A LoRaWAN-based smart building Solution that connects systems like lighting, HVAC, security, energy management, and water monitoring using low-power, long-range wireless technology.

Real-time sensor data enables automated climate control, smart lighting adjustments, predictive maintenance, and resource optimization.

This integration enhances security monitoring, reduces energy consumption, and improves overall building efficiency, creating a more sustainable, secure, and responsive environment for occupants.

## CHALLENGES OF CONVENTIONAL BUILDINGS

Conventional buildings encounter a range of problems as they rely on traditional construction materials and methods, lacking the incorporation of smart building technologies or advanced features such as automation, artificial intelligence, or IoT Sensors.

**SmartNest** leverages the power of **LoRaWAN** technology to transform buildings into intelligent, connected spaces. With **SmartNest**, a wide range of use cases become possible—from real-time energy consumption tracking and smart lighting control to predictive maintenance and indoor air quality monitoring. Our solutions enable seamless integration of occupancy sensors, leak detectors, and HVAC systems to optimize comfort, safety, and efficiency. Thanks to LoRaWAN's long-range, low-power connectivity, SmartNest is perfect for large buildings and campuses, delivering reliable performance while reducing energy costs and enhancing sustainability.

**LoRaWAN** is a low-power, long-range wireless protocol ideal for smart building applications. It allows **SmartNest** devices to transmit data over several kilometers with minimal energy use, enabling years of battery life. Its secure, scalable connectivity supports real-time monitoring, easy integration with cloud systems, and efficient building management.



## SmartNest Connected Buildings





Lack of Energy Efficienc

## HVAC System Control

- Switch/Lighting Control

- People Counting & Occupancy
- Smart Trash Bin System
- Leakage Monitoring
  - Smart Parking System

Company Limited ECCL Block - K, Level 4 House 6 Rd No.28, Banani

**Electronics and Communication** 

Dhaka 1213, Bangladesh sales@ecclbd.com www.ecclbd.com

