

# SmartServer is a powerful integration tool and cloud connector in one small, low-cost device.

SmartServer is a powerful brain for your building that helps machines, websites and computers talk to each other and our engineers use it to make buildings energy efficient while improving internal environments.

Typically, BMS systems are limited to controlling heating and ventilation, and are often value engineered, which limits their ability to effectively control your building.

SmartServer plugs the gap between your BMS, cloud and IoT technologies, metering and energy management software and other siloed building services such as lighting, wayfinding and security.

SmartServer makes sharing data between disparate systems easy. This allows us to add value back into your BMS giving it the data it needs to effectively control your building. It also helps you centralise data for viewing, analysis and understanding how your building operates 24 hours a day.



## Control your building with data, not assumptions

We use SmartServer to integrate data from websites such as the Met Office, BMS controllers, air conditioning systems, ventilation plant, energy meters, lifts, occupancy sensors, room booking systems and many other devices. All of this data is translated into one common format and this 'normalised' data can then be shared between the siloed systems within your building to improve operational efficiency.

SmartServer can optimise heating and cooling control based on the predicted weather conditions, rather than just the current outside air temperature. This prevents over-heating on Spring mornings, creating a more stable, comfortable and energy efficient environment.

By integrating occupancy data, your building can respond to the way it's used, rather than to a fixed set of calendars and timers which makes it more comfortable and less energy intensive.

SmartServer also has built-in automation and controls services for scheduling, logging, alarming, connections, and routing. This means SmartServer can provide the full BMS function in buildings where none is present.

We can create bespoke dashboards using SmartServer. For example, a dashboard showing you live data such as energy use, desk occupancy, or heating and cooling settings. It can also be used to push data to your preferred BMS supervisor or cloud-based IoT Platform.

SmartServer works as a gateway between LoRaWan devices and BACnet/IP without the need for cloud based LoRaWan servers.



This means LoRaWan sensors can be integrated into BMS systems at the Edge (on premises) with no reliance on cloud computing or internet connections which increases reliability and addresses security concerns. SmartServer has drivers for an ever-increasing number of long-range wireless sensors and actuators including:

- Air quality sensors
- Temperature and humidity sensors
- CO<sub>2</sub> sensors
- Energy meters
- People counting technology
- Pulse counters
- Vibration analysis
- Door contact/window sensors
- Desk occupancy
- Light level
- Current transducers
- Electricity meters
- Leak detection
- Wireless TRV

Traditional BMS systems are often value engineered at the point of installation, meaning they operate with the minimum possible number of sensors. Traditional BMS sensors typically only measure one value, whereas LoRaWAN sensors can measure up to nine. A BMS system would require nine hard-wired sensors to achieve the same as one Wireless LoRaWAN sensor.

## Deploying SmartServer helps you:

- Meet your ESG (Energy, Social and Governance) commitments.
- Meet your CSR (Corporate and Social Responsibility) commitments.
- Cost effectively meet SECR (Streamlined Energy and Carbon Reporting) regulations.
- Meet energy metering and reporting regulations.
- Identify energy wastage in real-time (not day+1 when it's too late!).
- Improve your first-time fix rate for maintenance callouts.
- Verify works carried out by your maintenance team and independently monitor their KPIs.
- Optimise control of your building for comfort, safety and energy use.
- Continually minimise your energy spend.
- Reduce your total cost of ownership.

### SmartServer makes your buildings smarter!

All integrated LoRaWan devices have their sensor readings, outputs and telemetry data automatically shared as BACnet/IP objects for integration into the BMS. This helps the BMS make better decisions based on a wider range of live data, rather than on assumptions. Your building is then able to respond to the way it is being used, at much lower cost than adding hard-wired sensors to the BMS.

We are rolling out SmartServer to a wide range of applications, from offices, schools, and universities to high street stores, out of town retail and hospitality venues.