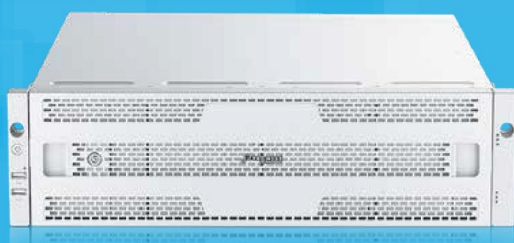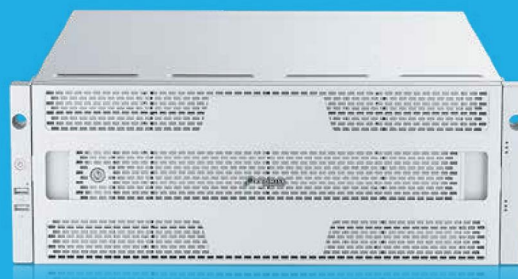# PROMISE
### TECHNOLOGY

# Vess

# Vess A7000 Series

## *Application Note*

**Vess A7600**
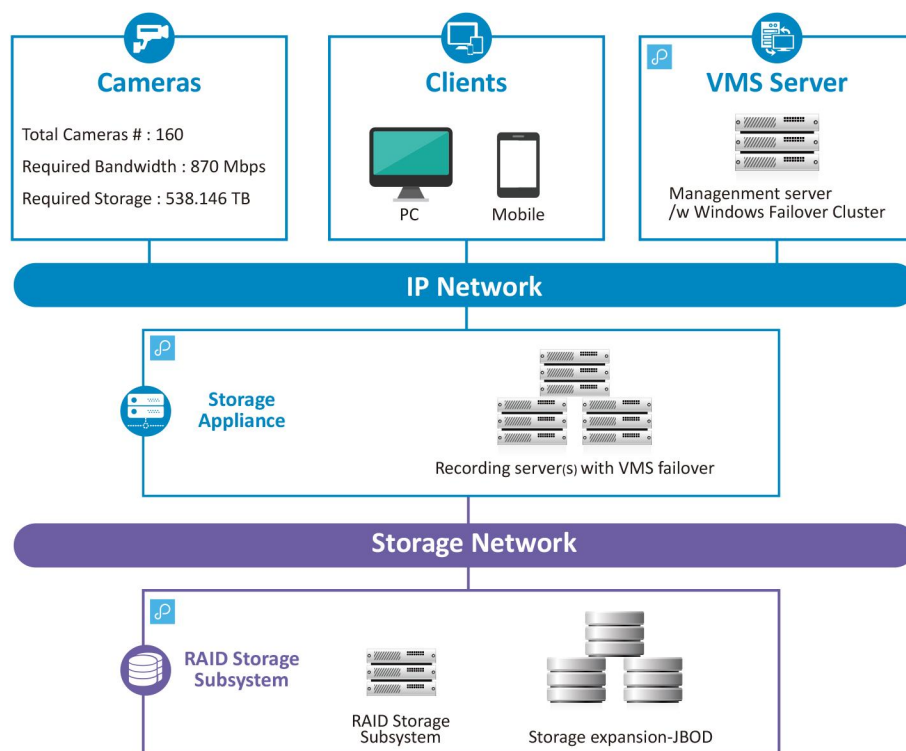
**Vess A7800**

# PROMISE Vess™ A7000
## Storage Solutions Designed for Surveillance

### Vess A7000 Performance

The Vess A7000 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 A7000, 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 A7600 | 100 | H.264 | 1080P (1920x1080) | 30 |
| Vess A7800 | 150 | | | |

## Typical set-up of Promise Vess Products in Surveillance Projects

### Cameras

Total Cameras # : 160
Required Bandwidth : 870 Mbps
Required Storage : 538.146 TB

### Clients

PC          Mobile

### VMS Server

Management server
/w Windows Failover Cluster

**IP Network**

**Storage Appliance**

Recording server(s) with VMS failover

**Storage Network**

**RAID Storage Subsystem**

RAID Storage Subsystem          Storage expansion-JBOD

# PROMISE Vess™ A7000
## Storage Solutions Designed for Surveillance

### Server Level Performance & Expansion Design

Two options for large HDD capacity enclosures are available: a 3U 16-drive (Vess A7600) and 4U 24-drive (Vess A7800). The Intel E5 CPU combined with Promise Technology know how creates an outstanding combination of performance and reliability for Midsize to Large-Scale surveillance deployments. For larger storage system requirements, the system is cost effect using the Promise JBOD to extend capacity without the added expense of an additional RAID server.

### Chosen Product for Intelligent Video Analytics

To handle more advanced Intelligent Video Analytics (IVA) demand in Surveillance market, Vess A7000 series is designed to support multiple add-on graphic cards with embedded GPU to meet the requirement of such advanced projects in the field. The unique SMARTBOOST™ Video technology makes Vess A7000 series more suitable for IVA applications with skill and ease.

### Stepping Stone to Artificial Intelligence

Together with the hardware design of scalable add-on GPU, SMARTBOOST™ Video/Storage technology, Vess A7000 series is the best enter point of Artificial Intelligence (AI) applications for your future surveillance demand. Taking good care of your recording videos without frame dropped, reduce your system loading, scalable hardware design to add more GPU onto your system, brings you connected with AI technology without any risk of unnecessary cost.

# PROMISE Vess™ A7000
## Storage Solutions Designed for Surveillance

### 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.
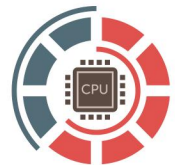Our predictive playback prevents interruptions and impacts on video recording.

### 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 A7000 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 A7000, you'll discover how much easier it is to manage all your disks and enclosures via a single WebPAM PROe.

# PROMISE Vess™ A7000
## Storage Solutions Designed for Surveillance
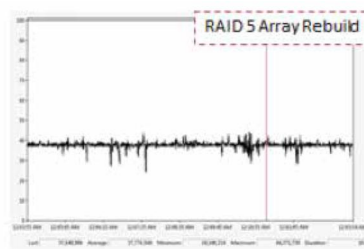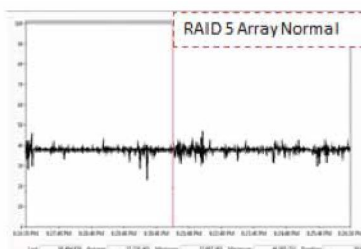
### SMARTBOOST™

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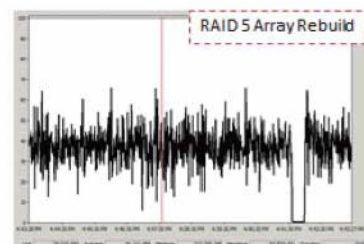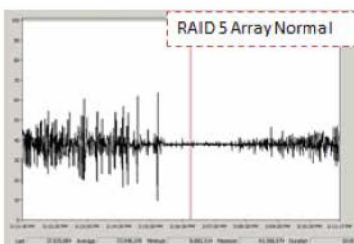
### Stable Performance With Disk Rebuild

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.

### Vess A7000 SMARTBOOST™ Mode



### Other RAID card

# PROMISE Vess™ A7000
## Storage Solutions Designed for Surveillance

### Single Package Offering 1PB Raw Capacity

With the latest Vess A7000 series and Vess J3600 series, it's now available to deliver 1PB raw capacity with 12/14TB HDD full populated. Vess A7000 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 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-euective 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 eflcient.