

Surveon RAID NVR & Intelligent Video Analytics Upgrade Factory to Megapixel Surveillance

The enhanced video quality of IP cameras and megapixel recorders are beneficial for various industries and facilities because of the wider monitoring area and longer recording retention period that are required. "With the proven end to end solutions provided by Surveon, it is possible to ensure monitoring of the entire premises with limited number of guards and save our client on resource and maintenance costs," said Marco Wardil, the project manager of Wimpex.

Customer

Electro-Motive Diesel (EMD), a subsidiary of Progress Rail Services, is a business entity originated in Caterpillar Group. Located in Sete Lagoas, Minas Gerais, Brazil and covering 15,000 meters of built area, the factory planned to expand its capacity to be able to manufacture 100 locomotives a year with 4,000 HP power. The number of employees should reach 600 before the completion of the project.

Challenges

Broad and Uncovered Space

"The size of the property is about 400 x 200 meters, where four sheds, a storage area without coverage, three buildings (office, cafeteria and locker room) and two entrances (people and vehicles) are located," said Wardil. "The areas to be monitored are as follows: two corners, backyard, area in front of the sheds and the front part including concierge and the three buildings. Also, the entrances and exits of the production halls and warehouse areas have to be included."

Integration for Megapixel Solutions

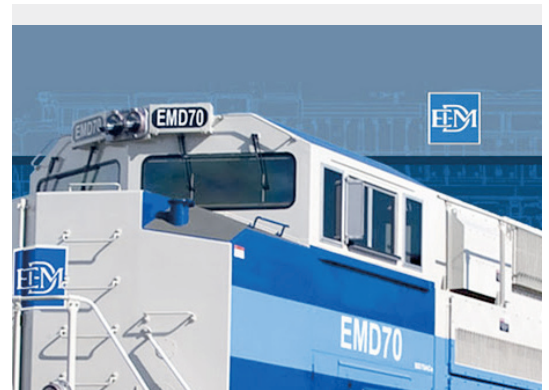
Megapixel solutions offer significant benefits for surveillance operations, but the large number of megapixel cameras and the need for 24/7 recording present many difficult issues for the system integrator: I/O performance of traditional NVRs, stable integration of storage solutions, and overall installation of a proven solution that can assure end-to-end integration. To successfully deal with all these issues, Wimpex adopted Surveon's eminent end-to-end megapixel solution including cameras, SMR and enterprise VMS solutions.

Table 1: The I/O and Storage Performance for 32 Cameras

Type	Resolution	I/O (Mbps)	Storage 14 Days	Storage 28 Days
CIF	320x240	0.5	2.4 TB	5.2 TB
D1	720x480	1.5	7.3 TB	15.5 TB
1.3 Megapixel	1280x960	4	19.4 TB	41.5 TB
2 Megapixel	1920x1080	6	29 TB	62.2 TB
3 Megapixel	2048x1536	6	29 TB	62.2 TB

Complicated Installation and Configuration

"Integrators have difficulty in installing and configuring products from different vendors. The reliability of the system comes from using cameras from a single manufacturer that are compatible with the management software," said Wardil. "All-in-one, non-COTS system and 100% in-house design featured in Surveon's SMR offer a highly integrated and proven solution, reducing the installation, compatibility and maintenance issues associated with traditional PC+software solutions and enable system integrators to easily upgrade to professional, small- to medium-sized megapixel surveillance."



Summary

Customer:

Electro-Motive Diesel, a manufacturer of locomotives in Brazil

Factory Needs:

- Proven end to end solutions for megapixel surveillance
- Support 24/7 recording
- Monitor large areas, indoor, outdoor
- Improve image quality of surveillance video
- Provide more active management
- Quicken event responsiveness
- Reduce cost for system maintenance

Surveon Solutions:

Highly integrated solutions with the following:

- CAM2321 3 megapixel day/night WDR box
- CAM1301 2 megapixel day/night compact box
- SMR8032 desktop hardware RAID NVR
- Surveon intelligent video analytics

Surveon Solution Benefits:

- Certified end to end solutions, from cameras, NVR, VMS, to storage
- H/W RAID NVR ensures reliability
- Easy integration
- Real-time VI detection
- Smart investigation
- Exemplary performance, extremely stable HD and zero frame loss
- 100% in-house design and production
- 3 year warranty

Solutions

The first phase of the project was primarily deployed to monitor the security perimeter around the sheds and their access routes. The final project included not only to monitor the safety but also to take care of the equity for keeping excellent manufacturing process quality. The system is connected to the corporate data network which allows monitoring in real time the production line worker's safety, management departments, and the status of the entire plant without compromising data transmission. Surveon's SMR8032 was installed in the data center, while CAM1301 and CAM2321 box IP cameras were connected to four network racks installed in the sheds and were interconnected via fiber optics. This configuration has created a dedicated VLAN for security equipment and the cameras were powered via PoE.

CAM1301 offers a wide array of features including the compact size, 1920x1080 video resolution, H.264 simultaneous video streams, PoE and backend video analytics capability. CAM2321, equipped with the Sony Exmor image sensor, provides high image quality and low light performance. With maximum 2048x1536 resolution and Full HD video performance, in addition to features such as DC iris and WDR, the cameras are ideal solutions for high-level security applications.

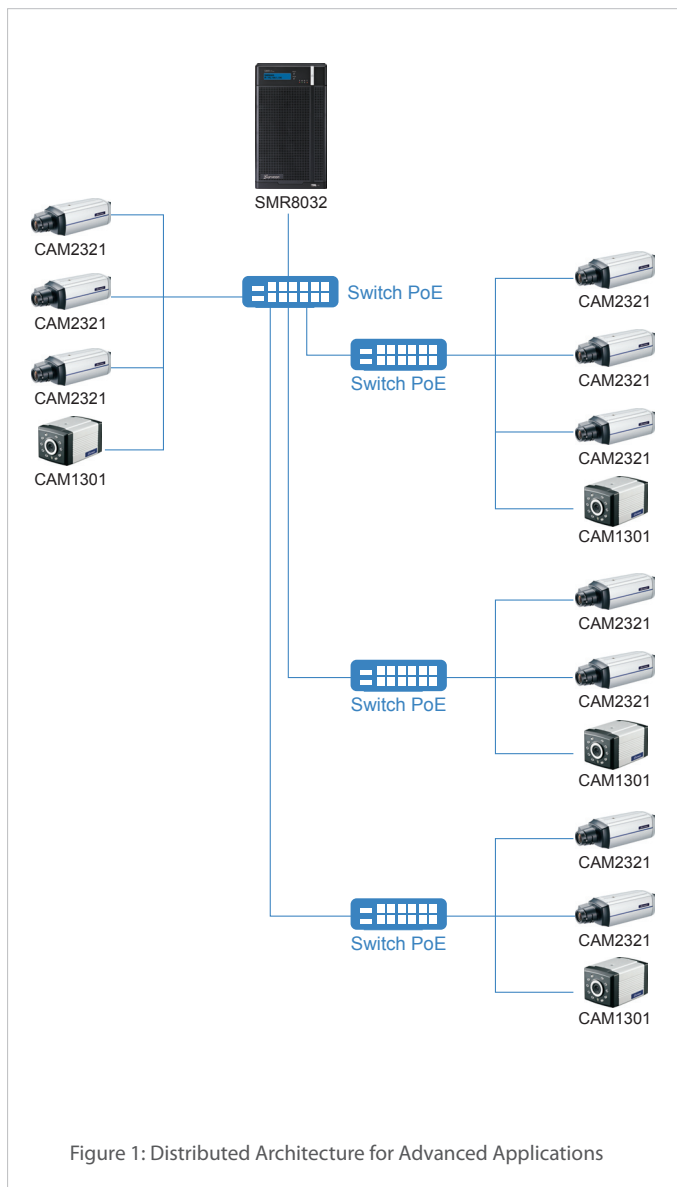


Figure 1: Distributed Architecture for Advanced Applications

The Smart Megapixel Recorders (SMR) are embedded with Surveon's intuitive VMS software and provide enterprise-level features such as local live viewing with megapixel quality, real-time analytics, multi-display, video bookmarking, instant playback, remote monitoring, web client, mobile client, HTML overlay and domain management. It comes with an easy-to-use desktop form factor and provides high I/O rates, large capacities, and overall system stability necessary to help system integrators easily meet

Benefits

True Megapixel and Night Time Image Quality

"We chose the complete IP solutions from Surveon for EMD due to the capability of using IVA (Intelligent Video Analytics) and digital zoom without loss of picture quality. The image quality and functionality exceeded expectations. Night-time images were configured to display color images even at dark and sharpness is top-notch. Handling the system is easy and retrieving recorded images is very simple. Besides, CAM1301 is in a very competitive price range but nevertheless features D/N and IR LED. That is why I consider CAM1301 as an excellent solution for upgrading from analogue to megapixel," said Wardil.

Highly Integrated and Reliable Solutions

Surveon's SMR series, a professional video recording system, can be combined with cameras to create highly integrated and reliable surveillance solutions. Compared to PC-based solutions, Surveon's key value lies in the production process which ensures that every "integration point" comes with reduced possibility of problems and risks. "They tested CPU loading, network connection, storage performance from cameras to NVR using hundreds of hours for the solution base. And we love this!" said Wardil.

Real Time Recording

A dedicated SMR ensures recording of all the images with high resolution for a period of 7 days with stability and reliability. "With Surveon systems, it is possible to ensure the monitoring of the entire premises with limited number of guards. All images are live viewed in two monitors where the guards can see all terrains and receive intrusion alerts through real-time video analytics and therefore act more assertively and effectively," said Wardil.

About Wimpex

WIMPEX COMÉRCIO IMPORTAÇÃO LTDA is a Brazilian company based in Belo Horizonte, with vast experience in importing, supplying, development, security and maintenance of surveillance and access control systems.

About Surveon

Surveon Technology offers end-to-end network video surveillance solutions that showcase expertise in professional camera design, hardware RAID NVR, high-availability video storage, embedded firmware and video management software. All our products are designed in-house and manufactured at ISO 9001 and ISO 14001 certified production sites. Our highly integrated, proven, and reliable product lineup reduces integration effort and compatibility risks, and maximizes profits for our security partners.