

## INTRODUCTION

This Mini PCI-Express USB 3.0 Host Controller Card complies with the Universal Serial Bus 3.0 Specification Revision 1.0 and PCI Express Generation 2 specification. The Super Speed USB 3.0 standard, operating at 5 Gbps full-duplex mode, is 10 times faster than USB 2.0 High-Speed (480 Mbps) standard. The product is also backward compatible with current USB 2.0 devices running at High-Speed (480 Mbps), Full-Speed (12 Mbps), and Low-Speed (1.5 Mbps) modes. This product is an ideal choice for any Mini PCI-Express expandable embedded or micro system needing larger volume and higher speed data transfer connectivity with USB devices, such as external Hard Disk Drive, Solid State Drive (SSD), optical drive, high definition video camera, etc.

## FEATURES AND SPECIFICATION

### General

- Based on Renesas USB 3.0 Host Controller IC
- Compliant with Intel's Extensible Host Controller Interface (xHCI) Specification Revision 1.0
- Microsoft certified WHQL drivers for Windows XP 32-/64-bit, Windows Vista 32-/64-bit, Windows 7 32-/64-bit and Server 2008 R2 64-bit operating systems

### Mini PCI-Express Interface

- 1-Lane Mini PCI-Express 2.0 interface supports communication speed of 2.5Gbps and 5.0Gbps
- Compliant with PCI Express Base Specification 2.0
- Supports PCI-Bus Power Management Interface Specification Revision 1.2

### USB Interface

- Compliant with Universal Serial Bus 3.0 Specification Revision 1.0
- USB 3.0 Super-Speed (5 Gbps) host ports, backward compatible with USB 2.0 High-Speed (480Mbps), Full-Speed (12Mbps) and Low-Speed (1.5Mbps) interface
- Supports all USB compliant data transfer types (Control / Bulk / Interrupt / Isochronous)
- Supports all USB compliant peripherals (e.g. keyboard, mouse, monitor, joystick, etc.)
- Full support of real time dynamic insertion and removal of USB devices
- Internal FDD power connector for supplying +5V power to the USB ports

## PACKAGE CONTENTS

Please check whether the package contains following items. If any item is missing or damaged, please contact the retailer as soon as possible:

- Mini PCI-Express USB 3.0 Host Controller Card (x1)
- Driver CD (x1)
- User Manual (x1)
- Optional USB 3.0 Internal Connector to Dual USB 3.0 A-type Female Cable (x1)

## SYSTEM REQUIREMENT

- Motherboard with one available Mini PCI-Express 1.0 / 2.0 slot. Mini PCI Express 2.0 slot is highly recommended for fully utilizing the Super Speed USB 3.0 (5 Gbps) bandwidth.
- Supported operation system
- Optical drive for driver installation

#### WARNING

Before installing and activating this controller card, please make sure you have a complete backup of your existing data from your hard drives. Manufacturer is not responsible for data loss due to abuse, misuse, or neglect. Should you have any installation problem, please contact your dealer for assistance.

#### HARDWARE INSTALLATION

1. Turn off your computer and all external devices connected to it.
2. Disconnect your computer from the power sources.
3. Open the computer case. Refer to your computer user manual for more details.
4. Find an available mini PCI-Express 2.0 slot and remove the screw. Save the screw for later use.
5. Insert the controller card to the mini PCI-Express slot firmly and evenly. Take care not to force it into the slot. Once you have properly positioned the controller card into the slot, secure it with the screw you have just saved.
6. Connect USB 3.0 internal connector cable to USB 3.0 internal connector of the card;
7. To get power for USB devices, connect the power cable to the controller card from the power supply unit (PSU) of the computer.
8. Secure the computer case and switch on your computer.

#### DRIVER INSTALLATION

##### Installing Windows driver:

1. Insert the driver CD disc into the optical drive. Assume the optical drive letter is **D:**.
2. Go to the driver folder **D:\Renesas\wPD72020x\**
3. Double click on "**setup.exe**"
4. The Installation Wizard will guide you through the setup process. Follow the on-screen instruction until the installation is completed.

##### Verifying Driver Installation

To verify if the driver has been installed correctly, make sure the following items appear in the Universal Serial Bus Controllers category in the Windows Device Manager, and there is no yellow exclamation mark next to any of these items, then you have successfully installed the driver for the product.

Renesas Electronics USB 3.0 Host Controller  
Renesas Electronics USB 3.0 Root Hub

#### GETTING THE LATEST DRIVER, SOFTWARE & DOCUMENT

1. Visit <http://www.drivers-download.com>
2. In "Drivers Search" section, enter the Download code (DL code): **DL-0460101** to search for the latest driver, software and document

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