

Technical Specification for SV900 – 5G Vehicle Gateway



VERSION NUMBER:V2.5

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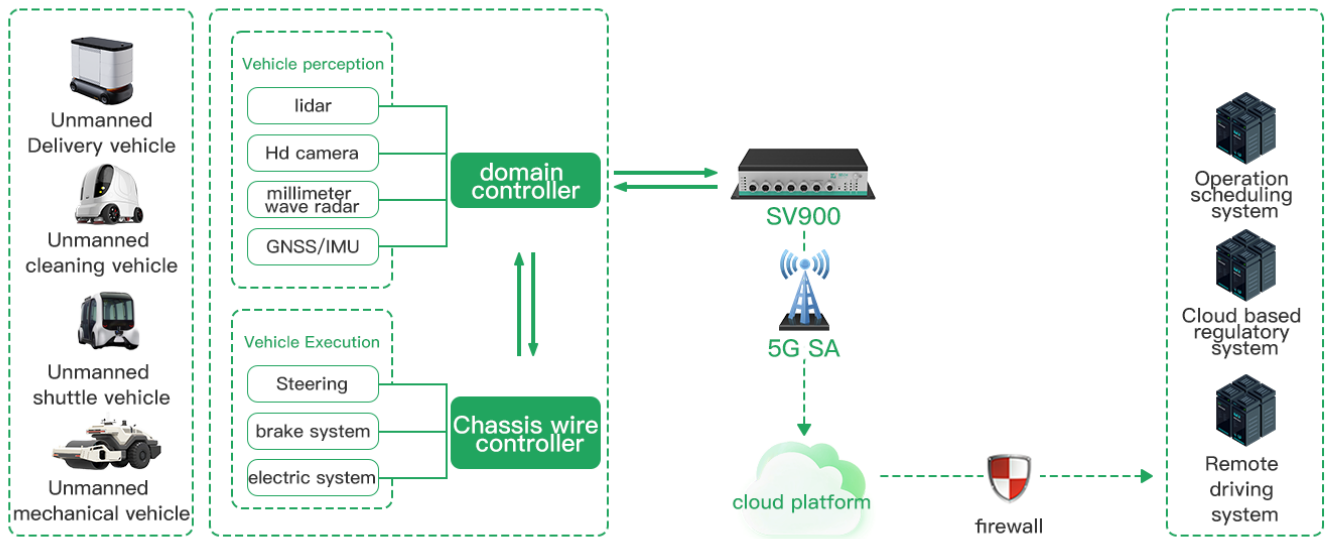
Product Overview

The SV900 series products are IoT wireless router products integrating 4G/5G networks, virtual private networks, and other technologies. Leveraging 4G/5G wireless wide area networks (WWAN) and Wi-Fi wireless local area networks (WLAN), this device provides uninterrupted access to multiple networks, offering users a high-speed and stable data transmission channel with comprehensive security and wireless services.

Product Features

- Supports dual 5G or 5G+4G LTE CAT4 high-speed network and Redcap network
- Supports WLAN (optional)
- Supports multiple DNN (Deep Neural Networks)
- Equipped with 5 Gigabit Ethernet ports, M12 aviation connectors
- Wired and dual wireless redundancy for backup
- Designed for vehicle interfaces, capable of withstanding challenging conditions
- Supports Linux OpenWrt system, facilitating user customization with comprehensive development guidelines
- Supports various VPN functionalities: PPTP, L2TP, IPSEC, OPENVPN, GRE, GRE-TAP, Vxlan, etc
- Supports SNMP and Star-Cloud platform management

Topology Diagram



Technical Parameters

Hardware Performance

Memory	512MB, expandable to 1GB
FLASH	EMMC 4GB, expandable to 8GB
WIFI (optional)	Supports 2.4G/5.8G dual-band with a theoretical maximum speed of 866.7Mbps. Optional WIFI6 with a theoretical maximum speed of 1774Mbps
Network support	N1/N3/N5/N7/N8/N20/N28/N38/N40/N41/N71/N75/N76/N77/N78/N79 B1/B3/B5/B7/B8/B20/B28/B32/B71 B38/B40/B41/B42/B43
System Time	Time synchronization using NTP technology with built-in RTC

Interfaces

WAN port	1 (10M/100M/1000M adaptive MDI/MDIX port), M12 aviation connector
LAN port	4(10M/100M/1000M adaptive MDI/MDIX port), M12 aviation connector
SIM Card Interface	2 (drawer-style card slot, supports 1.8V/3V SIM/UIM cards), compatible with ESIM
Reset	1 (reset button)
antenna interface	8 (5G/4G antennas, 50 ohm impedance, Fakra connector) 4 (WiFi antennas, 50 ohm impedance, Fakra connector)
Power Interface	1, 4-pin aviation connector with built-in reverse polarity and overvoltage protection
Serial Port, CAN Port	1*RS232, 1*RS485, 1*CAN, M12 aviation connector

SM (optional)	Supported
Indicators	14 indicators (1 PWR, 1 SYS, 1 WIFI, 1 NET, 3 signal strength, SIM1, SIM2, 5 Ethernet)
Power Characteristics	
Power Supply	External power adapter (12V 2A)
Operating Voltage	Wide power input DC 9~48V (expandable to 9~60V)
Standby Power Consumption	400~450mA@12V DC
Operating Power Consumption	450-650mA@12V DC
Operating Conditions	
Operating Temperature	-35~+75°C (-31~+167°F)
Storage Temperature	-40~+85°C (-40~+185°F)
Operating Humidity	5%~95% (non-condensing)
Device Ventilation	Natural heat dissipation, noiseless
Physical Characteristics	
Casing	Aluminum casing
Dimensions	Length*width*height:245*171*61mm (excluding antenna and mounting components)
Installation Method	Desktop placement
Weight	Net weight: 1KG (excluding antenna and mounting components) Gross weight: 1.5KG (with accessories and packaging box)
Device Safety and Reliability	
Safety and Reliability	Power reverse polarity protection, overvoltage protection, overcurrent protection; Ethernet interface with 1.5KV electromagnetic isolation protection; RS232/RS485 interface with 15KV ESD protection; SIM/UIM card interface with 15KV ESD protection
Protection Level	IP40
Certification	Compliant with CCC, RoHS
MTBF	≥100,000 hours
Software Functions	
Network Access	Supports APN VPDN
Access Authentication	Supports CHAP/PAP authentication
LAN Protocol	Supports ARP, Ethernet
WAN Protocol	Supports static IP, DHCP, PPPoE, PPP
IP Applications	Supports Ping, Trace, DHCP Server, DHCP Relay, DHCP Client, DNS relay, DDNS, Telnet
IP Routing	Supports routing
NAT Function	Supports network address translation
Industrial Protocols	Supports HJ212 protocol, supports MQTT, MUDBUS, and other industrial protocols

Network Security

Firewall

Full-state packet monitoring (SPI), prevents denial of service (DoS) attacks, filters multicast ping packets, access control lists (ACL), content URL filtering, port mapping, virtual IP mapping, IP-MAC binding

Data Security

IPsec VPN/VxLAN/L2TP/PPTP/GRE/GRD TAP/OPEN VPN/CA certificate

Reliability

Backup Function

Supports wired, dual 5G, and wifi multi-channel mutual backup

Link Online Monitoring

Sends heartbeat packets for detection, automatically reconnects when disconnected

Built-in Watchdog

Device self-check technology, fault self-repair during device operation

WLAN (optional)

Protocol Standards

IEEE 802.11b/g/n/ac/ax (optional)

Rate

Up to 1774M

Security Features

Open system, shared key, WPA/WPA2 authentication, WEP/TKIP/AES encryption

Operating Mode

AP, Client mode

Transmission Distance

100m (actual transmission distance depends on the environment)

Intelligent Features

Integrated DTU Function

Supports TCP, UDP transparent transmission mode, connects to Qianxun differential platform protocol, TCP Server mode, supports Modbus RTU to Modbus TCP bridge, supports DCUDP, DCTCP mode

Network Management

QOS Management

Supports bandwidth limitation, IP speed limit

Configuration Methods

Supports telnet, web, SSH, and console configuration methods

Upgrade Methods

Supports web upgrade, FOTA

Log Function

Supports local system logs, remote logs, serial port output logs, supports power-off log saving function

Network Management

Supports Star-Cloud platform batch management

Simple Network Management Functions

Supports SNMP v1/v2/v3, supports SNMP TRAP function

Traffic Management

Supports traffic threshold setting, traffic statistics, and traffic alarm functions

Maintenance Tools

Ping, route tracking

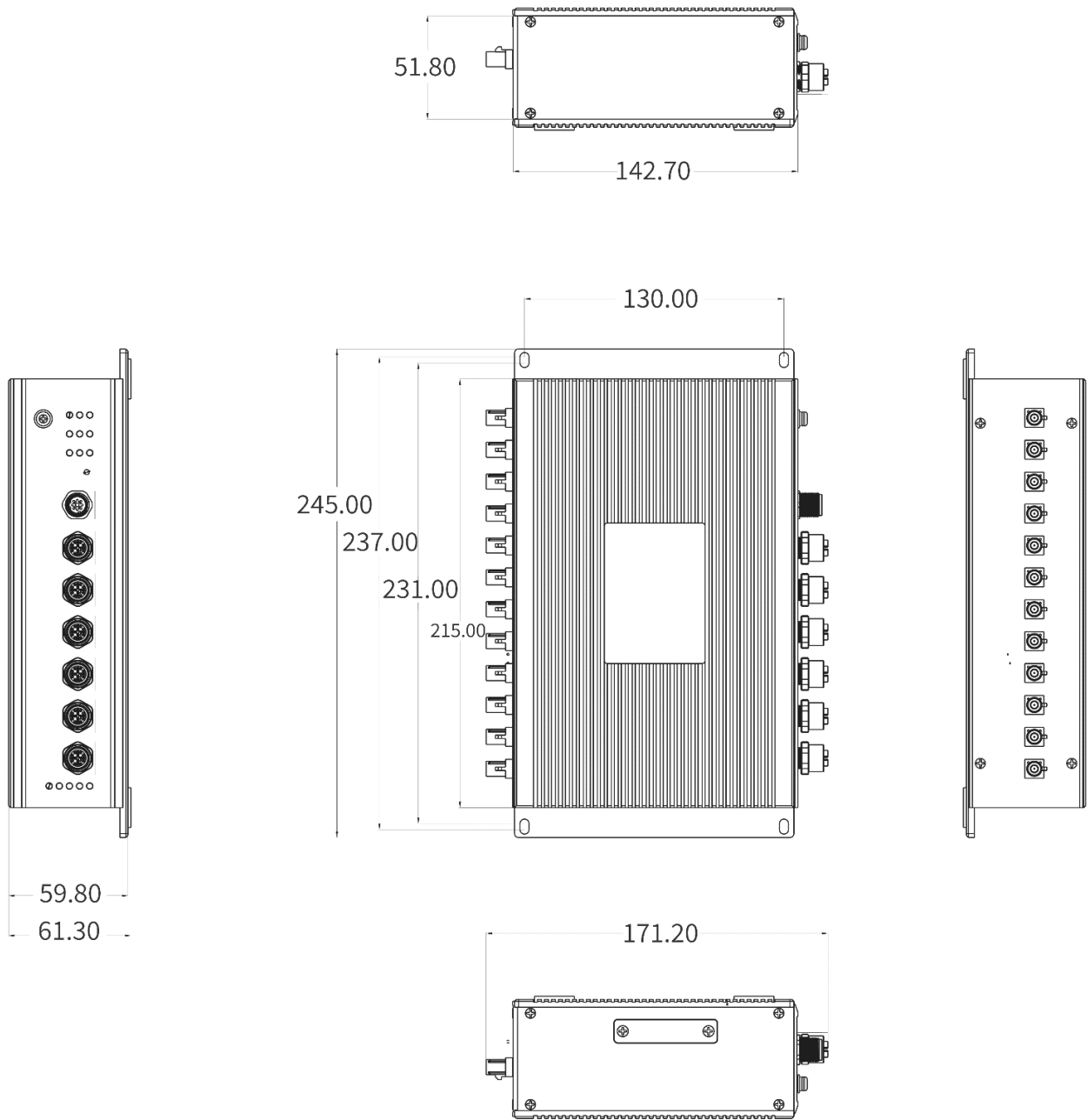
Status Query

System status, modem status, network connection status, routing status

Product Interfaces



Product Dimensions



Product Selection

model	PID	Version Description
SV900	00	Supports 2*5G modules
SV900	02	Supports 1*5G module+1*4G module
SV900	03	Supports 1*4G modules
SV900	04	Supports 1*5G modules

