



# NB-IoT™ Smart Access Control Fact Sheet

## For Utility Companies

### What is NB IoT?

NB IoT is a new communications technology which enables devices to connect to the internet with improved connectivity, less energy expenditure, greater reliability and security. NB IoT is also a purpose-built network for machine to machine operations, meaning that Wi-Fi and Bluetooth, built for human operations, can be eliminated. NB IoT is built on telecommunication companies existing mobile networks, and is currently live in 33 countries, supported by over 30 of the world's largest mobile operators, culminatingly worth over \$660 billion, who provide communications to over 2.9 billion customers and geographically serve over 90% of the IoT markets in 79 countries.

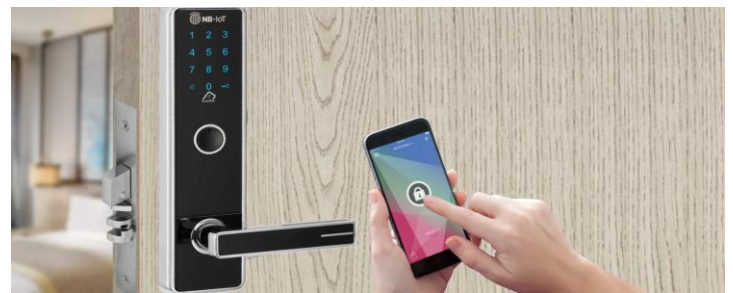
### Why is NB IoT used in Access Control?

The humble **metal key** has been used to secure properties, spaces, and assets since the Roman days over 2000 years ago. In the latter half of the 20th century keycard systems, commonly found in hotels and offices were invented to provide **access** to a variety of people for different time frames, and to **control** what rooms or spaces those people can access. Hence the **access control** industry was born. These keycard access control systems need to have people managing/programming them, and communicating with them. This communication was originally done by wiring all the locks together, and connecting them to onsite servers and PC's, and large controller boxes to house all the electronics.

When the internet came along the wiring used in the keycard access control systems was able to be replaced by Wi-Fi, Bluetooth, Z-Wave, and other communication technologies. This opened access control, originally limited to hotels and offices, to places such as people's homes. It also introduced smartphone digital keys, reduced costs, and spawned a new product and industry called **smart locks**. But the problem with these smart locks is that they still require onsite network infrastructure, and onsite electricity to run. And each different location has its own unique network, making it hard to bring multiple smart locks together under the one control system. Also Wi-Fi, Bluetooth and other communication technologies that the smart locks used, have proven to be hackable, and unreliable for access control. A new technology solves all these problems, and its called **NB IoT**.

### What is NB IoT Smart Access Control?

NB IoT Smart Access combines smart locks, with keycard access control, but instead of using onsite network infrastructure everything is inside the lock, and the rest of the infrastructure is in the mobile network. In short, it's like **making a lock like a mobile phone** with its own little modems, little computers, antenna's, apps etc.



### Why should Utility Companies get this?

Distribute digital keys online to contractors, workers and make them easily self-accessible so they can access electrical boxes, base stations, padlocks on gates, electricity poles, transformer boxes, meters etc without having to drive across town to pick up keys from head offices/sites. This **saves time and money**, and also makes the operation more secure (keys can get lost, not returned). Key management becomes a breeze.

Track/monitor employees presence on sites in real-time for **mandatory Occupational Health and Safety reporting/legalities**, and for emergency and insurance situations. Those companies/businesses that do not meet OH&S guidelines (regarding tracking can be fined or liable to legal action). The smart lock can become like a punch card log in system.

CCTV camera's can't be everywhere. We're not quite in that Orwellian world yet, where every single centimeter of the public realm on the entire planet is monitored by CCTV. Smart locks can fill the gaps. **If someone attempts to break in to somewhere that has a smart lock, instant notifications can be sent to security teams**, who can then instantly notify police - smart locks can act like a monitored alarm system without the alarm system costs.