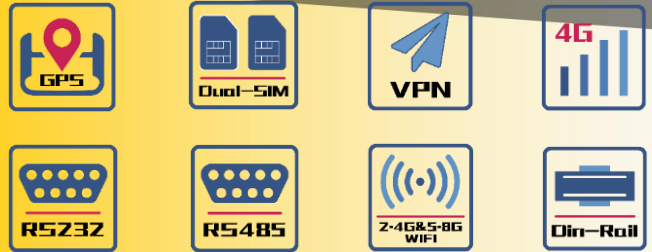


# 4G Industrial Router

F-R200



## Introduction

F-R200 is an intelligent cellular router designed for industrial applications requiring faultless connectivity. It provides a secure, reliable, real-time, remote connectivity for SCADA, distribution management systems, metering etc. Software-defined, multi-carrier networking, dual SIM models, 802.11n/802.11ac and global 2.5G/3G/HSPA+/LTE options make it easy to get connected. With DIN-rail mounting, wide operating temperature range, and IP30 metal housing, F-R200 is a convenient yet reliable solution for any industrial wireless applications.



Industrial-grade Design

- ▶ High-performance industrial-grade wireless module
- ▶ High-performance industrial-grade 32-bit communication processor
- ▶ Using metal shell, protection grade IP30
- ▶ Wide power input range 5~36V



Stability & Reliability

- ▶ WDT Watchdog design
- ▶ Complete anti-dropping mechanism to ensure that the data terminal is always online
- ▶ Built-in 1.5KV electromagnetic isolation protection for Ethernet interface
- ▶ RS232/RS485/RS422 (Optional) interface power and data isolation
- ▶ SIM/UIM card interface built-in 15KV ESD protection
- ▶ Lightning protection of antenna interface (Optional)



Standard & Convenience

- ▶ Standard RS232/RS485/RS422 (Optional), Ethernet and WIFI Interface
- ▶ Provide standard wired WAN port (support standard PPPOE protocol)
- ▶ Can be directly connected to ADSL devices
- ▶ Provide central management software to facilitate devices management (Optional)
- ▶ Multiple working mode options
- ▶ Configuration and maintenance interface
- ▶ Support local and remote WEB mode or CLI mode

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- ▶ Multiple WAN connection methods, include Static IP/DHCP/PPPOE/DHCP-4G
- ▶ Support LTE/EVDO and wired WAN dual link backup (Optional)
- ▶ Support VPN client: PPTP/L2TP/IPSEC (Only VPN version can support)
- ▶ Support VPN server: PPTP/L2TP/IPSEC (Only VPN version can support)
- ▶ Remote management SYSLOG/SNMP/TELNET/SSH/HTTPS
- ▶ Support local upgrade and remote upgrade
- ▶ Import and export configuration files
- ▶ NTP / Build-in RTC
- ▶ Support DDNS
- ▶ Support VLAN, MAC address clone
- ▶ WIFI Support 802.11b/g/n/ac. Support AP/AP Client/Bridge mode (Optional)
- ▶ Support Private APN/VPDN
- ▶ Support APN/VPDN
- ▶ Support DHCP server and DHCP client, DDNS, firewall, NAT, DMZ, QOS
- ▶ Support TCP/IP, UDP, FTP (Optional), HTTP and other network protocols
- ▶ Support SPI firewall, VPN pass through, ACL, URL filter
- ▶ Traffic statistics, real-time display of data transmission rate and, etc.

## Product Specification

### Cellular Specification

Items	Contents
<b>Frequency</b>	Support LTE FDD 2600/2100/1800/900/800MHz, 700/1700/2100MHz (Optional) Support DC-HSPA+/HSPA+/HSDPA/HSUPA/UMTS 850/900/2100MHz, 800/850/1900/2100MHz (Optional) Support EDGE/GPRS/GSM 850/900/1800/1900MHz Support GPRS CLASS 10 Support EDGE CLASS 12
<b>Bandwidth</b>	LTE FDD: Downlink 100 Mbps, Uplink 50 Mbps DC-HSPA+: Downlink 42 Mbps, Uplink 5.76 Mbps HSPA+: Downlink 21 Mbps, Uplink 5.76 Mbps HSDPA: Downlink 7.2 Mbps, HSUPA: Uplink 5.76 Mbps UMTS: 384Kbps
<b>Power</b>	< 23 dBm
<b>Sensitivity</b>	<-97 dBm

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WIFI	
Items	Contents
Frequency	Support IEEE802.11b/g/n, 2.4G, support AP mode, Station mode (Optional) Support IEEE802.11ac, 5.8G, support AP mode, Station mode (Optional)
Bandwidth	IEEE802.11b/g: Maximum speed rate up to 54 Mbps IEEE802.11n: Maximum speed rate up to 150 Mbps IEEE802.11ac: Maximum speed rate up to 390 Mbps
Security Encryption	Support WEP, WPA, WPA2 and other encryption methods, WPS (Optional)
Power	26dBm (11b), 21.5dBm (11g), 20dBm (11n), 16dBm (11ac)
Sensitivity	<-72dBm@54Mbps
Hardware	
Items	Contents
CPU	Industrial-grade 32-bit communication processor
FLASH	32MB, Extensible to 64MB
DDR3	512MB
TF	8GB/32GB (Optional)
Interfaces	
Items	Contents
WAN	1 x 10/100/1000M Ethernet (RJ45) Auto MDI/MDIX, Built-in 1.5KV electromagnetic isolation protection
LAN	4 x 10/100/1000M Ethernet (RJ45) Auto MDI/MDIX, Built-in 1.5KV electromagnetic isolation protection 1 x RS232(RS422/RS485), Built-in 1.5KV electromagnetic isolation protection
Serial	Data bit: 5, 6, 7, 8 Stop bit: 1, 1.5 (Optional), 2 Calibration: null, even, odd, SPACE (Optional) and MARK (Optional) Baud rate: 2400~115200bits/s
Indicators	"PWR", "SYS", "WIFI", "SIM", "Online", "Signal Strength"
I/O Port	6-pin 3.5mm wiring terminal, 2 inputs, 1 output, 1 relay; Controlled by Modbus protocol Input high level: 5 to 30 VDC Input low level: 0 to 3 VDC Load current: 50mA @ 30VDC Relay load 1A 250V AC/ 30V DC
Antenna	Cellular: 2 standard SMA female antenna interfaces, characteristic impedance 50 ohms WIFI: 1 standard SMA male antenna interfaces, characteristic impedance 50 ohms GPS: 1 calibrated SMA male antenna interface, characteristic impedance 50 ohms

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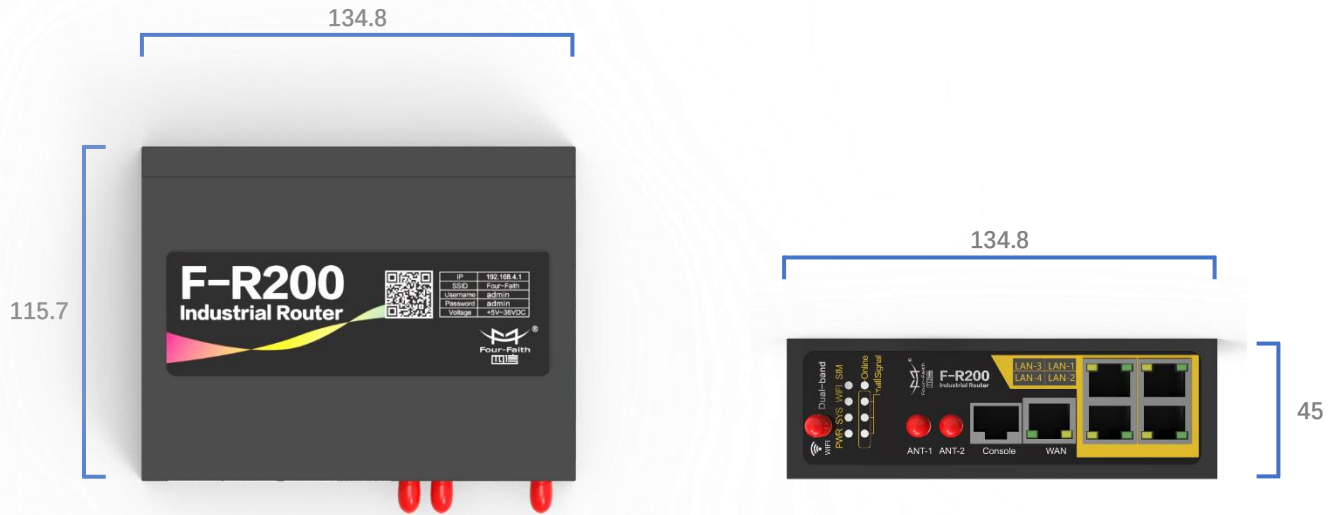


Items	Contents
<b>SIM/UIIM</b>	Standard drawer type user card interface Support 1.8V/3V SIM/UIIM card, built-in 15KV ESD protection
<b>Power</b>	2 PINS terminal power socket, built-in power reverse protection
<b>Reset button</b>	Restore the router's parameter configuration to factory values
<b>Power Supply</b>	
Items	Contents
<b>Standard</b>	DC 12V/1.5A
<b>Range</b>	DC 5 ~36V
<b>Consumption</b>	<700mA (12V)
<b>Physical Properties</b>	
Items	Contents
<b>Shell</b>	Metal shell, protection grade IP30
<b>Size</b>	134.8 x 115.7 x 45mm (Does not include antenna and mounting parts)
<b>Weight</b>	520 g
<b>GPS</b>	
Items	Contents
<b>GPS Module</b>	Industrial GPS module (Optional Beidou module)
	50 channels
<b>Receiver Type</b>	GPSL1 (1575.42MHz) C/A code Support WAAS and EGNOS, MSAS, GAGAN
<b>Maximum Update Rate</b>	5Hz
<b>Positioning Accuracy</b>	Positioning: 2.5m CPE SBAS: 2.0m CPE
<b>Sensitivity</b>	Tracking: -160 dBm Re-capture: -160 dBm Cold start: -146 dBm
<b>Others</b>	
Items	Contents
<b>Operating Temperature</b>	-35~+75°C (-31~+167°F)
<b>Storage Temperature</b>	-40~+85°C (-40~+185°F)
<b>Relative Humidity</b>	95% (No condensation)

# 4G Industrial Router F-R200



## Dimension (mm)



## Order Information

Models	Description
F-R200-FL	F-R200-FL Cellular (LTE/WCDMA), WIFI, SIM*1 (Expandable to 2), I/O (2*DI, 1*DO, 1*Relay), GPS(Optional)
F-R200-FL-SIM2	Cellular (LTE/WCDMA, Single-Module), WIFI, SIM*2, I/O (2*DI, 1*DO, 1*Relay), GPS(Optional)
F-R200-FL/FL-SIM2	Cellular (LTE/WCDMA, Dual-Module), WIFI, SIM*2, I/O (2*DI, 1*DO, 1*Relay), GPS(Optional)