

USB2311C

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



Introduction

SUNIX USB2311C is a single-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 USB2311C 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 USB2311C supports 5VDC@3000mA 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 single-lane (x1) .
- 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 / 3000mA 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 3.0, Single-Lane (x1)
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	1-port
PCB Connector	USB3.1 USB Type-C port (Downstream Facing Port)
Protection	±15KV IEC61000-4-2 Air Gap Discharge ±8KV IEC61000-4-2 Contact Discharge

Power

Source	+5VDC / SATA Power Connector Type
Output Capacity	USB Type-C Port: +5VDC / 3.0A / each port Note: Total power output capacity will be limited by system power supply.
Over Current Protection	USB Type-C Port: +5VDC / 3.7A / each port / Power Switch
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)

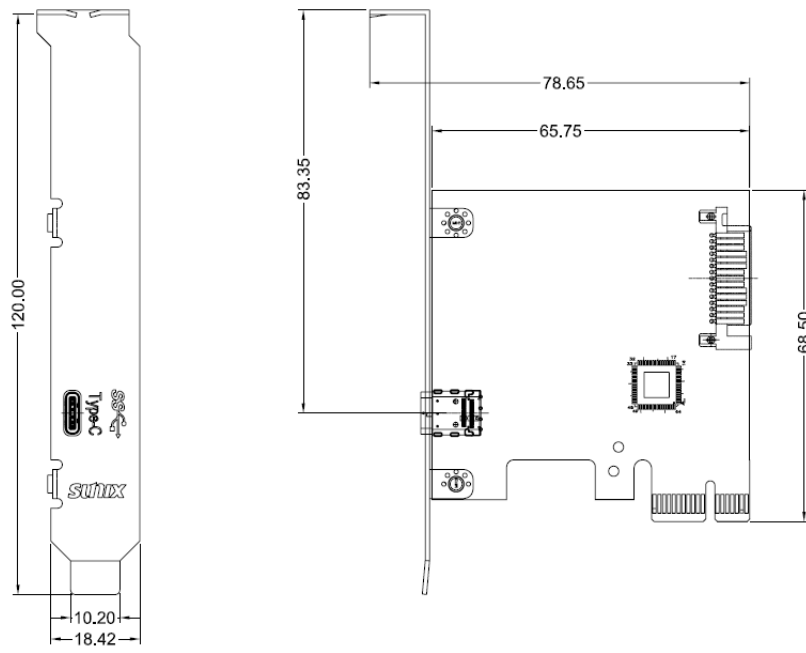
Environment

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

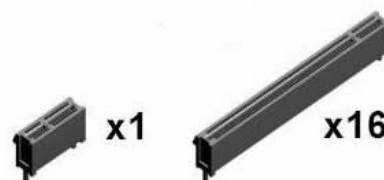
Physical Characteristics

PCB Dimension	65.75 x 68.5 mm
Bracket	Standard 120 mm (Low Profile 80mm)
Bracket Space	1
Mechanical Drawings (unit: mm)	

<Note>:

To comply with status of most motherboard's available PCIe x1 expansion slot, USB2312C adopts the PCIe Gen3/x1 (8Gb/s) interface connector design. However, most PC system does not support PCIe Gen3 specification, but only PCIe Gen2x1 (5Gb/s) performance. So that SUNIX USB2312C could not sport full-power performances (10Gb/s). Please contact with your PC vendor for system detail information.

To satisfy USB3.1 10Gb/s SuperSpeed+ highest performance, please pick SUNIX USB2312 (USB3.1 PCIe add-on card with 2-port USB Type-A Receptacle) that adopts 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.



Package

- USB2311C - 1-port USB3.1 PCIe Host Card with Type-C Receptacle
- CD Driver
- User's Manual

Optional Accessory

- C2UCU00 - USB Type-C (Male) to Type-A (Female) Dongle

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
- USB2312 - USB3.1 PCIe Host Card with 2-port USB Type-A 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

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