

## 8 Port PCI Express Low Profile Serial Adapter Card

PEX8S950LP



\*actual product may vary from photos

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This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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# Introduction

The PEX8S950LP 8 Port PCI Express Low Profile Serial Adapter Card with dongle cables included offers 8 RS 232 Serial connections via a single PCI Express slot, with data rates up to 921Kbps. Perfect for use with a broad variety of serial peripherals including printers, scanners, industrial controls and more.

A complete 8 port RS232 Serial card solution, the adapter includes 2 breakout cables – each with 4 DB9 connectors for a total of 8 ports. The perfect choice for adding several additional ports when space is at a premium, the serial adapter card is designed to fit in small/micro form factor computer cases. Plus, this versatile card also includes 2 standard profile brackets for compatibility with full size cases.

Backed by a StarTech.com Lifetime warranty and free lifetime technical support.

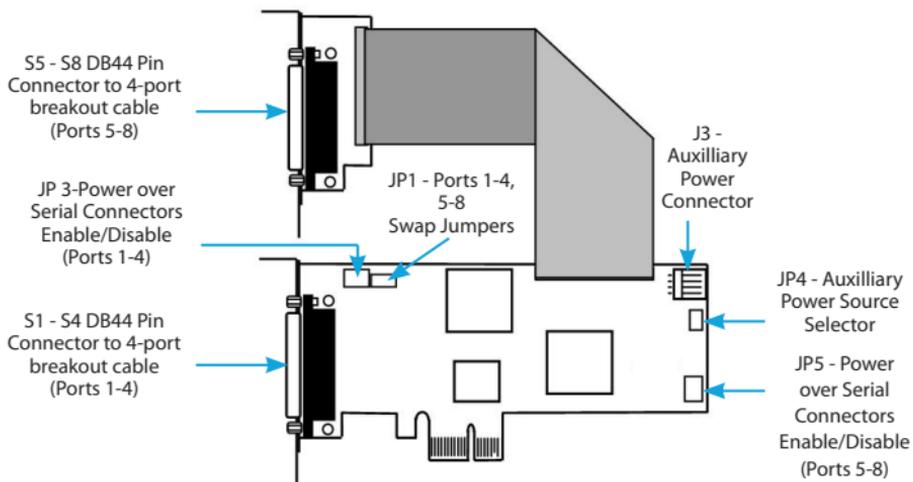
## Package Contents

- 8 Port PCI Express Serial Card
- 2x Breakout Cables
- 2x Standard Brackets
- 16 x Removable hex nuts
- Driver CD
- Instruction Manual

## System Requirements

- A PC with an available PCI Express slot
- Windows® 7 (32/64bit)/ Vista(32/64)/ XP(32/64)/ 2000/ 98SE/ CE 5.0 Windows® Server 2008 R2/ 2003(32/64) Linux 2.4.x/ 2.6.x

# Hardware Guide



**JP1 - COM Ports Swapping Selector** - Used to swap Serial Ports 1-4 and 5-8. Unless necessary, maintain default setting.

A0	● ●
A1	○ ○
B0	○ ○
B1	● ●

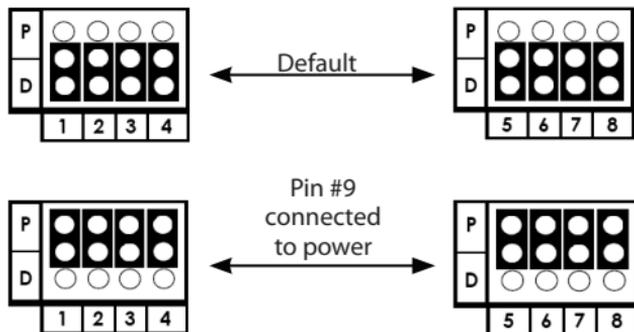
No Swapping. The COM ports will be mapped from S1 to S8 as normal.

The COM ports will be swapped as follows, where S designates the port number:

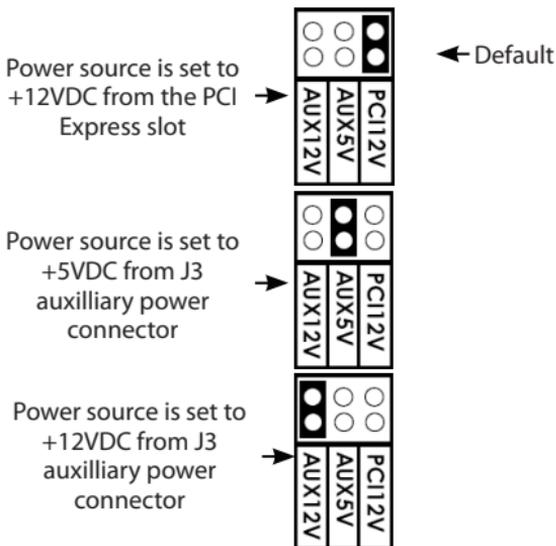
S1 ↔ S5  
 S2 ↔ S6  
 S3 ↔ S7  
 S4 ↔ S8

A0	○ ○
A1	● ●
B0	● ●
B1	○ ○

**JP3, JP5 - External Power Enable/Disable Selector** - JP3 is used to set pin #9 of DB9 connectors S1-S4 to either the RI (Ring Indicator Signals) or the 5V/12V DC Power (selected by JP4). JP5 performs the same function for DB9 connectors S5-S8. When the jumper is set to the “P” position, it will output the DC power over pin #9; if set to the “D” position, pin #9 will be connected to the normal RI signal, based on the RS232 standard.



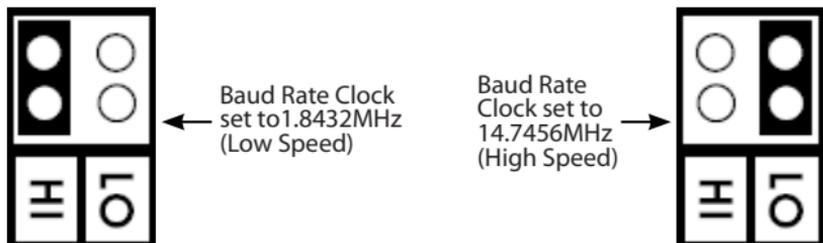
**JP4 - Power Source Selector** - Used to select DC power for pin #9 of the DB9 connectors. This can be set from PCI Express 12V or 12V (or 5V) from the 4-pin auxiliary power connector.



**JP2 - Baud Rate Selector** - Used to control the baud rate clock input of the UARTs. There are two positions:

**Lo (factory default)** - The clock is set to 1.8432MHz, with a maximum baud rate of 115.2Kbps.

**Hi** - The clock is set to 14.7456MHz, with a maximum baud rate of 921.6Kbps. Please see the section entitled **Configuration** for more information.



# Installation



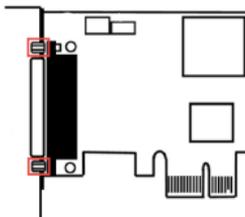
**WARNING!** PCI Express cards, like all computer equipment, can be severely damaged by static electricity. Be sure that you are properly grounded before opening your computer case or touching your card. StarTech.com recommends that you wear an anti-static strap when installing any computer component. If an anti-static strap is unavailable, discharge yourself of any static electricity build-up by touching a large grounded metal surface (such as the computer case) for several seconds. Also be careful to handle the card by its edges and not the gold connectors.

1. Turn OFF the computer power before installation.
2. Remove the chassis cover from your computer.
3. Locate an unused PCI Express slot and remove the corresponding slot cover from rear panel of the computer chassis. Retain the screw (if applicable) used to hold the slot cover in place.
4. Align the PCI Express card with the unused PCI Express expansion slot. Applying pressure evenly across the top edge of the expansion card, firmly but gently insert the card into the slot, ensuring that the card is properly aligned with the rear panel slot.
5. Secure the card to the motherboard and rear chassis using the screw removed in step 3 (if necessary). Secure the additional serial port provided by the daughter board (smaller circuit board to an adjacent rear bracket).
6. Replace the chassis cover (removed in step 2).
7. Connect the 4-port breakout (octopus) cables to the ports provided by PEX8S950LP.
8. Power on the computer. Once the computer has been rebooted, the operating system will detect that the PCI Express card has been installed and request driver installation, detailed in the next section.

## Using the Removable Hex Nuts

The removable hex nuts are use to secure the cable's connector to the DB44 pin connector on the PCI Express card. If the cable's connector has lock screws instead of nuts, the removable hex nuts can be installed on the PCI Express card instead of the hex screws which come pre-installed.

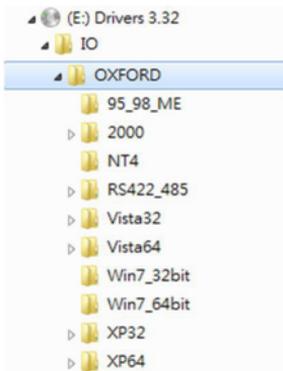
1. Unscrew the two hex screws located on either side of the DB44 pin connector on the PCI Express card.



2. Align the two hex nuts with the screw holes on either side of the DB44 pin connector.
3. Carefully tighten the hex nuts. Be careful not to over-tighten.

## Software Installation

To install the necessary drivers for use with PEX8S950LP, simply insert the Driver CD into the CD/DVD-ROM drive on the host computer, and follow the prompts provided by the operating system. When asked to specify the location of the files, please select Browse and guide the Hardware Wizard to the exact folder location where the driver is located. (E:\IO\OXFORD\NT4 folder where E: is the CD/DVD-ROM drive).



Allowing Windows to search for the file may result in the incorrect file being installed, as the Driver CD contains several versions of the necessary software. As such, please pay particular attention when designating the folder from which to install the driver files.

# Configuration

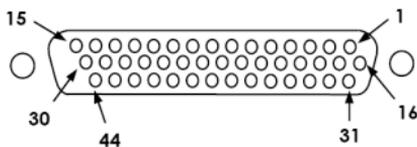
Once installation is complete, you will be able to configure the port(s) provided by the card, as you would any other serial port. To do so, click on **Start**, then right-click on **Manage** to open the Computer Management window.

1. In the left pane, click on Device Manager. Here, you should see two listings for PCI Communications Port as illustrated below.
2. Right-click on the first listing and select properties, to launch the PCI Communications Port Properties window.
3. Click on the Data Rate tab, and click on Detect Clock Frequency to automatically detect the port data transfer capability, then select OK.
4. Repeat steps 1-3 to configure the second added port.



# Specifications

## Connector Pin Assignments



Port 1		Port 2		Port 3		Port 4	
<b>42</b>	DCD1	<b>39</b>	DCD2	<b>35</b>	DCD3	<b>31</b>	DCD4
<b>14</b>	RXD1	<b>10</b>	RXD2	<b>6</b>	RXD3	<b>2</b>	RXD4
<b>13</b>	TXD1	<b>9</b>	TXD2	<b>5</b>	TXD3	<b>1</b>	TXD4
<b>29</b>	DTR1	<b>25</b>	DTR2	<b>21</b>	DTR3	<b>17</b>	DTR4
<b>44</b>	GND	<b>41</b>	GND	<b>37</b>	GND	<b>33</b>	GND
<b>30</b>	DSR1	<b>26</b>	DSR2	<b>22</b>	DSR3	<b>18</b>	DSR4
<b>15</b>	RTS1	<b>11</b>	RTS2	<b>7</b>	RTS3	<b>3</b>	RTS4
<b>28</b>	CTS1	<b>24</b>	CTS2	<b>20</b>	CTS3	<b>16</b>	CTS4
<b>43</b>	RI1(*)	<b>40</b>	RI2(*)	<b>36</b>	RI3(*)	<b>32</b>	RI4(*)

## General Specifications

Type	Specifications
Connectors	DB44 Female
Cables	DB44M-to-DB9MX4 Octopus type x2
Bus Interface	PCI Express x 1
Number of Ports	8
RS-232 Signals	TXD, RXD, RTS, CTS, DTR, DSR, DCD, GND
Baud Rate	110 bps to 921.6Kbps
Data Bits	5,6,7,8,9
Stop Bits	1, 1.5, 2
I/O address /IRQ	Plug-and-Play (various)
Parity	None, Even, Odd, 1, 0
Flow Control	RTS/CTS, XON/XOFF
Power Requirement	3.3V/800mA
Operating Temperature	0 to 55C(32 to 132F)
Operating Humidity	5 to 95% RH
Storage Temperature	-20 to 85C (-4 to 185F)
Chipset ID	Oxford OXMPCI9S2
OS Compatibility	Windows® 7 (32/64bit)/ Vista(32/64)/ XP(32/64)/ 2000/ 98SE/ CE 5.0 Windows® Server 2008 R2/ 2003(32/64) Linux 2.4.x/ 2.6.x

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