



RAIDCORE™

VIRTUAL RAID ADAPTER

Super-charges RAID for AMD and Intel Motherboards

Key Benefits

- Platform independent
- Support for major SATA and SAS IO devices
- Protection data against hardware or system malfunction
- Reduced system acquisition and operating costs
- Reduced development and support costs through a common stack (vs. multiple RAID stacks to develop to, test and support)
- Improved storage utilization and performance

Virtual RAID Adapters – A Server-class RAID Solution

RAIDCore™, as a Virtual RAID Adapter, is a powerful way of building RAID-protected arrays out of internal server storage. The Virtual RAID Adapter is a unique and new pure, host-based software RAID solution. It combines the key advantages of pure software RAID with many of the key advantages of hardware RAID adapters. Unlike other host-based offerings, Virtual RAID Adapter solutions are not tied to any single vendor's disk IO controller. This makes Virtual RAID Adapters universally capable of working on most mainstream SATA or SAS IO devices. The universal nature of VRA technology allows OEMs to easily migrate to new hardware platforms while maintaining their same look and feel and without having to change RAID vendors.

Data Protection

RAID protects against hardware or system malfunction and prevents the loss of valuable customer data. RAIDCore offers a full compliment of RAID options – 0, 1, 5 and 10 – enabling configurations tailored to individual application needs.

Reduced Acquisition and Operating Expenses

Equally important, lower storage costs can be achieved by implementing a software-based RAID solution for internal storage. Hardware RAID card costs can be eliminated along with their associated power and cooling costs; support and management costs can be reduced through the deployment of a common RAID stack across multiple core logic chip sets and motherboards.

RAID Performance

With today's multi-core processors, RAIDCore runs with little load on the system and achieves comparable and in some case superior read/write performance compared to hardware RAID adapter cards. Since the RAID function is performed by the host CPU there are fewer components to flow through. Given that the server CPU processor and internal memory bandwidth typically exceeds that of a hardware RAID adapter, RAIDCore IO performance can exceed that of a plug-in HBA.

spec

RAIDCore™



I/O Reliability

RAIDCore's touched region logging (TRL) feature ensures mirror and parity consistency in the event of system failure for in-progress writes. For RAID 5 what is commonly known as the RAID 5 write-hole vulnerability is eliminated.

Boot Protection

With an Option ROM integrated with the system BIOS, the boot image can be RAID protected prior to loading the operating system mitigating corruption should a disk failure occur during the boot process.

Universal Management

RAIDCore runs on the latest chipsets from industry leaders AMD and Intel, as well as SATA/SAS controllers from LSI. This enables system builders and OEMs to offer a broad range of architectures and platforms to their customers, while only having to support RAIDCore. Similarly, customers using the supported motherboards can now combine all of those ports, eliminating the need for external HBAs. One RAID stack results in one interface to manage all RAID sets. No semiconductor supplier offers this level of flexibility.

■ MOTHERBOARD CORE LOGIC AND IOC CHIPSET SUPPORT

| | |
|--|--|
| Motherboard Core Logic Chipset Support | Intel ICH10R, Ibox Peak AMD SB700, SP5100 |
| Discrete SAS IOC Support | LSI 1068E |

■ RAID SUPPORT

| | |
|--------|----------|
| Levels | 0,1,5,10 |
|--------|----------|

■ DRIVE SUPPORT

| | |
|---|-----------|
| Drive support | SATA, SAS |
| Total drive support | Up to 8 |
| Multiple arrays per drive | 8 |
| Global and dedicated spare | Yes |
| Mixed capacity drives supported with 100% utilization of free space | |

■ DATA PROTECTION FEATURES

Touched region logging (TRL) to address RAID 5 write hole

■ MANAGEMENT

| | |
|---------------------------------------|-----|
| Software licensing control | Yes |
| O/S and pre-O/S BIOS level management | |

■ OPERATING SYSTEM SUPPORT

Windows Vista 32/64 bit
 Windows 7 64 bit
 Windows Server 2003 32/64 bit
 Windows 2008 Server 32/64 bit
 Windows 2008 R2 Server 64 bit
 Red Hat® Enterprise Linux 5.3 32/64 bit
 Red Hat® Enterprise Linux 5.4 32/64 bit
 SuSE® Linux Enterprise Server 10.3 32/64 bit
 SuSE® Linux Enterprise Server 11 32/64 bit
 Linux SDK Available

Specifications subject to change at any time.

Resources

PRODUCT INFORMATION

<http://www.dothill.com/products/data-protection-software/raidcore.htm>

AMD REFERENCE DESIGN INFORMATION

<http://www.dothill.com/amd-raidcore>

INTEROPERABILITY

<http://crc.dothill.com/>

PRESS RELEASES

<http://investors.dothill.com/releases.cfm>

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