

## Scalable Wireless IoT Connectivity for Smart Buildings

### The IoT Challenge

IoT unleashes boundless potential for property owners and managers to improve operational efficiency, sustainability and occupants' health and well-being. While the opportunities are immense, there also exists the challenge of building an effective communication network, especially for structurally complex buildings and geographically dispersed campuses like retail malls, office complexes and hospitality.

The right network infrastructure for smart buildings must balance all criteria: scalability, robustness, affordability, range and power efficiency.

While many buildings are already equipped with wired connectivity for building automation, these legacy systems fail to integrate and scale with the new and proliferating number of IoT sensors. Short-range wireless technologies like Wi-Fi and Zigbee are also not optimal solutions due to limited coverage and high-power consumption. Implementing a mesh topology can help overcome the range issue, but it will inflate upfront costs and increase security risks.

### Introducing MYTHINGS™

MYTHINGS is a wireless connectivity platform purpose-built for complex and massive IoT sensor networks. At the core of MYTHINGS is

MIOTY; a powerful low-power wide area network (LPWAN) protocol designed for unrivaled robustness against interference, massive scalability and extensive coverage. MYTHINGS provides reliable plug-and-play connectivity that can enable innumerable smart building applications across any building or campus style.



#### UNRIVALED INTERFERENCE IMMUNITY

Achieve industrial-grade reliability with unrivaled interference immunity and deep indoor penetration



#### MASSIVE SCALABILITY

Aggregate millions of messages from thousands of devices using only a single base station



#### LONG RANGE

Operate 1-15km in typical environments, and cover cellular blind spots



#### ULTRA-LOW POWER

Achieve ultimate power efficiency with the longest battery life of any LPWAN solution



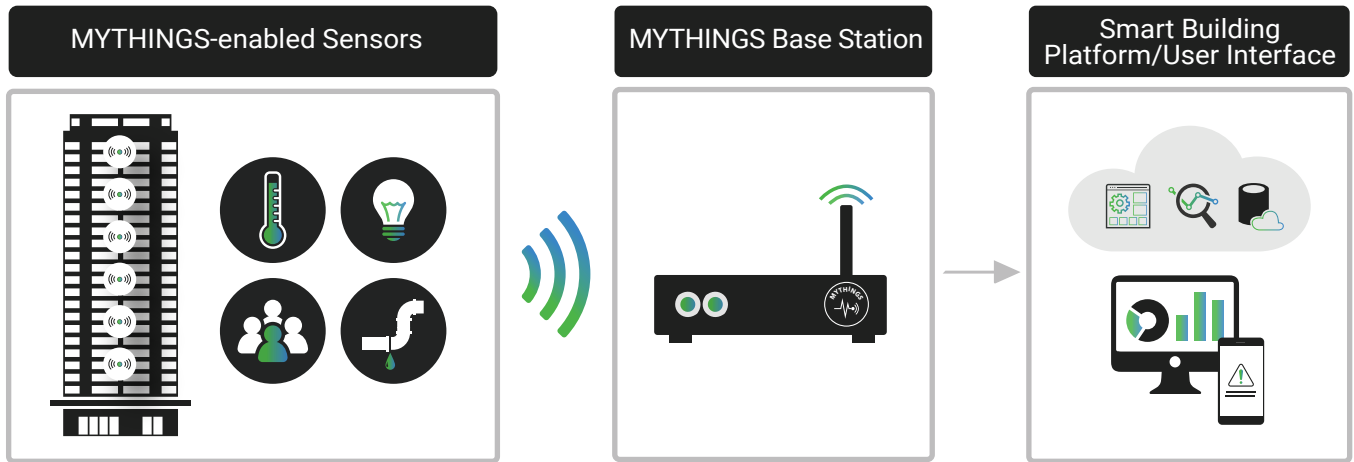
#### NETWORK & DEVICE MANAGEMENT

Simplify deployment and on-going management of massive-scale IoT networks with MYTHINGS Central



#### SUPERIOR MOBILITY SUPPORT

Collect data from moving sensors and gateways at up to 120km/hr



**The MYTHINGS Architecture:** MYTHINGS-enabled sensors wirelessly transmit data to a MYTHINGS Base Station, equipped with MYTHINGS Central for network and device management. Data is then pushed to the users preferred backend/cloud for analytics and visualization.

## Next-Gen Wireless Connectivity for Smart Building Applications

### Occupancy Detection

Monitor traffic flows and dwell times in various building zones. Pinpoint over-utilized and under-utilized areas to better control safe distancing measures, sanitation activities and to minimize unnecessary maintenance and energy expenses.

### Air Quality Monitoring

Proactively monitor indoor air quality (IAQ) conditions to improve the health, comfort, and well-being of building occupants and reduce risks of developing respiratory symptoms.

### Leak Detection

Get ahead of even the smallest leaks from afar and in a matter of seconds with leak detection sensors. Integrate with your building automation system and set up automatic responses like shutting off the supply valve or HVAC equipment to prevent widespread and costly damage.

### Consumables Monitoring

Get real-time insight into the usage levels of various building consumables like hand sanitizer, soap,

paper towel and toilet paper. Get notified when items are running low to ensure timely refills and to maintain the health and safety of occupants.

### Intelligent HVAC Control

Measure temperature, humidity, air quality and lighting in remote building areas for decentralized, granular control of the HVAC system. Reduce utility costs and carbon footprint, while maximizing tenants' comfort and productivity.

### Facility Management

Simplify the management and service life of facilities such as elevators, escalators and HVAC equipment. Diagnose abnormalities that require intervention before failures occur and schedule proactive condition-based maintenance.

### Access Control

Interconnect your entire alarm system from smoke detectors to open window/door detectors. Trigger alerts upon intrusive and dangerous incidents. Send regular reports on battery life and enable access systems for employees and visitors.

### Asset Tracking

Combat theft of your critical assets like fire extinguishers and defibrillators. Use motion sensors to immediately alert building managers when unauthorized and suspect movement is detected.