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## F7736 GPS+LTE/TD-SCDMA WIFI ROUTER TECHNICAL SPECIFICATION

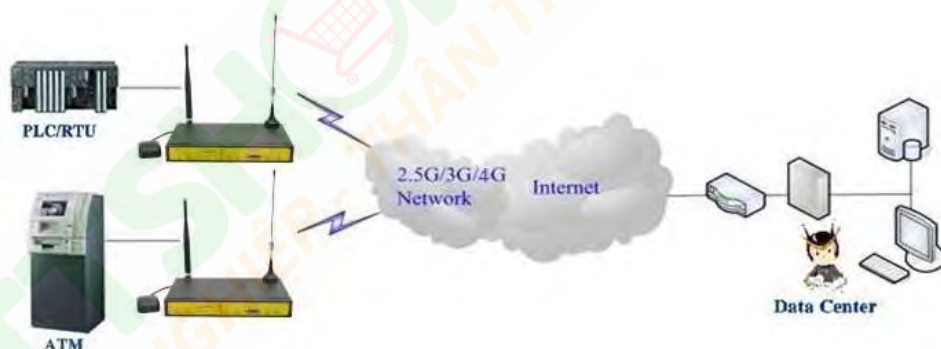


### General

F7736 GPS+LTE/TD-SCDMA WIFI ROUTER is a kind of cellular terminal device that provides large data transfer function by public LTE/TD-SCDMA 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/TD-SCDMA 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 TDD 2600/1900/2300MHz(Band 38/39/40), 800/1400/1800MHz(Band 27/61/62)(optional)<br>TD-SCDMA 2010/1900MHz(A/F frequency band, Band 34/39)<br>GSM /GPRS/EDGE 900/1800/1900MHz |
| Bandwidth         | LTE TDD: Download speed 61Mbps, Upload speed 18Mbps<br>TD-HSPA+: Download speed 4.2Mbps, Upload speed 2.2Mbps<br>TD-HSPA: Download speed 2.2Mbps, Upload speed 2.2Mbps          |
| TX power          | <23dBm  |
| RX sensitivity    | <-97dBm   |

**GPS Specification**

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

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

### WIFI Specification

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

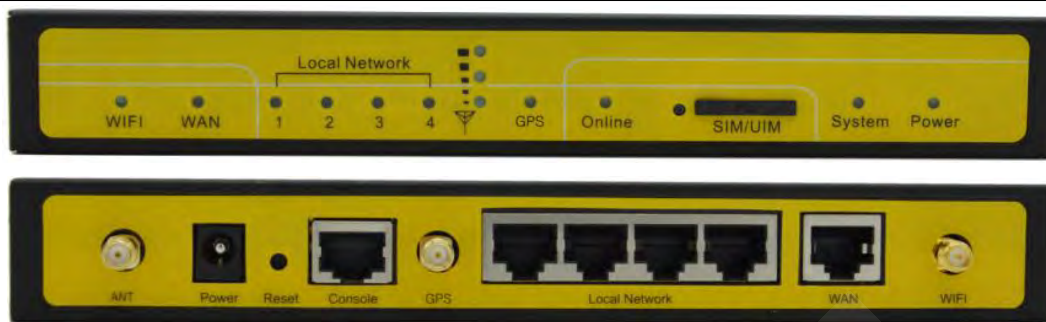
### Hardware System

| 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<br>Data bits: 5, 6, 7, 8<br>Stop bits: 1, 1.5(optional), 2<br>Parity: none, even, odd, space(optional), mark(optional)<br>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)<br>GPS: Standard SMA female interface, 50 ohm, lightning protection(optional)<br>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           | 293~340mA@12VDC  |
| Communication     | 352~593mA@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)       |