

File version	confidential
V1.10	

## F7A36 GPS+LTE WIFI ROUTER TECHNICAL SPECIFICATION

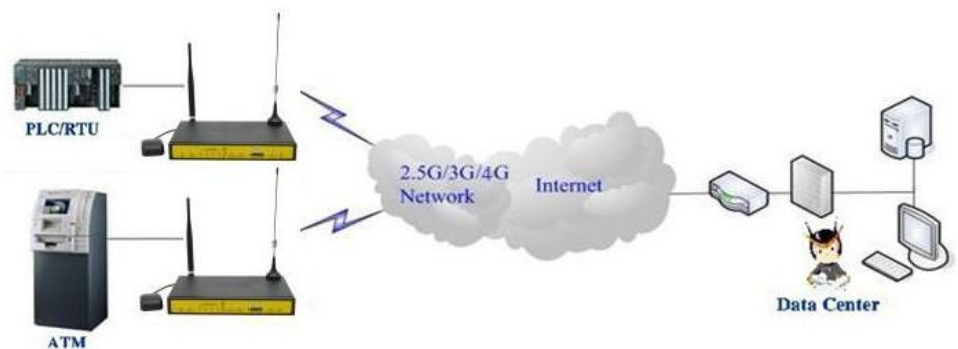


### General

F7A36 GPS+LTE WIFI ROUTER is a kind of cellular terminal device that provides large data transfer function by public LTE network and GPS function.

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. Also, it supports GPS function.

It has been widely used on M2M fields, such as self-service terminal industry, intelligent transportation, smart grid, industrial automation, telemetry, finance, POS, water supply, environment protection, post, weather, and so on.



### Product Feature

#### Design for Industrial Application

- ◆ High-powered industrial cellular module
- ◆ High-powered industrial 32bits CPU
- ◆ High-powered industrial GPS module
- ◆ Support low-consumption mode, including sleep mode, scheduled online/offline mode, scheduled power-on/power-off mode(optional)
- ◆ Housing: iron, providing IP30 protection
- ◆ Power range: DC 5~36V

#### Stability and Reliability

- ◆ Support hardware and software WDT
- ◆ Support auto recovery mechanism, including online detect, auto redial when offline to make router always online
- ◆ Ethernet port: 1.5KV magnetic isolation protection

- ◆ RS232/RS485/RS422 port: 15KV ESD protection
- ◆ SIM/UIM port: 15KV ESD protection
- ◆ Power port: reverse-voltage and over-voltage protection
- ◆ Antenna port: lightning protection(optional)

#### Standard and Convenience

- ◆ Support standard RS232(or RS485/RS422), Ethernet and WIFI port that can connect to serial, Ethernet and WIFI devices directly
- ◆ Support standard WAN port and PPPOE protocol that can connect to ADSL directly
- ◆ Support intellectual mode, enter into communication state automatically when powered

- ◆ Provide management software for remote management
- ◆ Support several work modes
- ◆ Convenient configuration and maintenance interface(WEB or CLI)

**High-performance**

- ◆ Support multiple WAN access methods, including static IP, DHCP, L2TP, PPTP,PPPOE,2G/3G/4G
- ◆ Support double link backup between LTE and WAN(PPPOE, ADSL)(optional)
- ◆ Support VPN client(PPTP, L2TP, IPSEC)(only for VPN version)
- ◆ Support VPN server(PPTP, L2TP, IPSEC)(only for VPN version)
- ◆ Support local and remote firmware upgrade,import and export configure file
- ◆ Support NTP, RTC embedded
- ◆ Support multiple DDNS provider service
- ◆ Support VLANs, MAC Address clone, PPPoE Server

- ◆ Support the GPS positioning function
- ◆ WIFI support 802.11b/g/n. support AP, client, Adhoc, Repeater, Repeater Bridge mode
- ◆ WIFI support WEP,WPA,WPA2 encryption,Support MAC address filter
- ◆ Support multiple online trigger ways, including SMS, ring and data. Support link disconnection when timeout
- ◆ Support APN/VPDN
- ◆ Support DHCP server and client, firewall, NAT, DMZ host , URL block, QoS, traffic statistics, real time link speed statistics etc
- ◆ Full protocol support , such as TCP/IP, UDP, ICMP, SMTP(optional), HTTP, POP3(optional), OICQ(optional), TELNET, FTP(optional), SNMP, SSHD, etc
- ◆ Schedule Reboot, Schedule Online and Offline,etc

**Product Specification** -----

**Cellular Specification**

Cellular Module	Content
Cellular Module	Industrial cellular module
Standard and Band	LTE FDD,LTE TDD,EVDO,WCDMA,TD-SCDMA,CDMA1X,GPRS/EDGE
Bandwidth	LTE FDD: Download speed 100Mbps, Upload speed 50Mbps LTE TDD: Download speed 61Mbps, Upload speed 18Mbps DC-HSPA+: Download speed 42Mbps, Upload speed 5.76Mbps TD-HSPA+: Download speed 4.2Mbps, Upload speed 2.2Mbps EVDO Rev. A: Download speed 3.1Mbps, Upload speed 1.8Mbps
TX power	<23dBm
RX sensitivity	<-97dBm

**GPS Specification**

Item	Content
GPS Module	Industrial GPS module
Receiver Type	50-channel GPS L1(1575.42MHz)C/A code SBAS: WAAS,EGNOS,MSAS,GAGAN Support GALILEO
Max. update rate	4 Hz
Accuracy	Position: 2.5m CPE

	SBAS: 2.0m CPE
Acquisition	Cold starts: 29S Warm starts: 29S Aided starts: <1S Hot starts: <1S
Sensitivity	Tracking: -160dBm Reacquisition: -160dBm Cold starts: -144dBm
Timing accuracy	RMS: 30ns 99%: <60ns Granularity: 21ns
Time pulse	Configurable, 0.25 to 1000Hz

### WIFI Specification

Item	Content
Standard	IEEE802.11b/g/n
Bandwidth	IEEE802.11b/g: 54Mbps (max) IEEE802.11n: 150Mbps (max)
Security	WEP, WPA, WPA2, etc WPS (optional)
TX power	20dBm(11n),24dBm(11g),26dBm(11b)
RX sensitivity	<-72dBm@54Mbps

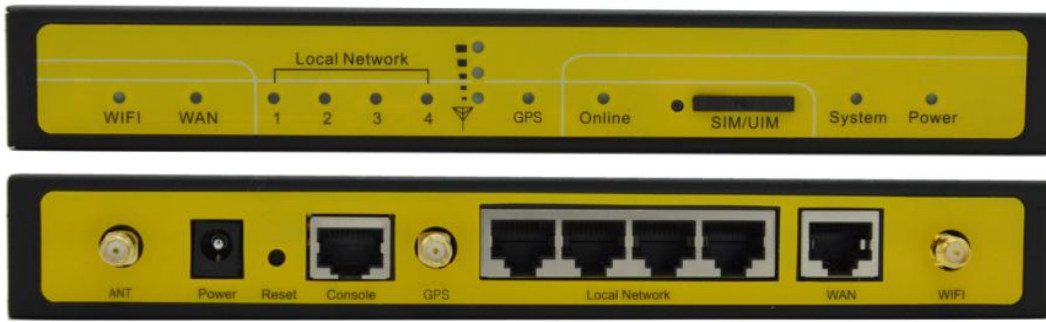
### Hardware System

Item	Content
CPU	Industrial 32bits CPU
FLASH	16MB(Extendable to 64MB)
DDR2	128MB

### Interface type

Item	Content
WAN	1 10/100 Mbps WAN port(RJ45), auto MDI/MDIX, 1.5KV magnetic isolation protection
LAN	4 10/100 Mbps Ethernet ports(RJ45), auto MDI/MDIX, 1.5KV magnetic isolation protection
Serial	1 RS232(or RS485/RS422) port, 15KV ESD protection Data bits: 5, 6, 7, 8 Stop bits: 1, 1.5(optional), 2 Parity: none, even, odd, space(optional), mark(optional) Baud rate: 2400~115200 bps
Indicator	"Power", "System", "Online", "GPS", "Local Network", "WAN", "WIFI", "Signal Strength"
Antenna	Cellular: Standard SMA female interface, 50 ohm, lightning protection(optional) GPS: Standard SMA female interface, 50 ohm, lightning protection(optional) WIFI: Standard SMA male interface, 50 ohm, lightning protection(optional)

SIM/UIM	Standard 3V/1.8V user card interface, 15KV ESD protection
Power	Standard 3-PIN power jack, reverse-voltage and over-voltage protection
Reset	Restore the router to its original factory default settings



**Power supply**

Item	Content
Standard Power	DC 12V/1.5A
Power range	DC 5~36V

**Consumption**

Working condition	Consumption
Standby	305~338mA@12VDC
Communication	340~584mA@12VDC
Schedule Shutdown	2.57~4.2mA@12DVC

**Physical Characteristics**

Item	Content
Housing	Iron, providing IP30 protection
Dimensions	207x135x28 mm
Weight	790g

**Environmental Limits**

Item	Content
Operating Temperature	-35~+75°C(-31~+167°F)
Storage Temperature	-40~+85°C (-40~+185°F)
Operating Humidity	95% (unfreezing)