



Inside the Black Box: LineMetrics Creates Smart Buildings with Laird Connectivity's Sentrius RS186 Sensors

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THE CHALLENGE

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HVAC systems, utilities, materials storage, and more systems within existing buildings are often “black boxes,” meaning that building system operations are viewed at a high level with no real insight into the inner structure. Most building operators don’t have deep intelligence on level-by-level power usage, room-to-room temperature, occupancy, or real-time status on building equipment like elevators and refrigeration units.

In particular, temperature and humidity information can have big consequences for materials and for people in buildings. For products that must be stored at certain temperatures and humidity levels – such as food and pharmaceuticals – it’s necessary to closely monitor and maintain these environmental levels for the sake of both compliance and safety. In addition, because a work environment greatly influences the well-being of the people who work there, optimal temperatures are also critical for worker efficiency and productivity.

The European-based company LineMetrics works with companies and organizations to retrofit these already-established buildings into smart buildings that are capable of environmental monitoring and data collection. The company saw that most solutions to this problem in the marketplace were too costly, difficult, or required significant expertise. They were also difficult to analyze, leading to severe operating inefficiencies. LineMetrics wanted to identify the

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THE SOLUTION

LineMetrics innovative approach would make real-time data monitoring in existing buildings easier than ever. Through a combination of battery powered sensors and LoRaWAN technology, they could guarantee easy installation, no requirement to wire in power, and high signal penetration (up to two kilometers, even in urban areas).

To successfully implement this solution platform, LineMetrics diligently tests and evaluates the products of technology partners for each applicable use case. For implementations designed for the food industry, pharmaceuticals, and the temperature-controlled storage of various other products, LineMetrics identified two of Laird Connectivity’s products to deploy in their solution.

They selected the Laird Connectivity RS186 integrated temperature and humidity sensor and the RS186 temperature and humidity sensor

with external probe. Both are battery-powered, long-range sensor platforms that leverage the benefits of LoRaWAN and Bluetooth Low Energy connectivity. They are also suitable for recording environmental data in demanding industrial environments, cold storage areas, outdoors, and (via the external probe) liquids. Laird Connectivity manufactures LoRaWAN sensors that effectively function in rough and demanding environments, an ideal match for the demands of the application.

THE RESULTS

By leveraging the Laird Connectivity RS186 sensors, LineMetrics was able to provide key benefits to their customers: a high degree of measuring accuracy, a large signal range via LoRaWAN, and a long battery life of up to seven years to decrease maintenance once installed. In addition, the robust enclosure of the RS186 presents a resilient, reliable platform for recording and delivering reliable sensor data from a range of harsh environments. Extreme temperatures, high concentrations of dirt and dust, and sources of heavy RF interference are no problem for LineMetrics’ wireless sensor solutions.



By working towards the digitization of the real estate industry, LineMetrics strives to become the leader in the European market for data collection in existing buildings. Selecting the best product partnerships is a critical step in achieving this goal. The addition of Laird Connectivity's RS186 temperature and humidity sensors as part of their product platform enables LineMetrics to bring more kinds of intelligence and sensing to property owners in a time when quality, reliable metrics on day-to-day operations bring critical efficiencies and savings.

LineMetrics now brings that critical service to over 300 customers in 25 countries, serving one billion measuring points in buildings around the world.

With their offering of sensors, gateways, and a centralized cloud analytics platform, they've brought intelligence to building operators that produces better results, reduces inefficiencies, and transforms the black box of in building systems into a powerhouse of information and control.



According to Reinhard Nowak, LineMetrics CEO, *“Laird is a competent and reliable partner. Even during the [COVID] crisis, Laird was able to supply continuously and offered high quality service. The team was always available for support.”*

- Reinhard Nowak (CEO)



Laird Connectivity simplifies wireless connectivity with market-leading modules, antennas, IoT devices, and customer-specific wireless solutions. Our products are trusted by companies around the world for their performance and reliability. With best-in-class support and comprehensive design services, we reduce your risk and improve your time-to-market. When you need unmatched wireless performance to connect your applications with security and confidence, Laird Connectivity Delivers - No Matter What.

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