

Technical Specification for SV910N - Automotive Ethernet Switch



VERSION: **V1.0**

XIAMEN KEY-IOT TECHNOLOGY CO., LTD
www.key-iot.com



Product Overview

SV910N is a high-performance in-vehicle Ethernet gateway featuring a rich set of interfaces. It boasts 6 in-vehicle Ethernet interfaces, 2 industrial M12 Ethernet interfaces, 2 CAN channels (expandable to 3), 2 DI (Digital Input) and 2 DO (Digital Output) channels. It supports the PTP protocol, with optional low-power mode and V2X functionality.

Leveraging its extensive connectivity options, the SV910N enables integration with various vehicle-mounted devices and facilitates remote monitoring of vehicle status, thereby enhancing operational and management efficiency.

Product Features

- Supports three 1000/100 BASE-T1 ports, three 100 BASE-T1 ports, and two 1000/100 BASE-TX ports
- Supports two DO channels (relay outputs) and two DI channels (one dry-contact input and one wet-contact input)
- Supports input-voltage monitoring with reporting and alarm functions
- Supports PTP

Technical Parameter

Hardware Performance

CPU	Quad-core A55, up to 2 GHz clock speed
Memory	2GB , expandable to 4GB
FLASH	EMMC 8GB, expandable to 64GB
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
System Time	Time synchronization using NTP technology with built-in RTC

Interfaces

Automotive Ethernet Interfaces	3 × 1000/100 BASE-T1 and 3 × 100BASE-T1
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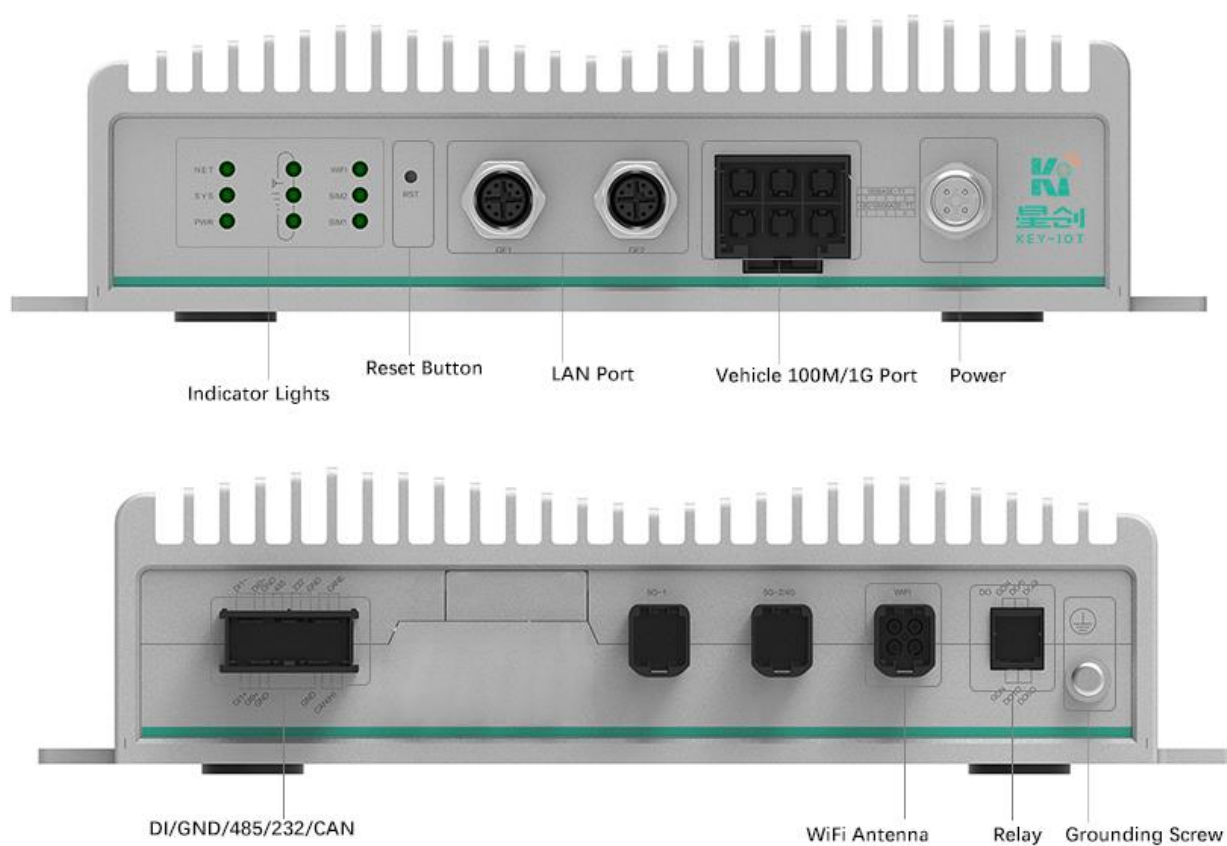
Standard Ethernet Interfaces	2 × 1000/100 BASE-TX Ethernet interfaces with M12 aviation connectors
Wi-Fi (Optional)	IEEE 802.11b/g/n/ac/ax IEEE 802.11ax(WiFi6), Up to 1774Mbps IEEE 802.11ac(WiFi5), Up to 866Mbps
Antenna Interface	1 × 4-in-1 mini FAKRA Wi-Fi antenna interface
Power Interface	1 × 4-pin aviation connector, supporting dual redundant power inputs: DC 9–48 V
Serial Port	1*RS232,1*RS485
CAN Interface	2 × CAN interfaces, expandable to 3 × CAN interfaces
Relay	2 × relay outputs, maximum input voltage: 30 VDC / 250 VAC, maximum current: 5 A
DI	2 × opto-isolated DI channels (DI0 for dry contact testing, DI1 for wet contact testing) Logic 0: Wet contact 0–2 VDC or dry contact closed Logic 1: Wet contact 9–30 VDC or dry contact open
Indicators	9 Indicators (1 PWR、1 SYS、1 WIFI、1 NET、3 signal strength、SIM1、SIM2) SIM1 and SIM2 (reserved, inactive for switch model).
Power Characteristics	
Power Supply	External power adapter (12V 2A)
Operating Voltage	Wide power input DC 9~48V
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 ,no noise
Physical Characteristics	
Casing Material	Aluminum alloy housing
Installation Method	Desktop placement
Device Safety and Reliability	
Hardware WatchDog	Built-in hardware watchdog with automatic device fault self-recovery
Safety and Reliability	Reverse polarity protection, overvoltage protection, overcurrent protection; Ethernet interface built-in 1.5KV electromagnetic isolation protection; RS232/RS485 interface built-in 15KV ESD protection;
Protection Level	IP40
Certification	Complies with CCC、Rohs、CE
Networking feature	
WAN Protocol	Supports Static IP、DHCP、PPPOE
IP Applications	Supports Ping、Trace、DHCP Server、DHCP Relay、DHCP Client、DNS relay、DDNS、Telnet
Wi-Fi	Supports both AP (Access Point) mode and Client (STA) mode

VLAN	Supports VLAN, including both Tagged and Untagged modes for VLAN ID assignment
Static Routing	Supports adding static routes
Dynamic Routing	Supports dynamic routing protocols OSPF and RIP
Policy Routing	Supports policy routing to enable traffic splitting
Wi-Fi (Optional)	
Protocol Standards	IEEE 802.11b/g/n/ac/ax (Optional)
Speed	IEEE 802.11ax(WiFi6), Up to 1774Mbps IEEE 802.11ac(WiFi5), Up to 866Mbps
Security Features	Open system, shared key, WPA/WPA2 authentication, WEP/TKIP/AES encryption
Working Modes	AP and Client (WiFi STA)
Firewall & Network Security	
Firewall	Full-state packet inspection (SPI), DoS attack prevention, multicast Ping packet filtering, port mapping, and IP-MAC binding
VPN	IPsec/OPENVPN/L2TP/PPTP/VXLAN/GRE /GRETAP
NAT	Supports DMZ and Port Forwarding
Address Filtering	Supports IP, domain name, and MAC filtering; Allows configuration of blacklists and whitelists
Applications	
DTU	Supports TCP, UDP, MQTT, HTTP, HJ212-2017, NTRIP, MODBUS TCP, MODBUS RTU, and MODBUS TCP-to-MODBUS RTU protocols
Data Acquisition	Southbound: Supports Modbus RTU/TCP and Siemens S7 protocols Northbound: Supports TCP, MQTT, HTTP, JSON, HJ212-2017; Supports up to 5 configurable servers with different protocols
Status Reporting&Retrieval	Supports querying and scheduled reporting of device status via TCP, MQTT, or HTTP, including dial-up status, operational status, and link usage
Scheduled Tasks	Supports scheduled reboot and customizable scheduled tasks
SNMP	Supports SNMP v1/v2/v3
System Settings	
Logging Functionality	Supports local system log viewing, remote logging, and serial output logs; Supports log retention during power outage
Configuration Mode	Supports configuration via Web, Telnet, SSH, and Console; Supports configuration import and export
System Time Settings	Built-in RTC clock; Supports NTP network time synchronization, manual time setting, and GPS time synchronization
Maintenance Tools	Ping, Route tracing

Product Selection Summary

Model	PID	Version Description
SV910N	05	
	15	Supports LP
	35	Supports LP+V2X

Product Interface



Product Size

