InRouter615-S Series

4G LTE, 3G, Wi-Fi, VPN Industrial Router

Overview

Integrating 3G, 4G LTE and advanced security, the InRouter615-S series is the next generation of InRouter695 cellular router. With embedded hardware watchdog, link detection, auto-recovery and auto-reboot, the InRouter615-S series provides reliable communications to unattended sites. Reliable VPN technology secures sensitive data. The InRouter615-S also utilizes remote management tools such as a CLI, a web interface and InHand *Device Manager* Cloud platform for batch configuration and monitoring.

InRouter615-S series is ideal for large-scale Machine to Machine(M2M) applications including kiosks, vending machines, medical equipment and industrial control systems.

Features

Uninterrupted Network Access
- Optional 4G/LTE, 3G/HSPA+, 3G/EV-DO, with 100Mbps downlink, 50Mbps uplink.
- Automatically recover with GPRS/CDMA without an LTE signal
- Wi-Fi Access Point or Client: 802.11b/g/n, speed up to 300Mbps; WEP/WPA/WPA2 encryption
- 3G/4G and Wi-Fi backup for redundant communication

Rugged Industrial Design
- Metal housing, IP30
- EMC levels 3
- 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
- **Network Security**
    - Stateful Packet Inspection (SPI), Secure Shell(SSH) and DoS mitigation
    - Intrusion protection, and IP to MAC Binding
- **Management-Plane Security**
    - Multi-level user authority
    - Administrative permission management

Reliable Cellular

- **Automatic Link Detection**
    - PPP Layer Detection: monitor the cellular connection
    - Network Connection Detection: automatic redial and reboot
    - VPN Tunnel Detection: ruggedized and improved VPN tunnels
- **Auto-recovery**
    - Embedded hardware watchdog, able to automatically recover from various failure, ensure highest level of availability.

Remote Management

- Local Web-Brower Interface
- Command-line interface
- InHand 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
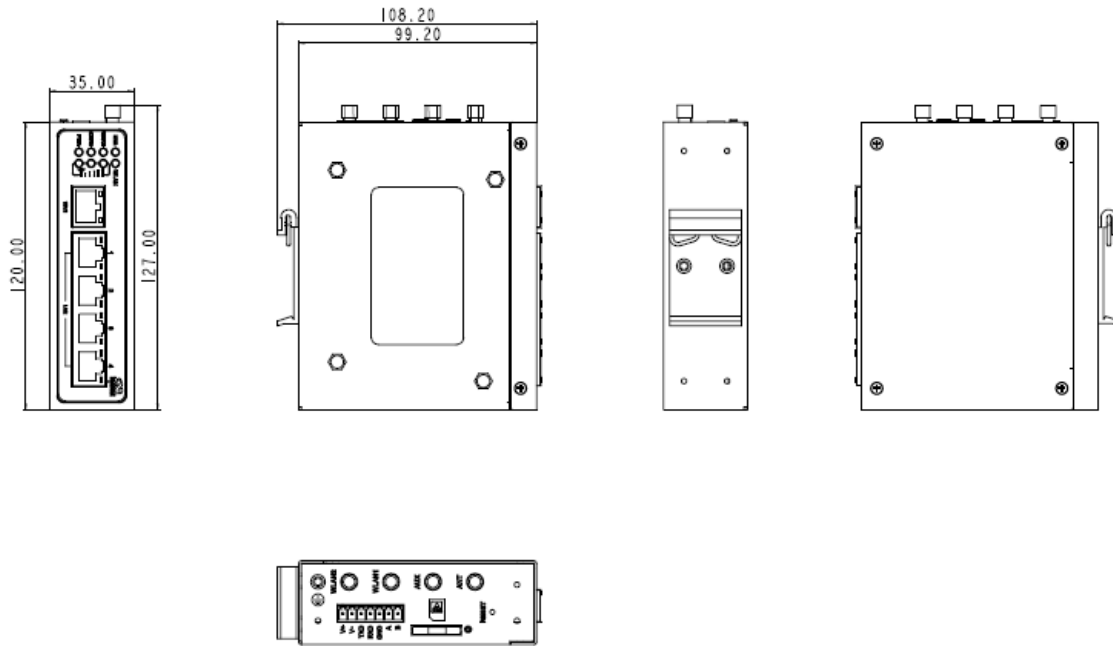
Specifications

InRouter615-S Software Specification

		InRouter615-S
Network	Network Access	Custom APN, VPDN
	Authentication	CHAP/PAP
	Network	GSM/GPRS/EDGE UMTS/HSPA+/EVDO/TD-SCDMA/ TD-LTE/FDD LTE (See the detailed band in ordering table)
	LAN	ARP, Ethernet
	WAN	Static IP, DHCP, PPPoE, PPP

		InRouter615-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 (depend on field environments)
Security	Network Security	DoS protection, Stateless Packet Inspection, Filtering Multicast/Ping package, Virtual IP Mapping, Access Control List (ACL), IP/MAC Binding, Port forwarding
	Data Security	IPSec VPN/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
	Firmware Upgrade	Via web, via InHand Device Manager
	Log	Local log, remote log, export log via serial port; Important log backup in flash memory
	On-Demand Dial Up	Trigger by data, 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

InRouter615-S Hardware Specification

		InRouter615-S
Interface	Ethernet Port	1*10/100Mbps, WAN; 4*10/100Mbps, LAN; 1.5KV isolated protection
	Power Supply	DC9-26V
	Serial Port	1*RS-232/485(DB9),15KV ESD protection
	SIM Holder	Drawer Card Holder x1
	Reset	Pinhole Reset Button
	Antenna Connector	3G/4G: SMA x 2, WLAN: RP-SMA x 2
Mechanical Features	Dimension (mm)	127x108.2x35
	Installation	Standard DIN-rail, wall/panel mounting optional
	Housing	Metal
	Protection Level	IP30
	Cooling	Fanless
Power Consumption	Standby	120mA-200mA@12V
	Operating	150mA-320mA@12V
	Peak	320mA@12V
Wi-Fi Transmit Power	Transmit Power	802.11b:16dBm +/-2dBm(11Mbps) 802.11g:16dBm +/-2dBm(54Mbps) 802.11n@2.4GHz:16dBm +/-2dBm(HT20 MCS7) 802.11n@2.4GHz:16dBm +/-2dBm(HT40 MCS7)
Environment Temperature	Humidity	5~95% relative humidity (noncondensing)
	Storage Temp	-40~85°C
	Working Temp	-20~70°C
LED Indicators	POWER, STATUS, WARN, ERROR, Wi-Fi, SIM, three Levels of Cellular Signal Strength	
EMC	Electrostatic Discharge Immunity	EN61000-4-2,level 3
	Electrical Fast Transient/Burst Immunity	EN61000-4-4,level 3
	Surge	EN61000-4-5,level 3
	Shockwave Immunity	EN61000-4-12,level 3
Certification	CE(EMC&LVD&RF&Temperature), FCC	
Warranty	3 years	

Dimensions (mm)

InRouter615-S

Ordering Information

	InRouter615-S		
Part Number	InRouter615-S-<N>-<WLAN>		
N (Network)	U: UMTS(HSPA+); V: EVDO; L: LTE-FDD; L3: LTE-FDD/UMTS/GPRS; L5: LTE-FDD/LTE-TDD/TD-SCDMA/UMTS/GPRS; L7: LTE-FDD/LTE-TDD/TD-SCDMA/UMTS/ EVDO/CDMA-1x/GPRS;		
	Network/Hardware Version	Band	3G/4G
	U/30108	UMTS(HSPA+) Band1/2/5/8 (850/900/1900/2100MHz) EDGE/GPRS/GSM 850/900/1800/1900MHz	3G
	U/30207	UMTS(HSPA) Band1/8(900/2100MHz) EDGE/GPRS/GSM 850/900/1800/1900MHz	
	V/40214	EVDO 800MHz CDMA 1x 800MHz	
	V/40115 (For Verizon Wireless in USA)	EVDO and CDMA 1x	
	L5/60218 (For China)	LTE-FDD Band 1/3/8 LTE-TDD Band 38/39/40/41 TD-SCDMA Band 34/39 UMTS(DC-HSPA+) 1/5/8/9 EDGE/GPRS/GSM 900/1800MHz	4G

	L7/60522 (For China)	LTE-FDD Band 1/3 LTE-TDD 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	
	L3/60123 (For Europe)	LTE-FDD Band 1/3/7/8/20 UMTS(HSPA+) Band 1/3/8 EDGE/GPRS/GSM 900/1800MHz	
	L3/60124 (For AT&T in USA and North/South America)	LTE-FDD Band 2/4/5/17 UMTS(HSPA+) Band 2/4/5 EDGE/GPRS/GSM 850/900/1800/1900MHz	
	L/60625 (For Verizon Wireless in USA)	LTE-FDD Band 4/13	
	L3/60220 (For Europe)	LTE-FDD Band 1/2/3/4/5/7/8/20 UMTS(DC-HSPA+) Band1/2/5/8 EDGE/GPRS/GSM 850/900/1800/1900MHz	
	EN00		No cellular module
WLAN(Wi-Fi)	<NA>: no Wi-Fi WLAN: Wi-Fi AP&Client		
Example	InRouter615-S-L5-WLAN: 5 ETH ports, support IPSec/PPTP/L2TP/OPEN VPN, LTE-FDD/LTE-TDD/TD-SCDMA/UMTS/GPRS, Wi-Fi AP&Client, RS-232 or RS-485		

InHand Networks

InHand Networks provides reliable, secured and intelligent M2M solution for electric power, industrial automation, commercial and medical devices. Recognized by world class customers and partners. Proven by a large install base. Expanding with intensive investments in research and development. Enduring for long-term support.

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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