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TinyGateway WiFi

Short User Manual

Introduction

TinyGateway WiFi (referred to also as TinyGateway or gateway or product) is a low-power and low-cost gateway, based on ESP32-S3 processor (which includes WiFi 802.11 b/g/n support) and on nRF52832 SoC (for BLE or Wirepas communication).

TinyGateway WiFi is available in two versions:
- **BLE:** scanner and advertiser device of Bluetooth Low Energy packets;
- **Wirepas**: sink node for Wirepas Mesh 2.4GHz networks

TinyGateway is provided in the following models:
- **Indoor**: compact light-weight plastic enclosure suitable for indoor wall or ceiling installation. Dual power-supply: 5VDC USB (through lateral USB-C connector) or 4.5-30VDC (through internal 2-port connector).
- **Outdoor**: compact robust waterproof enclosure with IP65 rating. Power-supply is provided through internal 2-port connector, accessible via cable-gland, with voltage range 4.5V to 30VDC.

Before you start using a TinyGateway WiFi, 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:	WiFi (802.11), Bluetooth Low Energy (v4.x/v5.x) or Wirepas 5.x

Electrical specifications

Indoor version

Connector:	USB-C connector
	Internal 2-port pluggable connector, Würth series 301/3157 compatible
Voltage:	5 Vdc (USB) or 4.5 to 30 Vdc (internal 2-port)

Outdoor version

Connector:	Internal 2-port pluggable connector, Würth series 301/3157 compatible
Voltage:	4.5 to 30 Vdc

Mechanical and environmental specifications

Size:	Indoor version: 74 x 74 x 25.5 mm; Outdoor version: 105 x 105 x 45 mm
Mounting options:	Indoor version: dual-adhesive or screws; Outdoor version: screws for flanges
IP protection:	Indoor version: IP40; Outdoor version: IP65
Operating temperature:	-40°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:

BLE: https://support.blueupbeacons.com/portal/en/kb/articles/tinygateway-wifi-ble-user-manual

Wirepas: https://support.blueupbeacons.com/portal/en/kb/articles/tinygateway-wifi-wirepas-user-manual

Installation and Power supply

TinyGateway WiFi 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 double-sided tape or screws, as described below.

USB-C connector (Indoor version)

Install the gateway on the wall using the double-sided tape attached to the back panel.

Power-up TinyGateway WiFi using the lateral USB-C port, with continuous voltage 5V (5VDC).

Internal 2-port connector (Indoor version)

DC power supply is required, with voltage range 4.5Vdc to 30Vdc.

1. Ensure that the power cables coming out of an opening on wall protrude by at least 5cm from the hole
2. Open the gateway enclosure.
3. Install the gateway on the wall using screws (3mm and countersunk head recommended).
4. Connect cable to the 2-port connector (optional). Use the rear knockout on back panel for cable entry
5. Attach the connector to the board.
6. Close the gateway.

Internal 2-port connector (Outdoor version)

DC power supply is required, with voltage range 4.5Vdc to 30Vdc.

1. Ensure you have easy access to power cables.
2. Open the gateway enclosure using the 4 screws on front panel.
3. Install the gateway on the wall using screws.
4. Connect cable to the 2-port connector provided with the gateway.
5. Attach the connector to the board.
6. Close the gateway using the 4 screws on the front panel.

First start

When received, the gateway is configured in Access Point (AP) mode and has to be configured.

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

   SSID: TinyGateway WiFi

   Password: tinygateway
3. Access the Web interface at

   URL: http://192.168.4.1

   Password: blueup
4. Configure WiFi connection with your desired values.

Gateway Configuration

1. Connect to the gateway IP address (assigned when configuring the WiFi connection).
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 version).

Safety

These 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 WiFi must be intended for use for which it was designed. Any other use is considered improper and therefore dangerous.
Before you start using TinyGateway WiFi, verify that it is undamaged.
DO NOT use TinyGateway WiFi in potentially explosive atmospheres. The presence of flammable gas or fumes is a serious safety hazard.
Make sure that TinyGateway WiFi 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

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

Conformity

US (FCC)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modification not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

FCC ID: 2ALP7TNW01

EU (ETSI)

Hereby, BlueUp S.r.l. declares that TinyGateway WiFi is in compliance with Directives 2014/53/UE (RED) , 2011/65/UE (RoHS 2) and 2015/863/UE (RoHS 3) .

The full text of the EU declarations of conformity is available at the following internet address: www.blueupbeacons.com

Contacts

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Full User Manuals

TinyGateway WiFi BLE

TinyGateway WiFi Wirepas

Blueup reserves the right to make changes to the product at any time

CERTIFICATIONS

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: 1) this device may not cause harmful interference. 2) this device must accept any interference received, including interference that may cause undesired operation.
Caution: changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates use and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or experienced radio / TV technician for help.

FCC Caution
- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.
- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Industry Canada (IC) Compliance Notice
This device complies with the Industry Canada license-exempt RSS standard(s). Operation is subject to the following 2 conditions: 1) this device may not cause interference, and 2) this device must accept any interference, including interference that may cause undesired operation of the device.
Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and it gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

L' é metteur/r é cepteur exempt de licence contenu dans le pr é sent appareil est conforme aux
CNR d'Innovation, Sciences et D é veloppement é conomique Canada applicables aux appareils radio exempts de licence. L'exploitation est autoris é e aux deux conditions suivantes :
1) L'appareil ne doit pas produire de brouillage;
2) L'appareil doit accepter tout brouillage radio é lectrique subi, m ê me si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.
Le dispositif est conforme aux limites d 'exposition au rayonnement ci fix é es pour un environnement non contrôl é .La distance minimale entre le radiateur et votre corps doit ê tre de 20 cm lors de l 'installation et du fonctionnement de cet appareil.

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