Cgate100-G

Cellular Remote I/O Modular Edge Gateway



- 1×100M WAN port, 1×RS232/485, 1×RS485 ports, built-in 15KV ESD serial port protection
- 2×DI, 2×DO, 2×AI, support flexible I/O expansion
- Support global LTE 4G CAT-4 cellular network
- 32-bit ARM Cortex-M7 core CPU, up to 400MHz
- Support Modbus TCP-RTU protocol conversion
- Secure serial data transmission via certificate verification, SSL/TLS, HTTPS, TCPS, and MQTTS
- Cloud support: MQTT for AWS IoT, Azure, ThingsBoard, and Alibaba Cloud
- Support edge computing
- DC 9~36V wide input voltage. Level 3 EMC protection
- -20°C ~ +75°C operating temperature

Product Description

The Cgate100-G is an intelligent IoT I/O gateway designed for industrial data acquisition and remote device connectivity. It integrates onboard I/O, RS232/RS485, Ethernet interfaces, and 4G connectivity into a compact modular gateway, making it suitable for industrial monitoring, control, and IoT applications.

Supporting Modbus RTU, Modbus TCP, MQTT, HTTP, and other protocols, this industrial intelligent gateway collects data from serial devices and onboard I/O, performs protocol conversion and edge data processing, and transmits data to SCADA systems, cloud platforms, or web applications. It supports MQTT connectivity with platforms such as AWS IoT, Microsoft Azure, ThingsBoard, and Alibaba Cloud.

The modular mechanical design simplifies installation and maintenance, while industrial-grade features such as -25°C to +75°C operation, EMC Class B protection, and secure SSL/TLS communication ensure reliable operation in demanding environments. By connecting legacy serial devices to Ethernet, the Cgate100-G also provides a practical way to extend the service life of existing equipment and integrate it into modern industrial networks.

Product Features

- High-performance CPU: 32-bit Arm Cortex-M7 core SoC, up to 400 MHz
- 1×10/100 Mbps Ethernet WAN port with auto MDI/MDIX
- Onboard I/O: 2 × analog inputs (AI, 4–20 mA), 2 × digital inputs (DI), and 2 × digital outputs (DO); expandable with I/O modules, with linkage control for digital outputs
- Expandable I/O with additional I/O modules
- 2 serial ports: 1×RS232/RS485 and 1×RS485
- Baud rate: 600~230400 bps, with flexible baud rate settings; support None, Odd, Even, Mark, and Space parity
- Flexible serial port data framing and packet segmentation
- Support global 4G CAT-4 cellular connectivity for remote industrial data access
- Versatile operating modes: TCP Server, TCP Client, UDP, HTTP Client, WebSocket Server
- Virtual COM support
- Modbus Ethernet-to-Serial support (Modbus/TCP, Modbus/RTU) for seamless integration of serial Modbus devices
- Configuration via Windows configuration tool and web browser
- Firmware upgrades via web browser, Windows configuration tool, and remote upgrade
- High security with certificate verification and SSL/TLS encryption for serial data transmission; supports HTTPS, TCP, and MQTTS
- Support Modbus RTU Master, edge computing, Modbus gateway, and MQTT gateway
- Support SNMP v1/v2c
- Cloud support: MQTT connectivity via AWS IoT, Microsoft Azure, ThingsBoard, Alibaba Cloud, and more
- Wide industrial operating temperature range: -25°C to +75°C

Technical Specifications

Power Supply	
Input Voltage	9~36 V DC, reverse polarity protection, surge protection
Power Consumption	Idle: < 2.4W, Max: < 4.8W
Serial Port	
No.	1 × RS232/RS485 and 1 × RS485
Connection	RS232 terminal block connector: TX, RX RS485 terminal block connector: A, B
Baud Rates	600~230400 bps
Data Bits	7,8
Stop Bits	1,2
Parity	None, Even, Odd, Mark, Space
Flow	None, XON/XOFF
Physical Interface	
DI	2 × Digital non-isolated inputs (0-2 V detected as logic low, 9-36 V detected as logic high)
DO	2 × Relays
	DC contacts rating @R(at resistive load)10A / 28VDC
	AC contacts rating @R(at resistive load)10A / 277VAC, NO
	AC contacts rating @R(at resistive load)5A /250VAC, NC
AI	2 × Analog input 4-20mA
Antennas	1 × SMA-K Connectors (Center PIN: SMA Female)
SIM	1 × (3 V/1.8 V) Micro-SIM(3FF)

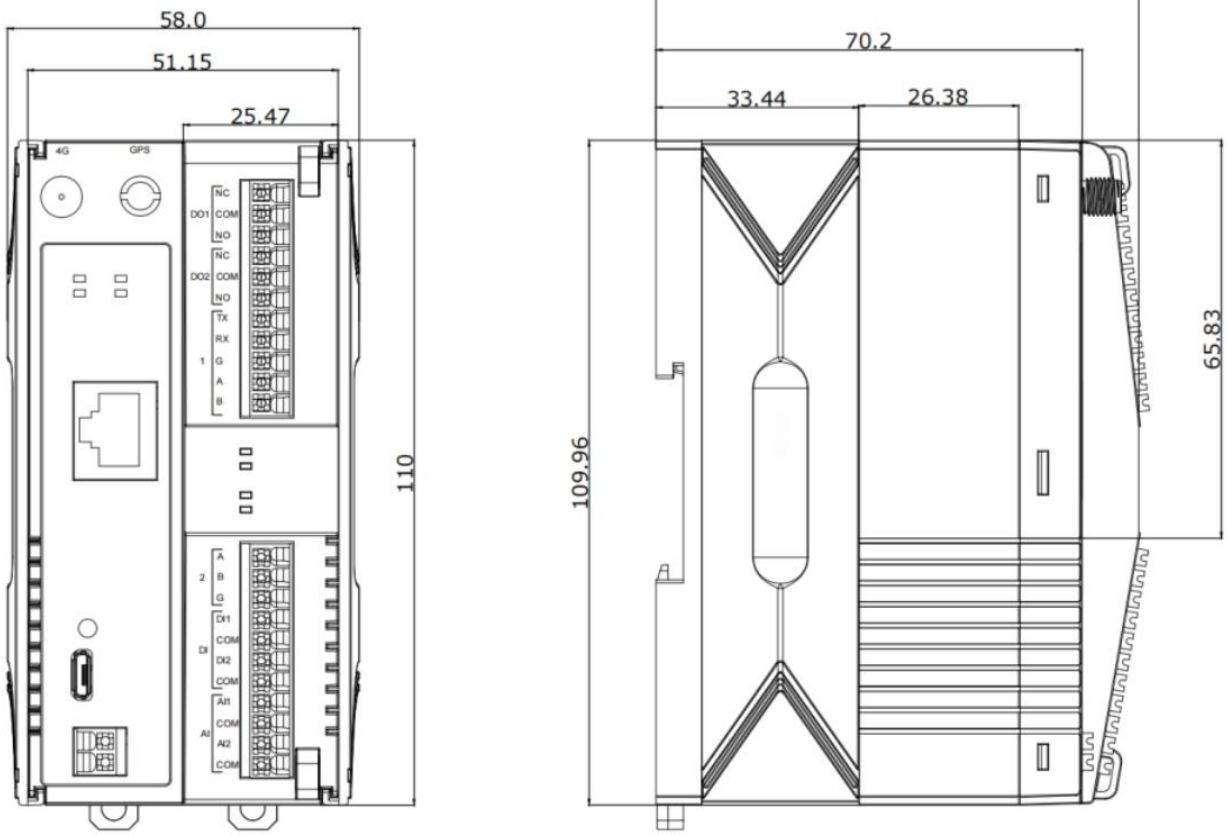
Physical Specification	
Dimensions (W × H × D)	79.6*58*110 mm
Mounting Options	DIN rail, wall mounting
Hardware Protection	
ESD	IEC61000-4-2, Level 3, class B, contact 6KV, air 8KV
Surge	IEC61000-4-5, Level 3, class B
EFT	IEC61000-4-4, Level 3, class B
Status LEDS	
Power	ON: Gateway is powered up
	OFF: Gateway is not powered up
Work	When the device is working properly, it blinks at 1 Hz
NET	Blinking when the WAN connects to the internet
	OFF when there is no work
DATA	Blinking when the serial port is transmitting data
DO	Light on, the channel output is activated
DI	Light on, the channel is activated by the input signal
Network	
Cellular	**Frequency:** FDD-LTE: B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28/66 TDD-LTE: B34/38/39/40/41 WCDMA: B1/2/4/5/6/8/19 GSM/EDGE: B2/3/5/8 **Maximum Transmission Data Rate:**

	LTE FDD: 150(DL)/ 50(UL) Mbps LTE FDD: 130(DL)/ 30.5(UL) Mbps WCDMA: 384(DL)/ 384(UL) Kbps
ETHERNET	1 × WAN port 10/100 Mbps, compliance with IEEE 802.3 and IEEE 802.3u standards, auto MDI/MDIX
Software	
Network Protocols	ICMP, IPv4, IPv4, ARP, TCP, UDP, DHCP, DNS, HTTPS, MQTT, SNMP, Telnet, NTP, SSL v3
IP	DHCP/Static IP
Websocket	Supported
MQTT	Supported, standard MQTT protocol, 16 subscription topics and 16 publish topics
Linkage Control	Supported. Data collection points, DI, and AI can be used as triggers and executed by DO
IOT PLATFORMS	Alibaba cloud, AWS IOT, Microsoft Azure, ThingsBoard
User Configuring	Windows Utility, web console (HTTP)
Operating Environment	
Operating Temperature	-25 °C to 75 °C
Operating Humidity	10% to 90% (non-condensing)
Ingress Protection Rating	IP30
MODBUS RTU Master	
Supported Functions	01, 02, 03, 04
Supported Data Formats	8-bit: INT, UINT; 16-bit: INT, UINT (MSB first); 32-bit: float, INT, UINT (ABCD (big-endian), DCBA (little-endian), CDAB);

	64-bit: float
Supported Data Points	128
Certifications	
Certifications	CE, FCC, RoHS

Dimensions

Unit: mm (first angle projection)



Ordering Information

Model	Ethernet	Serial	Cellular	Cellular Frequency
Cgate100-G	1×100M WAN	1×RS232/485 1×RS485	LTE CAT-4 Global	FDD-LTE: B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28/66 TDD-LTE: B34/38/39/40/41 WCDMA: B1/2/4/5/6/8/19 GSM/EDGE: B2/3/5/8

Contact Us

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