



# Smart Homes and Home Automation

9th Edition

*Smart Homes and Home Automation is the ninth consecutive report from Berg Insight analysing the latest developments and trends on the smart home markets in Europe and North America. This strategic research report provides you with 300 pages of unique business intelligence including 5-year industry forecasts and expert commentary on which to base your business decisions.*

# 105 million homes in Europe and North America were smart at the end of 2021

Smart home and home automation systems include a wide range of solutions for controlling, monitoring and automating functions in the home. Berg Insight's definition of a smart home system is one that is accessible from remote and includes a smartphone app or a web portal user interface. Devices that only can be controlled and automated locally, through switches, timers, sensors and remote controls, are thus not included in the scope of this study. Smart home systems can be grouped into seven primary categories: security and access control systems; energy management and climate control systems; audio-visual and entertainment systems; lighting and window control systems; healthcare and independent living systems; home appliances and service robotics.

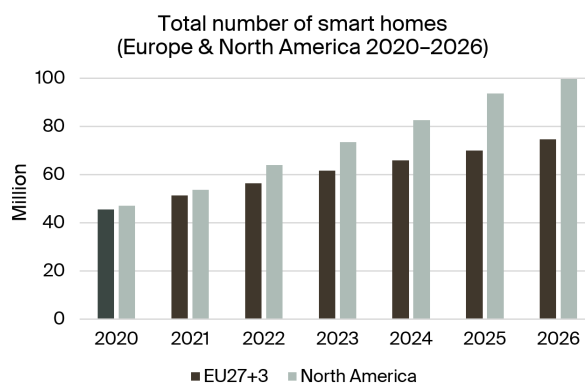
The North American smart home market recorded strong growth during 2021. The installed base of smart home systems increased by 18.0 percent to reach 223.2 million at the year-end. An estimated 30.0 million of these were multifunction or whole-home systems whereas 193.2 million were point solutions designed for one specific function. As some homes have more than one smart system in use, the installed base totalled an estimated 51.3 million smart homes at the end of the year. This corresponds to 35.8 percent of all households, placing North America as the most advanced smart home market in the world. Between 2021 and 2026, the number of households that adopt smart home systems is forecasted to grow at a compound annual growth rate (CAGR) of 7.8 percent, resulting in 74.6 million smart homes. Market revenues reached US\$ 36.7 billion (€ 31.0 billion) in 2021, an increase of 16.4 percent year-on-year. The market is expected to grow at a CAGR of 11.7 percent between 2021 and 2026, reaching US\$ 63.7 billion (€ 53.9 billion) in yearly revenues at the end of the forecast period.

The European market for smart home systems is still behind the North American market in terms of market penetration and maturity. However, the market has now grown to become almost as large as the North American market. At the end of 2021, there was a total of 167.7 million smart home systems in use in the EU27+3 countries, up 22.9 percent year-on-year. Around 20.0 million of these systems were multifunction or whole-home systems whereas 147.7 million were point solutions. This corresponds to around 53.7 million smart homes when overlaps are taken into account, meaning that 23.0 percent of all households in Europe were smart at the end of the year. The number of European households to adopt smart home systems is forecasted to grow at a compound annual growth rate (CAGR) of 13.7 percent during the next five years, resulting in 99.7 million smart homes by 2026. Market

revenues grew by 30.9 percent to € 29.7 billion (US\$ 35.1 billion) in 2021. The market is forecasted to grow at a CAGR of 15.5 percent between 2021 and 2026 to reach € 61.1 billion (US\$ 72.2 billion) at the end of the forecast period.

A point solution will in many cases constitute the consumer's first smart home purchase. The most popular point solutions to date, in terms of sold units, include smart thermostats, smart light bulbs, smart plugs, connected security cameras and voice controlled smart speakers. These products are marketed by incumbent OEMs such as Signify, Resideo, Danfoss, Belkin, Chamberlain, Schlage and Assa Abloy and newer entrants such as Ecobee, Sonos, Arlo, Nuki, Mysa, IKEA and Wyze Labs. In the whole-home system market, traditional home automation vendors such as Crestron Electronics, Control4, Savant Systems, eQ-3 and Loxone are facing new competition as companies from adjacent industries have entered the market. Communications and security service providers such as ADT, Vivint, Comcast and Brinks Home Security (Monitronics) have established themselves among the largest whole-home solution vendors in North America. Major vendors in Europe include Centrica, Somfy, Deutsche Telekom and Verisure.

There are a number of factors and trends in today's society that favour the smart home market. The interest in energy efficiency solutions is growing as energy prices surge and sustainable solutions are part of the daily agenda in media and corporate boardrooms. Smart thermostats and HVAC systems, smart lighting, connected home appliances as well as other connected home systems can all help lower the energy consumption in the home and in turn reduce the energy bill. Consumer interest in these types of solutions is now growing rapidly. Berg Insight also anticipates that working from home will remain common post Covid-19 and that people that spend more time at home are more willing to invest in smart home products and services as they can provide improved safety, wellbeing and convenience.



# Table of contents

## Executive summary

### 1 Smart homes, connected homes and home automation

#### 1.1 Introduction

#### 1.2 Types of home automation

- 1.2.1 Security and access control systems
- 1.2.2 Energy management and climate control systems
- 1.2.3 Audio-visual and entertainment systems
- 1.2.4 Lighting and window control systems
- 1.2.5 Healthcare and independent living
- 1.2.6 Home appliances
- 1.2.7 Service robotics
- 1.2.8 Multifunction and whole-home automation systems

#### 1.3 Home automation market segments

- 1.3.1 Mainstream houses and multi-family dwellings
- 1.3.2 The custom (luxury) segment
- 1.3.3 New homes versus existing homes

#### 1.4 Channels to market

- 1.4.1 Professional installation
- 1.4.2 Retail
- 1.4.3 Service providers

### 2 Networks and communications technologies

#### 2.1 Overview

- 2.1.1 Different approaches to establishing interoperability
- 2.1.2 Technology choices of product OEMs
- 2.1.3 Technology choices of whole-home solution vendors

#### 2.2 Smart home networking technologies and standards

- 2.2.1 Bluetooth
- 2.2.2 DECT ULE
- 2.2.3 EnOcean
- 2.2.4 Insteon
- 2.2.5 KNX
- 2.2.6 LPWA
- 2.2.7 Matter
- 2.2.8 Open Connectivity Foundation
- 2.2.9 OpenTherm
- 2.2.10 Thread
- 2.2.11 Wi-Fi
- 2.2.12 Zigbee
- 2.2.13 Z-Wave

#### 2.3 Smart home ecosystems and hubs

- 2.3.1 Amazon Alexa
- 2.3.2 Apple HomeKit and Siri
- 2.3.3 Google Home and Google Assistant
- 2.3.4 Homey
- 2.3.5 IFTTT
- 2.3.6 Mediola
- 2.3.7 Samsung SmartThings
- 2.3.8 Wink
- 2.3.9 Yonomi (Allegion)

#### 2.4 Smart home platforms

- 2.4.1 AWS (Amazon)
- 2.4.2 Ayla Networks
- 2.4.3 Google Cloud
- 2.4.4 Microsoft
- 2.4.5 ThroughTek
- 2.4.6 Tuya

### 3 Technology providers and OEMs

#### 3.1 Market overview

- 3.1.1 Point solutions – an entry into the smart home
- 3.1.2 Smart home strategies for product OEMs
- 3.1.3 New entrants challenge incumbents with connected products

#### 3.2 Security and access control system vendors

- 3.2.1 Ajax Systems
- 3.2.2 Arlo Technologies
- 3.2.3 Assa Abloy
- 3.2.4 Canary
- 3.2.5 Chamberlain Group
- 3.2.6 Ezviz Network (Hikvision)
- 3.2.7 Frontpoint
- 3.2.8 Kwikset (Assa Abloy)
- 3.2.9 Logitech
- 3.2.10 Minut
- 3.2.11 Nuki Home Solutions

- 3.2.12 Reolink
- 3.2.13 Ring (Amazon)
- 3.2.14 Schlage
- 3.2.15 Simplisafe
- 3.2.16 Wyze Labs
- 3.2.17 YI Technology

#### 3.3 Energy management and climate control system vendors

- 3.3.1 Danfoss
- 3.3.2 Ecobee (Generac)
- 3.3.3 Eneco
- 3.3.4 Eve Systems
- 3.3.5 Geo
- 3.3.6 Google Nest
- 3.3.7 iDevices (Hubbell)
- 3.3.8 Lux Products (Johnson Controls)
- 3.3.9 Mysa
- 3.3.10 Netatmo (Legrand)
- 3.3.11 Tado

#### 3.4 Audio-visual and entertainment system vendors

- 3.4.1 Bose
- 3.4.2 Harman (Samsung Electronics)
- 3.4.3 Kaleidescape
- 3.4.4 Naim Audio
- 3.4.5 Sonos
- 3.4.6 Sony
- 3.4.7 Sound United

#### 3.5 Lighting and window control system vendors

- 3.5.1 Acuity Brands
- 3.5.2 Belkin
- 3.5.3 IKEA
- 3.5.4 Ledvance (MLS)
- 3.5.5 Leviton
- 3.5.6 LIFX (Buddy Technologies)
- 3.5.7 Lutron Electronics
- 3.5.8 Plejd
- 3.5.9 Signify
- 3.5.10 Velux

#### 3.6 Healthcare and independent living solution vendors

- 3.6.1 Appello
- 3.6.2 Careium
- 3.6.3 Climax Technology
- 3.6.4 Enovation
- 3.6.5 Just Checking
- 3.6.6 Qorvo
- 3.6.7 Sensio
- 3.6.8 Tunstall Healthcare Group

#### 3.7 Home appliances vendors

- 3.7.1 BSH Hausgeräte (Bosch)
- 3.7.2 Electrolux
- 3.7.3 GE Appliances (Haier)
- 3.7.4 Haier
- 3.7.5 LG Electronics
- 3.7.6 Whirlpool

#### 3.8 Service Robotics vendors

- 3.8.1 Ambrogio Robot (Zucchetti Centro Sistemi)
- 3.8.2 Dyson
- 3.8.3 Husqvarna
- 3.8.4 iRobot
- 3.8.5 Labrador Systems
- 3.8.6 Neato Robotics
- 3.8.7 Robomow
- 3.8.8 SharkNinja Operating

### 4 Service providers and whole-home system vendors

#### 4.1 Market overview

- 4.1.1 The European market
- 4.1.2 The North American market

#### 4.2 Market segments and go-to-market strategies

- 4.2.1 Traditional home automation
- 4.2.2 DIY systems
- 4.2.3 Professionally monitored security

#### 4.3 Whole-home system OEMs

- 4.3.1 ABB
- 4.3.2 Alarm.com
- 4.3.3 Bosch
- 4.3.4 Control4 (Snap One)
- 4.3.5 Crestron Electronics
- 4.3.6 Delta Dore
- 4.3.7 D-Link

- 4.3.8 eQ-3
- 4.3.9 Ezlo Innovation
- 4.3.10 Essence Group
- 4.3.11 Fibar Group (Nice Group)
- 4.3.12 Gigaset
- 4.3.13 Gira
- 4.3.14 Grenton
- 4.3.15 Legrand
- 4.3.16 Loxone Electronics
- 4.3.17 myGEKKO (Ekon)
- 4.3.18 Nice Group
- 4.3.19 OBLO Living
- 4.3.20 Resideo Technologies
- 4.3.21 Savant Systems
- 4.3.22 Schneider Electric
- 4.3.23 Shelly (Allterco)
- 4.3.24 Somfy
- 4.3.25 Tellus (Proove)
- 4.3.26 TP-Link
- 4.3.27 Universal Electronics
- 4.3.28 Xiaomi

#### 4.4 Smart home service providers

- 4.4.1 ADT
- 4.4.2 Alice France
- 4.4.3 Brinks Home Security (Monitronics)
- 4.4.4 Centrica
- 4.4.5 Comcast
- 4.4.6 Cox Communications
- 4.4.7 Deutsche Telekom
- 4.4.8 Telus
- 4.4.9 Verisure
- 4.4.10 Vivint
- 4.4.11 Vodafone

### 5 Market forecasts and conclusions

#### 5.1 Market forecasts

#### 5.2 Europe

- 5.2.1 Revenues
- 5.2.2 Shipments
- 5.2.3 Installed base

#### 5.3 North America

- 5.3.1 Revenues
- 5.3.2 Shipments
- 5.3.3 Installed base

#### 5.4 Popular smart home product categories

- 5.4.1 Smart speakers and displays
- 5.4.2 Smart thermostats and radiator valves
- 5.4.3 Smart lighting
- 5.4.4 Smart plugs

#### 5.5 Market trends and analysis

- 5.5.1 Will Matter solve the interoperability problems in the smart home industry?
- 5.5.2 Surging energy prices create demand for smart energy efficiency solutions
- 5.5.3 Connectivity – soon a standard feature in the home appliances segment
- 5.5.4 Greater consumer awareness benefits all players
- 5.5.5 Lower price points opens the doors to the mass market
- 5.5.6 Cloud-based systems and the integrated hub opportunity
- 5.5.7 Cellular IoT in the smart home and home security markets
- 5.5.8 Open versus closed smart home ecosystems
- 5.5.9 Short product lifecycles damage consumer trust
- 5.5.10 Smart insurance for the connected home
- 5.5.11 Mergers and acquisitions in the smart home industry

## Glossary

## Highlights from the report

**Insights** from 30 executive interviews with market leading companies.

**360-degree overview** of the smart homes & home automation ecosystem.

**Summary** of industry trends in key vertical market segments.

**Statistical data** on adoption of smart home systems in Europe and North America.

**New market forecasts** lasting until 2026.

**Detailed reviews** of the latest initiatives launched by industry players.

**Updated profiles** of the key vendors on this market.

## The report answers the following questions

- Which are the main applications within smart homes and home automation?
- What are the main drivers behind growth in Europe and North America?
- What are the business models and channels-to-market for smart home solutions?
- Which are the leading whole-home system vendors in Europe and North America?
- How are product OEMs and whole home solution vendors positioning themselves?
- What home connectivity technologies are smart home system vendors betting on?
- What is the potential market size for cellular IoT in home automation?
- How will the smart home market evolve in the next five years?

## About Berg Insight's IoT market research

Our market reports offer comprehensive information and analysis on key IoT technologies and markets, addressing important concerns including total addressable market, market penetration, market shares, industry landscape, regulatory environment, market trends and forecasts. Our research portfolio today comprises more than 55 items, where each market report focuses on a specific vertical application area or cover horizontal themes. All market reports come with complementary data sets in Excel format that can be easily analysed and converted into tables and charts. We offer a range of different license options together with bundled packages and subscriptions to suit your specific needs.





## SMART BUILDINGS

## Smart Homes and Home Automation

How should the mobile industry address the vast business opportunity in connected smart homes? Berg Insight estimates that revenues from home automation system shipments and service fees in Europe and North America will grow at a compound annual growth rate of 13.5 percent from US\$ 68.8 billion in 2021 to US\$ 129.7 billion in 2026. Get a 360 degree perspective on the rapid evolution of the home automation market in this comprehensive 300 page strategy report.

PUBLISHED DATE	April 2022
EDITION	9th
PAGES	300
AUTHOR	Martin Bäckman

PDF & EXCEL: 1 user license	€ 1 500
PDF & EXCEL: 2-10 user license	€ 2 250
PDF & EXCEL: Enterprise license	€ 3 000

[Read more and place order on berginsight.com](https://berginsight.com)

## Who should read this report?

Smart Homes and Home Automation is the foremost source of information about the emerging market for connected home applications. Whether you are a product vendor, service provider, telecom operator, investor, consultant, application developer or government agency, you will gain valuable insights from our in-depth research.

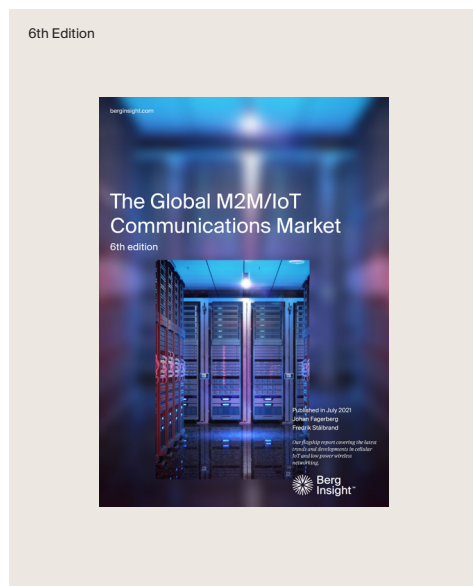
## AUTHOR

## Martin Bäckman



Martin is a senior analyst who specialises in IoT applications for the smart homes and buildings, transportation and security markets. He joined Berg Insight in 2018 and is the lead author of numerous research reports. In addition to published research, he has provided bespoke research to clients ranging from IoT solution providers, management consulting firms, private equity firms and others. Prior to joining Berg Insight, Martin worked as a supply chain analyst at Volvo Group. Martin holds a Master's degree in Industrial Engineering and Management from Chalmers University of Technology.

## Related products *Find them and more on [berginsight.com](https://berginsight.com)*



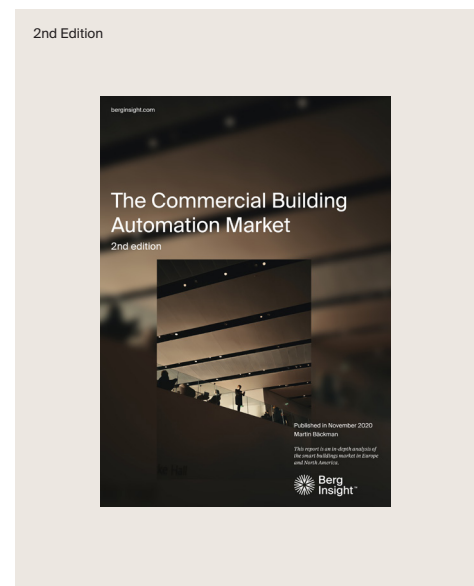
CATEGORY

Horizontal Themes



CATEGORY

Smart Buildings



CATEGORY

Smart Buildings

## CONTACT

**Berg Insight AB**  
**Viktoriagatan 3**  
**411 25 Gothenburg**  
**Sweden**

**+46 (0)31 711 30 91**  
**[info@berginsight.com](mailto:info@berginsight.com)**  
**[www.berginsight.com](https://www.berginsight.com)**



*Berg Insight offers premier business intelligence to the telecom industry. We produce concise reports providing key facts and strategic insights about pivotal developments in our focus areas. Berg Insight also offers detailed market forecast databases and advisory services. Our vision is to be the most valuable source of intelligence for our customers.*