



**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
- Remote router management and comprehensive services through AirLink Complete

## RV50X Services and Support



### AIRLINK COMPLETE

Maximize your AirLink RV50X hardware investment with AirLink Complete – a comprehensive service package designed to empower you with the tools and support necessary to secure, optimize and effortlessly scale your RV50X deployments.

AirLink Complete includes\*:

- **AirLink Management Service (ALMS)** for remote device and security management
- **Expert technical support**
- **Extended hardware warranty** – up to 5 years maximum
- For more information on AirLink Complete visit our [web page](#)

*\*With active subscription. 1-year subscription included with the RV50X purchase*



### AIRLINK PREMIUM

Ideal for organizations managing mission-critical vehicle fleets, this service upgrade encompasses all the benefits of [AirLink Complete](#)\*, enhanced with:

- **Advanced Mobility Reporting\***: Offers comprehensive coverage and fleet reporting to monitor your network and vehicles.
- **Advance Replacement\***: Provides same-day shipping for in-warranty router replacements, minimizing downtime, spare inventory and keeping your operations running smoothly.

*\*With active subscription.*



### AIRLINK CONNECTION MANAGER (ACM) – [MOBILE VPN](#)

This purpose-built VPN solution securely extends your enterprise network to your AirLink router and its connected devices and applications.

Optimized for use in a mobile, multi-network environment, it seamlessly maintains VPN tunnels as users roam between multiple carrier and Wi-Fi networks to prevent downtime and loss of communications.

Available in a FIPS 140-2 compliant offering.



### ANTENNAS

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

## AirLink RV50X – Router Specifications

CELLULAR	
Peak D/L	Up to 300 Mbps
Peak U/L	Up to 50 Mbps
4G LTE	
Frequency Bands*	
North America & EMEA	B1, B2, B3, B4, B5, B7, B8, B12, B13, B20, B25, B26, B29, B30, B41
Asia Pacific	B1, B3, B5, B7, B8, B18, B19, B21, B28, B38, B39, B40, B41
3G WCDMA/HSPA+/ TD-SCDMA	
Frequency Bands*	
North America & EMEA	B1, B2, B3, B4, B5, B8
Asia Pacific	B1, B5, B6, B8, B9, B19, B39
APPROVALS	
Regulatory	
North America & EMEA	FCC, IC/ISED, 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	<b>Operating Temperature:</b> -40°C to +70°C / -40°F to +158°F <b>Storage Temperature:</b> -40°C to +85°C / -40°F to +185°F <b>Humidity:</b> 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	<b>Input Voltage:</b> 7 to 36 VDC Configurable I/O pin on power connector <ul style="list-style-type: none"> <li>Digital Input ON Voltage: 2.7 to 36 VDC</li> <li>Configurable Pull-up for dry contact input</li> <li>Digital Open Collector Output &gt; sinking 500 mA</li> <li>Analog Input: 0.5-36 VDC</li> </ul>
Power modes	<b>LTE Idle Power:</b> 900mW (75 mA @ 12VDC) <b>Standby Mode Power:</b> 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

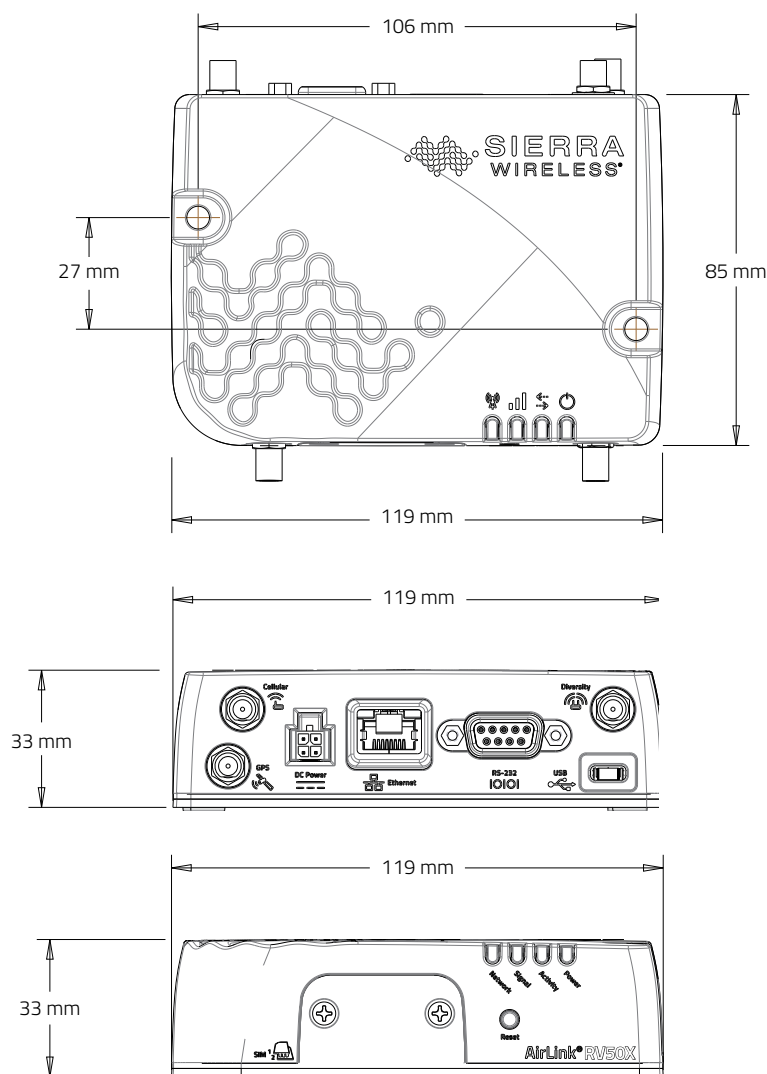
NETWORK AND ROUTING	
	Network Address Translation (NAT) Port Forwarding Host Port Routing NEMO/DMNR VRRP Reliable Static Route Dynamic DNS Policy Routing Verizon ANTM IPv6 Gateway
VPN***	
	IPsec, GRE, and OpenVPN Client Up to 5 concurrent tunnels Split Tunnel Dead Peer Detection (DPD) Multiple Subnets
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 <b>Hazardous Environments:</b> Class 1 Div 2
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
ROUTER MANAGEMENT	
	ALMS Local web user interface AT Command Line Interface (Telnet/SSH/Serial) SMS Commands SNMP
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)
EVENTS ENGINE	
	Custom event triggers and reports Configurable interface, no programming <b>Event Types:</b> Digital Input, Network Parameters, Data Usage, Timer, Power, Device Temperature and Voltage <b>Report Types:</b> RAP, SMS, Email, SNMP Trap, TCP (Binary, XML, CSV) <b>Event Actions:</b> Drive Relay Output
AIRLINK COMPLETE (1 Year Included With Router Purchase)	
Support	24/7 technical support*
Hardware Warranty	1-year standard hardware warranty Extended hardware warranty up to 5 years with current subscription**
Device Management	AirLink Management Service (ALMS)*
Software Updates	Unrestricted critical firmware updates through at least December 31st, 2029
AIRLINK PREMIUM (Optional Upgrade)	
Includes All Airlink Complete Features* and Adds:	
Advanced Mobility Reporting	Coverage and fleet reporting***
Advance Replacement	Same-day shipping for in-warranty router replacements***
ACCESSORIES	
In the box	RV50X, DC Power Cable and Quick Start Guide Other Accessories (sold separately): <ul style="list-style-type: none"> <li>• 2000579 AC Adapter, 12VDC</li> <li>• 6000659 DIN Rail Bracket</li> </ul> For antenna options visit: <a href="https://www.semtechwireless.com/antennas">Semtechwireless.com/antennas</a>
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)

\*With current AirLink Complete subscription

\*\*Full warranty terms are available at [www.sierrawireless.com/end-user-warranty](https://www.sierrawireless.com/end-user-warranty)

\*\*\*With current AirLink Premium subscription

## AirLink RV50X – Router Dimensions Diagram



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### About Semtech

Semtech Corporation (Nasdaq: SMTX) is a high-performance semiconductor, IoT systems and cloud connectivity service provider dedicated to delivering high-quality technology solutions that enable a smarter, more connected and sustainable planet. Our global teams are committed to empowering solution architects and application developers to develop breakthrough products for the infrastructure, industrial and consumer markets.

To learn more about Semtech technology, visit us at [Semtech.com](http://Semtech.com) or follow us on [LinkedIn](#) or [X](#).

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