



W4GR-1115 Series

Industrial Cellular Gateway

4G LTE CAT6/CAT4 · Wi-Fi · Dual-SIM Failover Industrial Router

An industrial cellular gateway built around a high-powered industrial 32-bit CPU with multi-layer software detection and hardware protection for reliability and stability. It supports worldwide carrier 4G LTE CAT6/CAT4/3G/2G networks and, with 4-LAN, 1-WAN, USB, relay, serial, digital input, dual SIM, GPS, and Wi-Fi interfaces, suits most IoT applications across industries.

Model	W4GR-1115
Product Name	Industrial Cellular Gateway
Cellular	4G LTE CAT6/CAT4, 3G/2G (model-dependent — see Ordering Information)
Ethernet Ports	5 × RJ45 (1-WAN, 4-LAN or 5-LAN)
Power Input	DC 5–35V
Manufacturer	Qualitech Technology Pte. Ltd.
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Product Overview

W4GR-1115 Series Gateway is an industrial cellular gateway that adopts a high-powered industrial 32-bit CPU, with multi-layer software detection and hardware protection to ensure reliability and stability. It supports worldwide carrier 4G LTE CAT6/CAT4/3G/2G cellular networks — FDD-LTE, TDD-LTE, WCDMA, EVDO, TD-SCDMA, EDGE, CDMA 1X, and GPRS. With rich interfaces — 4-LAN, 1-WAN, 1-USB, 2-Relay, 1-RS232, 1-RS485, 2-DI (Digital Input), dual SIM (single-module or dual-module, optional), GPS (optional), and Wi-Fi — it suits most IoT applications across industries.

The gateway supports multiple network and industrial protocols, including TCP Client, TCP Server, UDP Client, UDP Server, DHCP, ICMP, NTP, DNS, DDNS, Modbus RTU, Modbus TCP, Modbus Master, MQTT, HTTP, and SNMPv1/v2/v3, among others. As a gateway, it is widely used in Intelligent Transportation, Smart Grid, Oil and Gas, ATM, vending machines, agricultural irrigation, environmental protection, industrial automation, energy saving, smart home, and more.

Key Features

Cellular & Connectivity

- DSDM (dual SIM on dual module) or DSSM (dual SIM on single module), optional — supports failover and load-balance mode.
- LTE/3G/PPPoE/DHCP and static address connection modes, with automatic switchover between wired and wireless connectivity.
- Rich interfaces: 4-LAN, 1-WAN, 1-USB, 2-DI, 2-Relay, 1-RS232, 1-RS485, 1-WiFi (802.11b/g/n), 1-GPS (option).
- 2-channel digital input with DI alarm.
- Din-rail mounting.

Protocols & Data

- MQTT, Modbus RTU, and Modbus TCP protocols.
- TCP/IP, UDP, HTTP, and SNMP protocols.
- APN/VPDN to secure data transmission.
- Multiple VPN protocols: IPsec, L2TP, PPTP, GRE, and OpenVPN.

Security & Access Control

- DHCP server, DHCP binding by MAC address, DDNS, firewall, NAT, DMZ host, QoS, and traffic analysis.
- SPI firewall, access control, port mapping, DMZ mapping, Access Control List (ACL), IP-MAC binding, and clone function.

Reliability & Management

- Online detection with automatic recovery; hardware and software watchdog technology for automatic fault repair.
- Status query of system, network connection, and routing.
- Web UI, Telnet, and SSH configuration; local/remote syslog with serial port output log.
- SMS and SMS alarm support.
- Remote configuration and management via DMP (Device Management Platform).¹
- Firmware customization; secondary development via Python, LUA, and SDK.

Application Diagram



Specifications

CELLULAR INTERFACES

Antenna Connector	2 × 50 Ω SMA Female
SIM Slot	1, or 2 (for DSDM and DSSM)
ESD Protection	15KV

ETHERNET INTERFACE

Ports	5-RJ45 (1-WAN, 4-LAN or 5-LAN)
Data Rate	10/100 Mbps (auto-sensing), auto MDI/MDIX
Magnet Isolation	1.5KV

SERIAL INTERFACE

Connector	Terminal block, 6-pin 3.5mm female socket with lock
Ports	1-RS232, 1-RS485 (2-RS232 or 2-RS485, option)
Baud Rate	300bps to 230400bps
ESD Protection	8KV for RS232, 15KV for RS485

WI-FI

Antenna Connector	1 × 50 Ω SMA Male
Standard	IEEE 802.11b/g/n, supporting AP and Client modes
Transmission Rate	IEEE802.11b/g: up to 54Mbps; IEEE802.11n: up to 300Mbps
Security	Open, WPA, WPA2, WPA/WPA2 Enterprise, Radius
Tx Power	18dBm (11g), 21dBm (11b)
Rx Sensitivity	<-72dBm@54Mbps

I/O

Connector	Terminal block, 6-pin 3.5mm female socket with lock
DI	2-DI (0-30V input)
DO	2-Relay (up to 5A and 30VDC/250VAC output)

EXTERNAL STORAGE

USB Port	1 × USB 2.0
SD (Optional)	1 × Micro SD interface, up to 32G
Usage	User program, data storage, and firmware upgrade

GPS (OPTIONAL)

Module	Built-in independent GPS module
Antenna Connector	1 × 50 Ω SMA Female

POWER SUPPLY & CONSUMPTION

Connector	2-pin with 3.5mm terminal block
Standard Power	DC 12V/1.5A
Input Voltage	5–35 VDC
Power Consumption	280–330mA@12VDC
Idle Consumption	190–240mA@12VDC

SOFTWARE

Network Protocols	PPP, PPPoE, SNMP v1/v2c/v3, TCP, UDP, DHCP, RIPv1/v2, OSPF, DNS, DDNS, HTTP, ARP, QoS, SNTP, Telnet, VLAN, SSH, etc.
Serial Port	MQTT, Transparent (TCP Client/Server, UDP Client/Server), Modbus Gateway (Modbus RTU to Modbus TCP)
VPN Tunnel	IPsec/PPTP/L2TP/GRE/OpenVPN

FIREWALL, MANAGEMENT & RELIABILITY

Firewall	ACL / DMZ / Port Mapping / MAC Binding
Management	Web, CLI, SMS, Cloud DMP (Device Management Platform)
Reliability	WAN failover, dual SIM backup and load balance, hardware & software watchdog
Secondary Development	OpenWrt based, supports Python, LUA, and SDK

PHYSICAL CHARACTERISTICS

Ingress Protection	IP30
Housing & Weight	Metal, 630g (1.39lbs), without accessories
Dimensions	145 × 114 × 45mm (5.71 × 4.49 × 1.77in)
Mounting	Desktop, DIN rail

ENVIRONMENTAL

Operating Temperature	-35°C to +75°C (-31°F to +167°F)
Storage Temperature	-40°C to +80°C (-40°F to +176°F)
Relative Humidity	0% to 95% (non-condensing) at 25°C/77°F
Ethernet Isolation	1.5 kV RMS

OTHERS

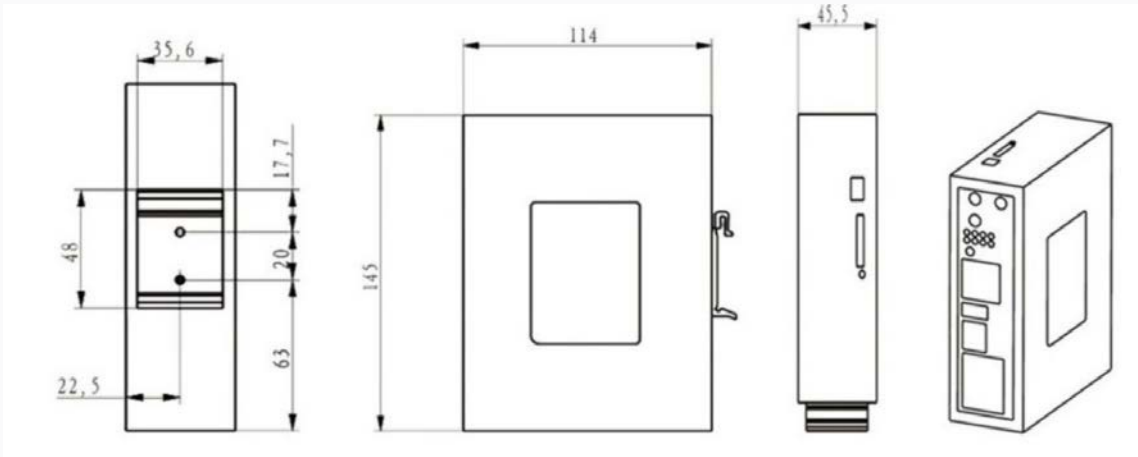
Reset Button	1-RESET
LED Indicators	1-POWER, 1-WiFi, 1-SYSTEM, 1-ALARM, 1-ONLINE, 3-Signal Strength
Built-in	Watchdog, RTC, Timer
Certifications	CE, RCM, NBTC, FCC*
Warranty Period	Standard: 12 months. Extended: 2–5 years.

* Under process. There is a licence fee for DMP. Price of extended warranty will differ. If you couldn't find the frequency band for your region or have any questions, please contact Qualitech Technology sales for more information.

Standard Package Content

- W4GR-1115 Gateway
- Power adapter (DC 12V/1.5A, EU/US/UK/AU plug optional)
- RP-SMA Wi-Fi antenna (19.5cm, 5dBi)
- Mag-mount cellular antenna / SMA male (optional)
- RS232 cable / DB9 female, 1 meter (optional)
- Ethernet cable (1 meter); 6-pin terminal block (2 pcs), 2-pin terminal block, DIN-rail mount
- Quick Start Guide (printed)

Dimensions (mm)



Ordering Information

Model	Frequency Band
W4GR-1115-LF	4G LTE CAT 6 — EMEA & APAC: B1/B3/B5/B7/B8/B20/B28; NA: B2/B4/B5/B7/B12/B13/B25 4G LTE CAT 4 — EMEA: 1/B3/B5/B7/B8/B20/B38/B40/B41; ANZ/LATAM: B1/B3/B5/B7/B8/B28; NA: B2/B4/B5/B12/B13/B14
W4GR-1115-W	HSPA/UMTS/WCDMA — 900/2100MHz, or 850/1900/2100MHz Global: 800/850/900/1900/2100

If you couldn't find the frequency band for your region, please contact Qualitech Technology sales for more information.

Support & Partnership

Qualitech Technology provides technical guidance and engineering support services for partners.

Contact

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MODEL

W4GR-1115

PRODUCT NAME

Industrial Cellular Gateway

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