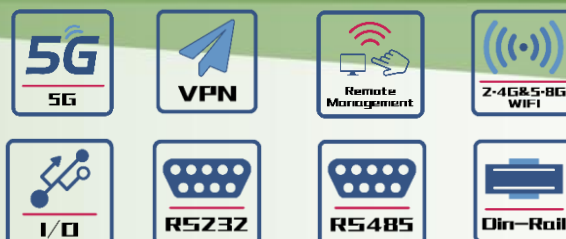


# Industrial 5G Gateway

G100



## Introduction

The G100 is a 5G IoT wireless intelligent gateway that provides users with wireless long distance big data transmission using a public 3G/4G/ 5G network. The product uses a high performance industrial grade 32 bit communication processor and industrial grade wireless modules, with an embedded real time operating system as a software platform, and provides 1x RS232, 5 x RS485, 4 x Ethernet LANs, and 1 x WAN. The product has been widely used in the M2M industry of the IoT industrial chain, such as smart grid, intelligent transportation, smart manufacturing, smart home, and finance.



Industrial-grade Design

- ▶ High-performance industrial-grade CPU
- ▶ High-performance industrial-grade wireless communication module
- ▶ Support low-consumption mode, scheduled power-on/power-off mode (Optional)
- ▶ Metal casing, IP30 protection level, suitable for most industrial control applications.
- ▶ Wide range power input (DC 9~36V)



Stability & Reliability

- ▶ SIM/UIM card slot with built-in 15KV ESD
- ▶ Ethernet interface with built-in 15KV ESD
- ▶ RS232/RS485 with built-in 15KV ESD
- ▶ Multiple protection mechanism to ensure system stability, always keeping online
- ▶ Auto recovery mechanism, including online detect and auto redial
- ▶ WDT Watchdog design to ensure system stability



Standard & Convenience

- ▶ Standard RS232, RS485, Ethernet and WIFI
- ▶ Provide standard wired WAN port (support standard PPPOE protocol)
- ▶ Intelligent data terminal, automatically enter transmission status after power-on
- ▶ Easy to use and flexible, has multiple working modes
- ▶ Convenient system configuration and maintenance interface (including local and remote WEB or CLI access)
- ▶ DIN-Rail mounting, wall mounting or desktop

# Industrial 5G Gateway G100 Series



High Performance

- ▶ Support 3G/4G/5G and wired WAN dual link backup ( Optional ) .
- ▶ Multiple WAN connection methods, include static IP, DHCP, PPPOE, 3G/UMTS/4G/LTE, DHCP-4G/5G
- ▶ Support APN/VPDN
- ▶ Support NTP, RTC embedded.
- ▶ Support multiple DDNS provider service
- ▶ Support multiple online trigger ways,including SMS, ring and data. Support link disconnection when timeout
- ▶ Support remote management, SYSLOG, SNMP, TELNET, SSHD, HTTPS, etc.
- ▶ Support upgrade software from the local and remote maintenance.
- ▶ Support SPI firewall, access control, URL filtering, etc.
- ▶ WIFI 802.11b/g/n/ac. Support AP/AP Client/Bridge mode (Optional).
- ▶ VPN Tunnel: PPTP/L2TP/OPENVPN/IPSEC/GRE
- ▶ Support TCP/IP, UDP, FTP (Optional), HTTP and other network protocols
- ▶ Support DHCP server and DHCP client, NAT, DMZ, QOS.
- ▶ Schedule Reboot, Schedule Online and Offline, etc.
- ▶ Use MQTT+SSL/TLS Https WebSocket to connect to the IoT platform
- ▶ Support TCP/IP/UDP/FTP/HTTP and other network protocols
- ▶ Support PC client software to achieve remote configuration, data monitoring, and other features
- ▶ Can access to the Ali could, Huawei Could and other third-party could platforms
- ▶ With Python, C secondary development, applications can be customized
- ▶ Built-in various communication protocols (Modbus RTU/Modbus TCP/IEC60870\_5\_104, and etc.)
- ▶ Supports encryption modes such as DES and 3DES, and supports VRRP hot backup
- ▶ Local storage supports flash memory, TF card (or built-in eMMC)
- ▶ Provide secondary development kit (SDK), easy to use various system interfaces and resources
- ▶ Support GPS function (Optional)

# Industrial 5G Gateway G100 Series



## Product Specification

### Cellular Specification

Items	Contents
<b>Standard and Band</b>	5G NR: n1, n3, n5, n7, n8, n20, n28, n38, n41, n77, n78, n79 LTE: B1, B2, B3, B5, B7, B8, B20, B28, B34, B38, B39, B40, B41, B42, B43 WCDMA: B1, B2, B5, B8 Optional: 5G NR: n2, n5, n7, n12, n25, n41, n66, n71, n78 LTE: B2, B4, B5, B7, B12, B13, B14, B17, B25, B26, B29, B30, B66, B71, B41, B42, B48 WCDMA: B1, B2, B5, B8 Optional: 5G NR: n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40/n41/n48*/n66/n71/n77/n78/n79 LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B29/B30/B32/B66/B71 LTE TDD: B34/B38/B39/B40/B41/B42/B43/B48
<b>Bandwidth</b>	5G NR : DL 3.4Gbps , UL 900Mbps LTE Cat20 : DL 2.0Gbps , UL 150Mbps HSPA+ : DL 42Mbps , UL 5.76Mbps
<b>Transmit Power</b>	< 23dBm
<b>Sensitivity</b>	< -97dBm

### WIFI Specification

Items	Contents
<b>Standard and Band</b>	Support IEEE802.11b/g/n, 2.4G, Support IEEE802.11ac, 5.8G
<b>Bandwidth</b>	IEEE802.11b/g: Maximum speed rate up to 108Mbps IEEE802.11n: Maximum speed rate up to 300Mbps IEEE802.11ac: Maximum speed rate up to 780Mbps
<b>Security</b>	Support WEP, WPA, WPA2 encrypt methods, optional WPS function
<b>Transmit Power</b>	26dBm (11b), 21.5dBm (11g), 20dBm (11n), 16dBm (11ac)
<b>Sensitivity</b>	< -72dBm @ 54Mbps

### Hardware System

Items	Contents
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# Industrial 5G Gateway G100 Series



<b>CPU</b>	Industrial-grade 32-bit communication processor
<b>Flash</b>	32MB
<b>DDR3</b>	512MB
<b>Interfaces</b>	
<b>Items</b>	<b>Contents</b>
<b>WAN Interface</b>	1 x Gigabit RJ45 ethernet port, adaptive MDI/MDIX, built-in 15KV ESD
<b>LAN Interface</b>	4 x Gigabit RJ45 ethernet port, adaptive MDI/MDIX, built-in 15KV ESD
<b>Serial</b>	1 x RS232, 5 x RS485(One shared with RS232 interface) serial interface with built-in 15KV ESD The serial port parameters are as follows: Data bits: 5, 6, 7, 8 Stop bits: 1, 1.5 (Optional), 2 bits Check: no check, even check, odd check, SPACE (Optional) and MARK check (Optional) Serial port speed: 2400 ~ 115200bits/s
<b>I/O Interface</b>	6-pin 3.5mm terminal block 2xDI, 1xDO, 1xrelay Input high level: 5 to 30 VDC Input low level: 0 to 3 VDC Load current <50mA @ 30VDC Relay load: 1A 250VAC / 30VDC
<b>LED Indicators</b>	"PWR", "SYS", "WIFI", "SIM", "Online", "Signal Strength"
<b>Antenna Interface</b>	Cellular: 2 standard SMA female antenna interfaces, characteristic impedance 50 ohms (4G version) 4 standard SMA female antenna interfaces, characteristic impedance 50 ohms (5G version) WIFI: 2 standard SMA male antenna interfaces, characteristic impedance 50 ohms
<b>SIM/UIM Slot</b>	Standard drawer type user card interface, support 1.8V/3V SIM/UIM card, built-in 15KV ESD, support dual-SIM card
<b>USB</b>	Standard USB3.0 interface, support various USB storage
<b>TF card</b>	Standard bullet TF card interface, support various TF cards (TF card or eMMC)
<b>Power Interface</b>	Terminal power socket
<b>Reset Button</b>	Can reset router's configuration to default factory setting by this button
<b>Power</b>	
<b>Items</b>	<b>Contents</b>
<b>Input Voltage</b>	DC 12V/1.5A
<b>Accepted Range</b>	DC 9~36V
<b>Consumption</b>	<1.2A (12V)
<b>Standby Current</b>	<800mA (12V)

# Industrial 5G Gateway G100 Series



Physical Properties	
Items	Contents
Casing	Metal casing, IP30 protection level, suitable for most industrial control applications.
Dimensions	172x122x38 mm (excluding antennas and mountings parts)
Weight	700g
Others	
Items	Contents
Operating Temperature	-35~+75°C ( -31~+167°F )
Storage Temperature	-40~+85°C ( -40~+185°F )
Relative Humidity	95% (non-condensing)

## Topology



# Industrial 5G Gateway G100 Series



## Dimension



## Order Information

Models	Product Name	Cellular Antenna(s)	WIFI Antenna(s)	SIM/UIM	Description
<b>G100-NR</b>	5G Gateway	4	2	2	Cellular (5G NR), WIFI, SIM*2, 1 x Wan, 4 x Lan, 1 x RS232, 5 x RS485, 5 x I/O(2*DI, 1*DO, 1*Relay.) , GPS(Optional)
<b>G100-L</b>	LTE Gateway	2	2	2	Cellular (LTE), WIFI, SIM*2, 1 x Wan, 4 x Lan, 1 x RS232, 5 x RS485, 5 x I/O(2*DI, 1*DO, 1*Relay.) , GPS(Optional)