

BossMonitor — Quick Start Guide

EG4 / LuxPower Inverter Monitor & Controller

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BETA SOFTWARE & HARDWARE NOTICE

BossMonitor is currently provided as a beta product for evaluation, testing, educational, and personal-use purposes. While reasonable efforts have been made to ensure proper operation, the software and hardware are provided "as is" without warranties of any kind, express or implied, including warranties of merchantability, fitness for a particular purpose, or non-infringement.

BossMonitor interfaces with third-party electrical equipment, including inverter and battery systems. Installation, configuration, and operation should be performed only by individuals familiar with such systems and in accordance with all applicable manufacturer instructions and safety guidelines.

The author, contributors, and distributors shall not be liable for any loss, damage, injury, equipment failure, data loss, business interruption, or other direct, indirect, incidental, special, or consequential damages arising from the use of, inability to use, or performance of BossMonitor, regardless of the cause.

By installing or using BossMonitor, you acknowledge that you assume all responsibility and risk associated with its use.

What's in the Box

- BossMonitor unit (Seeed XIAO ESP32-S3, pre-flashed and licensed)
- This guide

The unit is ready to use. No soldering or programming required.

Step 1 — Power the Unit

Connect BossMonitor to a USB power source using a USB-C cable (5V, 500mA minimum). A USB port on your router or a small USB wall adapter works well.

Tip: For 24/7 reliability, a small USB battery bank with pass-through charging (\$10–20) keeps BossMonitor running through brief power outages.

The yellow status LED will blink once the unit is running.

Step 2 — Connect to Your Home WiFi

1. On your phone or laptop, connect to the WiFi network `BossMonitor-Recovery`
2. Open a browser and go to: `http://192.168.15.1`
3. Click **Admin** in the navigation bar
4. Enter your home WiFi name (SSID) and password
5. Click **Save & Reboot**

BossMonitor will restart and connect to your home network. After about 30 seconds you can reach it at `http://bossmonitor.local` or by finding its IP address in your router's device list.

Step 3 — Add Your Inverter

1. Go to `http://bossmonitor.local`
2. Click **Admin** → **Manage Inverters**
3. Click **Scan Subnet** — BossMonitor will search for EG4/LuxPower dongles on your network
4. Select your inverter from the results list
5. Set the role: **Master** for your primary inverter, **Slave** for additional units, or **Gridboss** if applicable
6. Click **Add** to save the configuration

Multiple inverters: repeat for each inverter. The Master is typically the unit connected to your batteries.

Manual entry: if the scan does not find your inverter, enter its IP address manually. The dongle IP can be found in your router's device list — look for a device named "ESP" or with a LuxPower MAC address.

Step 4 — Verify Data is Flowing

Go to the **Dashboard** (`http://bossmonitor.local`). Within 60 seconds you should see:

- PV power, battery SOC and voltage
- Grid status
- Load power

If values show dashes (—) after 2 minutes, check that the inverter dongle is on the same network as BossMonitor and the IP address is correct.

Step 5 — Notifications (Optional)

BossMonitor uses **Pushover** to send alerts to your phone for:

- Battery low / full
- Grid lost / restored
- Room temperature high or low

Setup

1. Install the **Pushover** app on your phone (`pushover.net` — one-time \$5 purchase)
2. Create an account and note your **User Key**
3. Create an application at `pushover.net` and note the **API Token**
4. In BossMonitor go to **Admin** → **Notifications**
5. Enter your User Key and API Token
6. Click **Send Test** to verify

Step 6 — Smart Outlets (Optional)

BossMonitor can control **Kasa** and **Shelly** smart outlets automatically based on:

- Room temperature (high or low)
- Battery SOC (high or low)

- Grid lost

Setup

1. Go to **Smart Outlets** from the navigation menu
2. Enter your Kasa account email and password (if using Kasa outlets)
3. For each outlet, enter its IP address and set a trigger condition and threshold
4. Click **Save**

Find your outlet's IP address in the Kasa or Shelly app, or in your router's device list.

Accessing BossMonitor

Address	When to use
<code>http://bossmonitor.local</code>	Normal access on home network
<code>http://<device-ip></code>	If mDNS (.local) does not work on your network
<code>http://192.168.15.1</code>	Recovery mode — connect to BossMonitor-Recovery WiFi first

Key Pages

Page	What it does
Dashboard	Overview — PV, battery, grid, load at a glance
Monitor	Detailed live data for all inverters
Battery BMS	Per-pack cell data (requires BMS Pass-Through mode + EG4 batteries)
Inverter Settings	Change inverter operating parameters
Smart Outlets	Configure and control Kasa/Shelly outlets
Data / Charts	Historical energy data
Notifications	Pushover alert configuration
Admin	WiFi, inverter list, firmware update, file manager

Firmware Updates

BossMonitor supports over-the-air (OTA) firmware updates:

1. Go to **Admin** → **Firmware Update**
2. Select the `.bin` file provided
3. Click **Upload** — the unit will update and reboot automatically

Troubleshooting

Dashboard shows dashes after 2 minutes

- Verify the inverter dongle IP is correct in Manage Inverters
- Confirm the dongle is online (ping its IP from your PC)
- Check that the dongle and BossMonitor are on the same subnet

BossMonitor not found at bossmonitor.local

- Try the IP address directly (find it in your router's device list)
- Some networks do not support mDNS — use the IP address instead

EG4 app shows "device offline" after BMS Pass-Through setup

- Confirm the dongle is connected to BMS Passthrough (not your home network)
- Check the BossMonitor dashboard — if BMS data appears, the dongle is connected correctly
- The EG4 app communicates through BossMonitor in BMS Pass-Through mode and will show live data

Yellow LED not blinking

- Check USB power connection
- Try a different USB cable or power adapter

Need to reset to factory defaults

- Connect to BossMonitor-Recovery WiFi and go to `http://192.168.15.1/admin.html`
- Use the Reset Config option — this clears WiFi and inverter settings

Addendum — EG4 Battery Pack Data (Optional)

Only set this up if you MUST have per-pack BMS data (individual cell voltages, temperatures, and SOC per pack). You do not need this to establish primary monitoring capabilities.

Setup

1. Go to **Admin** → **Settings** → **BMS Operating Mode**
2. Select **BMS Pass-Through** and click Save — the unit will reboot
3. On the dongle's WiFi settings, disconnect from your home network and connect to:
 - SSID: `BMS Passthrough`
 - Password: `bridge1234`
4. Within 30 seconds, BossMonitor will detect the dongle connection
5. Go to **Battery BMS** page to view per-pack data

Important Requirements & Settings: You must use the **EG4 app** to explicitly configure and set the battery type and brand before switching to BMS Pass-Through mode. BossMonitor cannot change or assign these hardware profile settings.

Cooling: BMS Pass-Through mode runs the WiFi radio harder. Ensure the unit has ventilation. Monitor chip temperature on the dashboard — keep it below 70°C.

Support

Email: gpineau@gpineau.com

YouTube: <https://www.youtube.com/@gerrypineau/playlists>

DIY Solar Forum: <https://www.facebook.com/groups/693338546112543>