sunix.

USB2312

USB3.1 Enhanced SuperSpeed
Dual ports PCI Express Host Card
with Type-A Receptacle

Introduction

SUNIX USB2312 is a dual-port Super-Speed USB3.1 PCI Express Add-on card, and it's compliant with the PCI Express Generation 2 (Dual-lane x2) specification for host PC system. It works up to 10 Gbps for data transfer when connecting to USB 3.1 compliant peripherals, while maintaining compatibility with existing USB peripheral devices. USB3.1 performance is 2 times faster than USB3.0 and 20 times faster than USB2.0 connectivity. With SUNIX unique technology, it can output efficient power to USB device without additional power adapter connection. SUNIX USB2312 is an ideal choice for external storage devices, MP3 players, external writer, digital cameras, webcam, networking and video devices, and all other USB devices.

Features

■ PCI Express Base Specification Revision 2.0 dual-lane (x2) .

■ Compliant with Universal Serial Bus 3.1 specification Gen2.

■ Compliant with xHCI (eXtensible Host Controller Interface) specifications Revision 1.1.

■ Supports simultaneous operation of multiple USB 3.1, 3.0, USB 2.0 and USB 1.1 devices

■ Supports USB data transfer rate of 10G/5G/480/12/1.5 Mbps.

■ Expands dual external USB3.1 Super-Speed plus Type-A ports on the system.

■ Each USB port supplies maximum +5VDC / 900mA power output to USB device.

■ Built-in over current protection on each USB port.

■ Support device remote wakeup function from USB keyboard or mouse.

■ Hot-swapping feature allows connect/disconnect device without powering down the system.

■ Driver supports for Microsoft Windows 7, 8.x and 10 operation systems.

■ Certified by Electromagnetic Compatibility (CE, FCC, VCCI, C-Tick, BSMI) and RoHS approval.

Specifications

Hardware

BUS	PCI Express Spec 2.0, Dual-Lane (x2)
Controller	PCI Express USB3.1 Host controller, Asmedia ASM1142
USB Standard	eXtensible Host Controller Interface (xHCI) Rev1.1
IRQ & IO	Assigned by System

USB Communication

Interface	Universal Serial Bus 3.1 / 3.0 / 2.0 / 1.1
Speed	Super Speed+ (10Gpbs), Super Speed(5Gpbs) High Speed(480Mbps), Full Speed(12Mbps), Low Speed (1.5Mbps)
No. of Port	2-port
PCB Connector	USB3.1 USB Type-A port
Protection	±15KV IEC61000-4-2 Air Gap Discharge ±8KV IEC61000-4-2 Contact Discharge

Power

Source	PCIe Bus Power
Output Capacity	USB Type-A Port: +5VDC / Maximum 0.9A / each port Note: Total power output capacity will be limited by system power supply.
Over Current Protection	USB Type-A Port: +6VDC / 1.1A / each port / PTC Fuse
Power Consumption	1.1 W @ 3.3V (board only without power output to USB device)

Driver Support

Microsoft	Windows 7 (X86/X64) Windows 8.x / 10 (X86/X64) (Windows in-box driver)
Linux	Linux 2.6.31 or later (Linux OS already implemented USB3.0 driver)

Environment

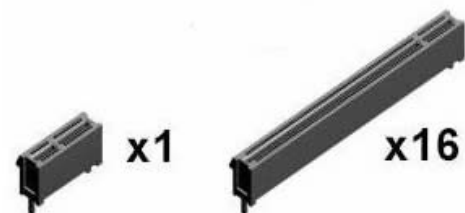| Operation Temperature	0 to 60°C (32 to 140°F)
Operation Humidity	5 to 95% RH
Storage Temperature	-20 to 70°C (-4 to 158°F)

Standards and Certifications

EMC	EUR: CE, EN55022 Class B, EN55024, EN61000-3-2, EN61000-3-3 US: FCC Part 15 Class B TAIWAN: BSMI: CNS13438 AS/NZS: C-Tick: CISPR22 JAPAN: VCCI
Green	RoHS, CRoHS, WEEE

Physical Characteristics

PCB Dimension	79.3 x 68.5 mm
Bracket	Standard 120 mm (Low Profile 80mm)
Bracket Space	1
Mechanical Drawings (unit: mm)	

Note:

To satisfy USB3.1 10Gb/s SuperSpeed+ highest performance, SUNIX USB2312 adopts the PCIe Gen2/x2 (10Gb/s) interface connector design. User has to plug USB2312 add-on card into PCIe x16 (or x4 above) slot on the mainboard, such as graphics add-on card adopting. Due to expansion slot mechanical limitation, this card can NOT be plugged into PCIe x1 slot. If user does not have available PCIe x16 on the mainboard, please pick SUNIX USB2312C (USB3.1 PCIe add-on card with 2-port USB Type-C Receptacle) that adopts PCIe Gen3/x1 (8Gb/s) interface connector design.

Package

- USB2312 - 2-port USB3.1 PCIe Host Card with Type-A Receptacle
- CD Driver
- User's Manual

Product Family

- USB2311C - USB3.1 PCIe Host Card with 1-port USB Type-C Receptacle
- USB2312C - USB3.1 PCIe Host Card with 2-port USB Type-C Receptacle
- USB2302C - USB3.0 PCIe Host Card with 2-port USB Type-C Receptacle
- USB2311CD - USB3.1 & DisplayPort (Alt -Mode) PCIe Host Card with USB Type-C Receptacle