



## CINTERION IN THE PRESS

Next Generation Power & Energy EU | September 2010

Smart Wireless Metering

28 kWh

417 m<sup>3</sup>

5800 m<sup>3</sup>

2274 m<sup>3</sup>

1840 m<sup>3</sup>

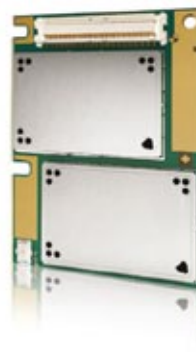
1780 m<sup>3</sup>

1290 m<sup>3</sup>

Invest today in tomorrow's metering solution...  
Integrate EU3

The new UMTS900 EU3 wireless module offers a shrewd investment today for worldwide power, water and gas smart meters of the future. EU3 offers the perfect solution for the challenging long-term requirements of automatic meter reading. With dual-band 3G frequencies, including newly added UMTS900 capability, it was designed to support applications on evolving GSM networks for many years to come. EU3 preserves your technology investment and helps to cut costs, streamline operations and reduce environmental impact.

[www.cinterion.com](http://www.cinterion.com)



# M2M, smart grids and wireless technological evolution

By NORBERT MUHRER

**M**achine-to-machine technology, M2M for short, is used by businesses across many varied industries to connect machines, automate remote data communications, improve business processes and productivity and ultimately, improve the bottom line. Wireless networks are virtually everywhere and the ubiquity of cellular communications has fuelled extraordinary technical innovation in machine-to-machine technology. Cinterion Wireless Modules is the global leader in wireless M2M communications and has been the driving force for industry innovation since its inception.

Some of the most exciting M2M innovation and growth is expected in utility and smart grid applications. At the end of October 2009, the Obama administration announced US\$3.4 billion (€2.7billion) in grants from the stimulus bill for smart-grid efforts. Smart grids allow energy consumers and suppliers to quickly respond to each other's needs to help conserve resources. They operate by using two-way digital and wireless technology to remotely control anything that consumes electricity in homes and businesses. Smart grid technology saves energy, reduces costs and increases reliability and transparency – it's win-win technology. And what role does M2M play in this? M2M enabled smart meters are the key component to enabling two-way communication, which are an essential component of a smart grid.

Smart grid technology drives sustainable energy generation and consumption in a number of ways. It helps alternative sources of energy such as solar and wind integrate into the grid. Smart meters allow energy consumption to be remotely adjusted and controlled, helping consumers take advantage of off-peak rates for non-urgent appliances such as dishwashers and washing machines. This type of load shifting helps to minimize service disruptions during peak hours of use and allows more economical distribution of resources.

Smart grid technology also enables remote monitoring and maintenance of equipment in the field. Built-in intelligence enables problem solving in real time so changes can be made before significant fixes are necessary, which cuts significant costs for utilities. For example, during the 2003 four-day blackout in the US and Canada, the estimated cost to utility companies was US\$10 billion (€7.9billion), which might have been alleviated with smart grid technology.

Global wireless networks will continue to evolve, bringing advanced communication and computing ca-

pabilities necessary for smart grid applications. However, evolution offers challenges for adopters who need solutions that will last for the long haul. Unlike cell phones, which are typically upgraded every year or so, smart grid solutions depend on widely distributed geographic implementations with an enormous number of endpoints (meters). It would be enormously time consuming and costly to update the communications modules in every smart meter each time the network evolves. And with network evolution happening at faster rates, a unique challenge emerges – what happens to an implementation when the network is turned off?

Cinterion is well known for its intelligently designed product roadmap and announced its new UMTS900 module EU3 at the Metering, Billing/CRM Europe 2009 tradeshow. The Cinterion EU3 UMTS wireless module

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***“Smart grid technology saves energy, reduces costs and increases reliability and transparency – it's win-win technology”***

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offers the perfect solution for the challenging long-term requirements of industrial applications such as automatic meter reading (AMR). The sophisticated module has Dual-Band frequencies for both 2G and 3G functionality including newly added UMTS900 functionality.

This means EU3 can support applications designed for use on evolving GSM networks for many years to come – both in areas with next generation wireless service and in remote areas where 3G coverage is not yet available. With its embedded TCP/IP stack including ‘Transparent TCP Service’, the EU3 provides an easy way to handle machine-to-machine data communication via UMTS, EDGE, GPRS or GSM.

Utilities, meter makers and enterprises across many varied industries are wise to invest in smart M2M technology that enables wireless connectivity of the future today. Sustainable and forward-thinking M2M technology offers a full range of wireless communications functions and features and protects technology investment while allowing room for growth to the cellular networks of the future. ■



Before taking up his position as Chief Executive Officer at Cinterion Wireless Modules in June 2008, Norbert Muhrer served as President and CEO of Siemens' Wireless Modules division. Under his leadership Cinterion spun off from Siemens and established itself as a focused M2M company leading the market with a 33 percent market share.