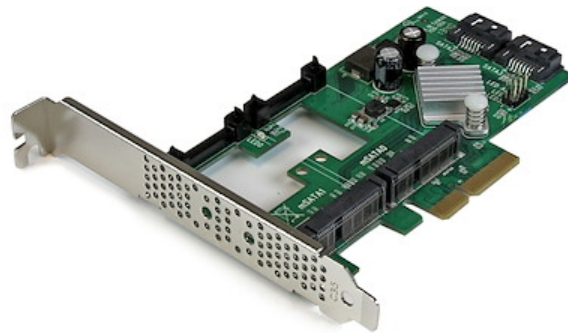2-Port PCI Express 2.0 SATA III 6Gbps RAID Controller Card with 2 mSATA Slots and HyperDuo SSD Tiering

Product ID: PEXMSATA3422

The PEXMSATA3422 PCI Express SATA Card helps you improve the overall speed and storage capacity of your computer by giving you multiple 6 Gbps SATA connections for connecting high-performance SSDs (Solid State Drives) and hard drives in a HyperDuo array. Now, you can easily add two mSATA slots and two SATA III ports to your computer through a single PCIe x4 slot.

Featuring HyperDuo technology, the SATA card offers SSD auto-tiering which lets you balance the performance advantages of SSD storage with the cost-effectiveness and large capacity of standard hard drives. By combining SSD and HDD drives into a single volume (up to 3 SSD + 1 HDD), HyperDuo discreetly works in the background to identify and move frequently accessed files to the faster SSD drive(s) for improved data throughput - up to 80% of SSD performance! (Note: The HyperDuo automatic storage tiering feature is compatible with computers that use a BIOS.)

This versatile RAID controller card helps to relieve the internal space constraints often associated with multi-drive configurations by letting you install two mSATA SSDs directly to the card via convenient, latching slots. With dual mSATA slots, as well as two internal SATA ports, the card offers an effective hardware RAID solution, with native RAID (0, 1) support.

The PCIe SATA controller also offers Port Multiplier (PM) support, so you can connect multiple SATA drives to just one port, for a total of 7 drives (up to 4 drives through PM on one port, plus a single drive to the other SATA port and two mSATA slots).

For added versatility, the controller card is equipped with a standard profile bracket and includes a low-profile/half-height bracket for installation in small form-factor computers.

Throughput Benchmark

Backed by a StarTech.com 2-year warranty and free lifetime technical support.

Certifications, Reports and Compatibility

Applications

• Use SSD tiering to optimize your system for I/O intensive applications such as office suites, photo/video editing and media players

• Install 2 internal SSDs directly to the card, for a simple and discreet solution that improves overall system performance

• Upgrade an older PCIe-based system to SATA 6Gbps capability, to better utilize faster SATA drives

• Provide optimized off-site back-ups/vaulting, through built-in RAID 1 capability

• Perfect for multi-drive internal RAID storage solutions

• Add more internal SATA ports to your computer, for connecting additional storage drives and/or optical drives

Features

• Supports HyperDuo SSD auto-tiering, merging SSD performance with HDD capacity

• 2 mSATA SSD slots and 2 AHCI SATA III (6 Gbps) ports through PCI Express

• Supports hardware RAID 0 and 1 modes

• Fully compliant with SATA 3.0 specifications and backward compatible with SATA I/II (1.5/3.0Gbps) drives

• Port Multiplier FIS-based and Command-based switching supported

• Compliant with PCI Express 2.0 standards

• Simple HyperDuo configuration via card BIOS or intuitive GUI console (Windows only)

• Supports TRIM command with compatible SSD and Operating System

• Supports Native Command Queuing (NCQ) and ATA/ATAPI commands

• On-board latching mSATA slots - SSD installation with no screws required

• Configured with standard profile bracket, low-profile/half-height bracket included

• Supports HDDs/SSDs/Optical/Blu-Ray drives

Hardware

Warranty	2 Years
Ports	2
Interface	Mini SATA

		SATA
	Bus Type	PCI Express
	Card Type	Standard Profile (LP bracket incl.)
	Port Style	Integrated on Card
	Industry Standards	Serial ATA 3.0 specification
		PCI Express 2.0
	Chipset ID	Marvell - 88SE9230

Performance

	Type and Rate	SATA III (6 Gbps)
	Port Multiplier	Yes
	Number of Ports That Support Port Multiplier	2 (can only use 1 PM at a time)
	Number of Drives Supported Through Port Multiplier	1 to 4
	Bootable	Yes
	LBA support	48-bit
	Hardware Raid Supported	Yes
	Supported RAID Modes	JBOD - (Just a Bunch of Disks)
		RAID 1 (Mirrored Disks)
		RAID 0 (Striped Disks)
	Max Drive Capacity	Currently tested up to 4TB per drive
	ATAPI Support	Yes

Connector(s)

	Connector Type(s)	PCI Express x4
	Internal Ports	mSATA (52 pin, Mini SATA) Slot
		SATA (7 pin, Data)

Software

	OS Compatibility	Windows XP, Vista, 7, 8, 8.1, 10, 11
		Windows Server 2003, 2008 R2, 2012, 2012 R2, 2016, 2019
		Mac OS 10.6 to 10.14
		Linux 3.5.x to 4.11.x <i>LTS versions only</i>
		Note: Connected drives cannot be used as System / Primary drive in Windows Server 2012, 2012 R2, 2016

Special Notes / Requirements

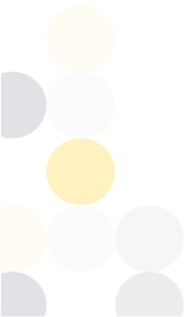|		
	System and Cable Requirements	Available PCI Express x4 slot (backward compatible with x8, and x16 slots
	Note	The maximum throughput of this card is limited by the bus interface. If used with PCI Express Gen 1.0 enabled computers, the max throughput is 2.5 Gbps per lane. If used with PCI Express Gen 2.0 enabled computers, the max throughput is 5 Gbps per lane. Only one port can use the Port Multiplier feature at a time. Supports up to 4 drives connected via Port Multiplier, 7 drives total. Port Multiplier not supported in Mac OS.
		The Marvell Storage Utility application requires macOS 10.9 to 10.14.

Environmental

	Operating Temperature	5C to 50C (41F to 122F)
	Storage Temperature	-25C to 70C (-13F to 158F)
	Humidity	20~80% RH

Physical Characteristics

	Color	Green
	Material	Steel
	Product Length	4.9 in [12.5 cm]
	Product Width	0.8 in [20.0 mm]
	Product Height	4.7 in [12.0 cm]
	Weight of Product	2.1 oz [60.0 g]

Packaging Information

	Package Length	6.9 in [17.4 cm]

Package Width	5.7 in [14.4 cm]
Package Height	1.3 in [32.0 mm]
Shipping (Package) Weight	5.6 oz [160.0 g]

What's in the Box

Included in Package	PCIe mSATA/SATA Controller Card
	Low Profile Bracket
	Driver CD
	Instruction Manual

*Product appearance and specifications are subject to change without notice.