



# Industry Leading Wireless Solutions for Power Utilities

## Power Utilities

Today's utilities are incorporating more intelligence across delivery systems for mission critical communications.

An end-to-end digital, two-way communications infrastructure to increase system reliability is crucial.

**The end goal is reduced consumption, improved efficiencies, better diagnostics, controls and forecasting.**

### SIERRA WIRELESS: CONNECTING THE GRID

Sierra Wireless solutions enable secure, real-time two-way communications for remote monitoring, control, management, reporting and compliance. We offer a comprehensive range of intelligent embedded modules, routers and gateways to provide the widest range of device and integration options. Our portfolio assures reliable performance in even the harshest conditions or industrial environments.

Complementing a broad portfolio of modules and intelligent gateways and routers is a comprehensive portfolio of software and services. Sierra Wireless software solutions provide a wide array of device management and configuration capabilities as well as end-to-end solutions management.



## Optimized for Gas and Electric Utility Requirements

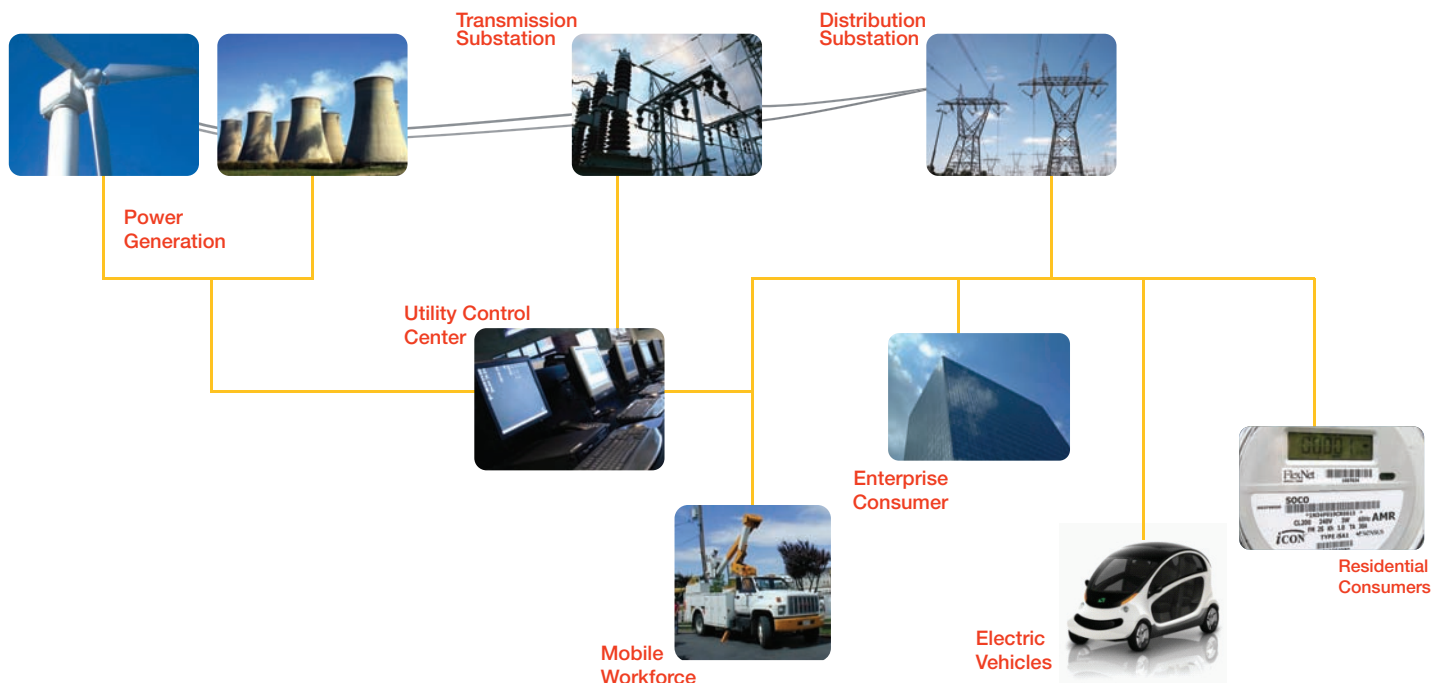
Secure, real-time two-way communications for remote and mobile monitoring, control, management, reporting and compliance is vital for efficient management of information collection and distribution.

Working closely with major carriers, Sierra Wireless continues to leverage the latest advances in cellular wireless infrastructure for increased bandwidth, reliability and availability.

ALEOS™ embedded intelligence simplifies configuration and “always-on”, “always-aware” communications management across remote fixed and mobile field assets.

## Industry Leadership

- Open-standards network security
- Remote management tools across fixed and mobile field assets
- Extensive legacy protocol support
- Rugged design for remote, harsh, fixed, mobile and hazardous environments
- Superior cellular wireless network expertise



## Solutions Partner Ecosystem

Across the grid, Sierra Wireless works closely with technology developers, carriers and customers to deliver innovative solutions.



## Utility Customers





## Transmissions + Distribution Communications



Substations are primarily in harsh environments and demand a communications infrastructure which supports legacy equipment as well as new intelligent electronic devices (IED) for better monitoring and to enable more efficient power rerouting in outages. Mission critical data which needs to be monitored and managed securely via native DNP3 and other legacy protocol support includes:

- Voltage regulators
- Capacitor bank controllers
- Reclosers
- Fault monitors
- Surveillance cameras
- Access controls
- Weather and seismic monitors
- Wi-Fi hot spot for mobile workers

## Smart Metering + Infrastructure



Secure broadband AMI concentrators are required to accelerate monitoring of millions of homes and enterprises with the ultimate objective of empowering users to control and curb their usage.

This network must be highly secure and reliable to ensure consumer privacy and increase confidence. Improved insights into customer usage allows utilities to better pinpoint outages and reroute power more efficiently which translates into better customer service.

## Pipeline Monitoring



A reliable, economic, and flexible energy transportation infrastructure is essential to driving efficiencies for utilities. By increasing the number of sensors throughout a pipeline in conjunction with greater intelligence at compressor stations leads to:

- Enhanced pipeline system reliability and integrity
- Optimized gas deliverability
- More efficient utilization of existing capacity
- Telemetry and SCADA to remote equipment

## Field Services



Communications for mobile and remote operations needs to be integrated with remote fixed assets while reducing risks associated with vehicle investment and operational expenses. Field personnel are given the ability to operate with greater

knowledge through the availability and exchange of real-time mission critical data. Creating a true mobile office environment and an accurate tracking solution requires:

- Secure, broadband data
- Precise GPS tracking and mapping
- Rugged reliability
- Remote management

## Electric Vehicles



With the rollout of the PIEV, technologies are converging to help people plan efficient routes and recharge away from home. Those technologies - telematics, location awareness, and smart grid communications - require route planning that includes the locations of PCI-compliant charging stations. Sierra Wireless leverages broad experience in wireless infrastructure to support automakers as the power, transportation, and automotive sectors converge to roll out the PIEV and its supporting infrastructure.



## AirLink Intelligent Gateways + Device Management

Creating an end-to-end wireless solution for energy management, automation and distribution and field service applications requires intelligent devices at the end point and software and services to manage those devices, as well as the entire solution.

### AIRLINK INTELLIGENT GATEWAYS + ROUTERS

- Multiple connection interfaces
- Rugged design for harsh environments
- Compact form factors
- Fully certified (Regulatory and Carrier approvals)



### ALEOS EMBEDDED INTELLIGENCE

- Session persistence
- Embedded machine protocols
- IP Network Security
- Rules based reporting
- Application Services



### HOSTED DEVICE MANAGEMENT

- Comprehensive Configuration
- Hosted Remote Management
- Diagnostics and Troubleshooting
- Connection Manager



## Benefits for the Energy Ecosystem

### EMBEDDED MACHINE PROTOCOLS

In serving the Utilities market for almost two decades, Sierra Wireless has deployed solutions in nearly every energy management application. This experience has enabled us to continuously enhance our ALEOS intelligence with legacy machine protocols enabling our devices to be easily integrated in many scenarios without upgrades to existing legacy equipment.

### REMOTE MANAGEMENT

Configuration parameters and firmware upgrades can be pushed over-the-air with minimal user intervention to reduce field service visits using the AirLink device management software. Remote diagnostic and monitoring can be done in real-time to decrease the frequency and duration of on-site trips to reduce downtimes from days to minutes.

### FIELD SERVICE MANAGEMENT

To optimize information processed by field workers, AirLink products provide a pervasive high-speed broadband connection to vital back-end databases to file reports, handle payments, and access customer information in real-time.

### MOBILE RESOURCE MANAGEMENT

Increase productivity, reduce costs, and gain a competitive advantage in managing the mobility of workers, vehicles, and assets. AirLink devices are highly configurable and easily integrated with GPS and MRM applications.

### RUGGED DESIGN

AirLink devices are designed for harsh and hazardous environments, and are built to last many years. With extruded aluminum cases, Mil-STD-810F and Class I Div 2 certification, AirLink devices meet the requirements for the energy industry.

## WIRELESS END TO END SOLUTIONS

Sierra Wireless is expanding the wireless world with a comprehensive offering of wireless solutions, including AirPrime™ embedded modules, AirLink intelligent gateways and routers, AirCards™, and AirVantage Services Platform and Solutions. Customers count on us for innovative and reliable performance as well as early access to new cellular technologies for fixed remote and mobile mission-critical utility applications.

## AIRLINK INTELLIGENT GATEWAYS + ROUTERS:

- Sessions Persistence
- Remote Management
- Configurable Serial Protocol Support
- IP Filtering
- Port Forwarding
- ModBus, DNP3, BSAP, DF1, etc
- Events Reporting
- IPsec VPN

## AIRLINK DEVICE MANAGEMENT

The Sierra Wireless AirLink management suite enables secure, real-time two-way communications for remote and mobile monitoring, control, management, reporting and compliance. Together with ALEOS, AirLink devices simplify configuration and “always-on” “always-aware” communications management across remote fixed and mobile field assets.

- Over-the-Air Configuration
- Comprehensive Remote Management
- Device Troubleshooting and Logging
- Minimize Field Visits
- Lower Total Cost of Ownership

### For More Information

#### North America & Asia

Tel: +1 510 624 4200

#### Europe, Middle East & Africa

Tel: +44 20 8 622 3015

#### E-mail:

AirLinkSales@sierrawireless.com