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MegaRAID Series 466
Frequently Asked Questions

Memory

Q1: What kind and size of cache memory can I use with the 466?
A1: 4, 8, 16, 32, 64, 128 MB - x36(parity) - 50/60/70 ns - 72 pin - Fast Page Mode or EDO SIMMS. X32 (non-parity) SIMMS are not supported or guaranteed to work with the 466. If the firmware version begins in the letter E, EDO is supported only. If the version begins in F, Fast Page only is supported. Reference page 35 the PCI RAID controller hardware manual.

Q2: Can I use any brand of memory with the 466?
A2: No. The only makes or brands confirmed for the 466 are PNY, SEC, and Tanisys.

Storage

Q1: The 466 uses the newer LVD(low voltage differential) disks, but does it work with the older types of SCSI disks properly as well as the new, including the older 50 pin disks?
A1: Yes, the 466 SCSI channels can be set to run disks in the SCSI Fast, Ultra, and Ultra-2 modes. A 50-68 pin connector adapter will be required for the 50 pin disks, as there are no 50 pin connectors on this controller. It is not recommended to mix the older and newer types of disks on the same channel, however.

Q2: The 466 is seeing 3 of one type of disk correctly in CTL-M, but not of another. The other disk(s) might not appear at all or cause the other disks to show as not responding. The disk has proven to work on another controller, so what can be the problem / conflict? What is the solution?
A2: The problem can be caused by improper termination setting on the disks or the MegaRAID. It also can be caused by SCSI queue command tagging, which can be disabled in the objects/physical drive menu in CTL-M. Also, a firmware upgrade may be the solution to this issue, again available from a support technician.

Q3: Can the older disks and the newer disks be used on the same channel / bus on the 466?
A3: Yes, but this will not produce optimal performance results. Also, it is recommended that slower devices such as CDROM and tape drives are placed on a separate channel from the newer high performance disks.

Other Devices/Components

Q1: What is the available and acceptable length for the external SCSI cables?
A1: 466 has been confirmed for external high density 68 pin connector cables 1 to 3 meters but can be up to 20 meters with the right enclosure, cables, and accessories (such as the AMI 436 bus extender device), although data transfer integrity is questionable beyond that

Features

Q1: How many channels/buses does 466 card support?
A1: The card supports 1 SCSI channel, has 1 external ultra high density connector, and also 1 high density internal connector. It is a single channel RAID card supporting 15 SCSI ID's.

Q2: The 466 is an I2O RAID controller. What does that mean, and how is that different from the 418, 428, and 434 RAID controllers?
A2: The 466 has the newer Intel RP technology processor, providing faster performance and throughput in operating systems in 2 ways. Unlike the older controllers, the RP combines the CPU /memory and the bridge (channel / bus control) features, and separates the 2 processes in the controllers to work simultaneously. I2O technology (or intelligent- input- output) that the 466 uses works with drivers in most newer operating systems, to increase performance by releasing the host bus adapter / controller (in this case the 466) of interrupt intense input-output (or IO). Memory interrupts used by drivers

and operating systems to perform tasks with hardware and software devices. This technology is also used with the 438, 431, 762, and the up-coming 64 bit RAID controllers. More information on I2O can be found on the I2OSIG.org web page, and Ziff Davis web page by running search term I2O.

Q3: How is the I2O feature then applied in the operating system? Why would I use it or not use it?
A3: Some of the newer operating systems such as NT 4, Netware 5, and the SCO operating systems now have available I2O OSM's (operating system modules), which address and use I2O devices. In the CTL-M of the MegaRAID under the objects/adapter menu, the HBA controller must be set as I2O, not mass storage, then the I2O OSM's can properly see and use the MegaRAID. The reason for using it, as described in FAQ 10, is that better performance will be possible while in the operating system. However, at this time AMI MegaRAID operating system utilities(such as Power Console) do not function under I2O mode and therefore will not access the MegaRAID. Only with the conventional drivers included with the controller do the utilities work.

Q4: What is meant by LVDS and Ultra2? Why and how should I use it?
A4: LVDS or low voltage differential SCSI, is a new SCSI bus technology that transmits data on 2 SCSI wires at once instead of 1, increasing data integrity, reducing signal noise and electro-magnetic interference on the SCSI bus and cable. It therefore increases the maximum possible unassisted cable length to 12 meters. Ultra2 SCSI, the new SCSI standard revision that comes from the LVD technology, allows or produces up to an 80 MB/s (megabytes per second) SCSI data transfer rate. This is twice as fast as the Ultra-Wide SCSI, which provides for up to 40 MB/s. Because the 466 was designed to take advantage of this technology to work with LVD SCSI disks and LVD enclosures, you can get far greater transfer speeds with LVD than Fast or Fast Wide technology.

Q5: How are logical drives / partitions / file systems created on arrays on the MegaRAID card configured in Unix? I seem to have a problem configuring MegaRAID logical drives in Unix.
A5: All RAIDs on the MegaRAID controller, from 0 to 50, do not register target IDs in Unix, only logical units or LUNs, and in Unix they always start at 0 per RAID controller. So, for example, if MegaRAID is the first seen controller on the system and if the boot disk is on the MegaRAID it will be on the first logical array, and the first logical array will be seen in Unix as c0t0d0s0, the second would be c0t0d1s0 (may vary, depending on make and version of Unix). That actually means first controller, target 0, first LUN, first slice or file system, and so on. CDROM drives and tape drives on the MegaRAID however, are configured with target ID in Unix.

Support

Q1: Are firmware/driver upgrades available for the 466?
A1: Yes. Driver sets are located on ftp.Megatrends.com /MegaRAID/drivers. Firmware is available from tech support upon discussion and request.

Q2: My MegaRAID card has another company name on it, such as Dell, ALR, etc, as well as AMI. Are support / firmware upgrades available for this MegaRAID card?
A2: There may be, but only from the OEM company. Only AMI exclusive products are supported by AMI tech support. Support for products by OEM (original equipment manufacturer) must be provided by the respective OEM, such as Dell, ALR, etc.

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