

Compact Industrial Router

5G, Four Gigabit Ethernet Ports, Dual SIM, Wi-Fi 5, Cloud Management

InRouter624

Embrace 5G to empower enterprise digitalization

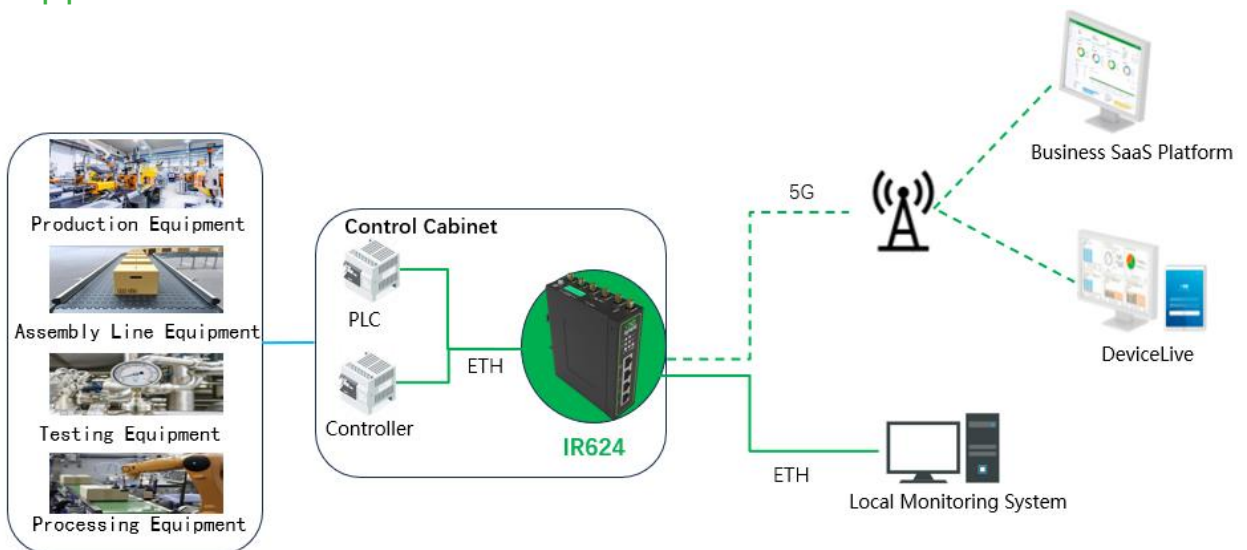


- Facing the ever-increasing digitalization of IoT, both application scenarios and terminal devices urgently need to be networked to facilitate the digital transformation of enterprise business, requiring more convenient and efficient networking solutions. InHand launches InRouter624(IR624) series products combined with DeviceLive cloud management service. It is suitable for various industries of the IoT, making your enterprise digitalization more convenient and efficient!
- The IR624 series products are industrial router product that integrates 4G/5G, Wi-Fi, virtual private network (VPN) and other technologies. It provides uninterrupted network access capabilities, comprehensive security features, and intelligent software services for various IoT industry applications, providing a secure and reliable business data link for enterprises to achieve digital networking.
- The IR624 series products are suitable for the networking of unattended devices and sites. It is embedded with watchdog and multi-layer link detection mechanisms to ensure reliable and stable communications. Meanwhile, combined with the InHand DeviceLive cloud platform, it is easy for enterprise users to conduct unified cloud management centrally, grasp status of devices effortlessly, save deployment costs and improve management efficiency, providing one-stop solutions for your large-scale IoT deployment.

Key industries:

Smart Commerce	<ul style="list-style-type: none"> - ATM, POS - Unattended kiosk - Digital signage - Retail Stand
Smart Energy	<ul style="list-style-type: none"> - EV Charging - Power distribution , Meter reading
Smart City	<ul style="list-style-type: none"> - Heat, Water & air supply - Gas supply security; Traffic management、 - E-police - Smart parking
Smart Manufacturing	<ul style="list-style-type: none"> - Networking machines robots - Industrial automatic factories & productions lines
Smart medical care	<ul style="list-style-type: none"> - Medical device networking and other applications

Application Case



Features and Advantages

● Omnipresent and continuous internet access capability: 5G

The IR624 is equipped with 5G cellular access capabilities, fully providing new capabilities and experiences brought by 5G networks. The high bandwidth, low latency and other features make better service.

- Global 5G network access, downstream rate 2Gbps, support SA/NSA networking.
- Gigabit Ethernet, support WAN/LAN/VLAN.
- Maximum bandwidth 1200Mbps, support 802.11 ac/a/b/g/n, 2.4G+5G Wi-Fi dual-band.

● Concise and convenient cloud management

IR624 can access the InHand DeviceLive device management cloud platform. DeviceLive can manage tens of thousands of distributed site devices in real time, and grasp device status anytime and anywhere. At the same time, users can connect to remote devices through cloud services to diagnose, debug and repair the devices, reduce losses caused by device failure, and make management easier, more efficient, and more economical!

● “Always online” , ensuring uninterrupted network

Provides high quality network services that are always online, ensuring the stability of business network, reducing the risk of network malfunction, saving network investment cost.

- Link-backup : enabling wired, cellular and Wi-Fi to make backup mutually;
- Dual SIM failover, automatically switches to the more stable carrier networks;
- Multi-layer detection mechanism : detects link status , realizing automatic re-pull and fault self-recovery

● Strong security protection

Security protection is critical in a complex network environment. Multi-level security policies protect sensitive data and key service networks from attacks and threats, providing a secure network to protect digital assets while business advances rapidly.

- Support IPsec VPN and L2TP VPN, ensuring data transmission security.
- Support access control, NAT, port mapping, and firewall filtering based on MAC/IP/port/protocol to protect the network from external attacks.

● Abundant industrial ports, covering IoT scenarios

With rich industrial interfaces, the IR624 can be widely used in highly integrated and diversified IoT scenarios to provide cost effective networking deployment solutions.

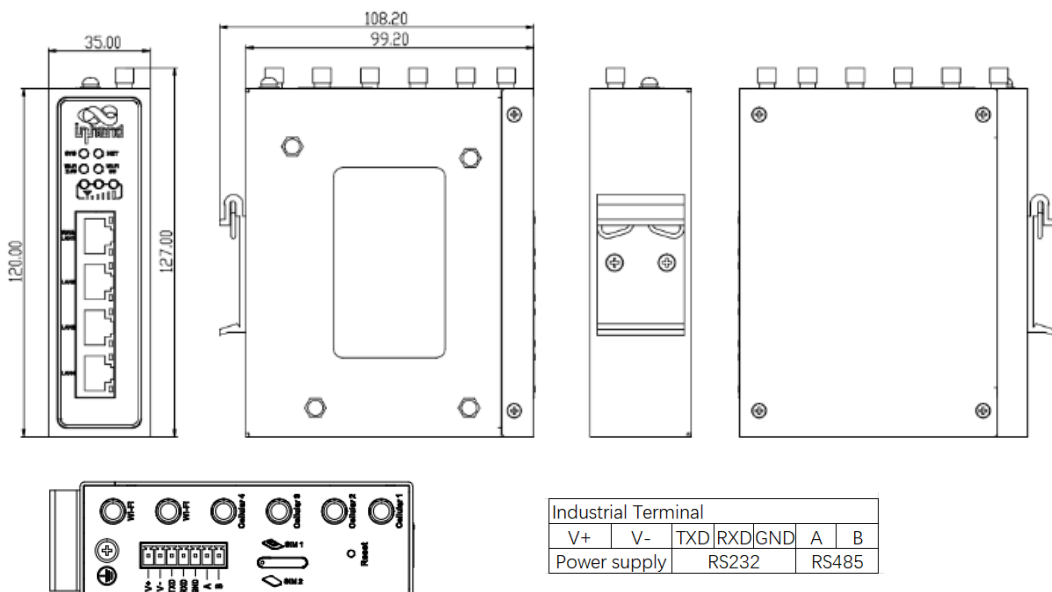
- 4 x Gigabit Ethernet port: WAN/LAN/VLAN
- Antennas: 2 x SMA for LTE, 2 x RP-SMA for Wi-Fi
- Industrial serial ports: RS232 & RS485
- 1 x SIM slots (2 x Nano SIM – 4FF), 1.8 V/3 V, eSIM (Optional)

● Industrial-grade design

IR624 adheres to the consistent principles of industrial design, maintaining a craftsman's attitude in both product design and component selection, providing high-quality products for unattended IoT sites.

- Support wide temperature and voltage
- Metal shell
- Protection level: IP30
- EMC level: 3
- The Device is compact for saving installation and deployment space.
- Installation method: Din-rail.

Dimensions(mm)



Production Specifications

InRouter624 Hardware Specifications			
Hardware Platform			
CPU	580MHz		
Throughput	450Mbps		
Recommended Users	50~100		
RAM	256MB		
Flash	128MB		
Interface			
Cellular	5G, downlink rate 2Gbps, Sub6(450MHz to 6GHz), compatible with 4G/3G		
Ethernet Port	4*10/100/1000Mbps, Ethernet, WAN/LAN/VLAN 1.5KV network isolation transformer protection		
Power Supply	DC9~36V, over-current protection, anti-reverse connection, 2 PIN industrial terminal		
Serial Port	1 x RS232 and 1 x RS485		
Reset	Reset button		
SIM Card	1 x Drawer-type slot, support dual-NANO SIM, 1.8 V/3 V eSIM (Optional)		
Antenna Interface	4 x SMA for 5G or 2 x SMA for 4G, 2 x RP-SMA for Wi-Fi		
Ground Terminal	Supports		
Indicator	1 x System, 1 x Cellular, 1 x 2.4G Wi-Fi, 1 x 5G Wi-Fi, 3 x Signal		
Hardware components			
RTC	Support		
Wi-Fi			
Dual Radio	2.4 / 5GHz Wi-Fi		
Transmission Bandwidth	5G: 867 Mbps 2.4G: 300 Mbps		
Protocol	802.11 ac/a/b/g/n Wave2 MU-MIMO		
Maximum Transmit Power	5G: 17dBm 2.4G: 17dBm		
Transmission Distance	50 meters by line of sight (Actual transmission distance depends on environment of the site.)		
Mechanical Features			
Dimensions	127x 108.2x 35mm	Weight	524g
Installation	Din-rail	Protection Rating	IP30
Housing	Metal	Cooling	Fanless
Power rate			
Standby Power	370~480mA@12V		
Working Power	415~530mA@12V		
Peak Power	530mA@12V		
Ambient Environment			
Storage Temperature	-40 ~ 85°C	Operating Temperature	-20~ 70°C
Ambient Humidity	5~95% (no condensing)		
EMC			
Static	EN61000-4-2, level 3		
Radiation Electric Field	EN61000-4-3, level 3		
Pulsed Electric Field	EN61000-4-4, level 3		
Surge	EN61000-4-5, level 3		
Conducted Disturbance Immunity	EN61000-4-6, level 3		
Shock Wave Resistance	EN61000-4-12, level 3		
Power Frequency Magnetic Field Resistance	EN61000-4-8, horizontal / vertical 400A/m (>level 2)		
Physical Specs			
Shockproof	IEC60068-2-27	Vibration Resistance	IEC60068-2-6
Free Fall	IEC60068-2-32		
Certificate			
CE, CB, FCC, IC, PTCRB, AT&T, Verizon			

InRouter624 Software Specifications	
Network Connection	
Network Access	APN, VPDN
Access Authentication	CHAP/PAP
Network Type	WCDMA, TDD LTE/FDD LTE, 5G NR(SA/NSA) (Please refer to the Ordering Guide for frequencies)
LAN Protocol	ARP, Ethernet
WAN Protocol	Static IP, DHCP, PPPoE
Network Protocol	
Protocol & Application	TCP, UDP, IPv4, ICMP, NTP, DNS, HTTP, HTTPS, SSL/TLS, ARP, VRRP, PPP, PPPoE, SSH, DHCP Server, DHCP Relay, DHCP Client, DDNS, Telnet, IP Passthrough
Routing	Static routing
Security	
Network Security	Support access control, NAT, port mapping and firewall filtering based on MAC/IP/port/protocol Support policy routing
Data Security	IPsec VPN, L2TP VPN
Reliability	
Backup	Interface backup
Dual SIM Failover	Supports dual SIM failover
Link Detection	Sends heartbeat packets to detect, auto redials when disconnected
Embedded Watchdog	Device runs self-detection, auto recovers from malfunctions
Wi-Fi	
Working Mode	AP, Client
Security	Open system, shared key, WPA/WPA2 certification WEP/TKIP/AES encryption
Wi-Fi Portal	Support
Intelligence	
DTU Functions	TCP / UDP transparent transmission mode Supports conversion of Modbus RTU to Modbus TCP bridge
Monitoring & Alerting	
Dash Board	Device information, interface status, and refined traffic statistics
Link Monitoring	Link delay, jitter, packet loss, and throughput
Log & Alarm	System logs, diagnostic logs, device events
QoS	
Traffic Shaping	Support
Remote maintenance	
Remote Access	Support Web/CLI remote access
Cloud Management	DeviceLive supports batch management, equipment monitoring, remote maintenance
Network Diagnostics	Support Ping, Traceroute and network packet capture tools
Configuration Backup	Support configuration import and export

Ordering Guide

Model code: IR624-<WMNN>-<WLAN/NA>-S

Model	<WMNN>: Cellular Type & Module	<WLAN/NA>: Wi-Fi	S: Serial
IR624-NRF2-<WLAN/NA>-S	(For China, 5G) 5G NR: n1/3*/5/8/28/41/78/79 LTE FDD: B1/3/5/7*/8 LTE TDD: B34/38/39/40/41 WCDMA: B1/5/8	WLAN: Wi-Fi <NA>: no Wi-Fi	S: 1*RS232+1*RS485
IR624-NRF4-<WLAN/NA>-S	(For Europe, 5G) 5G NR: n1/3/5/7/8/20/28/38/40/41/71/77/78 LTE FDD: B1/3/5/7/8/20/28/71 LTE TDD: B38/40/41 WCDMA: B1/5/8	WLAN: Wi-Fi <NA>: no Wi-Fi	S: 1*RS232+1*RS485
IR624-LQ20-<WLAN/空>-S	(For China, 4G LTE CAT4) FDD: B1/3/5/8 TDD: B34/38/39/40/41 WCDMA: B1/5/8 GSM/EDGE: B3/8	WLAN: Wi-Fi <空>: 无 Wi-Fi	S: 1*RS232+1*RS485
IR624-FQ58-<WLAN/空>-S	(For Europe & APAC, 4G LTE CAT4) LTE-FDD: B1/3/5/7/8/20/28 LTE-TDD: B34/38/39/40/41 WCDMA: B1/5/8 GSM: B3/8	WLAN: Wi-Fi <空>: 无 Wi-Fi	S: 1*RS232+1*RS485
IR624-EN00-<WLAN/空>-S	NA	WLAN: Wi-Fi <空>: 无 Wi-Fi	S: 1*RS232+1*RS485

Example: IR624-NRF2-WLAN-S: Four Gigabit Ethernet ports IR624 series cellular router with Wi-Fi, supports IPsec VPN and L2TP VPN, supports RS232 and RS485.

Note: the product comes standard with suction cup antenna and Din-rail accessories.

About Us

InHand Networks is a global leader of Industrial IoT, with a record of tremendous success following groundbreaking innovation since our inception in 2001.

InHand serves world-class partners and customers with industrial M2M routers, gateways, industrial Ethernet switches, rugged computers and IoT management platforms. We provide IoT solutions for various vertical markets including Smart Grid, Industrial Automation, Remote Machine Monitoring, Smart Vending, Smart City, Retail and more.

Proudly bearing the marks of both Rockwell Automation Technology Partner in Asia-Pacific and Schneider Electric Technology Partner, InHand Networks defines industrial innovation and reliability.