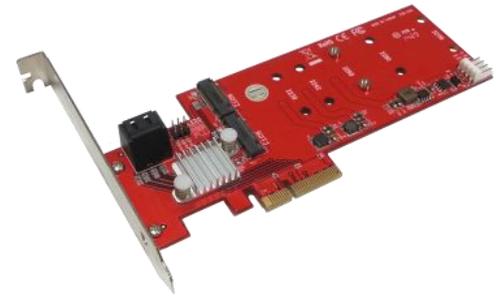
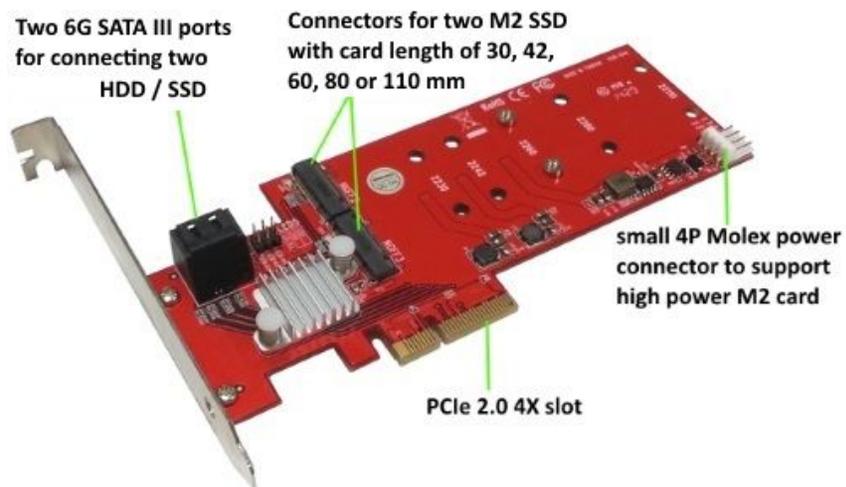


INTRODUCTION

This Dual Hyper HDD - M2 SSD Hybrid controller is a 2-port SATA III PCI-e host controller combined with two M2 (NGFF) SSD slots. It offers the benefits of high performance of a small capacity M2 SSD and the low cost, high-capacity of a standard hard drive. The controller can be configured to operate in either hybrid mode or standard mode. In Hybrid mode, the controller enhances the performance of any ordinary SATA hard drive by the faster speed of a M2 SSD (Solid State Drive). This significantly improves the boot up time of your system as well as the overall read/write performance of the hard drive, great for storage IO intensive applications such as gaming, video editing, CAD/CAM or high performance workstations. For more detail on how the hybrid mode operates and the benefit, please click on the following link to read the white paper from Marvell, the ASIC engine supplier for this controller.



In standard mode, the connected two M2 SSDs and the two SATA hard drives can be set up to operate as four individual drives or combined to form a RAID 0, RAID 1 or combined into a RAID 10 group. The two SATA ports are Port Multiplier compatible and is SATA III compliant with maximum throughput up to 6Gbps. When installed into a 2-Lane PCI-e (version 2.0 or higher) slot, this adapter offers a maximum band width of 1000 MB/sec. It is a simple economical solution to create a high performance bootable SSD using low cost M2 SSD for any Desktop, server or computing equipment



FEATURES

- Create a high performance SSD with throughput up to 1000 MB/sec
- Increase system overall performance by combining a small capacity high performance M2 (NGFF) SSD and a low-cost high-capacity hard drive
- Supported modes of operation:
- Hybrid Drive (HDD+SSD) mode: Safe Mode (Mirrored Protection) or Capacity Mode (Cost-Optimized)
Hybrid Drive mode enables 80 percent of the performance of a solid state drive (SSD) on any SATA hard drive at one-third the cost of SSD
- Standard mode : two Hardware RAID0, RAID1, one RAID10 or as four (4) individual drives
- Install into PCIe 4X slot
- Two M2 SSD sockets and two SATA ports
- Support M2 (NGFF) in length of 30, 42, 60, 80 and 110 mm
- Port Multiplier Compatible
- Maximum throughput up to 10 Gbps when installed into a 4-Lane PCIe 2.0 or 3.0 slot (the adapter electrically is a PCIe 2-Lane card)
- Hot swappable - drive can be removed and added without system shut down or restart **
- Native Command Queuing (NCQ) support
- Compatible with any SATA I, II or III hard drive
- Includes PCIe Low Profile and regular size two Brackets for installing into standard height or low profile system
- 2 LED pin header for drive activity
- Supported OS: any OS with built-in AHCI driver, Windows XP (driver required)
- All modern OSs such as Windows 7, 8, Mac OS 10.6 and later and the latest Linux kernel comes with AHCI support

*To achieve the maximum throughput, the PCI-Express slot must be version 2.0 or higher. Older system with PCI-Express 1.0 slot will limit the speed to 2.5 Gbps. In standard mode, performance per port may decrease under individual drive configuration if both ports are transferring data simultaneously due to the limited throughput of the PCI-Express slot. Please visit following web page for more information of ExpressCard v1.0 and v2.0 聽
http://en.wikipedia.org/wiki/PCI_Express

** Hot swapping hard drive has been tested on Windows OS only.

SPECIFICATIONS

- Two (2) 7-Pin SATA connectors and two (2) M2 sockets on board
- Mounting pole locations for installing M2 (NGFF) cards in length of 30, 42, 60, 80 and 110 mm
- Two 6 Gbps SATA III Ports PCIe Gen2, 4-Lane Host Adapter (electrically a 2-Lane card)
- PCIe 1.0 and PCIe 2.0 compatible
- Compliant with 5Gbps PCI Express 2.0
- Fully compliant with Serial ATA specifications 3.0
- Support SATA III transfer rate of 6.0Gbps, 3.0Gbps, 1.5Gbps
- Support Hybrid Drive (HDD+SSD), Hardware RAID0, RAID1 or RAID 10
- Hybrid Drive enables 80 percent of the performance of a solid state drive (SSD) at one-third the cost
- Hybrid Drive Modes: Safe Mode (Mirrored Protection), Capacity Mode (Cost-Optimized)
- Support ATA and ATAPI commands
- Support Native Command Queuing (NCQ)
- Support one Port Multiplier FIS-based or Command-based switching and max. two RAID groups
- Low Profile PCIe Form Factor
- Three Pin headers on board for LED connection
- Compatible with Windows 2000, Windows XP, 2003, Vista, Windows 7/8, 2008
- Dimension (not including PCI bracket): (W x L x H) ~ 55 mm x 167 mm x 16 mm (2.17 x 6.56 x .63 in)
- Weight: ~ 68g (2.40 oz)
- Operating temperature range: 0 °C to +60 °C
- Operating humidity range: 5% to 90%
- Storage temperature range: -40 °C to +75 °C
- Storage humidity range: 5% - 95% (non condensing)
- 1 year warranty
- RoHS Compliant