

# Surveon RAID NVR Upgrades Largest Commercial Bank in Vietnam

As with many other users, Agribank had to face a major challenge after deciding to adopt megapixel solutions: how to select and integrate new technologies offering professional and reliable solutions? how to achieve a distributed deployment with centralized management? how to ensure that storage performance can keep up with simultaneous multi-channel megapixel recording and playback, as well as finding software that supports professional surveillance functions such as active VI detection, alarm management and intelligent search?

“Surveon, with its end-to-end open megapixel solutions, fully understands our concerns regarding megapixel integration and was able to meet the Agribank’s requirements for surveillance quality and stability”, said Le Hong Thanh, Director of Sales at the Tan Binh Minh Investment Trading and Technique Company, a key partner of Surveon in Vietnam. He added, “We were able to quickly complete the Agribank’s project and fully meet their goals for the new systems”.

## Customer

The Agribank (Vietnam Bank for Agriculture and Rural Development) is the largest commercial bank in Vietnam in terms of capital, assets, workforce, operating network and customer base. It has 37,500 staff in 2,300 branches and transaction offices, serving 10 million households and 30,000 enterprises nationwide.

Agribank wanted to expand its video surveillance system in order to meet business growth and achieve centralized management for its surveillance networks. Agribank planned to set up a new system at its provincial headquarters in Yen Bai, while managing surveillance networks of six other locations in the province, including one branch and five offices.

## Challenges

### Reliability for Multiple Megapixel Cameras

A number of challenges were identified at the beginning of the project. The customer was concerned about the feasibility of setting up a truly end-to-end megapixel solution that went beyond simply installing megapixel cameras. With a strong technological background, Surveon’s SI partner was well aware of the impact on system performance and stability generated by the large bandwidth required by megapixel streams.

### Solution Scalability

In terms of solution deployment, the customer required a distributed structure with centralized management. In addition, the solution had to be scalable, enabling the customer to add cameras at individual locations or expand the coverage of the solution to include even more locations.

### Professional CCTV Solutions

The customer was also hoping to add advanced technologies. In their old structure, monitoring relied fully on manpower, leading to low efficiency. In addition, when events did occur within the scope of the surveillance network, the customer had to spend considerable time and effort to gather information related to the event, and it was hard to follow up on events.

### True Megapixel Quality

As for video quality, the customer required that the solution at least supported megapixel cameras and was able to provide sufficient reliability for long-term operations. Finally, the solution had to be able to support different kinds of environments and applications (indoor and outdoor, dust- and water-resistant, etc.)

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

Camera Type	Resolution	I/O (Mbps)	Storage 14 Days	Storage 30 Days
CIF	320x240	0.5	2.4T	5.2T
D1	720x480	1.5	7.3T	15.5T
1.3 Megapixel	1280x1024	4	19.4T	41.5T
2 Megapixel	1920x1080	6	29T	62.2T



## Summary

### Customer:

Agribank, Vietnam

### Bank Needs:

- System performance and stability
- Centralized management
- Increased management efficiency
- Decreased event response time
- Megapixel solutions with better image quality

### Surveon Solution:

The fully integrated solution includes the following:

- CAM4365 3M D/N outdoor, Sony low light dome
- CAM4260 1.3M D/N outdoor dome
- CAM3260 1.3M D/N bullet
- SMR5012 Smart Megapixel RAID Recorders
- Surveon Central Management System (CMS)

### Surveon Solution Benefits:

- Highly integrated end to end solutions
- Megapixel RAID NVR overcomes the I/O and reliability issues
- Megapixel video quality
- Client-server solutions for easy scalability
- Real-time VI detection upgrades security managements
- Smart investigation for easy case management
- 100% in-house design and production
- 3 year warranty

## Solutions

Surveon's solution featured one Smart Megapixel Recorder (SMR) system at each of the six locations, with multiple cameras attached to this SMR. The solution included 28 IP cameras: 11 CAM4365 (3M D/N outdoor, Sony low light, fixed dome), 11 CAM4260 (D/N outdoor, fixed dome), and six CAM3260 (D/N bullet).

*"As a surveillance SI, we have lots of experience in project integration in many different areas. However, for megapixel projects we are most concerned about how to integrate a comprehensive and certified solution in order to guarantee operational stability. For bank applications, we cannot accept any risks caused by uncertain factors", said Mr. Le. "We selected Surveon's megapixel solution as it includes cameras, megapixel recorders and VMS management software, and has been fully tested and certified."*

The system used by the Agribank also comes with Surveon's active monitoring and smart investigation technology, which supports the Agribank in terms of reaching required surveillance monitoring levels. Through the included real-time video analytics engine, all important events can be effectively displayed on the solution's alarm board, allowing security guards to immediately follow up. For example, when a suspicious person is detected in the ATM area of the bank, the system will actively sound an alarm notifying the security guards and record the developing situation. Past events can also be quickly identified with the search function.

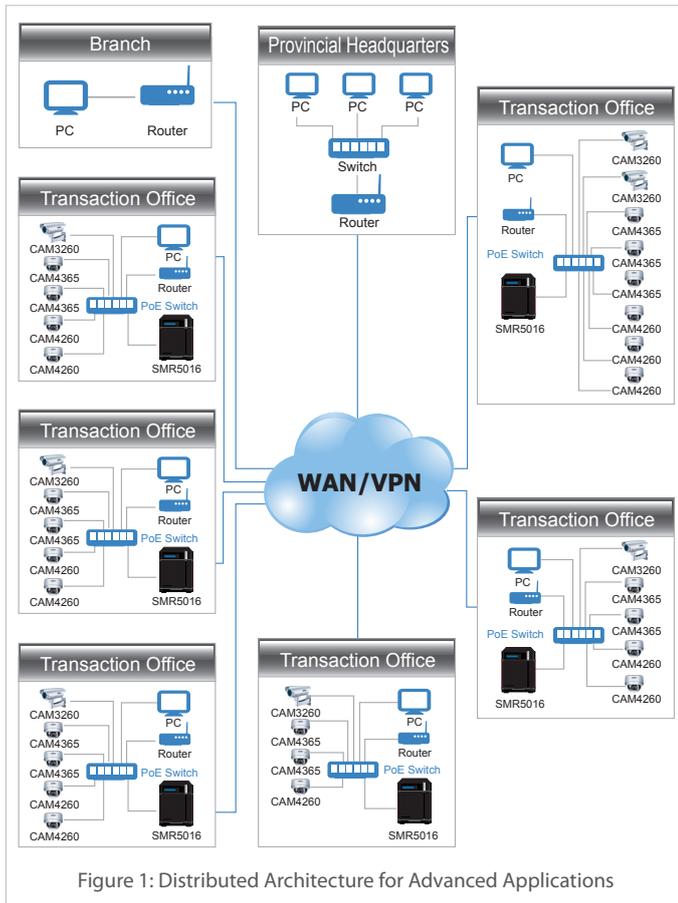


Figure 1: Distributed Architecture for Advanced Applications

## Benefits

*Mr. Le noted, "A great concern for us when implementing megapixel solutions is storage performance and reliability. From previous experiences we have seen that even though traditional PC- or COTS-based solutions can be used in regular D1 or VGA projects, they may not be up to the task for megapixel applications. The performance stability issues caused by the overall I/Os, frame drops, etc. are real problems for SIs when providing support services for megapixel projects."*

Surveon's megapixel RAID NVR systems have helped the customer to overcome the I/O and reliability issues often encountered in megapixel surveillance. The SMR5000 systems offer hardware RAID5 configurations to effectively distribute CPU loading while supporting up to 20-channel megapixel recording. The high-end NVR2000 systems feature advanced EonStor RAID storage with independent RAID controllers to offer even better solutions for medium- to large-sized projects.

Surveon cameras are developed and manufactured in-house, offering a complete solution from SMT to finished product assembly and providing users with end-products that operate with great stability. With firmware developed in-house, Surveon is able to control and manage any issues the IP cameras may encounter in video streaming or other issues created by the network's complexity.

*"With nearly 20 years of experience with storage systems, we have found that reliability is more important for SIs in the surveillance industry than most of other industry. If a single camera breaks down, an SI could easily spend a full day at the customer site to detect the problem and conduct necessary repairs, creating significant cost burdens for the SI", said Elvin Hsu, Sales Manager at Surveon. "A storage or NVR malfunctioning would cause a greater maintenance issue for both SI and customer. Besides in-house developed firmware, Surveon products feature 3-year warranties, including all the components used in the products. Another aspect of our commitment to quality is our own SMT and in-house production"*

*Mr. Le seconded, "Different from PC-based NVR solutions, Surveon adopts a system design fully customized for surveillance applications. This offers higher value for SIs, including advanced levels of integration and stability."*



### About Tan Binh Minh Investment Trading and Technique Company

Tan Binh Minh was established by the Department of Planning and Investment of Hanoi City. With a team of engineers with long experience in security equipment, safety, electronics, and automation, the field activities of Tan Binh Minh include import, distribution, consulting, design, equipment supply, installation, deployment, and maintenance of the security systems.

### About Surveon

Surveon Technology offers end-to-end network video surveillance solutions that showcase our expertise in professional camera design, hardware RAID NVR, high-availability video storage, embedded firmware and video management software. All Surveon products are designed in-house and manufactured on our ISO 9001 and ISO 14001 certified production site to ensure the highest quality for our partners. For more information about Surveon, please visit our website at [www.surveon.com](http://www.surveon.com).