Dot Hill R/Evolution™
Storage Solutions

Modular storage solutions for medical modality and PACS

Vendors of Picture Archiving and Communication Systems (PACS) face a continual challenge to provide solutions that seamlessly scale while satisfying individual performance requirements. The Dot Hill R/Evolution family of networked storage arrays can meet these demands through an unrivalled modular system design with guaranteed backward and forward compatibility for maximum investment protection.

Scalability to meet capacity and regulatory demands

The health care industry is experiencing explosive storage growth, driven by new imaging resolutions and ever increasing regulations. Dot Hill offer a platform of easily managed solutions ranging from a few terabytes of direct attached primary storage hosting a small number of medical imaging devices, through to fully networked solutions with hundreds of terabytes and advanced data management features.
A true PACS storage infrastructure with lifespan

Historically, imaging departments such as cardiology and radiology have purchased systems from modality or PACS manufacturers combined with a commercial off the shelf storage systems in order to provide the necessary real-time access to the data being created from each examination. Over time those storage arrays would reach capacity with the data often moved offline to tape which may also have been sold as part of the solution. These solutions frequently turn into silos due to a lack of upgrade path. The hospital will then find themselves having to manage multiple storage systems, both online and offline types. This becomes costly from a management perspective creating the need to manage multiple support contracts, differing maintenance processes, and diverging hardware obsolescence plans. The R/Evolution family from Dot Hill solves this logistical and investment nightmare through a family of storage solutions based on a common management platform that offer complete forward and backward compatibility for disk based expansion units. This means that as performance and capacity needs grow the core RAID controller units can be upgraded while seamlessly maintaining access to data held on existing disk expansion units. The Dot Hill solution has a vastly extended lifespan which avoids sending your valuable IT investments to landfill at all costs.

Managing the convergence of IT & PACS systems

The medical community is experiencing a convergence of IT systems and PACS, plus there is a growing need for health care professionals to have access to shared archives of patient information related to imaging records, pathology reports and pharmaceutical information. Medical companies are finding they can’t keep separate servers with separate storage. To avoid this they need a centralized and integrated IT infrastructure. The Dot Hill family of networked storage arrays can provide an easily managed and cost effective solution with a choice of infrastructure solutions ranging from direct attached storage DAS, ethernet networked iSCSI or high performance Fibre Channel storage area networks (SAN). Regardless of which infrastructure is chosen, every Dot Hill storage array presents the same management interface thereby reducing staff training costs, and the modular design means that systems share common field replaceable units (FRUs) making service & spares inventory far easier.

Meeting the demands of health care legislation

In addition to IT and PACS convergence and the demands of new data hungry imaging applications, the Health Insurance Portability and Accountability Act (HIPAA), which requires organizations to keep patient records safe, secure and available for decades, is a legislation that further increases the need for digital storage. Patient data must be also adequately protected so that privacy is preserved in accordance with the Act. The Dot Hill R/Evolution family provides a range of Data Management Services (DMS) such as Snapshot, Volume Copy and Remote Replication that can assist medical institutions in gathering data from remote locations for central backup and archive. Data protection of digital records and images is becoming ever more critical hence the Dot Hill platform is certified for integration with backup software applications from a variety of vendors, while providing disaster recovery capability through replication and redundant hardware components.

Learn more about why Dot Hill is your PACS storage partner of choice
Both high performance SAS and high capacity SATA drives can be freely intermixed within each storage expansion tray allowing tiered storage solutions to be optimally designed to cater for ever increasing performance and data retention mandates. Tiered storage and/or disk-to-disk backups can be accomplished without ever having to utilise precious network bandwidth.

Dot Hill’s robust architectures assure “no single point of failure,” and automatic failover mechanisms facilitate the highest levels of data protection, service levels and disaster recovery. Support for industry high-availability software and virtualisation middleware guarantees seamless integration with the rest of the enterprise.

Dot Hill offers networked disk RAID storage solutions with a choice of iSCSI, Fibre Channel or SAS host connectivity delivering flexibility and maximisation of any existing network infrastructure. Entry level solutions scale seamlessly for more performance or capacity with complete re-use of existing disk drive expansion trays for unrivalled investment protection.

Dot Hill’s R/Evolution architecture supports multiple high speed host connections, such as 4Gb Fibre Channel, and a switched fabric drive side bus to assure maximum throughput. Patented SimuCache data caching provides blistering write performance in high availability RAID configurations.

Both our latest generation 2000 and 5000 series storage array’s support battery-free cache backup which is part of our ongoing EcoStor Green Storage initiative. EcoStor will deliver a series of energy saving and environmentally responsible technologies such as drive spin-down and our unique Data-In-Place Migration already maximises the life-cycle of your customers investment in RAID storage technology.

Dot Hill offers complete life cycle planning services to support medical imaging customers in program deployments that span over several years, including advance change notices, extended product lifecycles and parts availability.

100% platform independence and designed-in multi-host, SwitchlessSAN™ architectures ensure storage can be centrally located and managed – improving the efficiency of merging data from disparate information sources.

Simple, yet sophisticated management & configuration tools minimise the administrative burden already placed on over-extended IT staff. Built-in DMS tools such as the snapshot capabilities from Dot Hill’s AssuredSnap™ technology provide further opportunities for data integrity and easy off-line data analysis.
Data Storage Solutions for Medical Imaging

Headquartered in Carlsbad, California, Dot Hill has offices in Germany, United Kingdom, Japan and the United States.