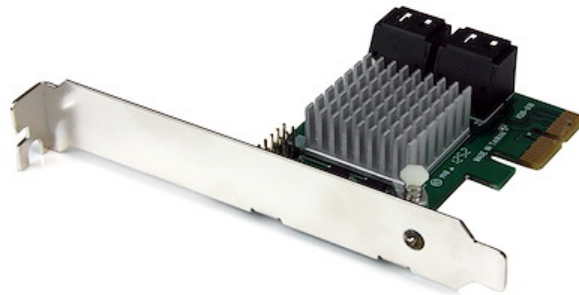4 Port PCI Express 2.0 SATA III 6Gbps RAID Controller Card with HyperDuo SSD Tiering

Product ID: PEXSAT34RH

The PEXSAT34RH 4-Port PCI Express 2.0 SATA Controller Card with HyperDuo adds 4 AHCI SATA III ports to a computer through a PCIe slot (x2), delivering multiple internal 6Gbps connections for high-performance hard drives and Solid State Drives (SSDs).

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.)

The PCIe SATA controller card supports Port Multiplier (PM), enabling multiple SATA drives to be connected to one port over a single cable, for a total of 7 drives (Up to 4 drives through PM on one port, and a single drive to the remaining 3 ports). Plus, the SATA controller card offers an effective hardware RAID solution, with native RAID (0, 1, 1+0) support.

Throughput Benchmark

This PCIe SATA 6gbps card is backed by a 2-year StarTech.com 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

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

• Add more internal SATA ports to a computer system, to connect additional storage drives and/or optical drives

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

• Perfect for multi-drive internal RAID storage solutions

Features

• Supports HyperDuo SSD auto-tiering

• 4 AHCI SATA III (6Gbps) ports through PCI Express x2

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

• Supports hardware RAID 0, 1, and 1+0 modes configured through BIOS

• Compliant with PCI Express 2.0 standards

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

• Natively supported single chipset design

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

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

• Includes Low Profile/Half-Height installation bracket

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

• LED headers for HDD activity LED indicators

Hardware

Warranty	2 Years
Ports	4
Interface	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	4 (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)
		RAID 10 (1+0, Striped set of Mirrored Subset)
	Max Drive Capacity	Currently tested up to 4TB per drive
	ATAPI Support	Yes
	Hot Swap Capability	Yes

Connector(s)

	Connector Type(s)	PCI Express x2
	Internal Ports	SATA (7 pin, Data)

Software

	OS Compatibility	Windows XP, Vista, 7, 8, 8.1, 10
		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>

Special Notes / Requirements

	System and Cable Requirements	Available PCI Express x2 slot (backward compatible with x4, x8, and x16 slots)
	Note	<p>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.</p> <p>Only one port can use the Port Multiplier feature at a time. Supports up to 4 drives connected via Port Multiplier, 7 drives total.</p><p>Port Multiplier not supported in Mac OS.</p><p>Note: Connected drives cannot be used as System / Primary drive in Windows Server 2012, 2012 R2, 2016<p> <p>The Marvell Storage Utility application requires macOS 10.9 to 10.14.<p>

Environmental

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

Physical Characteristics

	Material	Steel
	Product Length	2.8 in [70 mm]
	Product Width	4.7 in [12 cm]
	Product Height	0.8 in [20 mm]
	Weight of Product	1.7 oz [49 g]

Packaging Information

	Package Quantity	1
	Package Length	6.9 in [17.5 cm]
	Package Width	5.7 in [14.5 cm]
	Package Height	1.3 in [32 mm]
	Shipping (Package) Weight	5.0 oz [141 g]

What's in the

Box

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

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