



Low-Power 5G RedCap and Wi-Fi 6 Connectivity in an Ultra-Rugged and Compact Router for Remote Assets Operating in Harsh Environments

- 2x2 5G RedCap + LTE Cat-4
- 1x1 Wi-Fi 6 (optional)
- Dual-Band GNSS
- Single Ethernet (1 Gbps)
- Dual RS-232
- IP64 and MIL-STD-810H Rated
- Powered by AirLink® OS and AirLink® Complete

RX400 Product Description

The RX400 AirLink router brings 5G RedCap and Wi-Fi 6 connectivity to remote fixed assets in energy, oil & gas, and utility operations. This ruggedized solution is engineered for harsh environments with ultra-low power consumption, making it ideal for solar and battery-powered installations. Featuring a compact design with just two antenna elements, the RX400 delivers reliable 5G connectivity that enables long-term network longevity for critical industrial applications.

A Fully Integrated Solution

The AirLink RX400 is fully integrated with AirLink Complete – a comprehensive service package that includes remote device and security management, expert technical support and extended hardware warranty. You can also opt for AirLink Premium – an advanced service package that includes all the benefits of AirLink Complete, enhanced with Advanced Mobility Reporting and Advance Replacement.

Ideal Applications

Future-ready, reliable connectivity in mission-critical applications:

- Critical Infrastructure
- Utilities
- Oil & Gas
- SCADA & Metering

Benefits

- Reliably connect and gain intelligence from remote fixed assets operating in harsh environments
- Designed and thoroughly tested to thrive in the harshest conditions: shock and vibration resilience (MIL-STD-810H grade), extreme temperature and humidity operating range, intrinsic safety and power resilience
- Ultra-low power consumption, ideal for solar/battery powered installations
- Compact solution with 2 antenna elements, bringing 5G RedCap connectivity to previously inaccessible equipment
- Edge intelligence with industry-standard container support
- Future-ready-connectivity with 5 RedCap and Wi-Fi 6 technologies
- Remote router management and comprehensive services through AirLink Complete

RX400 Services and Support



AIRLINK COMPLETE

Maximize your AirLink RX400 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 RX400 deployments.

AirLink Complete includes*:

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

**With active subscription. 1-year subscription included with the RX400 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.

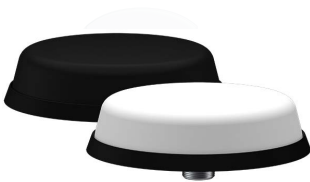
**With active subscription.*



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 RX400 router visit our [web page](#)

AirLink RX400 – Router Specifications

KEY FEATURES	
Cellular Radios	5G RedCap (Reduced Capability)
Wi-Fi	Single 1x1 MIMO Wi-Fi 6 (Optional)
Ethernet	Single Ethernet (1 Gbps)
Serial	Dual RS-232
GNSS	Dual-band GNSS
CAN	–
I/O	1 GPIO
USB	USB Type-C
Bluetooth	–
IP Rating	Sealed Aluminum Housing (IP64 Rated)
Services	AirLink Complete (1 year included)
Operating System	AirLink OS
Management System	AirLink Management Service (ALMS) - Included with AirLink Complete subscription AirLink Manager (AM) / AirLink Mobility Manager (AMM) - Paid Option

GLOBAL	
CELLULAR	
Variant	Global
Technology	5G RedCap
Peak Downlink (Theoretical)	220 Mbps
Peak Uplink (Theoretical)	120 Mbps
Category	5G RedCap
Region	Global
Radio	EM8695
MIMO	2x2
RF Connectors	SMA
SIM	Dual SIM (Nano-4FF)

FREQUENCY BANDS		
	5G	4G LTE
1	n1	B1
2	n2	B2
3	n3	B3
4		B4
5	n5	B5
7	n7	B7
8	n8	B8
12	n12	B12
13	n13	B13
14	n14	B14
17		B17
18	n18	B18
19		B19
20	n20	B20
25	n25	B25
26	n26	B26
28	n28	B28
34		B34
38	n38	B38
39		B39
40	n40	B40

FREQUENCY BANDS		
	5G	4G LTE
41	n41	B41
42		B42
43		B43
48	n48	B48
66	n66	B66
70	n70	B70
71	n71	B71
77	n77	
78	n78	
79	n79	
106		B106



WIRELESS CERTIFICATION	
Regulatory	Planned: FCC, IC/ISED, PTCRB, GCF, CE, RED, RCM
Carrier	Planned: AT&T, T-Mobile, Verizon, Telus, Rogers, Bell
Public Safety	Planned: FirstNet® 4G
Part Numbers	1105304 RX400 1105305 RX400 with Wi-Fi

WI-FI	
Wi-Fi Standard	Wi-Fi 6
Access Point	Dual (2.4 & 5 GHz)
Client (Depot/WAN)	Yes
Client & AP	Yes
Peak Throughput (Theoretical)	600 Mbps
MIMO	Single 1x1
Security	WPA2/3 Personal WPA2/3 Transitional WPA2 Enterprise (Client only)
Clients	16 per radio
SSID	1
Output Power	16 dBm (for 2.4 GHz) & 14 dBm (for 5 GHz) per chain conducted transmit power
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 +65°C / -22°F to +149°F (Wi-Fi variant)
Storage Temperature	-40°C to +85°C / -40°F to +185°F
Humidity	95% RH @ 60°C
Military Specification	Planned: MIL-STD-810H (Shock, Vibration, Thermal Shock, Humidity)
IP Rating	IP64

INDUSTRY CERTIFICATIONS	
Safety	Planned: IECCE Certification Bodies Scheme (CB Scheme)
Vehicle Usage	Planned: E-Mark (UN ECE Regulation 10.05), ISO7637-2, SAE J1455 (Shock, Vibration, Electrical))
Environmental Directives	Planned: RoHS2, REACH, WEEE, Prop 65
Hazardous Environments	Planned: Class 1 Div 2 – Ambient temperatures of -30°C to +60°C IECEx & ATEX
Rail Usage	Planned: EN50155/EN45545 (Rolling Stock)

POWER	
Input Voltage	7 to 36 VDC Redundant power input via USB-C (15W)
Power Consumption	Idle Power: 924mW (77 mA @ 12VDC) - serial Standby Mode Power: 24 mW +- 10% (2 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

Features	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
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QoS	Application/Traffic Priority Queuing
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WAN Monitors	Connection Failure Recovery
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LAN (ETHERNET/USB)

	USB to Ethernet
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VPN

Features	IPsec protocol with IKEv1/IKEv2 FIPS 140-2 Level 1 compliant
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Encryption	AES128/AES192/AES256
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Hashing	SHA256/SHA384/SHA512
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Key Exchange	DHGroup14/15/16/17/18/19/20/21
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	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)
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ROUTER MANAGEMENT INTERFACES

	ALMS - included with AirLink Complete AM/AMM (paid option) Local web user interface REST API (Beta) licensed via ALMS
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EDGE COMPUTING

	Support for Edge Compute Docker Containerized Applications (early adopters) licensed via ALMS
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RAM^{1,2}	600 MB
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Storage (Flash)¹	500 MB
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CPU	Dual Core ARM Cortex A55 (Dual Core ARMv8.2-A 64-bit)
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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 Optional 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, 2030

AIRLINK PREMIUM (Optional Upgrade) Includes All Airlink Complete Features* and Adds:

Advanced Mobility Reporting	Coverage and fleet reporting***
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Advance Replacement	Same-day shipping for in-warranty router replacements***
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RELIABILITY

MTBF	1105304 RX400 Without Wi-Fi : 96.94 years 1105305 RX400 Wi-Fi: 93.30 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	RX400, DC Power Cable, Quick Start Guide, AirLink Complete Leaflet
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Other Accessories (sold separately)

DIMENSIONS

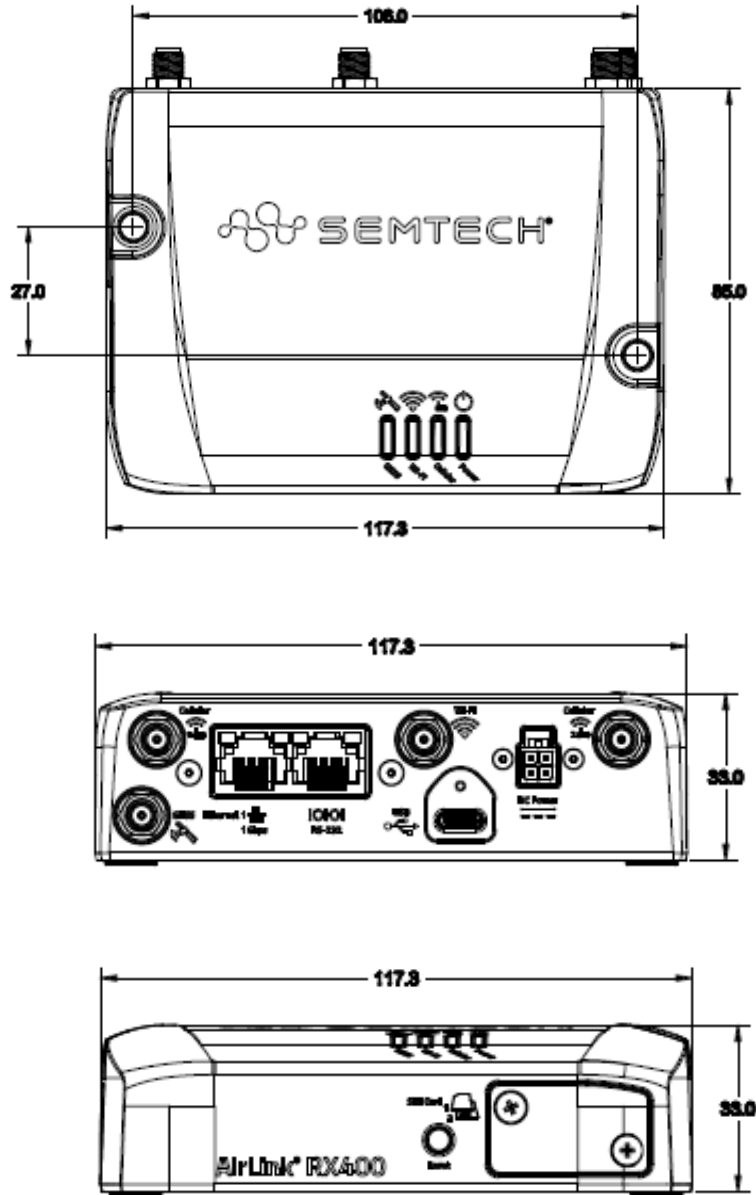
AirLink RX400	117.3 x 33 x 85 mm (117.3x33x94 mm including SMA connectors) 4.62 x 1.30 x 3.35" (4.62x1.30x3.7" including SMA connectors) Same bolt pattern as RV 350.5 g / 0.77 lb (RX400 Wi-Fi)
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*With current AirLink Complete subscription

**Full warranty terms are available at www.sierrawireless.com/end-user-warranty

***With current AirLink Premium subscription

AirLink RX400 – 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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