

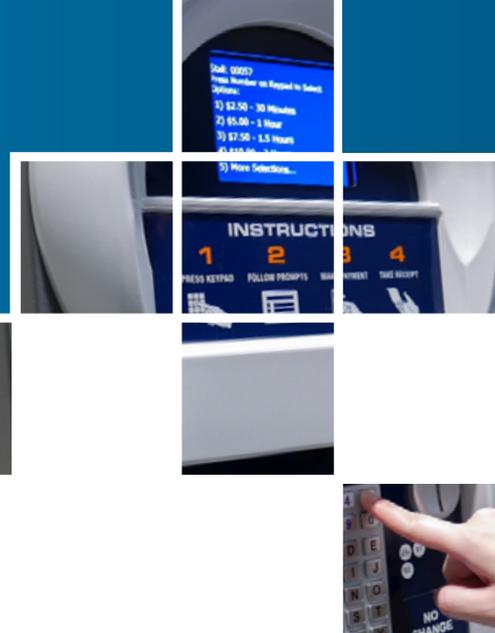
Retail M2M and IoT Applications

Retail M2M and IoT Applications is the fifth consecutive report from Berg Insight that gives first-hand insights into the adoption of wireless connectivity in the vending, parking, ticketing, ATM, digital signage and POS terminal markets.

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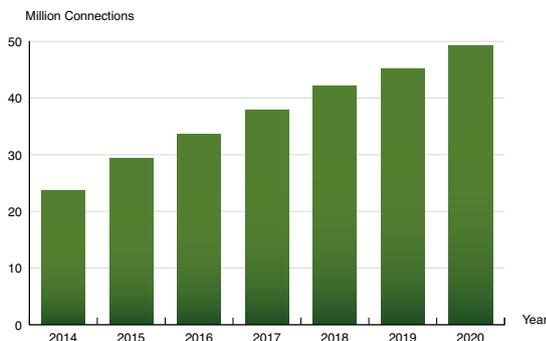


Cellular M2M connections in the retail industry reached 34 million in 2016

The retail industry is an important vertical for cellular M2M connectivity with 33.7 million cellular connections today and a total market size of nearly 151 million POS terminals, ATMs, vending machines, parking meters, digital signs and fare collection devices worldwide. Berg Insight forecasts that the number of cellular M2M connections in the retail industry will grow at a compound annual growth rate (CAGR) of 10.0 percent to reach 49.2 million connections worldwide in 2020. Shipments of cellular M2M devices will at the same time increase at a CAGR of 5.6 percent from 11.6 million units in 2014 to 14.4 million units in 2020. Cellular M2M technology enables devices such as POS terminals and ATMs to be used at new locations where fixed line connectivity is unavailable or impractical. The technology has a more transformational effect on markets such as vending and parking, where machine operators need to reorganize their operations in order to benefit from the availability of real-time information.

The installed base of connected vending machines in North America reached 1.0 million units at the end of 2016, whereas the corresponding figure for EU28+2 was 0.25 million units. The market is still in an early stage as penetration rates for North America and Europe are at 20.0 percent and 6.6 percent respectively. However, vending is also one of the fastest growing segments for connectivity solutions in the retail industry, driven by demand for cashless payment and vending telemetry solutions. The North American market is projected to grow at a CAGR of 17.8 percent between 2016 and 2020, reaching 1.9 million connected vending machines at the end of the period. Similarly, the European market is forecasted to grow at a CAGR of 26.0 percent to reach 0.62 million connections by 2020.

The parking industry has been one of the earliest adopters of M2M communication technology and today approximately 62 percent of the world's 524,000 multi-space meters are connected, primarily to cellular networks. This penetration rate will continue to increase steadily throughout the foreseeable future, as nearly all new multi-space meter deployments have connectivity as a requirement. Connectivity has in contrast to this only recently become an optional feature in single-space meters and today only 10 percent of the single-space meters in the world are connected. However, connected single-space meters have recently had a breakthrough in the North American market, where mixed deployments that comprise both single-space and multi-space ►



Cellular M2M network connections in the retail industry (World 2014–2020)

► meters are becoming common. The share of single-space meters that incorporate connectivity is as a result now increasing rapidly and expected to reach 25 percent by 2020.

Cellular connectivity has become a very popular option for POS terminals and was incorporated in more than one third of the devices shipped in 2016. The wireless technology has an important role in facilitating the global adoption of electronic payments, as it enables the rollout of POS terminals to many new market segments as well as regions where the fixed line telecommunications infrastructure is less developed. Berg Insight forecasts that the installed base of cellular POS terminals will grow at a CAGR of 9.3 percent between 2016 and 2020 to reach 42.9 million units worldwide in 2020, driven especially by growth in emerging markets.

Digital signage solutions have found their way into nearly every possible vertical market and a wide variety of application areas. The untapped market potential is nevertheless still vast and growth is showing no signs of slowing down. Berg Insight forecasts that global shipments of display screens for digital signage will grow from 10.5 million units in 2016 at a compound annual growth rate (CAGR) of 17.3 percent to reach 19.9 million units by 2020. Cellular connectivity is very useful for applications such as temporary signs and in locations where access to fixed line communications is not available or costly to obtain. However, cellular is expected to remain a niche connectivity technology due to the higher costs associated with the technology, especially in bandwidth-intensive applications.

Cellular connectivity is incorporated in more than 0.1 million fare collection devices worldwide today, such as on-board ticket vending machines, stationary vending machines and handheld ticket sales terminals. Berg Insight anticipates that the market potential for cellular connectivity in public transport will expand as account-based fare collection systems gain ground and increase the need for real-time communication. However, the number of fare collection devices that incorporate cellular connectivity is likely to remain relatively modest, as many fare collection devices can share a communication line with other equipment.

This report answers the following questions:

- What is the potential market size for wireless M2M communication in the retail industry?
- Which are the key applications that offer sizable business opportunities?
- Which trends and developments are shaping each vertical market segment?
- Which are the leading providers of vending telemetry solutions?
- How is the market for wireless ATM connectivity solutions developing?
- Which are the leading providers of connected parking meters?
- How many connected digital signs are there worldwide?
- What is the attach rate for cellular connectivity in POS terminals by region?
- How is the market for public transport fare collection systems evolving?

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About the Authors



Johan Fagerberg is co-founder and an experienced analyst with a Master's degree in Electrical Engineering from Chalmers University of Technology. He has during the past 21 years published numerous articles and reports about IoT/M2M topics. His areas of expertise include location-based services, commercial vehicle telematics, car telematics and retail M2M applications.

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