

# Surveon's End to End iSCSI Megapixel Solution Safeguards the Turkish-Iranian Border

*The visual clarity of megapixel cameras brings explicit benefits for video surveillance. For some applications, such as transportation, manufacturing, school or public utility, this advantage is extremely important for enhancing operation efficiency and overall service satisfaction. Using Surveon's megapixel cameras and clustered video storage, security integrators can provide reliability and stability to customers, and at the same time, minimize man power costs while increasing efficiency.*

## Customer

Gürbulak is a village in the district of Doğubeyazıt of province Ağrı in eastern Turkey and the only border door into Iran. As one of the major border checkpoints in the Middle East, Gürbulak required a major upgrade to megapixel surveillance to provide sufficient security in its tough environment.

## Challenges

### Broad and Uncovered Space

The Gürbulak Border Checkpoint covers 160 decares of land, 75,000 square meters of wide road and park space, and 16,000 square meters of closed space – all of the areas must be carefully monitored.

### Illegal Trade Prevention

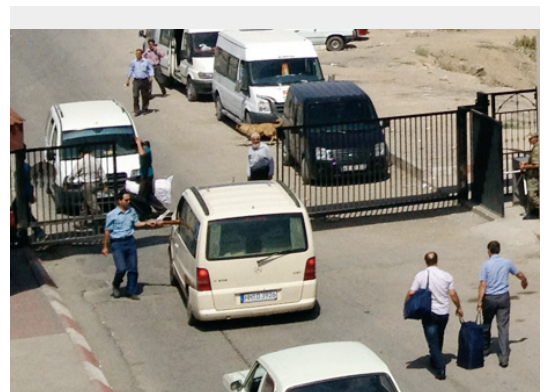
In order to ease customs and prevent illegal trade along the border, the government spent a lot of resource on man power for surveillance and was eager to adopt a more efficient method using the advanced megapixel surveillance.

### Integration of Megapixel Solutions

"Integration tasks do bring us a lot of troubles before completing the project," said Fatih Kilic of Biges Technologies, the security project manager of Gürbulak Border Checkpoint. The extremely complicated integration and verification tasks, among all, not only consume SIs many invisible resources, but also contain other potential risks of integration. For example, when video recording is malfunctioning, which device is the cause? Camera? VMS? Or is it storage performance, not the device, that is degrading? Sometimes the integration of VMS and PC causes the system to be unstable too.

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

Type	Resolution	I/O (Mbps)	Storage 14 Days	Storage 30 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



## Summary

### Customer:

Gürbulak Border Checkpoint, the only border entrance between Turkey and Iran.

### Project Needs:

- Proven end to end solutions for megapixel recording
- Support 120-day continuous recording
- Support surveillance in wide and open areas
- Enterprise VMS and storage with up to 448TB
- System scalability and long video retention period
- Improve quality of video images
- Provide more active management
- Reduce cost for system maintenance

### Surveon Solutions:

Highly integrated solutions with the following:

- CAM3365 3 megapixel day/night bullet
- CAM4360 2 megapixel day/night outdoor dome
- CAM6351 20x zoom Full HD day/night speed dome
- NVR2064 hardware RAID NVR system
- Surveon video analytics
- Surveon SANwatch storage monitoring suite

### Surveon Solution Benefits:

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

## Solutions

Surveon's megapixel solutions, which contain IP cameras, hardware RAID NVR, IP storage and enterprise centralized management software, were deployed at the Gürbulak Border Checkpoint. 3 megapixel IP cameras were installed in the key locations to efficiently monitor the areas with hundreds of people and vehicles coming in and going out: CAM3365 3 megapixel IP66 bullet cameras for day and night usage, CAM4360 Full HD vandal proof outdoor domes, and CAM6351 Full HD autofocus PTZ speed dome for outdoor surveillance. All devices are built with industrial grade components, which lead to reliable solutions that reduce maintenance cost.

"One important benefit that Surveon brings to our partners is the end-to-end solutions and the fully in-house design and manufacturing that make our products superior and provide outstanding performance. Surveon products are also verified by end-to-end based certifications." Andy Chen, Sales Manager of Surveon, emphasized.

Network video recording is handled by Surveon's enterprise grade NVR2000 series, which offers up to 64-channel megapixel recording and 120 days of video content storage. Surveon's iSCSI-based RAID NVR provides scalable architecture which brings lower maintenance effort, fewer required hard disks and lower cost.

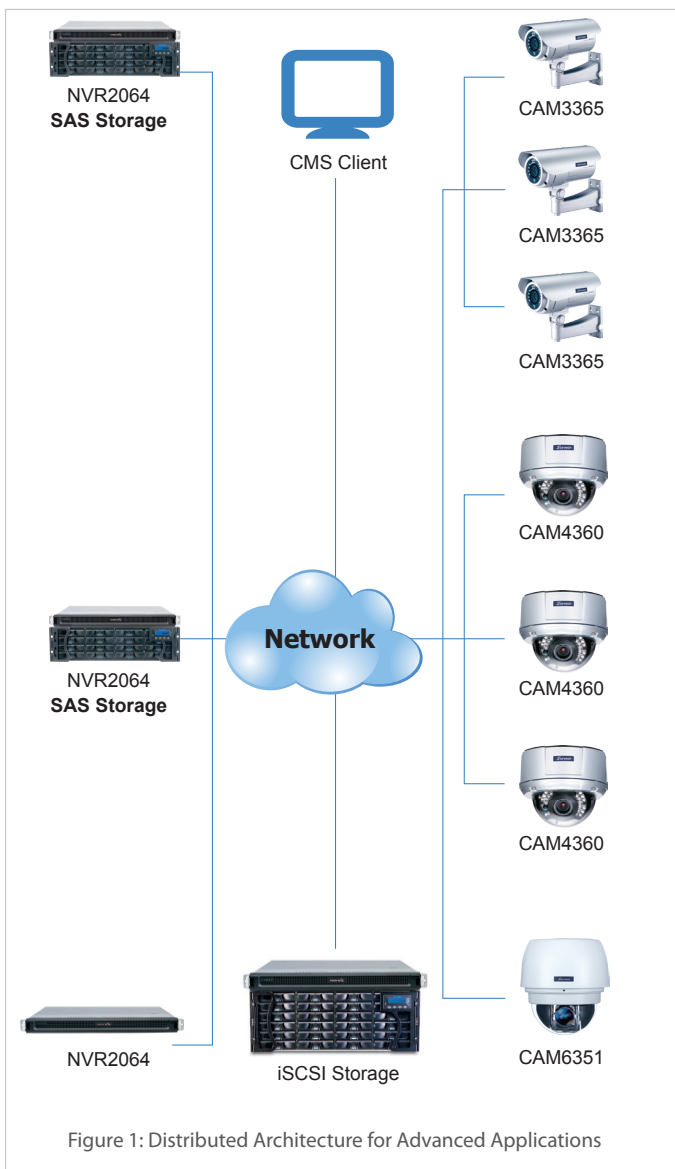


Figure 1: Distributed Architecture for Advanced Applications

Surveon enterprise Centralized Management Software is built with client-server architecture and adopts central management style, which is also easily scalable. Its active VI detection function has a pre-configured base for a number of scenarios, such as intrusion detection at and around the checkpoint, examination of important gates and detection in the park areas. The smart investigation feature distinguishes what is important from what is not, turning raw surveillance videos into useful information. The recorded events are analyzed and labeled with details such as time, date, direction, color and size of the objects.

Surveon's clustered video storage solutions come with the SANwatch storage monitoring suite which helps customers easily manage and monitor the status of their storage systems. The data protection functions provided by SANwatch storage monitoring suite ensure the highest availability of recorded videos and events; no data loss is allowed.

## Benefits

### True Megapixel Quality

Ranged from 2, 3 to 5 megapixel, Surveon's IP cameras are equipped with Sony Exmor Sensors that provide 10 times clearer images than conventional analogue cameras, offering sufficient reliability for long-term operations.

### Less Maintenance Effort and Management Cost

"Surveon's cameras are designed and manufactured in house with industrial-grade components to ensure the lowest failure rate for the 24/7 operation," said Chen. "We believe using the high quality components will benefit our partners to reduce maintenance and failure rate. These investments will then be returned to the control management of manufacturers' product quality and total cost of ownership."

"Surveon uses 3-year warranty industry-grade components instead of conventional consumer-based components and deploys IP66, vandal proof and in-house high quality control production process. These have resulted in great improvement on product quality and indeed saved massive management cost for us," said Kilic.

### End to End Solutions

Surveon provides various product packages, ranging from different camera segments to resolutions and all kinds of NVR and storage systems. All of them are based on the same VMS framework, which allows partners to keep the investment on existing projects for expansions.

### About Biges

Biges Technologies Electronics Co., Ltd. was established in Istanbul, Turkey in 1998. Over 15 years, Biges provides advanced technologies and high-quality services, and is one of the experts in IT and technology consultancy, network and system engineering, and home and business security.

### 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).