

**hp** netRAID-1M  
product brief



**hp** netservers  
simply reliable



**performance**



## **hp netRAID-1M controller for hp netservers**

### **affordable RAID data protection**

Information technology professionals rely on HP NetRAID disk array controllers to ensure maximum server uptime and data protection across the enterprise. Now you can get high availability for a low price with the HP NetRAID-1M controller. Designed specifically to meet the needs of small to medium-sized businesses, the HP NetRAID-1M controller offers the latest technology and critical features to enhance your data protection.

### **flexible features and dependable results**

Because it shares common features and software with other HP NetRAID products, the HP NetRAID-1M controller can easily be deployed and managed across a range of servers. An intuitive, graphical user interface with a wizard feature simplifies setup and allows you to monitor and manage physical and logical drives, add capacity, and migrate RAID (redundant array of inexpensive disks) levels on the fly.

With today's networks growing up and out, it's good to know you can also manage the HP NetRAID-1M controller from a remote console. And, of course, like all HP Netserver products, this solution is backed with HP's world-class service and support to ensure your success.

### **leading the way with Ultra3 SCSI**

Ultra3 SCSI has been incorporated into the HP NetRAID-1M controller for greater speed and flexibility. Ultra3 SCSI doubles the maximum bus transfer rate to 160 MB/sec. The HP NetRAID-1M controller also supports hard drives and enclosures that use Ultra2 SCSI.

## features and benefits

### easy to manage

- Graphical user interface—easy, intuitive installation, array configuration, and monitoring<sup>1</sup>
- Integration with HP NetRAID Assistant—centralized event notification in a Microsoft® Windows® environment<sup>2</sup>
- Remote console monitoring for simplified management of all HP NetRAID adapters in Microsoft Windows NT®, Microsoft Windows 2000, and Novell NetWare servers<sup>3</sup>
- Configuration replication and storage on disks—prevents configuration loss in the event of array controller failure, and an external storage system can be easily moved to a new server for maximum uptime and data protection
- RAID levels 0, 1, 5, 10, 50—flexibility to maximize data storage performance under varied server uses
- Online capacity expansion and RAID level migration—so there is no need to back up and restore data to add capacity, and RAID levels can be changed quickly to keep up with changing requirements<sup>4</sup>
- Hot spare disk drives for completely unattended rebuild of failed drives
- On-board tone generator gives audible warning of disk status for prompt attention

### superior value

- Affordable solution for data protection on file and application servers with a small number of disk drives
- Priced for lean budgets

<sup>1</sup> Limited support for Linux

<sup>2</sup> Centralized event notification also available with HP NetRAID Monitor utilities for NetWare, SCO OpenServer and SCO UnixWare environments

<sup>3</sup> Remote console monitoring available for Novell NetWare from a Windows client

<sup>4</sup> Online capacity expansion only available in Microsoft Windows & Novell NetWare

## specifications

RAID levels supported	0, 1, 5, 10, and 50
SCSI connectors	One 68-pin, high-density internal connector; One 68-pin, very-high-density external connector
SCSI channels	One
Devices per SCSI channel	Up to 14
SCSI device types supported	Synchronous or asynchronous
SCSI bus	Single-ended or LVD
SCSI data transfer rate	Fast, Ultra, Ultra2, Ultra3
SCSI termination	SCSI active termination
Termination disable	Through jumper configuration
Card size	6.875" × 4.2" (half-length PCI)
Multiple cards	Up to six HP NetRAID family adapters (varies by server)
Bus type	PCI 2.1 (32-bit bus), 33 MHz
Bus data transfer rate	Up to 132 MB/sec
Processor	Intel® i960RM @ 100 MHz
Cache configuration	32 MB SDRAM
Nonvolatile RAM	32K × 8 to store RAID configuration
BIOS	HP NetRAID BIOS
Tone generator	Audible warnings indicate degraded drives, offline drives, and drive rebuilds
Warranty	1-year return to HP or system matching when installed in an HP Netserver

## supported operating systems

Microsoft Windows NT 4.0 and Windows 2000; Novell NetWare, 5.1, 6.0; SCO OpenServer 5.x; SCO UnixWare 7.x; and Red Hat Linux 7.0\*.

\* Only available on HP Server LP1000r and HP Server LP2000r

## supported servers

E200, E60, E800, tc2100, tc2110, tc3100, tc4100, LC3, LC2000, LH3, LH3000, LH4, LH6000, LPr, LP1000r, LP2000r, LT 6000r, LXr 8000, LXr 8500

## ordering information

description	product no.
HP NetRAID-1M controller	P3410A
HP internal Ultra3 SCSI Cable Kit, for use with various HP Netservers	P3469A
Cables used to connect the NetRAID-1M controller to external storage:	
HP Netserver Storage System/6	
– 2.5-meter SCSI cable, HD to VHD offset	D6020A
HP Netserver Rack Storage/8	
– 2.5-meter SCSI cable, HD to VHD offset	D6020A
HP Netserver Rack Storage/12	
– 1-meter SCSI cable, HD to VHD offset	D7131A
– 5-meter SCSI cable, HD to VHD offset	D6982A
– 10-meter SCSI cable, HD to VHD offset	D6983A
HP DiskSystem 2300 (ds2300)	
– 2-meter SCSI cable, VHDS68 M/M Multimedia	C2373A
– 5-meter SCSI cable, VHDS68 M/M Multimedia	C2374A
– 10-meter SCSI cable, VHDS68 M/M Multimedia	C2375A

## for the latest information

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