



**Compact, Rugged,  
Low power, LTE  
Router for Industrial  
IoT, SCADA and fleet  
applications in private  
and public networks.**

## KEY FEATURES

- 4G LTE-A
- Dual 1x1 Wi-Fi 5
- 1 Gigabit Ethernet
- Single/Dual Serial
- GNSS
- IP64 Rated
- AirLink OS with AirLink Complete

## RX55 Product Description

The AirLink® RX55 is optimized for Industrial IoT with ultra-low power consumption and a rugged design for extreme conditions. With advanced networking and industry-standard container support capabilities, the RX55 delivers intelligence securely at the edge for mission-critical applications on both public and private networks.

## Ideal Applications

Reliable connectivity for fixed and mobile assets in:

- Utilities
- Oil & Gas
- Public Safety
- Agriculture
- Environmental monitoring
- Critical Infrastructure
- Smart Cities

## Benefits

- Compact size makes installation easier
- Ultra-low power consumption makes it ideal for solar or battery-powered applications
- Connect to a wide variety of devices from video to low-power IoT
- Remote device management through AirLink Complete
- Ready for your edge computing workloads (Beta)



## RX55 Services and Support

### AIRLINK COMPLETE

Maximize your AirLink RX55 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 RX55 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 RX55 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.*

### HYBRID CLOUD

This optional feature merges the benefits of cloud technology with on-premise security controls for the management of your AirLink XR and RX routers, offering ultimate security and control.

[Hybrid Cloud](#) is available to add to an active AirLink Complete or Premium 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 RX55 router visit our [web page](#)

## AirLink RX55 – Router Specifications

KEY FEATURES	
Cellular Radios	4G LTE-A
Wi-Fi	Dual 1x1 Wi-Fi 5
Ethernet	1x Gigabit Ethernet Port (RJ45)
Serial	Dual RS-232 serial port (DB9) - Base Model (with optional Y-cable) Single RS-232 serial port (DB9) - Wi-Fi & Wi-Fi Plus Model
GNSS	30 Channel GNSS
CAN	Wi-Fi & Wi-Fi Plus Model (with optional Y-cable)
I/O	1 GPIO
USB	USB 2.0 Micro-B
IP Rating	Sealed Aluminum Housing (IP64)
Services	AirLink Complete
Operating System	AirLink OS
Management System	ALMS

	NAM	EMEA-APAC
CELLULAR		
Technology	4G LTE-A	4G LTE-A
Cellular	4G, 3G	4G, 3G
Peak Downlink (Theoretical)	300 Mbps	300 Mbps
Peak Uplink (Theoretical)	150 Mbps	150 Mbps
LTE Category	Cat-7	Cat-7
Region	NAM	EMEA, APAC
Radio	EM7411	EM7421
MIMO	2x2	2x2
RF Connectors	SMA	SMA
SIM	Dual SIM (Mini-2FF)	Dual SIM (Mini-2FF)



NAM			EMEA-APAC	
FREQUENCY BANDS				
4G LTE		3G (HSPA+)	4G LTE	3G (HSPA+)
1			B1	B1
2	B2	B2		
3			B3	
4	B4	B4		
5	B5	B5		B5
7	B7		B7	
8			B8	B8
12	B12			
13	B13			
14	B14			
20			B20	
25	B25			
26	B26			
28			B28	
32			B32	
38			B38	
40			B40	
41	B41		B41	
42	B42		B42	
43	B43		B43	
48				
66				
71	B71			



NAM		EMEA-APAC
WIRELESS CERTIFICATION		
Regulatory	FCC, IC/ISED, PTCRB	GCF, CE, RED, RCM
Carrier	Verizon, AT&T, T-Mobile, Bell, CBRS	
Public Safety	FirstNet®	
Part Numbers	1104927 Base 1104928 Wi-Fi 1104934 Wi-Fi Plus	1104929 Base 1104930 Wi-Fi 1104933 Wi-Fi Plus

WI-FI (Optional)	
Wi-Fi Standard	Wi-Fi 5
Access Point	Dual
Client (Depot/WAN)	Yes
Client & AP	Yes
Peak Throughput (Theoretical)	433 Mbps
MIMO	Dual 1x1
Security	WPA2 Enterprise
Clients	10 per radio
SSID	1 per radio
Output Power	16 dBm
Frequency	2.4/5 GHz
RF Connectors	SMA (Reverse Polarity)
ENVIRONMENTAL	
Operating Temperature	-40°C to +70°C / -40°F to +158°F -30°C to +70°C / -22°F to +158°F (Wi-Fi variant)
Storage Temperature	-40°C to +85°C / -40°F to +185°F
Humidity	95% RH @ 60°C
Military Specification	MIL-STD-810G (shock, vibration, thermal shock, humidity)
IP Rating	IP64

INDUSTRY CERTIFICATIONS	
Safety	IECEE Certification Bodies Scheme (CB Scheme)
Vehicle Usage	E-Mark (UN ECE Regulation 10.04), ISO7637-2, SAE J1455 (Shock, Vibration, Electrical)
Environmental Directives	RoHS2, REACH, WEEE, Prop 65
Hazardous Environments	Class 1 Div 2 – Ambient temperatures of -30°C to +60°C IECEX & ATEX
Rail Usage	North America: EN50155 EMEA & APAC: EN50155/EN45545 (Rolling Stock)
POWER	
Input Voltage	7 to 36 VDC
Power Consumption	LTE Idle Power: 717mW (75 mA @ 12VDC) Standby Mode Power: 38mW (4.4 mA @ 12 VDC) triggered on low voltage, I/O or periodic timer
Power Modes	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
SECURITY	
AAA	802.1x / Radius authentication with Wi-Fi and Ethernet
Firewall	Stateful firewall with port forwarding, DMZ
WLAN Encryption	WPA2/WPA3 Personal/Enterprise
Firmware Update	Secure Firmware Update

## NETWORK AND ROUTING

Semtech Cognitive Wireless  
IPv4 and IPv6 Routing  
Network Address Translation (NAT)  
Port Forwarding  
DHCP Server  
IP Passthrough  
LAN Segmentation  
IPv4 Passthrough and IPv6 Prefix Extension  
WAN/LAN Connection Policy Management  
Policy-Based Routing  
Configurable MTU size  
Static Routing  
WAN Ethernet

**QoS** Application/Traffic Priority Queuing

**WAN Monitors** Connection Failure Recovery

## VPN

Integrated with ACM VPN Server  
IPsec protocol with IKEv1/IKEv2  
FIPS 140-2 Level 1 compliant

**Encryption** AES128/AES192/AES256

**Hashing** SHA256/SHA384/SHA512

**Key Exchange** DHGroup14/15/16/17/18/19/20/21

LAN to LAN and Host to LAN  
Up to 10 concurrent tunnels per link  
MOBIKE protocol  
IP compression  
Full/Split Tunnel  
Dead Peer Detection (DPD)

## ROUTER MANAGEMENT INTERFACES

ALMS  
Local web user interface  
REST API (Beta)

## EDGE COMPUTING

Support for Edge Compute Containerized Applications (Beta)

**RAM<sup>1,2</sup>** 50 MB (Base & Wi-Fi)  
200 MB (Wi-Fi Plus)

**Storage (Flash)<sup>1</sup>** 200 MB (Base & Wi-Fi)  
2.8 GB (Wi-Fi Plus)

**CPU** Dual Core ARMv7 32-bit

## 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\*\*\*

## RELIABILITY

**MTBF** >100 years  

- Ground Benign, 25°C
- MTBF calculations performed per Telcordia "Reliability Prediction Procedure for Electronic Equipment" document number SR-332, Method I, Issue 3

## ACCESSORIES

**In The Box** RX55, DC Power Cable and Quick Start Guide, AirLink Complete Leaflet

**Other Accessories (sold separately)** 2000579 AC Adapter, 12VDC  
6000659 DIN Rail Bracket  
6001238 Dual Serial Y-cable  
6001479 Serial CAN Y-cable  
For Antenna options visit: [web page](#)

## DIMENSIONS

**Size** 119 mm x 33 mm x 85 mm (102 mm including Wi-Fi connectors)  
4.69 in x 1.34 in x 3.35 in (3.70 in including connectors)

**Weight** 320 g / 0.7 lb

\*With current AirLink Complete subscription

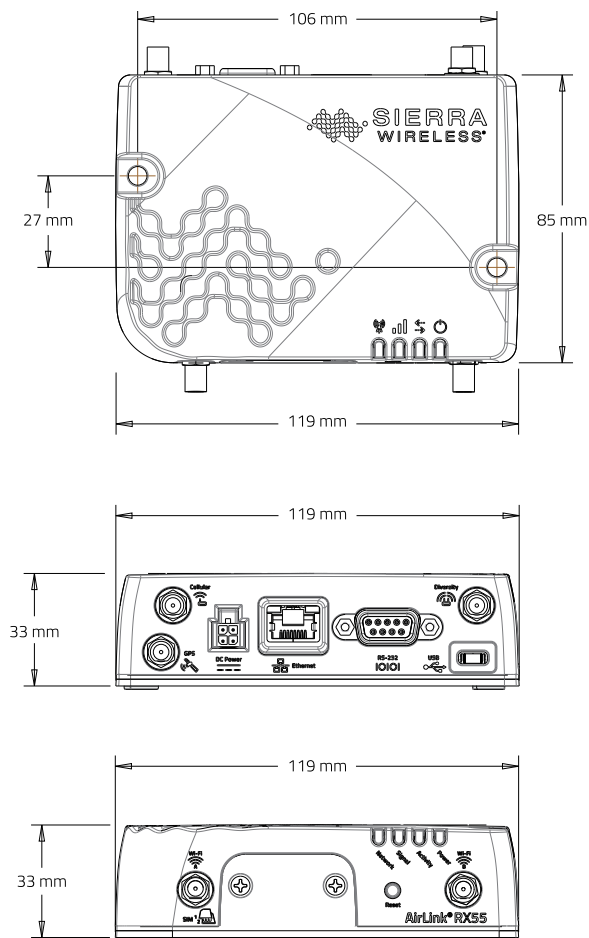
\*\*Full warranty terms are available at [www.sierrawireless.com/end-user-warranty](http://www.sierrawireless.com/end-user-warranty)

\*\*\*With current AirLink Premium subscription

1. Approximation available to containers (not device total)

2. Depends on other enabled features

## AirLink RX55 – Router Dimensions Diagram



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

"Semtech", "Sierra Wireless" and "AirLink" are registered trademarks of Semtech Corporation or its subsidiaries. Other product or service names mentioned herein may be the trademarks of their respective owners. © 2022 Sierra Wireless, Inc. © 2023 Semtech Corporation. All rights reserved. 2024.05.22