Xnbada SLZB-07MG24

Xnbada SMLIGHT SLZB-07MG24 Zigbee 3.0 Coordinator User Manual

1. Introduction

1.1 Product Overview

The SMLIGHT SLZB-07MG24 is a versatile Zigbee 3.0 USB adapter designed to function as a coordinator for smart home systems. It supports Thread and Matter protocols and is pre-flashed for immediate use with Home Assistant ZHA and Zigbee2MQTT. This device features an EFR32MG24 chip and a CP2102N USB/UART converter, ensuring reliable performance and broad compatibility.

Its compact design includes a rotatable antenna for optimal signal reception and transmission, offering enhanced signal amplification to cover extensive areas.

Figure 1: SMLIGHT SLZB-07MG24 Zigbee 3.0 Coordinator USB adapter with its external antenna.

2. Setup Instructions

2.1 Connecting the Adapter

To begin, connect the SMLIGHT SLZB-07MG24 USB adapter to an available USB port on your host device (e.g., Raspberry Pi, desktop computer running Home Assistant). The adapter is designed for plug-and-play functionality.

Figure 2: The SMLIGHT SLZB-07MG24 USB adapter connected to a laptop, illustrating its plug-and-play nature for Zigbee2MQTT and ZHA.

2.2 Initial Configuration (Home Assistant ZHA / Zigbee2MQTT)

The device comes pre-flashed and is ready for use with Home Assistant ZHA and Zigbee2MQTT. No initial firmware flashing is typically required for these platforms.

1. **For Home Assistant ZHA:** Once connected, Home Assistant should detect the new Zigbee coordinator. Follow the on-screen prompts within Home Assistant to integrate the device into your ZHA network.
2. **For Zigbee2MQTT:** Ensure Zigbee2MQTT is installed and configured on your system. The adapter should be recognized automatically. Refer to the Zigbee2MQTT documentation for specific configuration steps, including specifying the serial port.

2.3 Firmware Updates

The SLZB-07MG24 supports Over-The-Air (OTA) firmware updates for Zigbee. AutoBSL (Bootloader) is enabled on all devices, simplifying the update process. For specific instructions on updating firmware, especially for Thread/Matter functionality, consult the official SMLIGHT documentation or community resources.

3. Operating the Coordinator

3.1 Functioning as a Zigbee Coordinator

The SLZB-07MG24 acts as the central hub for your Zigbee network. It manages communication between Zigbee devices and your smart home platform (Home Assistant, Zigbee2MQTT).

3.2 Adding Zigbee Devices

To add new Zigbee devices to your network:

1. Initiate pairing mode on your smart home platform (e.g., "Add device" in Home Assistant ZHA or "Permit join" in Zigbee2MQTT).
2. Put your Zigbee device into pairing mode (refer to the device's specific instructions).
3. The coordinator will detect and add the device to your network.

3.3 Signal Coverage and Multiple Coordinators

The adapter features a +20dB SoC amplifier and a 3dB antenna, providing extended signal range. For larger installations or to cover multiple buildings, you can add multiple SLZB-07MG24 coordinators to a single server instance (e.g., Home Assistant) using Zigbee2MQTT. This allows for comprehensive coverage across different rooms or structures.

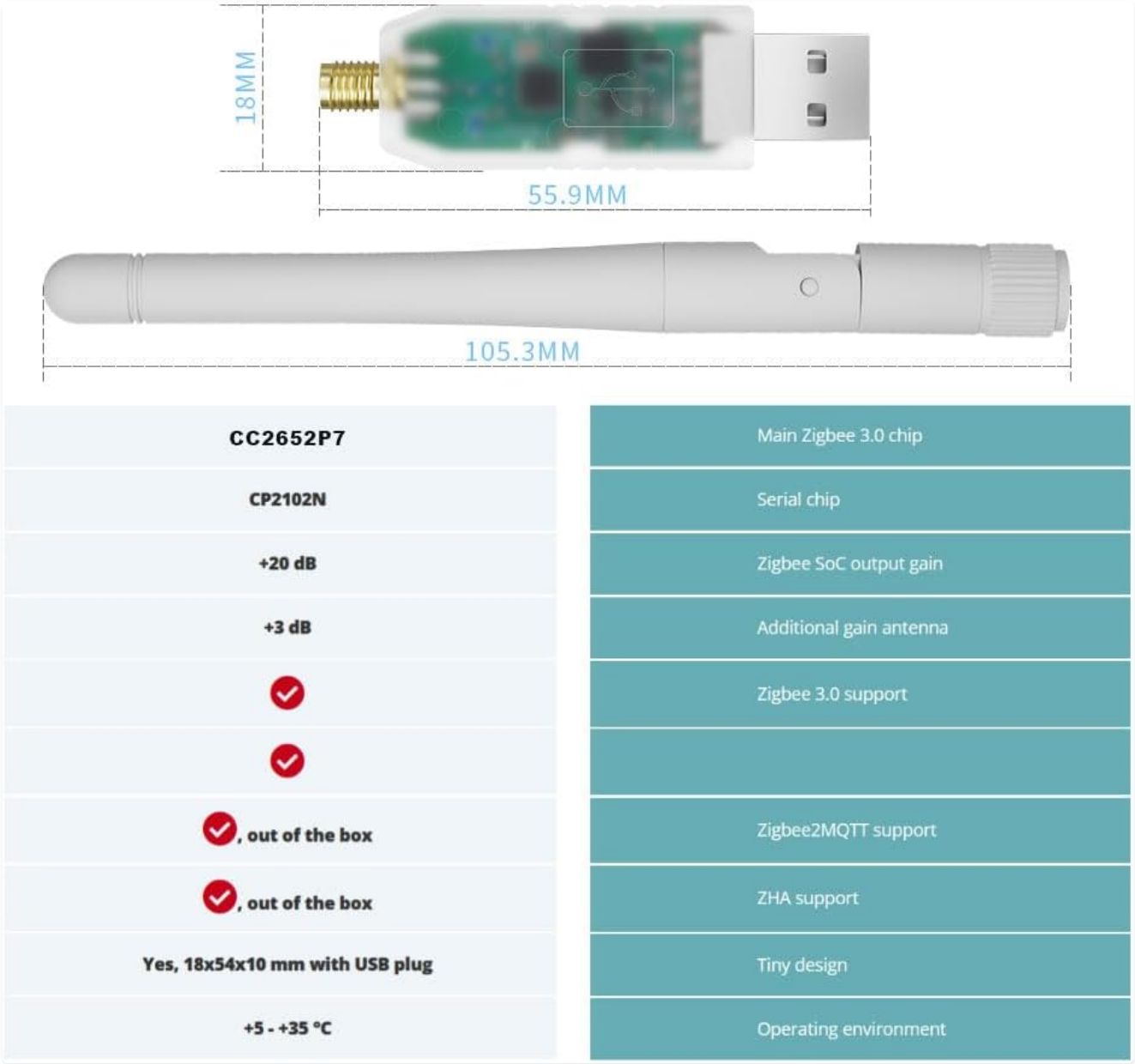

Figure 3: Diagram demonstrating how multiple SLZB-07 coordinators can extend signal coverage across different buildings or areas within a Home Assistant setup.

4. Key Features

- **Wide Compatibility:** Pre-flashed for Home Assistant ZHA and Zigbee2MQTT. Supports Thread/Matter protocols.
- **Powerful Chipset:** Based on EFR32MG24 and CP2102N for reliable and high-speed USB/UART conversion.
- **Enhanced Signal:** +20dB SoC amplifier and 3dB antenna for extended range and robust connectivity.
- **Firmware Updates:** Supports Zigbee firmware OTA updates with autoBSL enabled.
- **Coordinator Functionality:** Operates as a primary Zigbee coordinator.
- **Multi-Coordinator Support:** Allows adding multiple coordinators to a single server for expanded coverage.
- **Rotatable Antenna:** Adjustable antenna for optimizing signal direction.

Figure 4: Key features of the SLZB-07MG24, including its rotatable antenna, EFR32MG24 chip, signal amplification, and compatibility with smart home platforms.

Figure 5: An illustration highlighting key features such as compact size, Zigbee 3.0, Thread/Matter support, and the integrated EFR32MG24 and CP2102 chips.

5. Specifications

Feature	Detail
Model Number	SLZB-07MG24
Main Chip	EFR32MG24
Serial Chip	CP2102N

Feature	Detail
Zigbee SoC Output Gain	+20 dBm
Antenna Gain	3 dB
Zigbee Support	Zigbee 3.0
Protocol Support	Zigbee, Thread, Matter
Hardware Interface	USB Type C
Product Dimensions	0.71 x 0.38 x 6.38 inches (18 x 9.65 x 162.05 mm)
Item Weight	0.317 ounces (0.01 kg)
Operating Temperature	+5 to +35 °C (estimated)

Figure 6: Dimensions of the USB adapter and antenna, alongside a table of specifications. Note: The main chip listed in this image may vary from the product description; refer to the text specifications for the SLZB-07MG24 model.

6. Troubleshooting

6.1 Device Not Recognized

If the adapter is not recognized by your system:

- Ensure it is securely plugged into a functional USB port.
- For Windows systems, you may need to install a CP2102N driver to map the USB to a COM port. Search for "CP2102N driver" online for official downloads.
- On Linux, the driver is often included in the mainline kernel. Verify kernel modules are loaded correctly.
- Try a different USB port or a different host device to rule out hardware issues.

6.2 Firmware Flashing Issues (for Thread/Matter)

While the device is pre-flashed for Zigbee, updating firmware for Thread/Matter functionality may require specific tools and procedures. Some users have reported difficulties with online flashing tools or driver requirements for macOS/Windows.

- Consult the official SMLIGHT documentation or community forums for detailed, up-to-date flashing instructions.
- Ensure all necessary drivers are correctly installed for your operating system.
- Use a reliable USB cable and port during the flashing process.

6.3 Zigbee Network Instability

- **Interference:** Position the coordinator away from Wi-Fi routers, USB 3.0 ports, and other sources of 2.4 GHz interference. Use a USB extension cable if necessary.
- **Antenna Orientation:** Adjust the rotatable antenna for optimal signal strength.
- **Mesh Network:** Ensure you have enough mains-powered Zigbee devices (routers) to create a robust mesh network, especially in larger homes.

7. Warranty and Support

For warranty information and technical support, please refer to the manufacturer's official website or contact their customer service directly. Keep your purchase receipt for warranty claims.

Online resources and community forums for Home Assistant and Zigbee2MQTT can also provide valuable assistance for setup and advanced configurations.