



SIMPLIFYING THE EVOLUTION OF SMART TECH

Innodep in South Korea cuts development time by 40 percent for its security management solution by working with an original equipment manufacturer that understands smart thinking



Security & Surveillance

South Korea

Business needs

Innodep wanted to seize the market opportunity for IoT-enabled devices by extending the success of its IP-based security solution for a smarter world.

Solutions at a glance

- [OEM Solutions](#)
- [Internet of Things](#)
- [Servers](#)
- [Storage](#)
- [Networking](#)
- [Enterprise Support](#)

Business results

- Helps customers improve the safety of their buildings
- Enables simple integration with hardware based on open standards
- Simplifies management with a single point of contact
- Delivers 40% reduction in development time
- Reduces IT infrastructure needs by 95%
- Optimizes solution for virtualization and Internet of Things

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The Internet of Things (IoT) offers great opportunities for businesses. It provides new sources of value from the data being collected by sensors embedded in everyday objects. Indeed, companies such as Innodep in South Korea are seeking early mover advantage in this exciting business landscape that is shaping our future.

In the case of Innodep, the company wanted to build on the success of its Vurix IP-Matrix video security management appliance. Innodep IP video security is already helping organizations across South Korea and other parts of the world manage the security of their facilities. More specifically, it gave customers a centralized security management system for an unlimited number of cameras, ensuring cost-effective and reliable security of any location size.

A success story that begins with a 30% sales growth

What made Vurix IP-Matrix successful was its delivery as an appliance. Customers gained a highly converged, all-in-one solution to simplify deployment and management. Innodep worked with Dell EMC OEM Solutions from the early stages of its design right through to development of the finished product. The relationship also extended to deployment and support. From any angle, the partnership worked well because Innodep saw overall sales increase by 30 percent with the launch of the Vurix IP-Matrix.

Seongjin Lee, CEO of Innodep, said at the time, “We quickly identified Dell EMC as a long-term OEM partner. Dell EMC understood our business precisely and studied in detail our needs to develop a solution. The sales and technical support were excellent, and Dell EMC OEM Solutions could be a single point of contact for our IT needs.”

The time for IoT capabilities

Innodep wanted to build on the success of the Vurix IP-Matrix, incorporating IoT capabilities. The potential for an IoT-enabled solution was enormous. By combining visual data with sensor data, the Innodep Vurix IP-Matrix would become a building management system that could, for example, control ventilation, temperature control and evacuation announcements as well as closed-circuit TV.

For the appliance, Innodep turned to Dell EMC OEM Solutions

once again. Key for Innodep was the overall Dell EMC position on IoT. Dell EMC OEM Solutions enables a pragmatic approach to IoT, encouraging customers to leverage existing IT investments for analytics-driven operations. Says Chris Lee, marketing director at Innodep, “We found that Dell EMC OEM Solutions was ready for our IoT communication. The Dell EMC team reflected the wider adoption across Dell EMC of IoT and cloud-based systems. It was already familiar with the smart city concept and we could work straight away.”

Built on an IT platform for modern-day businesses

Innodep’s already market-leading Vurix IP-Matrix is built on the high-performance and scalable Dell EMC PowerEdge R730 servers with Intel® Xeon® E5-2600 v4 processors. The Dell EMC PowerEdge servers get the best out of the virtualization options available thanks to high-density memory and balanced input/output (I/O). Chris Lee says, “In addition to a five-year warranty period of the R730 platform, Dell EMC also offers ProSupport for OEM, which made our choice easier.”

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Working alongside the servers are Dell EMC PowerVault MD3860 storage arrays as well as Dell EMC Networking N2024 switches. Dell OptiPlex 7010 desktops with Intel Core™ i5 processors provide customers with the appliance interface. Comments Lee, “We could increase the amount of storage we offer customers – from 500 terabytes to 1 petabyte of storage for the Vurix IP-Matrix appliance – thanks to our Dell EMC PowerVault arrays. Besides the continuous need for large amounts of storage, the appliance has to support a lot of data traffic. We chose Dell EMC Networking N2024 switches together with Ethernet capabilities to help manage the data traffic for 500 to 1,000 channels of high-definition video.”

A practical approach to IoT that saves customer resources

For Innodep, the goal was to IoT-enable the Dell EMC hardware stack by integrating a Dell Edge Gateway 5000 based on its own infrastructure. Dell Edge Gateways are intelligent devices purpose-built for the IoT. They look like PCs on the inside, but the outside is ruggedized for challenging environments. They also come with a wide variety of wired and wireless I/O plus expansion options to bridge sensors, controllers, and industrial equipment to the internet. Each gateway is designed for high performance in real-world environments and can run at full processing capacity at stated temperature specifications with no external airflow required. The gateways are also dependable with 24x7 fan-less operation for five years in temperatures of up to -30°C to 70°C.

For Innodep, the Dell Edge Gateway technology gave the Vurix IP-Matrix IoT performance. Unlike many gateways, however, the Dell Edge Gateway 5000 model is built on open standards, which simplifies integration and provides options for security and system management. From this point, Innodep and the Dell EMC OEM Solutions Team began working together on integrating the Dell Edge Gateway 5000 with the Vurix IP-Matrix appliance. Work focused on the IoT lab at the Dell EMC Customer Solution Centre in Singapore. The facility allows Dell EMC customers to test and deploy IoT solutions. Lee comments, “We gained the expertise and efficient IoT platform facilities necessary for developing our gateway solution for our Dell EMC OEM-based appliance at the Customer Solution Centre.”

Reduces development time for IoT enhancement by 40%

Currently, Innodep is looking to drive growth for its Vurix IP-Matrix solution. The appliance integrates video and sensor information to optimize the security and various elements, such as air quality, of a given environment through learning algorithms. With impending legislation in South Korea and other countries to encourage the development of smart cities, the time is right for IoT solutions, and Innodep has an early mover advantage. According to Lee, working with Dell EMC OEM Solutions has been crucial in obtaining such a timely presence in the market. “We have reduced the development time for our IoT-enabled Vurix IP-Matrix appliance by at least 40 percent by partnering with Dell EMC OEM Solutions.” Lee points to the availability of the Dell EMC Customer Solution Centre in Singapore as well as IoT experts from Dell EMC for cutting overall development time.

The IoT-enabled Vurix IP-Matrix is in its last stages of development and a prototype of the finished product is completing its final evaluation. Current tests also include building the solution into an innovative form factor such as the Dell EMC PowerEdge VRTX shared infrastructure chassis. “The government of South Korea is clear on how IoT can help improve the efficiency and safety of buildings,” says Lee. “We can answer the need for IoT technology to enable smart cities through our work with Dell EMC OEM Solutions. Within just a couple of years, IoT technology will be fully integrated into our buildings, and we’ll be in the right place to meet the demand.”

Improvement of building safety for customers

Innodep customers will be able to enhance the security of their facilities within buildings with the IoT-enabled appliance. As Lee makes clear, the Vurix IP-Matrix ensures many improvements, such as better fire protection. What’s more, the functionality of the appliance can be expanded later thanks to the gateway’s flexible architecture. This flexibility is visible in the ability of the Vurix-IP Matrix to integrate with multiple gateways. Right now, by processing data locally on moisture levels, temperature, dust and gas

from sensors, the intelligent gateway can detect correlations that indicate a fire hazard faster than traditional methods and react with less latency than centralized analytics in the cloud or data center. “An extra minute of warning can save many lives and injuries in the event of a fire in a typical multi-storey office building,” he says.

Enables simple integration with standards-based IoT solution

Customers will also minimize the cost of upgrading their appliances thanks to the interoperability of the Dell EMC platform. “Our Dell EMC-based appliance already comes with servers, storage and networking to simplify deployment and management processes. We’ve created a highly cost-effective IoT solution using the Dell Edge Gateway 5000 with the support of Dell EMC OEM Solutions that delivers real value to our customers,” comments Lee.

Consolidates IT infrastructure needs by 95% with end-to-end solution

Innodep has extended the capabilities of its Vurix IP-Matrix while retaining the advantages of an end-to-end Dell EMC

OEM Solution. More importantly, customers also gain the benefits that come from the Dell EMC commitment to high-quality and high-performance technology. In the case of the Vurix IP-Matrix solution, one virtualized Dell EMC PowerEdge R730 can do the work of 20 physical servers supporting 1,000 CCTV cameras. “Our Dell EMC PowerEdge R730–based CCTV Vurix IP-Matrix appliance can reduce server numbers by 95 percent for our customers,” confirms Lee. In addition, Innodep uses the Dell EMC Lifecycle Controller to deploy the server operating system. This saves time during installation by increasing the efficiency of implementing driver installs.

Simplified support and management with single point of contact

Besides retaining the end-to-end solution advantage, Innodep also preserves a simplified support model. For instance, Innodep stakeholders have a single point of contact at Dell EMC OEM Solutions to support development work. In addition to that, Innodep and its customers can make use of ProSupport to answer all their support inquiries. This ensures a consistently high level of service regardless of whether the request involves the servers, storage, networking or IoT features in the appliance.

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