

InRoute611-S Series

4G LTE, 3G, WI-FI, VPN Industrial Router



Overview

Integrating 3G, 4G LTE and advanced security, the InRouter611-S series is the next generation of InRouter611-S cellular router. With embedded hardware watchdog, link detection, auto-recovery and auto-reboot, the InRouter611-S series provides reliable communications to unattended sites. Reliable VPN technology secures sensitive data, including standard IPSec/SSL/PPTP/L2TP and GRE. The IR611-S also utilizes remote management tools such as a CLI, a web interface and InHand *Device Manager* Cloud platform for batch configuration and monitoring.

Now available with the LTE CAT 1, the InRouter611-S is able to provide highly efficient LTE connectivity and more cost-effective solutions for M2M/IoT applications including retail, ATM/POS, digital signage, remote monitoring, smart metering, healthcare and more.

Features

Uninterrupted Network Access

- Optional 4G/LTE CAT4/CAT1, 3G/HSPA+, 3G/EV-DO, Cat 4 (150Mbps DL, 50Mbps UL)
Cat 1 (10 Mbit/s DL, 5 Mbit/s UL)
- Automatically recover with GPRS or 3G without an LTE signal
- WI-FI Access Point or Client: 802.11b/g/n, WEP/WPA/WPA2 encryption
- 3G/4G and Wi-Fi backup internet access
- Quad-Band 2G, 3G and 4G LTE for global deployment

Rugged Industrial Design

- Metal housing, IP30
- EMC levels II and above
- 1.5 kv isolated serial port

- Wide temperature range: -20~70 °C
- Wide input voltage range: 9~26VDC

Data Security

- **Data Transmission Security**
IPsec VPN, L2TP, PPTP, SSL VPN and certificates guarantee data security
SCEP scalable VPN authentication
- **Network Security**
Stateful packet inspection (SPI), Secure Shell(SSH) and DoS mitigation
Intrusion protection, and IP to MAC Binding
ACL, DMZ, Port-forwarding and IP filtering
- **Management-Plane Security**
SSH, HTTPS and InHand *Device Manager* for secure remote management
Multi-level user authority
Administrative permission management

Reliable Cellular

- **Automatic Link Detection & Recovery**
PPP Layer Detection: monitor the cellular connection
Network Connection Detection: automatic redial and reboot
VPN Tunnel Detection: ruggedized and improved VPN tunnels

Remote Management

- Local Web-Browser Interface
- Command-line interface
- *Device Manager* for batch management and configuration

Industrial Serial

- Transparent serial communication for point to multi-point serial over cellular.
- Modbus TCP to Modbus RTU protocol conversion

Specifications

IR611-S Software Specification

		IR611-S
Network	Network Access	Custom APN, VPDN, Static IP
	Authentication	CHAP/PAP
	Network	GSM/GPRS/EDGE UMTS/HSPA+/EVDO/TD-SCDMA TD-LTE FDD LTE
	LAN	ARP
	WAN	PPP

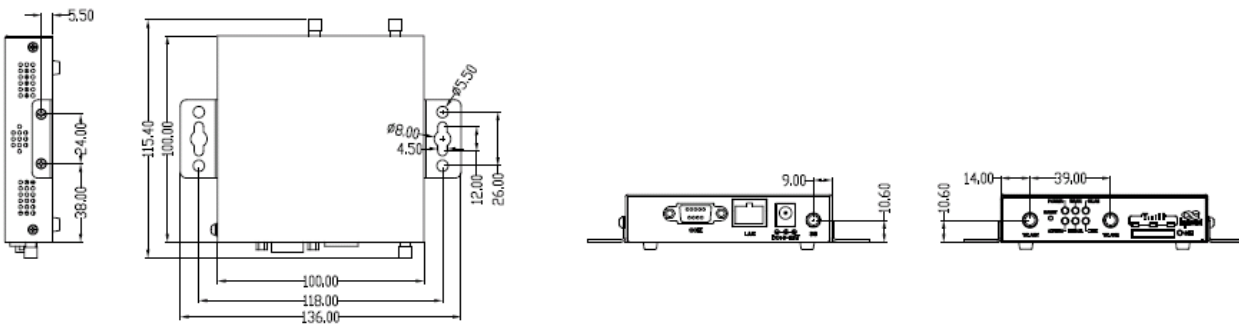
		IR611-S	
	IP	Ping, Trace, DHCP Server, DHCP Relay, DHCP Client, DNS relay, DDNS, Telnet	
	IP Routing	Static routing	
WLAN (optional)	Standard	IEEE 802.11b/g/n	
	Mode	AP, Client	
	Speed	300Mbps	
	Security		Support open system, shared keys, WPA/WPA2
			WEP/TKIP/AES encryption
Transmission Distance	100m (line of sight)		
Security	Network Security	DoS protection, Stateless Packet Inspection, Filtering Multicast/Ping package, Access Control List (ACL), IP/MAC Binding, Port forwarding	
	Data Security	IPsec/L2TP/PPTP/GRE/OpenVPN/CA	
	Management Security	Multi-level user authority	
Reliability	Link Status Detection	Reconnects automatically when a link failure is detected	
	Auto-Recovery	Hardware Watchdog	
Intelligence	Integrated DTU Functions	Support Modbus protocol, virtual serial port, WP agreement, WN protocol, Trap + Poll, transparent transmission	
Management & Maintenance	Traffic Management	Bandwidth control, IP-based QoS	
	Configuration	Telnet, web, SSH, INOS command-line	
	Firmware Upgrade	Via web, InHand Device Manager	
	Log	Local log, remote log, export log via serial port	
	On-Demand Dial Up	Trigger by data on port, text message or on demand	
	Network Management	InHand Device Manager for batch configuration	
	Multi-level user	Authentication for configuration and remote access	
	Maintenance Tool	Ping, Traceroute, speed test	
	Status Check	System, modem, network connections, route	

IR611-S Hardware Specification

		IR611-S
Interface	Ethernet Port	1*10/100Mbps, LAN/WAN, 1.5KV isolated serial port
	Power Supply	DC9-26V

		IR611-S
	Serial Port	1*RS-232,15KV ESD protection
	SIM Holder	Drawer Card Holder x1
	Reset	Pinhole Reset Button
	Antenna Connector	3G/4G:SMA x 1, WLAN: RP-SMA x 2 Note: 1. VH09 model: SMA 3G x 2 2. FS18 and FS28 models: SMA 4G x2
Mechanical Features	Dimension (mm)	100x100x23
	Installation	Wall/Panel mounting with mounting ears
	Housing	Metal
	Protection Level	IP30
	Cooling	Fanless
Power Consumption	Standby	80mA-120mA@12V
	Operating	200mA-220mA@12V
	Peak	240mA@12.0V
Environment Temperature	Humidity	5~95% relative humidity (noncondensing)
	Storage Temp	-40~85°C
	Working Temp	-20~70°C
LED Indicators	POWER, STATUS, WARN, ERROR, MODEM, SIM, three Levels of Cellular Signal Strength	
EMC	Electrostatic Discharge Immunity	EN61000-4-2,level 2
	Radio Frequency Immunity	EN61000-4-3,level 2
	Electrical Fast Transient/Burst Immunity	EN61000-4-4,level 2
	Surge	EN61000-4-5,level 2
	Immunity to Conducted Disturbances	EN61000-4-6,level 2
	Shockwave Immunity	EN61000-4-12,level 2
	Power Frequency Magnetic Field Immunity	EN61000-4-8, horizontal/vertical400A/m (>level 2)
Physical	Shock Test	IEC60068-2-27
	Free Fall	IEC60068-2-32
	Vibration	IEC60068-2-6
Certification	CE (EMC, LVD, RF, Temperature), FCC, CCC, PTCRB, IC, RCM	
Warranty	3 years	

Dimensions (mm)



Ordering

InRouter611-S		
Part Number	IR611-S-<N>-<WLAN>	
N(Network)	PS08: (Global) UMTS(HSPA+) Band1/2/5/8 EDGE/GPRS/GSM 850/900/1800/1900 PH09: (For China) UMTS(HSPA+) Band1/8 (900/ 2100MHz) VH09: (For China) EVDO 800MHz CDMA 1x 800MHz	3G
	TL00: (For China) LTE-FDD CAT 4 Band 1/3/8 LTE-TDD CAT 4 Band 38/39/40/41 TD-SCDMA Band 34/39 UMTS(DC-HSPA+) Band 1/5/8/9 EDGE/GPRS/GSM 900/1800MHz TL01: (For China) LTE-FDD CAT 4 Band 1/3/5/7/8 LTE-TDD CAT 4 Band 38/39/40/41 TD-SCDMA Band 34/39 UMTS (DC-HSPA+) Band 1 EVDO 800MHz CDMA 1x 800MHz EDGE/GPRS/GSM 850/900/1800/1900MHz	4G

	<p>FH20: (For Europe & APAC) LTE-FDD CAT 4 Band 1/2/3/4/5/7/8/20 UMTS(DC-HSPA+) Band1/2/5/8 EDGE/GPRS/GSM 850/900/1800/1900MHz</p> <p>FS08: (For Europe) LTE-FDD CAT 3 Band1/3/7/8/20 UMTS(DC-HSPA+) Band1/3/8 EDGE/GPRS/GSM 900/1800MHz</p> <p>FB78: (For Australia & South America) LTE-FDD CAT4 Band 1/3/5/7/8/28 UMTS(DC-HSPA+)850, 900, 1900, 2100</p> <p>FB53: (For Europe) LTE-FDD CAT1 Band 3/7/20 EDGE/GPRS/GSM 900/1800/MHz</p> <p>FB63: (For APAC) LTE-FDD CAT1 Band 3/8/28 UMTS(DC-HSPA+) 2100</p> <p>FS18: (For North America, AT&T, T-Mobile) LTE-FDD CAT 3 Band2/4/5/17 UMTS(DC-HSPA+) Band2/4/5 EDGE/GPRS/GSM 850/900/1800/1900MHz</p> <p>FS28: (For USA, Verizon Wireless) LTE-FDD CAT 3 Band2/4/13</p> <p>FB38: (For North America, Verizon Wireless) LTE-FDD CAT 4 Band 2/4/5/13/17 UMTS(DC-HSPA+) Band2/5</p> <p>FB13: (For North America, AT&T) LTE-FDD CAT1 Band2/4/12</p> <p>FB23: (For USA, Verizon Wireless) LTE-FDD CAT1 Band4/13</p>	
	EN00: No Cellular	
WLAN(Wi-Fi)	<p><NA>: no Wi-Fi WLAN: Wi-Fi AP & Client</p>	
Example	IR611-S-PS08-WLAN: support IPsec/PPTP/L2TP/OPEN VPN, HSPA+, Wi-Fi AP & Client, RS232	

Note: UMTS band 1: 2100 MHz; band 2: 1900 MHz; band 4: 1700 MHz; band 5: 850 MHz; band 8: 900 MHz

InHand Networks

InHand Networks provides reliable, secure and intelligent M2M solution for electric power, industrial automation, commercial and medical devices. InHand Networks is recognized by world class customers and partners and expanding with intensive investments in research and development.

InHand Networks has become leader in industrial grade network technology by providing industrial cellular routers, industrial Ethernet switches, wireless sensor network devices and cloud based M2M platforms.

Connecting devices, enabling services.



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