

Summary

Executive summary

Smart homes and home automation are ambiguous terms used in reference to a wide range of solutions for controlling, monitoring and automating functions in the home. Berg Insight's definition of a smart home system requires that it has a smartphone app or a web portal as a user interface. Devices that only can be controlled with switches, timers, sensors and remote controls are thus not included in the scope of this study. Smart home systems can be grouped into six primary categories: energy management and climate control systems; security and access control systems; lighting, window and appliance control systems; home appliances; audio-visual and entertainment systems; and healthcare and assisted living systems.

North America recorded strong growth in the smart home market during 2015. The installed base of smart home systems in the region increased by 62 percent to reach 16.9 million at the year-end. An estimated 2.8 million of these were multifunction or whole-home systems whereas 14.1 million were point solutions designed for one specific function. As some homes have more than one smart system in use, the installed base totalled an estimated 12.7 million smart homes at the end of the year. This corresponds to 9.7 percent of all households, placing North America as the most advanced smart home market in the world. Between 2015 and 2020, the number of households that have adopted smart home systems is forecasted to grow at a compound annual growth rate (CAGR) of 30 percent, resulting in 46.2 million smart homes. Market revenues reached US\$ 6.2 billion (€ 5.4 billion) in 2015, an increase of 42 percent year-on-year. The market is expected to grow at a CAGR of 31 percent between 2015 and 2020, reaching US\$ 24.3 billion (€ 21.2 billion) in yearly revenues at the end of the forecast period.

The European market for smart home systems is still in an early stage and 2–3 years behind North America in terms of penetration and market maturity. At the end of 2015, there were a total of 6.6 million smart home systems in use in the EU28+2 countries, up from 3.3 million in the previous year. Around 0.8 million of these systems were multifunction or whole-home

systems whereas 5.8 million were point solutions. This corresponds to around 5.3 million smart homes when overlaps are taken into account, meaning that 2.4 percent of all households in the region were smart at the end of the year. The number of European households that have adopted smart home systems is forecasted to grow at a compound annual growth rate (CAGR) of 54 percent during the next five years, resulting in 44.9 million smart homes by 2020. Market revenues grew by 157 percent to € 2.4 billion (US\$ 2.7 billion) in 2015. The market is forecasted to grow at a CAGR of 40 percent between 2015 and 2020 to reach € 12.8 billion (US\$ 14.7 billion) at the end of the forecast period.

A point solution will in most cases constitute the consumer's first smart home purchase. Compared to whole-home systems, point solutions generated 58 percent of the combined market revenues in North America and Europe. The most successful point solutions to date include smart thermostats, security systems, smart light bulbs, network cameras and multi-room audio systems. These products are marketed by incumbent OEMs such as Philips Lighting, Honeywell, Danfoss, Belkin, Chamberlain, Kwikset and Assa Abloy; service providers such as SFR and Centrica; and newer entrants such as Nest, Ecobee, MyFox, Sonos, Canary, Netatmo and D-Link. In the whole-home system market, traditional home automation system vendors such as Crestron, Control4, Gira and Jung are facing new competition as companies from adjacent industries have entered the market. Communication and security service providers such as Vivint, ADT, Comcast and AT&T have established themselves among the largest whole-home solution vendors in North America. Major vendors in Europe include Verisure, eQ-3, RWE, Deutsche Telekom and Loxone.

Smartphone apps are today the most common user interface for smart home solutions. In the future, users are however unlikely to be willing to launch a number of individual apps to be able to use their connected devices. A cross platform compatible and voice driven user interface would instead have the ability to connect and control a wide range of devices and services using simple voice commands. Several ICT industry giants are now betting on voice driven user interfaces to make it easier to control smart home solutions. The Alexa service from Amazon has quickly become popular and Apple's HomeKit platform supports the company's voice driven digital assistant Siri. Microsoft has indicated that the company will push its Cortana service as a foundation for controlling connected devices and services and Google announced its conversational digital assistant named Google Assistant in May 2016.