SIERRA WIRELESS IS NOW SEMTECH

DATASHEET

AirLink® XR60

Performance Series Routers

5G and Wi-Fi 6 Performance in an Ultra-Compact and Rugged Router for Fixed and Mobile Mission-Critical Applications

KEY FEATURES

- 4x4 5G + LTE Cat-20
- 2x2 Wi-Fi 6 (optional)
- Dual-Band GNSS
- Single Serial / Single Ethernet (1 Gbps) or Dual Ethernet (1 Gbps + 5 Gbps)
- IP64 and MIL-STD-810H Rated
- Powered by AirLink® OS and AirLink® Complete

XR60 Product Description

The ultra-compact and highly ruggedized AirLink® XR60 delivers high performance 5G and Wi-Fi 6 connectivity to space-limited and harsh environments – from tight industrial enclosures to fast-moving vehicles. With advanced networking capabilities, private network support and edge computing capabilities, the XR60 future proofs your connectivity and accelerates your digital transformation.

A Fully Integrated Solution

The AirLink XR60 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

High-performance and reliable connectivity in fixed and mobile mission-critical applications:

- Critical Infrastructure
- Video Surveillance
- Smart Cities
- Manufacturing
- Public Safety Vehicles
- Fixed Wireless Access
- Fleet Vehicles

Benefits

- Designed for high performance with 5G, Wi-Fi 6, 5 Gbps Ethernet and USB-C technologies
- Ultra-compact design making it ideal for space-constrained industrial settings and vehicle applications
- 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
- Advanced networking capabilities with flexible software-defined routing functions
- Multi-band support for extensive public and private networking coverage
- Edge intelligence with industry-standard container support
- Redundant USB-C power supply input for increased reliability

XR60 Services and Support

AIRLINK COMPLETE

Maximize your AirLink XR60 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 XR60 deployments.

AirLink Complete includes*:

- AirLink Managerment 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 XR60 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 XR60 router visit our *web page*

AirLink XR60 – Router Specifications

KEY FEATURES	
Cellular Radios	5G
Wi-Fi	2x2 MIMO Wi-Fi 6 (Optional)
Ethernet	1x Ethernet RJ45 (1 Gbps) – Single Serial/Single Ethernet variant 2x Ethernet RJ45 (1 Gbps + 5 Gbps) – Dual Ethernet variant
Serial	Dual RS-232/485 (Serial/Ethernet variant)
GNSS	Dual-band 48 Channel GNSS
CAN	–
I/O	1 GPIO
USB	USB 3.2 Gen 1 Type-C® with Power Delivery and 5 Gbps LAN networking
Bluetooth	–
IP Rating	Sealed Aluminum Housing (IP64 Rated)
Services	AirLink Complete (1 year included)
Operating System	AirLink OS
Management System	AirLink Management Service (ALMS)

	GLOBAL
CELLULAR	
Variant	Global
Technology	5G
Peak Downlink (Theoretical)	2800 Mbps
Peak Uplink (Theoretical)	900 Mbps
Category	5G
Region	Global
Radio	EM9291
MIMO	4x4
RF Connectors	SMA
SIM	Dual SIM (Nano-4FF)

FREQUENCY BANDS			
	5G	4G LTE	3G (HSPA+)
1	n1	B1	B1
2	n2	B2	B2
3	n3	B3	
4		B4	B4
5	n5	B5	B5
7	n7	B7	
8	n8	B8	B8
12	n12	B12	
13	n13	B13	
14	n14	B14	
17		B17	
18	n18	B18	
19		B19	B19
20	n20	B20	
25	n25	B25	
26	n26	B26	
28	n28	B28	
29	n29*	B29**	
30	n30	B30**	
32		B32**	
34		B34	
38	n38	B38	
39		B39	
40	n40	B40	

FREQUENCY BANDS			
	5G	4G LTE	3G (HSPA+)
41	n41	B41	
42		B42	
43		B43	
46		B46**	
48	n48	B48	
66	n66	B66	
70	n70		
71	n71	B71	
75	n75*		
76	n76*		
77	n77		
78	n78		
79	n79		

** SA downlink only*
*** Downlink only*

WIRELESS CERTIFICATION	
Regulatory	FCC, IC/ISED, PTCRB, GCF, CE[2], RED[2], RCM
Carrier	AT&T, FirstNet® 4G Capable, T-Mobile, Verizon, Telus, Southern Linc, CBRS, C-Band Planned: Rogers[1], Bell[1], Telstra[1]
Public Safety	FirstNet® 4G Capable
Part Numbers	1105099 XR60 Dual Ethernet (1 Gbps + 5 Gbps) 1105159 XR60 Dual Ethernet (1 Gbps + 5 Gbps) with Wi-Fi 1105160 XR60 Single Serial, Single Ethernet (1 Gbps) 1105161 XR60 Single Serial, Single Ethernet (1 Gbps) with Wi-Fi **TAA Part Numbers:** 1105232 XR60 TAA Dual Ethernet (1 Gbps + 5 Gbps) 1105233 XR60 TAA Dual Ethernet (1 Gbps + 5 Gbps) with Wi-Fi 1105234 XR60 TAA Single Serial, Single Ethernet (1 Gbps) 1105235 XR60 TAA Single Serial, Single Ethernet (1 Gbps) 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)	1200 Mbps
MIMO	Single 2x2
Security	WPA2/3 Personal WPA2/3 Transitional WPA2 Enterprise
Clients	Up to 32 maximum
SSID	3
Output Power	21 dBm per chain
Frequency	2.4/5 GHz
RF Connectors	SMA (Reverse Polarity)

ENVIRONMENTAL	
Operating Temperature	-40°C to +75°C / -40°F to +167°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-810H (Shock, Vibration, Thermal Shock, Humidity)
IP Rating	IP64

INDUSTRY CERTIFICATIONS	
Safety	IECEE Certification Bodies Scheme (CB Scheme)
Vehicle Usage	E-Mark[3] (UN ECE Regulation 10.05), ISO7637-2, SAE J1455 (Shock, Vibration, Electrical)
Environmental Directives	RoHS2, REACH, WEEE, Prop 65
Hazardous Environments	Class 1 Div 2[2] – Ambient temperatures of -30°C to +60°C IECEx[2] & ATEX[2]
Rail Usage	EN50155/EN45545 (Rolling Stock)

POWER	
Input Voltage	7 to 36 VDC Redundant power input via USB-C (45W)
Power Consumption	Idle Power: 3.5W (290 mA @ 12VDC) - Serial/Ethernet variant Standby Mode Power: 55 mW (4.6 mA @ 12 VDC) Triggered on low voltage, I/O or periodic timer
Power Modes	7 to 36 VDC: Low voltage disconnect to prevent battery drain Built-in protection against voltage transients including 5VDC engine cranking and +200 VDC load dump Ignition Sense with time delay shutdown Configurable features and ports to optimize power consumption Can switch to redundant power input via USB-C (45W)

SECURITY	
AAA	Wi-Fi 802.1x/Radius authentication
Firewall	Stateful firewall with port forwarding, DMZ
WLAN Encryption	WPA2/3 Personal WPA2/3 Transitional WPA2 Enterprise (Client only)
Firmware Update	Secure Firmware Update

1: Pending. See latest status here.
2: TAA Part Numbers do not have the CE/RED, C1D2, and IECEx/ATEX certification
3: Pending for non-TAA Part Numbers. TAA Part Numbers do not have the E-Mark certification.

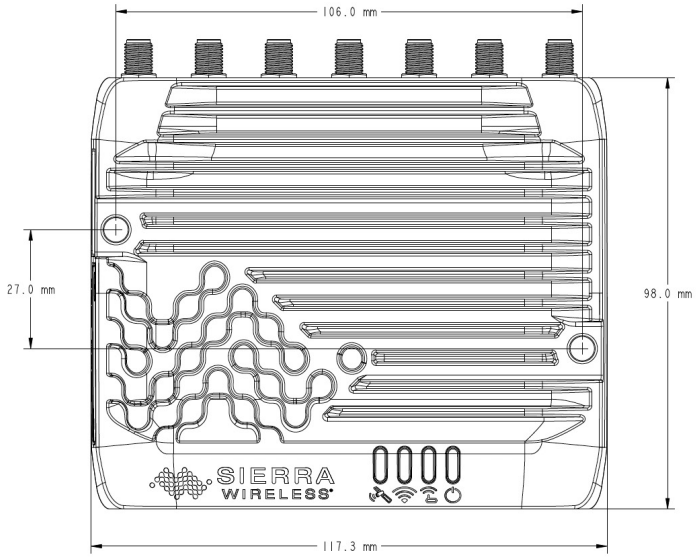
NETWORK AND ROUTING	
Throughput	800 Mbps Firewall TCP throughput
Features	Semtech Cognitive Wireless IPv4 and IPv6 Routing Network Address Translation (NAT) Port Forwarding DHCP Server IP Passthrough LAN Segmentation IPv4 Passthrough and IPv6 Prefix Extension WAN/LAN Connection Policy Management Policy-Based Routing Configurable MTU size Static Routing WAN Ethernet
QoS	Application/Traffic Priority Queuing
WAN Monitors	Connection Failure Recovery
LAN (ETHERNET/USB)	
	USB to Ethernet
VPN	
Throughput	175 Mbps IPSec VPN TCP throughput
Features	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) licensed via ALMS
EDGE COMPUTING	
	Support for Edge Compute Docker Containerized Applications (Beta) licensed via ALMS
RAM[1,2]	1.2 GB
Storage (Flash)[1]	1.7 GB
CPU	Quad Core Arm A53 64 bit

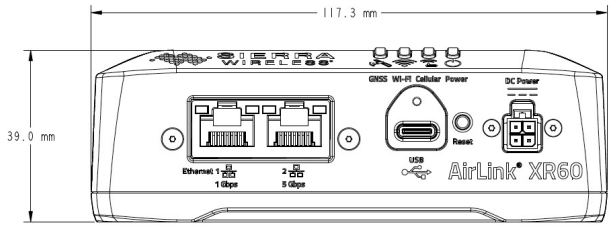
1. Approximation available to containers (not device total)
2. Depends on other enabled features

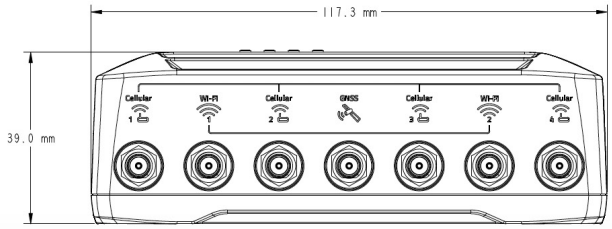
AIRLINK COMPLETE *(1 Year Included With Router Purchase)*	
Support	24/7 technical support*
Hardware Warranty	1-year standard hardware warranty Extended hardware warranty up to 5 years with current subscription**
Device Management	AirLink Management Service (ALMS)*
Software Updates	Unrestricted critical 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	1105099 XR60 Dual Ethernet: 264010 hours (30.13 years) 1105159 XR60 Dual Ethernet, Wi-Fi: 245227 hours (27.99 years) 1105160 XR60 Serial, Ethernet: 283666 hours (32.38 years) 1105161 XR60 Serial, Ethernet, Wi-Fi: 262094 hours (29.91 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	XR60, DC Power Cable, Quick Start Guide, AirLink Complete Leaflet
Other Accessories (sold separately)	6001503 AC Adapter 6001502 Spare DC Power Cable 6001529 DIN Rail Bracket 6001410 RJ45 to Single DB9 6001409 RJ45 to Dual DB9 For Antenna options visit: *web page*
DIMENSIONS	
AirLink XR60	**Size:** 118mm x 39mm x 98mm (108 including SMA connectors) 4.6 x 1.5 x 3.9 in (4.2 in including SMA connectors) Same bolt pattern as RV **Weight:** 522 g / 1.15 lb with Wi-Fi

**With current AirLink Complete subscription*
***Full warranty terms are available at www.sierrawireless.com/end-user-warranty*
****With current AirLink Premium subscription*

AirLink XR60 – Router Dimensions Diagram







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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.**

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