Cgate320

2 × RS485 + 1×100M Ethernet Port Edge Gateway



- 2 × RS485 ports to 1 × 100M RJ45 Ethernet port
- Support Modbus and DL645 to MQTT + JSON
- Powerful Edge Computing Capabilities: 1000 points + data acquisition + analysis
- Support Modbus RTU to Modbus TCP, and multi-host Modbus polling
- Support the standard MQTT protocol and can connect to mainstream cloud platforms, including AWS IOT, Microsoft Azure, Thingsboard, Alibaba Cloud, EMQX, Tuya, Cumulocity IoT
- Support SD Card for data storage, ensuring data integrity
- Hardware & software dual watchdog to ensure stable operation
- DC 9-36V wide power input voltage
- High-strength metal shell, fanless enclosure heat dissipation, -40 ℃ ~ +85 ℃ working temperature range
- Level 3 high EMC protection

Product Description

Cgate320 is a high-performance industrial edge IoT gateway integrating data acquisition, edge computing, protocol conversion, and secure cloud communication. It provides 2 × RS485 serial ports and 1 × 10/100M Ethernet port, enabling efficient connection between field devices such as PLCs, meters, and sensors and cloud platforms or control systems.

Powered by a RISC-V processor with up to 600MHz frequency, this industrial protocol gateway supports Modbus RTU, Modbus TCP, and DL/T645-2007 protocols, with capacity for up to 1000 data points. The Cgate320 data acquisition gateway performs local data decoding, calculation, and preprocessing, reducing server workload and improving system efficiency. It also supports protocol conversion and JSON data reporting via MQTT or TCP, with dual independent connections for flexible multi-platform integration.

Designed for industrial environments, Cgate320 supports a wide power input range of DC 9–36V and operates reliably from -40°C to +85°C. With watchdog protection, high EMC performance, SSL/TLS encryption, and optional SD card data caching, it ensures stable and secure operation in harsh conditions, keeping your devices always online and your data always flowing.

Product Features

- Adopt RISC-V processor with up to 600MHz frequency, providing fast data processing and reliable edge computing performance
- Provide 2 × RS485 serial ports and 1 × 10/100M Ethernet port, enabling flexible connection between field devices and IP networks
- Support Modbus RTU, Modbus TCP, and DL/T645-2007 protocols, allowing unified data acquisition from PLCs, meters, and sensors
- Support up to 1000 data points, with local decoding, calculation, and preprocessing to reduce server workload and improve response speed
- Support protocol conversion between Modbus RTU and Modbus TCP, as well as JSON data reporting for easy integration with cloud platforms
- Support MQTT and TCP communication, ensuring compatibility with mainstream IoT platforms and private servers
- Support dual independent TCP and dual independent MQTT connections, enabling simultaneous data transmission to multiple servers or cloud systems
- Support SSL/TLS encryption and certificate authentication, ensuring secure data transmission over public networks
- Support SD card data caching, automatically storing data during network interruptions and retransmitting after recovery
- Support TCP Client and TCP Server modes, allowing flexible deployment in different network architectures
- Support web-based configuration and configuration software, simplifying device setup, management, and maintenance
- Support wide power input range of DC 9–36V, suitable for various industrial power environments
- Support operating temperature from -40°C to +85°C, ensuring stable operation in harsh industrial conditions
- Built-in hardware and software watchdog mechanisms, automatically recover the system from abnormal states
- Provide high EMC protection and serial port ESD protection, enhancing reliability in electrically noisy environments

Technical Specifications

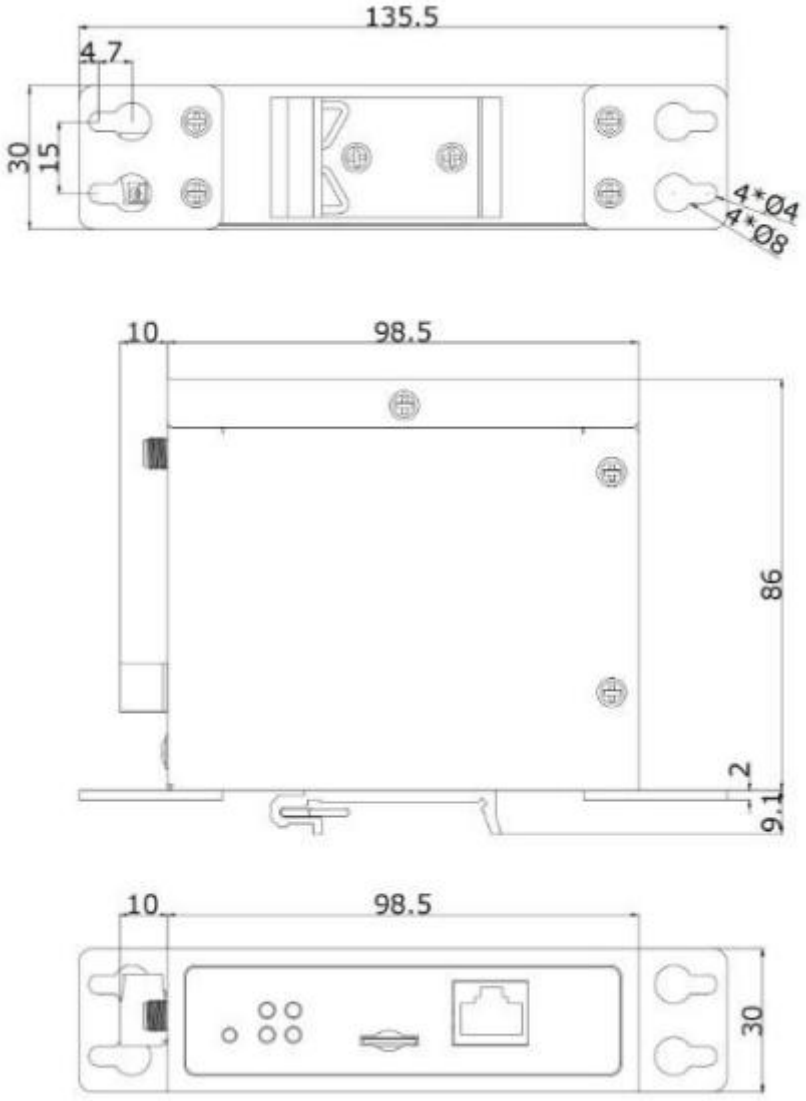
Processor	
CPU	RISC-V core
Frequency	Up to 600 MHz
Power	
Power Supply	DC 9–36V, 2-pin terminal blocks
Consumption	Avg: 75 mA @ 12V Max: 85 mA @ 12V
Ethernet	
Port	1 × RJ45
Rate	10/100 Mbps, auto MDI/MDX
Protection	2KV electromagnetic isolation
Serial Port	
Port	2 × RS485, 7-pin terminal blocks
Baud Rate	600 bps ~ 230400 bps
Data Bits	7, 8
Stop Bits	1, 2
Parity	None, Even, Odd
Physical	
Dimensions	98.5 × 30 × 86 mm (without terminals) 118.5 × 30 × 95.1 mm (with terminals)

Installation	DIN rail or wall mounting
Environment	
Operating Temp	-40°C ~ 85°C
Storage Temp	-40°C ~ 105°C
Operating Humidity	5% ~ 95% (non-condensing)
Storage Humidity	5% ~ 95% (non-condensing)
Basic Features	
Network Protocols	IP, TCP, MQTT, SSL/TLS, ICMP, ARP, DNS, NTP, DHCP, IPv4
IP Assignment	Static / DHCP
DNS	Support
Configuration	Built-in Webpage, Config Software
Work Mode	TCP Server / TCP Client 2 * independent TCP connection supported
Edge Acquisition Protocol	Modbus RTU, DL/T645-2007
Data Reporting Format	JSON, Modbus TCP
Data Points	Up to 1000
MQTT	Standard MQTT protocol Easy access to mainstream platforms: Thingsboard, AWS, Azure, etc. 2 * independent MQTT connection supported
SSL Encryption	Support
Offline Data Cache	External SD card

Others	
Certificates	CE, FCC, RoHS, WEEE
Warranty	2 years

Dimensions

Unit: mm



Ordering Information

Standard Model	100M RJ45 Port	RS485	Input Voltage
Cgate320	1	2	DC 9-36V

Contact Us

COME-STAR COMMUNICATION(WUHAN) CO., LTD.

Address: Puneng Industrial Park, Fenghuang Garden 1st Road, East Lake High-Tech Development Zone, Wuhan, China.

Tel: +86-027-59951128

Mail: sales@come-star.com

Official site: www.come-star.com

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