

# USB2312C

USB3.1 Enhanced SuperSpeed  
2 port PCI Express Host Card  
with Type-C Receptacle



## Introduction

SUNIX USB2312C is a 2 port Super-Speed USB3.1 PCI Express card, and it's compliant with the PCI Express Generation 3 specification for host PC system. Based on USB Type-C pure DFP (Downstream Facing Port) mode, 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 USB Type-C Receptacle, SUNIX USB2312C sports reversible plug orientation and cable direction, which means that users will no longer need to be concerned with plug orientation/cable direction, making it easier to plug in. The new connector is smaller and thinner design, but drive higher power output capacity to USB device. SUNIX USB2312C supports 5VDC@1.5A power output to USB device with over current protection on each USB port. This card is an ideal choice for external storage devices, digital cameras, webcam, video devices, and all other USB electronic devices.

## Features

- PCI Express Base Specification Revision 3.0 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 single external USB3.1 Super-Speed plus Type-C port (DFP) on the system.
- USB port supplies maximum +5VDC / 1.5A power output to USB device.
- Built-in over current protection on each USB port.
- 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, BSMI) and RoHS approval.
- Green Product meets RoHS standard and Low Power consumption.

## Specifications

### Hardware

<b>BUS</b>	PCI Express Spec 3.0, Dual-Lane (x2)
<b>Controller</b>	PCI Express USB3.1 Host controller, ASM3142
<b>USB Standard</b>	eXtensible Host Controller Interface (xHCI) Rev1.1
<b>IRQ &amp; IO</b>	Assigned by System

### USB Communication

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

### Power

<b>Source</b>	PCI Express bus power
<b>Output Capacity</b>	USB Type-C Port: +5VDC / 1.5A Note: * USB Power Delivery Protocol does NOT support. * Built-in over current protection on each USB port. * Maximum total power output depends on the capacity of user's power supply unit
<b>Power Consumption</b>	1.1 W @ 3.3V (board only without power output to USB device)

### Driver Support

<b>Microsoft</b>	Windows 7 (X86/X64) Windows 8.x / 10 (X86/X64) (Windows in-box driver)
<b>Linux</b>	Linux 4.6 or later

### Environment

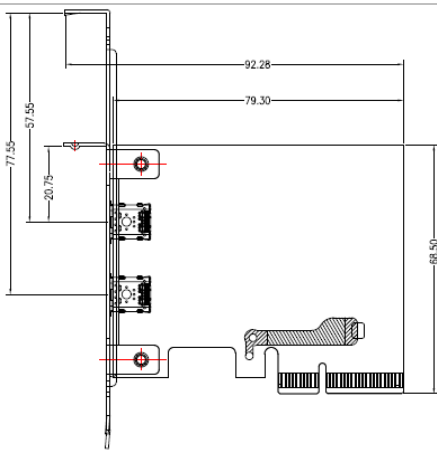
<b>Operation Temperature</b>	0 to 60°C (32 to 140°F)
<b>Operation Humidity</b>	5 to 95% RH
<b>Storage Temperature</b>	-20 to 70°C (-4 to 158°F)

### Standards and Certifications

<b>EMC</b>	CE, FCC, VCCI, BSMI
<b>Green</b>	RoHS, CRoHS, WEEE

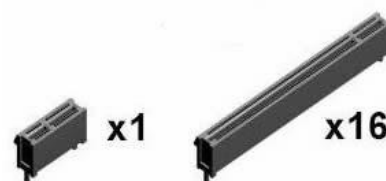
### Physical Characteristics

<b>PCB Dimension</b>	80 x 68.5 mm
<b>Bracket</b>	Standard 120 mm (Low Profile 80mm)

<b>Bracket Space</b> <b>Mechanical Drawings</b> <b>(unit: mm)</b>	<p>1</p> 
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<Note>:

To satisfy USB3.1 10Gb/s SuperSpeed+ highest performance, USB2312C adopts the PCIe Gen3x2 or Gen2x2 interface connector design to support full-power performances (10Gb/s). User has to plug USB2312C add-on card into PCIe x16 (or x4 above) slot on the mainboard, such as graphics add-on card adopting.



## Package

- USB2312C - 2-port USB3.1 PCIe Host Card with Type-C Receptacle
- User's Manual

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