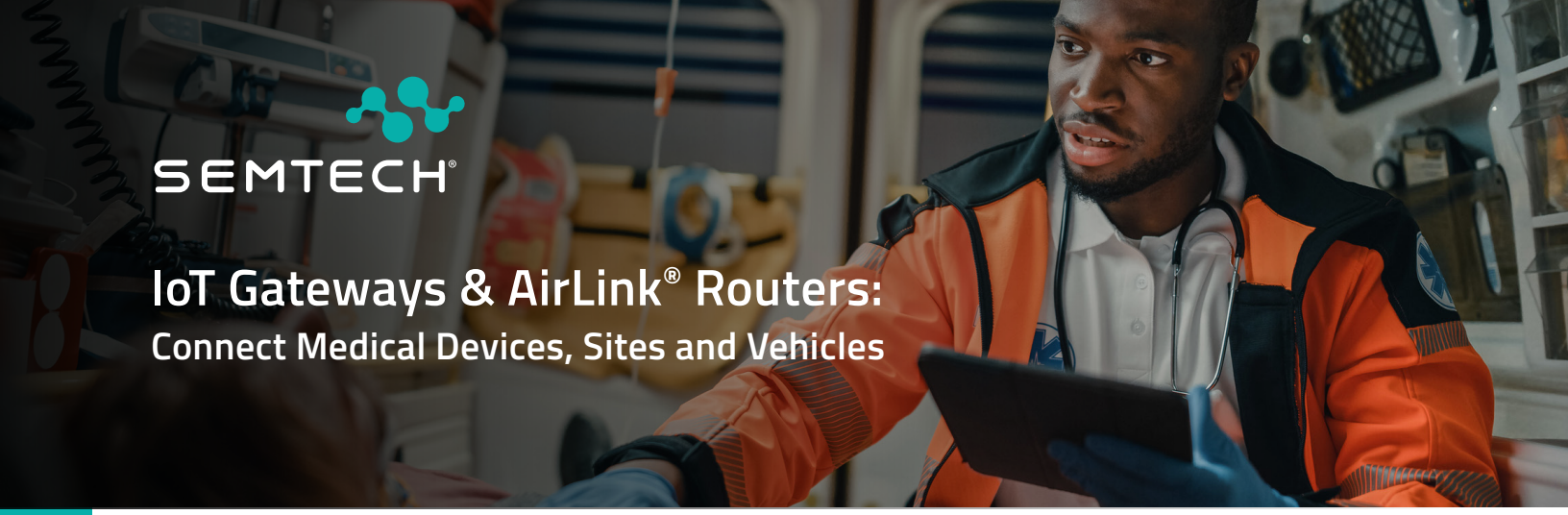


IoT Gateways & AirLink® Routers:
Connect Medical Devices, Sites and Vehicles

Connect your Legacy Medical Devices

Clinical medical devices used in hospital, ambulatory and laboratory environments typically have a lifetime lasting decades. This is due to a number of reasons including regulation, rigorous amounts of testing and certification and cost. However, today's hyperconnected world empowered by AI means that data from these devices needs to be accessible almost the instant it becomes available. Although the latest models of these devices are increasingly built with connectivity there is a large install base of legacy medical devices which need a retrofit solution to enable them to connect to the cloud. Cloud connection simplifies a number of workflows including both control plane (device management such as software updates) as well as data plane (extracting the data from the device) reducing the overall total cost of ownership (TCO).

In some instances, these medical devices may have a connection such as Ethernet. However, when these are deployed in remote or rural locations, they may not be able to access the management and control features resulting in old software on the device and limited troubleshooting capability. Cellular connectivity enables them to connect directly to the cloud, giving the user the ability to benefit from all the capabilities of service and support as if the device had built-in connectivity.

BRIDGING LEGACY WIRED CONNECTIONS WITH CELLULAR IOT GATEWAYS

Ethernet devices can connect to existing networks relatively easily when an Ethernet connection is available, however those devices with only analog, serial or USB interface will require a gateway with some custom software to interface between the device and the application. Gateways have two interfaces: a local interface (LAN) which talks to the device and a wide area network (WAN) interface which is the IP connected side that can talk to the cloud or application. In order to bridge the local wired connection, you must first determine what kind of interface is supported and choose a gateway which has that interface. Many IoT gateways support add-in cards from which you can select the right add-in cards for analog, serial, and USB to insert into the gateway. Most gateways also support Ethernet WAN but depending on your application you may also want Wi-Fi. Gateways with cellular capabilities offer extra network redundancy in case the Ethernet or Wi-Fi internet connection goes down.

Semtech's FX30 IoT gateway has an add-in interface through which 3rd party interface cards such as those from Energiya can be inserted to enable USB, analog or Serial interfaces. Finally, once the hardware has been selected, an application has to be written on the gateway to interface with the wired telecare device and can communicate with the application. Semtech offers the Legato framework to customers who want to write applications on the FX30.

AirLink RX55

BRIDGING LEGACY WIRED CONNECTIONS WITH AIRLINK® CELLULAR ROUTERS

For more complex use cases, requiring higher bandwidth and multi-network connectivity, you can opt for Semtech's AirLink® 5G or LTE routers. Leveraging public and private cellular technologies, a rugged design and comprehensive services, AirLink routers empower organizations to configure, deploy, monitor, secure and manage their assets remotely and reliably, virtually anywhere.

The compact AirLink RX55 LTE router can connect existing medical devices, such as blood analyzers, through cellular, Wi-Fi or Ethernet connectivity. This out-of-the-box solution enables organizations to save time and retrofit existing devices without having to design special IoT hardware for machine connectivity. Medical devices can be connected in minutes, without relying on the site wired connectivity network. With global connectivity, remote management capabilities through the AirLink Management Service platform (ALMS) and round-the-clock technical support, organizations can deploy, monitor, and upgrade thousands of devices in different parts of the world.

Learn more: *https://www.sierrawireless.com/resources/customer-stories/connected-medical-devices/*

Connecting your Medical Sites and Vehicles

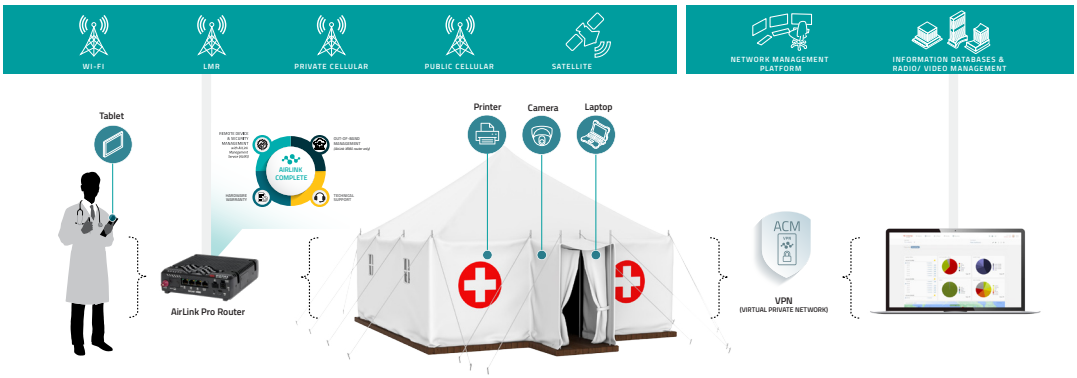
From compact, low-power solutions to ultimate 5G and Wi-Fi 6 performance, Semtech offers a large range of AirLink® routers that can connect single medical devices but also entire ambulances or temporary health centers such as vaccination sites.

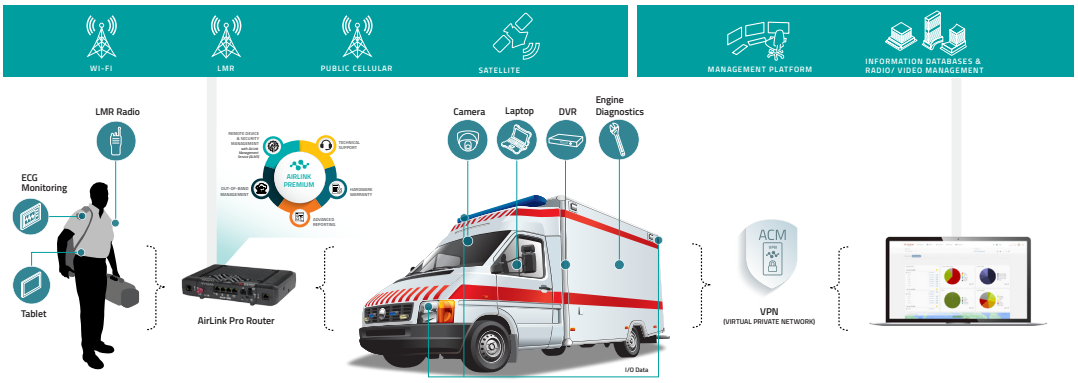
AirLink XR80

CONNECTING TEMPORARY HEALTHCARE FACILITIES

During a health crisis, organizations may need to quickly deploy temporary healthcare centers such as triage tents, vaccination centers or mobile testing sites. Connectivity becomes even more critical in makeshift healthcare facilities set up to mitigate patient overflow and triage patients. In such crises, healthcare professionals need uninterrupted access to data such as patient records, test results and supply chain statuses. Traditional wireless hot spot solutions are not an option: coverage tends to be poor, bandwidth is limited, and security is at risk. AirLink router solutions, such as the AirLink XR80 5G router, provide mission-critical cellular connectivity and high-performance Wi-Fi 6 to support the connectivity requirements of medical staff, connected devices, and patients. With an ultra-rugged design, AirLink Pro routers can be deployed in harsh outdoor environments and disinfected repeatedly, making them ideal for temporary healthcare facilities.

Learn More: *https://www.sierrawireless.com/wp-content/uploads/2022/07/XR80-VUC-Healthcare-Pop-Up-Clinics-Vaccination-Sites_CUSTOMER.pdf*





AirLink XR60

CONNECTING AMBULANCES AND FIRST RESPONDERS

Emergency medical service (EMS) personnel know how critical it is to have the right information to treat patients in the field as well as in the hospital. Cellular connectivity can help field teams gain access to electronic patient care records (EPCR) in real-time to better treat emergencies. EMS technicians can also quickly transmit patient data back to the hospital so doctors can be better prepared for patient arrival. Proper wireless router security ensures that patient records and condition are kept confidential. AirLink routers, such as the XR60 5G router, create a hub of real-time cellular, Wi-Fi and Ethernet connectivity for all medical equipment in and around the ambulance. This enables secure, high-speed communications with hospitals and databases through resilient 5G, Wi-Fi 6 and Gigabit ethernet connectivity. With additional GPS and vehicle telemetry capabilities, AirLink routers also help ensure the fastest arrival times and enables dispatch to validate vehicle position and status.

Learn More: *https://info.sierrawireless.com/ebook-driving-innovation-harnessing-the-power-of-5g-in-vehicle-connectivity*

Semtech is Your Trusted Partner Where Security Matters Most

Semtech is strongly committed to solution security through the entire product lifecycle from solution inception, design, deployment, operations and security maintenance.

AirLink Routers are developed leveraging secure development practices including third-party security audits and penetration tests. Secure firmware updates can be automatically delivered to the routers to ensure that devices remain updated with the latest version, security patches and router security features.

We follow MITRE-approved processes to accept vulnerability reports, coordinate with security researchers, and issue CVE reports against our AirLink products. This provides us with lifecycle control of security vulnerabilities reported against our products while providing consistent and reliable visibility to our customers.

For more information, visit our Security page.

Semtech - Supporting Your Success

Semtech is a trusted provider of Public Safety and industrial solutions and currently serves hundreds of organizations globally. Our solutions come with comprehensive services to enable your devices to operate securely and at peak performance. We support our customers with expert technical support, real-time remote management, unrestricted access to firmware and security updates and hardware warranty with AirLink service subscriptions.

As a part of the global cellular and IoT ecosystem we contribute to the definition and evolution of technology standards. Our partnerships with major cellular carriers help ensure you have the performance and connectivity required for your mission-critical and business-critical applications.

Contact us to Learn More

To learn more about **AirLink Networking Solutions,** call us at **1.877.687.7795** or email sales@semtech.com

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.**