The Global Commercial Building Automation Market is the first report from Berg Insight analysing the latest developments on the smart buildings market.

This report in the M2M Research Series provides you with 290 pages of unique business intelligence including 5-year industry forecasts and expert commentary on which to base your business decisions.

**Highlights from this report:**

- **Insights** from 30 executive interviews with market leading companies.
- **360-degree overview** of the smart building & building automation ecosystem.
- **Summary** of industry trends in key vertical market segments.
- **Statistical data** on adoption of building automation systems worldwide by region.
- **New market forecasts** lasting until 2022.
- **Detailed reviews** of the latest initiatives launched by industry players.
- **Updated profiles** of the key vendors in this market.

**Berg Insight’s M2M Research Series**

What are the key business opportunities in the emerging wireless M2M/IoT market? Berg Insight’s M2M Research Series is a unique series of 35 market reports published on a regular basis. Each title offers detailed analysis of a specific vertical application area such as smart homes, smart metering, fleet management and car telematics, or covers horizontal topics including IoT platforms, software, hardware, IoT connectivity statistics and the mobile operators’ IoT strategies.

www.berginsight.com
Where is the global smart building market headed?

Smart buildings and building automation are ambiguous terms used in reference to a wide range of solutions for controlling, monitoring and automating functions in buildings such as commercial office spaces, retail stores, hotels, schools, hospitals and industrial buildings. Berg Insight’s definition of a building automation 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 building systems can be grouped into twelve primary categories: HVAC systems; lighting and window control; occupancy comfort and productivity systems; fire and safety; access and security; water management; refrigeration; elevators and escalators management; pool and spa management; irrigation systems; charging for electric vehicles; and audio, video and entertainment.

Berg Insight estimates that 48 million connected devices were shipped globally into the BIoT market in 2018. Note that by connected devices we mean the functions encapsulated in sensors and actuators, I/O modules, controllers and gateways used to control the functions in a smart building. It does not include the servers that may run the dashboard & apps, nor does it include data storage & analytics. The market is broken down into twelve segments of which the access and security market was the largest, followed closely by the fire and safety segment. This intuitively makes sense because these two segments are not just “nice-to-have”, but critical in any commercial building. Moreover, access and security for a commercial building will comprise of a large number of units; sensors and actuators have to go into multiple doors and entrance ways into lobbies, laboratories, IT and server rooms, gym and fitness centres and supply rooms. In terms of the fire and safety segment: heat detectors, smoke alarms, sprinkler device placements are governed by regulations. There has to be a minimum number spaced a certain distance apart. This segment thus turns out to be the second largest market. Berg Insight estimates that shipments for all segments will grow at a CAGR of 36.0 percent to reach 163 million units worldwide in 2022.

Berg Insight estimates that more than 151 million connected devices for BIoT were in operation throughout the world at the end of 2018. By 2022, Berg Insight estimates that roughly 483 million units will be active worldwide, representing a CAGR of 33.3 percent between 2018 and 2022. About 4.5 million of these devices were connected via cellular networks in 2018. The number of cellular connections in the building automation market will grow at a CAGR of 44.1 percent to reach 19.4 million in 2022. In terms of revenues, Berg Insight estimates that connected devices into the global BIoT market generated revenues of more than US$ 1.2 billion in 2018. This figure will grow at a CAGR of 21.4 percent to almost US$ 2.65 billion in 2022.

The most successful building automation solutions to date, in terms of sold units, include access and security, fire and safety, HVAC systems and elevators and escalators management. These solutions are marketed by product OEMs such as Assa Abloy, Avigilon, AMAG Technology, HID Global, Comark, Tyco, Albireo Energy, Cimetrics, Delta Controls, ENGIE Insight, Silvair, KONE, Otis, Schindler and ThyssenKrupp. The automatic control may be done through a centralized system such as a Building Management System (BMS). Examples of BMS solution providers include ABB, Honeywell, Johnson Controls, Schneider Electric, Siemens and United Technologies.

Building automation has been around for many decades but there is a new urgency due to factors such as energy conservation as well as mandates for green construction. IoT offers the technologies for building owners to easily measure and conserve energy. A major change is starting to happen now especially in new construction, where the primary driver is changing from cost reduction to features that enhance the user experience and change how users and buildings interact. Instead of there being a single “killer-app” for user-experience, we are starting to see a combination of use-cases. These use-cases leverage the Internet of Things, sensors and connectivity to enable customization of spaces in offices and conference rooms based on occupancy levels and occupant preferences, efficient mobility throughout the building, and they help occupants with location and wayfinding – all controllable by mobile platforms. Most important, they are capable of predictive awareness of individual needs.

This report answers the following questions:

- Which are the main verticals within smart buildings and building automation?
- What are the main drivers behind growth in this market?
- What are the challenges and roadblocks towards widespread adoption?
- What are the business models and channels-to-market for smart building solutions?
- Which are the leading building management system (BMS) vendors?
- How are product OEMs and BMS vendors positioning themselves?
- What connectivity technologies are smart building system vendors betting on?
- What is the potential market size for cellular IoT in building automation?
- How will the smart building market evolve in the next five years?
About the Author

**Alan Varghese** has more than 25 years of experience in the wireless, semiconductor and broadband industries and serves as a strategic advisor to companies in these segments. He holds a Master’s degree in Electrical Engineering from Rensselaer Polytechnic Institute, New York. Alan is an experienced analyst and author of numerous reports and articles about various telecom topics for leading analyst firms.

**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.

---

**Who should buy this report?**

<table>
<thead>
<tr>
<th>The Global Commercial Building Automation Market</th>
<th>Related products</th>
</tr>
</thead>
</table>
| The foremost source of information about the emerging market for connected and smart buildings. | ▪ Smart Homes and Home Automation  
▪ Security Applications and Wireless M2M  
▪ Smart Metering in Europe  
▪ The Global M2M/IoT Communications Market |

---

**Order form** — TO RECEIVE YOUR COPY OF THE GLOBAL COMMERCIAL BUILDING AUTOMATION MARKET

**You can place your order in the following alternative ways:**

1. Place your order online in our web shop at www.berginsight.com
2. Mail this order sheet to us at: Berg Insight AB, Viktoriagatan 3, 411 25 Gothenburg, Sweden
3. Email your order to: info@berginsight.com
4. Phone us at +46 31 711 30 91

**Choose type of format**

- Paper copy .................. 1000 EUR
- PDF 1-5 user license ........ 1500 EUR
- PDF corporate license ...... 3000 EUR

**Family/Surname**

**Forename**

**Position**

**Company**

**Address**

**Postcode**

**Country**

**Telephone**

**Email**

**VAT** is chargeable on all orders from Sweden. Orders from all other countries in the European Union must include the buyer’s VAT Registration number below in order to avoid the addition of VAT.

Your PO number

Your VAT/TVA/IVA/BTW/MWST number

**Please charge my credit card**

- [ ] VISA  
- [ ] Mastercard

Card number

Expiry date (MM/YY)

CV code

Cardholder’s name

Signature

Billing address

Postcode

Country

- [ ] We enclose our cheque payable to Berg Insight AB
- [ ] Please invoice me

Signature

Date

Reports will be dispatched once full payment has been received. For any enquires regarding this, please contact us. Payment may be made by credit card, cheque made payable to Berg Insight AB, Viktoriagatan 3, 411 25 Gothenburg, Sweden or by direct bank transfer to Skandinaviska Enskilda Banken, 106 40 Stockholm, Sweden.

Account Holder: Berg Insight AB
Account number: 5011 10 402 80
BIC/SWIFT: ESSESESS
IBAN: SE92 5000 0000 0501 1104 0280

---

Berg Insight AB, Viktoriagatan 3, SE-411 25 Gothenburg, Sweden • Phone +46 31 711 30 91 • www.berginsight.com • info@berginsight.com