Technical Specification
for SR520 Dual Ethernet Port and Dual SIM 4G Router

VERSION NUMBER:**V1.0**

**XIAMEN KEY-IOT TECHNOLOGY CO.,LTD**

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Product Overview

StarRouter520 LTE ROUTER(SR520 for short) series products, is a 4G network, virtual private network and other technologies in one of the Internet of Things wireless router products. The device relies on 4G wireless wide area network and Wi-Fi wireless local area network and other technologies to provide uninterrupted access to a variety of networks, with its comprehensive security and wireless service features, to provide users with high-speed and stable data transmission channels.

Product Features

- WLAN support (Optional)

- Supports two Ethernet ports

- Support guide rail and desktop installation

- Supports dual carrier network backup (dual SIM cards) and is compatible with ESIM cards

- Supports wired and wireless mutual backup

- Supports efficient deployment of large-scale device networks

- Fully industrial design, not afraid of the challenge of harsh conditions

- Support 4G LTE CAT4 high-speed network, optional power 1.8GHz private network

- Supports the Linux OpenWrt system, which facilitates secondary development and provides a complete secondary development guide

- Supports multiple VPN functions. PPTP, L2TP, IPSEC, OPENVPN, GRE, GRETAP, Vxlan, etc

- Support SNMP and KEY-IOT Device Manager "Cloud Device Management" platform, to achieve efficient remote centralized network management

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Topological Diagram
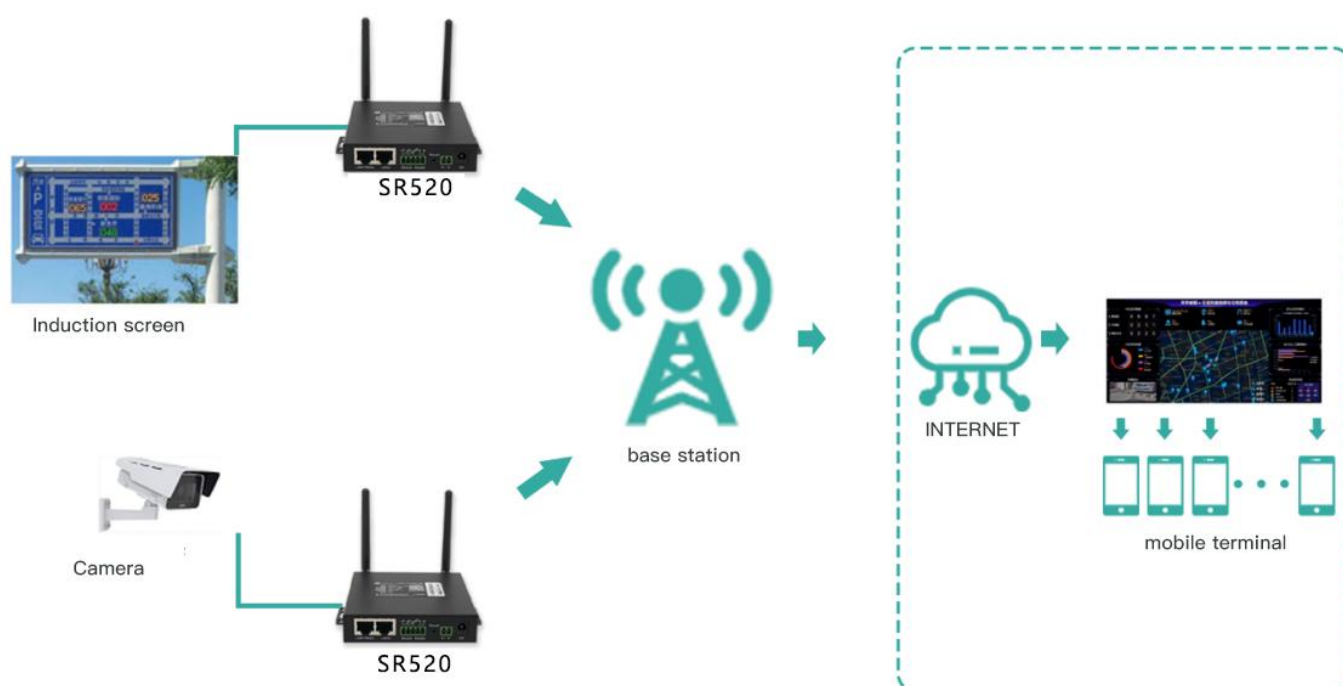
Technical Parameters
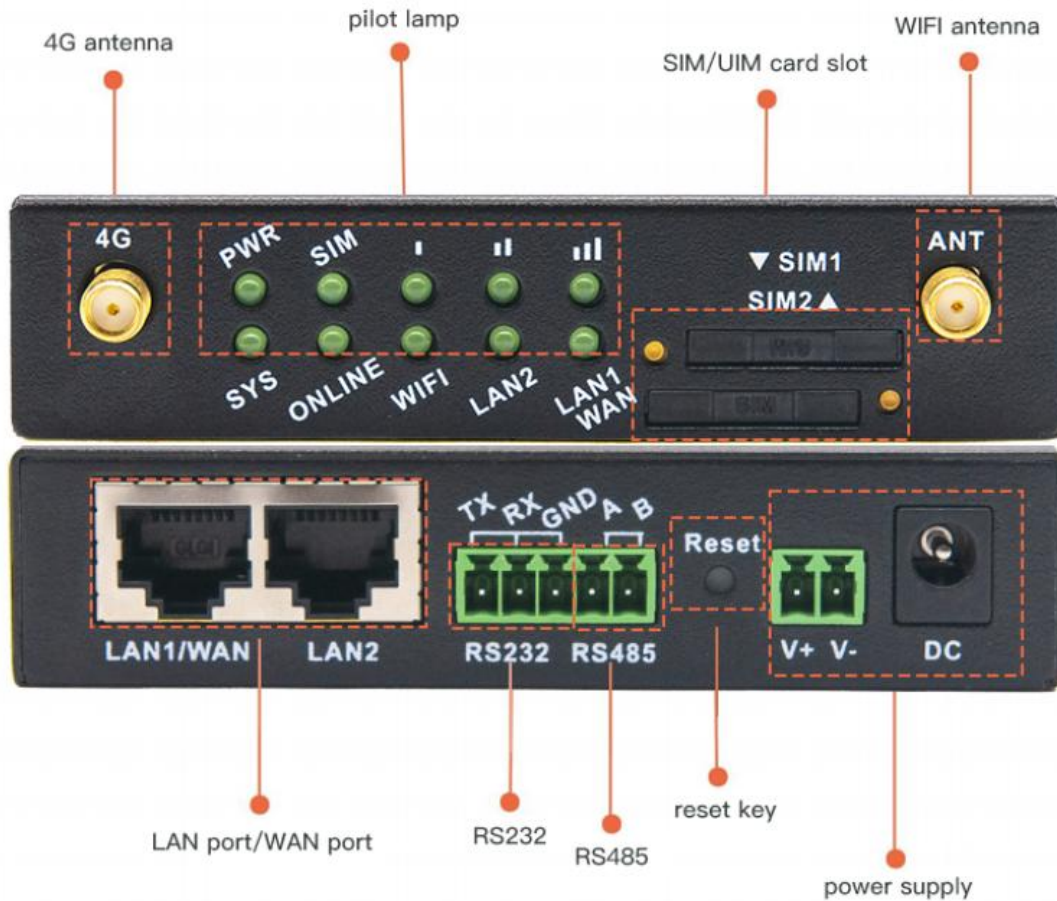
Hardware Performance	
Memory	64MB
FLASH	16MB（Expandable to 32MB)
WIFI（optional）	2.4G supports 802.11b/g/n，maximum rate 150Mbps
Network Support	Industrial-grade 4G module, supports seven mode full network

System Time	NTP technology for time synchronization, with built-in RTC

Interfaces

WAN Port	LAN1 can be configured as 1 WAN port
LAN Port	2 (10M/100M adaptive MDI/MDIX ports)
SIM Card Interface	2 (drawer type card holder, support 1.8V/3V SIM/UIM card), compatible with ESIM
Reset	1 (reset button)
Antenna Interface	1 (3G/4G antenna, impedance 50 OHM, SMA cathode port)
	1 (2.4G antenna, impedance 50 OHM, SMA internal port interface, can be reused as 4G antenna)
DC Power	1 (DC power base 2.1mm inner core)
Power Terminal	1 (2-pin 3.81mm pitch connecting seat)
Console	1 (5-pin 3.5mm pitch connector, 1 channel RS232/1 channel RS485)
Indicators	10 Power indicators and status indicators (Power, System, LAN1, LAN2, SIM, Online, WIFI, Signal)

Power Characteristics

Power	External Power Adapter (12V 1A)
Operating Voltage	Wide power input DC 5~36V (extensible 5-60V)
Standby Power Consumption	100~150mA@12V DC
Operating Power Consumption	150~220mA@12V DC

Working Conditions

Operating Temperature	-35~+75℃ (-31~+167℉)
Storage Temperature	-40~+85℃ (-40~+185℉)
Operating Humidity	5%~95% (non-condensing)
Device Ventilation	Natural heat dissipation, no noise

Physical Characteristics

Enclosure	All-metal enclosure
Dimensions	Length * Width * Height：100*100*23mm (not including antenna mounting parts)
Installation Methods	Table flat, rail mounted, wall mounted
Weight	Net weight: 0.30KG (excluding antenna and installation components)
	Gross weight: 0.60KG (with accessories and packaging box)

Device Safety and Reliability

Safety and Reliability	Power inverter protection, overvoltage protection, overcurrent protection; Ethernet interface built-in 1.5KV electromagnetic isolation protection; RS232/RS485 interface built-in 15KV ESD protection; SIM/UIM card port built-in 15KV ESD protection
Protection Level	IP30
Certification	CE Certification，Complies with CCC, Rohs
MTBF	≥100,000 hours

Software Features

Network Access	Supports APN VPDN
Access Authentication	Supports CHAP/PAP authentication
Network Mode	GSM/GPRS/EDGE,LIMTS/HSPA+/EVDO/TD-SCDMA/TD-LTE/FDD LTE
LAN Protocol	Supports ARP and Ethernet
WAN Protocol	Supports static IP,DHCP,PPPoE, and PPP
IP Application	Support 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 Functionality	Supports network address translation
Network Security	
Firewall	Full-state packet inspection (SPI), prevent denial of service (DoS) attacks, filter multicast Ping packets, access control lists, URL filtering, port mapping, virtual IP mapping, IP-MAC binding
Data Security	IPsec VPN/L2TP/PPTP/GRE/GRE TAP /OPEN VPN/VXLAN/CA certificate
Reliability	
Backup Functionality	Support link backup(failover)
Online Link Detection	Send heartbeat packet detection, disconnection automatic connection
Built-in Watchdog	Device self-checking technology, device fault self-repair
WLAN(Optional)	
Protocol Standard	IEEE 802.11b/g/n
Rate	Supports 150Mbps
Safety Features	Open system, shared key, WPA/WPA2 authentication, WEP/TKIP/AES encryption
Working Modes	AP and Client（WiFi STA)
Transmission Distance	100m(The actual transmission distance depends on the environment)
Intelligent Features	
Integrated DTU Functionality	Support TCP, UDP transparent transmission mode, TCP Server mode, support Modbus RTU to Modbus TCP bridge, support DCUDP, DCTCP mode
Network Management	
QoS Management	Supports bandwidth limiting and IP limiting
Configuration Mode	Supports Telnet, WEB, SSH, and Console configurations
Upgrade Mode	Supports WEB upgrade and FOTA upgrade
Logging Functionality	Supports local system logs, remote logs, and serial port output logs
Network Management Functionality	Support KEY-IOT Device Manager "Cloud Device Management" platform, batch management
Simple Network Management Protocol(Optional)	Supports SNMP v1, v2, and v3, and SNMP TRAP
Traffic Management	Supports traffic threshold setting, traffic statistics, and traffic alarm functionality

Maintenance Tools	Ping，Route tracing
Status Inquiry	System status, modem status, network connection status, route status

Product Interfaces

Product Dimensions

122

100

23

111

50

37.5

100