

PCI Express Parallel Communication Board



Introduction

This PCI Express parallel communication board meets the new interface standard for expansion board. It is compatible with PCI Express x1, x2, x4, x8, and x16 lane Bus, enabling this board to be installed in any PCI Express capable PC system. Majority of today's motherboard no longer come with parallel port, with PCI Express parallel board, users can add or expand 2 or 1 ports of IEEE1284 interface on their system, allowing them to connect their parallel devices. This board is the advanced and high efficient solution for commercial and industrial automation applications.

PCI Express is the next revolution in I/O interconnects standards that will deliver the bandwidth and features required by PCs, consumer electronics and communications devices. The architecture is a cost-effective, low-pin count, and point-to-point technologies offering maximum bandwidth, reducing cost and design complexity and enabling smaller form factors. Single-lane (or x1) PCI Express link has potential transfer rates of 2.5 Gbps by two pairs of wires connection. This differs from existent PCI Bus architectures that used a shared, parallel bus architectures.

Features

- Designed to meet PCI Express Base Specification Revision 1.1.
- Single-lane (or x1) PCI Express throughput up to 2.5 Gbps.
- Supports x1, x2, x4, x8, x16 (lane) PCI Express Bus connector keys.
- High speed SUN1888 Parallel controller on-board.
- Support IEEE 1284-1994 parallel port standard.
 - ECP(Enhance Capacity Port) / EPP(Enhance Parallel Port)
 - SPP(Standard Parallel Port) / BPP(Bi-direction Parallel Port)
- Certified by Microsoft WHQL, CE, FCC approval.
- Support Intel® and AMD® 32/64-bit system and Linux, Microsoft Windows OS.

Package List

Please check if the following items are present and in good condition upon opening your package. Contact your vendor if any item is damaged or missing.

- PCI Express Parallel Communication Board
- Parallel Cable with bracket (2 ports only)
- User's Manual and Software CD ROM
- Quick Installation Guide (this document)

Specification

Model	PCI Express Parallel Communication Board
Mode of Operation	ECP / EPP / SPP / BPP
Controller	SUN1888 IEEE1284 Compatible
Bus Interface	PCI Express x1 lane Bus
Number of Ports	1 or 2 DB25 Female LPT ports
Bracket	Standard 121 mm
IRQ & IO Address	Assigned by BIOS / O.S.
FIFO	32 byte hardware FIFO
Baud Rate	Maximum up to 2.7 Mbps
Pin Assignment	
Driver Support	Windows 2000 / XP / 2003 Linux 2.4.x, 2.6.x
Regulatory Approvals	CE, FCC / Microsoft WHQL
Environment	Operation Temperature: 0°C ~ 60°C Storage Temperature: -20°C ~ 85°C

Driver Installation

In order to ensure proper operation of your PCI-Express Parallel board, the driver will be in the CD bound with your product. You can specify the location (folder) as below:

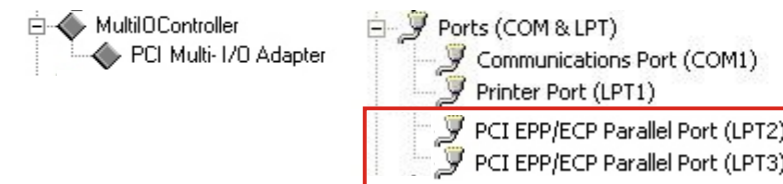
Operation System	Driver Location
Windows 2000 / XP / 2003	:IO\PCI IO\Win2K & XP & 2003\Setup.exe
Linux 2.4.x, 2.6.x	:IO\PCI IO\Linux\
User Manual	:IO\PCI IO\Manual\parallel.pdf

※ You can find the detail of the installation steps in the user manual.

Hardware Verity

Please launch the "Device Manager" to verify hardware installation correctly.

Start > Controller Panel > System > Device Manager



※The number of LPT ports will depend on what products you bought.

Port Setting

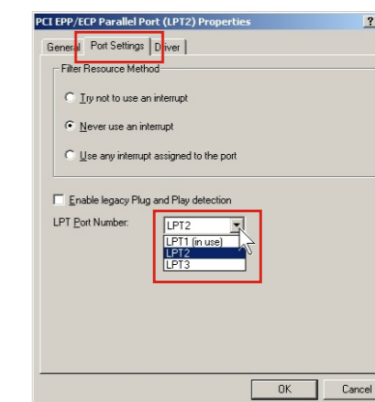
After installing PCI Express parallel board successfully, you can modify the setting for each parallel port in device manager.

1. Right click your mouse on the LPT port, and select "Properties".



2. Select "Port Setting" page to modify LPT (parallel) port setting.

3. Select LPT Port Number menu, you can modify LPT number as you need.



NOTE: Because of PCI-Express plug-n-play role, user can NOT specify LPT port to legacy ISA 278, 378, or 3BC address.

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● Troubleshooting

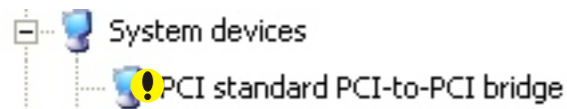
■ If the card and devices connected to the computer do not seem to be working properly, please perform following basic troubleshooting steps:

1. Check that all cables are correct and securely connected.
2. Make sure the devices are turned on.
3. Make sure the devices are getting the power they require.
4. If a powered repeater is connected, make sure it is turned on.
5. Make sure there is no problem with the card installation.

■ The computer can NOT detect the PCI Express parallel card

1. Make sure that the PCI Express cards is correctly plugged into the PCI Express slot; if not, turn off the computer and plug it in again
2. If the PCI Express card is plugged in correctly, see if the golden connectors on the card are clean; if not, clean the connector surface.
3. If still NOT, please change another PCI Express slot on your motherboard.
4. Please entry "Device Manager" affirming "PCI standard PCI-to-PCI bridge " message appears in the sub-tree of "System device".

Start > Controller Panel > System > Device Manager



If you can not find this information or exclamation mark shown on the PCI standard PCI-to-PCI bridge, please upgrade your motherboard BIOS to the latest version. If it still not work, contact your motherboard vendor asking the advanced supporting for BIOS updated.

■ There are some exclamation marks on PCI Multi-I/O adapter or LPT port in the device manager. PCI-E parallel card can not work properly.

1. It caused by the wrong driver installing or hardware settings. Please turn off your computer and re-install hardware and software again.
2. Please confirm the system note of exclamation mark. If system shows "there is no resource assigned to this device", please upgrade your motherboard BIOS to the latest version.

■ System fails to find the PCI Express parallel board or LPT port

It may cause by following issue:

- a. The board is not properly plugged into the PCI Express slot.
- b. Please clean the golden finger.
- c. The PCI Express slot may defective.
Please try other slots until you find one that works.
- d. The mainboard does not have available IRQ for the PCI or PCI Express serial board. Enter the PC's BIOS and make sure an IRQ setting is available in the PCI/PnP settings.
- e. The board itself might be defective. You can try another mainboard testing this board working or not.
- f. Please entry "Device Manager" affirming "PCI standard PCI-to-PCI bridge" message appears in the sub-tree of "System device". If not, please upgrade your motherboard BIOS to the latest version.

■ The PCI Express serial board cannot be detected by the attached driver while installing the driver.

It may cause by following issue:

- a. The board is not installed. Please install the board in an empty PCI-E slot.
- b. The board is not properly plugged into the system's PCI Express slot.
If that is the case, re-plug the board in a PCI Express slot. It may also be the case that the PCI Express slot is defective. In this case, try other PCI Express slots until you find one that works.

■ How can I select or configure between ECP, EPP, SPP, or BPP modes?

On Windows OS such as WinXP/2K/2003, PCI-E parallel board's LPT port will automatically communicate with the device to which it is connected and sets to that particular mode. For example if PCI-E parallel board is connected to a printer that support SPP mode, then this board will communicate with this printer and will automatically set to SPP mode. It means that this board will automatically handshakes with the device to which it is connected and configures to that mode. User does not require changing to any particular mode.

■ My parallel device can not work on PCI-Express parallel card's LPT port, but work properly when connecting on-board LPT port.

It caused by your parallel device problem, because your device only works under legacy ISA address. Due to PCI-Express plug-n-play rule, IRQ and I/O resource are all assigned by BIOS or system. Motherboard's LPT port can remap or to ISA 278, 378, or 3BC address, but PCI-Express Parallel can not. Please ask new driver for your parallel device.