read-Only access. Login ID has minimum 4 characters and 6 as maximum. For full functionality.

Comfort MQTT Bridge Battery Update target ID.

1

The ID to query when the Comfort MQTT Bridge 'Battery Update' control is pressed. Range consisting of [0,1,33,34,35,36,37].

Global Log Verbosity

☐ DEBUG

☒ INFO

☐ WARNING

☐ ERROR

☐ CRITICAL

Cytech Comfort add-on — Comfort system settings and log verbosity

5.4 Comfort Registers

Further down the Configuration page, set the number of each entity type to expose in Home Assistant. Match these to your Comfort system configuration. Setting values too high wastes memory; too low will hide entities.

Zone Inputs — Number of zone inputs, in multiples of 8. Range: 8–96. Default: 8.

Zone Outputs — Number of outputs, in multiples of 8. Range: 0–96. Default: 0.

Comfort Flags — Number of Comfort flags. Range: 0–254. Default: 8.

Comfort Counters — Number of Comfort counters. Range: 0–255. Default: 8.

Comfort Timers — Number of Comfort timers. Range: 0–64. Default: 8.

Comfort Sensors — Number of Comfort sensors. Range: 0–32. Default: 8.

Comfort Responses — Number of Comfort responses that can be activated. Range: 0–1024. Default: 0.

Set Comfort Time and Date — When enabled, the bridge sets the time and date on the Comfort panel at logon and once daily at midnight. Recommended if the panel does not have a battery-backed real-time clock.

Comfort Zone Inputs (In multiples of 8).
8
Cytech Comfort Zone Inputs installed on your system. Range from 8 - 96 (Default is 8).
Comfort Zone Outputs (In multiples of 8).
8
Cytech Comfort Zone Outputs installed on your system. Range from 0 - 96 (Default is 0).
Comfort Flags
8
The number of Cytech Comfort Flags that are shown in Home Assistant and can range from 0 - 254 (Default is 8).
Comfort Counters
8
The number of Cytech Comfort Counters that are shown in Home Assistant and can range from 0 - 255 (Default is 8).
Comfort Timers
8

Comfort register settings — Zone Inputs, Outputs, Flags, Counters, Timers

Comfort Timers	8	✕ ▾
The number of Cytech Comfort Timers that are shown in Home Assistant and can range from 0 - 64 (Default is 8).		
Comfort Sensors	8	✕ ▾
The number of Cytech Comfort Sensors that are shown in Home Assistant and can range from 0 - 32 (Default is 8).		
Comfort Responses	127	↕
The number of Cytech Comfort Responses that can be activated. Range from 0 - 1024 (Default is 0).		
Set Comfort Time and Date.		
Set Cytech Comfort Time and Date on successful login and once a day at midnight (Default is False).		
☒		

Comfort register settings — Timers, Sensors, Responses, and Time/Date sync

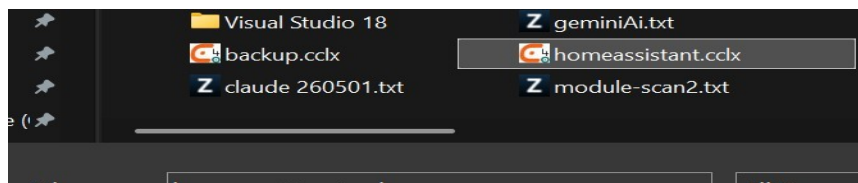
After filling in all settings, click Save. Return to the Info tab and click Start (or Restart if the add-on was already running).

6. Loading the Comfort Configuration File (CCLX)

The Cytech Comfort add-on needs your Comfort system's configuration database in CCLX format. This file contains the names of zones, users, outputs, and other site-specific settings. Without it, entities will appear with generic names such as Zone01, Zone02, etc.

6.1 Exporting the CCLX File

Open the Comfort PC software on your computer. Export or save the configuration as a CCLX file. The default filename is homeassistant.cclx.

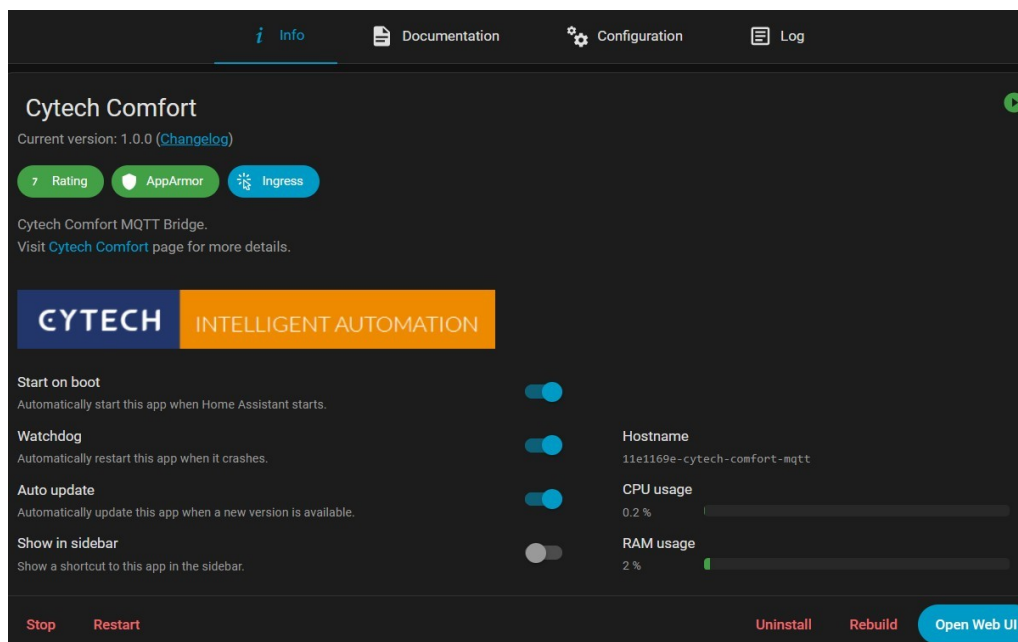


The CCLX file selected in the file browser

Copy the CCLX file to a location you can easily access from your browser (for example, your Desktop or Downloads folder).

6.2 Accessing the Web UI

On the Cytech Comfort add-on Info page, click the "Open Web UI" button at the bottom right. This opens the CCLX management page in a new browser tab.



Cytech Comfort Info page — click "Open Web UI"

6.3 Uploading the CCLX File

The Web UI shows the status of the currently active CCLX file, including its SHA256 checksum and upload date. To upload a new file:

Step 1 — Under "Upload CCLX", click Browse and select the CCLX file on your computer.

Step 2 — Click Upload. The file is transferred to the module.

Comfort CCLX File Download

Status

Time: 2026-05-10 09:58:03

Active CCLX: **present**

Reload pending: **no**

Active SHA256: f316704c254708f13bf28fe134139d80ace15affd9ae45978b0bad6ab4aff80d

Uploaded (staged): **present**

Original filename: homeassistant.cclx

Uploaded at: 2026-04-08 09:43:20

Type: application/octet-stream

Upload path: /data/upload.cclx

Upload size: 121927 bytes

Upload modified: 2026-04-08 09:43:20

Upload SHA256: f316704c254708f13bf28fe134139d80ace15affd9ae45978b0bad6ab4aff80d

[Preview](#)
[Download](#)

Backup: **present**

Backup SHA256: 648af72abdcc3545aa732bf7710f56fcf94e64fd9c0b64e6381744ce970201e1

1) Upload CCLX

[Browse...](#) No file selected.

[Upload](#)

2) Validate uploaded CCLX

[Validate](#)

CCLX File Management page — status, upload, validate, and apply

6.4 Validating and Applying

After uploading, complete the remaining steps:

Step 2 — Click Validate. This checks the uploaded file for errors. Wait for the result before proceeding.

Step 3 — Click Apply. This activates the CCLX file and rebuilds the MQTT entity discovery. A warning is shown that existing entities will be cleared and recreated — this is expected.

When complete, the page shows "Apply complete" with a summary of all entities found in the file: zones, outputs, flags, counters, sensors, timers, and users.

1) Upload CCLX

Browse...

homeassistant.cclx

Upload

2) Validate uploaded CCLX

Validate

3) Apply (activate + request rebuild)

This will clear old MQTT discovery entities and recreate them from the uploaded CCLX

The bridge will reload the CCLX and rebuild MQTT discovery within a few seconds.

Apply

Rollback

Rollback to previous active

Validate & Apply steps

Apply complete

Applied successfully at 2026-05-10 10:03:

Summary

```
{
  "found": true,
  "flags": {
    "devicemap": true,
    "zonemap": true,
    "countermmap": true,
    "flagmap": true,
    "outputmap": true,
    "sensormmap": true,
    "timermap": true,
    "usermap": true
  },
  "zones": 64,
  "counters": 128,
  "flags_count": 64,
  "outputs": 16,
  "sensors": 32,
  "timers": 16,
  "users": 17
}
```

[Back](#)

Apply complete — entity summary

Home Assistant now uses the zone and entity names from your Comfort configuration. A Rollback button is available if you need to revert to the previous CCLX.

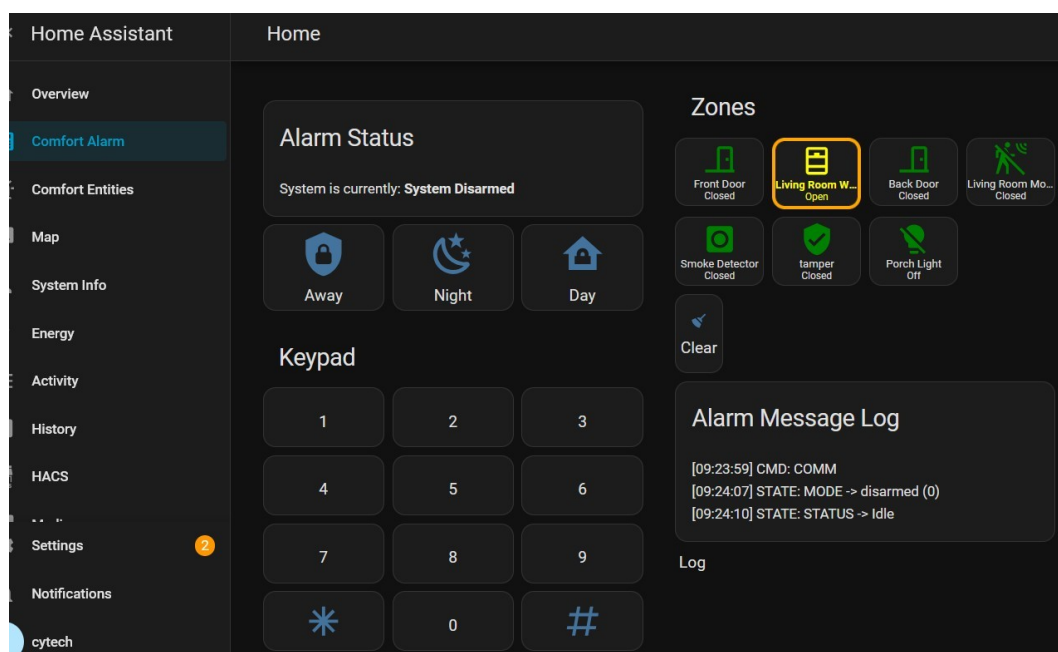
Note:

Any time you update your Comfort system configuration (add zones, rename outputs, etc.), re-export a new CCLX file and repeat steps 1–3 above.

7. Comfort Alarm Dashboard

The Comfort Alarm page is the main control panel for your alarm system. It provides arm/disarm buttons, a virtual keypad, zone status, and a live alarm message log. Access it from "Comfort Alarm" in the left sidebar.

7.1 Desktop View



Comfort Alarm dashboard — desktop browser view

Alarm Status

The Alarm Status panel shows the current system state. Possible states include:

- System Disarmed — the alarm is off; all zones are inactive.
- System Armed (Away) — fully armed; all zones are active.
- System Armed (Night) — night arm mode; typically perimeter zones only.
- System Armed (Day/Home) — partial arm for when occupants are inside.
- System Unavailable — the bridge is not connected to the Comfort panel.

Arming and Disarming

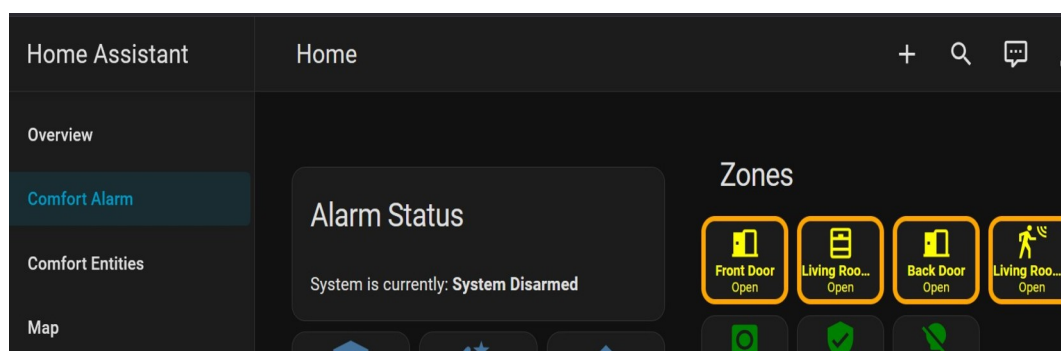
Use the Away, Night, or Day buttons to arm the system in the desired mode. To disarm, enter your user code on the keypad and press # to confirm. Press * to cancel or clear a partial entry.

Tip: The keypad on screen works exactly like a physical Comfort keypad. You can arm, disarm, and send other codes the same way.

Zone Status

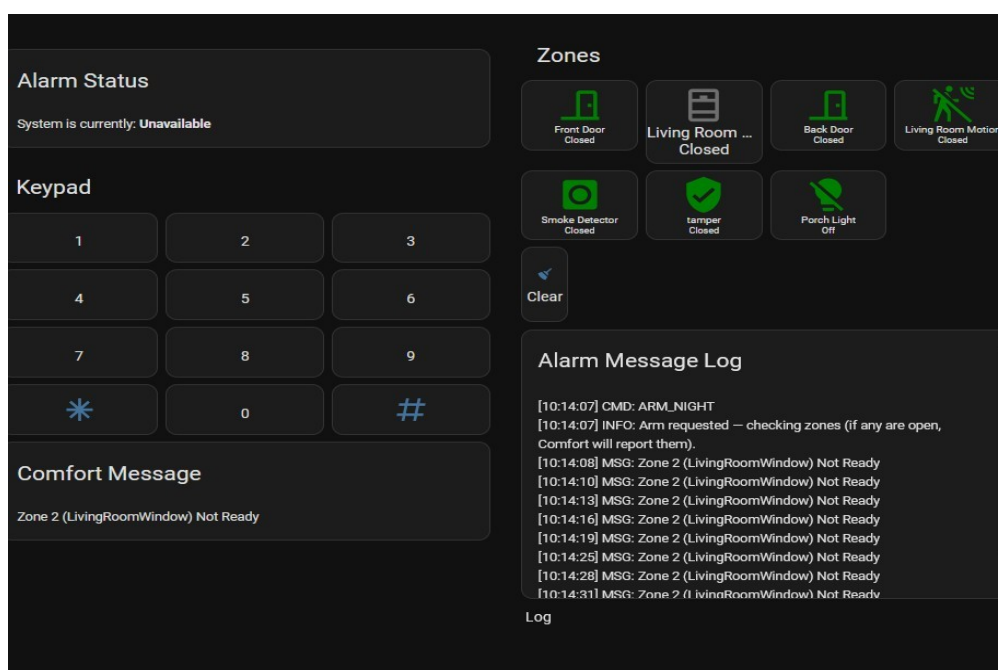
The Zones panel shows all configured zones and their current state:

- Green icon — zone is secure (contact closed).
- Yellow/orange highlighted border — zone is open or not ready.



Zones panel — open zones highlighted in yellow

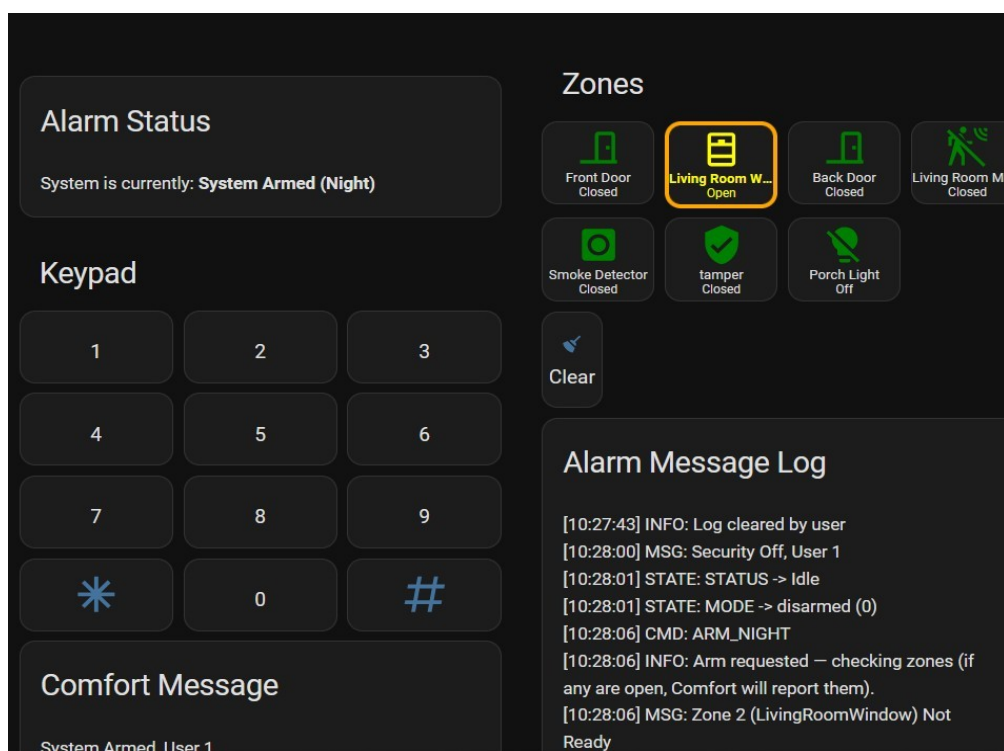
If a zone is open when you attempt to arm, the Comfort system reports the zone name in the Comfort Message area and logs it in the Alarm Message Log.



Zone not ready — the message log shows which zone is preventing arming

Armed Night Mode

When the system is in Night mode, the Alarm Status shows "System Armed (Night)". Zones that are open but bypassed by the system remain highlighted in yellow — the alarm is active on other zones.



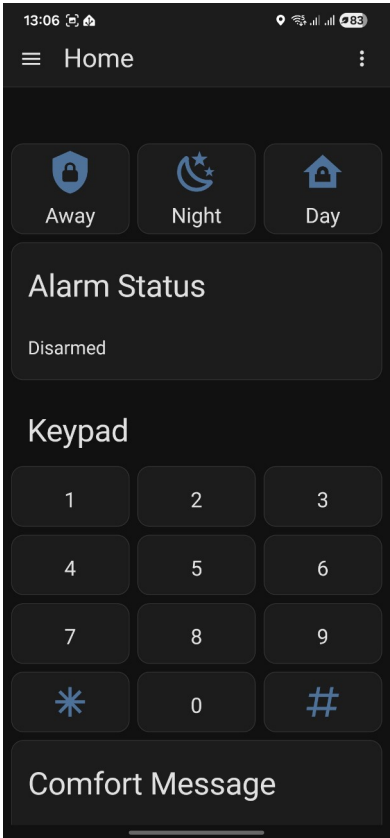
System Armed (Night) — Living Room Window open but bypassed

Alarm Message Log

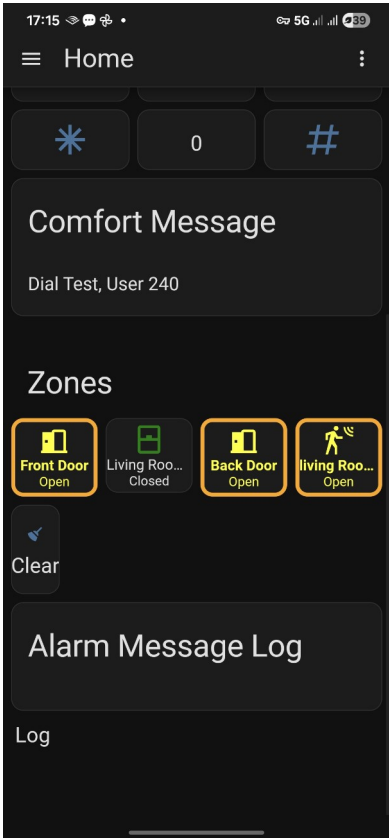
The Alarm Message Log records all system events in real time, with timestamps. Events include mode changes, zone messages, arm/disarm actions, and alert conditions. The Clear button clears the display only — it does not erase the Comfort panel log.

7.2 Mobile View

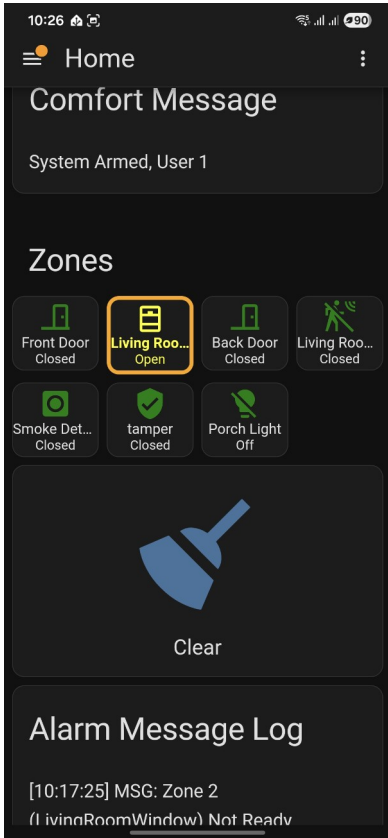
The Comfort Alarm page works identically on the mobile app. The layout adapts to the phone's screen, with the arm buttons, alarm status, keypad, zones, and message log arranged vertically.



Keypad & arm buttons



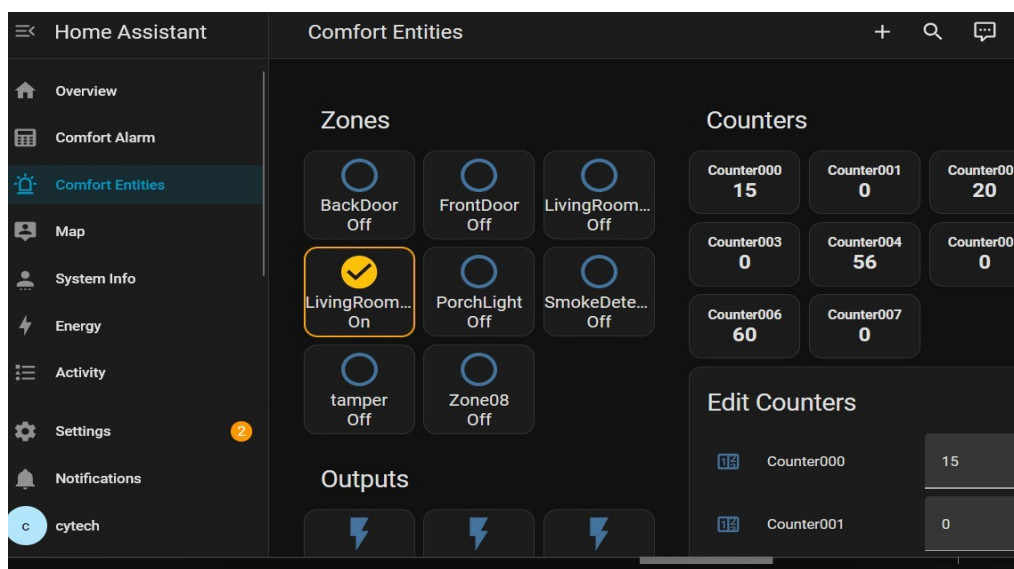
Zones & alarm log



Zones — armed

8. Comfort Entities

The Comfort Entities page gives you direct access to all Comfort data beyond alarm control: Zones, Outputs, Counters, Flags, Timers, and Sensors. Writable entities can be changed directly from this page.



Comfort Entities — Zones, Outputs, and Counters (desktop view)

8.1 Zones and Outputs

The Zones section mirrors the zone status on the Comfort Alarm page. Each tile shows the zone name and its current state (Open / Closed / Off).

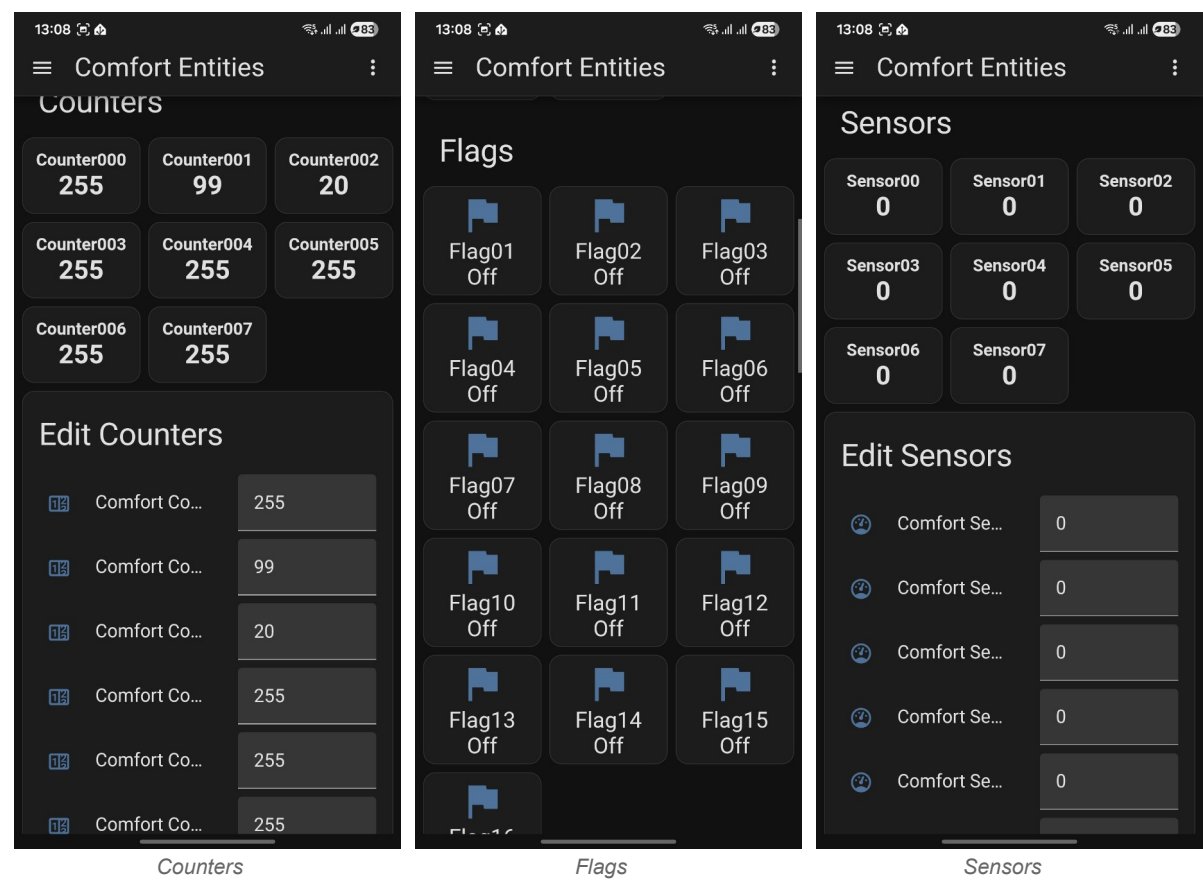
The Outputs section shows the state of all Comfort output channels. Outputs can be switched on or off by tapping their tiles, subject to the user access level configured in the add-on.

8.2 Counters, Flags and Sensors

Comfort counters are integer values (0–255) used in Comfort programming. The Counters section shows current values, and the "Edit Counters" panel lets you enter new values directly and send them to the panel.

Comfort flags are binary (On/Off) variables used in Comfort programming logic. Each flag tile shows its current state and can be toggled by tapping it.

Comfort sensors report numerical values read from the Comfort system, such as temperature or analogue inputs. The "Edit Sensors" panel allows you to write new values to writable sensors.



9. System Info

The System Info page provides a summary of the Comfort panel's health: backup battery condition, charger status, and measured voltages. Access it from "System Info" in the left sidebar.

9.1 Battery and Power

Battery — OK indicates the backup battery is in good condition. A fault condition will be shown if the battery is low or disconnected.

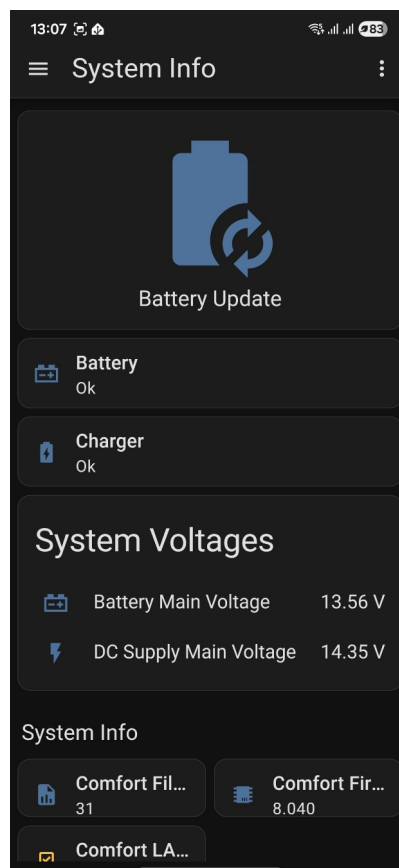
Charger — OK indicates the panel's battery charger is functioning correctly.

Battery Update — A button that requests a fresh battery status update from the Comfort panel.

9.2 System Voltages

Battery Main Voltage — The current voltage of the backup battery. A healthy, charging battery reads approximately 13.5–13.8 V.

DC Supply Main Voltage — The voltage from the panel's DC power supply. This is typically around 13.8–14.4 V.



Mobile: System Voltages — Battery and DC Supply readings

9.3 System Info Details

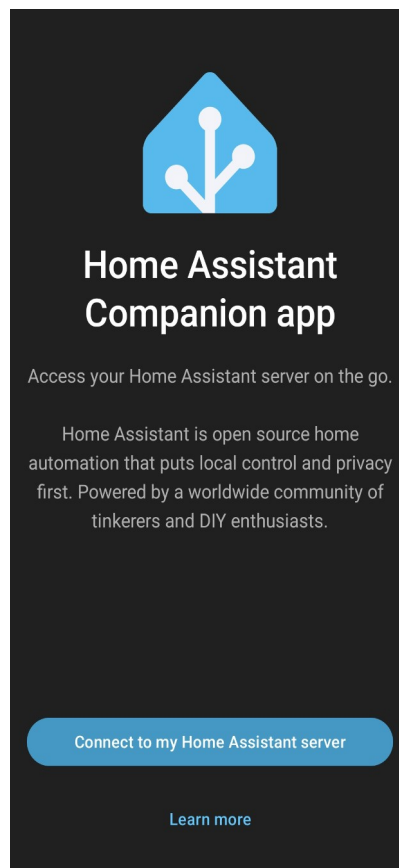
Below the voltages section, additional technical information is shown, including the Comfort firmware version, file count, and other system identifiers. These are useful when contacting technical support.

10. Mobile App Setup (Home Assistant Companion)

The Home Assistant Companion app is the official mobile application for Android and iOS. It gives you full access to your Home Assistant dashboard from your phone, and enables push notifications for Comfort alarm events.

10.1 Installing the App

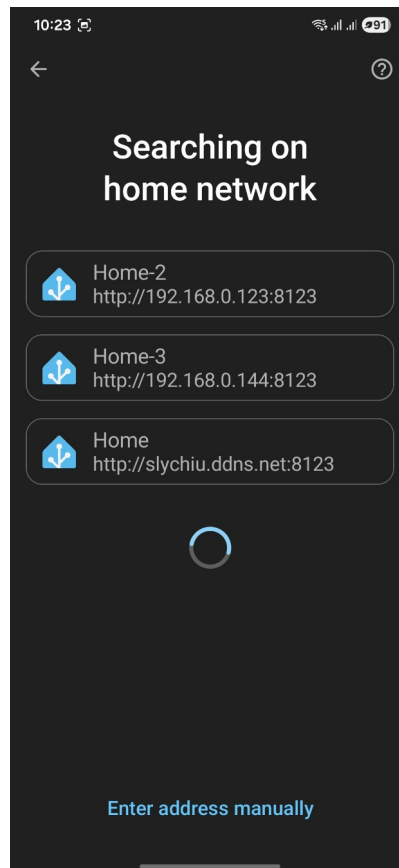
Download and install "Home Assistant" from the Google Play Store (Android) or the App Store (iOS). The app is free.



Home Assistant Companion app welcome screen

10.2 Connecting to Your Home Assistant

Tap "Connect to my Home Assistant server". The app searches your local Wi-Fi network for Home Assistant instances.

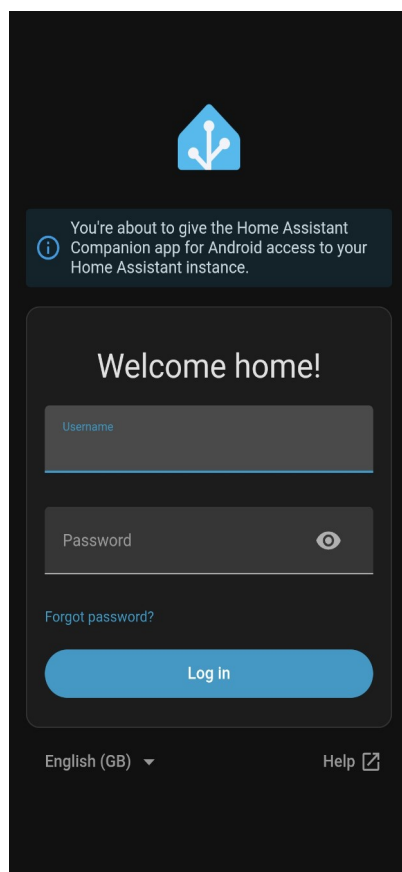


App searching the home network — tap your instance to connect

Select your Home Assistant instance from the list. If it does not appear, tap "Enter address manually" and type the local address (for example, `http://192.168.0.144:8123` or `http://homeassistant.local:8123`).

10.3 Logging In

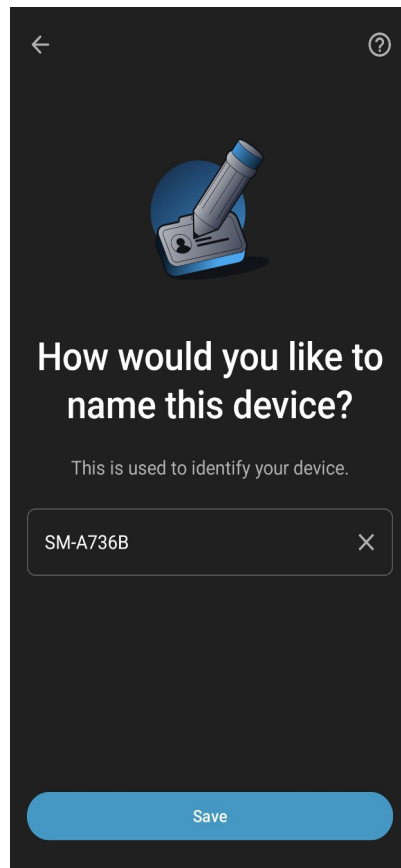
The app displays the Home Assistant login screen. Enter the username and password you set up during initial configuration, then tap "Log in".



Companion app login screen

10.4 Naming the Device

The app asks you to name this device. This name identifies the phone or tablet in Home Assistant — it is used for presence detection and targeting notifications. You can change it at any time. Tap "Save" when done.

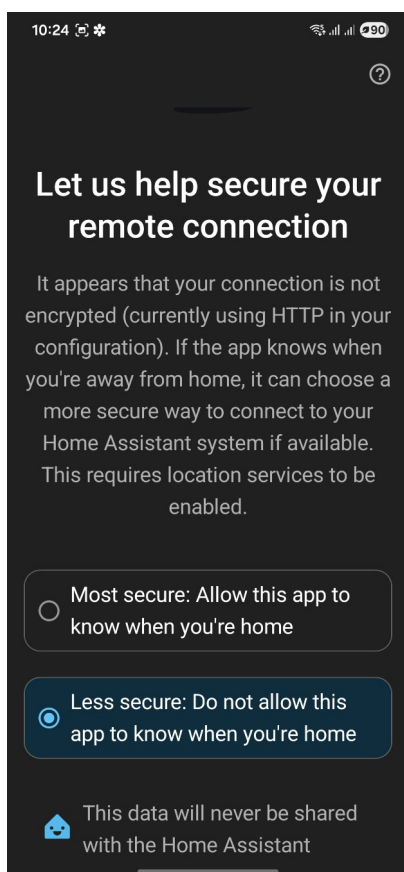
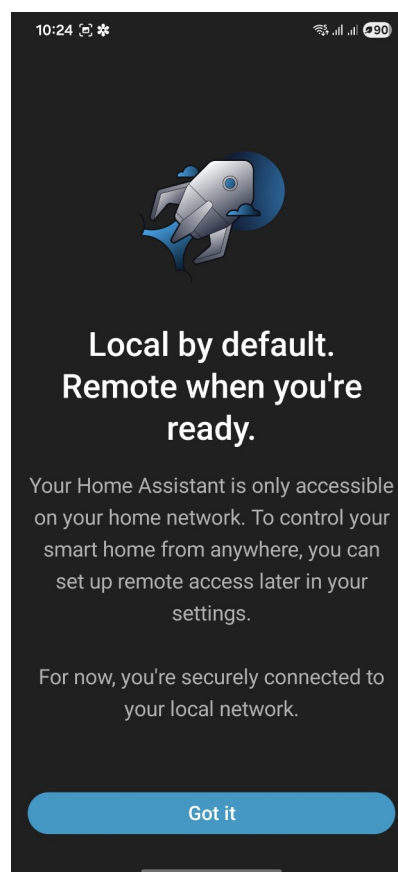


Naming the mobile device for Home Assistant

10.5 Connection Security

If your Home Assistant is accessed via an unencrypted HTTP address, the app will present a security option:

- Most secure — the app uses your phone's location to detect when you are at home, and automatically switches between local and remote connections. Recommended for the best experience.
- Less secure — the app always uses the address you entered, without location detection. Choose this if you prefer not to grant location access.

*Connection security options**Local by default — remote access can be added later*

The app will also display a notice that Home Assistant is local by default, and that remote access can be set up at any time via Tailscale (see Chapter 11).

10.6 Push Notifications

Once connected, the Companion app can send push notifications to your phone for Comfort alarm events — arming, disarming, zone alerts, and bypassed zones. Notifications are generated by Home Assistant automations.

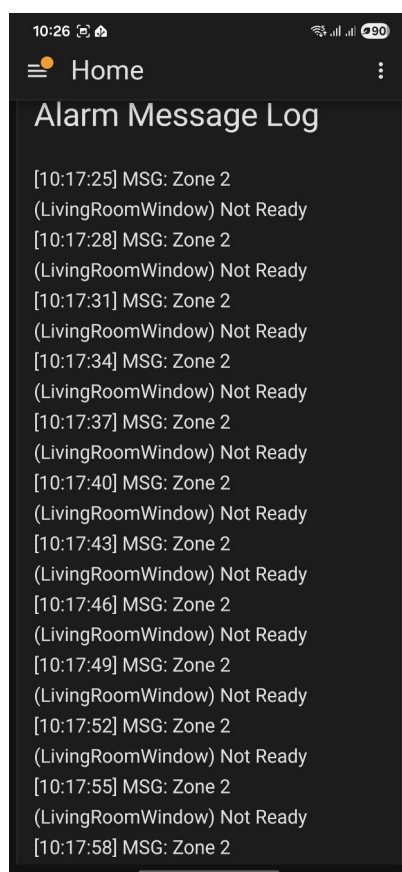
The example below shows notifications from the Comfort Alarm integration indicating the system was Armed/Disarmed, and another noting that zones were bypassed.



Push notifications — arm/disarm events and bypassed zone alerts

10.7 Alarm Message Log on Mobile

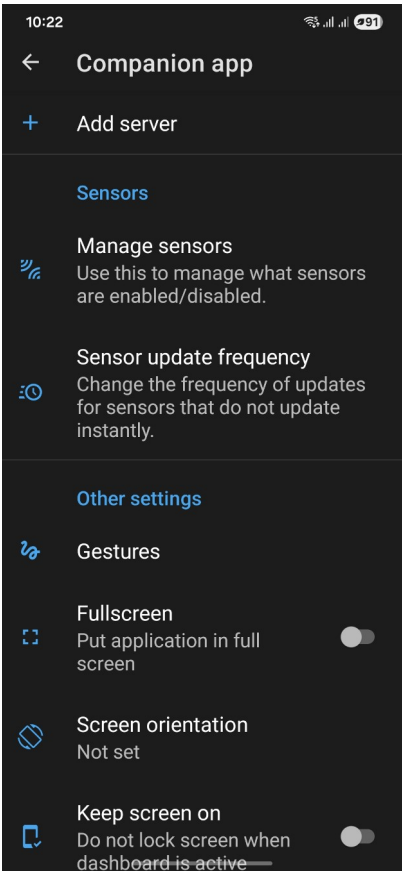
The Alarm Message Log is available on the mobile app on the Comfort Alarm page, just as it is on the desktop. Scroll down the page to view it. It shows all Comfort events with timestamps and is useful for reviewing activity while you were away.



Mobile: Alarm Message Log showing zone events

10.8 Companion App Settings

In the Companion app, tap the menu (≡) then Settings → Companion app to access device-specific options such as sensor management, sensor update frequency, and display settings.



Companion app settings — sensors and display options

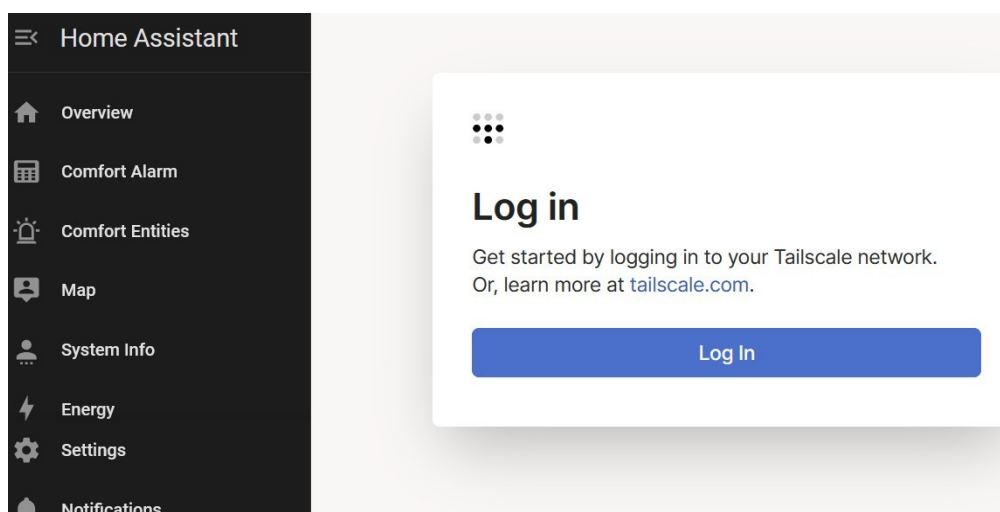
11. Remote Access with Tailscale

By default, Home Assistant is only accessible on your home network. Tailscale is a VPN service that provides secure access to your Home Assistant from anywhere in the world — without opening ports on your router or relying on an external cloud service.

Tailscale is free for personal use (up to 100 devices on a single account).

11.1 Setting Up Tailscale on the UCMA/Pi

Go to Settings → Add-ons and click "Tailscale". On the Info page, click "Open Web UI". A login prompt appears inside Home Assistant.



Tailscale add-on — click "Log In" to begin

The Tailscale login page opens. Sign in with your Google, Microsoft, or GitHub account — or with an email address. If you do not have a Tailscale account, signing up is free and takes less than a minute.



Log in to connect a device to your tailnet.

Sign in

OR

 Sign in with Google

 Sign in with Microsoft

 Sign in with GitHub

Tailscale login page — sign in with your preferred account

After signing in, Tailscale confirms that the device "homeassistant" will be connected to your Tailscale network (tailnet). Click "Connect" to authorise it.



chiu.cytech@gmail.com 

Connect device

You are about to connect the device **homeassistant** to the **chiu.cytech@gmail.com** tailnet.

Connect

► Device details

Not finding what you are looking for?
[Try signing in with a different account.](#)

Authorising the Home Assistant device on your Tailscale network

Once connected, the UCMA/Pi has a Tailscale IP address (in the 100.x.x.x range). You can then access Home Assistant from any device on your Tailscale network using that address, even when away from home.

11.2 MagicDNS — a Fixed Name for Your Home Assistant

Instead of remembering a Tailscale IP address (100.x.x.x), Tailscale offers a feature called MagicDNS. When enabled, every device on your Tailscale network gets a fixed hostname. Your UCMA/Pi becomes accessible at simply:

`http://homeassistant:8123`

This address works from any device connected to your Tailscale network, wherever you are in the world. To enable MagicDNS, log in to the Tailscale admin console at login.tailscale.com, open the DNS settings, and switch MagicDNS on.

Note: *The MagicDNS hostname is the device name shown in the Tailscale admin console. The UCMA/Pi registers itself as "homeassistant" by default.*

11.3 Installing Tailscale on Your Phone or PC

Download and install the Tailscale app on your phone or PC from tailscale.com. Log in with the same account. Your UCMA/Pi will appear in the list of connected devices automatically.

In the Home Assistant Companion app, add the Tailscale URL as the remote (external) address. Go to the app settings, select your server, and enter `http://homeassistant:8123` (with MagicDNS) or `http://100.x.x.x:8123` (with the Tailscale IP) as the external URL. The app will use the local address when you are at home and the Tailscale address when you are away.

Important: *Tailscale must be running on your phone at all times for remote access to work. Some Android and iOS devices aggressively suspend background apps to save battery, which can silently disconnect Tailscale. If you cannot reach Home Assistant remotely, open the Tailscale app to reconnect. To prevent this, disable battery optimisation for the Tailscale app in your phone's battery or app settings.*

12. Troubleshooting

12.1 Module Does Not Start / No LEDs

- Check that the micro SD card is fully inserted into the slot — it should click firmly into place.
- Check that the CM4 module is securely pressed into its connector on the carrier board. An improperly seated CM4 will prevent the module from starting.
- Verify the UCM cable is connected and that the Comfort panel is powered — the UCMA/Pi is powered by the panel via the UCM bus.

12.2 Cannot Access Home Assistant in the Browser

- Confirm the UCMA/Pi is connected to the router by Ethernet and the link LED is lit.
- Try accessing by IP address instead of `homeassistant.local:8123`. Find the IP in your router's connected-device list.
- On first boot, the system may take up to 5 minutes to initialise. Wait and try again.
- Clear the browser cache, or try a different browser or device.

12.3 Comfort System Not Connecting

- Verify that the Cytech Comfort add-on is running: Settings → Add-ons → Cytech Comfort → Info should show "Running".
- Check that the MQTT Broker Address is set to "core-mosquitto", and that the username and password match those configured in the Mosquitto broker.
- Confirm that the Comfort User Login ID is a valid Comfort user code with the correct access level.
- Review the add-on log (Cytech Comfort → Log tab) for error messages.

12.4 Zone Names Show as "Zone01", "Zone02", etc.

The CCLX file has not been loaded, or the uploaded file does not contain zone name mappings. Re-export the CCLX from the Comfort PC software and repeat the steps in Chapter 6.

12.5 Cannot Arm — "Zone Not Ready" Message

The Comfort panel is reporting that a zone is open. Check the physical detector or door/window contact for that zone. The zone name is shown in the Comfort Message panel and the Alarm Message Log. Once all zones are secured, the arming command will succeed.

12.6 Cannot Access Home Assistant Remotely

- Confirm Tailscale is installed, running, and logged in on both the UCMA/Pi and your remote device.
- Log in to the Tailscale admin console at `login.tailscale.com` to verify that both devices appear as "Connected".
- Make sure you are using the Tailscale IP address (100.x.x.x) assigned to the UCMA/Pi.

12.7 Push Notifications Not Arriving

- Ensure the Home Assistant Companion app is installed, logged in, and has notification permissions granted in your phone's system settings.
- Notifications are generated by Home Assistant automations. Confirm the relevant automations are enabled: Settings → Automations.
- If the app has been inactive for a long time, open it once to re-establish the connection.

Appendix A: Default Settings Summary

The following table summarises the key default settings for the Cytech Comfort add-on.

MQTT Broker Address — core-mosquitto
MQTT Broker Port — 1883 (TCP, unencrypted)
MQTT Broker Username — cytech
Zone Inputs — 8
Zone Outputs — 0
Comfort Flags — 8
Comfort Counters — 8
Comfort Timers — 8
Comfort Sensors — 8
Comfort Responses — 0
Set Time and Date — Disabled (toggle on to enable automatic sync)
Log Verbosity — INFO

Appendix B: Access URLs

Local (hostname) — `http://homeassistant.local:8123`

Local (IP address) — `http://<IP-address>:8123`

Remote (Tailscale) — `http://100.x.x.x:8123` (use the Tailscale IP of the UCMA/Pi)

Note: *The default port 8123 is set by Home Assistant and does not need to be changed for normal use.*