

## Customer Data Sheet



# PixelStor 392e HD

Ultra high density expansion with up to 1 PB in a single system enabling unmatched capacity, density, performance and reliability.

Ideal for very large high performance megapixel camera video surveillance deployments

## **Features**

**Designed and Optimized** Designed for 24x7x365 video service and optimized for video surveillance storage applications.

#### Storage consolidation

Provides storage consolidation for NVR/DVRs; significantly lowering purchase, CAPEX, and OPEX costs.

High performance drives SAS drives provide enterprise class high reliability and performance.

#### **Scalability**

The PS392eHD has the scalability to match growing retention periods, rapidly increasing camera resolutions, and increasing numbers of cameras needed.

#### **High Availability**

The PixelStor system offers fully redundant, high availability models. It boosts enterprise class, high availability features such as active-active controller failover, 72 hour battery-backed cache, and full redundancy with serviceable controllers, power supplies, fans and hard drives. Every major component is hot swappable without interruption in service or loss of data. Its sophisticated mirrored and path failover capabilities give it best-in-class system fault tolerance.

#### Simple to Use and Install

It provides effortless installation, management and administration. All administration functions assume technicians have basic to no storage knowledge. Once racked, setup time should be 15 minutes or less.

# Ultra High Capacity and Highly Scalable

The Rasilient PS392eHD ultra high density expansion shelf is part of the PS5000 HD product line. The PS392e HD enclosure is a 5U/92 bay, SBB based expansion enclosure. It's simple and cost effective expansion and scalability is the ideal solution for ever increasing retention periods, camera resolutions and quantity of cameras needed. This makes the PS392e HD expansion shelf the perfect solution for all large video surveillance storage needs.

The PS392eHD ultra high density enclosure packs up to 92 enterprise class SAS drives in just 5U of rack space, significantly reducing computer room requirements. This allows the PS392eHD to pack three times the storage capacity into the same space used by traditional storage products. Customers can now store up to six PB in a single video surveillance rack, providing market leading storage density.

#### **High Reliability**

Disk drive failure is a major cause of lost video and downtime. The PS392eHD only uses the highest quality enterprise class SAS hard drives. The PS5000 HD's Self-Healing capability automatically repairs failed drives, reducing drive failure rate by up to 70%. In addition, it offers RAID 5 or 6 which eliminates the loss of video due to disk failure. The PS5000 HD offers global sparing; any drives not in use are used as global hot spares. If a drive fails, the PS5000 HD will automatically rebuild its data on the spare drive without requiring intervention by the administrator. The rebuild operation occurs in the background while the PS5000 HD continues to store video and modulates the rebuild speed based on the amount of video being stored, ensuring no incoming video will be lost. Video always has the top priority. PS5000 also has Disk Cloning feature where a potential failing disk can be cloned before it becomes faulty. Cloning is a user-initiated, online, copy-and-replace of a problematic disk-group member with another disk.

#### **Unmatched Performance**

The Rasilient PS5000 HD sets new performance standards. With ever increasing camera resolutions and quantities of surveillance cameras, video frame loss due to inadequate NVR storage is becoming a common problem. If incoming video surpasses the speed the NVR can store, the NVR will simply throw the video frame away. Since NVRs do not typically alert users to this loss of video, there is no way to know it has occurred. The PS5000 HD is designed to eliminate this problem and to excel in these most demanding video surveillance environments. It accomplishes this with its patented PixelStor technologies: VAN®, FlowThrough®, StreamAlign® and BusyPlot®. VAN® and FlowThrough® are designed to significantly increase storage speed performance. Performance is further increased with our optional HyperCache. StreamAlign® significantly reduces disk fragmentation which ensures performance will not degrade over time. Because of our advanced technologies, performance is an incredible 8x faster than typical NVR storage. BusyPlot® is a unique set of GUI tools used to monitor all aspects of the PS5000 HD storage performance. It alerts the user if incoming video outpaces storage performance, so steps may be taken to ensure no video is lost. The PS5000 HD has five standard GbE ports per controller with optional dual 10GbE ports. Not only does the PS5000 HD provide unmatched video storage performance, but also the tools necessary to monitor video storage performance and to provide guaranteed, quality video storage.

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# **More Features**

## Best-in-class Performance, Modularity & Serviceability

- SMART diagnostics
- Complete Modular Design
- All Major Components
   Redundant & Serviceable

#### **Enterprise-class**

- Single or dual active-active controllers
- RAID 10, 5, 50, 6, 60
- Disk Group concatenation
- Redundant OS, cooling & power
- Mirrored/persistent cache
- WB, WT or Mirrored cache (per LUN)
- Two 12Gbps SAS 3.0 ports
- Auto/global drive sparing
- Intelligent Power Management (IPM) and MAID (System and drive power management)
- Auto/global drive sparing
- Drive Self-Healing
- Bad sector reconstruction
- · Scheduled drive inspection

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# **Specifications**

Enclosure	5U rack-mounted storage enclosure with slide rail and cable
	management assembly
Disk Drive	92 top loading drives
Max. HDDs	104 (with PS5000 HD)
Interface Ports	Two SAS 3.0 / 12Gbps ports (per controller)
	One Serial port (per controller)
HDD Type	Enterprise Class SAS 3.0
Drives	3.5", SAS 4, 6, and 8 TB
Redundancy	Controllers
	Power Supplies
	Fans
	System Software
Availability Features	Active-Active controller failover, IP & disk group failover
	Auto drive rebuild w/global spares
Serviceability	Controllers
	Power Supplies
	Fans
	System Software
	Mid-plane
Data Protection	RAID 10, 5, 50, 6, 60
	Bad sector reconstruction
	Zero Maintenance
	Self-healing
	Scheduled drive inspection
	SMART diagnostics
	Disk Cloning
Power Supply	Two 2400W PSUs, hot-swap and redundant
	System input: 180-264VAC, 47Hz-63Hz, IEC C-20 rear inlet
	High efficiency (80Plus Gold Level)
	Energy Star® for Storage compliant
	Hot-pluggable from front of chassis
	1U x 200 mm (W) x 340 mm (D)
	Four 40mm dual counter rotating fans for PSU and
	Canister cooling controlled by internal microcontroller
Approvals	EMC: Class A, CISPR 22, FCC, ICES-003, VCCI, EN
	Safety: CB , UL, cUL, CE, CSA, IEC, EN
	Directive 2002/96/EC on Waste Electrical and Electronic
	Equipment (WEEE)
	Environment RoHS

\*\* Dual models only

#### **Physical Characteristics**

 Product
 Height
 Width
 Depth
 Weight (w/HDDs)

 PS392e
 22cm (8.66in.)
 44.58cm (17.6 in) 96.8cm (38.1 in.)
 ~130kg (286Lbs) estimated

#### **Operating Environment**

Air TempRelative Humidity5-35°C / (40-95°F)8%-80% non-condensing180-264VAC, 47Hz-63Hz, 2400 WattsAltitude0 to 3,000mDesigned for 24x7x365 Operation