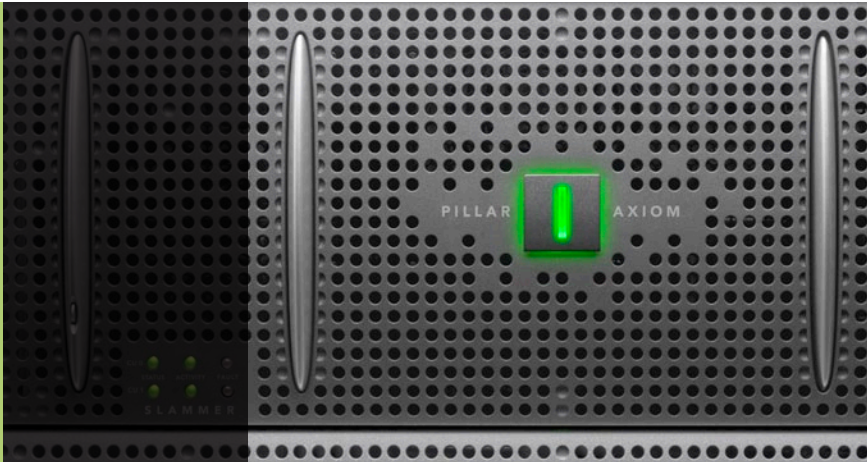


Pillar Axiom 300 Storage System



Application-Aware Storage Advantages

- **Simplify.** An intuitive management interface enables policy-based provisioning, capacity planning, and management; provisioning a LUN takes six clicks.
- **Utilize.** Axiom's architecture reduces data center operational costs and delivers utilization rates double the industry average.
- **Scale.** Independent capacity and performance scaling deliver savings in time and money.

Optimized for mid-sized deployments and budgets, the Pillar Axiom® 300 storage system brings enterprise-class storage capabilities to mid-range applications.

Its unique ability to tailor performance per application; its ease of use; and its ability to scale and support NAS, FC SAN or iSCSI SAN with a common user interface make it the most powerful entry to mid-tier storage offering available.

Comprising a Pillar Axiom Pilot policy controller, a Pillar Axiom NAS or SAN Slammer storage controller, one Pillar Axiom Brick storage enclosure, and the power of Pillar AxiomONE™ software, the Pillar Axiom 300 bridges the gap between low-feature, low-cost storage and high-feature, high-cost storage with a turnkey, easy to use solution that offers industrial-strength capabilities at a low cost of ownership.

With the Axiom 300, you can start small and upgrade later without losing your initial investment. You can easily upgrade to an Axiom 600 system without compromising data integrity.

AxiomONE Software

Pillar AxiomONE software delivers the power of ONE: one management interface for a common storage pool. It enables true multitenancy of all storage tiers in a single platform, offers a choice of SAN or NAS technology, and optimizes performance of SATA and Fibre Channel Bricks.

AxiomONE offers unique features such as Copy Services, Thin Provisioning, Pool RAID 10, and Wide Stripe, providing a higher level of data protection, performance, availability and application integration.

Axiom Pilot Policy Controller

The Pillar Axiom Pilot policy controller is the management interface for the system. Its simple, graphical console enables policy-based provisioning with Dynamic Performance prioritization, fault management, capacity planning, and Guided Maintenance for the entire system.

Dynamic Performance enables provisioning of multiple classes of service. It allows operators to align system performance with application requirements, enabling multiple tiers of storage in a single array without compromising performance of individual filesystems or LUNs.

Axiom 300 Slammer

The Pillar Axiom 300 Slammer storage controller is fully redundant. It has a dual-processor architecture with automatic failover and restoration, redundant power supplies, and 6GB (2GB battery-backed cache) memory. It operates as the storage controller for one up to four Bricks, supporting 3.6 to 104TB raw storage capacity and delivers enterprise-class throughput performance.



A choice of SAN or NAS network connectivity in the Slammer allows storage managers to align their data storage resources to their application requirements.

The SAN Slammer is available with either Fibre Channel and/or iSCSI connectivity, offering enterprise-class performance at an affordable price point.

Brick Storage Enclosures

The Axiom 300 can be configured with up to 4 Bricks to provide a highly available storage pool for your application environment. A choice of 500GB, 1TB or 2TB SATA Bricks or 300GB or 450GB FC Bricks to meet your capacity, budget and performance demands.

Bricks in an Axiom 300 system can be moved seamlessly when updating to an Axiom 600 system. This provides an easy upgrade path without compromising data integrity and protecting your initial investment as your data storage needs grow.

Axiom 300 Bundles Consist of the Following Items:

- One Slammer storage controller: Choose from NAS (CIFS or NFS) or SAN (FC or iSCSI)
- One Pilot policy controller
- One 500GB SATA /1TB/2TB SATA or 300GB/450GB FC Brick drive enclosure
- AxiomONE Software Suite
- 3 year next-business-day (NBD) hardware warranty
- One year of software maintenance

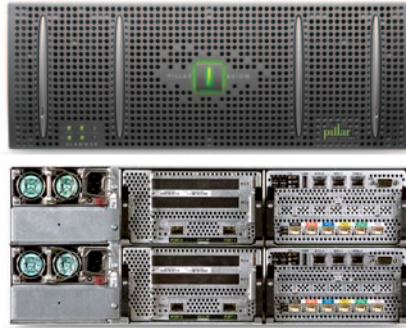
Optional features that can be added include:

- Up to three additional Bricks
- Additional CIFS or NFS protocol license for NAS
- Additional iSCSI protocol support for Fibre Channel and iSCSI host connectivity
- Additional NDMP protocol support for NDMP based backups
- Copy Services license, including CloneFS/LUN, VolumeCopy, VolumeBackup
- SecureWORMfs
- Thin Provisioning
- NAS Replication
- Basic installation fee
- Pillar cabinet
- Additional annual software maintenance
- Enhanced support options:
 - Additional years of NBD parts hardware warranty
 - Upgraded hardware warranty options:
 - ◆ Four-hour parts delivery
 - ◆ Four-hour parts delivery and onsite support

Part Numbers and Ordering

Product	Part Numbers
Axiom 300 NAS Copper with NFS includes base unit, Pilot, Brick, and QoS-OS	300-BNDL-NAS-CPR-NFS- 500GB/1TB (SATA) 300-BNDL-NAS-CPR-NFS- 2TB5 (SATA, 5400 RPM) 300-BNDL-NAS-CPR-NFS- 2TB7 (SATA, 7200 RPM) 300-BNDL-NAS-CPR-NFS- FC300GB/FC450GB
Axiom 300 NAS Copper with CIFS includes base unit, Pilot, Brick, SnapFS, and QoS-OS	300-BNDL-NAS-CPR-CIFS- 500GB/1TB/2TB5/2TB7 300-BNDL-NAS-CPR-CIFS- FC300GB /FC450GB
Axiom 300 SAN Fibre Channel includes base unit, Pilot, Brick, SnapFS, APM and QoS-OS	300-BNDL-SAN-FC- 500GB/1TB/2TB5/2TB7 300-BNDL-SAN-FC- FC300GB or FC450GB
Axiom 300 SAN iSCSI Copper includes base unit, Pilot, Brick, APM and QoS-OS	300-BNDL-SAN-ISCSI- 500GB/1TB/2TB5/2TB7 300-BNDL-SAN-ISCSI- FC300GB or FC450GB
AxiomONE Copy Services – NAS includes CloneFS, Volume Copy, and Volume Backup	QOS-300-COPYSVCS-NAS
AxiomONE Copy Services – SAN includes CloneLUN, Volume Copy, and Volume Backup	QOS-300-COPYSVCS-SAN
AxiomONE Thin Provisioning	QOS-300-THINPRO
AxiomONE Secure WORMfs	QOS-300-WORM
AxiomONE NAS Replication	AXONE-REP-NAS-1TB AXONE-REP-NAS-UNLTD

Axiom 300 Slammer Storage Controller



Axiom 300 Pilot Policy Controller



Features and Specifications

External Interfaces

Four 1-Gb Ethernet interfaces for host-to-LAN connectivity on NAS Slammers or SAN connectivity on iSCSI Slammers

Four 4-Gb Fibre Channel ports for host-to-SAN connectivity on SAN Slammers

Internal Interfaces

Six 10/100 Base-T Ethernet interfaces for Slammer/Pilot connectivity
12 2-Gb Fibre Channel interfaces for Brick/Slammer connectivity

Control Unit Components (Two per Slammer)

3GB RAM

Redundant and Hot-Swappable Components

Two load-balancing power supplies and fans per Slammer
Two active/active control units per Slammer
Fibre Channel interface modules
Gigabit Ethernet interface modules
Motherboards

Supported Protocols

Network Protocol Support:
NFS V2/V3 over UDP or TCP
CIFS
NDMP
SAN Protocol Support:
Fibre Channel Protocol (FCP) for SCSI;
fabric-attached and direct attached
iSCSI

Interfaces

Four 10/100 Base-T Ethernet private management interfaces (PMI)

Two 10/100 Base-T Ethernet interfaces for management LAN connectivity

Control Unit Components

Two control units per Pilot with active/passive failover
2GB RAM per control unit

Supported Protocols

SNMP NTP
SSH FTP
HTTP SMTP
NDMP

Dimensions

Enclosure Dimensions

Height	7 in	17.78 cm (4U)
Width	17.7 in	45 cm
Depth	26 in	66 cm
Weight	91 lbs	41 kg

Enclosure Dimensions

Height	3.5 in	8.89 cm (2U)
Width	17.7 in	45 cm
Depth	26 in (max)	66 cm
Weight	40 lbs	18.2 kg

Power

Frequency	50 – 60 Hz
AC Voltage	90 – 264 VAC
Max Power Consumption	685 VA
Max Heat Dissipation	2,336 BTU/hr
AC Plug Type	IEC 320 C13 connections

Frequency	50 – 60 Hz
AC Voltage	90 – 264 VAC
Max Power Consumption	280 VA
Max Heat Dissipation	989 BTU/hr
AC Plug Type	IEC 320 C13 connections

Environmental

Operating Temperature	10 to 40 degrees C
Temperature Gradient	10 degrees C/hr
Relative Humidity	10 – 85 percent non-condensing
Humidity Gradient	10 percent/hr non-condensing

Non-Operating Temperature	-40 to 70 degrees C
Temperature Gradient	30 degrees C/hr
Relative Humidity	5 – 95 percent non-condensing
Humidity Gradient	10 percent/hr non-condensing

Operating Temperature	10 to 40 degrees C
Temperature Gradient	10 degrees C/hr
Relative Humidity	10 – 85 percent non-condensing
Humidity Gradient	10 percent/hr non-condensing

Non-Operating Temperature	-40 to 70 degrees C
Temperature Gradient	30 degrees C/hr
Relative Humidity	5 – 95 percent non-condensing
Humidity Gradient	10 percent/hr non-condensing

SATA Brick Storage Enclosures

Serial ATA (SATA) Bricks provide high capacity disk storage for the SAN, NAS or the common SAN/NAS storage pool.

- Each Brick contains two RAID adapters that manage 12 drives as two RAID Groups with 6 drives each. These can be used for multiple RAID-5 or RAID-10 sets.
- The thirteenth drive is a shared hot spare that may be accessed by either controller in case of drive failure



Storage Enclosure

Interface to Slammer or Cascaded Bricks
Four Fibre Channel interfaces per controller

Features and Specifications

Automatic, transparent failover
Two RAID 5 5+P arrays
Distributed RAID 10

Redundant and Hot-Swappable Components

13 disk drives; includes one hot spare
Two RAID controllers per Brick (active-active)
Two load-balancing power supplies
Enclosure Services Module

Height	3.5 in	8.89 cm (2U)
Width	17.7 in	45 cm
Depth	22 in	55.5 cm
Weight	59 lbs	26 kg

Drive Information

Capacity	500GB, 1TB, 2TB	2TB
Rotational Velocity	7,200 RPM	5,400 RPM
Standard	SATA II	SATA II

Power Requirements

Power Frequency	50 – 60 Hz	50 – 60 Hz
AC Voltage	90 – 264 VAC	0 – 264 VAC
Max Power Consumption	257 VA	221 VA
Max Heat Dissipation	877 BTU/hr	877 BTU/hr
AC Plug Type	2 IEC 320 C13 connections	

Environmental – Operating

Temperature	10 – 40 degrees C
Temperature Gradient	10 degrees C/hr
Relative Humidity	10 – 85 percent non-condensing
Humidity Gradient	10 percent/hr non-condensing

Environmental – Non-Operating

Temperature	-40 – 70 degrees C
Temperature Gradient	30 degrees C/hr
Relative Humidity	5 – 95 percent non-condensing
Humidity Gradient	10 percent/hr non-condensing

Fibre Channel Brick Storage Enclosures

Fibre Channel Bricks deliver highly capacity, high-performance disk storage for SAN, NAS or the common SAN/NAS storage pool.

- Each Fibre Channel Brick may be cascaded to three additional Fibre Channel Bricks, scaling capacity and IOPS and reducing acquisition costs
- Configurable with Port Bypass Controller that cascades off Fibre Channel Bricks with the RAID Controller
- Two RAID adapters manage 12 drives as a single array of 10+P+S RAID 5 or manages 11 drives as a single array of distributed RAID 10



Interface to Slammer or Cascaded Bricks
Four Fibre Channel interfaces per controller

Automatic, transparent failover
One RAID 5 10+P+S array
Distributed RAID 10

Redundant and Hot-Swappable Components

12 disk drives (one hot spare)
Two RAID controllers (if specified)
Two load-balancing power supplies
Enclosure Services Module

Height	3.5 in	8.9 cm (2U)
Width	17.7 in	45 cm
Depth	22 in	55.5 cm
Weight	70 lbs	32 kg

Capacity

Capacity	300GB, 450GB
Rotational Velocity	15,000 RPM
Standard	FC

Power Frequency	50 – 60 Hz
AC Voltage	90 – 264 VAC
Max Power Consumption	400 VA
Max Heat Dissipation	1,370 BTU/hr
AC Plug Type	2 IEC 320 C13 connections

Temperature	10 – 40 degrees C
Temperature Gradient	20 degrees C/hr
Relative Humidity	10 – 85 percent non-condensing
Humidity Gradient	10 percent/hr non-condensing

Temperature	-40 – 70 degrees C
Temperature Gradient	30 degrees C/hr
Relative Humidity	5 – 95 percent non-condensing
Humidity Gradient	10 percent/hr non-condensing