S9925Si-5G



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RICON S9925Si-5G, is a high-performance router with 5G (3GPP Rel-16) cellular connectivity, designed for harsh industrial environments with high security requirements. **With ATEX Zone 1 and Zone 21 certification, IP54 protection and a -30 °C to +70 °C operating temperature range,** it stands apart from standard industrial routers. It offers comprehensive connectivity options with a Qualcomm IPQ4019 processor, Quectel RM500U-EA 5G modem module, 4 × Gigabit LAN, 1 × Gigabit WAN, dual SIM, dual-band Wi-Fi and an RS232/RS485 serial interface.

S9925Si-5G supports network continuity with automatic connection recovery and cellular/wired connection backup. Four simultaneous APN connections, advanced routing protocols and VPN support allow different data traffic to be managed securely and flexibly. It is a well-suited connectivity solution for oil and gas facilities, energy infrastructure, industrial automation and critical field monitoring applications. With optional GNSS/GPS support, it can also be used in location-based applications.

S9925Si-5G can be configured via the web interface, CLI, TR-069 and SNMP; it can be monitored centrally and managed remotely through the Ricon Management System (RMS). Remote software update and version management features help reduce the need for on-site field intervention and contribute to higher operational efficiency.

Features

- Gigabit-class 4 x LAN Switchports
- Gigabit-class 1 x WAN Switchport
- Single-radio Modem Interface
- MTBF: >250,000 hours
- Single 5G (Quectel RM500U-EA)
- PoE Power Support (Optional)
- 1 x External SD/TF Card Slot
- 1 x USB 2.0 Port (Type-A)
- 2 x SIM Slots
- 1 x Industrial DC Power Input 2.1mm
- 1 x 2.4GHz 1 x 5GHz WiFi Interface
- 1 x Serial Port (RS232/RS485)
- MTBF: >250,000 hours

Specifications

Dimensions and Weight

- Height: 40mm
- Width: 155mm
- Depth: 125mm
- Weight: <1Kg

Environmental

- Operating temp.: -30~+70°C
- Storage temp.: -40~85°C
- Humidity: 5% ~ 95%
- Operating voltage: DC 5V~48V
- IP54 Protection

Certifications

- **ATEX Zone 1 & 21 Certified II 2G Ex db IIB T6 Gb / II 2D Ex tb IIIC T85°C Db**

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General Specs

CPU	Qualcomm IPQ4019 Quad-Core ARM Cortex-A7 @717MHz
Memory	512MB
Storage	8GB eMMC (Optional)
Secure Boot	ARM Trustzone
RTC (Real-Time Clock)	Phillips PCF8563
HW Watchdog	SGMICRO SGM706/C122731
SPI Flash	32MB

Interfaces and Configuration

LAN	4x100/1000 Mb
WAN	1x100/1000 Mb
DHCP Server	IPv4/IPv6 Support DHCP Server mode for local VLAN DHCP Server mode for each VLAN DHCP Relay/Forwarding Configurable scope options (IP Pool, excluded addresses, default gateway, DNS addresses, domain name prefix…)

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Cellular Features

Cellular Modem Module	Quectel RM500U-EA
Module Type	M.2
Region	Global
Category	5G NR SA/NSA (3GPP Rel-16) • LTE-A Cat 12 (DL) / Cat 13 (UL)
Cellular Bands Quectel RM500U-EA	5G NR/NSA n1/ 3/ 7/ 28/ 38/ 40/ 41/ 77/ 78 5G NR/SA n1/ 3/ 7/ 28/ 38/ 40/ 41/ 77/ 78 LTE-FDD B1/ 2/ 3/ 4/ 5/ 7/ 8/ 20/ 28/ 66 LTE-TDD B38/ 40/ 41 WCDMA B1/ 2/ 5/ 8 Carrier Aggregation: Supported
SIM Support	2 x U-SIM Cards

Security Features

Firewall	Identity-Based Firewall Cloud Access Control (CASB) TLS Inspection
Filters	Domain Name Filters AllowList and DenyList for specific Domain Names IP Filters AllowList and DenyList for specific IP Hosts, Subnets MAC Filters WhiteList and BlackList for specific MAC Addresses
TrustZone	ARM TrustZone is supported
Misc	Security event logging Security alarms Packet capture logging (pcap dump to file)

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GNSS / GPS Features (Optional)

Chipset	ATGM336H-5N32
Supported Bands	GPS/ QZSS: L1 C/A, L5 GLONASS: L1 BDS: B1I, B2a
Default Constellations	GPS + GLONASS + BDS + QZSS
Number of Simultaneous GNSS	4 + QZSS
Protocols	NMEA 0183/ RTCM 3.x
SBAS	WAAS, EGNOS, MSAS and GAGAN

Management Features

Management Interfaces	Web User Interface CLI (Telnet, SSH, SSHv2) TR069 with integrated data models: TR-181 and TR-098. SNMPv2, SNMPv2c, SNMPv3 AT Commands for Modem Management (CLI)	
Version Management	Image Checksum Active version and backup version Automatic rollback when remote upgrade fails	
Account Management	Integrated Admin/Guest accounting TACACS/TACACS+, Radius Authorization models	
Retrievable Parameters WEB UI / CLI / TR-069 / SNMP	• RSRP • RSRQ • RSSI • SINR • Cell ID/NCI/BTS Id • EarFCN • BAND • Bandwidth Live • Tx power	• SIM ICCID • LAC • LAN IP Address • WAN IP Address • Serial Number • Software Version • Status • Signal Level

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Cellular Modem Features

APN Data Services	Dynamic APN support Multiple APN support (Maximum 4 Simultaneous APNs) SIM PIN management Static APN mapping to WAN tunnel(s) and interfaces Static APN mapping to LAN and VLAN(s) Multi-Carrier Support with Policy Routing using dual radio Bridge Mode Support
Modem Interface Configuration	Configurable MTU size SIM slot selection Full band scan Modem band lock Automatic/on-demand dialing Enable/disable radio PPPD and DHCP dialing options
Modem Backup	Backup operation support on interface outages. Backup operation support on traffic flow interruptions. Automatic connection recovery support. Automatic return to primary line (supported with Dual Modem Modules) Scheduled return to primary line (supported with Single Modem Module)

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Wi-Fi

Chipset	Qualcomm IPQ4019 Integrated
Wi-Fi Features	General Specs 2x2/40MHz Radio 2.4GHz, 5GHz full-band support Up to 20~25 simultaneous clients 2.4 GHz (WiFi4) IEEE802.11 a/b/g/n 20/40MHz Support Tx Output Frequency Range: 2400~2496 MHz 5.8 GHz (WiFi5) IEEE802.11 n/ac 20/40MHz Support Tx Output Frequency Range: 4900~5925 MHz
MIMO	2x2 DL MIMO MU-MIMO
Region	Global
Wireless Security	Protocols WEP, WPA, WPA2, WPA3 Client Encryption AES, TKIP
Mode	Access Point and WiFi Client (Station) modes are supported **MU-MIMO is supported in both of the above modes **2x2 DL MIMO is supported in both of the above modes
Multi SSID	Supported in Access Point Mode Not supported in Client (Station) mode

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Network Features

Routing	Static Routing RIPv1, RIPv2 OSPFv2, OSPFv3 BGP, eBGP MPLS VRF, VRF-Lite
Tunnels	IPSec IKEv1, IKEv2 Encryption Algorithms (DES, 3DES, AES, AES128, AES256) Hash (md5, SHA, SHA256) Tunnel/Transport modes Multiple Access List configurable GRE, mGRE, DMVPN (Layer3) Configurable MTU/MSS setting EoGRE (Layer2) L2TP Client, L2TP Server, PPTP *** Multiple simultaneous tunnels for different LANs/VLANs*
Routing	NAT (Enable/Disable) PAT Port Forwarding RBUE (Route Behind UE) QoS L2 Network Bridging
Load Balancing	Per-Packet Routing Support

Security Features

Firewall	Identity-Based Firewall Cloud Access Control (CASB) TLS Inspection
Filters	Domain Name Filters Allow List and Deny List for specific Domain Names IP Filters Allow List and Deny List for specific IP Hosts and Subnets, based on IP address filtering rules MAC Filters Whitelist and Blacklist for specific MAC Addresses
TrustZone	Supports ARM TrustZone

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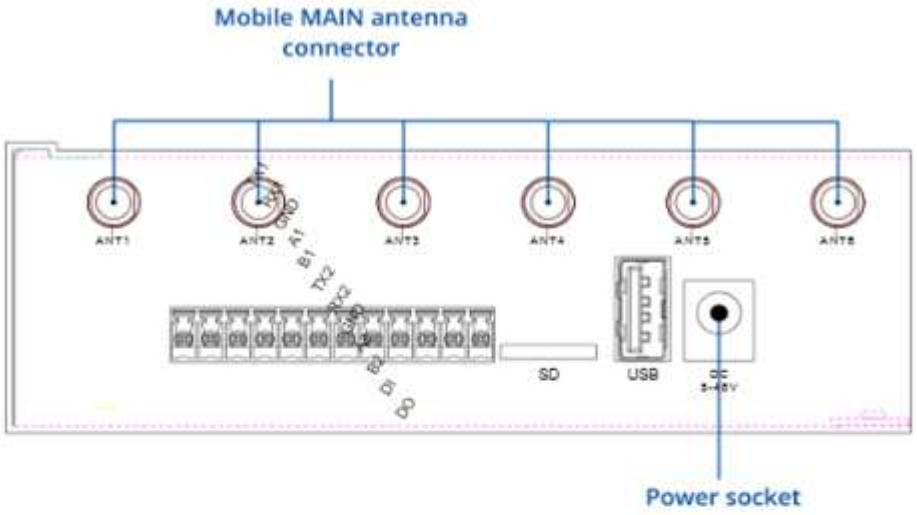
Ordering Information and Accessories

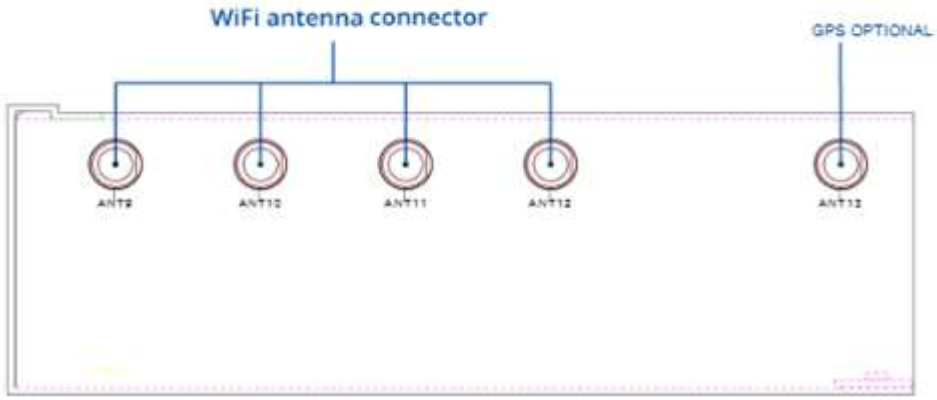
S9925Si-5G	High-Speed Mobile Router - 5G NR Single Cellular Radio Interface 4xLAN Gigabit, 1xWAN Gigabit, 2xSIM Slots 2.4 GHz-5 GHz Wi-Fi 802.11b/g/n/ac

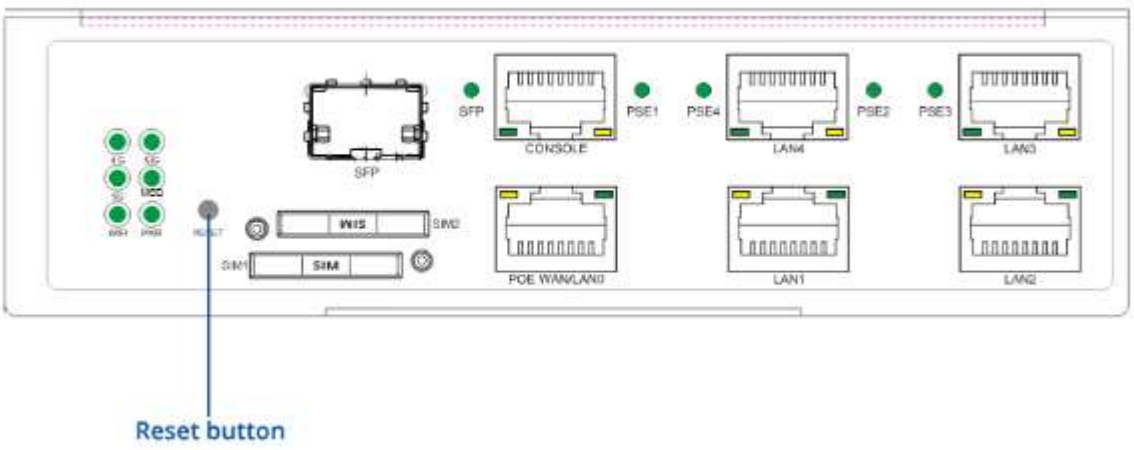
Defaults

Default Box Contents	1 x S9925Si Router Hardware 1 x 48 VDC 1.5 A 60 W Power Supply 1 x Serial connector 1 x Rack mount kit 4 x 5G Antennas 4 x WiFi Antennas 1 x 1 m. CAT6 Ethernet connection cable

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Mobile MAIN antenna connector
ANT1
ANT2
ANT3
ANT4
ANT5
ANT6
SD
USB
Power socket


WiFi antenna connector
GPS OPTIONAL
ANT9
ANT10
ANT11
ANT12
ANT13


SFP
CONSOLE
PSE1
PSE4
LAN4
PSE2
PSE3
LAN3
SFP
WiS
SIM2
SIM1
SIM
POE WAN/LAN0
LAN1
LAN2
Reset button

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About Ricon

Ricon is a B2B technology company developing network technologies for the secure, uninterrupted and sustainable communication needs of businesses. With industry experience and a technology-driven approach, it delivers connectivity, communication and management solutions for mobile, fixed and cloud networks.

Helping service providers, businesses and partners build reliable and scalable network infrastructures, Ricon supports the development of strong and sustainable communication infrastructures with solutions that adapt to changing digital needs and requirements.

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