



**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.*



### 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

<b>NETWORK AND ROUTING</b>		<b>NETWORK MANAGEMENT</b>	
	<ul style="list-style-type: none"> <li>Network Address Translation (NAT)</li> <li>Port Forwarding</li> <li>Host Port Routing</li> <li>NEMO/DMNR</li> <li>VRRP</li> <li>Reliable Static Route</li> <li>Dynamic DNS</li> <li>Policy Routing</li> <li>Verizon ANTM</li> <li>IPv6 Gateway</li> </ul>	<ul style="list-style-type: none"> <li>Secure network management applications available in the cloud or licensed platform in the enterprise data center</li> <li>Fleet wide firmware upgrade delivery</li> <li>Router configuration and template management</li> <li>Router staging over the air and local Ethernet connection</li> <li>Over-the-air software and radio module firmware updates</li> <li>Device Configuration Templates</li> <li>Configurable monitoring and alerting</li> <li>Remote provisioning and airtime activation (where applicable)</li> </ul>	
<b>VPN***</b>		<b>EVENTS ENGINE</b>	
	<ul style="list-style-type: none"> <li>IPsec, GRE, and OpenVPN Client</li> <li>Up to 5 concurrent tunnels</li> <li>Split Tunnel</li> <li>Dead Peer Detection (DPD)</li> <li>Multiple Subnets</li> </ul>	<ul style="list-style-type: none"> <li>Custom event triggers and reports</li> <li>Configurable interface, no programming</li> <li><b>Event Types:</b> Digital Input, Network Parameters, Data Usage, Timer, Power, Device Temperature and Voltage</li> <li><b>Report Types:</b> RAP, SMS, Email, SNMP Trap, TCP (Binary, XML, CSV)</li> <li><b>Event Actions:</b> Drive Relay Output</li> </ul>	
<b>INDUSTRY CERTIFICATIONS</b>		<b>AIRLINK COMPLETE (1 Year Included With Router Purchase)</b>	
<b>Safety</b>	IECEE Certification Bodies Scheme (CB Scheme) CSA-C22.2 No. 62368-1, UL 62368-1, EN/IEC 62368-1*	<b>Support</b>	24/7 technical support**
<b>Vehicle Usage</b>	E-Mark (UN ECE Regulation 10.04), ISO 7637-2, SAE J1455 (Shock & Vibration)	<b>Hardware Warranty</b>	1-year standard hardware warranty Extended hardware warranty up to 5 years with current subscription***
<b>Environmental</b>	RoHS, REACH, WEEE <b>Hazardous Environments:</b> Class 1 Div 2	<b>Device Management</b>	AirLink Management Service (ALMS)**
<b>LAN (ETHERNET/USB)</b>		<b>Software Updates</b>	Unrestricted critical firmware updates through at least December 31st, 2029
	<ul style="list-style-type: none"> <li>DNS, DNS Proxy</li> <li>DHCP Server</li> <li>IP Passthrough</li> <li>VLAN</li> <li>Host Interface Watchdog</li> <li>PPPoE</li> </ul>	<b>AIRLINK PREMIUM (Optional Upgrade)</b> Includes All Airlink Complete Features* and Adds:	
<b>SERIAL</b>		<b>Advanced Mobility Reporting</b>	Coverage and fleet reporting****
	<ul style="list-style-type: none"> <li>TCP/UDP PAD Mode</li> <li>Modbus (ASCII, RTU, Variable)</li> <li>PPP</li> <li>DNP3 Interoperability</li> </ul>	<b>Advance Replacement</b>	Same-day shipping for in-warranty router replacements****
<b>APPLICATION FRAMEWORK</b>		<b>ACCESSORIES</b>	
	<ul style="list-style-type: none"> <li>ALEOS Application Framework (AAF)</li> <li>LUA Scripting Language</li> <li>Eclipse-based IDE</li> <li>Integrated with AirVantage®</li> <li>Dual-Core Processing</li> </ul>	<b>In the box</b>	<ul style="list-style-type: none"> <li>RV50X, DC Power Cable and Quick Start Guide</li> <li>Other Accessories (sold separately):                             <ul style="list-style-type: none"> <li>2000579 AC Adapter, 12VDC</li> <li>6000659 DIN Rail Bracket</li> </ul> </li> <li>For antenna options visit: <a href="http://Semtechwireless.com/antennas">Semtechwireless.com/antennas</a></li> </ul>
<b>ROUTER MANAGEMENT</b>		<b>DIMENSIONS</b>	
	<ul style="list-style-type: none"> <li>ALMS</li> <li>Local web user interface</li> <li>AT Command Line Interface (Telnet/SSH/Serial)</li> <li>SMS Commands</li> <li>SNMP</li> </ul>	<b>AirLink RV50X – Main Body</b>	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)

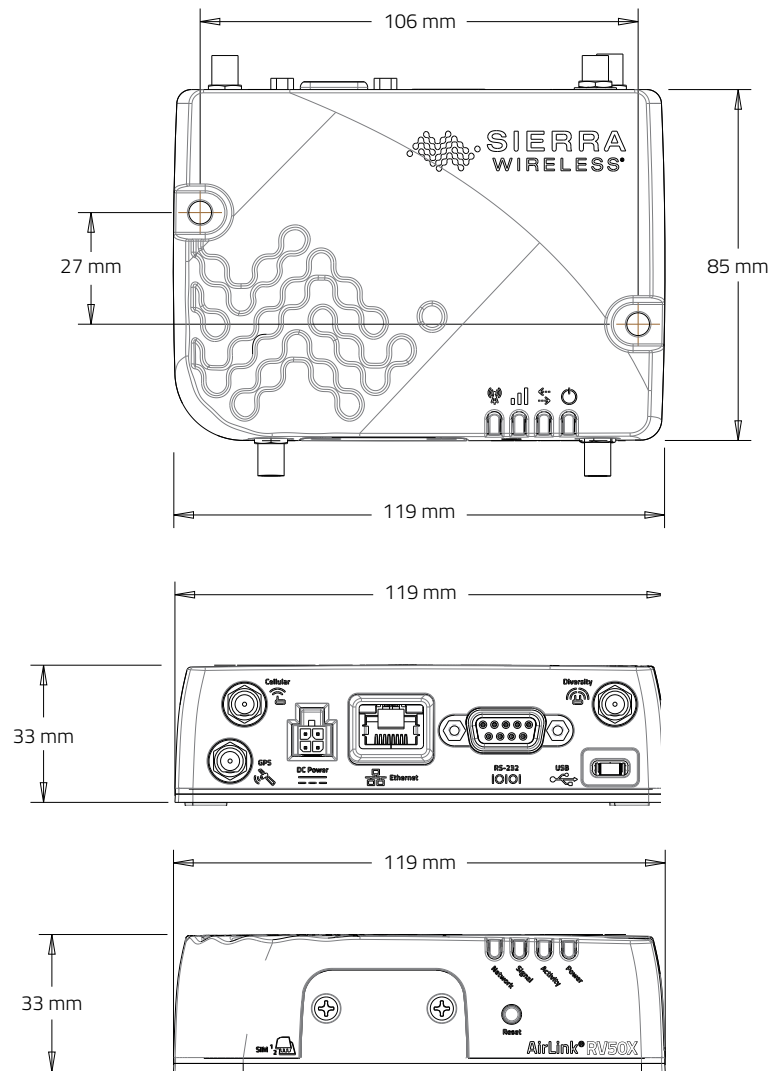
\*Ambient temperatures of -30°C to +60°C

\*\*With current AirLink Complete subscription

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

\*\*\*\*With current AirLink Premium subscription

## AirLink RV50X – Router Dimensions Diagram



### About Semtech

Semtech Corporation (Nasdaq: SMTC) 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](https://www.semtech.com) or follow us on [LinkedIn](#) or [X](#).