# Cgate3204Series

## 4*RS232/RS485 to 2*Ethernet Ports Modbus Industrial Gateway

- Support 4*RS232/RS485 serial port to 2*10/100Base-T(X) auto-sensing Ethernet ports

- Support conversion between Modbus RTU/ASCII and Modbus TCP protocols, and support Modbus RTU/ASCII Over TCP transparent transmission

- Support Modbus slave readahead, single port automatically learns up to 256 RTU or 128 ASCII instructions, and pre-reads data to achieve fast response

- Support Modbus address mapping, mapping a single read/write instruction with read/write instructions of multiple addresses, realizing batch read/write with a single instruction

- Support serial port forwarding, realizes transparent transmission of data between the serial port and other serial ports, and provides one-way forwarding/receiving and two-way forwarding direction control

- Support JSON function, which can convert the collected Modbus slave device data into JSON format and send it to the server

- Support dual DC 9~60V redundant power input, support non polarity

- High-strength aluminum alloy casing, IP40 protection level, fanless casing for heat dissipation, the equipment can reliably work in harsh industrial environments of -40 ℃ ~+85℃

# COME-STAR

## Product Description

Cgate3204 is a Din rail industrial Modbus gateway. It supports serial port conversion to UDP, TCP, Modbus, HTTPD, WebSocket, MQTT and other protocols, and can realize communication between Modbus RTU/ASCII and Modbus TCP protocols. This product provides 2*100M copper ports and 4*RS232/RS485 serial ports. It supports DC 9~60V dual power supply redundant input. There is no polarity on power supply connection.

The product supports WEB configuration of various network management functions, such as serial port/network working mode, serial port forwarding, network card mode, DNS, access control, IP/MAC filtering, log management, email alarms, SNMP alarms, serial port restart, system management, etc.; supports Modbus RTU Master/Slave, Modbus ASCII Master/Slave, UDP, TCP Client/Server, UDP Multicast, RealCOM_MCP/CCP/MW, Pair Connection Master/Slave, HTTPD Client, WebSocket Client, MQTT and other conversion modes to realize serial port to Ethernet network or Modbus TCP protocol. Supports one-click restart or factory reset. The hardware adopts high-standard industrial protection design, with industrial-grade components and high-strength aluminum alloy casing, which is sturdy and durable; Mgate3204 is featured with low power consumption, -40℃~+85℃ wide temperature and wide voltage design, fanless casing for heat dissipation, and passed strict safety regulations and EMC tests to meet the application needs of harsh industrial environments. The Modbus gateway can be widely used in industrial automation, integrated energy, smart cities, smart transportation, smart mines, smart factories and other fields.

# Product Features

- High-performance CPU processing power, Cortex-A7 core, running frequency up to 800MHz
- Dual ethernet ports can be configured as two independent network segments or cascade ports
- Serial port supports 300bps-460800bps baud rate range
- Support UDP and UDP Multicast mode. Point-to-point, point-to-multipoint or multipoint-to-multipoint communication can be achieved through UDP protocol, which is fast and efficient.
- Support TCP Client/Server mode, establishing session connections through TCP protocol. TCP Client supports up to 16 session connections, TCP Server supports up to 32 session connections, and supports RFC2217 instructions to dynamically modify communication parameters such as serial port baud rate
- Support Pair Connection Master/Slave mode, devices can be used in pairs, easy to operate
- Support Modbus RTU/ASCII Master/Slave mode to realize Modbus TCP and Modbus RTU/ASCII protocol conversion
- Support RealCOM_MCP/CCP/CS mode, maps the network to local COM, and seamlessly connects
- Support HTTPD Client mode and can perform GET or POST operations with HTTPD server
- Support WebSocket Client mode, enabling two-way communication with the WebSocket server
- Support multiple sub-packaging mechanisms, converts serial port data into Ethernet data packets according to data length or time, to meet the real-time needs of different networks
- Support frame header and tail mode. The serial port can filter data frames based on the start byte and end byte of the frame
- Support registration package and heartbeat package to realize connection verification and connection status detection
- Support Modbus virtual ID, mapping the real ID of the Modbus slave to a virtual ID for data communication to avoid duplication of slave IDs
- Support DES/3DES/AES/RC2/RC4/RC5/BlowFish and other data encryption algorithms to ensure data security
- Support SSL (TLS1.0/1.1/1.2) connection encryption, one-way/two-way certificate verification, ensuring connection security
- Support HTTP/ HTTPS/ SSH/ TELNET access control, and IP/ MAC address filtering
- Support event alarms such as device restart, login events, configuration changes, password changes, etc, and supports email and SNMP alarm methods
- Support serial port communication parameters, working mode, statistics of sent and received frames
- Support log local storage, network storage and serial port log output
- Support serial port/device restart, factory settings restoration, device upgrade and NTP client

# Technical Specifications

| Software | |
| --- | --- |
| Network Protocol | IP, TCP, UDP, DNS, ARP, SNMP Trap, SSH, ICMP, HTTP, HTTPS, DHCP Client, RFC2217, NTP, SMTP, TELENT |
| IP Obtaining Method | Static IP/DHCP |
| DNS Resolution | Support |
| User Configuration | Web page configuration/CONSOLE port simple network parameter configuration |
| Simple Transparent Transmission | UDP/ UDP Multicast/ TCP Client/ TCP Server/ RealCOM/ Pair Connection |
| Modbus | Modbus RTU /ASCII to Modbus TCP |
| Serial Port Data Packaging | Time and length can be set; the maximum pack length is 1460 bytes |
| Data Encryption | DES/3DES/AES/RC2/RC4/RC5/BlowFish |
| SSL Encryption | TLS1.0/TLS1.1/TLS1.2 |
| TCP Server Connection | The single serial port supports up to 32 * TCP Client connections |
| TCP Client Connection | Single serial port supports up to 16 * TCP Server connections |
| Network Cache | Send: 16 Kbyte; receive: 16 Kbyte |
| Serial Port Cache | Send: 16 Kbyte; receive: 16 Kbyte |
| Heartbeat Package | Support TCP Keepalive, custom heartbeat package content |
| Registration Package | Customize the registration package content |
| RFC2217 | Support |
| Serial to Serial Data Forwarding | Users can select the data forwarding rules between the current serial port and other serial ports |
| Modbus Address Mapping | This feature is only effective in Modbus RTU Slave and Modbus ASCII Slave modes and is mutually exclusive to the Modbus slave pre-read and Modbus slave address mapping features |

| HTTPD Client | Support |
|---|---|
| WebSocket Client | Support |
| MQTT | Support |
| JSON | The JSON function is supported in the HTTPD Client, WebSocket Client, and MQTT mode |
| RealCOM | Support CS, Moxa, CanHigher and other working modes |
| Transmission Delay (Average) | <10ms |
| Supporting Software | Network management configuration tool, virtual serial port software |
| **Interface** | |
| 100M Ethernet | 2 * 10/100Base-T (X) auto-sensing RJ 45 port, supporting full/half duplex, auto MDI/MDI-X, and 1.5kV electromagnetic isolation protection |
| Serial Port | Serial port type: 4 * RS232 or RS485 is optional<br>Connection mode: 6 bits 3.81mm spacing with lock connection terminal<br>Paud rate: 300bps-460800bps<br>Data bit: 7bit, 8bit<br>Stop bits: 1bit, 2bit<br>Check bit: None, Odd, Even<br>Serial isolation: 2 KVA/3kVDC isolation protection |
| CONSOLE Port | 1 * CONSOLE port, in accordance with USB2.0 specification, using Micro-B USB2.0 socket |
| Button | One-click restart or restore the factory Settings |
| Status LED | Power indicator, operation indicator, Ethernet interface SPEED/LINK indicator, serial port indicator |
| **Power Supply** | |
| Input Voltage | Dual DC 9~60V redundancy power input |
| Power Consumption (full load) | ＜2W@DC24V(RS232), < 1.8W@DC24V(RS485) |
| Connection | 5-bit 5.08mm spacing with lock connection terminal |
| Protection | Non-polarity |

| Physical Characteristics | |
|---|---|
| Dimensions | 140×35×100 mm (DIN rail mounting clip excluded) |
| Installations | Easy installation on 35mm DIN rails |
| IP Code | IP40 |
| Weight | About 0.45kg |
| **Working Environment** | |
| Operating Temp | -40℃~+85℃ |
| Storage Temp | -40℃~+85℃ |
| Relative Humidity | 5%~95% (non-condensing) |
| **Industry Standard** | |
| EMC | IEC 61000-4-2 (ESD): contact discharge ± 8kV and air discharge ± 15kV<br>IEC 61000-4-5 (Surge): Power supply: co-mode ± 4kV, difference mode ± 2kV;<br>RS485: co-mode ± 4kV, difference mode ± 2kV;<br>Copper port: co-mode ± 6kV, difference mode ± 2kV<br>IEC 61000-4-4 (EFT): Power supply: ± 4kV; communication port: ± 2kV |
| Certification | CE, FCC, RoHS |

# Dimensions

Unit: mm

Cgate3204-4D232
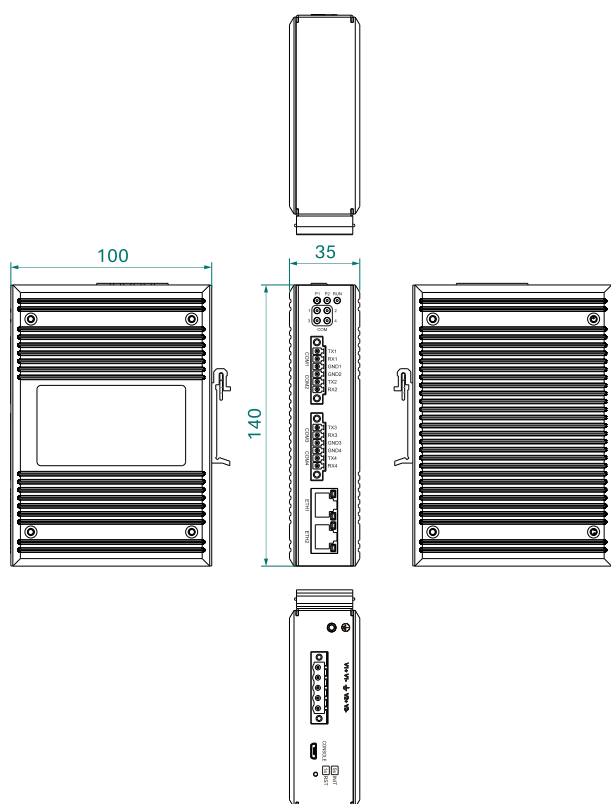
Cgate3204-4D485
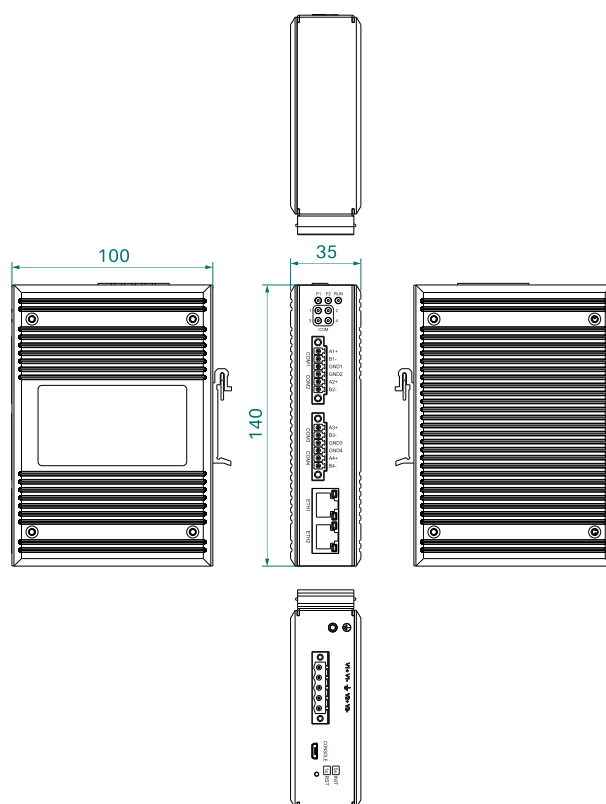
## Ordering Information

| Standard Model | 100M Copper Port | RS232 | RS485 | Input Voltage |
|---|---|---|---|---|
| Cgate3204-4D232 | 2 | 4 | / | Dual DC9~60V |
| Cgate3204-4D485 | 2 | / | 4 | |

## 📞 Contact Us

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