

Four-Faith

4G Industrial Router

F-R100 V2

GPS | Dual-SIM | VPN | 4G | RS232 | RS485 | WIFI | Din-Rail

Introduction

F-R100 V2 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 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, the F-R100 is a convenient yet reliable solution for any industrial wireless application.

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
- SIM/UIM card interface built-in 15KV ESD protection
- Built-in reverse phase protection and over voltage protection for power interface

Standard & Convenience

- Standard RS232 or RS485/RS422 (Optional), Ethernet and WIFI Interface
- Provide standard wired WAN port (support standard PPPOE protocol)
- Plug and Play
- Multiple working mode options
- Configuration and maintenance interface
- Support DIN rail and wall-mounted
- Support local and remote WEB mode or CLI mode

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High Performance

- Multiple WAN connection methods, include Static IP/DHCP/PPPOE/DHCP-4G
- Support 3G/4G and wired WAN dual link backup（Optional）
- VPN Tunnel: PPTP/L2TP/IPSEC/OPENVPN/GRE
- 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
- WIFI Support WEP, WPA, WPA2 and multiple SSID
- Support Private APN SIM card
- Support APN/VPDN
- Support DHCP server and DHCP client, NAT, DMZ, QOS
- Support TCP/IP, UDP, FTP (Optional), HTTP and other network protocols
- Support SPI firewall，VPN pass through, ACL, URL filter
- Support hardware encryption (Optional)
- Traffic statistics, real-time display of data transmission rate

Product Specification

Cellular Specification	
Items	**Contents**
Module	Industrial grade wireless module
Frequency	Support for FDD LTE: Band 1/3, Band 2/4/5/13/17/25 (Optional) Support CDMA 1XRTT/EVDO 800/1900MHz Support the whole network (Optional): TDD-LTE, FDD-LTE, EVDO, WCDMA, TD-SCDMA, CDMA1X, GPRS/EDGE
Bandwidth	FDD LTE (Downlink 100Mbps, Uplink 50Mbps) TDD LTE (Downlink 61Mbps, Uplink 18Mbps) CDMA2000 1X EVDO Rev A (Downlink 3.1Mbps, Uplink 1.8Mbps) WCDMA (Downlink 42Mbps, Uplink 5.76Mbps) TD-SCDMA (Downlink 4.2Mbps, Uplink 2.2Mbps)
Power	< 23dBm
Sensitivity	<-93.3dBm

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WIFI Specification	
Items	**Contents**
Frequency	Support IEEE802.11b/g/n
Bandwidth	IEEE802.11b/g：54Mbps IEEE802.11n：150Mbps
Security	Support WEP, WPA, WPA2 and other encryption methods, WPS (Optional)
Power	15dBm（11n），17dBm（11g），18dBm（11b）
Sensitive	<-72dBm @ 54Mbps

Hardware System	
Items	**Contents**
CPU	Industrial-grade 32-bit communication processor
FLASH	16MB, Extensible to 32MB
DDR3	64MB

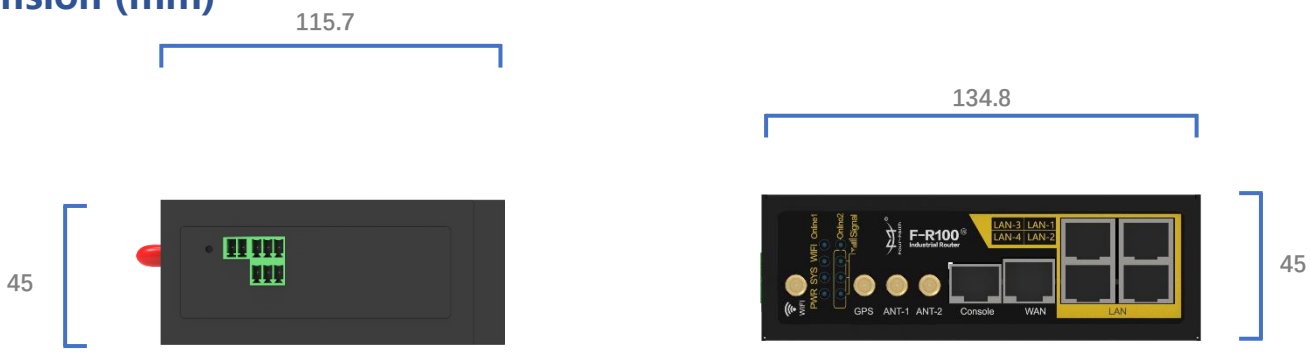
Interfaces	
Items	**Contents**
WAN	1 x 10/100M Ethernet (RJ45) Auto MDI/MDIX, Built-in 1.5KV electromagnetic isolation protection
LAN	4 x 10/100M Ethernet (RJ45) Auto MDI/MDIX, Built-in 1.5KV electromagnetic isolation protection
Serial	1 x RS232 (RS422/RS485), Built-in 1.5KV electromagnetic isolation 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
SIM/UIM	Standard drawer type user card interface Support 1.8V/3V SIM/UIM card, built-in 15KV ESD protection
Power	Terminal power socket
Reset button	2 bins terminal power socket, built-in power reverse protection and overvoltage protection

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Power Supply	
Items	Contents
Standard	DC 12V/1.5A
Range	DC 5 ~36V
Consumption	<500mA (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	520g
Others	
Items	Contents
Operating Temperature	-35~+75℃ (-31~+167℉)
Storage Temperature	-40~+85℃ (-40~+185℉)
Relative Humidity	95% (No condensation)

Dimension (mm)



Order Information

Models	Description
F-R100 V2	Cellular (LTE/WCDMA, Single-Module), WIFI, SIM*1, I/O (2*DI, 1*DO, 1*Relay)
F-R100 V2-SIM2	Cellular (LTE/WCDMA, Single-Module), WIFI, SIM*2, I/O (2*DI, 1*DO, 1*Relay)
F-R100 V2 GPS	Cellular (LTE/WCDMA, Single-Module), WIFI, SIM*1, I/O (2*DI, 1*DO, 1*Relay), GPS
F-R100 V2-2*	Cellular (LTE/WCDMA, Dual-Module), WIFI, SIM*2, I/O (2*DI, 1*DO, 1*Relay)
F-R100 V2-SIM2-GPS	Cellular (LTE/WCDMA, Single-Module), WIFI, SIM*2, I/O (2*DI, 1*DO, 1*Relay), GPS
F-R100 V2-GPS-2*	Cellular (LTE/WCDMA, Dual-Module), WIFI, SIM*2, I/O (2*DI, 1*DO, 1*Relay), GPS