Technical Specifications for SR820 Compact 5G CPE

VERSION NUMBER:**V2.3**

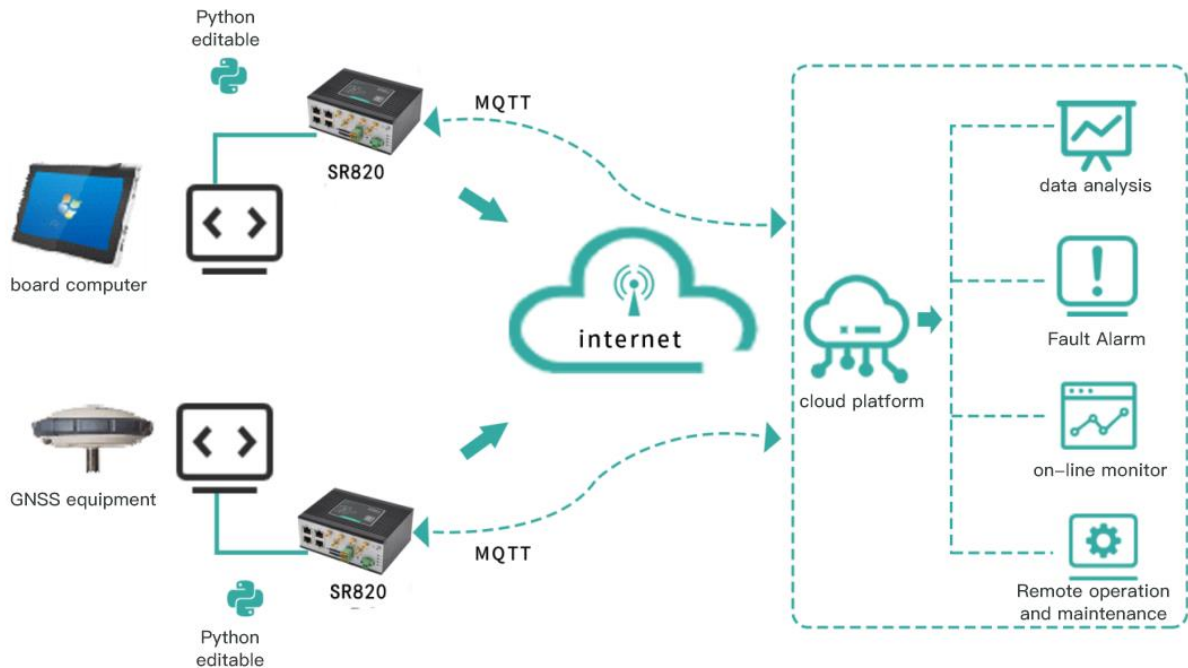**XIAMEN KEY-IOT TECHNOLOGY CO., LTD**

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Product Overview

The SR820 series products are IoT wireless router which integrated 4G/5G networks, virtual private networks, and other technologies. Leveraging 4G/5G wireless wide area network (WWAN) dual-network backup and Wi-Fi wireless local area network (WLAN) technologies, this device provides uninterrupted access to various networks. With its comprehensive security and wireless services, it offers users a high-speed and stable data transmission channel.

Product Features

- Supports multiple DNNs

- Supports 5G NR high-speed network

- Supports WLAN

- Supports 4 Ethernet ports

- Supports dual-operator network backup (dual SIM cards)

- Supports rail and desktop installation

- Efficiently completes large-scale device network deployments

- Fully industrial design, capable of withstanding challenging conditions

- Supports Linux OpenWrt system, facilitating user secondary development with comprehensive secondary development guidelines

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

- Supports SNMP and Star Device Manager (Star Cloud Platform) for efficient remote centralized network management

Topology Diagram

Technical Parameters

Hardware Performance	
Memory	512MB
FLASH	4GB EMMC
WIFI	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	Industrial-grade 5G module
System Time	NTP technology for time synchronization, with built-in RTC
Interfaces	
LAN Port	4 (10M/100M/1000M adaptive MDI/MDIX ports), with one usable as a WAN port
SIM Card Interfaces	2 (drawer-type card slots, supporting 1.8V/3V SIM/UIM cards)
Reset	1 (reset button)
Antenna Interfaces	4 (4G/5G antenna, impedance 50 ohms, SMA male interface)
	2 (2.4G/5.8 antenna, impedance 50 ohms, SMA interface)
Power Terminals	1 (2-pin 3.81mm pitch connector)
Console Port	1 (5-pin 3.5mm pitch connector, 1 RS232 / 1 RS485)

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Indicators	4 (1 PWR light, 1 SYS light, 1 WIFI light, 1 NET light)
Power Characteristics	
Power Supply	External power adapter (12V 2A)
Operating Voltage	Wide power input DC 9~36V
Standby Power Consumption	300~500mA@12V DC
Operating Power Consumption	500~700mA@12V DC
Operating Conditions	
Operating Temperature	-35~+75℃ (-31~+167℉)
Storage Temperature	-40~+85℃ (-40~+185℉)
Operating Humidity	5%~95% (non-condensing)
Device Ventilation	Natural cooling, no noise
Physical Features	
Chassis	Full metal chassis
Dimensions	Length*Width*Height:135*98*55.5mm (excluding antenna mounting components)
Installation Method	Desktop flat, rail mounting, wall mounting
Weight	Net weight: 0.50KG (excluding antennas and mounting components)
	Gross weight: 0.95KG (with accessories and packaging box)
Device Security and Reliability	
Security and Reliability	Reverse polarity protection, overvoltage protection, overcurrent protection; Ethernet interface with built-in 1.5KV electromagnetic isolation protection; RS232/RS485 interface with built-in 15KV ESD protection; SIM/UIM card interface with built-in 15KV ESD protection
Protection Level	IP30
Certification	Compliant with CCC, RoHS
MTBF	≥100,000 hours
Software Functions	
Network Access	Supports APN/VPDN/slice networks
Access Authentication	Supports CHAP/PAP authentication
Network Modes	5G Sub-6 SA/NSA/LTE/WCDMA
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 environmental protection 212 protocol, supports MQTT, MUDBUS, and other industrial protocols
Network Security	

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Firewall	Full state packet monitoring (SPI), defense against denial of service (Dos) attacks, filtering multicast Ping packets, access control lists (ACL), URL filtering, port mapping, virtual IP mapping, IP-MAC binding
Data Security	IPsec VPN/L2TP/PPTP/GRE/OPEN VPN/CA certificate

Reliability

Backup Function	Supports wired, 5G, and WIFI triple backup
Link Online Monitoring	Sends heartbeat packets for detection, automatically reconnects if disconnected
Embedded Watchdog	Device self-test technology, automatic fault repair

WLAN(optional)

Protocol Standards	IEEE 802.11b/g/n/ac/wifi6 ax (optional)
Rate	Up to 9.6Gbps
Security Features	Open system, shared key, WPA/WPA2 authentication, WEP/TKIP/AES encryption
Operating Mode	AP, Client operating mode
Transmission Distance	100m(actual transmission distance depends on the environment)

Intelligent Features

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 Method	Supports telnet, web, ssh, and console configuration methods
Upgrade Method	Supports web upgrade, supports FOTA
Log Function	Supports local system logs, remote logs, serial output logs
Network Management Function	Supports Star Device Manager (Star Cloud Platform) for batch management
Simple Network Management Function	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

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Product Interfaces

WIFI antenna
WIFI antenna
Ground Screw
pilot lamp
GE0
GE2
ANT1
ANT2
ANT3
ANT4
WLAN1
WLAN2
SIM1
SIM2
GE1
GE3
LAN port
SIM card slot
RS232/RS485
reset key
power supply

Product Dimensions

单位:mm
unit:mm

135
33.3
36.3

128
17.7
42.5
55.5
51.3
20.5
18.6

50.1
87
43.5
100
109.3

75
110
60
43.5
27.6
6
17.6
12.5

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