

Technical Specification for SR510

Power Industry 5G Router



VERSION:V2.2

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Product Overview

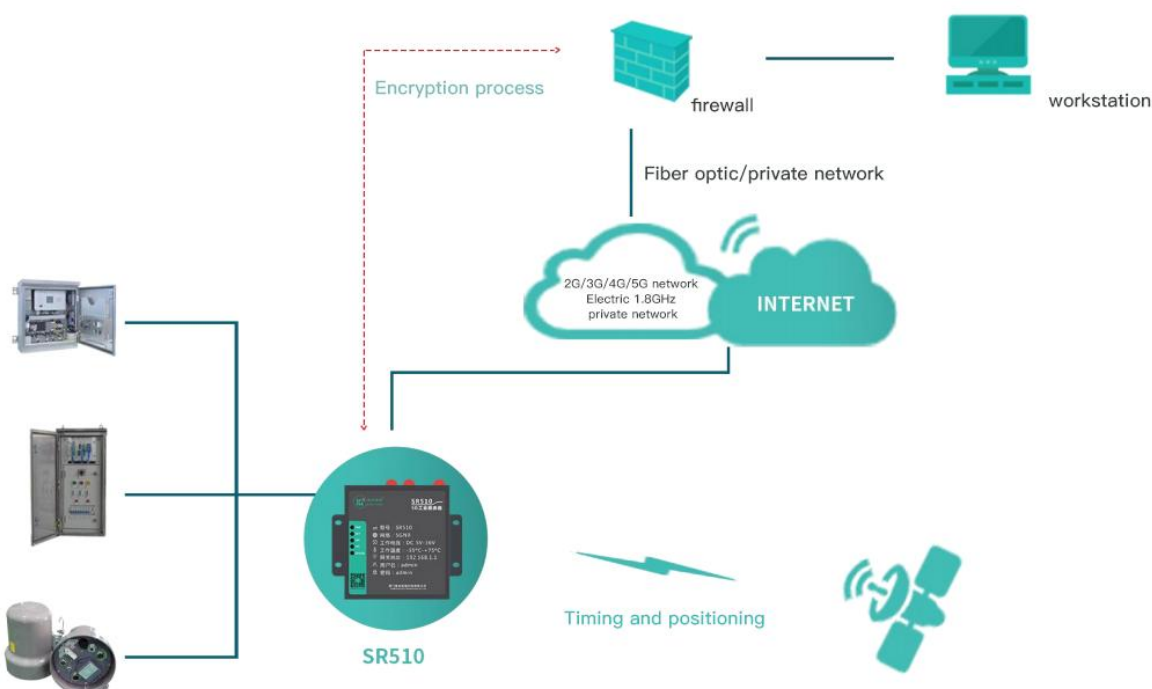
StarRouter 510 (SR510) is a series of IoT wireless routers integrating 4G/5G network and Virtual Private Network (VPN) technologies. Equipped with features such as 4G/5G wireless wide-area network (WWAN) dual-network backup, this device ensures uninterrupted access to multiple network connections. With comprehensive security features and wireless service capabilities, it provides users with high-speed and stable data transmission channels.

Product Features

- Supports 5G NR high-speed networks and Redcap networks
- Supports National encryption (optional)
- Supports dual SIM cards with mutual backup functionality (failover)
- Supports GPS/BeiDou (optional)
- Supports WLAN (optional)
- Supports failover between wired and wireless connections
- Supports dynamic routing protocols OSPF and RIP
- Supports policy-based routing for traffic splitting
- Supports querying and reporting of device status information
- Supports VLAN configuration, including multiple VLANs with tagged and untagged modes
- Supports Linux system for secondary development, with comprehensive development guidelines provided
- Supports SNMP and StarCloud Platform (Device Management Platform)
- Supports multiple VPN functions: PPTP, L2TP, IPSEC, OpenVPN, GRE, GRE-TAP, VXLAN, etc



Topology Diagram



Technical Parameter

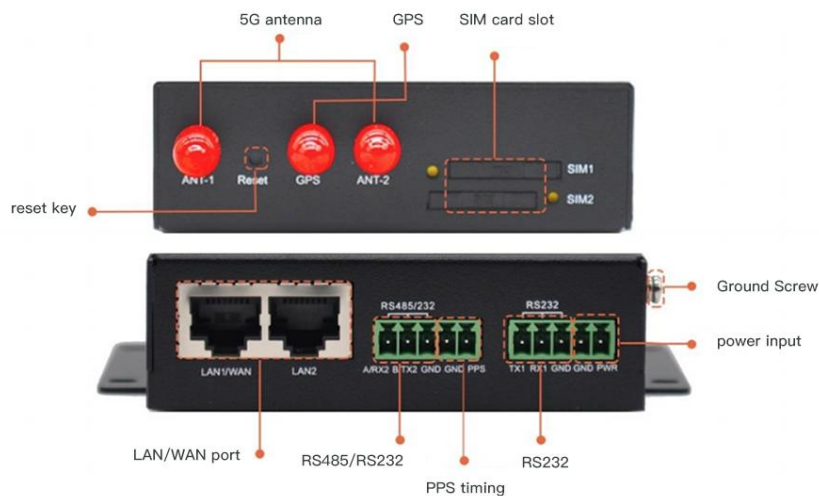
Hardware Performance

Memory	64MB
FLASH	16MB, expandable to 32MB
Network Support	Industrial-grade 5G module
System Time	Time synchronization using NTP technology, with built-in RTC
Interface	
LAN Port	2 (10M/100M adaptive MDI/MDIX port), one of which can be reused as a WAN port
SIM Card Interface	2 (drawer-type card slots, supporting 1.8V/3V SIM/UIM cards)
Reset	1 (reset button)
Antenna Interface	2 (4G/5G antennas, impedance 50 ohms, SMA male inner pin interface) 1 (optional, GPS antenna, impedance 50 ohms, SMA inner pin interface)
Power Terminals	1 (2-pin 3.5mm pitch connector)
Serial Ports	1 RS232, 1 RS485 (can be reused as RS232), 3.5mm pitch connector
GPS	GPS time synchronization (optional)
Encryption	Hardware encryption (optional)

Indicators	1 Power light (red), 1 network light (green), 1 SIM card light (green), 1 online light (green), 1 GPS/BD signal light (green)
Power Characteristics	
Power Supply	External power adapter (12V 2A)
Operating Voltage	Wide power input DC 9~36V
Standby Power Consumption	80~150mA@12V DC
Operating Power Consumption	150~250mA@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, noise-free
Physical Characteristics	
Casing Material	Metal housing
Dimensions	Length * width * height 94 * 89 * 27mm (excluding antenna and mounting parts)
Installation Methods	Desktop placement, DIN rail installation, wall-mounted
Weight	Net weight: 0.40KG (excluding antennas and mounting parts)
	Gross weight: 0.70KG (with accessories and packaging box)
Device Security and Reliability	
Security 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; SIM/UM card interface built-in 15KV ESD protection
Protection Level	IP30
Certifications	Complies with CCC、Rohs
MTBF (Mean Time Between Failures)	≥100,000 hours
Software Features	
Network Access	Supports APN, VPDN
Access Authentication	Supports CHAP/PAP authentication
Network Modes	GSM/GPRS/EDGE,LIMITS/HSPA+/EVDO/TD-SCDMA/TD-LTE/5G NR
LAN Protocols	Support ARP, Ethernet
WAN Protocols	Supports static IP, DHCP, PPPoE, PPP
IP Applications	Supports Ping, Trace, DHCP Server, DHCP Relay, DHCP Client, DNS relay, DDNS, Telnet
IP Routing	Supports static routing, dynamic routing protocols (OSPF, RIP), and policy-based routing
NAT Function	Supports Network Address Translation
Industrial Protocols	Supports IEC101/104 protocol, supports environmental protection 212 protocol, supports MQTT, MODBUS, and other industrial protocols
Network Security	

Firewall	Full state packet inspection (SPI), prevention of denial of service (DoS) attacks, filtering multicast Ping packets, access control lists, URL filtering, port mapping, virtual IP mapping, IP-MAC binding
Data Security	IPsec VPN/L2TP/PPTP/GRE/GRETAP/Vxlan/OPEN VPN/CA Certificate
Reliability	
Backup Function	Supports wired, 5G, mutual backup
Link Online Monitoring	Sends heartbeat packets for detection, automatically reconnects after disconnection
Embedded Watchdog	Device self-checking technology, device fault self-repair
Intelligence	
Integrated DTU Function	Supports TCP, UDP transparent transmission mode, 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 Method	Supports WEB upgrade, supports FOTA (Firmware Over The Air)
Logging Function	Supports local system logs, remote logs, serial port output logs
Network Management Function	Supports KEY-IoT Device Management Platform for batch management
Simple Network Management Protocol(Optional)	SNMP v1/v2/v3, Supports SNMP TRAP Functionality
Traffic Management	Supports setting traffic thresholds, supports traffic statistics and traffic alarm functions
Maintenance Tools	Ping, route tracing
Status Query	System status, modem status, network connection status, route status

Product Interfaces



Product Dimension

单位:mm
unit:mm

