



Vess A6000 Series

— *Application Note* —



Vess A6600



Vess A6800

PROMISE Vess™ A6000

Purpose Built Storage for Surveillance

Vess A6000 Performance

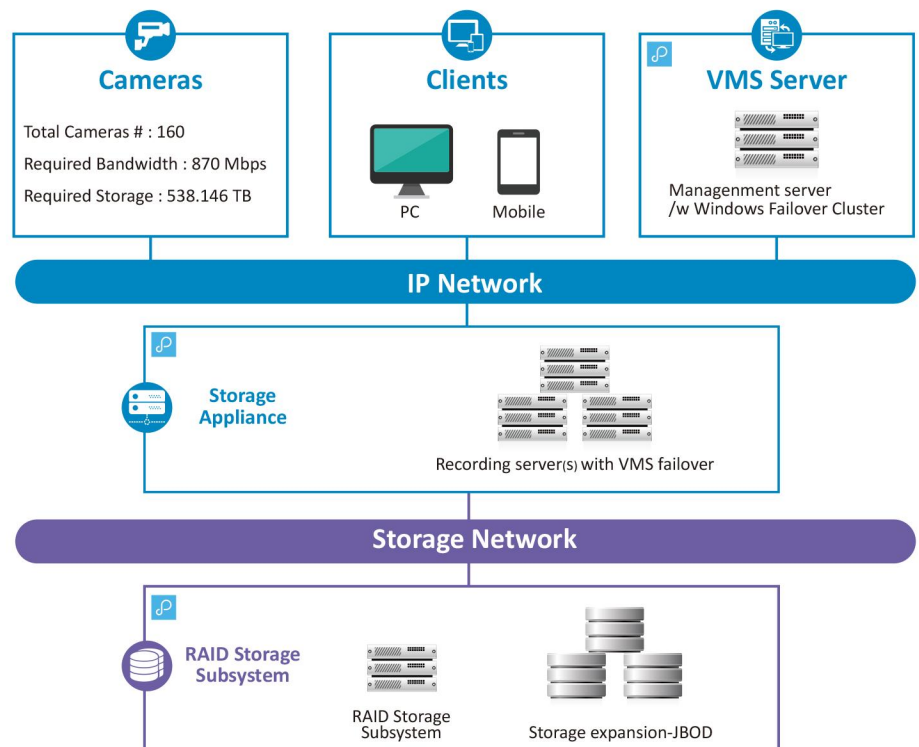
The Vess A6000 series comes with 16 or 24 SAS/SATA disk slots and it has one built-in SAS 12Gb expansion port which can handle up to 104 disks via 5 JBODs. With the Vess A6000, you'll discover how much easier it is to manage all your disks and enclosures via a single WebPAM PROe.

	# Camera	Codec	Resolution	FPS
Vess A6600	150	H.264	1080P (1920x1080)	30
Vess A6800	200			

Criteria:

- No frame lost
- Overall CPU usage is under 70%
- Pure Recording only/Motion Detection Disabled/RAID Status: Normal RAID 5

Typical set-up of Promise Vess Products in Surveillance Projects



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Single Package Offering 1PB Raw Capacity¹

With the latest Vess A6000 series and Vess J3600 series, it's now available to deliver 1PB raw capacity with 12/14TB HDD full populated. Vess A6000 series can directly attach maximum to 5 units JBOD without extra RAID head to provide you the best TCO(Total Cost Ownership) for your surveillance projects.

Dedicated for Surveillance Application

Considering the high surveillance storage demands in certain territories and specialized surveillance applications like Banking, Prisons, City Surveillance, Large-Scale system, ...etc, the Vess J3600s paired with Vess A6000 or Vess A7000 is a robust storage expansion platform. This potent combination is a system building block, installing reliability and flexibility in a cost effective package; simple to administer, while meeting the demands of your application.

Optional Cost-effective Storage Expansion Platform

As the demands for capacity expansion explode for video surveillance, it is imperative that the system administrators find a cost-effective way to meet performance and expansion goals. Using Vess J3600s with Vess A6000/A7000 brings an optional structure of storage expansion platform to save the total system cost without requiring an extra RAID box. The same reliability and quality of Promise Storage appliance for surveillance system is achieved, helping to solve the headache of the surveillance system administrators when a larger storage capacity is required.

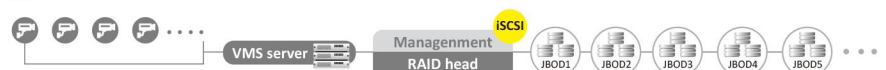
Simplified Storage Management GUI

Management of Vess J3600 is done using the GUI of Vess A6000/A7000. The Vess A6000/A7000 performs the role of RAID Head of Vess J3600 in the storage network. This approach contrast with storage management separated by another RAID Head device in a typical storage network arrangement; the Vess J3600 being paired with Vess A6000/A7000 simplifies the storage management platform making storage management easier and more efficient.



• Lower Total Cost • Simplified Management • Bandwidth Benefit iSCSI v.s. SAS • Total Solution

Typical



Optional



¹The real supported camera range on site by A6000 series may be various depends on the local deployment.

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Video Playback

Video playback increases I/O handling volume and complexity as playback involves sending Read requests to the disk to access stored data while on-going recording generates numerous Writing actions to the disk.

As a result :

- Disk performance will decrease due to the mixed Read and Write commands.
- The disk head moves around to read data at disk locations that may be far away from one another.

Specially developed for surveillance purposes, our PROMISE SMARTBOOST™ Technology improves predictive reading to avoid mixing read and write commands and keep disk performance at a high level.

Our predictive playback prevents interruptions and impacts on video recording.



Minimize CPU Usage

As an open platform for surveillance storage, you can benefit from some extra applications that run on the system. These additional resources won't impact your storage and leave free memory to run other applications for specific tasks.

PROMISE SMARTBOOST™ Technology not only reduces CPU usage in your internal process, but also limits the storage drivers needed to only one CPU core that supports all I/O access. This frees up more CPU space for your other applications.



Large built-in disks and scalable design

The Vess A6000 series comes with 16 or 24 SAS/SATA disk slots and it has one built-in SAS 12Gb expansion port which can handle up to 144 disks via 5 JBODs.

With the Vess A6000, you'll discover how much easier it is to manage all your disks and enclosures via a single WebPAM PROe.



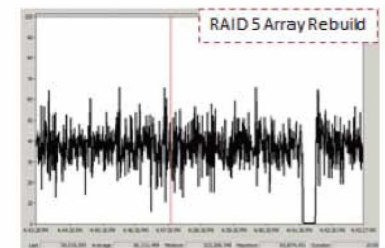
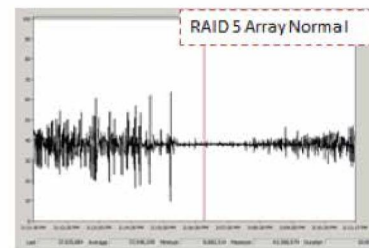
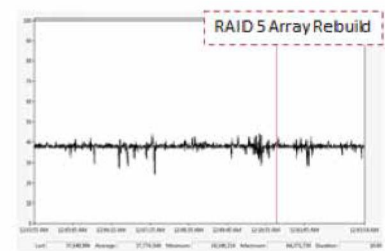
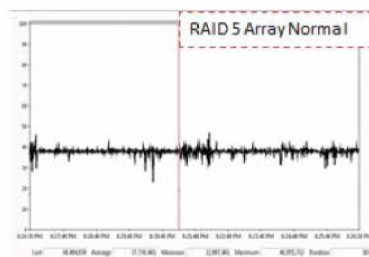
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Stable Performance With Disk Rebuild

Stable performance is crucial for surveillance video recording. Common storage involves constant disk rebuilding, which creates I/O response time lag and makes performance less stable. In surveillance this means that a critical video frame and therefore key value might be lost.

PROMISE SMARTBOOST™ Technology fine-tunes the RAID engine and balances the rebuild process and pace to provide stable recording performance. PROMISE understands that rebuild speed is also important for data safety. So, we do not make the rebuild process slow, but we monitor the host I/O and control the throttle property.



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Flexible PSU

This Power Supply Unit supports three CRPS (Common Redundant Power Supply) PSU units of 550W each with direct connections for power input. You can opt for (1+1) PSU units to support 550W redundant PSU, or (2+1) PSU units to support 1100W redundant PSU.

* We suggest you use (2+1) PSU when adding a VGA card or if you have extra power requirements.

SMARTBOOST™

Open storage platforms for video surveillance often come with some challenges with recording, live view and playback via VMS. Our SMARTBOOST™ Technology has been specially designed to provide the most stable and high performance storage solutions for surveillance systems.

Video Recording

Video Management Systems (VMS) need to update their metadata/databases frequently to maintain data consistency. This makes the RAID engine and disk busy because

- The RAID engine needs to update parity to write small-size commands to partial disk groups.
- The disk heads need to move to service this kind of data in specific areas.
- When the disk is busy seeking or servicing those small data packets, it may drag disk performance down, and there is no buffer to handle minor errors or timeouts.

PROMISE SMARTBOOST™ Technology reduces the loading of the RAID driver and frees up time for the disk to handle unexpected errors or slow responses by the disk mechanism. This results in high and stable performance for your video recording.

