DATASHEET

AirLink® RV50X

SIERRA WIRELESS IS NOW
SEMTECH®

TransCOR
RUGGED & CONNECTED

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	**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

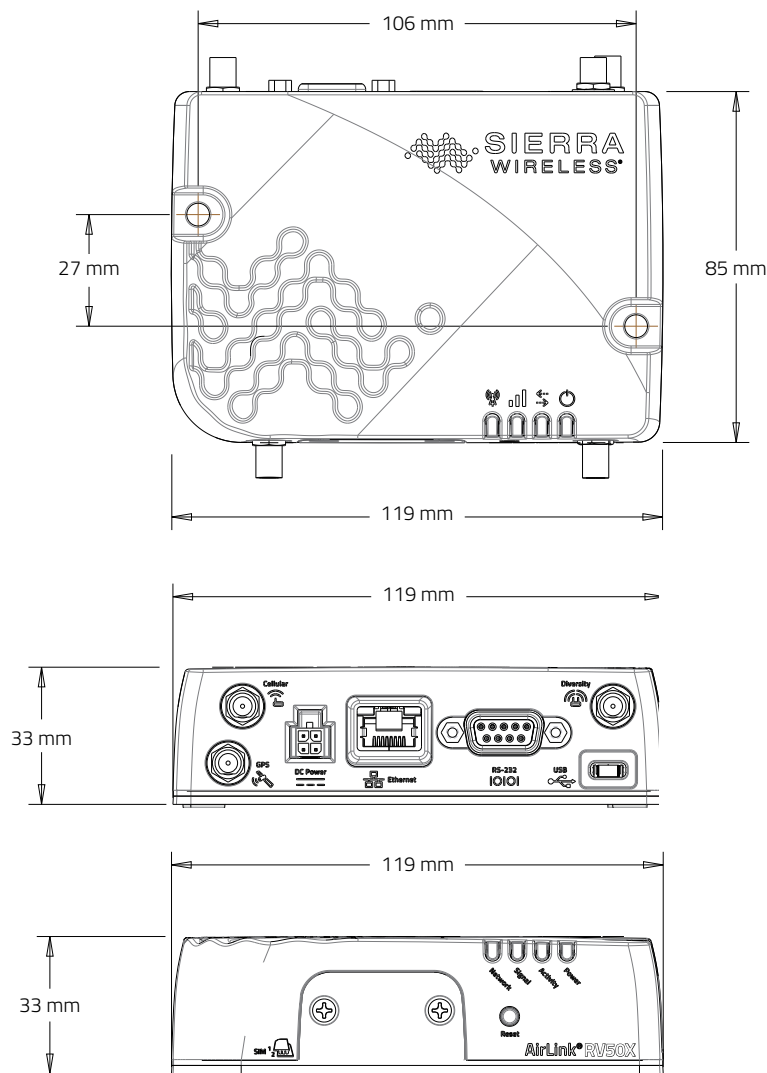|	
Input/Operating Voltage	**Input Voltage:** 7 to 36 VDC Configurable I/O pin on power connector • Digital Input ON Voltage: 2.7 to 36 VDC • Configurable Pull-up for dry contact input • Digital Open Collector Output > sinking 500 mA • Analog Input: 0.5-36 VDC
Power modes	**LTE Idle Power:** 900mW (75 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

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
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

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):
• 2000579 AC Adapter, 12VDC
• 6000659 DIN Rail Bracket
For antenna options visit: Semtechwireless.com/antennas |

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
***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** or follow us on **LinkedIn** or **X.**