



SIERRA WIRELESS IS NOW  
**SEMTECH**



DATASHEET

AirLink® RX55



Compact Series Routers

**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 (*Wi-Fi Plus model - early adopters*)

## 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.



### 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)<br>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           |
|-----------------------------|---------------------|---------------------|
| <b>CELLULAR</b>             |                     |                     |
| 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              | B48    |            |           |            |
| 66              | B66    |            |           |            |
| 71              | B71    |            |           |            |

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

\* Requires device management via AirLink Management Service (ALMS)

| <b>WI-FI (Optional)</b>       |                        |
|-------------------------------|------------------------|
| 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) |

| <b>ENVIRONMENTAL</b>   |  |
|------------------------|--|
| Operating Temperature  | -40°C to +70°C / -40°F to +158°F<br>-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   |

| <b>INDUSTRY CERTIFICATIONS</b> |  |
|--------------------------------|--|
| Safety                         | IECEE Certification Bodies Scheme (CB Scheme)<br>CSA-C22.2 No. 62368-1, UL 62368-1, EN/IEC 62368-1** |
| 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<br>IECEX & ATEX                               |
| Rail Usage                     | North America: EN50155<br>EMEA & APAC: EN50155/EN45545 (Rolling Stock)                               |

| <b>POWER</b>      |  |
|-------------------|--|
| Input Voltage     | 7 to 36 VDC  |
| Power Consumption | LTE Idle Power: 717mW (75 mA @ 12VDC)<br>Standby Mode Power: 38mW (4.4 mA @ 12 VDC)<br>triggered on low voltage, I/O or periodic timer   |
| Power Modes       | Low voltage disconnect to prevent battery drain<br>Built-in protection against voltage transients including 5 VDC engine cranking and +200 VDC load dump<br>Ignition Sense with time delay shutdown<br>Configurable features and ports to optimize power consumption |

| <b>SECURITY</b> |   |
|-----------------|---|
| 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                                |

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

| NETWORK AND ROUTING               |   |
|-----------------------------------|---|
|                                   | Semtech Cognitive Wireless<br>IPv4 and IPv6 Routing<br>Network Address Translation (NAT)<br>Port Forwarding<br>DHCP Server<br>IP Passthrough<br>LAN Segmentation<br>IPv4 Passthrough and IPv6 Prefix Extension<br>WAN/LAN Connection Policy Management<br>Policy-Based Routing<br>Configurable MTU size<br>Static Routing<br>WAN Ethernet |
| QoS                               | Application/Traffic Priority Queuing  |
| WAN Monitors                      | Connection Failure Recovery   |
| VPN                               |   |
| Features                          | IPsec protocol with IKEv1/IKEv2<br>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<br>Up to 10 concurrent tunnels per link<br>MOBIKE protocol<br>IP compression<br>Full/Split Tunnel<br>Dead Peer Detection (DPD)   |
| ROUTER MANAGEMENT INTERFACES      |   |
|                                   | ALMS<br>Local web user interface<br>REST API (Beta)   |
| EDGE COMPUTING (Wi-Fi Plus Model) |   |
|                                   | Support for Edge Compute Containerized<br>Applications: Wi-Fi Plus model only (early adopters)  |
| RAM <sup>1,2</sup>                | 200 MB (Wi-Fi Plus)   |
| Storage (Flash) <sup>1</sup>      | 2.8 GB (Wi-Fi Plus)   |
| CPU                               | Dual Core ARMv7 32-bit  |

1. Approximation available to containers (not device total)  
2. Depends on other enabled features

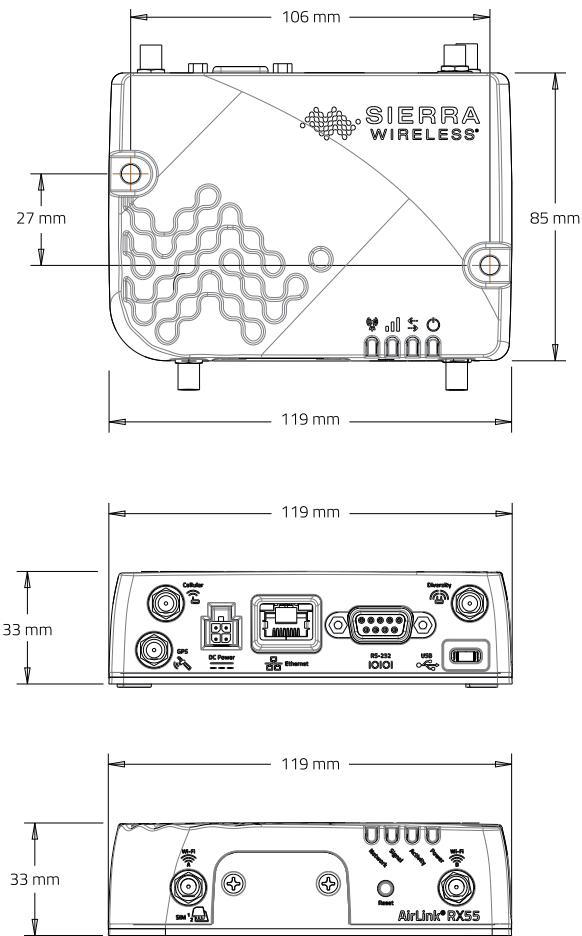
| AIRLINK COMPLETE (1 Year Included With Router Purchase) |  |
|---|--|
| Support   | 24/7 technical support*  |
| Hardware Warranty                                       | 1-year standard hardware warranty<br>Extended hardware warranty up to 5 years with current subscription**  |
| Device Management                                       | 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<br><ul style="list-style-type: none"> <li>Ground Benign, 25°C</li> <li>MTBF calculations performed per Telcordia "Reliability Prediction Procedure for Electronic Equipment" document number SR-332, Method I, Issue 3</li> </ul> |
| ACCESSORIES   |  |
| In The Box  | RX55, DC Power Cable and Quick Start Guide, AirLink Complete Leaflet   |
| Other Accessories (sold separately)                     | 2000579 AC Adapter, 12VDC<br>6000659 DIN Rail Bracket<br>6001238 Dual Serial Y-cable<br>6001479 Serial CAN Y-cable<br>For Antenna options visit: <a href="#">web page</a>  |
| DIMENSIONS  |  |
| Size  | 119 mm x 33 mm x 85 mm (102 mm including Wi-Fi connectors)<br>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

## AirLink RX55 – 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.

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