
EDMI Managing Meters Better

Leading Energy Metering Manufacturer Builds Tomorrow's Smart Grid with Sierra Wireless AirPrime Embedded Modules

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EDMI is a global market leader in innovative energy metering products, smartmetering infrastructure and energy management systems. Headquartered in Singapore, the company serves a large and growing customer base in Europe, Asia, Australasia, the Middle East and Africa.

Business challenge

EDMI's energy supplier customers are investing in automated

metering infrastructure (AMI) technologies to build a greener, smarter energy grid. With real-time power grid visibility all the way to the meter, utilities can optimize energy distribution, take action to shift demand loads and, ultimately, serve more customers more efficiently.

EDMI recognizes the potential of AMI to transform the industry and is extending the company's leadership to emerging smart grid technologies. To accomplish this, however, EDM must address the demanding requirements of always-on, industrial-grade metering communications. The company believes that cellular connectivity can provide an ideal solution for many deployments.

Many of our customers prefer to take advantage of existing communications infrastructure managed by a cellular network operator, rather than building out new infrastructure themselves, explains Graeme Lees, Chief Operating Officer, EDM. These networks have proven themselves over many years and provide nationwide coverage in all the markets where we operate.

Building effective cellular communications for a global customer base, however, can be challenging. Different markets use different communications protocols and have unique certification requirements.

In many ways, the hardest part of an AMI project is communications, says Lees. We have years of expertise building industry-leading metering systems, but we find ourselves spending much of our time focusing on communications. We need a trusted industry partner who can provide reliable, flexible communications modules that can perform anywhere in the world.

AirPrime SL6087 Embedded Wireless Module

To build state-of-the-art cellular AMI solutions for a growing international market, EDM partners with Sierra Wireless. Most recently, the company chose the AirPrime SL6087 EDGE module to support its new Mk7B smart single-phase electronic revenue meter.

EDMI is targeting the Mk7B to serve the global, low-cost and high-volume smart residential meter market. The solution includes an integrated, modular pod-based communication system, with cellular connectivity provided by the AirPrime module. The embedded SIM module combines a compact, ruggedized design with full AMI functionality, as well as an optional ZigBee RF interface to connect a remote display channel. The solution allows EDM to provide a cost-effective point-to-point wireless connection that can be remotely managed, upgraded and configured over the air, simplifying maintenance in the field.

“The AirPrime SL6087 has all the features and reliability we want, but the biggest advantage is that it’s built for a long-term strategy,” says Lees. “We know we will be able to work with this module for many years to come.”

AirPrime WMP100 Embedded Wireless Module

EDMI has also partnered with Sierra Wireless for the EWM100 Advanced GSM/GPRS Modem for Smart Metering Applications. Built with the AirPrime WMP100, the plug-and-play modem provides an ideal “in-meter” communications platform for AMI. The solution combines industrial-grade specifications, low power consumption and remote manageability in a standards-based package that interoperates with a wide range of meter technologies.

In February 2011, EDM I and Sierra Wireless won the GSMA Global Mobile Award for Best Mobile Innovation for Utilities at the Mobile World Congress in Barcelona for the product.

Embedded Application Framework

The Sierra Wireless AirPrime modules feature an Embedded Application Framework (EAF) which includes an operating system (Open AT®) designed specifically for machine-to-machine (M2M) communications. The EAF allows EDM I to build application processing into the module if they choose, and to customize the modem for diverse market needs. Recently, EDM I used this capability to comply with a set of unique protocol specifications for a customer in Southeast Asia.

“Smart metering projects around the world are all different, and each utility has specific requirements,” explains Lees. “The fact that we have the option to add intelligence in the AirPrime module gives us a lot of flexibility.”

Results

Today, Sierra Wireless is playing an important role in helping EDM I build a new generation of innovative smart metering solutions. The AirPrime embedded modules benefit EDM I by providing:

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- Long life span, with the ability to remain online for 10 years or longer
 - Industrial-grade specifications to meet extreme environmental conditions of high temperatures, shock, corrosion, vibration and humidity
 - Embedded SIMs to provide a more robust and durable solution
 - Simplified maintenance, with remote management and configuration over the air

Solution:

- Sierra Wireless AirPrime SL6087 embedded wireless module
- Sierra Wireless AirPrime WMP100 embedded wireless module
- Embedded Application Framework with M2M-specific Open AT OS, software libraries and integrated development environment

Key Benefits:

- Reliability and longevity
- Interoperability with carriers and markets worldwide
- Fast time-to-market