

Reliability, Availability, and Serviceability



System Benefits:

- Designed with active backup components and sophisticated software to virtually eliminate the possibility of data loss or corruption.
- Extremely fault-resilient and the data they store is highly accessible, even during component replacements or software upgrades.
- Easy to maintain, with guided maintenance wizards, self-diagnosing/self-repairing systems, and hot-swappable, user-replaceable components.

Pillar Technology

Pillar understands that dependable, around-the-clock data access is critical to your business, so Pillar Axiom™ Storage systems are designed from the ground up with integrated features to ensure reliability, availability, and serviceability.

Reliability means Pillar storage systems are designed with active backup components and sophisticated software to virtually eliminate the possibility of data loss or corruption.

Availability means Pillar storage systems are extremely fault-resilient and the data they store is highly accessible, even during component replacements or software upgrades.

Serviceability means Pillar storage systems are easy to maintain, with guided maintenance wizards, self-diagnosing/self-repairing systems, and hot-swappable, user-replaceable components.

To complement their advanced hardware and software features, Pillar Storage systems are backed by world-class service and support. At Pillar, service isn't just an afterthought; it's tightly integrated with the systems themselves to ensure dependability, performance, and ease of use. What's more, highly customizable service programs mean you get just the support you need without being forced to accept bundled options you don't.

Hardware Features

Every Pillar storage system includes a complete set of hardware features to make repairs easy, ensure data integrity, and maximize uptime.

Hardware is designed for easy serviceability. Every component is user-replaceable, reducing the need for service calls and lowering total cost of ownership.

Critical components have duplicate, active backups to virtually eliminate any single point of potential hardware failure. Protected components and systems include:

- Dual-ported disk drives
- Motherboards
- Power supplies
- Fans
- Storage network connectivity
- Storage system fabric connectivity
- RAID controller cards

Many critical components are hot-swappable, allowing on-the-fly replacement without disrupting data access or powering down the system. Hot swappable components include:

- Dual-ported disk drives
- Power supplies
- Fans
- RAID controllers

Other components are “warm-swappable,” allowing power and connectivity to be rerouted to active backups while the faulty unit is powered down and replaced. Warm-swappable components include:

- Motherboards
- Network interface modules

Replacement parts can be delivered in as little as four hours, and complete on-site part kits are also available so you’ll always have critical components on hand for immediate repairs.

Each Brick storage enclosure features dual RAID controllers and 13 SATA disk drives, which are managed as two separate RAID 5 5+P arrays with a shared, hot-swappable spare. This redundant controller circuitry provides active-active failure support, eliminating the possibility of downtime due to a single controller failure.

Non-proprietary, high-volume components

- including power supplies, disk drives, and core ASICs
- reduce acquisition and repair costs.

Battery-backed RAM ensures data integrity in the event of a power failure.

Software Features

Pillar's Quality of Service (QoS) Storage Manager software features policy-based provisioning and management for ease-of-use, high performance, and high availability. What's more, QoS Storage Manager is tightly integrated with Pillar's hardware and customer service offerings to maximize reliability and uptime.

QoS Storage Manager's Guided Maintenance wizard provides step-by-step instructions for hardware repair and replacement. LEDs guide repair personnel to the appropriate components or cables, while management software verifies each step before proceeding to the next.

Remote notification capabilities alert your administrators and the Pillar customer service team to system status and events real-time, around-the-clock. This call-home feature monitors performance over time, recommends fixes if it finds performance has declined, and can even order replacement parts and software upgrades automatically.

The Support Toolbox can be controlled either by GUI or CLI, and includes these serviceability features:

- Check-up and performance monitoring features ensure system issues are identified before they become critical problems.
- Onscreen error messages explain hardware and software issues in plain English.
- Data states and trace information are logged for debugging.

Self-diagnosis/self-repair features allow Pillar systems to bypass faulty hardware and use active backup components in their place.

Industry-standard SMART™ disk feature anticipates drive failures before they happen.

SNMP easily integrates with industry-standard network and storage management tools.

Multiple data paths ensure no single point of potential data transmission loss.

Robust data replication features generate separate copies of data for storage, application testing, and staging. Snap FS and Snap LUN snapshot features capture an image of a filesystem or LUN at a point in time, preserving data states.

Warm starts can be executed in as little as ten seconds. During a warm start, a control unit can revalidate its state and restart its processing without losing data stored in cache. This feature also allows for non-disruptive, on-the-fly software upgrades.

Service Features

With a Pillar service package, you get the support options that you need without being forced to accept bundled options that you don't. At the same time, hardware, software, and service components work together to make certain your Pillar system delivers peak performance.

Pillar's customer service Website allows you to access our knowledge base and technical publications library, download the latest software upgrades, check product bulletins and training schedules, and monitor your support account.

Our software subscription program ensures your system has the latest functionality and performance features, while our software support team gives you individual attention to ensure you get the most from your upgrades.

Technical support services include 24/7/365 telephone and email support, next-business-day parts delivery, and onsite service – often within four hours of your call in specified service areas.

Complete training programs include courses in essential storage concepts, Pillar system orientation, SAN and NAS administration, maintenance, and more.

Professional Services Consultants develop effective storage solutions that leverage your resources and keep costs down. Programs include installation, consolidation, backup and restore integration, and system optimization.

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Pillar Data Systems takes a sensible, customer-centric approach to networked storage. We started with a simple, yet powerful idea: Build a successful storage company by creating value that others had promised, but never produced. At Pillar, we're on a mission to deliver the most cost-effective, highly available networked storage solutions on the market. We build reliable, flexible solutions that, for the first time, seamlessly unite SAN with NAS and enable multiple tiers of storage on a single platform. In the end, we created an entirely new class of storage. www.pillardata.com

