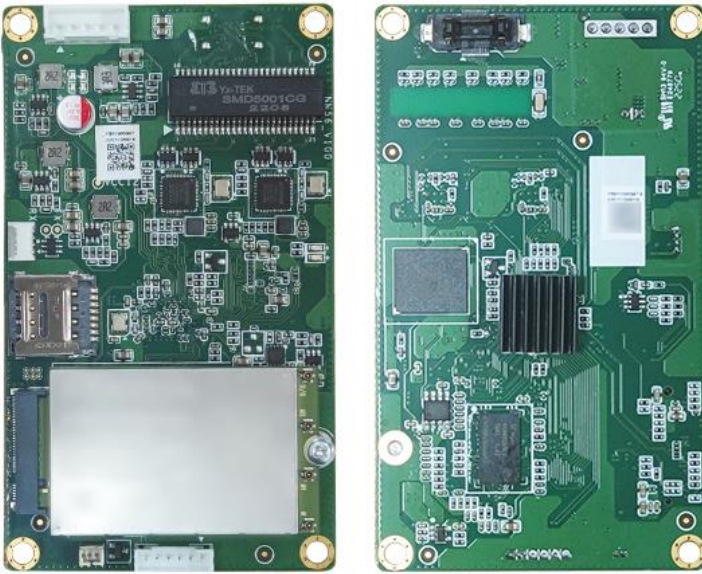


Technical Specification for SR830-E Embedded 5G Router



VERSION NUMBER: **V2.1**

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



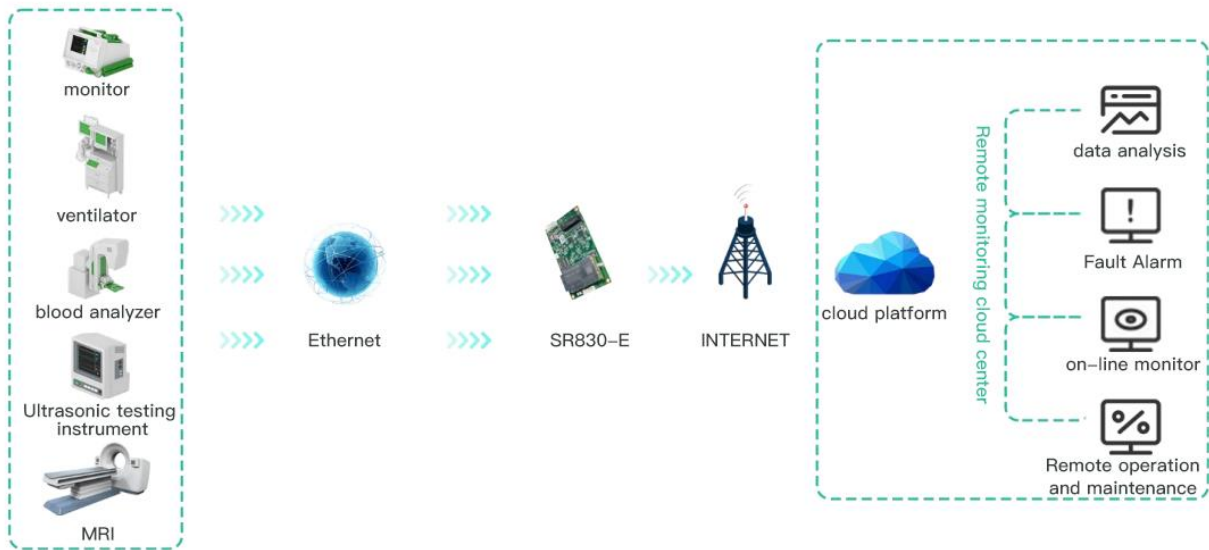
Product Overview

The SR830-E series is a collection of IoT wireless router which is integrate 4G/5G networks, virtual private networks, and other technologies. With the multi-DNN network slicing feature, it meets the differentiated needs of various industry applications, providing network-level SLA guarantees and end-to-end security isolation. This device supports Vxlan functionality, enabling practical layer 2 exchange networking and offering robust solutions for data centers.

Product Features

- Supports the networks of major carriers (Mobile, Unicom, Telecom, Broadcasting)
- Supports multi-DNN
- Supports 5G NR high-speed network and Redcap networks
- Equipped with 2 Ethernet ports
- Embedded design
- Supports efficient completion of large-scale device network deployments
- Fully industrialized design, capable of withstanding challenging conditions
- Supports Linux OpenWrt system, facilitating user secondary development, and providing comprehensive secondary development guidelines
- Supports various VPN functionalities, including PPTP, L2TP, IPSEC, OPENVPN, GRE, GRE-TAP, Vxlan, etc
- Supports SNMP and Star Device Manager (Star Cloud) platform, enabling efficient remote centralized network management

Topology Diagram



Technical Parameters

Hardware Performance

Memory	512MB
FLASH	4GB EMMC
Network Support	Industrial-grade 5G module
System Time	Time synchronization using NTP technology, with built-in RTC

Interface (20PIN PCB Connector)

WAN Port	1 (can be reused as LAN port)
LAN Port	1 (10M/100M/1000M adaptive MDI/MDIX port)
Power Supply	1

Power Characteristics

Operating Voltage	DC 12V
Current Requirements	12V1.5A 以上
Standby Power Consumption	300~500mA@12V DC
Operating Power Consumption	500~700mA@12V DC

Operating Conditions

Operating Temperature	-35~+75°C (-31~+167°F) (Requires additional heat dissipation measures)
Storage Temperature	-40~+85°C (-40~+185°F)
Operating Humidity	5%~95% (Non-condensing)
Device Ventilation	Natural heat dissipation, noiseless

Physical Characteristics

Structure	Embedded type
SIM Card Interface	1 flip card slot
Dimensions	Length*Width*Height:103*60*25mm (excluding antenna and installation components)
Installation Method	PCB connector and screw column

Device Security and Reliability

Safety and Reliability	Power reverse protection, overvoltage protection, overcurrent protection; Ethernet interface built-in 1.5KV electromagnetic isolation protection; SIM/UIM card interface built-in 15KV ESD protection
Certification	Compliant with CCC, RoHS
MTBF	≥100,000 hours

Software Features

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, MQTT, MUDBUS, etc

Network Security

Firewall	Full state packet inspection (SPI), defense against denial of service (DoS) attacks, filtering of multicast Ping packets, access control lists (ACL), content 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, and mutual backup
Link Online Monitoring	Sends heartbeat packets for detection, automatically reconnects if disconnected
Embedded Watchdog	Device self-checking technology, self-repair in case of device failure

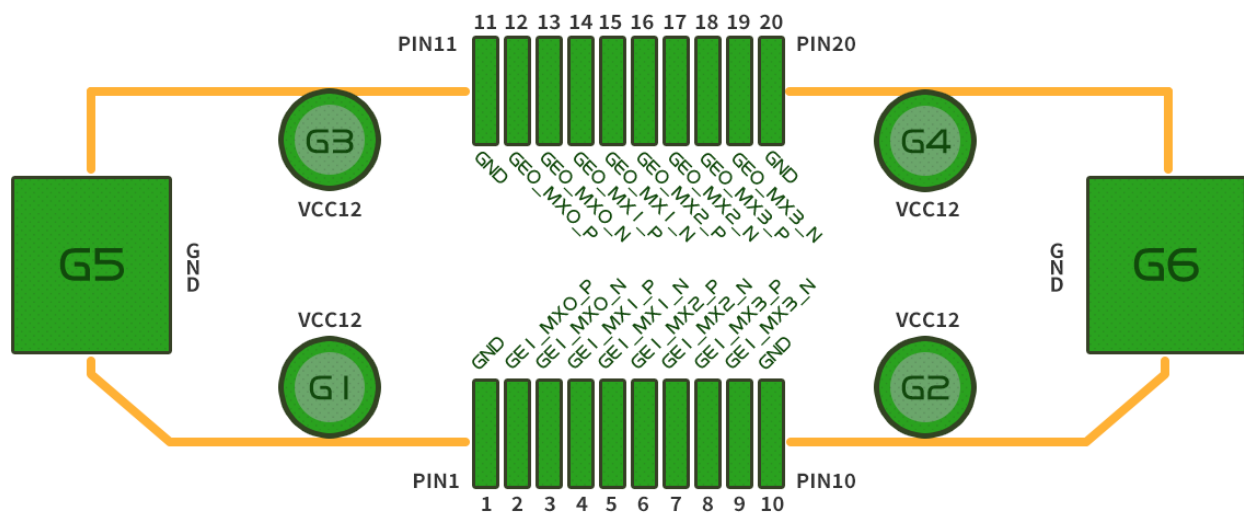
Intelligent

Integrated DTU Function	Supports TCP, UDP transparent transmission mode, TCP Server mode, 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 support
Logging Function	Supports local system logs, remote logs, and serial port output logs
Network Management Function	Supports Star Device Manager (Star Cloud) platform, batch management
Simple Network Management Function	Supports SNMP v1/v2/v3, supports SNMP TRAP function
Traffic Management	Supports traffic threshold setting, supports traffic statistics and traffic alarm functions
Maintenance Tools	Ping, route tracking
Status Query	System status, modem status, network connection status, route status

Explanation of PCB Connector Pins



Product Installation Size Structure Diagram

