

# Fizix OGate Datasheet



# A Compact IoT Gateway that Collects Data from Wired and Wireless Sensors, Processes It, and Securely Transmits It to Monitoring Platforms

## OGate-Mini

OGate-Mini is a compact IoT gateway device that collects data from various sensors through wired (RS485) and wireless (Wi-Fi, BLE) connections and securely and flexibly transmits this data to central monitoring systems via wired (Ethernet) or wireless (LTE) networks.

It simplifies data communication, reduces infrastructure costs, and accelerates operations in a wide range of facilities such as manufacturing plants, energy monitoring systems, cement and heavy industry facilities, mining and chemical industries, and oil and gas fields.



### Multiple Connectivity Support

Provides reliable connectivity in various field conditions with Wi-Fi, BLE, RS485, LTE, and Ethernet options.



### RS485 Communication and Power

Enables reliable data communication with connected devices through the RS485 line.



### Edge Computing

Processes data locally in the field and transmits only the necessary information, reducing network load and improving response time.



### Infrastructure-Independent Operation

With LTE and Wi-Fi support, it enables data transmission even in locations without a wired network infrastructure.

## General Features and Benefits

- Multiple connectivity support: Wi-Fi, BLE, RS485 (default); LTE, Ethernet, and PoE (optional)
- Wide input voltage range: 6VDC – 30VDC; optional battery support (7.2 – 8.4 VDC)
- Operating temperature: Stable operation between -35°C and +65°C
- Modular structure: Configuration options suitable for different field requirements through model naming
- 5 dBi gain SMA Wi-Fi antenna, replaceable LTE/BLE antenna options
- 10/100 Mbps Ethernet, BLE 5.0, LTE Cat 1 modem, Wi-Fi 802.11b/g/n
- 16MB Flash, 8MB RAM, dual-core processor

## Intelligent System

Integrated in the Field, Manageable from the Center

OGate-Mini collects and processes data from sensors deployed in the field in appropriate formats. Through lightweight and modern communication protocols such as MQTT, this data is securely transmitted to centralized monitoring and control systems. LTE connectivity enables fast and flexible deployment in remote locations without the need for fixed network infrastructure.

Its capability to communicate simultaneously with multiple low-power sensors via BLE expands the device's flexible usage scenarios. With its modular structure and scalable architecture, OGate-Mini provides a reliable interface solution for industrial IoT systems.

## OGate Variants

| Feature / Model                                                         | OGate-Mini           | OGate-Max | OGate-Wise |
|-------------------------------------------------------------------------|----------------------|-----------|------------|
| Wi-Fi (802.11b/g/n)                                                     | ✓                    | ✓         | ✓          |
| BLE                                                                     | ✓                    | ✓         | TBD        |
| RS485                                                                   | ✓                    | ✓         | ✓          |
| LTE Cat 1                                                               | Opt.                 | Opt.      | Opt.       |
| Ethernet                                                                | Opt.                 | Opt.      | Opt.       |
| PoE                                                                     | Opt.                 | Opt.      | Opt.       |
| Power via RS485 (24V / 2A)                                              | ✓                    | ✓         | ✓          |
| Wide Operating Voltage Range                                            | ✓                    | ✓         | ✓          |
| Battery Support (7.2–8.4 VDC)                                           | Opt.                 | Opt.      | Opt.       |
| IP67 Protection                                                         | ✓                    | ✓         | ✓          |
| DIN Rail / Wall Mount                                                   | ✓                    | ✓         | ✓          |
| Memory / Storage                                                        | 16MB Flash + 8MB RAM | TBD       | TBD        |
| Linux-Based Interface                                                   | ✗                    | ✗         | ✓          |
| OPC UA Support                                                          | ✗                    | ✗         | ✓          |
| MQTT Support                                                            | ✓                    | ✓         | ✓          |
| Edge Computing Capabilities                                             | Level 1              | Level 2   | Level 3    |
| Additional External Connectivity Options (4–20 mA, 0–10 V, Dry Contact) | ✗                    | ✓         | ✓          |
| Artificial Intelligence / Machine Learning Algorithms                   | ✗                    | ✗         | ✓          |

**Ops.** = Optional feature

**TBD** = To Be Determined; will be finalized with the final product design.

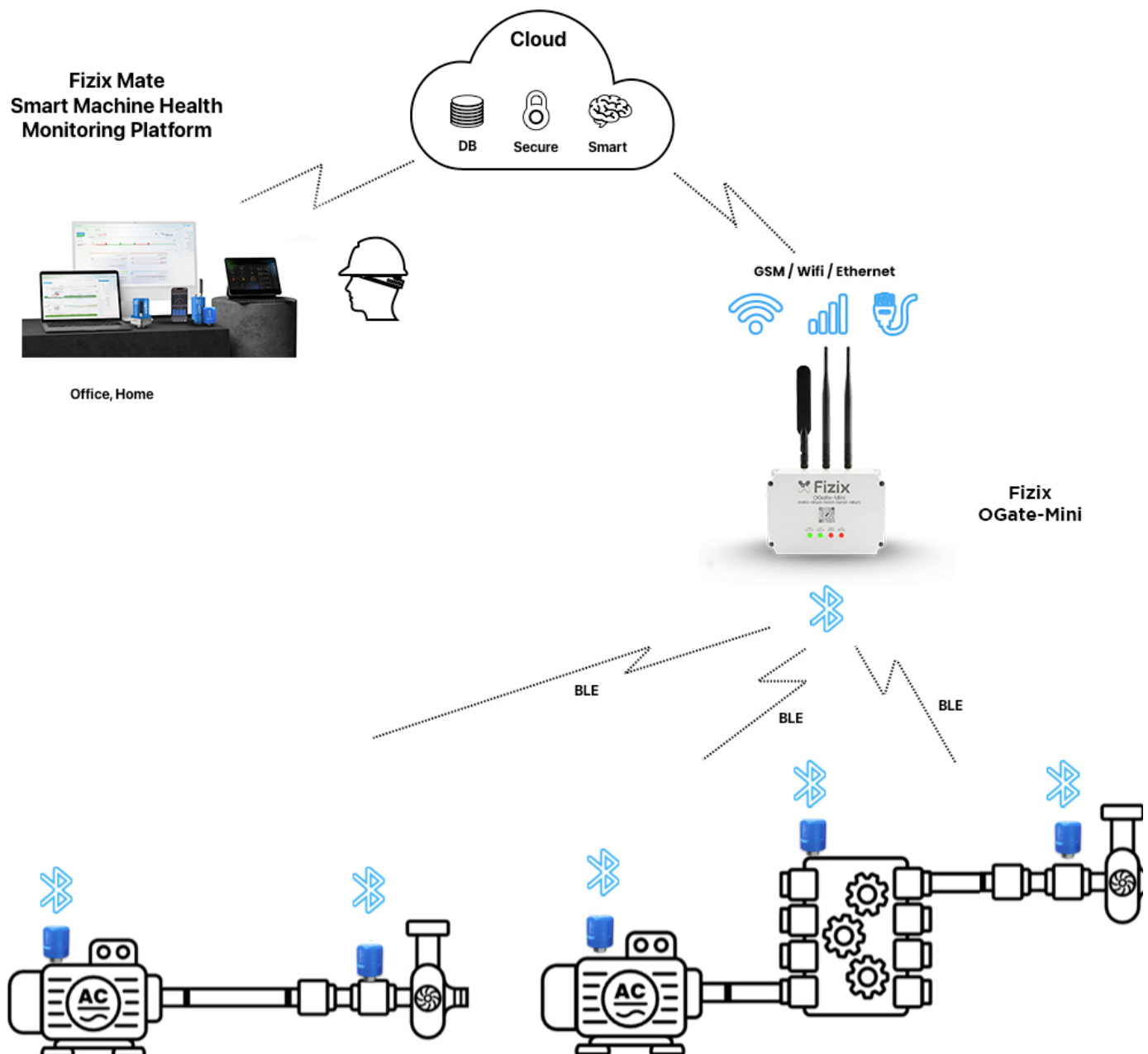
**OGate-Max** and **OGate-Wise** are currently under development; specifications may change.

Fizix | **OGate Mini**

## Interfaces and Connectivity

- **Wi-Fi:** Supports AP and Station modes, A-MPDU/A-MSDU, 0.4 Qs guard interval
- **BLE / IEEE 802.15.4:** Provides secure communication with field devices through low power consumption and extended range
- **RS485:** Available as standard on all models; enables data communication with field devices and provides power to connected devices with a 24V / 2A output
- **LTE (optional):** Provides LTE Cat 1 connectivity support
- **Ethernet (optional):** Supports LAN connectivity at 10/100 Mbps
- **PoE (optional):** Allows power supply through the Ethernet port

OGate-Mini acts as a bridge for data collection and transmission within factory or facility network infrastructures. Data from sensors is securely transferred from the field to the central monitoring system.



## Technical Specifications

| Feature                      | OGate-Mini                                                                                                                              |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Processor</b>             | Dual-core 32-bit MCU<br>Dual-core, 240 MHz, 16MB Flash, 8MB RAM, Wi-Fi 802.11b/g/n support                                              |
| <b>Memory</b>                | 16 MB Flash, 8 MB RAM                                                                                                                   |
| <b>Wi-Fi</b>                 | Wi-Fi 802.11b/g/n, AP/Station mode, up to 150 Mbps, 2412–2484 MHz                                                                       |
| <b>BLE</b>                   | Bluetooth 5.0, 125 kbps–2 Mbps, -103 dBm RX, +8 dBm TX<br>5.0, Zigbee / Thread support, -103 dBm RX, +8 dBm TX, low power consumption   |
| <b>LTE</b>                   | Cat 1, nano SIM, FDD B1/3/7/8/20/28<br>Up to 10 Mbps speed, EMI/ESD protected, supports up to 32 devices                                |
| <b>RS485</b>                 | Half-duplex, -7V to +12V common-mode, max 10 Mbps, 32 node support<br>Up to 10 Mbps speed, EMI/ESD protected, supports up to 32 devices |
| <b>RS485 Power Output</b>    | Maximum 24V / 2A                                                                                                                        |
| <b>Ethernet (Optional)</b>   | 10Base-T / 100Base-TX, 10/100 Mbps speed, hardware TCP/IP stack, low power consumption                                                  |
| <b>PoE (Optional)</b>        | IEEE 802.3af support                                                                                                                    |
| <b>Input Voltage</b>         | 6VDC – 30VDC                                                                                                                            |
| <b>Battery</b>               | 7.2 VDC – 8.4 VDC (Optional)                                                                                                            |
| <b>Operating Temperature</b> | -35°C to +65°C                                                                                                                          |

## Mechanical and Environmental Features

| Feature                     | OGate-Mini                                                                                      |
|-----------------------------|-------------------------------------------------------------------------------------------------|
| <b>Dimensions (LxWxH)</b>   | 169x118,5x55 mm                                                                                 |
| <b>IP Protection Rating</b> | IP 67                                                                                           |
| <b>Mounting Options</b>     | Wall Mount                                                                                      |
| <b>Material</b>             | ABS, UL94-HB                                                                                    |
| <b>Antenna</b>              | Wi-Fi: 5 dBi<br>BLE: 2–5 dBi (low-power, short-range communication)<br>LTE: 2–5 dBi, multi-band |

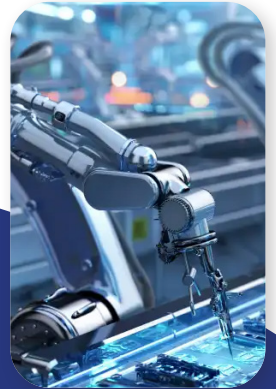
## OGate-Mini Model Variants

| Feature     | Data Collection | Data Transmission | Description                                          |
|-------------|-----------------|-------------------|------------------------------------------------------|
| <b>GWES</b> | Wi-Fi / RS485   | Ethernet          | Receives data via Wi-Fi or RS485, sends via Ethernet |
| <b>GBWS</b> | BLE / RS485     | Wi-Fi             | Receives data via BLE or RS485, sends via Wi-Fi      |
| <b>GBGS</b> | BLE / RS485     | GSM (LTE)         | Receives data via BLE or RS485, sends via LTE        |
| <b>GWGS</b> | Wi-Fi / RS485   | GSM (LTE)         | Receives data via Wi-Fi or RS485, sends via LTE      |
| <b>GRWS</b> | RS485           | Wi-Fi             | Receives data via RS485, sends via Wi-Fi             |

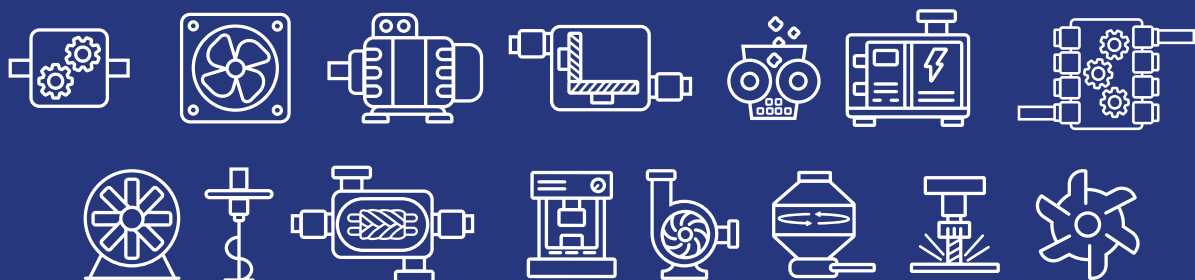


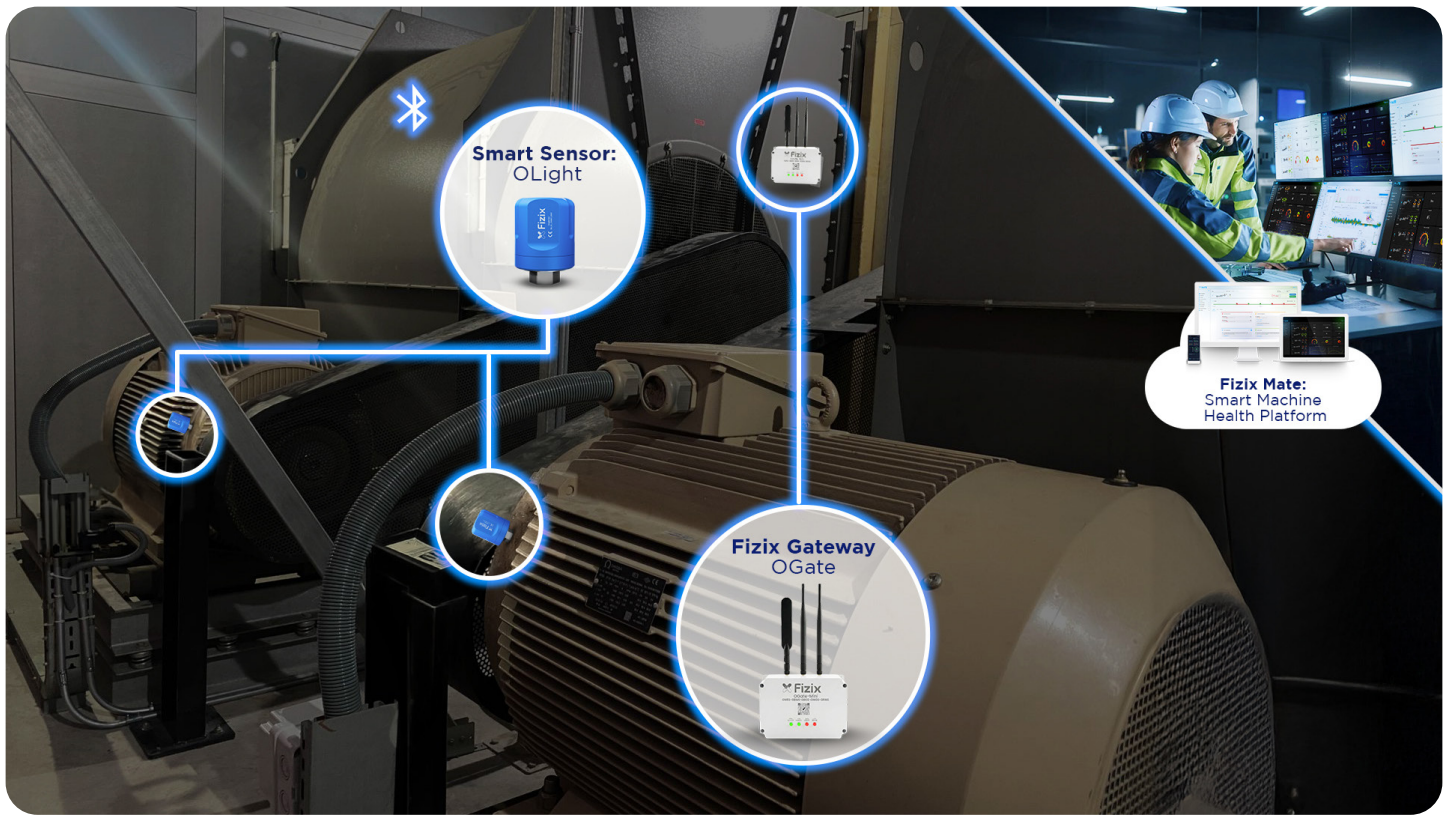
### Main Use Cases

- Monitoring equipment health in cement and heavy industry
- Data monitoring in energy panels and distribution systems
- Remote condition tracking in mining and chemical plants
- Field data transmission in oil and gas sites
- Sensor integration in robotics and automation systems



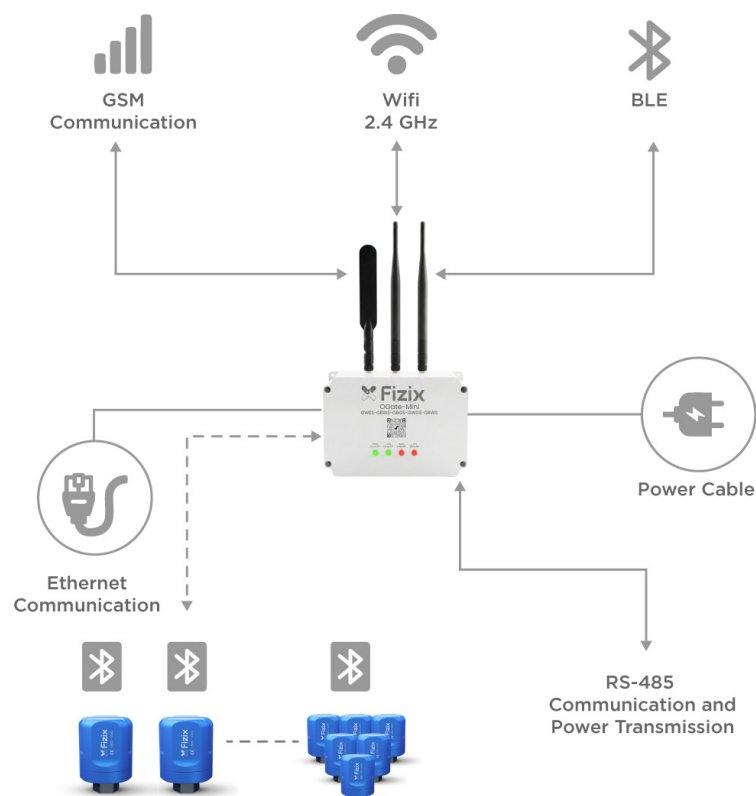
**For All Machines  
&  
For All Industries**



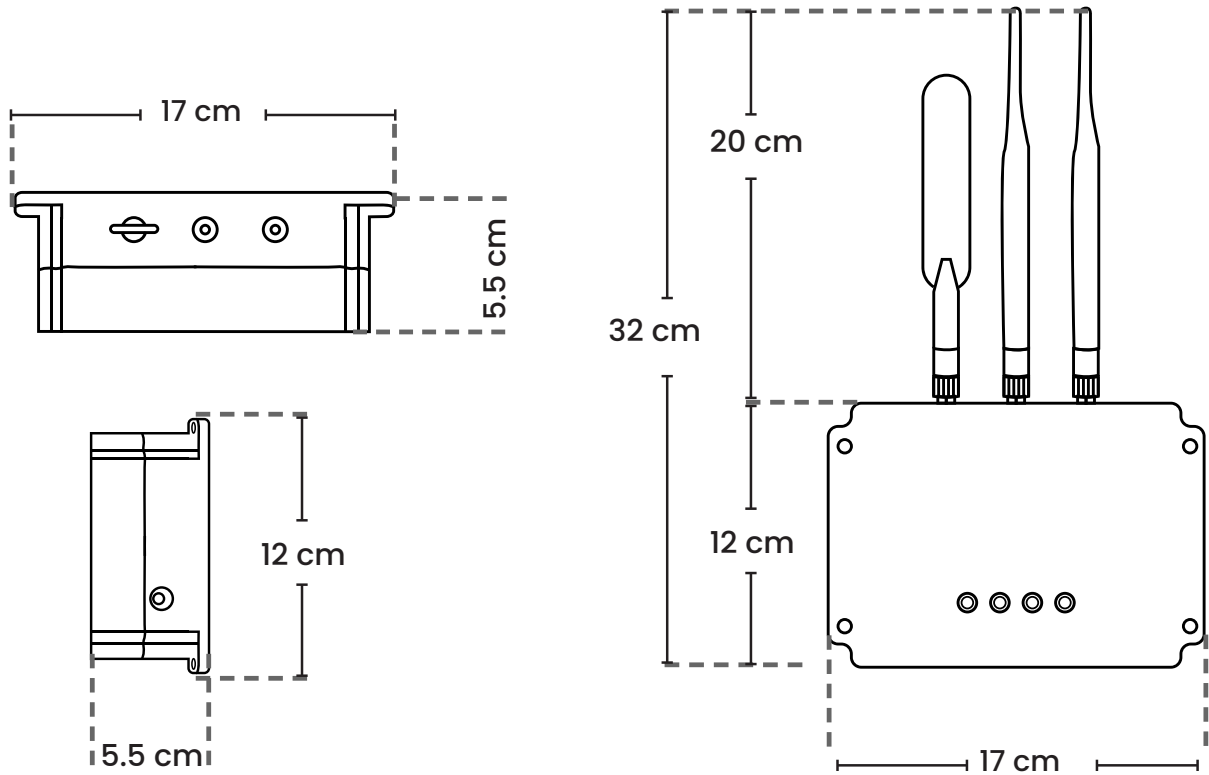


## OGate-Mini System Architecture

OGate-Mini collects data from the field and transmits it to central systems with multiple communication modules and extensive connectivity options. It supports various data collection and transmission scenarios via Wi-Fi, BLE, LTE, RS485, and Ethernet. Multiple sensors can be connected simultaneously via the RS485 line.



## Technical Specifications and Visual



# Contact Us!

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