M.gear

MVI5301
Ruggedized and Compact 5G Cellular Router

Key Features

- **Qualcomm SDX62 single chip solution**
- **5G NR and LTE-A CAT19 dual mode**
- **Support both SA and NSA**
- **Worldwide Sub-6 5G and LTE-A coverage**
- **Support Web, TR069 and MQTT based device management**
- **IP65 water and dust proof**
- **Built-in GNSS receiver**

Ruggedized and Compact 5G Data Transfer Unit

MVI5301 Ruggedized and Compact is designed for industrial applications that converts 5G wireless signals into Gigabit Ethernet, providing stable and high-speed 5G access for the devices.

Designed for both indoor and outdoor harsh industrial environments, MVI5301 meets high standards in vibration tolerance and is ideal for operations in robot, AVG, AMR, unmanned delivery cars, drones, logistics, automated manufacturing, port and other outdoor applications. MVI5301 can also offer precise information about its real-time location; its built-in GNSS receiver allows GPS, GLONASS, Beidou, Galileo and QZSS constellations.
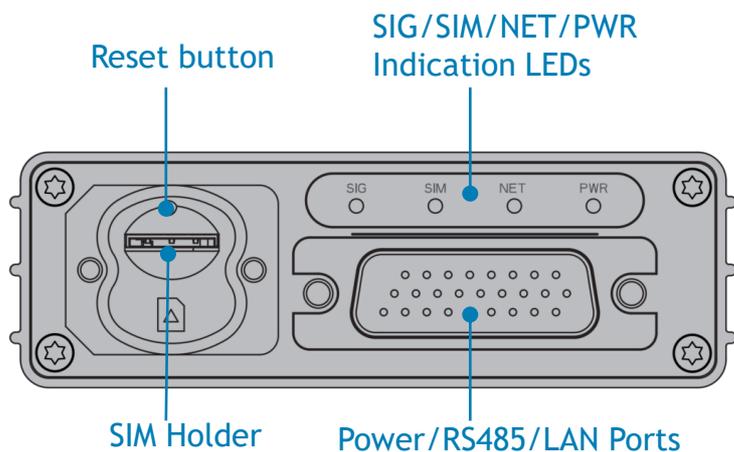

Manufacturing
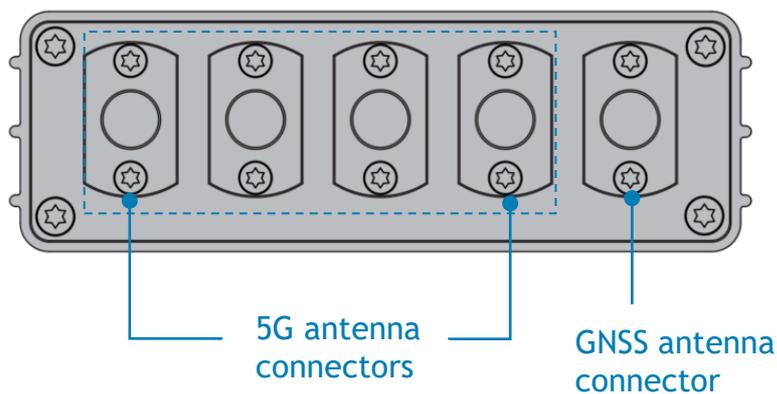

Grid

Transportation

Port

Hardware Specifications
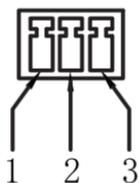
Reset button

SIG/SIM/NET/PWR Indication LEDs

SIG   SIM   NET   PWR

SIM Holder

Power/RS485/LAN Ports

5G antenna connectors

GNSS antenna connector

LAN Port

RS485 Port

DC Jack

VGA Port
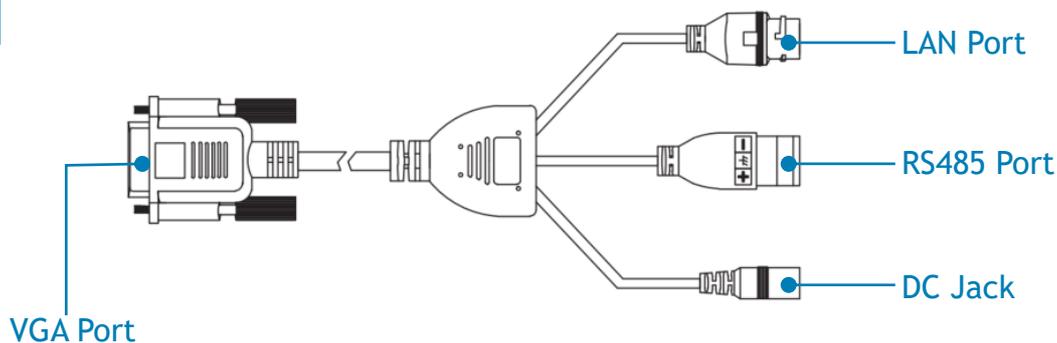
1.RS485_B

2.RS485_GND

3.RS485_A

1   2   3

Hardware Specifications

Chipset	Qualcomm SDX62	
Module	Quectel RG520N-EU/NA	
5G Mode	Support SA/NSA	
Category	Rel-16/Sub6 5G DL Cat 19/UL Cat 18	
Cellular Bands (Europe & Asia version)	5G NR	n1/n3/n5/n7/n8/n20/n28/n38/n40/n41/n75/n76/n77/n78
	LTE	FDD: B1/B3/B5/B7/B8/B20/B28/B32 TDD: B38/B40/B41/B42/B43
	WCDMA	B1/B5/B8
External port	1 x 2.5G Ethernet port 1 x RS485 1 x SIM Slot (4FF) 1 x Reset	
LED	4 LED Indicators (PWR, NET, SIM, Tri-color SIG)	
Antenna	4 x LTE/NR Antenna 1 x GNSS (External combined antenna, optional)	
Carrier Aggregation	LTE: DL 5CA and UL 2CA NR: 2CA	
MIMO	Download	5G NR: 4 × 4 MIMO on n1/n3/n5/n7/n8/n20/n28/n38/n40/n41/n75 n76/n77/n78 LTE: 4 × 4 MIMO on B1/B3/B5/B7/B8/B20/B28/B38/B40/B41 B42/B43
	Uplink	5G NR: 2 × 2 MIMO on n38/n41/n77/n78
Maximum transmission power	5G NR Sub 6 bands	Class 3 (23 dBm ±2 dB)
	n41/n77/n78 HPUE	Class 2 (26 dBm +2/-3 dB) ①
	4G LTE	Class 3 (23 dBm ±2 dB)
	B38/B41/B42 HPUE	Class 2 (26 dBm ±2 dB)①
	WCDMA	Class 3 (24 dBm +1/-3 dB)

① HPUE only supports single carrier.

Hardware Specifications

Maximum transmit throughput	Downlink	5G NR SA (Gigabit Ethernet port)	2.4Gbps
		5G NR NSA (Gigabit Ethernet port)	2.5Gbps
		4G LTE (Gigabit Ethernet port)	1.6Gbps
		WCDMA (Gigabit Ethernet port)	42Mbps
	Uplink	5G NR SA Sub 6	900Mbps
		5G NR NSA Sub 6	550Mbps
		4G LTE	200Mbps
		WCDMA	5.76Mbps
Power supply	DC 8~24V, 12V default		
Power consumption	< 24W		
GNSS	Support GPS, GLONASS, Beidou, Galileo and QZSS		
Dimensions	125mm x 75mm x 25mm		
Weight	420g		
Humidity	5% - 95% (Non-condensing)		
IP	65		
Temperature	Working temperature: -30°C to 70°C Storage temperature: -40°C to 85°C		

Software Specifications

WAN	Multi-APN support, maximum four IPv4/v6 dual stack
LAN	DHCP Server DNS and DNS proxy DMZ Multicast/Multicast Proxy
Protocol	Routing: Static routing
Device management	TR069 Web UI Software upgrade via Web UI/TR069/FOTA USIM PIN management MQTT management SNMP v2/v3 Trap Event Handling
Routing mode	Route Mode Bridge Mode NAT mode Static Route Port Mirror and Port Forwarding IPV4/IPv6 Dual Stack
VPN	PPTP (Client Mode only) GRE Tunnel (L2/L3) L2TPv2 and L2TPv3 (Client Mode only) VXLAN IPsec (Client Mode only)
Security	Firewall MAC Address Filtering IP Address Filtering Access Control HTTPS Login from WAN DoS attack protection Two level of user authority
Reliability	Watchdog Auto rollback to previous version when upgrade fails