

**Shelly®
BLU
Smart BLE
Wi-Fi
Gateway**



Shelly BLU Smart BLE Wi-Fi Gateway Instruction Manual

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Shelly®

Shelly BLU Smart BLE Wi-Fi Gateway



Product Information

Specifications:

- Product Name: Shelly BLU Gateway Gen3
- Type: Smart BLE to Wi-Fi gateway in a USB-A dongle
- Manufacturer: Shelly Europe Ltd.
- Power Source: USB-A port
- Color Indicator: Blue LED

Product Description:

The Shelly BLU Gateway Gen3 is a smart BLE to Wi-Fi gateway device that comes with factory-installed firmware. Firmware updates are provided free of charge by Shelly Europe Ltd. to ensure security and performance. Users can access updates through the embedded web interface or the Shelly Smart Control mobile application.

Installation Instructions:

To install the device, simply plug it into a standard USB-A port. The LED indicator should turn blue, indicating that the device is powered and in access point (AP) mode.

Usage Instructions:

1. **Shelly Cloud Inclusion:** Follow the instructions on the Shelly Cloud platform to include the device for cloud-based control.
2. **Local Use:** Use the device locally within your network for direct control and monitoring.
3. **Pairing with BLE Devices:** If you have Shelly BLE devices, they can be easily paired with the Gateway Gen3 for seamless communication.

FAQ

- **Q: Can I use the Shelly BLU Gateway Gen3 outdoors?**

- A: No, the device is intended for indoor use only. Keep it away from dirt and moisture.

- **Q: How do I know if my device needs a firmware update?**

- A: Check for firmware updates regularly either through the web interface or the mobile app. It is the user's responsibility to install updates promptly.

User and safety guide

Shelly BLU TRV

A smart thermostatic radiator valve head with Bluetooth connectivity Referred to in this document as “the Device”

This sign indicates safety information.

- This sign indicates an important note.

Safety information

For safe and proper use, read this guide, and any other documents accompanying this product. Keep them for future reference. Failure to follow the installation procedures can lead to malfunction, danger to health and life, violation of law, and/or refusal of legal and commercial guarantees (if any). Shelly Europe Ltd. is not responsible for any loss or damage in case of incorrect installation or improper operation of this device due to failure to follow the user and safety instructions in this guide.

- **WARNING!** Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zink, or rechargeable batteries.
- **CAUTION!** Use the Device only with batteries that comply with all applicable regulations. Using inappropriate batteries can cause damage to the Device and fire.
- **CAUTION!** Make sure batteries are installed correctly according to polarity + and –
- **CAUTION!** Batteries can emit hazardous compounds or cause fire if not disposed of properly. Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children. Do NOT dispose of batteries in household trash or incinerate them.
- **CAUTION!** Do not use the Device in a damp environment. Do not allow the device to get wet.
- **CAUTION!** The Device is intended only for indoor use.
- **CAUTION!** Do not operate covered.
- **CAUTION!** Do not use the Device if it shows any sign of damage or defect.
- **CAUTION!** Do not attempt to repair the Device yourself. Before beginning the installation, make sure you have a Shelly BLU Gateway Gen3, a Bluetooth-to-Wi-Fi adapter. Without the gateway, the Device cannot be used with the Shelly Smart Control application or paired with external sensors. If your Device does not come with a Gateway included in the box, you can buy one at <http://www.shelly.com>.
- The Device comes with factory-installed firmware. To keep it updated and secure, Shelly Europe Ltd. provides the latest firmware updates free of charge. Access the updates through the Shelly Smart Control mobile application. Installation of firmware updates is the user's responsibility. Shelly Europe Ltd. shall not be liable for any lack of conformity of the Device caused by the failure of the user to install the available updates in a timely

manner.

Product Description

Shelly BLU TRV is a smart thermostatic radiator head with Bluetooth connectivity. It controls the temperature of a room by changing the flow of the hot water through the radiator. If needed, the temperature can be changed at any time by turning the Device rotating knob to the left or right, or through your mobile phone, tablet, or PC. The Device can also maintain the room temperature according to a set weekly schedule. It is powered by 2 AA, 1.5 V batteries.

User interfaces

Reset button

The reset button is on the back of the TRV's head (Fig. 1/7). To access the button, the head must be separated from the black plate (See Fig.

- To press the button, use a pointed object, such as a paperclip, pen tip, or a small screwdriver.
- Press once to pair the BLU TRV with another Bluetooth device.
- Press and hold for 30 seconds to factory reset the Device.
- Factory reset will disconnect the Device from the BLE Gateway Gen3 and delete all data.

Rotating knob

The rotating knob is the outer turning shell of the TRV head. It is programmed to setup and control the Device based on the number of rotational steps. For more details, see section Using the rotating knob to operate the device.

LED display

The TRV has a 7-segment LED with 3 indication modes:

- Steady on
- Blinking
- Off

Battery level:

b _	<50%
b =	50-75%
b ≡	>75%

Installation instructions

- **CAUTION!** Before beginning the installation, turn off the radiator and make sure it has cooled down.
- **CAUTION!** Mount the TRV head onto the backplate ONLY AFTER the backplate is mounted and secured on

the radiator valve.

- **CAUTION!** Risk of water leakage. If you do not have a thermostatic valve installed on your radiator, call a specialist to replace your valves. Compatible valves If not sure whether you need an adapter for your radiator valve, check the list of compatible radiator valves by brand and model here:

https://shelly.link/blu/trv_compatible_valves If your radiator valves are not compatible, use one of the adapters included in the box. (Fig. 2).

Installing the backplate

1. If your radiator needs an adapter, mount the suitable one (Fig. 2)

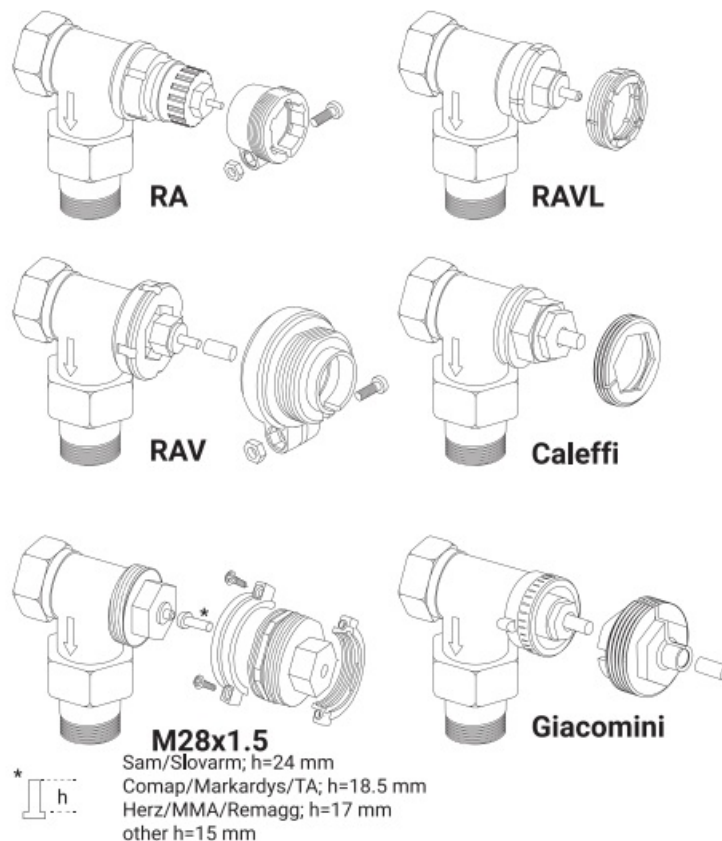
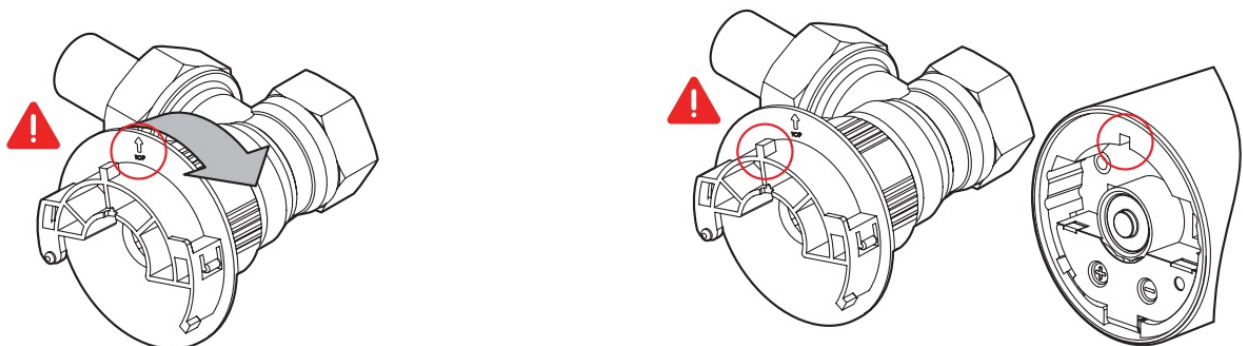


Fig.2

2. To install the backplate onto the radiator valve, turn the mounting ring clockwise by hand (Fig. 3)



- Make sure that the alignment mark on the backplate points upward

3. Tighten carefully the mounting ring by using an adjustable wrench.

- Do not over-tighten the ring!

Mounting the TRV head

The device comes with batteries installed. Before mounting the TRV head onto the backplate, remove the isolation tab from the battery compartment.

1. Align the head and backplate notches (Fig. 4). Then, insert the head on the backplate.
2. Apply moderate pressure with your palm on the front cap and turn the head clockwise until it clicks. (Fig. 5).

Calibrating the Device

- After successfully mounting the head, the TRV automatically starts calibration by turning its motor in both directions. The display shows **CAL**.
- If the calibration is successfully completed, the display shows briefly **EO**.
- If the calibration fails, the display shows briefly **CI**.
- If the Device does not start calibration, it likely means that the head is not fully tightened onto the backplate. Try to turn it farther. If this does not resolve the issue, repeat the steps from the beginning. To dismount the TRV head, press the front cap and turn the head counterclockwise until it is released (Fig. 6).

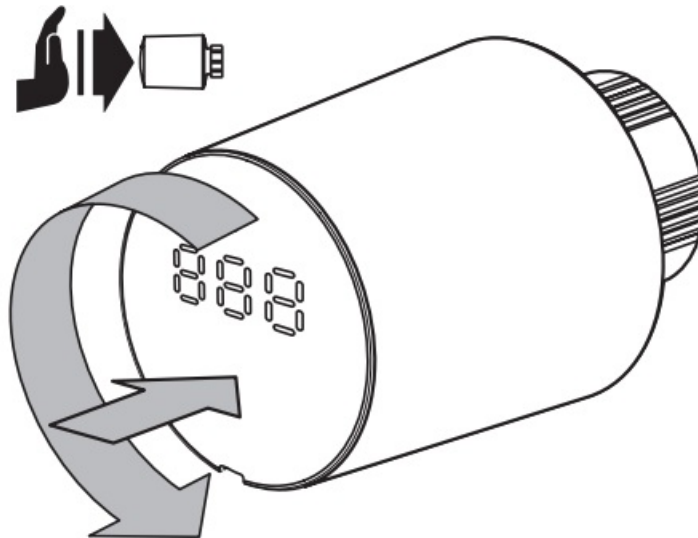


Fig. 6

- If the Device is installed with an adapter and reports failed calibration, you may need to install a pin extender from the adapter set (Fig. 2). Once the calibration is completed successfully, the Device can be used to control temperature.

Using the rotating knob to operate the device

To wake up the LEDs, turn the knob at least one step in any direction. The display shows the current temperature.

Setting the target temperature

1. To increase the temperature, turn the knob to the right.
2. To decrease the temperature, turn the knob to the left.
 - Each knob step changes the temperature by 0.1 °C
3. Once the target temperature is reached, stop turning the knob. After 3 seconds, the TRV applies the set temperature, and the display confirms the new temperature value

Turning On/Off Boost mode

Boost temporarily raises the heating power to quickly increase the room temperature.

1. To turn on the Boost mode, turn the knob for more than 10 steps to the right. The display shows **On** briefly.
2. To turn off the Boost mode, turn the knob for more than 10 steps to the left. The display shows **OFF** briefly.

Adding the Device to the Shelly Cloud application

To add the Device to the Cloud application, first you need to pair it with a BLU Gateway Gen3.

1. Power up the Gateway by plugging it into a standard USB Type-A port. The blue LED lights up showing that the device is in Access Point (AP) mode.
2. To add the Gateway to your Shelly Smart Control, open the application, select Add a new device, and follow the instructions in the app. Once the Device is added to your account, the green LED lights up.
3. To access the TRV menu, turn the rotating knob in this order: Left, Right, Left, Right. You can start in either direction.

The display will show **CO**. Turn the rotating knob to the right until the display shows **BLE**. In 3 sec, the Device will enter Pairing mode for 30 seconds indicated by a blinking **BLE** indicator. Alternatively, you can activate pairing mode by pressing the reset button once. If pairing times out, the display shows **no** for 3 seconds. 4 On the BLE Gateway Gen3, press the Pair button. 5 If the pairing is successfully completed, the TRV display shows **YES**. The Device will appear in your Shelly Smart Control app as a BTHome component of the BLE Gateway Gen3.

- To make sure that the Device is running on the latest firmware version, go to Device settings > Firmware version > Update. For more details on how to control the Device using the Cloud, refer to the <https://shelly.link/app-guide>

Replacing batteries

- The Device is powered by 2 AA, 1.5 V batteries.
 - We recommend using Lithium/Iron Disulfide (Li/FeS₂) batteries.
 - The Device may not operate with rechargeable batteries.
1. To disassemble the TRV head, press the front cap and turn the head counterclockwise until it is released (Fig. 6).

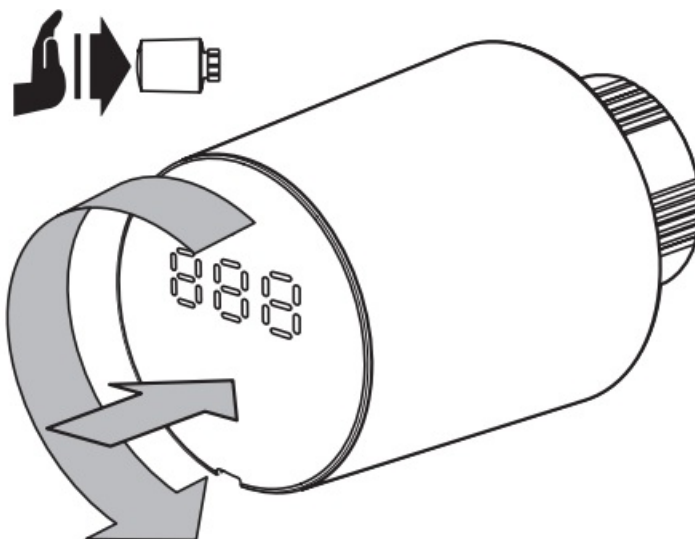


Fig. 6

2. Using your thumbs, press and slide the battery cover up until it pops open (Fig. 7).

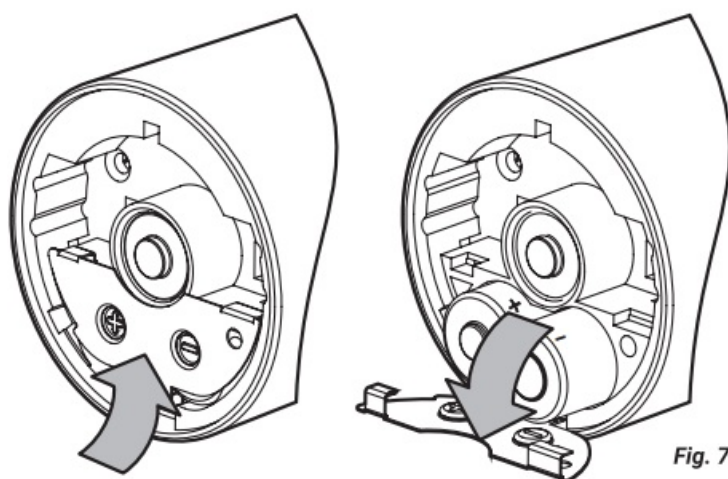
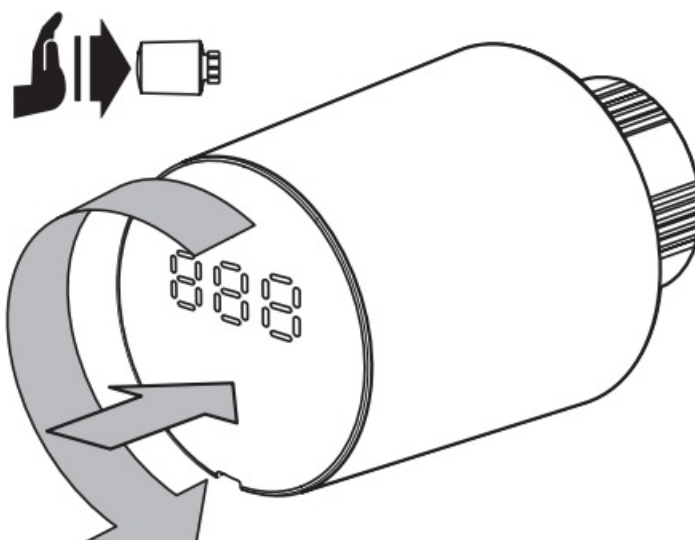


Fig. 7

3. Remove the exhausted batteries and dispose of them according to your local regulations.
4. Insert the new batteries following the polarity marking on the battery cover.
5. Push and slide the battery cover down until it locks.
6. Assemble the TRV head back onto the backplate (Fig. 5).



Specifications

Physical

- Size (HxD): 78 x 054 mm / 3.07×02.13 in
- Weight: 107 g / 3.77 oz
- Shell material: Plastic
- Shell color: White
- Mounting ring material: Nickel-plated brass
- Mounting: M30x1.5

Environmental

- Ambient working temperature: -20°C to 60°C / 68°F to 140°F
- Humidity: 25% to 80% RH
- Pollution degree: 2

Electrical

- Power supply: 2x AA, 1.5 V batteries (included)
- Estimated battery life: 1 to 2 years depending on usage

Bluetooth

- Protocol: BLE 4.2
- RF band: 2400 – 2483.5 MHz
- Max. RF power: < 5 dBm
- Range: Up to 30 m / 98 ft outdoors, up to 10 m / 33 ft indoors (depending on local conditions)
- Encryption: AES (CCM mode)

Sensors, meters

- Temperature sensor: Yes

Troubleshooting

In case you encounter problems with the installation or operation of the Device, check its knowledge base page:
https://shelly.link/blu_trv

Declaration of Conformity

Hereby, Shelly Europe Ltd. declares that the radio equipment type Shelly BLU TRV is in compliance with Directive 2014/53/EU, 2014/30/ EU, 2011/65/EU. The full text of the EU declaration of conformity is available at the following internet address:

https://shelly.link/blu_trv_DoC

Contact

- Manufacturer: Shelly Europe Ltd.
- Address: 103 Cherni Vrah Blvd., 1407 Sofia, Bulgaria
- Tel.: +359 2 988 7435
- E-mail: support@shelly.cloud
- Official website: <https://www.shelly.com>
- Changes in contact information are published by the Manufacturer on the official website.
- All rights to the trademark Shelly® and other intellectual rights associated with this Device belong to Shelly Europe Ltd.

Parts

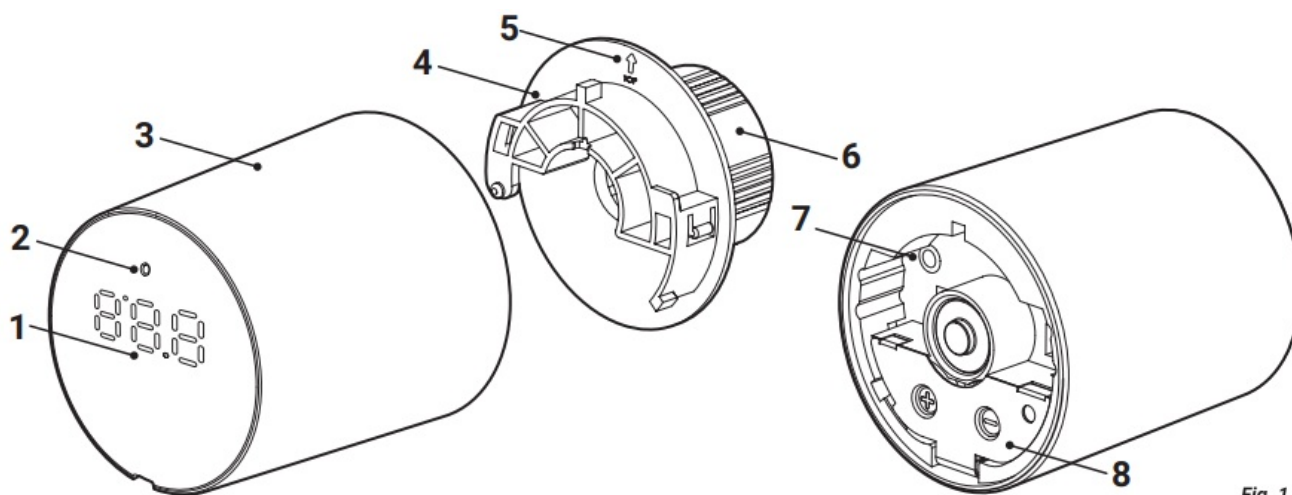
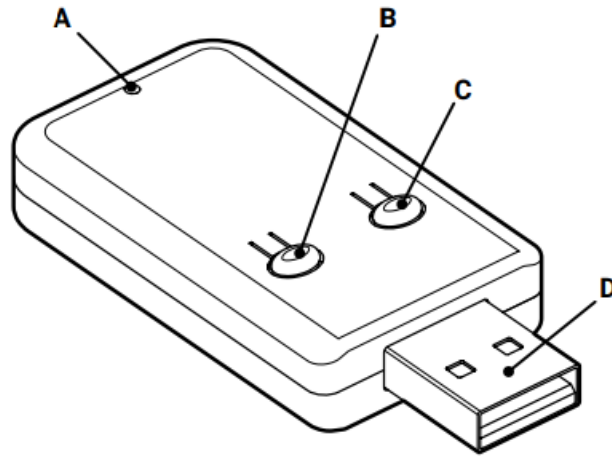


Fig. 1

1. LED display
2. Temperature sensor opening
3. Rotating knob
4. Backplate
5. Alignment mark
6. Mounting ring
7. Reset button
8. Battery compartment

Legend

- A: LED indication
- B: Pair button
- C: Reset button
- D: USB-A plug



Shelly BLU Gateway Gen3

Shelly BLU Gateway Gen3 (the Device) is a smart BLE to Wi-Fi gateway in a

USB-A dongle

Safety information

For safe and proper use, read this guide, and any other documents accompanying this product. Keep them for future reference. Failure to follow the installation procedures can lead to malfunction, danger to health and life, violation of law, and/or refusal of legal and commercial guarantees (if any). Shelly Europe Ltd. is not responsible for any loss or damage in case of incorrect installation or improper operation of this device due to failure to follow the user and safety instructions in this guide.

This sign indicates safety information.

This sign indicates an important note.

- CAUTION! Connect the Device only in the way shown in these instructions. Any other method could cause damage and/or injury.
- CAUTION! Do not use the Device if it shows any sign of damage or defect.
- CAUTION! Do not attempt to repair the Device yourself.
- CAUTION! The Device is intended only for indoor use.
- CAUTION! Keep the Device away from dirt and moisture.

Product Description

Shelly BLU Gateway Gen3 is a smart BLE to Wi-Fi gateway that can be used to monitor and control all Shelly BLE devices. It features Virtual and BT Home components. The Device has an embedded web interface used to monitor, control, and adjust the Device. The web interface is accessible at <http://192.168.33.1> when connected directly to the Device access point or at its IP address when you and the Device are connected to the same network. The Device can access and interact with other smart devices or automation systems if they are in the same network infrastructure. Shelly Europe Ltd. provides APIs for the devices, their integration, and cloud control. For more information, visit <https://shelly-api-docs.shelly.cloud>.

- The Device comes with factory-installed firmware. To keep it updated and secure, Shelly Europe Ltd. provides the latest firmware updates free of charge. Access the updates through either the embedded web interface or the Shelly Smart Control mobile application. Installation of firmware updates is the user's responsibility. Shelly Europe Ltd. shall not be liable for any lack of conformity of the Device caused by the failure of the user to install the available updates in a timely manner

Installation instructions

Plug the Device into a standard USB-A port. The LED should turn blue, indicating the Device is powered and is in access point (AP) mode.

Shelly Cloud inclusion

The Device can be monitored, controlled, and set up through our Shelly Cloud home automation service. You can use the service through either our Android, iOS, or Harmony OS mobile application or through any internet browser at

<https://control.shelly.cloud/>

If you choose to use the Device with the application and Shelly Cloud service, you can find instructions on how to connect the Device to the Cloud and control it from the Shelly app in the application guide: <https://shelly.link/app-guide>. The Shelly mobile application and Shelly Cloud service are not conditions for the Device to function properly. This Device can be used standalone or with various other home automation platforms.

Local use

If you want to use the Device locally, connect to its AP (SSID: ShellyBluGwG3-xxxxxxxxxxxx) using a Wi-Fi enabled device and type <http://192.168.33.1> in your browser to access the Device embedded Web Interface.

Click on the Wi-Fi icon at the top to go to the Device Wi-Fi settings. Connect the Device to a local Wi-Fi network. We recommend setting a static IP address. Check the Device Web Interface Guide for a detailed description at https://shelly.link/blugwg3_wig. Click on the Bluetooth icon at the top to go to the Device Bluetooth settings. Enable Bluetooth gateway. All paired Shelly BLE devices will appear as BT Home components on the home page of the Device web interface. Alternatively, you can use scripts to detect BLE devices that comply with the BT Home protocol, read their transmission, and, based on the received data, control other smart devices connected to the same network.

Pairing with BLE devices

- If you bought the Device bundled with Shelly BLE devices, they come factory pre-paired, so no additional setup is required. If you bought the Device separately or you want to pair it with additional BLE devices, follow the instructions below:
1. Press the Pair button on the Device.
 2. Set the BLE device you want to pair to the Shelly BLU Gateway Gen3.

You can achieve this by either pressing and holding the button on the BLE device for 10 seconds or selecting the option from the Shelly BLU TRV menu using its knob.

For more details, please refer to the user and safety guide of the BLE device you want to pair.

Specifications

Physical

- Size (HxWxD): 60x27x11 mm / 2.36×1.06×0.43 in
- Weight: 10 g / 0.35 oz
- Shell material: Plastic
- Shell color: White

Environmental

- Ambient working temperature: -20 °C to 40 °C / -5 °F to 105 °F
- Humidity: 30 % to 70 % RH

Electrical

- Power supply: 5 V (from USB-A port)
- Power consumption: < 1 W

Radio Wi-Fi

- Protocol: 802.11 b/g/n
- RF band: 2412-2472MHz
- Max. RF power: < 20 dBm
- Range: Up to 30 m / 98 ft indoors and 50 m / 164 ft outdoors (Depends on local conditions)

Bluetooth

- Protocol: 4.2 with BLE
- RF band: 2402-2480MHz
- Max. RF power: < 10 dBm
- Range: Up to 10 m / 33 ft indoors and 30 m / 98 ft outdoors (depends on local conditions)

Microcontroller unit

- CPU: Shelly ESP32 C3
- Flash: 8 MB

Firmware capabilities

- Schedules: 20
- Webhooks (URL actions): 20 with 5 URLs per hook
- Scripting: Yes
- MQTT: Yes
- Encryption: Yes

Declaration of Conformity

Hereby, Shelly Europe Ltd. declares that the radio equipment type Shelly BLU Gateway Gen3 is in compliance with Directive 2014/53/EU, 2014/30/EU, 2011/65/EU. The full text of the EU declaration of conformity is available at the following internet address: https://shelly.link/blu_gateway_gen3_DoC

- Manufacturer: Shelly Europe Ltd.

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Tel.: +359 2 988 7435

E-mail: support@shelly.cloud


Ofcial website: <https://www.shelly.com>

Changes in contact information are published by the Manufacturer on the ofcial website. All rights to the trademark Shelly® and other intellectual rights associated with this Device belong to Shelly Europe Ltd.

For the UP PSTI Act Statement of Compliance scan the QR code



Documents / Resources

	Shelly BLU Smart BLE Wi-Fi Gateway [pdf] Instruction Manual BLU Smart BLE Wi-Fi Gateway, BLE Wi-Fi Gateway, Gateway
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References

- [🌐 Shelly Control](#)
- [🔗 Welcome to Shelly Technical Documentation | Shelly Technical Documentation](#)
- [🔗 Shelly Smart Control guide](#)
- [🔗 Gen3 devices](#)
- [User Manual](#)

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