Hydro Monitor C6

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Installation, Wi-Fi Setup & Factory Reset Manual

This guide explains how to install, configure, secure, and reset the Hydro Monitor C6 using the **two-button hardware interface** and the **secured configuration portal**.

1. Product Overview

Hydro Monitor C6 is a compact temperature and humidity monitoring system designed for:

- **Hydroponics**
- **Indoor growing & greenhouses**
- **Microgreens & germination racks**

It is based on:

- **ESP32-C6**
- **1.47" TFT display (172×320)**
- **DHT22 temperature & humidity sensor**

The device provides:

- **On-screen display**
- **Wi-Fi connectivity**
- **Secure HTTP configuration portal**
- **HTTP API (JSON or raw values)**
- **No cloud, no account, no subscription**

2. Hardware Requirements

- Assembled **Hydro Monitor C6 PCB**
- ESP32-C6 module with TFT display : https://www.aliexpress.com/item/1005008465501661.html
- DHT22 sensor installed https://www.aliexpress.com/item/1005006963999579.html
- USB power supply (5V)
- Wi-Fi enabled phone, tablet, or computer

3. First Power-On

1. Connect the device to a USB power source.
2. The TFT screen turns on and displays the startup screen.
3. On **first boot**, the device automatically starts in **Wi-Fi Access Point (AP) mode**.

4. First Wi-Fi Configuration (Initial Setup)

Step 1 — Connect to the device Access Point

1. Open Wi-Fi settings on your phone or computer.
2. Connect to the network: ESP-Hydropony

3. No Wi-Fi password is required.

Step 2 — Open the configuration portal

1. Open a web browser.
2. Navigate to: http://192.168.4.1

3. A **login prompt** will appear.

Step 3 — Login (secured access)

Use the default credentials:

Username: admin
Password: admin

This authentication protects the configuration interface.

Step 4 — Configure your Wi-Fi network

1. Select your local Wi-Fi network (SSID).
2. Enter the Wi-Fi password.
3. Save / confirm.

The device will reboot automatically.

Step 5 — Normal operation

After reboot:

- The device connects to your Wi-Fi
- The screen displays:
    - Temperature
    - Humidity
    - Assigned local IP address

Example:

http://192.168.4.10

5. Accessing Sensor Data Over Wi-Fi

From any device on the same network:

- **http://DEVICE_IP/json → JSON output**
- **http://DEVICE_IP/temp → temperature only**
- **http://DEVICE_IP/hum → humidity only**

Perfect for:

- Home Assistant (REST sensors)
- Node-RED

- Python / shell scripts
- Custom dashboards

6. Re-enter Wi-Fi Configuration Mode

(Two-Button Method – Recommended)

If you move the device or change Wi-Fi network:

1. Power ON the device.
2. **Press and hold BOTH buttons simultaneously**.
3. Keep pressed for **5 seconds**.
4. Release the buttons.

Result:

- Current Wi-Fi credentials are cleared
- Device restarts in **Access Point (AP) mode**
- Configuration screen is available again

7. Full Factory Reset (Advanced)

A full factory reset clears:

- Wi-Fi credentials
- Stored settings (NVS)

Procedure

1. Power ON the device.
2. **Press and hold BOTH buttons**.
3. Keep pressed for **10 seconds**.
4. Release when the device reboots.

After reset:

- Device boots in **AP mode**
- Default firmware configuration is restored
- Default login is active again (admin / admin)

8. Button Summary

Action	Buttons	Duration
Enter AP / Wi-Fi setup	Both buttons	~5 seconds

9. Troubleshooting

AP network not visible

- Use the two-button method
- Wait ~10 seconds after reboot

Login page does not appear

- Ensure you are connected to ESP-Hydropony
- Use http://192.168.4.1
- Do not use HTTPS

Wrong login credentials

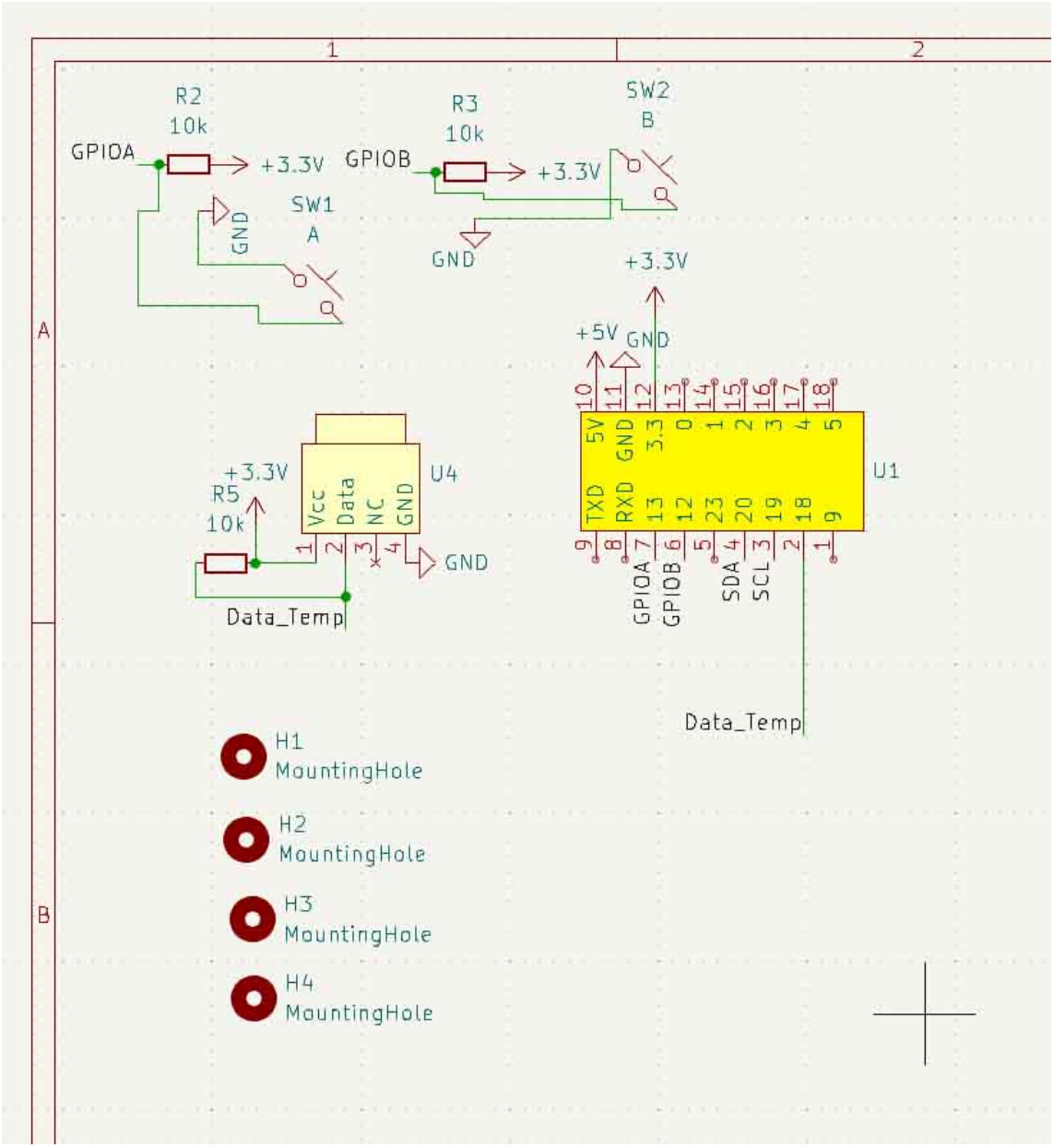
- Perform factory reset to restore defaults

10. Security Notes

- Configuration interface is **HTTP authenticated**
- Default credentials: admin / admin
- Intended for **local network use only**
- No external communication or cloud service

11. Support & Firmware

- Firmware is **free and flashable**
- Updates and source code are provided with the project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2
A
B
R2
10k
GPIOA
+3.3V
SW1
A
GND
R3
10k
GPIOB
+3.3V
SW2
B
GND
+3.3V
+5V
GND
U1
5V
GND
3.3
TXD
RXD
GPIOA
GPIOB
SDA
SCL
Data_Temp
R5
10k
+3.3V
U4
Vcc
Data
NC
GND
GND
Data_Temp
H1
MountingHole
H2
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H3
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H4
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