GrowMore Hub Universal Controller, Part No. GM6261

For email support: esp32andmore@gmail.com. For text/telephone/WhatsApp support: 1.585.310.1770
See: https://github.com/ESP32andmore/GrowMore

Setup and Configuration

For mounting, the HUB has integrated magnets for attaching to metal surfaces. Also included are self-tapping screws to use with the mounting holes on the rear of the case (1.25 inch/32 mm spacing), and Nano Tape for other surfaces.

Power is supplied from either the USB Type-C connector or a connected device such as an EC inline fan, connected to ports P1-P4, that sources 10v power. It is **HIGHLY SUGGESTED YOU ALWAYS POWER OFF ALL YOUR DEVICES WHEN CONNECTING TO THE GROWMORE HUB**. Although the HUB has protections in place, the is the wise thing to do otherwise damage to the HUB many occur. (Note: when power is supplied from USB, the P1-P4 ports will only supply 0-5v output)

To place on WiFi network use 2.4G phone to connect to "GrowMore Fallback Hotspot" with password "esphome1". Once connected to your WiFi network, to access the webpage of the device browse to http://growmore.local.

Device is flashed with an example ESPHome binary image that has manual control over fans and automatic control which can be enabled based the target temperature setting. Four temperature sensors control each of the four PWM fan connectors.

Flashed binary image has the Home Assistant "api:" enabled with MQTT disabled. For Home Assistant inclusion use encryption key: "itqzvhZMJj8wuTJX0GTOuL/ffESFROzUlmcO0u2+sfo="

For customization, please make a request to esp32andmore@gmail.com for source code. We are happy to help.

Flashing new firmware over USB or over WiFi. To flash the board with new firmware over USB from a Windows or Linux browser use ESPhome Web Flasher https://web.esphome.io/ with the device powered and connected to Windows or Linux PC. For flashing over WiFi access board's webpage.

The Flash and Reset Buttons are recessed on the USB end of the GrowMore Hub. The inner button is the Reset Button and the Flash Button is to the outside. Use a large paper clip or similar diameter instrument to depress then if required.

It is suggested you purchase sensors from us as they come integrated and tested with the HUB. Due to a recent change in ESPHome, the DS18B20 sensor address will need to be discover and a code compilation with the device being flashed if you use your own.

Specifications

- Size: Board - 73mm x 42mm with 3mm mounting holes. Case: 84mmx47mm.
- Processor: ESP32-S3 with 8MB flash and 2MB PSRAM with WiFi and BT V4.2.
- Power Input: Nominal 10v (5v-14v range) @ 330ma max via a 3.5mm TRRS connector or 5v via USB-C connector.
- On Board Switching Regulation: 3.3v @ 2.0 amps max.
- Power Consumption: Typical average 0.7w or 70ma @ 10v.
- Fourteen-pin 2.5mm header for display board.
- P1-P4: Four 0-10v digital PWM or 0-10v analog output, four open-source inputs via (4) 3.5mm TRRS connectors.
- DS: One-Wire bus with power (3.3v) and ground via 3.5mm TRRS connector.
- S1: I2C bus (3.3v), one via JST-SH and 3.5mm TRRS connectors.
- S2: Second I2C bus (3.3v) via JST-SH connector.
- USB 2.0 via USB-C connector.
- Display option: TFT LCD module with resolution of 320x240, 16-bit depth with touch screen.