# Whitepaper

## IP Video Surveillance

## Summary

### Benefits

- Verified performance with extensive documentation on testing procedure and results
- Do more for less: BVMS running on a single, all-in-one, Promise NVR storage server
- Integrated solution is fully optimized to benefit from built-in Bosch BVMS resilience
- Using One-Plug-Auto-Service (OPAS), Promise devices are easy to service and maintain
- Flexibility to record directly to pure iSCSI storage solutions (Vess R2000)
- Utilizes SNMP for monitoring the system

### Common Use Cases

- Commercial buildings
- Healthcare
- Education
- Others

## Promise Technology and Bosch Create an Integrated Storage and Video Management Solution

*Certified and integrated solution enables surveillance and security professionals to do more for less*

Video surveillance solutions have never been more critical to businesses and organizations around the world than they are today. A reliable, high-performance video surveillance solution can act as a deterrent to crime, help identify suspects, improve productivity, reduce losses and much more. With the growing prevalence of high quality and affordable IP video surveillance solutions, an unprecedented number of organizations are looking to deploy a system to help them achieve their security objectives. When everything is taken into consideration - retention time, number of cameras, video format, compression, frame rate – the volume of data can be overwhelming. With some environments requiring video be retained for a year or more, it's clear there are real challenges facing security and surveillance professionals.

Promise Technology has certified its Vess A-Series NVRs with Bosch Video Management System software (BVMS) to deliver an integrated storage and video management solution that has been tested extensively to ensure interoperability, high-performance, reliability and scalability. The Promise and Bosch solution helps security and surveillance professionals overcome the challenges facing them so they can easily deploy a video surveillance solution for enterprise applications.

### How Vess A-Series NVRs and BVMS work together

Promise Technology is the developer of the open storage platform for video surveillance. The company's Vess A-Series NVRs are purpose-built recording server and storage solutions for video surveillance. Bosch BVMS is a unique enterprise IP video security solution that provides seamless management of digital video, audio and data across any IP network. It provides the best VMS to go with Bosch CCTV devices and integrates seamlessly with Promise's servers and storage solutions for video surveillance.

# Featured Products

## BVMS

The Bosch Video Management System is a unique enterprise IP video security solution that provides seamless management of digital video, audio, and data across any IP network. The system is equipped with a unique embedded resilience. It keeps operations up and running even when both, Management and Recording Servers fail. On edge intelligent Video Analyses and the unmatched recording technology managing up to 2000 cameras with a single server dramatically reduces the total cost of ownership.
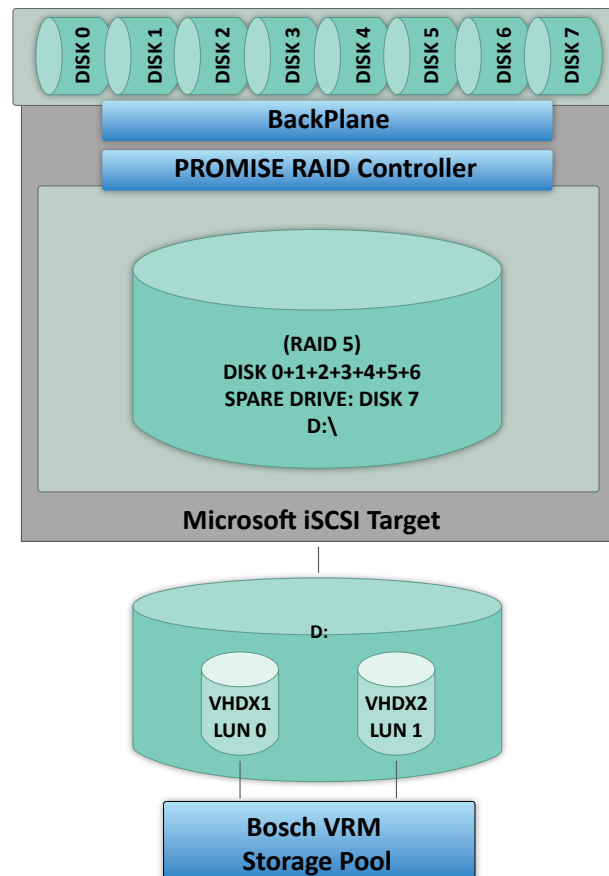
## Promise Vess A-Series NVRs

Promise Vess NVR serves are purpose-built to offer the highest levels of performance for IP video surveillance. Vess NVR appliances reduce support and equipment costs because there is no separate RAID storage unit to manage, eliminating the need for a server, controller cards, external cables, and a separate storage enclosure.

There are many possibilities for implementing BVMS, however Promise is focusing on the two configurations below:
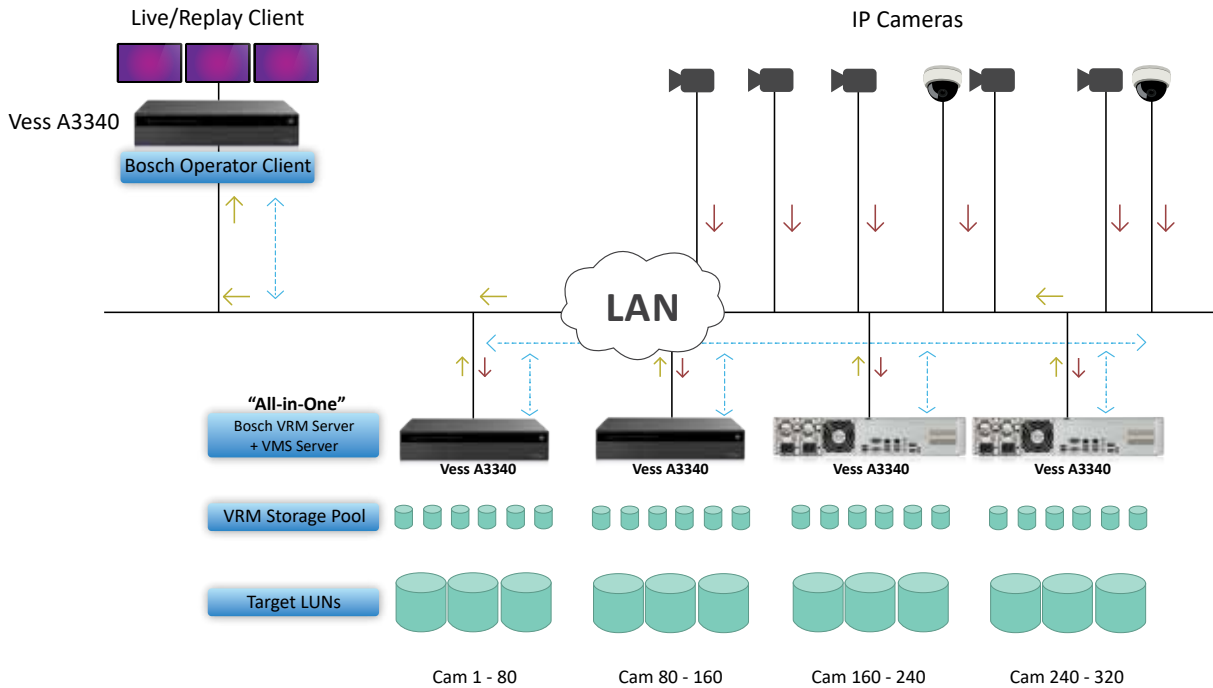
### Centralized Configuration:

In this configuration, the full BVMS solution is running on Promise Vess-A series and it is powered by VRM Video Recording Manager Software. The "all-in-one" Promise Appliance eliminates the need for separate NVR (Network Video Recorder) server and storage hardware as the local storage is available as the iSCSI target.

The Microsoft iSCSI gateway (Microsoft's iSCSI target service) is used to allow the Windows Server to present itself as an iSCSI disk array as shown in the below diagram.

| DISK 0 | DISK 1 | DISK 2 | DISK 3 | DISK 4 | DISK 5 | DISK 6 | DISK 7 |

**BackPlane**

**PROMISE RAID Controller**

**(RAID 5)**
**DISK 0+1+2+3+4+5+6**
**SPARE DRIVE: DISK 7**
**D:\**

**Microsoft iSCSI Target**

**D:**

**VHDX1**
**LUN 0**

**VHDX2**
**LUN 1**

**Bosch VRM**
**Storage Pool**

The configuration below shows an example of the centralized "all-in-one" recording, viewing and management solution for a network surveillance system of up to 128 video streams using the Promise Vess A3340 appliance.



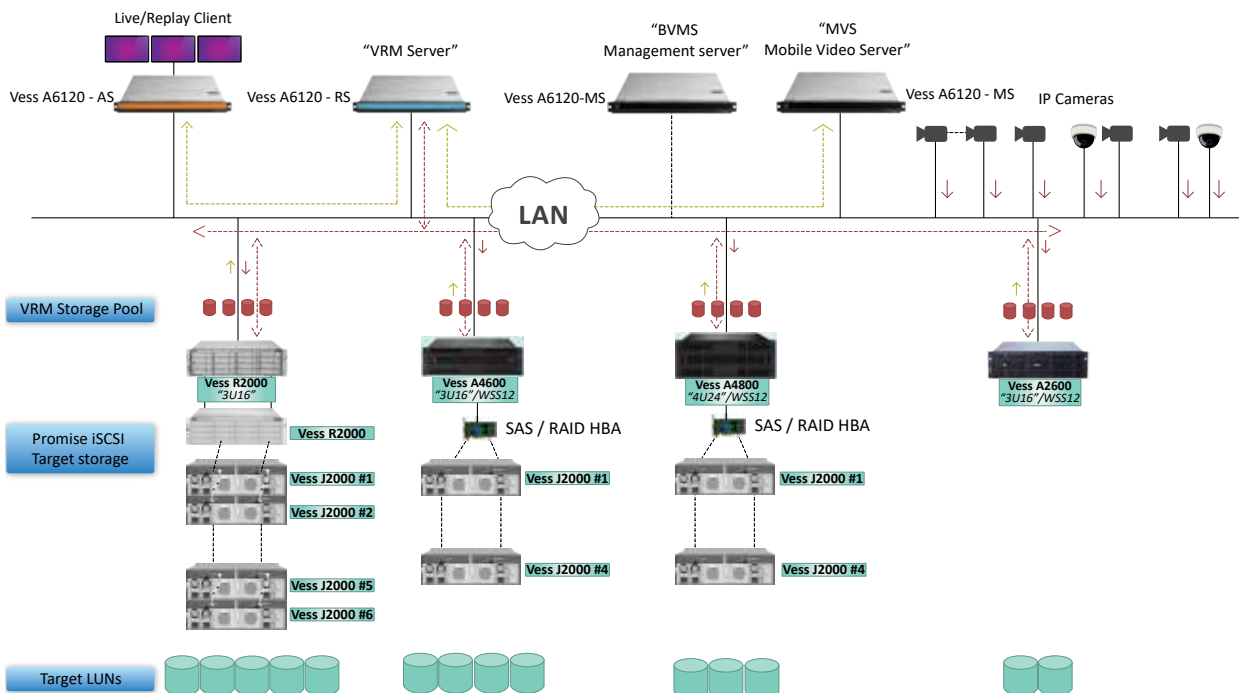Cam 1 - 80    Cam 80 - 160    Cam 160 - 240    Cam 240 - 320

## Distributed Configuration:

BVMS also provides a Distributed Network video recording solution where the installation consists of multiple hardware devices. Bosch Video Recording Manager (VRM) is a single server and is a management superset of VRM. The VRM provides base level system-wide recording, monitoring, and management of Bosch iSCSI storage, video servers, and cameras for BVMS.

The iSCSI disk arrays are not attached directly to a VRM, but instead can be attached anywhere on a standard IP network through 1 or 10 GbE links such as the Promise pure iSCSI storage solution with its Vess R2000 system.

The configuration below shows an example of the distributed solution for BVMS and different Promise Vess-A and Vess-R storage devices.

## About Bosch Security Systems

Bosch Security Systems division is a leading global supplier of security, safety, and communications products, solutions and services. The product portfolio includes video surveillance, intrusion detection, fire detection and voice evacuation systems as well as access control and management systems. Professional audio and conference systems for communication of voice, sound and music complete the range. Bosch Security Systems develops and manufactures in its own plants across the world.

## About Promise

Promise Technology is the developer of the open storage platform for IP video surveillance. Promise is active in all of the key video surveillance segments and is able to provide a solution for deployments of any size – from standalone NVR appliances to scale-out storage solutions for large deployments and video surveillance cloud services. Promise's solutions can be found at airports, banks, casinos, governments, highways, hospitals, hotels, metro and trains, mines, oil companies, prisons, shopping malls, warehouses and many more locations.

## For more info:

www.promise.com/surveillance
www.boschsecurity.com
sales@eu.promise.com

## Benefits

### Certified Solution with Verified Performance

Certifying Vess A-Series NVRs with BVMS offers customers an optimized solution that has been tested to deliver the highest levels of performance and reliability. Extensive documentation of the testing results is available and ensures that customers can fully leverage the performance offered by the integrated Vess A-Series and BVMS solution while also reducing deployment and management costs by having the VMS and surveillance storage on a single device. The Bosch and Promise solution is certified to be resilient, affordable and scalable for systems of any size.

### SmartBoost Technologies

Promise Vess A-Series NVRs are equipped with SmartBoost Technologies which enables the systems the handle a higher number of IP cameras that competing solutions. Additionally, Vess A-Series NVRs include One Plug Auto Service (OPAS) which is designed to offer a new level of user convenience that also helps reduce maintenance complexity and streamlines technical support. OPAS helps users easily collect all the necessary logs and data for the Promise support team to analyze the status of Vess A-Series NVRs.

### Vess R2000 iSCSI Storage

Promise not only offers Vess A-Series NVRs optimized for surveillance but also a pure iSCSI storage solution with its Vess R2000 system. Since Bosch cameras are iSCSI initiators which can record directly to iSCSI targets such as the Vess R2000, this offers more flexibility to customers and removes the need for intermediate servers which in turn can reduce the footprint of the system.

### Supports SNMP

The Promise and Bosch solution supports Simple Network Management Protocol (SNMP) which is used by network management systems to communicate with network devices. This means that Vess A-Series NVRs sends SNMP notifications and monitoring information to the BVMS. In fact it provides real time monitoring for Promise hardware components into the Bosch Operator Client interface.

## Summary

Promise Vess A-Series NVRs are certified solutions for use with Bosch BVMS. Promise and Bosch Security Systems collaborated to create a solution that has been tested extensively to ensure interoperability, high-performance, reliability and scalability. The solution is ideal for a wide range of applications, such as commercial buildings, healthcare, education and many use cases.