Seizing the power of the network edge

Calibr8 Systems helps energy companies transform the efficiency of their operations using Internet of Things technology supported by Dell Technologies OEM | Embedded & Edge Solutions

Business needs

Calibr8 Systems was seeking a partner that could provide gateways and embedded PCs at the network edge to support a solution that would help transform energy companies in the Philippines. The solution would enable companies to gain better control of their equipment, especially at remote sites, through Internet of Things technology.

Solutions at a glance

- Dell Technologies OEM | Embedded & Edge Solutions
- Dell Edge Gateway 3000/5000 Series
- Dell Embedded Box PC 3000/5000 Series
- Dell EMC PowerEdge R640 XL/R740 servers

Business results

- Supports IoT solution that helps energy companies reduce carbon emissions
- Creates solution that delivers 3–5% cost saving per month—equaling millions of dollars a year
- Enables companies to lower energy prices for consumers in the Philippines
- Provides better insights through real-time data acquisition
- Enables expansion into new markets

“Our solution and the technology of OEM | Embedded & Edge Solutions are helping companies surface the data that is just waiting to be discovered.”

David Lim
CEO, Calibr8 Systems
The Philippines is known to have some of the highest energy prices in Southeast Asia. However, deregulation and increased competition are ameliorating the situation. Helping drive the transformation is Calibr8 Systems, whose Internet of Things (IoT) technology is enabling energy companies, as well as organizations in other industries, to increase efficiencies to reduce expenses.

Using data to save millions of dollars
Calibr8 was founded by David Lim in 2014. After 20 years working in IT, with clients in the energy sector, Lim saw how utilities could significantly improve performance if they had access to real-time data from industrial machinery at both their major and remote sites. His company developed software that could collate IoT data from sensors on equipment, track performance in real time and present the data back to human controllers for them to optimize performance. Lim says, “With this data, customers can identify potential issues before they become problems, helping to extend the life of their equipment. For energy companies, this can mean savings of millions of dollars.”

Seeking a partner to support IoT
Calibr8 Systems looked for an original equipment manufacturer (OEM) to provide hardware on which to run its software. Calibr8’s solution sits at the network edge, and the company needed hardware for pre-processing sensor data and then sending it on to a customer’s data center for final processing. Says Lim, “We chose to work with Dell Technologies OEM | Embedded & Edge Solutions for several reasons. Dell Technologies is creating leading IoT solutions in our market, and we knew that working with the brand would give customers confidence. Besides the technology, OEM | Embedded & Edge Solutions offered local and regional support to help us grow our market first in the Philippines followed by the rest of Southeast Asia.”

Lim adds, “We also found the OEM | Embedded & Edge Solutions team were really easy to work with from day one. They understood our challenges and treated us like partners and not just sales opportunities.”

“A brand that customers trust
Calibr8 Systems selected Dell Edge Gateways 3000 and 5000 Series to work alongside Dell Embedded Box PC 3000 and 5000 Series devices to meet its IoT requirements at the network edge. In combination, the devices collect and pre-process data from the machines. The gateways and embedded PCs’ rugged components mean they can withstand the vibrations, high temperatures, humidity and dust even at remote sites and deliver high performance daily. Says Lim, “No other vendor we looked at could provide the processing power or the data buffering.” The rugged design also meant Calibr8 Systems’ solution gained an IP rating, which is an international standard for how well a device is sealed against dust and moisture. “This rating would make it much easier for us to sell our products to energy customers,” says Lim.

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As part of its solution, Calibr8 Systems also offers customers Dell EMC PowerEdge servers for the final data processing at the data center. The company proposes deploying PowerEdge R740 or R640 XL servers, which include an extended warranty. The servers are ideal for optimizing application performance while delivering the capabilities to handle increasing processing workloads. “The next step is integrating machine learning and artificial intelligence technology with our solution, so customers are going to need these kinds of high-performance servers,” says Lim.

**Enabling 100% business expansion**

Calibr8 Systems is experiencing 100 percent growth year-on-year with the support of OEM | Embedded & Edge Solutions. Lim and his colleagues have monthly meetings with the OEM | Embedded & Edge Solutions team. The team keeps Calibr8 Systems up to date on the Dell Technologies roadmap, works with the company on go-to-market strategies and assists on proofs of concept. “Our collaboration is helping drive growth,” says Lim. “The Dell Technologies sales team have received training in our solution to help us drive customer engagements. We’re also working closely with the regional management team to break into other regional markets.”

**Helping companies reduce carbon emissions**

Energy companies using Calibr8 Systems’ solution are reducing their carbon emissions as the IoT technology transforms their control over machinery. Authorities in the Philippines are introducing tougher limits on carbon emissions across all industries. With Calibr8 Systems’ technology, energy companies can monitor and improve the performance of machines, lowering the amount of energy they consume, and, in turn, reducing their carbon footprint. “Companies face large fines if they don’t meet these regulations, and we’re helping companies stay on target using IoT technology backed by OEM | Embedded & Edge Solutions,” comments Lim.
Cutting production costs 3–5% a month

The companies are also reducing production costs at a rate of 3–5 percent a month through better control over energy production. The figure—which amounts to millions of dollars a year—includes the money saved by extending the life of machinery through proactive maintenance and optimizing the machines' operations. “The savings from our solution using OEM | Embedded & Edge Solutions eventually filter through to savings to households, which see lower electricity bills,” comments Lim.

Helping improve performance and well-being

Besides helping customers reduce costs, Calibr8 Systems is also helping customers gain new insights. These include not just the productivity of machines, but also the productivity of people using the machines. Lim says, “Our solution and the technology of OEM | Embedded & Edge Solutions are helping companies surface the data that is just waiting to be discovered. They’re helping develop training programs to improve the performance and the well-being of personnel.”

Providing better control over margins

The same energy companies working with Calibr8 Systems can also compete more effectively in deregulated markets. In the Philippines, for example, energy companies trade through an energy spot market. They offer a certain amount of electricity at a specific price, with competition helping push down prices. Using Calibr8 Systems’ solution, energy companies have a clearer understanding of the costs of their energy production processes. “It improves the accuracy of customers’ estimates, giving them better control over their margins,” explains Lim.

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