



**Compact, Rugged
Low Power LTE-A
Router for Industrial
IoT, SCADA and
Metering**

RV50X Product Description

The AirLink® RV50X delivers LTE broadband connectivity for critical remote fixed assets and industrial IoT infrastructure. With low power consumption, the RV50X can run on battery or solar power.

RV50X

Rugged Cat 6 LTE router capable of 300 Mbps downlink and 50 Mbps uplink speeds. Ethernet and serial connections. GNSS. Wi-Fi not available.

Ideal Applications

Ruggedized connectivity for fixed assets in:

- Utilities
- Oil & Gas
- Public Safety
- SCADA and Metering
- Agriculture
- Environmental monitoring
- Smart City

Benefits

- Connect to devices in remote locations and harsh environments
- Lower connectivity costs compared to fiber, landlines or private network
- Deploy in off-grid locations using battery or solar power
- Maximize ROI and longevity of remotely deployed equipment

AirLink RV50X – Router Specifications

CELLULAR	
Peak D/L	RV50X LTE – Cat 6, Peak D/L Up to 300 Mbps
Peak U/L	Up to 50 Mbps
4G LTE	
Frequency Bands*	
North America & EMEA	2100(B1), 1900(B2), 1800(B3), AWS(B4), 850(B5), 2600(B7), 900(B8), 700(B12), 700(B13), 800(B20), 1900(B25), 850(B26), 700(B29), TDD B41
Asia Pacific	RV50X LTE – 2100(B1), 1800(B3), 850(B5), 2600(B7), 900(B8), 850(B18), 850(B19), 1500(B21), 700(B28), TDD 38, TDD 39, TDD 40, TDD 41
3G WCDMA/HSPA+	
Frequency Bands*	
North America & EMEA	2100(B1), 1900(B2), 1800(B3), AWS(B4), 850(B5), 900(B8)
Asia Pacific	2100(B1), 850(B5), 800(B6), 900(B8), 1700(B9), 850(B19)
3G TD-SCDMA	
Frequency Bands*	
Asia Pacific	B39
APPROVALS	
Regulatory	
North America & EMEA	FCC, IC, PTCRB, R&TTE, GCF, CE
Asia Pacific	RCM, JRF/JPA, Anatel
Carrier	
North America & EMEA	Verizon, AT&T, T-Mobile, Southern Linc, US Cellular, Rogers, TELUS, Bell, Anterix
Asia Pacific	Telstra
PART NUMBERS	
North America & EMEA	1103052
Asia Pacific	1103045, 1103973 (China)

*For carrier specific band support please refer to the hardware user guide.

HOST INTERFACES

10/100/1000 Ethernet (RJ45)
 RS-232 serial port (DB-9)
 USB 2.0 Micro-B Connector
 3 SMA antenna connectors (primary, diversity, GPS)
 Active GPS antenna support

SECURITY

Remote Authentication (LDAP, RADIUS, TACACS+)
 DMZ
 Inbound and Outbound Port filtering
 Inbound and Outbound Trusted IP
 MAC Address Filtering
 PCI compatible

SATELLITE NAVIGATION (GNSS)

12 Channel GPS and GLONASS Receiver
 Acquisition Time: 1 s Hot Start
 Accuracy: <2 m (50%), <5 m (90%)
 Tracking Sensitivity: -145 dBm
 Reports: NMEA 0183 V3.0, TAIP, RAP, XORA
 Multiple Redundant Servers
 Reliable Store and Forward

ENVIRONMENTAL

Temperature
Operating Temperature: -40°C to +70°C / -40°F to +158°F
Storage Temperature: -40°C to +85°C / -40°F to +185°F
Humidity: 90% RH @ 60°C

Military Spec MIL-STD-810G conformance to shock, vibration, thermal shock, and humidity
 IP64 rated ingress protection

POWER

Input/Operating Voltage
Input Voltage: 7 to 36 VDC
 Configurable I/O pin on power connector

- Digital Input ON Voltage: 2.7 to 36 VDC
- Configurable Pull-up for dry contact input
- Digital Open Collector Output > sinking 500 mA
- Analog Input: 0.5-36 VDC

Power modes
LTE Idle Power: 900mW (75 mA @ 12VDC)
Standby Mode Power: 53 mW (4.4 mA @ 12 VDC)
 triggered on low voltage, I/O or periodic timer
 Low voltage disconnect to prevent battery drain
 Built-in protection against voltage transients including 5 VDC engine cranking and +200 VDC load dump
 Ignition Sense with time delay shutdown
 Configurable features and ports to optimize power consumption

AirLink RV50X – Router Specifications

NETWORK AND ROUTING

Network Address Translation (NAT)
 Port Forwarding
 Host Port Routing
 NEMO/DMNR
 VRRP
 Reliable Static Route
 Dynamic DNS
 Policy Routing
 Verizon ANTM
 IPv6 Gateway

VPN***

IPsec, GRE, and OpenVPN Client
 Up to 5 concurrent tunnels
 Split Tunnel
 Dead Peer Detection (DPD)
 Multiple Subnets

INDUSTRY CERTIFICATIONS

Safety	IECEE Certification Bodies Scheme (CB Scheme), UL 60950
Vehicle Usage	E-Mark (UN ECE Regulation 10.04), ISO7637-2, SAE J1455 (Shock & Vibration)
Environmental	RoHS, REACH, WEEE Hazardous Environments: Class 1 Div 2

SUPPORT AND WARRANTY

1 year standard warranty with up to 5 years extended
 warranty with current AirLink Complete subscription.
 Unrestricted critical firmware updates.

LAN (ETHERNET/USB)

DNS, DNS Proxy
 DHCP Server
 IP Passthrough
 VLAN
 Host Interface Watchdog
 PPPoE

SERIAL

TCP/U DP PAD Mode
 Modbus (ASCII, RTU, Variable)
 PPP
 DNP3 Interoperability

APPLICATION FRAMEWORK

ALEOS Application Framework (AAF)
 LUA Scripting Language
 Eclipse-based IDE
 Integrated with AirVantage®
 Dual-Core Processing

NETWORK MANAGEMENT

Secure network management applications available in the
 cloud or licensed platform in the enterprise data center
 Fleet wide firmware upgrade delivery
 Router configuration and template management
 Router staging over the air and local Ethernet connection
 Over-the-air software and radio module firmware updates
 Device Configuration Templates
 Configurable monitoring and alerting
 Remote provisioning and airtime activation (where
 applicable)

ROUTER MANAGEMENT

ALMS
 Local web user interface
 AT Command Line Interface (Telnet/SSH/Serial)
 SMS Commands
 SNMP

EVENTS ENGINE

Custom event triggers and reports Configurable interface,
 no programming
Event Types: Digital Input, Network Parameters, Data
 Usage, Timer, Power, Device Temperature and Voltage
Report Types: RAP, SMS, Email, SNMP Trap, TCP (Binary,
 XML, CSV)
Event Actions: Drive Relay Output

ACCESSORIES

In the box	RV50X, DC Power Cable and Quick Start Guide Other Accessories (sold separately): <ul style="list-style-type: none"> 2000579 AC Adapter, 12VDC 6000659 DIN Rail Bracket For antenna options visit: sierrawireless.com/antennas
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DIMENSIONS

AirLink RV50X – Main Body	119 mm x 34 mm x 85 mm (94 mm including connectors) 4.69 in x 1.34 in x 3.35 in (3.70 in including connectors)
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RV50X Services and Support



AIRLINK COMPLETE

Maximize your AirLink RV50X hardware investment and ensure your applications operate at peak efficiency by subscribing to our best-in-class service and support including:

- AirLink Management Service (ALMS) network management
- Optional Advanced Mobility Reporting (AMR)
- 24/7/365 Tier 1 technical support from wireless experts via phone or online access
- Extended hardware warranty – up to 5 years
- For more information on AirLink Complete visit our [web page](#)



PROFESSIONAL SERVICES

Our [Professional Services](#) experts are well-versed in the latest enterprise networking and security standards. Harvesting experience and lessons-learned over thousands of customer deployments, our best practices are expertly tailored to help you architect and deploy your cutting-edge AirLink solutions.



AIRLINK CONNECTION MANAGER

- VPN appliance built from the ground up for AirLink routers & gateways
- Simplify deployment and management of your VPN solution, extending the enterprise to the network edge for fixed and mobile endpoints
- Carrier agnostic – ACM doesn't require fixed and/or public IP
- Compatible with FIPS 140-2, and always-on VPN capability



AIRLINK ANTENNAS

- Tested and certified to provide guaranteed performance with all AirLink routers and gateways
- Accelerate deployment with always-on, end-to-end connectivity
- For more information on antennas specific to the RV50X router visit our [web page](#)

For more information contact us:



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About Sierra Wireless

Sierra Wireless (NASDAQ: SWIR) (TSX: SW) is a world leading IoT solutions provider that combines devices, network services, and software to unlock value in the connected economy. Companies globally are adopting 4G, 5G, and LPWA solutions to improve operational efficiency, create better customer experiences, improve their business models, and create new revenue streams. Sierra Wireless works with its customers to develop the right industry-specific solution for their IoT deployments, whether this is an integrated solution to help connect edge devices to the cloud, a software/API service to manage processes with billions of connected assets, or a platform to extract real-time data to improve business decisions. With more than 25 years of cellular IoT experience, Sierra Wireless is the global partner customers trust to deliver them their next IoT solution.

For more information, visit www.sierrawireless.com.