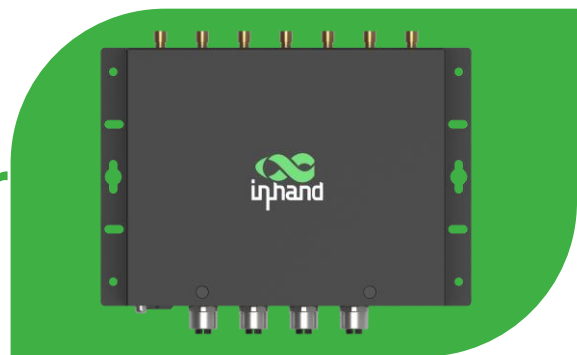


Ultra-fast Mobile Connectivity

VR624 5G Vehicle Router



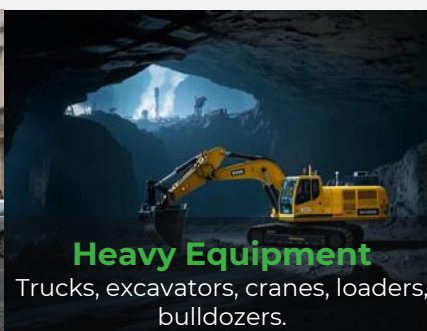
- 5G
- Wi-Fi 6
- M12 Connector
- GNSS
- Cloud-Managed

The InVehicle Router 624 (VR624) series is an industrial-grade mobile network access solution, suitable for multi-field transportation scenarios, covering special vehicles, heavy machinery, law enforcement vehicles, emergency vehicles, engineering fleets and ambulances, providing stable support for device networking and data interaction.

VR624 supports high-speed 5G, enabling high-speed and low-latency transmission. It is also integrated with high-speed Wi-Fi 6 to realize secure access for multiple devices. The integrated Global Positioning System (GPS) allows for real-time and precise positioning of vehicles, which is crucial for fleet dispatching, route optimization, and location-based monitoring, significantly enhancing vehicle operation and management efficiency.

The hardware adopts an industrial-grade design. The M12 connector is anti-vibration and anti-corrosion, can work in a wide temperature environment of -30°C to +70°C, making it suitable for harsh conditions.

Paired with the InHand DeviceLive platform, it can monitor device status in real time, diagnose faults, support remote operation and maintenance, and improve fleet management efficiency. Its integrated design provides a reliable network for in-vehicle systems and helps promote the digital transformation of the transportation field.



Features and Advantages

Ubiquitous network access: 5G

VR624 supports 5G NSA/SA networks with a downlink speed of up to 3.4Gbps, enabling gigabit-class data transmission and ensuring ultra-fast, low-latency communication on the move.

Powerful Wi-Fi 6 networking

VR624 enables easy setup of Wi-Fi 6 networks, supporting dual-band operation on 2.4GHz and 5GHz, featuring WPA3 security protocol and a maximum speed of 3000Mbps, with high throughput, high security, and more device access.

Robust design for mobility

VR624 adopts M12 aviation connectors for reliable, vibration-resistant wired connections in harsh environments. Certified to ECE R10, ECE R118, and EN 50155 standards for EMC compliance, fire safety, and railway-grade reliability, ensuring safe deployment in buses, trucks, and rail vehicles.

Global satellite position

VR624 supports a global satellite positioning system with high precision and sensitivity, enabling accurate tracking of vehicle locations anytime and anywhere.

“Always-on” connectivity

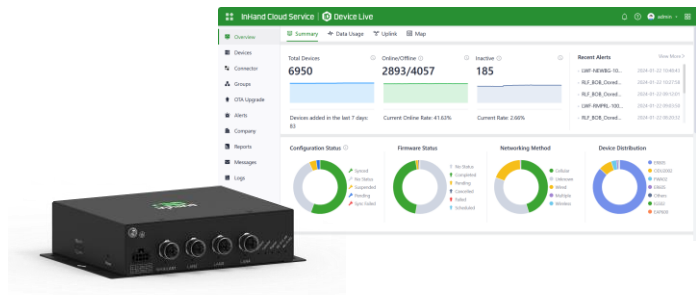
VR624 integrates features such as link backup, link detection, dual-card switching, and watchdog to ensure the reliability and stability of the network.

Solid security protection

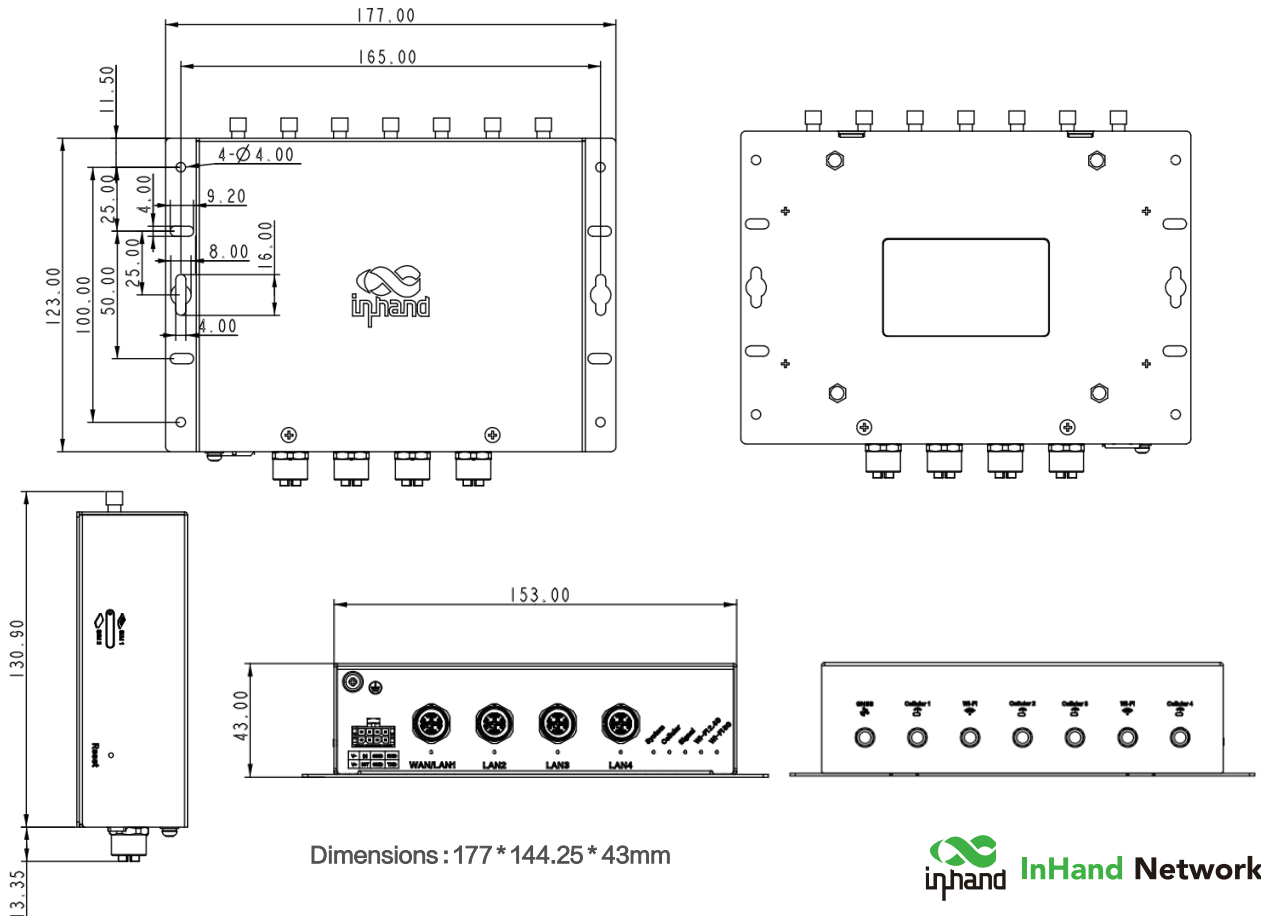
VR624 integrates a TPM encryption chip in hardware and multiple layers of security policies in software, including access control, firewall, VPN, and policy routing, which can effectively protect the network from attacks and threats.

Cloud-Managed

VR624 supports access to InHand Networks DeviceLive IoT device management platform, enabling real-time management of tens of thousands of distributed site devices and allowing users to keep track of device status anytime and anywhere.



Dimensions (mm)



Product Specifications

VR624 Hardware Specifications			
Hardware Platform			
CPU	1.3GHz		
RAM	512MB		
Flash	32GB eMMC		
Interfaces			
Cellular	5G, downlink speed of up to 3.4Gbps, compatible with 4G/3G		
Ethernet Port	4 x M12 X code 8 pin female ports, 10/100/1000 Mbps		
Serial Port	1 x RS232 ESD protection: 15KV		
I/O	2 x Input (Ignition detection/Low battery)		
Power Supply	DC9-48V, over-current protection, anti-reverse connection		
Reset	Reset button		
SIM Card	1 x Drawer-type slot, support dual-NANO SIM, 1.8 V/3 V 1 x Eembedded SIM (Optional)		
Antenna Interface	4 x SMA for 5G, 2 x SMA for 4G, 2 x RP-SMA for Wi-Fi, 1 x SMA for GNSS		
Ground Terminal	Supports		
Indicator	1 x System, 1 x Cellular, 1 x Signal , 1 x 2.4G Wi-Fi, 1 x 5G Wi-Fi		
Hardware components			
RTC	Support		
Wi-Fi			
Frequency	2.4GHz/ 5GHz dual band	Protocol	802.11 ax/ac/a/b/g/n
Transmission Bandwidth	3000Mbps	Maximum Transmit Power	5G: 20dBm 2.4G: 20dBm
Transmission Distance	50 meters by line of sight (Actual transmission distance depends on environment of the site.)		
Satellite Navigation			
	GPS, BDS, Galileo, GLONASS, QZSS		
Position accuracy	<1.5m (CEP50)		
Tracking Sensitivity	-162dBm	Navigation update rate	10Hz
Mechanical Features			
Dimensions	177 * 144.25 * 43mm	Weight	810g
Installation	Wall-mounting	Protection Rating	IP30
Housing	Metal	Cooling	Fanless
Ambient Environment			
Storage Temperature	-40 ~ 85℃	Operating Temperature	-30~ 70℃
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)		
Rail Standard	EN50155		
Physical Specs			
Shockproof	IEC60068-2-27	Vibration Resistance	IEC60068-2-6
Free Fall	IEC60068-2-32		
Certificate			
CE*, E-MARK*, ECE R118*, FCC*, PTCRB*, ITxPT*			

Note: The functions marked with * are not available yet.

VR624 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, IPv6, 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, BGP
Security	
Network Security	Support access control, NAT, port mapping and firewall filtering based on MAC/IP/port/protocol Support Policy-Based Routing Support 802.1X
Data Security	IPsec VPN, L2TP VPN, OpenVPN, WireGuard VPN
TPM	Integrated Trusted Platform Module, TPM 2.0 compliant
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/WPA3 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: VR624-<WMNN>				
Model	<WMNN>: Cellular Type & Module	GNSS	Wi-Fi	Region
VR624-GLNR	5G NR NSA: n1/2/3/5/7/8/12/13/14/18/20/25/26/28/29/30/38/40/41/48/66/ 70/71/75/76/77/78/79 5G NR SA: n1/2/3/5/7/8/12/13/14/18/20/25/26/28/29/30/38/40/41/48/66/ 70/71/75/76/77/78/79 LTE FDD: B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/29/30/ 32/66/71 LTE TDD: B34/38/39/40/41/42/43/48 LTE LAA: B46 WCDMA: B1/2/4/5/8/19	√	√	Global
VR624-GLC6	LTE-FDD B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/29/30/32/66/71 LTE-TDD B34/38/39/40/41/42/43/46(LAA)/48(CBRS) WCDMA B1/2/3/4/5/6/8/19	√	√	Global

About Us

InHand Networks is a leading IoT solutions provider founded in 2001, dedicated to driving digital transformation across industries and empowering customers to unlock their full potential and achieve accelerated growth.

We specialize in delivering industrial-grade connectivity solutions for diverse sectors, such as enterprise networks, industrial and building IoT, digital energy, smart commerce, and mobility. Our comprehensive product portfolio and services cater to various applications worldwide, including smart manufacturing, smart grid, intelligent transportation, smart retail, etc. With a global footprint spanning over 60 countries, we serve customers in China, the United States, France, Germany, the United Kingdom, Italy, and beyond.



3650 Concorde Pkwy, Suite 200,
Chantilly, VA 20151, USA
T: +1 (703) 348-2988
E: info@inhand.com
www.inhand.com