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# About this deck

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| **Distribution type**<br>Customer-facing, NDA Required,<br>Sierra and partner use only,<br>Internal use only (+ description of the confidential info) | Customer-Facing (NDA)<br>Partner Channel Use Only |
| **Target persona**<br>Technical decision maker, Business decision maker,<br>Embedded developer, Cloud developer, Others | Public Safety Agencies considering routers vs hotspot solutions |
| **Key messages** | Mission-critical connectivity requires professional-grade router solutions |
| **Info you can find in the deck** | Mission-critical connectivity challenges<br>Limitations of consumer-grade hotspot solutions<br>Benefits of professional-grade routers<br>AirLink router solutions |
| **File owner** | Eva Laviolette |
| **Last update** | **July 2025** |
| **Versioning** | V1 |

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SEMTECH®

# PROFESSIONAL-GRADE ROUTERS

## FOR MISSION-CRITICAL CONNECTIVITY

# Mission-Critical Connectivity Challenges

## Device Proliferation

**Too many devices in vehicles**

- Compute
- Video
- Peripheral & auxiliary systems

## Multiple Connections (SIMs)

**Expansion in Connectivity**

- Officer/Technician
- Vehicle
- Compute
- Video
- Telematics

## Robust Operation

**Surge in demand to manage all connections automatically & securely**

- Cellular continuity
- IP Session persistence
- Routing durability
- Smart Cities

## Infrastructure Management

**Need for reliable and sustainable solution**

- Maintaining security compliance
- Managing within human and capital budgets

**DISAGGREGATED CONNECTIVITY LEADS TO COMPLEXITY AND COST**

# Limitations of Traditional Hotspot Solutions

**Consumer-Grade Hardware:** Typically designed for personal use rather than vehicle-hardened applications. May lack vehicle power integration capabilities (ignition sense)

**Battery and Antenna Limitations:** Temperature sensitivity and signal challenges in enclosed vehicle environments can impact reliability

**Security and Management Considerations:** Consumer-focused security features typically not meet enterprise fleet management requirements

**Total Cost of Ownership Challenges:**

- Limited centralized fleet management and monitoring capabilities
- Not ruggedized enough for mission-critical use
- Often rely on consumer data plans not qualified for business use
- Higher replacement frequency can impact long-term costs

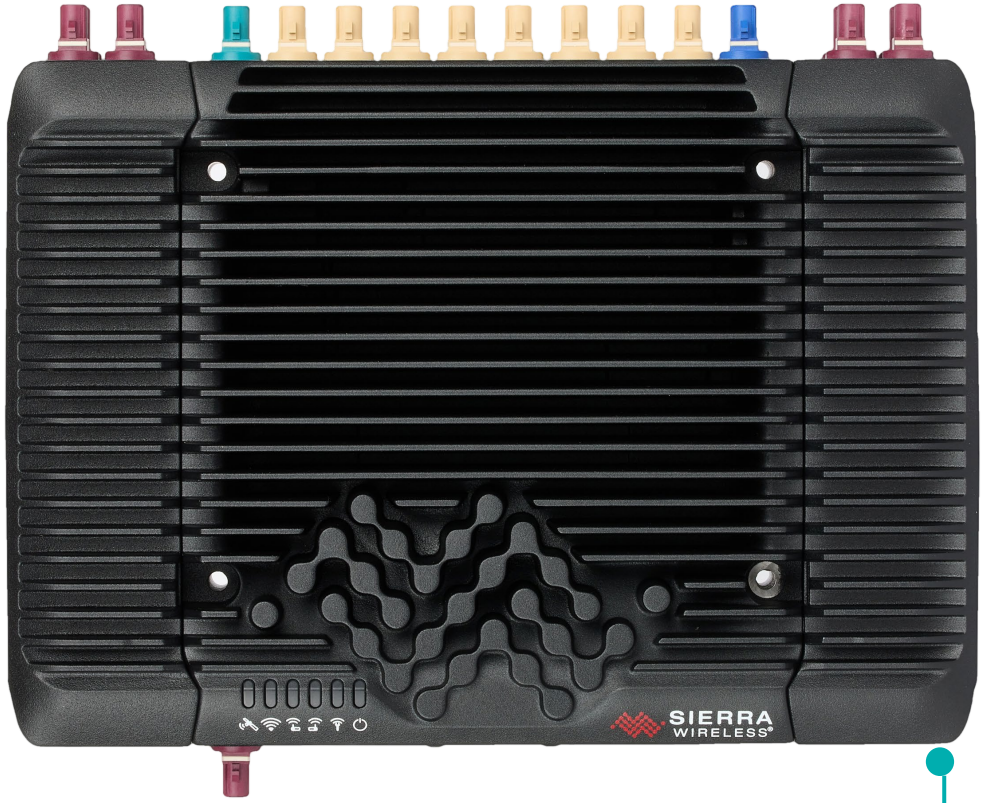
# The Solution: Professional Vehicle 5G Cellular Routers

## Ultimate Reliability

- Hardwired vehicle power
- Redundant connectivity failover with built-dual SIM support
- Industrial-grade components designed for 24/7 operation

## Superior Signal Performance

- External high-gain antennas with stronger signal acquisition
- Vehicle-mounted installation optimizes antenna positioning in free space
- Multi-carrier support with automatic failover




## Vehicle-Optimized Hardware

- Heat/cold/vibration-hardened (IP64, MIL-STD)
- Ignition-sensing power
- External high-gain antennas
- First Responders Carrier certified (including FirstNet, T-Priority, Frontline and 5G SA/Network Slicing)

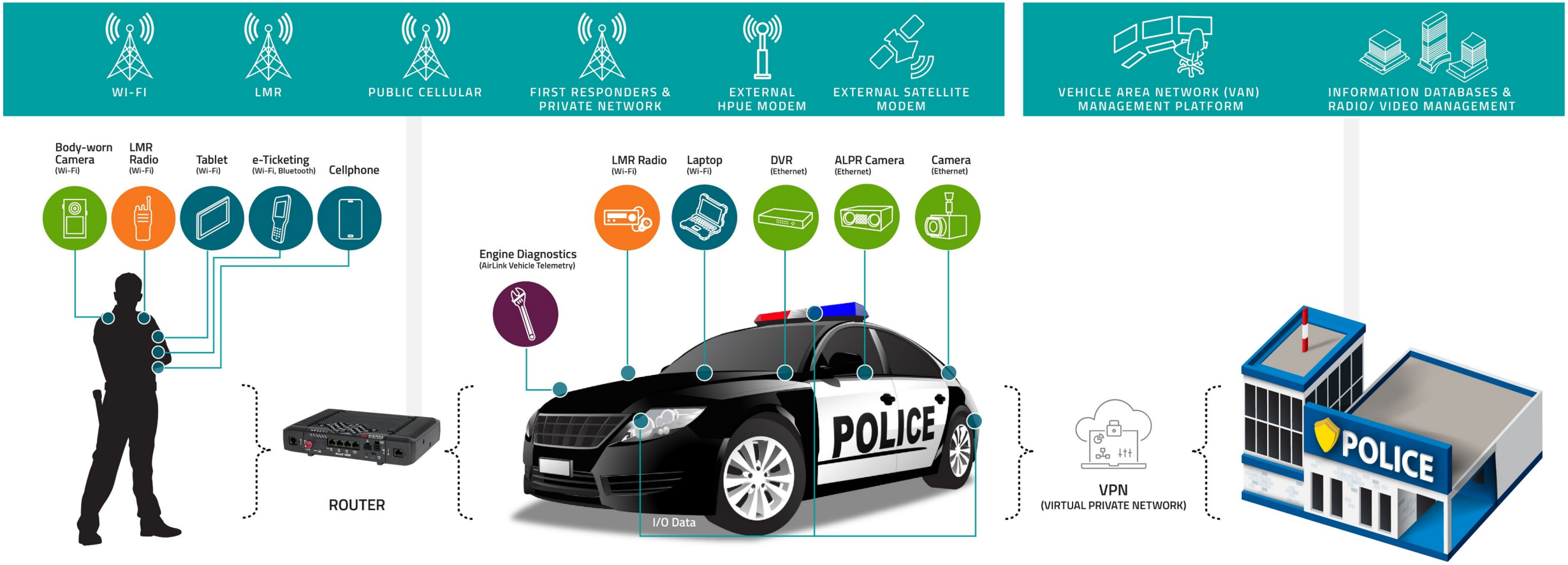
## Security

- Enterprise-grade VPN, firewall & encryption
- Policy Management
- Segmented networks for different applications

## Enterprise Management

- Remote fleet-wide management (ALMS)
- Remote management and firmware updates
- Extended lifecycle → better ROI

# AirLink®'s Vehicle Area Network




## Wi-Fi HOTSPOT

To connect all equipment in and around the vehicle

## LMR INTEGRATION

Expand radio coverage and expedite radio updates

## UNIFIED DATA PLAN

For all connected devices and applications

## UNIFIED SECURITY

The router acts as the VPN endpoint for each client device

# Not Just Routers but Complete Solutions


**Security**

Based on Semtech's defense-in-depth approach.

**Purpose-Built Hardware**

Quality branded custom-built routers and antennas

**Services**

Comprehensive service suites powered by ALMS

**Operating System**

Purpose-built for today and tomorrow's service needs

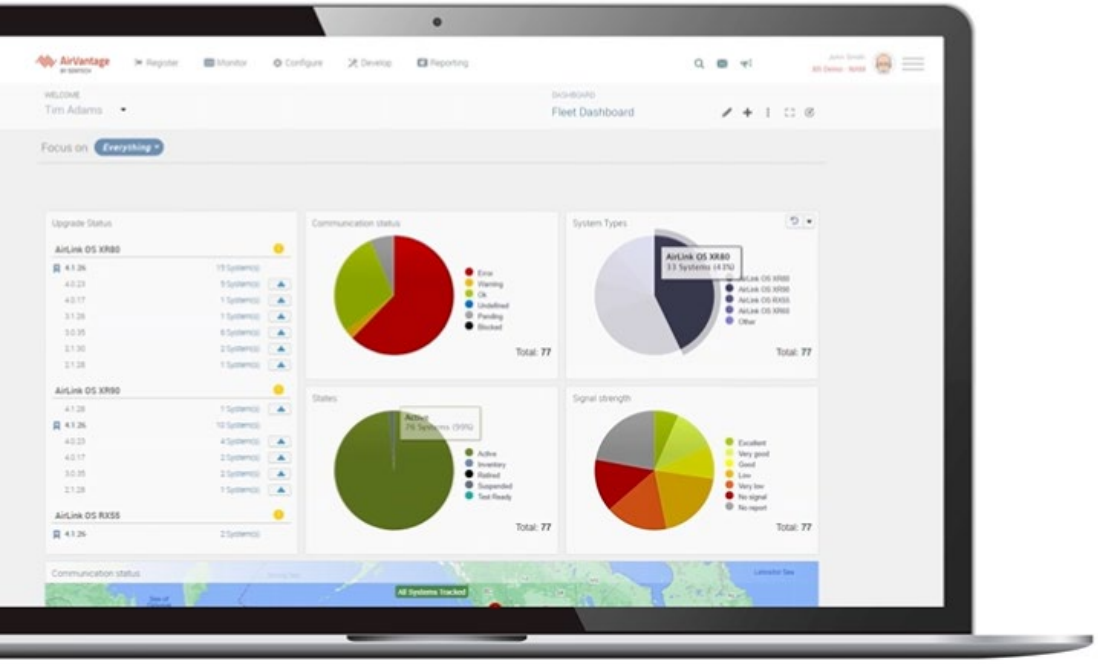
# Connect Virtually Anywhere with Multi-Network Connectivity

Airlink® XR90 and XR80 rugged routers feature multiple LTE /5G radios* that connect to:

- Multiple terrestrial cellular carriers
- Private networks
- Broadband satellite

# ALMS – The Control Hub

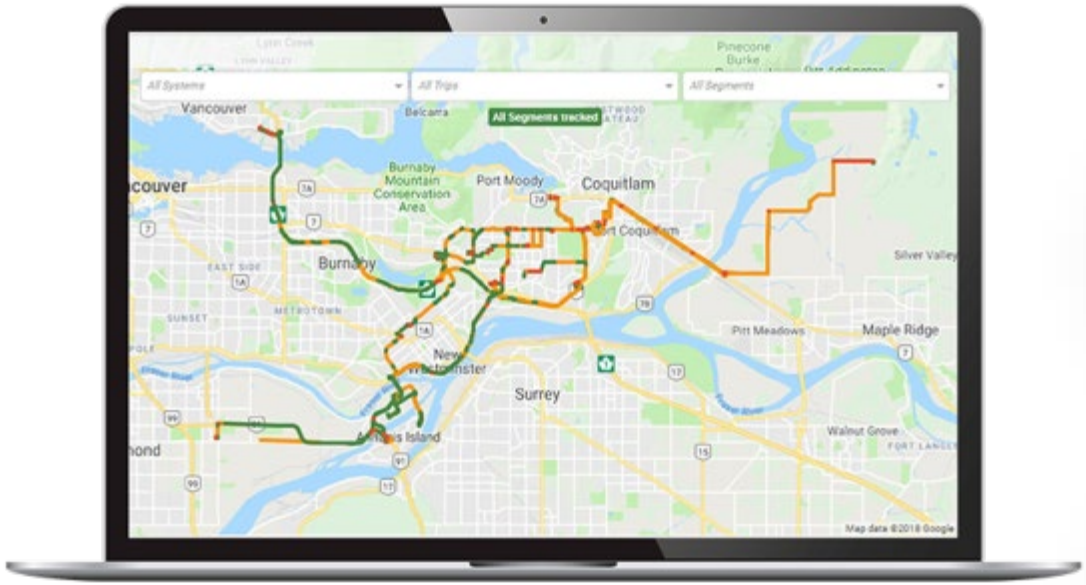
Acting as the control hub of your network, ALMS allows you to remotely configure, manage, secure and troubleshoot your routers – all from a single pane of glass.




- Register, configure and manage your routers at scale
- Proactively monitor your routers with interactive and customizable dashboards
- Deploy new firmware and security patches over-the-air in a few clicks
- Set alerts on critical events and diagnose issues with historical data
- Monitor your fleet of vehicles
- Integrate with your business applications through APIs

# Leveraging Purpose-Built Reporting

Advanced Mobility Reporting (AMR) delivers best-in-class network and vehicle analytics based on +25 years of experience in mobile deployments




Included with active AirLink Premium subscriptions

* Requires inertial sensors on the router
** Available on new-gen routers (AirLink OS)

## COVERAGE MAPS

Monitor system network connectivity status

## TRIP REPORTS / AVL

Real-time & historical view on vehicle location, stops, speed, etc.

## FLEET MANAGEMENT

360° view of vehicle utilization & health

## DRIVER BEHAVIOR*

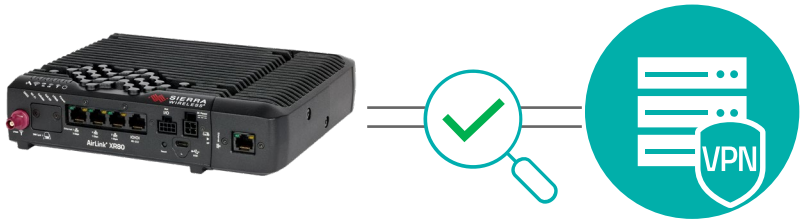
Keep your drivers safe and manage performance

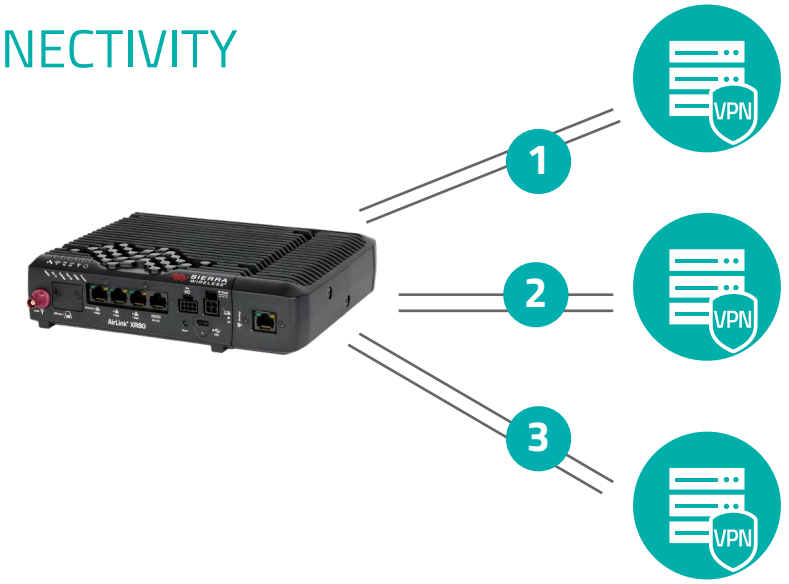
## TROUBLESHOOTING

Link Utilization**

# Advancing Intelligence within the Router

## EXPANDED VPN CAPABILITIES FOR SECURE CONNECTIVITY




VPN Monitoring to quickly detect and act on failures

Multi-VPN Selection and Prioritization to provide increased network control and flexibility.

- Configured priority for controlled connection
- Simultaneous to attempt connection to all available tunnels
- Random selection for load balancing

# Extend Intelligence to the Edge


- Report connectivity info to LAN devices for data offload and routing decisions
- Filter and prioritize connected sensor data
- Video streaming and compression
- Protocol Conversion
- Pass data across LAN devices
- Tailored mobile applications

# The Future of Fleet Connectivity

**EVERY SECOND COUNTS**

Seconds matter in emergency situations, and every second cellular connectivity is lost could be the difference between saving a life or not.

## Public safety and service fleet operations require:

- **Reliable, always-on connectivity** vs. battery-dependent devices
- **Professional-grade performance** vs. consumer limitations
- **Integrated fleet management** vs. standalone devices
- **Lower total cost of ownership** vs. hidden operational costs

# Fleet Connectivity – What To Look For

| | PROFESSIONAL-GRADE SOLUTIONS | CONSUMER SOLUTIONS |
|---|---|---|
| **Power Source** | Hardwired vehicle power | Battery (4-8 hours) |
| **Signal Strength** | External antennas, up to 5-10x stronger | Internal antenna, limited |
| **Device Connections** | 10-128+ simultaneous | 5-8 maximum |
| **Carrier Flexibility** | Multi-carrier, dual-SIM | Single carrier locked |
| **Security** | Enterprise VPN, firewall, fleet integration | Consumer-grade security |
| **Management** | Centralized fleet control | Individual device management |
| **Reliability** | Industrial reliability | Consumer reliability |
| **Operating Temp** | Industrial temperature operations | Consumer temperature operations |
| **Total Cost** | Lower per-vehicle TCO | Higher overall TCO |
| **Installation** | Professional permanent mount | Loose in vehicle |
| **Performance** | Consistent high speed | Degrades with load |

# THANK YOU



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