Industrial Automation and Wireless M2M

Industrial Automation and Wireless M2M is a comprehensive report from Berg Insight analysing the latest trends on the market for M2M applications in industrial automation worldwide.

This strategic research report from Berg Insight provides you with 90 pages of unique business intelligence including 5-year industry forecasts and expert commentary on which to base your business decisions.

Highlights from this report:
- **360-degree overview** of the M2M ecosystem in the industrial automation industry.
- **Insights** from numerous executive interviews with market leading companies.
- **Comprehensive overview** of key applications for wireless M2M in industrial automation.
- **In-depth analysis** of market trends and key developments.
- **Detailed profiles** of 50 key players in this market.
- **Market forecasts** by region, market vertical and device segment lasting until 2018.

Berg Insight’s M2M Research Series

What are the key business opportunities in the emerging wireless M2M market? Berg Insight’s M2M Research Series is a unique series of market reports published on a quarterly basis. Each title offers detailed analysis of a specific vertical application area such as smart metering, fleet management or vehicle telematics. Once per year we also publish summaries of our research with detailed forecasts for the Global and European wireless M2M markets, respectively.

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M2M is an abbreviation for machine-to-machine, or technology that supports wired or wireless communication between devices. Industrial automation systems utilize M2M communication to monitor and control remote and local facilities and equipment to increase operational efficiency. A wireless automation system contains a mix of network technologies and equipment including a backoffice solution, network equipment, control devices and field devices. The combination of wireless technologies such as Wi-Fi, cellular, WirelessHART, ISA100 and Bluetooth can provide ubiquitous online connectivity at reasonable cost and deliver very high performance, as well as excellent availability.

Berg Insight estimates that shipments of industrial automation M2M devices with cellular communication capabilities reached 760,000 worldwide in 2013. Growing at a compound annual growth rate of 22.5 percent, the shipments are expected to reach 2.1 million by 2018. Network equipment in industrial automation applications including gateways, switches, connectors, routers and wireless access points featuring embedded cellular connectivity is the largest industrial automation M2M device segment. Berg Insight estimates that shipments of cellular network equipment reached 530,000 worldwide in 2013. Shipments of automation equipment featuring embedded cellular connectivity including machinery, industrial robots, RTUs, PLCs, DCSSs, sensors, I/O modules and operator terminals reached 230,000 devices in 2013. The number of cellular M2M connections in industrial automation applications is forecasted to grow at a compound annual growth rate of 23.2 percent from 2.5 million connections at the end of 2013 to 7.1 million connections by 2018. Backbone network communication is the largest application for cellular M2M within both factory and process automation. It is also increasingly common to use wireless communication in monitoring applications. Remote service maintenance and diagnostics of machinery and industrial robots is a major application within factory automation and real-time monitoring of remote facilities and equipment are one of the most common applications within process automation.

Eaton, Phoenix Contact, Advantech and Kontron are major providers of industrial automation equipment and solutions which also offer products and solutions featuring embedded cellular connectivity. Moxa, Red Lion, HMS Industrial Networks, B&B Electronics, Westermo and Insys Microelectronics specialise in industrial network equipment including routers, gateways and switches and also provide products featuring embedded cellular connectivity. Digi International, Teltonika, Calamp, Eurotech, Hongdian, Multi-Tech Systems, Maestro Wireless Solutions, Erco & Gener and Robustel Technologies are examples of cellular M2M specialists offering solutions for a wide range of applications such as fleet management, retail, security as well as industrial automation. eWon, Netmodule, and Viola Systems are examples of vendors which are specialised in M2M solutions for industrial applications. The worldwide market for wireless M2M applications in industrial automation are also populated by global industrial automation and engineering companies including ABB, Emerson, Honeywell, Schneider Electric, Siemens and Yokogawa. These companies are all major SCADA and automation vendors with thousands to several hundreds of thousands employees, delivering solutions for automation and control to all major industry segments.

Industrial automation is an essential part of most manufacturing activities and market pressure to reduce costs and improve efficiency are important drivers for adoption. Wireless automation solutions are required when wired communications are too hazardous or impractical. Wireless solutions are also often faster and more cost effective to deploy and maintain which increase the flexibility and scalability of factory plant layouts. A new generation of high capacity LTE cellular networks will address the growth in demand for data hungry applications such as video monitoring as well as spur innovation of new applications. Furthermore, LTE will increase the usage of cellular communication in industrial backbone networks even further. Remote monitoring are already today a key driver for cellular M2M and LTE network’s shorter latency times will also enable cellular connectivity to be used in an increasing number of remote control applications. However, requirements vary depending on the application and cellular is part of a mix together with other technologies such as Wi-Fi, Bluetooth, Zigbee, WirelessHART and ISA100.

This report answers the following questions:

- Which are the major applications for wireless M2M in industrial automation?
- Which are the leading wireless M2M solution providers for industrial automation applications?
- What offerings are available from device vendors and service providers?
- What are the key drivers behind the adoption of wireless M2M in industrial automation?
- What impact will technology advancements have on the market?
- How will the market evolve in North America, Asia-Pacific and Europe?
- Why is Big Data analytics crucial for the future of M2M connectivity in industrial automation?
- How will connectivity strategies in industrial automation evolve in the future?
Executive summary

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Johan Svanberg is a Senior Analyst with a Master’s degree from Chalmers University of Technology. He joined Berg Insight in 2007 and his areas of expertise include embedded connectivity, wireless M2M markets and mobile applications.

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