

Providing the Bigger BEMS Picture for Trend Controls

The Challenge

Connectivity for remote management and monitoring of widespread Building Energy Management Systems.

The Westbase.io Solution

A robust and compact Sierra Wireless gateway:

- + Best-in-class, persistent, reliable connectivity
- + Embedded security features
- + Simple integration into existing BEMS

The Trend Connect System:

- + 24/7 monitoring and management
- + Instant alarms triggered at customer sites
- + Reduced support response times
- + Able to proactively manage situations as they arise

The Results

- + Rapid deployment due to simple installation without the need for networking expertise
- + Over 500 gateways installed by Trend staff as part of their standard BEMS deployment
- + 4G LTE connectivity enables central teams to monitor the geographically widespread BEMS 24/7
- + System issues are now identified before site visits
- + Significant cost and time savings by circumventing fixed line connectivity

Providing the Bigger BEMS Picture for Trend Controls

Trend Controls

Founded in 1980, Trend is one of the world's leading Building Energy Management System (BEMS) manufacturers. In order to control costs by maximising building efficiency and optimising work conditions, it is vital that businesses are able to regulate and monitor their energy consumption. Trend solutions make this possible through on-going close control and monitoring; their systems can now be found globally in every-type of non-residential building from schools and hospitals to office blocks and factories.

Getting Connected Quickly, Easily and Cost Effectively

To deploy their BEMS, Trend require on-site connectivity. It's this connectivity which enables them to transmit the essential data collected by their BEMS back to central energy reporting systems, and to monitor and manage their remote BEMS equipment 24/7 to ensure it's functioning correctly and has the most up-to-date configurations.

Trend had explored various options for connectivity. With high installation costs and lengthy lead times, fixed line solutions were far from ideal for their multiple and wide spread BEMS distribution. Integrating with the building's existing core IT infrastructure was also not an option; permission was frequently declined due to security restrictions, and fixed lines would often require extensions to be able to reach the BEMS' position.

As a result Trend began to investigate alternative methods of remotely communicating with their BEMS, for which cellular was the answer. Considerations in sourcing their connectivity solution were:

- + It needed to be easy to install, without the need for networking expertise
- + The solution needed to be compact in size to minimise intrusion and aid wide distribution
- + It needed to provide consistently reliable service as the BEMS are unmanned
- + The solution needed to be secure, flexible and cost effective

"We'd explored several options for connectivity but it was becoming increasingly apparent that a 4G LTE connection would be the best solution for our requirements. The challenge was finding a provider who would listen to our needs and work in partnership with us, so that we could roll out our services rapidly and across a global scale,"

Yasir Sheikh, Global Head of Energy Development at Trend Controls

Connecting Trend

Trend began their search for a reliable 4G LTE connectivity device to connect their widespread BEMS and soon heard of Westbase.io's reputation for delivering innovative IoT solutions. Westbase.io had in-depth discussions with Trend to determine their full requirements and conducted a complete assessment of the BEMS deployment scenario. From this analysis, Westbase.io initially recommended a Sierra Wireless solution.

With a rugged military spec designed for industrial and enterprise applications, the compact Sierra Wireless AirLink device provides best-in-class network connectivity. Delivering a persistent and reliable 4G LTE gateway in dispersed unmanned locations it's ideal for Trend's worldwide distribution network.



Powered by ALEOS embedded intelligence, its compact form makes the Sierra Wireless device ideal for installation in enclosed spaces, whilst its rugged military spec design enables it to withstand extreme and hazardous environments. With embedded security features such as IPsec compliant VPN and GRE tunnelling to ensure data is secure, Westbase.io has provided Trend with an affordable, reliable and secure solution to connect their BEMS.

Developing the Trend Connect System

Westbase.io worked in partnership with Trend to develop a fully managed solution. Trend's BEMS operate on a principle of real-time monitoring of services and energy consumption; the Trend Connect System developed with Westbase.io enables this by providing a 24/7 system for monitoring and management. Trend Connect enables the Trend Energy and Support Solutions Team to respond instantly to alarms triggered at customer sites, significantly reducing response times and proactively managing situations as they arise.

"By working with partners like Sierra Wireless and Westbase.io we can concentrate on our core competencies whilst leveraging cellular technology to extend our business and improve our product suite," said Sean Brook, Energy and Support Solutions Manager at Trend Controls.

In addition to helping with the solution design, Westbase.io also provides distribution services on an ongoing basis. Most importantly Westbase.io manages device staging and configuration, meaning that each device is ready to connect before it leaves the warehouse, enabling Trend's field engineers to install and connect the device with no IT networking knowledge.

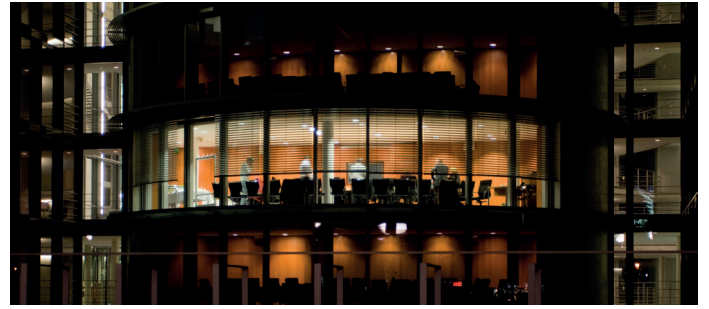
The Benefits: Simple, Secure, Affordable and Streamlined

The Trend Connect solution developed with Westbase.io delivers secure, reliable connectivity that can be rapidly deployed, easily installed, be integrated or remain independent of existing networks and infrastructure, and delivers real-time monitoring for instant problem resolution. To date, over 500 connected BEMS have been installed and Trend has reported numerous benefits, including:

- + Being able to remotely manage their BEMS across hundreds of geographically distributed sites, across many countries.
- + The 'plug and play' installation means that field engineers don't require IT networking experience.
- + 4G LTE connectivity enables central teams to identify potential issues so that field engineers are able to prepare and make their time on site more efficient and effective.
- + Significant cost and time savings have been made by being able to circumvent the need for fixed line connectivity.


Trend Sees the Big Picture

The flexibility of the Westbase.io solution has meant Trend's BEMS services can be deployed rapidly, and the reliability of the 4G LTE connectivity allows them to remain in control at all times. The visibility that Trend are able to have through their monitoring service has enabled them to assist a multitude of businesses and organisations in managing their buildings technical services and energy performance.



“The solution that we’ve delivered for Trend’s BEMS is a great example of how IoT services can transform businesses. The Trend Connect system is the result of our successful partnership in using robust 4G LTE connectivity to help businesses control and improve their buildings’ energy performance,” said Sacha Kakad, Managing Director at Westbase.io. “As the front runners in BEMS, Trend are a great partner to work with.”

If you have any questions about this case study, or the solution and products involved, then please contact Westbase.io:

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