



5G High-Performance Multi-Network Router for Public Safety, Field Service Fleets and Mission-Critical Fixed Applications

XR80 Product Description

The supercharged AirLink XR80 is optimized for fixed and mobile applications. The available dual-5G cellular radio and 5X4 MU MIMO Wi-Fi 6 delivers flexibility for customized configurations. The AirLink XR80 supports complete device-to-cloud security, reduces your total cost of ownership with ALMS Out-of-Band management, and with the cartridge-based design, enables long-term expandability and upgradability.

AIRLINK XR80 5G

Rugged 5G router capable of 4.14 Gbps download and 660 Mbps upload. Wi-Fi optional.

AIRLINK XR80 LTE CAT 20

Rugged LTE Cat 20 router capable of 2.0 Gbps download and 210 Mbps upload. Wi-Fi optional.

KEY FEATURES

- Expandable 4G/5G
- 5x4 MU MIMO Wi-Fi 6
- 4 Gigabit Ethernet
- Single/Dual Serial
- GNSS with Dead Reckoning
- IP64 Rated
- AirLinkOS with AirLink Complete

Ideal Applications

Mobile mission critical applications in public safety and field service fleets, Fixed Wireless Access, SCADA, Edge and industrial IoT.

- Ambulance/EMS
- Law Enforcement
- Utility Bucket Trucks
- Commercial Fleets
- Manufacturing
- Fixed Utility Applications
- Pipeline monitoring
- Remote Learning
- Retail, Digital Signage and Security

Benefits

- Designed for fixed and mobile mission and business-critical applications that require ultimate connectivity and reliability
- Real-time connectivity with unmatched uplink and downlink speeds using 5G, LTE Cat 20, Wi-Fi 6, and 5 Gbps Ethernet technology
- “Always-on” connectivity delivers consistent primary and backup connectivity for public and private networks using AirLink Sierra Wireless Cognitive Wireless
- Simplified set up and useability with new AirLink OS and upgraded AirLink Management Service (ALMS)
- AirLink Complete with ALMS Out-of-Band Management provides zero-touch set up and reduced service calls
- Ready for your Edge computing workloads



XR80 Services and Support

AIRLINK COMPLETE

Maximize your AirLink XR80 hardware investment and ensure your applications operate at peak efficiency by subscribing to our best-in-class service and support including:

- AirLink Management Service (ALMS) network management
- Optional Advanced Mobility Reporting (AMR)
- 24/7 with current AirLink Complete subscription
- 1 year standard warranty with up to 5 years extended warranty with current AirLink Complete subscription
- For more information on AirLink Complete visit our [web page](#)



AIRLINK CONNECTION MANAGER

- VPN appliance built from the ground up for AirLink routers & gateways
- Simplify deployment and management of your VPN solution, extending the enterprise to the network edge for fixed and mobile endpoints
- Carrier agnostic – ACM doesn't require fixed and/or public IP
- Compatible with FIPS 140-2, and always-on VPN capability



ANTENNAS

- Tested and certified to provide guaranteed performance with all AirLink routers and gateways
- Accelerate deployment with always-on, end-to-end connectivity
- For more information on antennas specific to the XR80 router visit our [web page](#)

AirLink XR80 – Router Specifications

KEY FEATURES	
Cellular Radios	5G/LTE Cat-20 LPWA for ALMS Out of Band Managemnt
Wi-Fi	5x4 MIMO Wi-Fi 6
Ethernet	3x Gigabit + 1x 5Gbps Ethernet Port (RJ45)
Serial	Single/Dual RS-232 (DB9) with optional cables
GNSS	48 Channel GNSS with Dead Reckoning
CAN	CAN bus/OBD-II (J1979)/J1939)
I/O	5 GPIO
USB	USB 3.1 USB-C
IP Rating	Sealed Aluminum Housing (IP64 Rated)
Services	AirLink Complete
Operating System	AirLink OS
Management System	ALMS

	LTE NAM	LTE GLOBAL	5G NAM	5G GLOBAL
CELLULAR				
Variant	NAM	EMEA & APAC	NAM	EMEA & APAC
Technology	LTE	LTE	5G	5G
Peak Downlink (Theoretical)	2 Gbps	2 Gbps	4.14 Gbps	4.14 Gbps
Peak Uplink (Theoretical)	210 Mbps	210 Mbps	660 Mbps	660 Mbps
LTE Category	Cat-20	Cat-20	5G	5G
Region	NAM	EMEA, APAC	NAM	EMEA, APAC
Radio	EM7690	EM7690	EM9190	EM9190
MIMO	4x4	4x4	4x4	4x4
RF Connectors	FAKRA	FAKRA	FAKRA	FAKRA
SIM	Dual SIM (Mini-2FF)	Dual SIM (Mini-2FF)	Dual SIM (Mini-2FF)	Dual SIM (Mini-2FF)

LTE NAM		LTE GLOBAL	5G NAM	5G GLOBAL
FREQUENCY BANDS				
5G Bands			n1, n2, n3, n5, n28, n41, n66, n71, n77, n78, n79 (NSA & SA Support)	n1, n2, n3, n5, n28, n41, n66, n71, n77, n78, n79 (NSA & SA Support)
			Future Variant adds support for: n7, n8, n12, n20, n25, n38, n40, n48 (NSA & SA Support)	Future Variant adds support for: n7, n8, n12, n20, n25, n38, n40, n48 (NSA & SA Support)
4G LTE Bands	B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71	B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71	B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71	B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71
3G HSPA+ Bands	B1, B2, B3, B4, B5, B6, B8, B9, B19	B1, B2, B3, B4, B5, B6, B8, B9, B19	B1, B2, B3, B4, B5, B6, B8, B9, B19	B1, B2, B3, B4, B5, B6, B8, B9, B19
LPWA	B1, B2, B3, B4, B5, B8, B9, B10, B12, B13, B17, B18, B19, B20, B25, B26, B27, B28, B66	B1, B2, B3, B4, B5, B8, B9, B10, B12, B13, B17, B18, B19, B20, B25, B26, B27, B28, B66	B1, B2, B3, B4, B5, B8, B9, B10, B12, B13, B17, B18, B19, B20, B25, B26, B27, B28, B66	B1, B2, B3, B4, B5, B8, B9, B10, B12, B13, B17, B18, B19, B20, B25, B26, B27, B28, B66
WIRELESS CERTIFICATION				
Regulatory	FCC, IC/ISED, PTCRB	GCF, CE, RED, RCM, ESN	FCC, IC/ISED, PTCRB	GCF, CE, RED, RCM, ESN
Carrier	AT&T, FirstNet® 4G, T-Mobile, Verizon, Rogers, Telus, Bell, CBRS		AT&T, FirstNet 4G, T-Mobile, Verizon, Rogers, Telus, Bell, CBRS	Telstra
Public Safety	FirstNet® 4G	ESN	FirstNet® 4G	ESN
Part Numbers	1104881 Base 1104879 Wi-Fi 1104757 XP 5G Cartridge (Optional)	1104880 Base 1104878 Wi-Fi 1104757 XP 5G Cartridge (Optional)	1104793 Base 1104789 Wi-Fi 1104757 XP 5G Cartridge (Optional)	1104791 Base 1104787 Wi-Fi 1104757 XP 5G Cartridge (Optional)

Wi-Fi (Optional)	
Wi-Fi Standard	Wi-Fi 6 802.11ax
Access Point	Single
Client (Depot/WAN)	Yes
Client & AP	Yes
Peak Throughput (Theoretical)	2400 Mbps
MIMO	5x4
Security	WPA2/3 Enterprise
Clients	128 per radio
SSID	4 per radio
Output Power	23.3 dBm per chain
Frequency	2.4/5 GHz
RF Connectors	FAKRA (Beige)
ENVIRONMENTAL	
Operating Temperature	-30°C to +70°C / -22°F to +158°F
Storage Temperature	-40°C to +85°C / -40°F to +185°F
Humidity	95% RH @ 60C
Military Specification	MIL-STD-810G (Shock, Vibration, Thermal Shock, Humidity)
IP Rating	IP64

INDUSTRY CERTIFICATIONS	
Safety	IECEE Certification Bodies Scheme (CB Scheme), UL 60950
Vehicle Usage	E-Mark (72/245/EEC, 2009/19/EC), 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
Rail Usage	EN50155/EN45545 (Rolling Stock)
POWER	
Input Voltage	7 to 36 VDC
Power Consumption	Peak: 54W (4.5A @12V) Standby: 55mW (4.5mA@12V)
Power Modes	Built-in protection against voltage transients including 5 VDC engine cranking and +200 VDC load dump Ignition Sense with time delay shutdown
SECURITY	
AAA	802.1x /Radius authentication with Wi-Fi and Ethernet
Firewall	Stateful firewall with port forwarding, DMZ
WLAN Encryption	WPA2/WPA3 Personal/Enterprise FIPS 140-2
Firmware Update	Secure Firmware Update



NETWORK AND ROUTING

	Sierra 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	
	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 ^{1,2}	200 MB
Storage (Flash) ¹	750 MB
CPU	Quad Core ARMv8 64 bit

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

AIRLINK COMPLETE

Services	AirLink Complete
Support	24/7 with current AirLink Complete subscription
Warranty	1 year standard warranty with up to 5 years extended warranty with current AirLink Complete subscription.
Device Management	ALMS with current AirLink Complete subscription
Software Updates	Unrestricted critical firmware updates

RELIABILITY

MTBF	Base: 23.8 years Wi-Fi: 21.3 years Using Telcordia SR-332 Issue 3 Method 1
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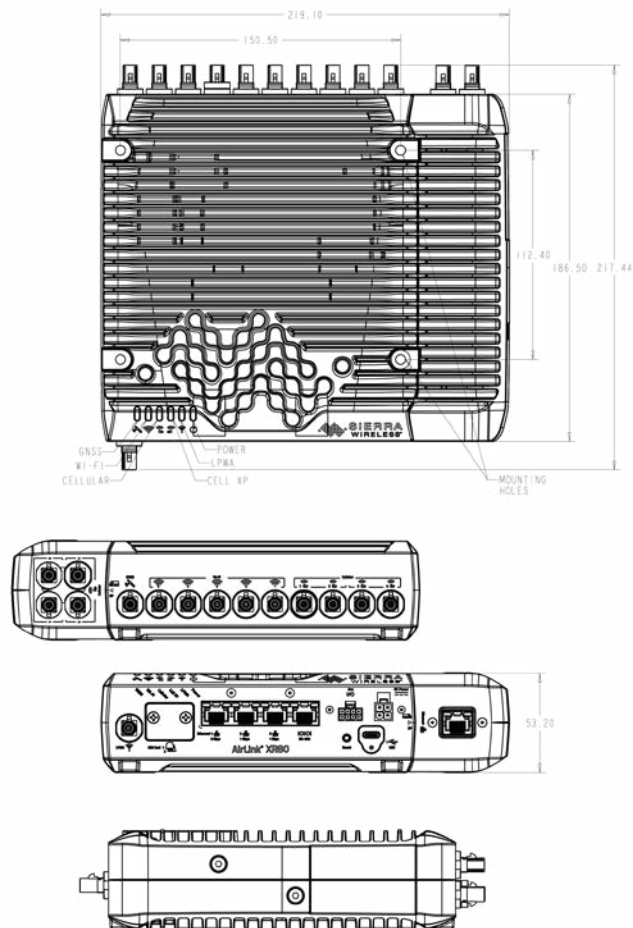
ACCESSORIES

In The Box	XR80, DC Power cable, LPWA Antenna, Quick Start Guide, AirLink Complete Leaflet
Other Accessories (sold separately)	6001004 XR80/90/MP/LX I/O Cable 6001192 XR80/90/MP70 J1939 Y Cable 6001204 XR80/90/MP70 OBD-II Y Cable 6001350 XR80/90 Mounting Bracket 6001372 XR80/90 AC Adaptor, 24 VDC 6001406 XR80/90 DC Power Cable 6001409 XR80/90 RJ45 to Dual DB9 6001410 XR80/90 RJ45 to Single DB9 6001433 XR80/90 DIN Rail Mounting Bracket 6001440 XR80/90 FAKRA Replacement Kit (8 Pieces) 6001456 XR80/90 to MG90 Mounting Bracket 1104757 XR80/90 XP-5G XR-Cartridge Global & NAM For Antenna options visit: web page

DIMENSIONS

AirLink XR80 – Main Body	220mm x 170mm x 53mm Weight: Non Wi-Fi 1.80 Kg, Wi-Fi 2.00 Kg
AirLink XR80 – Main Body with Single 5G Expansion Cartridge	220mm x 220mm x 53mm Weight: 2.64 Kg

AirLink XR80 – Router Dimensions Diagram



About Sierra Wireless

Sierra Wireless (NASDAQ: SWIR) (TSX: SW) is a world leading IoT solutions provider that combines devices, network services, and software to unlock value in the connected economy. Companies globally are adopting 4G, 5G, and LPWA solutions to improve operational efficiency, create better customer experiences, improve their business models, and create new revenue streams. Sierra Wireless works with its customers to develop the right industry-specific solution for their IoT deployments, whether this is an integrated solution to help connect edge devices to the cloud, a software/API service to manage processes with billions of connected assets, or a platform to extract real-time data to improve business decisions. With more than 25 years of cellular IoT experience, Sierra Wireless is the global partner customers trust to deliver them their next IoT solution.

For more information, visit www.sierrawireless.com.