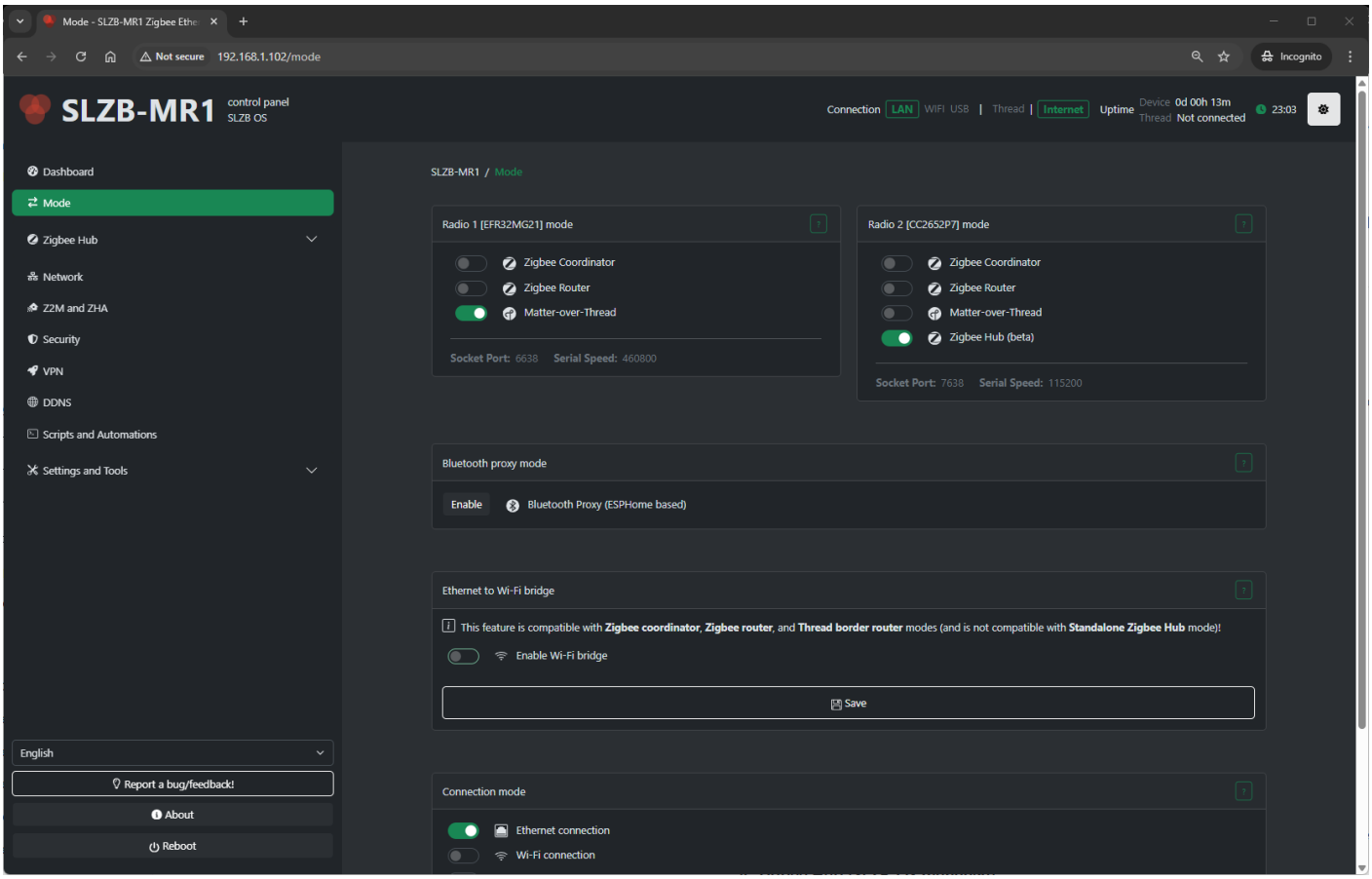
Mode

3. Mode

The **Mode** page lets you choose **how the coordinator is exposed** to your smart-home stack.



3.1 Radio SoC Modes

Your SLZB device’s **primary radio SoC** can operate in different roles depending on your smart home network design:

1. **Zigbee Coordinator**

- Creates and manages a Zigbee network.
- Required if this device is the **main Zigbee hub** in your setup.
- Works with Zigbee2MQTT, ZHA, and other Zigbee controllers.
- Allows pairing new devices and maintaining the full network routing table.

2. **Zigbee Router**

- Extends an existing Zigbee network by relaying messages between devices.
- Improves coverage and reliability in large or signal-challenged areas.
- Cannot create a network; must join an existing one.
- Useful for eliminating “dead zones” without replacing your main coordinator.

3. **OpenThread Border Router (OTBR)**

- Allows Thread devices (e.g., Matter over Thread) to join your home network.
- Bridges Thread to IP networks for integration into Matter-compatible platforms.
- Typically used alongside Matter controllers like Home Assistant, Google Home, or Apple HomeKit.

4. **Zigbee Hub** *(SLZB-OS managed)*

- Runs the Zigbee stack directly on the device under SLZB-OS control.
- No need for a PC/NAS to host Zigbee2MQTT or ZHA.
- Integrates easily via MQTT or native ZHA API.
- Managed through **Zigbee Hub** menu pages (Dashboard, Devices, Settings, MQTT).

3.2 Connection Modes

Once the radio role is selected, choose **how** the coordinator/router connects to your automation system:

A) **Ethernet** (Serial over TCP)

- Coordinator serial interface exposed as a TCP server.
- Ideal for stable wired installations (PoE optional).
- Use in remote Docker/VM/NAS setups where the Zigbee stack runs off-device.
- Access via:

`tcp://<device-ip>:<port>`

B) **USB** (Direct Serial)

- Device acts as a USB dongle with a standard serial interface.
- Requires physical connection to the host running Z2M/ZHA.
- Best for small servers or Raspberry Pi deployments.

C) **Wi-Fi**

- Coordinator available over Wi-Fi instead of Ethernet.
- Useful when wired connection isn’t possible.
- Expect slightly higher latency compared to Ethernet.

3.3 Additional Features

These optional modes and functions can be enabled separately to expand device capabilities:

Wi-Fi Bridge (Ethernet ↔ Wi-Fi)

Handy for extending Wi-Fi coverage to IoT devices in Ethernet-only zones.

> **A Wi-Fi bridge on U-series devices supports only NAPT mode.**

Two types:

1. **Transparent (802.1D)** – Makes connected Wi-Fi devices visible on the Ethernet network.
2. **NAPT** – Routes traffic from Wi-Fi clients via the device’s Ethernet uplink.

   NAPT mode on U-series devices supports port forwarding

Bluetooth Proxy (ESPHome mode)

- Turns the device into a Bluetooth LE proxy for Home Assistant.
- Ideal for extending coverage of BLE sensors like Xiaomi/Mijia, Aqara, etc.
- Uses ESPHome firmware module within SLZB-OS.

3.4 How to Apply Changes

1. Go to **Mode** in the SLZB-OS menu.
2. Select **Radio SoC mode** (Coordinator / Router / OTBR / Zigbee Hub).
3. Choose **Connection mode** (Ethernet / USB / Wi-Fi).
4. Enable any **Additional Features** (Wi-Fi Bridge, BLE Proxy) if needed.
5. Click **Save/Apply**.
6. Restart the service or device if prompted.
7. Confirm status in **Dashboard** and, for Zigbee Hub, under **Zigbee Hub → Dashboard**.

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