blueup BG96 Tiny Gateway LTE User Manual

Contents

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Product Information

Specifications

- **Platform:** Espressif Systems ESP32S3WROOM-1
- **Processor:** ESP32-S3
- **Connectivity:** LTE CatM/NB-IoT, Ethernet (802.3af), WiFi (802.11 b/g/n), Bluetooth Low Energy (v4.x/v5.x) or Wirepas 5.x
- **Connector:** USB-C connector, RJ45 connector for PoE
- **Voltage:** 5 Vdc (USB) or 36 to 57 Vdc (PoE)
- **Size:** 124 x 100 x 35 mm
- **Mounting options:** 2x M3.5 screws (not included)
- **IP protection:** IP40
- **Humidity:** 10-90% non-condensing

Product Usage Instructions

Installation and Power Supply:

1. Install the gateway on a flat surface (wall or ceiling) using 2x M3.5 screws.
2. Prepare the gateway for network connectivity:
    - In case of LTE connectivity:
        - Insert the SIM card in the specific slot.
        - Connect the LTE antenna to the gateway.
    - In case of Ethernet connectivity, connect the gateway to the LAN with a standard Ethernet cable.

3. Power on the TinyGateway using a standard USB-C cable with continuous voltage of 5VDC.

First Start:

1. Power on the gateway.
2. Connect to the gateway AP using WiFi connection with the following credentials:
    - **SSID:** TinyGateway
    - **Password:** tinygateway
3. Access the Web interface at URL: http://192.168.4.1 with password: blueup.
4. Configure Network connection with your desired connectivity type: LTE, Ethernet, or WiFi.

FAQ

- **Q:** What should I do if the gateway is not powering on?
    - **A:** Make sure the power supply cable is connected properly and that the voltage is within the specified range.
- **Q:** How can I reset the gateway to factory settings?
    - **A:** Press and hold the reset button for 10 seconds to reset the gateway to factory settings.

Introduction

TinyGateway LTE (referred to also as TinyGateway or gateway or product) is a low-power and low-cost gateway, based on BG96 module (for LTE connectivity), ESP32-S3 processor (for Ethernet and WiFi connectivity) and on nRF52832 SoC (for BLE or Wirepas communication).
TinyGateway LTE is available as Sink node for Wirepas Mesh 2.4GHz networks.

Before you start using a TinyGateway LTE, verify that it is undamaged and carefully read the instructions in this user manual, particularly the indications in the “Safety” section.
BlueUp S.r.l. disclaims any and all liability if the devices are used in modes and environments incompatible for keeping the product intact, safe and in operation.

Technical Characteristics

Hardware

- **Platform:** Espressif Systems ESP32S3WROOM-1
- **Processor:** ESP32-S3 series, Xtensa® dual-core 32-bit LX7 microprocessor, up to 240MHz
- **Connectivity:** LTE CatM/NB-IoT, Ethernet (802.3af), WiFi (802.11 b/g/n), Bluetooth Low Energy (v4.x/v5.x) or Wirepas 5.x

Electrical specifications

- **Connector: USB:** USB-C connector
    - **PoE:** RJ45 connector (1)
- **Voltage:** 5 Vdc (USB) or 36 to 57 Vdc (PoE) (1)

(1) PoE power supply not allowed when using LTE-M connectivity

Mechanical and environmental specifications

- **Size:** 124 x 100 x 35 mm
- **Mounting options:** 2x M3.5 screws (not included)
- **IP protection:** IP40
- **Operating temperature:** -35°C to +65°C
- **Humidity:** 10-90% non condensing

Procedures

Refer to the full User Manual available on BlueUp support website for a detailed description on the procedures for gateway installation, power supply and configuration:

- **Wirepas:** https://docs.blueupbeacons.com/Wirepas/TinyGateway/LTE_User_Guide/

Installation and Power supply

TinyGateway LTE can be installed on any flat surface (wall or ceiling), where the power supply cables can reach the gateway. The gateway can be installed using the screws, as described below.

USB-C connector

1. Install the gateway on the wall using the screws for the holes in the lateral flanges (2x M3.5 screws, not included).
2. Prepare the gateway for the network connectivity:
    - In case of LTE connectivity:
        - insert the SIM card in the specific slot
        - Connect the LTE antenna to the gateway.
    - In case of Ethernet connectivity, connect the gateway to the LAN with a standard Ethernet cable.
3. Power on the TinyGateway PoE using a standard USB-C cable, with continuous voltage 5V (5VDC).

PoE connector (Indoor version)

Ensure that your LAN is already provided with a PoE Switch or connect a PoE switch to your LAN network.

1. Install the gateway on the wall using the screws for the holes in the lateral flanges (2x M3.5 screws, not included).
2. Connect the gateway to the PoE-enabled LAN with standard Ethernet cable.

First start

1. Power-on the gateway.
2. Connect to the gateway AP using WiFi connection, using the following credentials:
    - **SSID:** TinyGateway

- **Password:** tinygateway

3. Access the Web interface at
    - **URL:** http://192.168.4.1
    - **Password:** blueup
4. Configure Network connection with your desired connectivity type: LTE, Ethernet or WiFi.

Gateway Configuration

1. Connect to the gateway IP address.
2. BLE version: configure the gateway as receiver (scanner), transmitter (beacon) or both. Wirepas version: configure the gateway as Wirepas Sink.
3. Configure the network communication with your desired settings (MQTT, HTTP, TCP or UDP, depending on the version).

Safety

This information are an integral and essential part of the product and must be delivered to the user. Read them carefully as they contain important information regarding the installation, use and maintenance.

Warnings

- TinyGateway LTE must be intended for use for which it was designed. Any other use is considered improper and therefore dangerous.
- Before you start using TinyGateway LTE, verify that it is undamaged.
- DO NOT use TinyGateway LTE in potentially explosive atmospheres. The presence of flammable gas or fumes is a serious safety hazard.
- Make sure that the TinyGateway LTE standard (indoor version) is always kept in a dry environment.
- The company BlueUp S.r.l. disclaims any liability for damages caused by an inadequate use of the device and the failure to observe the information provided herein.

Waste disposal

In implementing the Directives 2011/65/EU and 2012/19/EC on the restriction of the use of hazardous substances in electrical and electronic equipment and the disposal of waste.

The crossed bin symbol on the appliance or its packaging indicates that at the end of the product's life, it must be collected separately from other waste. The user must, therefore, take the remote control to an authorized disposal center for collection of electronic and electrical waste, or return it to the dealer when purchasing a new similar appliance, on a one-to-one basis. Appropriate separate collection for the subsequent forwarding of the product sent for recycling, treatment and environmentally compatible disposal helps to prevent negative environmental and health effects and promotes the reuse and/or recycling of materials making up the equipment. Illegal dumping of the product by the user entails the application of administrative sanctions in the current provisions of law.
For more information about the collection systems, contact your local authorities.

In implementing Directive 2006/66/EC on the reduced use of hazardous substances in batteries and the disposal of the same.

The crossed bin symbol on the appliance or its packaging indicates that the batteries must not be disposed of with the rest of the household waste, as they may contain substances that are potentially harmful to the environment and health. Remove the old battery from the device and turn it in at the appropriate collection points.

Disclaimer

This manual is intended to provide a brief summary of our knowledge and some guidance regarding the use of the device and its accessories. The information contained herein has been provided by sources that BlueUp S.r.l. considers to be dependable and is accurate to the best knowledge of the company. This sheet is not intended to be an inclusive document on worldwide hazard communication regulations. The information is provided in good faith. Each user of this material needs to evaluate the conditions of use and define the appropriate protective mechanisms to prevent the exposure of persons, property damage or release to the environment.

BlueUp S.r.l. assumes no responsibility for injury to the recipient or third persons, or for any damages resulting from misuse of the device and its parts.

Warranty And Contacts

Warranty

- For warranty conditions, refer to BlueUp “General Terms and Conditions of Sale” available available at the following internet address: **www.blueupbeacons.com**

Contacts

- BlueUp S.r.l.
- Loc. Belvedere, Ingresso 2, 99 IT-53034 Colle di Val d’Elsa (SI) – ITALY
- **E-mail:** **info@blueupbeacons.com**
- **Web:** **www.blueupbeacons.com**
- **Ph.** +39 344 2030929 / +39 0577 043101

Full User Manual TinyGateway LTE Wirepas

BlueUp reserves the right to make changes to the product at any time.

Documents / Resources

	blueup BG96 Tiny Gateway LTE [pdf] User Manual ESP32S3WROOM-1, BG96, nRF52832, BG96 Tiny Gateway LTE, BG96, Tiny Gateway LTE, Gateway LTE, LTE

References

- User Manual