# GU Series Wireless Gateways

The GU series wireless gateways are industrial-grade devices designed to seamlessly integrate with wireless sensors for data acquisition and transmission. Serving as a communication bridge, these gateways facilitate the real-time transfer of sensor data to a centralized monitoring platform. With their rugged design, they ensure reliable and stable operation across various demanding industrial environments, making them ideal for large-scale wireless sensor deployments. These gateways are engineered to manage wireless sensor networks efficiently. By optimizing network connections, the gateways enhance overall performance and stability, allowing for seamless collection and transmission of accurate, real-time data.

The GU100P, GU100S, and GU100X models are Bluetooth gateways compatible with all our Bluetooth sensors. The GU100P serves as the standard gateway, while the GU100S adds support for third-party Modbus sensors through its RS485 interface. The GU200-L and GU200X-L are LoRa gateways that support all our LoRa sensors. The GU100X and GU200X-L models are designed for explosive-proof applications, meeting the stringent safety requirements for hazardous environments.

The GU series features multiple communication interfaces, including Ethernet, 4G, RS485, and CAN, and supports various transmission protocols such as MQTT, HTTP, and Modbus. This flexibility enables easy integration with cloud platforms or central servers while supporting bidirectional communication between sensors and user systems.

## Features and Advantages

| | | |
|---|---|---|
| Reliable | ⇨ | Data acknowledgment, retransmission (resume from interrupted transmission), and reliable data transmission, even for large numbers of sensors and long waveform data. |
| Flexible | ⇨ | Multiple communication interfaces and protocols for versatile integration. |
| Long Distance | ⇨ | Bluetooth line-of-sight distance up to 300m with sensors and 600m with relays or sensors with enhanced Bluetooth. LoRa line-of-sight distance up to 300m with sensors. |
| Easy-to-use | ⇨ | User-friendly web interface for easy configuration, monitoring, and management. |
| Open | ⇨ | Open API for seamless integration with various systems and platforms, enabling flexible and scalable network configurations. |
| Ruggedized | ⇨ | Waterproof, dustproof, shockproof, corrosion-resistant, and intrinsically safe; suitable for harsh industrial environments. |
| Accessible | ⇨ | Remotely accessible anytime, with automatic alarm and maintenance-free operation. |
| Convenient | ⇨ | Bluetooth compatible and can be connected via mobile app. |

## Product Options

| Product Model | Communication | Explosion Protection | RS485 | 4G | Wi-Fi/5G |
|---|---|---|---|---|---|
| **GU100P** | Bluetooth | - | Optional (Uplink) | Optional | Optional Wi-Fi or 5G |
| **GU100S** | Bluetooth | - | Included (Downlink) | Optional | Optional Wi-Fi or 5G |
| **GU100X** | Bluetooth | EX ia IIC T6 Ga | Optional (Uplink) | Optional | Optional Wi-Fi |
| **GU200-L** | LoRa | - | Optional (Uplink) | Optional | Optional Wi-Fi |
| **GU200X-L** | LoRa | EX ia IIC T6 Ga | Optional (Uplink) | Optional | Optional Wi-Fi |

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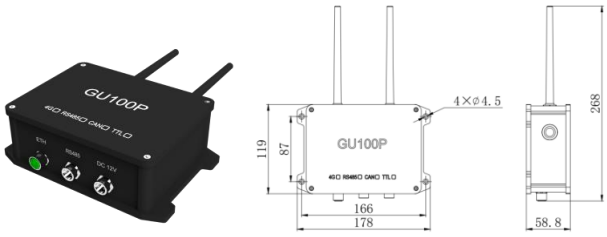
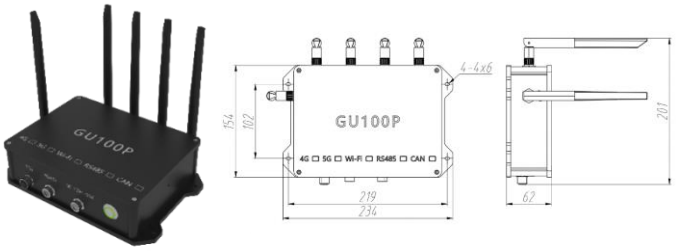
THETA SENSORS CORPORATION

## Specifications

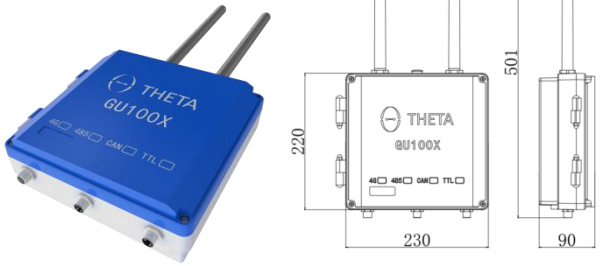
| Product Model | GU100P | GU100S | GU100X | GU200-L | GU200X-L |
|---|---|---|---|---|---|
| Wireless Sensor Network | Bluetooth 5.0; line-of-sight distance up to 300m with sensors and 600m with relays or sensors with enhanced Bluetooth | | | LoRa; line-of-sight range 3000 meters | |
| Wired Sensor Interface | - | Modbus/RS485 | - | | |
| WAN Communication | 100M Ethernet<br>4G (optional)<br>5G/Wi-Fi6 (optional)<br>RS485/CAN (optional) | 100M Ethernet<br>4G (optional) | 100M Ethernet<br>4G (optional)<br>RS485/CAN (optional) | 100M Ethernet<br>4G (optional)<br>RS485/CAN (optional) | |
| Number of Nodes | 64 (including gateway) | | | | |
| Protocols | TCP/IP, DHCP, NTP, MQTT, HTTP, Modbus RTU, Modbus TCP, CAN, 4G/5G, Wi-Fi6 | | | | |
| Power Supply | DC12-24V; 5W | | | | |
| Interfaces | Ethernet: 4pin-M12; Power and RS-485: M12 | | | | |
| Antenna Options | Rod antenna, suction-based antenna, fiberglass antenna | | | | |
| Switch | Power on and off | | | | |
| Indicator | Steady on, Flashing, Steady Off | | | | |
| Dimensions | 178 x 119 x 59mm (without 5G/Wi-Fi6)<br>234 x 154 x 62mm (with 5G/Wi-Fi6) | | 230 x 220 x 93mm | | |
| Weight | 1.0kg (without 5G/Wi-Fi6)<br>1.5kg (with 5G/Wi-Fi6) | | 2.75k | | |
| Operating Temperature | -40~85°C | | | | |
| Operating Humidity | 10%~90% RH | | | | |
| Enclosure | Metal | | | | |
| Ingress Protection | IP67 | | | | |
| Explosion Protection | - | - | EX ia IIC T6 Ga | - | EX ia IIC T6 Ga |
| Mounting | Adaptor board + expansion screw (on cement wall )<br>Adapting plate + stainless steel tie (on pole or rod)<br>L-shaped bracket (on angle steel)<br>Adaptor board + magnet (on steel wall)<br>Adaptor board + guide rail bracket (on guide rail) | | | Adaptor board + expansion screw (on cement wall )<br>Adapting plate + stainless steel tie (on pole or rod)<br>L-shaped bracket (on angle steel) | |



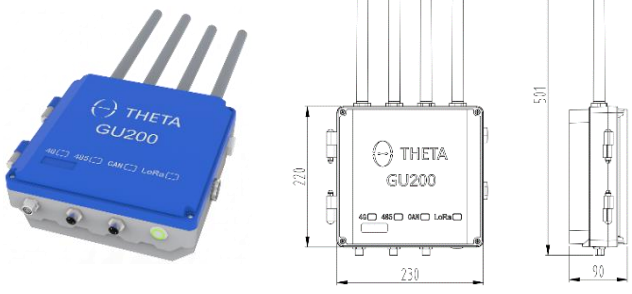

GU100P/GU100S
(without 5G/Wi-Fi6)




GU100P-5G/-Wi-Fi
(with 5G/Wi-Fi6)




GU100X




GU200-L/GU200X-L

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