

Product Name	GAO Tek Long Range 4 G Modem
Product SKU	GAOTek-LORAWAN-157
Product URL	https://gaotek.com/product/gaotek-long-range-4-g-modem/

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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.

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It is an intelligent 3G/4G router to provide the necessary M2M applications for all types of terminals. It adopts high-powered industrial 32-bits CPU and embedded real time operating system. It supports RS232 (or RS485/RS422), Ethernet and WIFI port that can conveniently and transparently connect one device to a cellular network, allowing you to connect to your existing serial, Ethernet and WIFI devices with only basic configuration.

It has been widely used on M2M fields, such as self-service terminal industry, intelligent transportation, smart grid, smart home, industrial automation, intelligent building, public security, fire protection, environment protection, telemetry, finance, POS, water supply, meteorology, remote sensing, digital medical, military, space exploration, agriculture, forestry, petrochemical and other fields etc.

Features

1.



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

2.



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)

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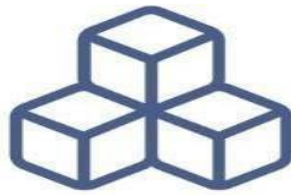
3.



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

4.



High Performance

- 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
<p>Frequency</p>	<p>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</p>
<p>Bandwidth</p>	<p>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</p>
<p>Power</p>	<p>< 23 dBm</p>
<p>Sensitivity</p>	<p><-97 dBm</p>

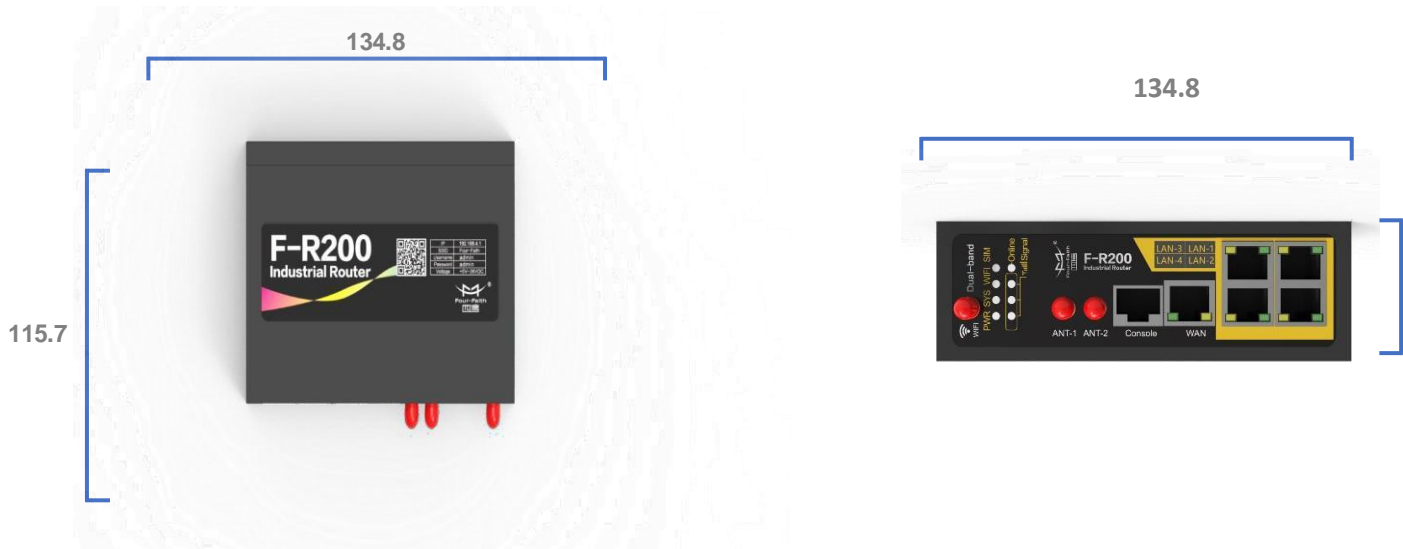
WIFI	
Items	Contents
Frequency	Support IEEE802.11b/g/n, 2.4G, support AP mode, Station mode (Optional) Support IEEE802.11ac, 5.8G, support AP mode, Station mode (Optional)
Bandwidth	IEEE802.11b/maximum speed rate up to 54 Mbps IEEE802.11n: Maximum speed rate up to 150 Mbps IEEE802.11ac: Maximum speed 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
Serial	1 x RS232(RS422/RS485), Built-in 1.5KV electromagnetic isolation protection 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
SIM/UIM	Standard drawer type user card interface Support 1.8V/3V SIM/UIM card, built-in 15KV ESD protection
Power	2 PINS terminal power socket, built-in power reverse protection
Reset button	Restore the router's parameter configuration to factory values
Power Supply	
Items	Contents
Standard	DC 12V/1.5A
Range	DC 5 ~36V
Consumption	<700mA (12V)
Physical Properties	
Items	Contents
Shell	Metal shell, protection grade IP30
Size	134.8 x 115.7 x 45mm (Does not include antenna and mounting parts)
Weight	520 g
GPS	
Items	Contents
GPS Module	Industrial GPS module (Optional Beidou module)
Receiver Type	50 channels GPSL1 (1575.42MHz) C/A code Support WAAS and EGNOS, MSAS, GAGAN
Maximum Update Rate	5Hz
Positioning Accuracy	Positioning: 2.5m CPE SBAS: 2.0m CPE
Sensitivity	Tracking: -160 dBm Re-capture: -160 dBm Cold start: -146 dBm
Others	
Items	Contents
Operating Temperature	-35~+75°C (-31~+167°F)
Storage Temperature	-40~+85°C (-40~+185°F)
Relative Humidity	95% (No condensation)

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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)

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Contact us: sales@gaotek.com

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