

5G Intelligent Gateway

F-G100



Introduction

The F-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 1 RS232, 5 RS485, 4 Ethernet LANs, and 1 WAN.



- ▶ High-performance industrial-grade wireless module
- ▶ High-performance industrial-grade 32-bit communication processor
- ▶ With metal case, protection class IP30. Metal housing and system are safely isolated, especially suitable for industrial control field applications
- ▶ Wide power input DC 9~36V



- ▶ WDT Watchdog design to ensure system stability
- ▶ Adopt a complete anti-drop mechanism to ensure that the data terminal is always online
- ▶ Built-in 1.5KV electromagnetic isolation protection for Ethernet interface
- ▶ RS232/RS485 interface power and data isolation, in line with CSA, UL and IEC standards
- ▶ SIM/UIM card interface built-in 15KV ESD protection
- ▶ Built-in reverse phase protection and over voltage protection for power interface
- ▶ Antenna interface lightning protection (optional)



- ▶ Provide standard RS232, RS485, Ethernet and WIFI interfaces, can directly connect serial devices, Ethernet devices and WIFI devices
- ▶ Provide standard WAN port (support standard PPPOE protocol), which can directly connect ADSL equipment
- ▶ Intelligent data terminal, can enter data transmission state after power on
- ▶ Easy to use, flexible, multiple working mode options
- ▶ Convenient system configuration and maintenance interface (including local and remote WEB mode or CLI mode)
- ▶ Supports DIN rail

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High Performance

- ▶ Support multiple WAN connection methods, including static IP, DHCP, PPPOE, 3G / UMTS / 4G / LTE, dhcp-4G
- ▶ Support 3G / 4G / 5G and wired WAN dual link intelligent switch backup function (optional)
- ▶ Support VPN client (PPTP, L2TP, IPSEC) (Note: Only supported by VPN version)
- ▶ Support VPN sever (PPTP, L2TP, IPSEC) (Note: Only supported by VPN version)
- ▶ Support remote management, SYSLOG, SNMP, TELNET, SSHD, HTTPS,
- ▶ Support local and remote online upgrade, import and export configuration files
- ▶ Support NTP, built-in RTC
- ▶ Support a variety of DDNS
- ▶ Support VLAN, MAC address clone
- ▶ Support WIFI AP mode, client mode, bridge mode(optional)
- ▶ WIFI supports 802.11b / g / n / ac, multiple working modes such as WIFI AP, AP Client, repeater, repeater bridge, etc. (optional)
- ▶ WIFI supports multiple encryption methods such as WEP, WPA, WPA2, MAC address filtering
- ▶ Support APN/VPDN
- ▶ Support DHCP server/DHCP client/DHCP binding MAC/DDNS/NAT/DMZ/QOS, traffic statistics, real-time display of data transmission rate
- ▶ Support TCP/IP/UDP/FTP/HTTP and other network protocols
- ▶ Support SPI firewall, access control, URL filtering

Product Specification

| Cellular Specification | |
|------------------------|---|
| Items | Contents |
| Module | Industrial wireless module |
| Standard and Frequency | 5G NR: n1/n2/n3/n5/n7/n8/n20/n28/n41/n66/n71/n77/n78/n79 LTE: B1/B2/B3/B4(66)/B5(18/19/26)/B7/B8/B12(17)/B13/B14/B20/B25/B26/B28/B29/B30/B38/B39/B40/B41/B42/B43/ B46/ B48/B71 |
| Theoretical bandwidth | 5G NR: downlink 3.4Gbps, uplink 350Mbps LTE Cat20: downlink 2.0Gbps, uplink 150Mbps HSPA+: downlink 42Mbps, uplink 5.76 Mbps |
| Transmit power | <23dBm |
| Receiving sensitivity | <-97dBm |

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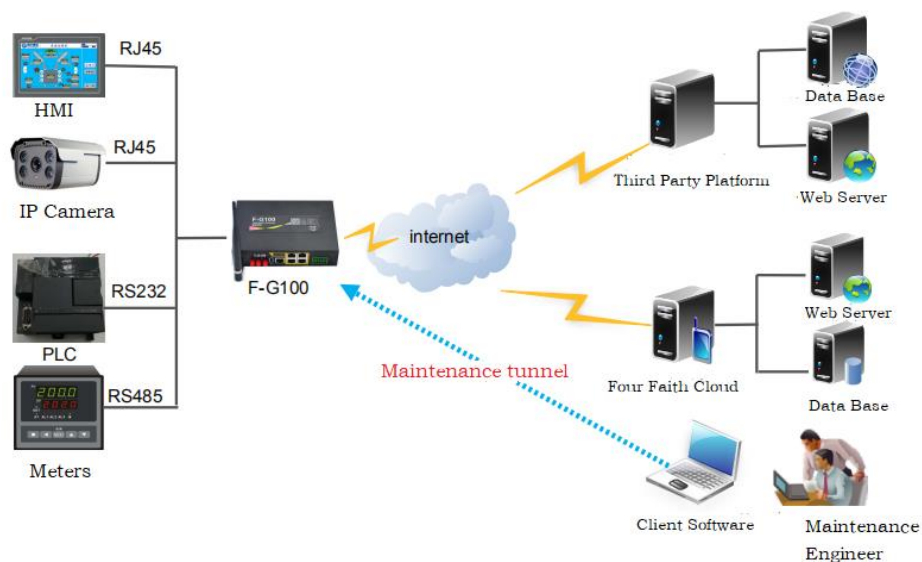
| WIFI Specification | |
|--------------------|---|
| Items | Contents |
| Frequency | Support IEEE802.11b/g/n, 2.4G, 2*2 MIMO, AP mode, Station mode (optional) Support IEEE802.11ac, 5.8G, 2*2 MIMO, AP mode, Station mode (optional) |
| Bandwidth | IEEE802.11b/g: 108Mbps IEEE802.11n: 300Mbps IEEE802.11ac: 780Mbps |
| Security | Support WEP, WPA, WPA2, WPS Optional |
| Power | 26dBm (11b) , 21.5dBm (11g) , 20dBm (11n) , 16dBm (11ac) |
| Sensitive | <-72dBm@54Mbps |
| Hardware System | |
| Items | Contents |
| CPU | Industrial-grade 32-bit communication processor |
| FLASH | 32MB |
| DDR3 | 512MB |
| TF | 8GB/32GB, optional |
| Interfaces | |
| Items | Contents |
| WAN | 1 x 10/100/1000M Ethernet (RJ45) , Adaptive MDI/MDIX, Built-in 1.5KV ESD Protection |
| LAN | 4 x 10/100/1000M Ethernet (RJ45) , Adaptive MDI/MDIX, Built-in 1.5KV ESD Protection |
| Serial | 1 x RS232, 5 x RS485 (One shared with RS232 interface) , Built-in 1.5KV ESD Protection, 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 |
| Indicators | "PWR", "SYS", "WIFI", "SIM", "Online", "Signal Strength" 6-pin 3.5mm terminal block; 2 DI, 1 DO, 1 relay Input high level: 5 to 30 VDC Input low level: 0 to 3 VDC Load current <50mA @ 30VDC Relay load: 1A 250VAC / 30VDC |
| I/O Interface | |
| Antenna | Cellular: 2 standard SMA female antenna interfaces, characteristic impedance 50 ohms WIFI: 2 standard SMA male antenna interfaces, characteristic impedance 50 ohms |
| SIM/UIM | Standard drawer-type user card interface, support 1.8V / 3V SIM / UIM card, built-in 15KV ESD protection |
| USB | Standard USB3.0 interface, support various USB storage |
| TF card | Standard bullet TF card interface, support various TF cards |

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| Power Supply | |
|-----------------------|--|
| Items | Contents |
| Standard | DC 12V/1.5A |
| Range | DC 9~36V |
| Consumption | <1.2A (12V) |
| Standby Current | <800mA (12V) |
| Physical Properties | |
| Items | Contents |
| Shell | Metal shell, protection level IP30 |
| Size | 172x122x38 mm (Excluding antennas and mounts) |
| Weight | 700g |
| Others | |
| Items | Contents |
| Operating Temperature | -35~+75°C (-31~+167°F) |
| Storage Temperature | -40~+85°C (-40~+185°F) |
| Relative Humidity | 95% (No condensation) |

Topology



Order Information

| Models | Description |
|-----------|--|
| F-G100-FL | Cellular (5G-NR), WIFI, SIM*1, I/O(2*DI, 1*DO, 1*Relay.) |