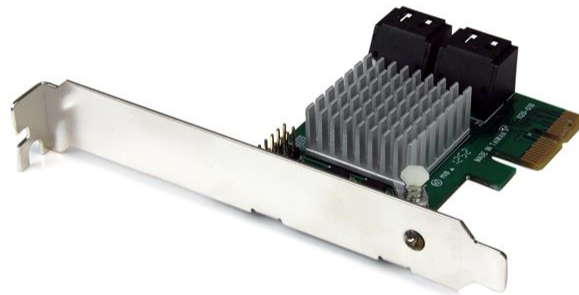


## 4 Port PCI Express 2.0 SATA III 6Gbps RAID Controller Card with HyperDuo SSD Tiering

**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.

<br />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**

- 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
- Use SSD tiering to optimize your system for I/O intensive applications such as Office Suites, Photo/Video Editing and Media Players

## Features

- 4 AHCI SATA III (6Gbps) ports through PCI Express x2
- Supports Native Command Queuing (NCQ) and ATA/ATAPI commands
- Port Multiplier FIS-based and Command-based switching supported
- Includes Low Profile/Half-Height installation bracket
- Supports hardware RAID 0, 1, and 1+0 modes configured through BIOS
- Fully compliant with SATA 3.0 specifications and backward compatible with SATA I/II (1.5/3.0Gbps) drives
- LED headers for HDD activity LED indicators
- Compliant with PCI Express 2.0 standards
- Supports HDDs/SSDs/Optical/Blu-Ray drives
- Natively supported single chipset design
- Supports HyperDuo SSD auto-tiering
- Simple HyperDuo configuration via card-BIOS level or intuitive GUI console (Windows only)

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### 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)<br>RAID 1 (Mirrored Disks)<br>RAID 10 (1+0, Striped set of Mirrored Subset)<br>RAID 0 (Striped Disks) |
| 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<br>Windows Server 2003, 2008 R2, 2012, 2012 R2, 2016<br>Mac OS 10.6 to 10.14<br>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>&lt;p&gt;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.&lt;/p&gt;</p> <p>&lt;p&gt;Only one port can use the Port Multiplier feature at a time. Supports up to 4 drives connected via Port Multiplier, 7 drives total.&lt;/p&gt;</p> <p>&lt;p&gt;Port Multiplier not supported in Mac OS.&lt;/p&gt;</p> <p>&lt;p&gt;Note: Connected drives cannot be used as System / Primary drive in Windows Server 2012, 2012 R2, 2016&lt;/p&gt;</p> <p>&lt;p&gt;The Marvell Storage Utility application requires macOS 10.9 to 10.14.&lt;/p&gt;</p> |

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## Environmental

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

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## 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]  |

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## 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]   |

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## What's in the



**Box**

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

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

