

Summary

Executive summary

M2M is an abbreviation for machine-to-machine, or technology that supports wired or wireless communication between devices. Virtually any communication network may accommodate M2M applications. Fixed-line networks are viable for monitoring fixed assets, whereas wireless networks may be used under all circumstances even though they are required for mobile assets. North America has a great diversity of licensed and unlicensed wireless network technologies. Cellular wireless – the focal technology family of this report – is only one of numerous wireless options available for M2M solution developers. These range from satellite communication to technologies utilizing unlicensed radio frequencies. Also the cellular domain itself is perhaps more fragmented in North America than anywhere else in the world. Parallel GSM/GPRS/EDGE, CDMA and iDEN networks cover most of the population on the continent. HSDPA, EVDO, WiFi-hotspots and soon also mobile WiMAX provide high speed Internet connectivity in urban centers. Older technologies such as AMPS/TDMA and Mobitex are gradually fading away, if only to make way for more newcomers.

The North American wireless M2M market is in a transitional stage where analogue wireless technologies disappear at the same time as the growth for digital wireless M2M is accelerating. Berg Insight estimates that shipments of cellular and satellite wireless M2M devices in North America reached a record level of 5.3 million units in 2006. Growing at a compound average annual growth rate of 27.3 percent, the market size is expected to reach 22.6 million units by 2011. Private vehicles will remain the overwhelmingly largest segment, underpinned by mass-market OEM telematics offerings from GM and other auto manufacturers. Steady growth is also expected in the commercial vehicles and energy meters segments. Shipments of energy meters with cellular capabilities are expected to accelerate at the end of the period due to large scale deployments of AMI. Demand in the security alarms and POS-terminal segments is expected to peak in 2007 due to replacement of analogue technologies.

Two vertical market segments stand out as those with the overwhelmingly largest potential for wireless M2M – utility meters and motor vehicles. North America has about 256 million motor vehicles and 217 million electricity and gas meters. Motor vehicles require wireless communication links, whereas fixed line and non-cellular wireless are potent alternatives for utility meters. Other segments with more limited potential include security alarms and POS-terminals. There are about 32 million monitored alarm systems in North America and the population of POS-terminals is estimated to 15 million. Both types of devices are today predominantly connected to fixed line networks. In the case of security alarms, cellular networks can serve a vital role as backup communication links. POS-terminals become more versatile with cellular connectivity and in some cases dedicated fixed lines can be replaced by cellular connections also at fixed locations.

Apart from standardized high volume devices, whether it be utility meters and car telematics units or security alarms and POS-terminals, there is also a sizable market for general purpose cellular M2M modems and terminals. Those are frequently sold through the distribution channel to system integrators who develop tailored wireless M2M solutions on behalf of enterprise clients. This market segment is still relatively important, but is increasingly being diminished by the high volumes achieved for standardized solutions.

Several categories of network operators and other service providers offer wireless M2M communication services on the North American market. The nationwide cellular network operators mainly service the M2M market through indirect sales channels and major customer accounts. In their place, a number of cellular M2M communication service providers have emerged. These include Aeris, Jasper Wireless, KORE Telematics and Numerex. Furthermore there are several non-cellular communication providers like SkyTel and Orbcomm offering solutions based on technologies such as paging and satellite networks.