CGT551R-G

1×RS485 to 4G LTE CAT-4 Industrial Serial-to-Cellular Wireless Modem



- 1 × RS485 serial port to global mainstream 4G Cat-4 network, fallback to 3G/2G
- Support bi-directional transparent transmission
- Support parameter configuration via serial, network, SMS AT commands, and provide the PC configuration tool
- Support TCP Server, TCP Client, UDP, and HTTP client with 2 socket connections
- Mutual conversion between Modbus TCP and RTU
- Support MQTT integration and SMS working mode with user-defined identity and heartbeat packets
- Support FTP upgrade and FOTA self upgrade
- Built with a hardware watchdog to ensure system stability and prevent crashes
- DC 9~36V wide input voltage, DIN Rail mount design
- -35 ℃~+75 ℃ working temperature range

Product Description

CGT551R-G is an industrial 4G LTE Cat-4 cellular modem designed for reliable, low-latency and real-time wireless communication between serial devices and central monitoring systems. It supports global LTE frequency bands and delivers uplink speeds up to 50 Mbps and downlink speeds up to 150 Mbps, ensuring fast and stable data transmission for a wide range of industrial applications.

This cellular modem from COME-STAR integrates TCP/UDP transparent transmission, HTTP transparent transmission, SMS mode, and Modbus TCP/RTU conversion, allowing industrial devices to connect to IoT platforms and cloud systems with ease. It also supports MQTT, user-defined identity packets, heartbeat packets, base-station geolocation, and multi-socket communication, providing a versatile communication toolkit for remote data acquisition and control.

With wide-range 9–36 V DC power input, DIN-Rail mounting, built-in hardware watchdog, remote firmware upgrade capabilities, and industrial-grade reliability, this industrial cellular gateway is well-suited for M2M and IoT scenarios including distribution automation, smart metering, water and wastewater management, heating systems, lighting control, and other unattended field applications.

Product Features

- 4G LTE Cat-4 cellular connectivity with fallback to 3G/2G, support global LTE bands
- 1 × RS485 serial interface for industrial field devices
- Bi-directional transparent data transmission
- Support TCP Server, TCP Client, UDP and HTTP client with 2-socket connections
- Support TCP/UDP/HTTP/SMS transparent transmission
- Modbus TCP and Modbus RTU mutual conversion for legacy device integration
- Support MQTT for cloud platform connection
- Each socket buffer 5 packets of serial data, up to 1000 bytes per packet
- Support user-defined identity packets and heartbeat packets
- Support base-station geolocation
- Support serial, SMS and network AT command configuration
- Support sending English SMS
- Provide PC configuration tool for rapid device setup
- Support Socket Distribution Protocol for multi-device data forwarding
- Support FTP firmware upgrade and remote FOTA self-update for keeping the firmware up to date
- Built-in hardware watchdog to ensure system reliability and prevent system halt
- DC 9~36V wide-range power input
- DIN-Rail mount compact design for easy cabinet installation
- Suitable for long-term operation in industrial environments

Technical Specifications

Software	
Network Protocol	TCP, UDP, DNS, HTTP, FTP
Network Access	APN, VPDN
User Configuration	AT commands via Serial, Network, SMS
Operation Mode	Transparent mode, HTTPD mode, SMS mode
Transparent Transmission	TCP/UDP Server, TCP/UDP Client, HTTP, SMS
MQTT	Support
Modbus	Support Modbus RTU/TCP protocol conversion
SMS	PDU/TEXT, English
Heartbeat / Identity Packet	Support Identity packet types: user-defined / ICCID / IMEI
Packaging mechanism	Packaging time(ms): 100~60000,default 100 Packaging length(byte): 100~1000,default 1000
Base Station Location	Support
Serial to Network	2 sockets, default A
Serial Port Buffer	5 packets
Remote Configuration	Support
Remote Upgrade	FOTA self-upgrade FTP firmware update
Remote Configuration	Support
4G Cellular	
Working Standard	FDD-LTE, TDD-LTE, WCDMA, GSM

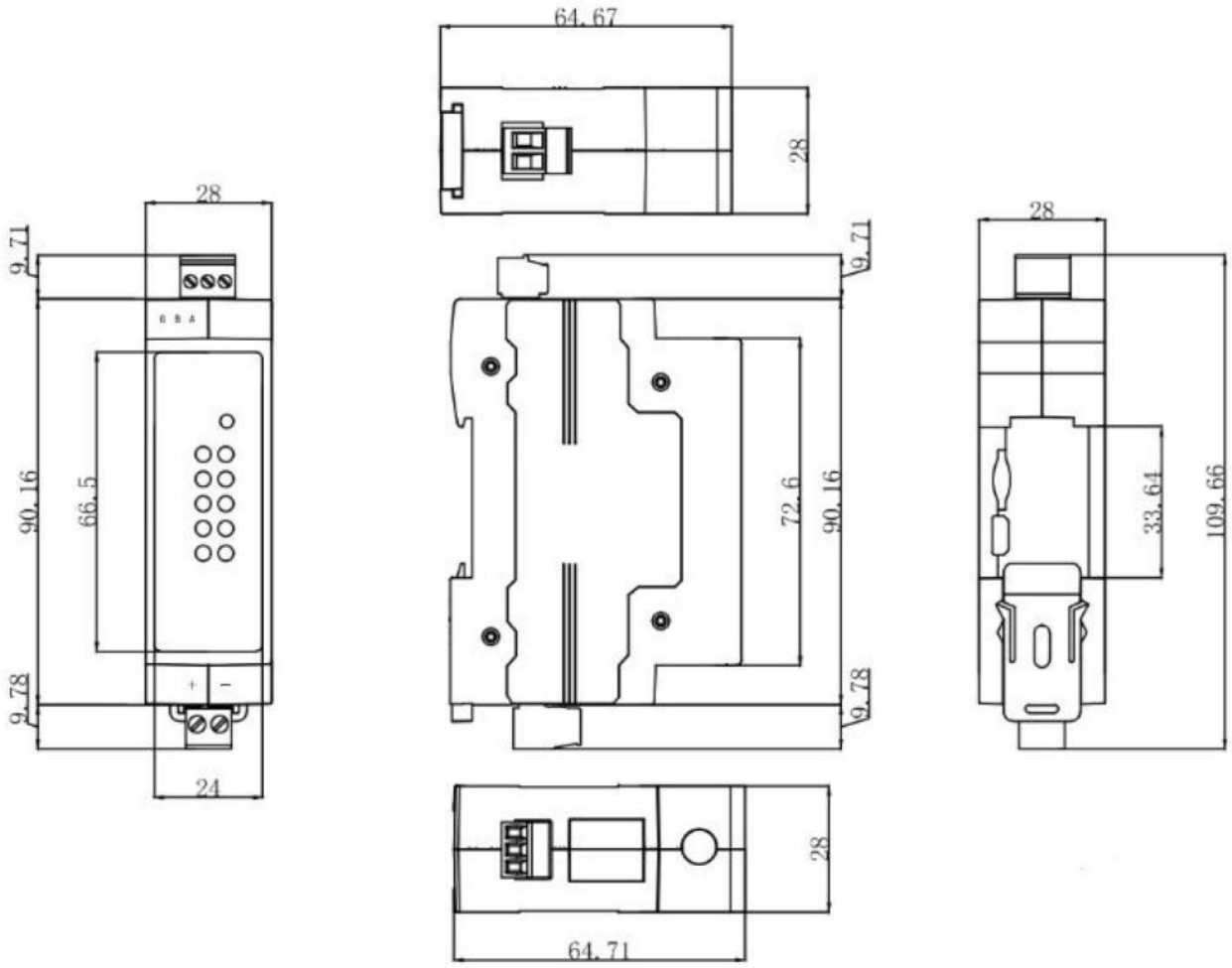
Working Frequency	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28 LTE-TDD: B38/B39/B40/B41 WCDMA: B1/B2/B4/B5/B6/B8/B19 GSM: B2/B3/B5/B8
Transmission Speed	LTE FDD: 150 Mbps DL / 50 Mbps UL LTE TDD: 130 Mbps DL / 30 Mbps UL WCDMA: 384 Kbps DL / 384 Kbps UL EDGE: 296 Kbps DL / 236.8 Kbps UL GPRS: 107 Kbps DL / 85.6 Kbps UL
TX Power	LTE-FDD: 23 dBm ±2 dB LTE-TDD: 23 dBm ±2 dB WCDMA: 24 dBm +1/−3 dB GSM850 / EGSM900: 33 dBm ±2 dB DCS1800 / PCS1900: 30 dBm ±2 dB 8-PSK power class E2 supported
Rx Sensitivity	LTE bands B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28/B38/ B39/B40/B41: −99 to −102 dBm WCDMA bands: approx. −110 dBm GSM850/900: −108 to −109 dBm DCS1800/PCS1900: −107 to −109 dBm
Interface	
Antenna	1 × SMA-F connector (outer-thread, inner-socket)

Serial Port	Serial Signal: 1 × RS485 Connection Method: 3-pin terminal Resistor: Pull-down resistance 2.2KΩ Baud Rate: 2400~230400bps Data Bits: 8 bits Stop Bits: 1 bit, 2 bits Parity: None, Odd, Even
SIM Card Slot	1 × Micro SIM (3FF), 1.8 V / 3.0 V
USB	Slave, Micro USB, USB 2.0 High speed
Button	Reload
Status LED	POWER, WORK, NET, LINK, RSSI, TX, RX
Power Supply	
Input Voltage	DC 9~36V, Reverse Polarity Protection
Operating Current	67mA～102mA @12V
Power Consumption	< 3 W
Connection	Pluggable industrial terminal block
Physical Characteristics	
Dimensions	28 × 64.7 × 109.7 mm
Installations	DIN Rail
Housing Material	ABS Plastic
IP	IP30
Working Environment	
Operating Temp	−35℃~+75℃
Storage Temp	−40℃~+90℃

Relative Humidity	5%~95% (non-condensing)
Industry Standard	
EMC	Power: ESD: IEC 61000-4-2 Level 3 Surge: IEC 61000-4-5 Level 3 EFT: IEC 61000-4-5 Level 3 RS485: ESD: IEC 61000-4-2 Level 3 Surge: IEC 61000-4-5 Level 3
Certifications	CE, RoHS

Dimensions

Unit: mm



Ordering Information

Standard Model	RS485	4G Antenna	Input Voltage
CGT551R-G	1	1	DC 9~36V

Contact Us

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