

DATASHEET

IGW-400

Smart IoT Gateway



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Key Features

- **Cloud Connectivity:** LTE Cat 1 (4G) with global bands via embedded module.
- **Local Interfaces:** RS485 Modbus RTU support for sensors/flow meters.
- **Isolated I/O:**
 - 1x Digital Input (DI): 0–24V (Active Low: 0–6V; Active High: 7–24V).
 - 1x Digital Output (DO): Open collector, 24V/250mA max.
- **Relay Output:** NO contact, 4A @ 24VDC or 40VAC.
- **Backup Power:** Integrated battery backup for data storage and communication

Technical Specifications

Controller	ARM Cortex-M4 Core, 168 MHz, 1MB Flash, 192KB RAM
LTE Module	Quectel EC200U (LTE Cat 1, Fallback to 2G)
RS485 Port	1x Isolated RS485 (Up to 115.2 kbps, ESD/EFT Protection)
Power Input	+12V DC ($\pm 20\%$), 5W max
Digital Input	1x Galvanically Isolated DI (0–24V; Logic configurable)
Digital Output	1x Isolated Open Collector DO (24V DC, 250mA Sink)
Relay	1x NO Contact, 4A @ 24VDC / 4A @ 40VAC
Tamper Protection	Enclosure intrusion sensor + Primary power loss monitoring
Backup Battery	12V Li-Ion (2000mAh), 2-hour tamper alert runtime
Operating Temperature	-30°C to +60°C
Enclosure	IP66 water proof plastic enclosure

IGW Series – Industrial LTE IoT Gateway

Isolation & Protection

I/O Ports	2.5kV galvanic isolation (DI/DO/RS485)
Surge Protection	±30kV ESD on RS485; ±4kV EFT on power
Relay Safety	Reinforced insulation (1.5kV)
Power Input	Reverse voltage protection

Mobile

Mobile module	4G LTE up to 10 DL/5 UL Mbps; 2G up to 86 DL/85 UL Kbps
3GPP Release	Release 13
APN	Auto APN

Modbus

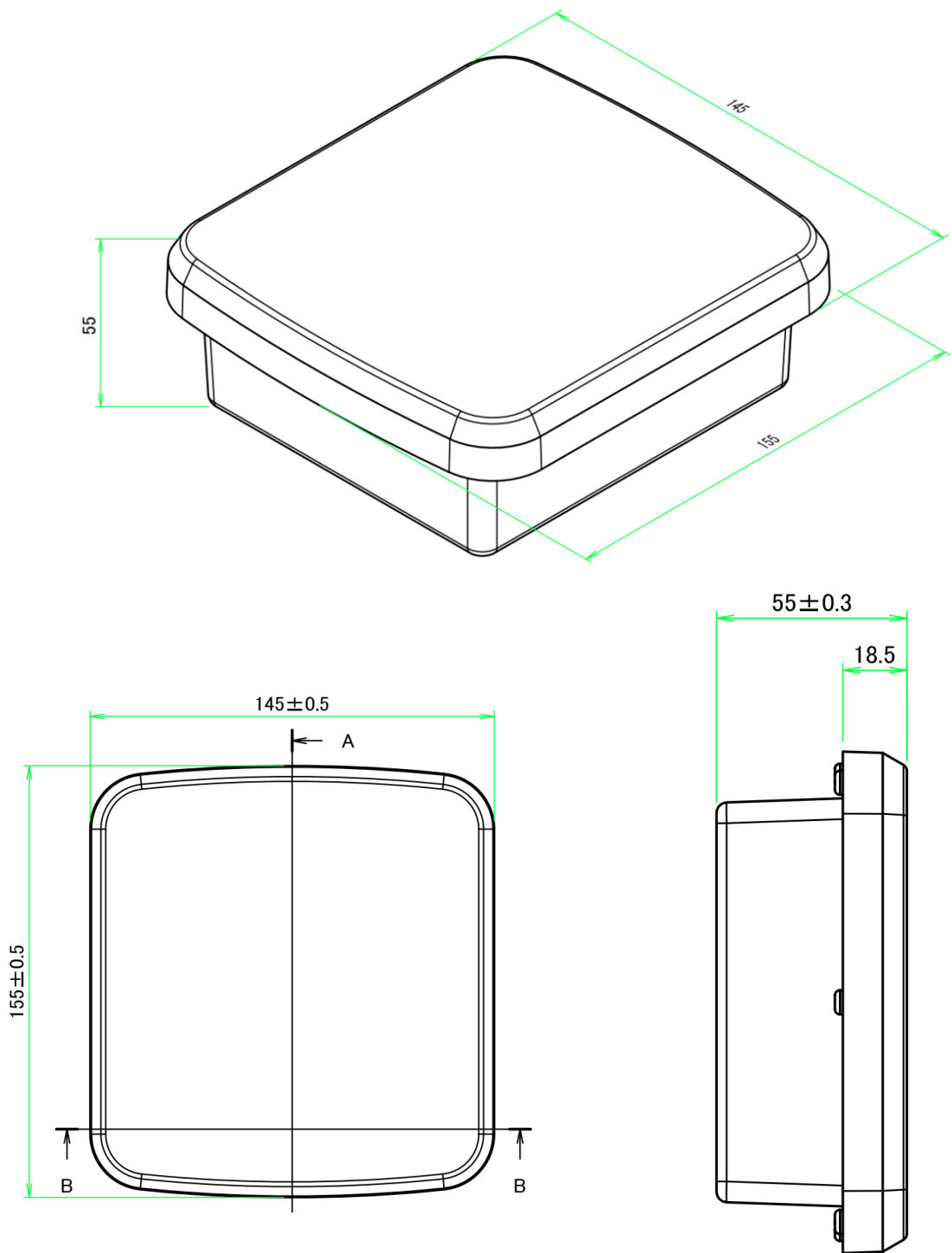
Supported modes	Master
Supported connection types	RTU, PLC
Supported data formats	8-bit: INT, UINT; 16-bit: INT, UINT (MSB or LSB first); 32-bit: float, INT, UINT (ABCD (big-endian), DCBA (little-endian), CDAB, BADC), HEX, ASCII

Software & Cloud

Protocols	MQTT, HTTPS, TCP/UDP, Modbus RTU/TCP
Cloud Platforms	AWS IoT, Azure, OptiMES, Custom API Integration
Management	Web-based local configuration + OTA firmware updates

Mechanical

Dimensions	155x145x55mm (L x W x H)
Weight	350g
Power	2-pin Terminal Block
RS485	3-pin Terminal Block
DI/DO/Relay	2-pin Terminal Block
LTE	SMA Antenna Port



Ordering Information

IGW-400	Base unit (RS485 interface and LTE connectivity)
IGW-410	Base unit + Digital Input/Output + Relay
IGW-411	Base unit + Digital Input/Output + Relay + Tamper detection and alert
IGW-412	Base unit + Digital Input/Output + Relay + Tamper detection + Local data storage

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