

PCIe-U300 Series

4/8/12-ch PCI Express x4 Gen2 USB3 Vision Top Performing Frame Grabbers

Features

- PCI Express x4 Gen2 compliant
- Compliant with USB 3.1 Gen 1 (identical to USB 3.0)
- Host Controller, Fresco FL1100
- 4/8 USB Type-A external ports (PCIe-U304/U308)
- 4 additional internal USB 3.0 ports by pin headers (PCIe-U312 only)
- Up to 20W USB power from PCIe bus (default)
- Up to 60W USB power supported by 4-pin Molex power connector
- Up to 1500mA max. current per port
- Multiple cards, multiple cameras in a single system
- Easy-to-use API provided for software-programmable per-port power on/off



Introduction

ADLINK's PCIe-U300 Series is a PCI Express x4 Gen2 USB3 Vision frame grabber supporting 4/8/12 USB 3.1 Gen 1 ports for multiple USB3 Vision device connections with data transfer up to 5 Gb/s per port.

The PCIe-U300 Series supports 5V and up to max. 1500mA current per port for external USB3 Vision industrial cameras. To guarantee industrial-grade high-bandwidth performance for each port, four independent Fresco FL1100 USB 3.1 Gen 1 host controllers with PCI Express x4 Gen2 interface allow each USB port to provide up to 5Gbps bandwidth when operating four ports simultaneously. It also supports software-programmable per-port power on/off control for fault recovery operations.

ADLINK's PCIe-U300 Series provides excellent capability to interface with USB 3.0 devices for machine vision, factory automation, quality assurance, logistics, medicine, and security and traffic surveillance applications.

Software Support

- **OS Information**
Windows® 7/10, Linux
- **Software Compatibility**
C#/VB.NET/VC++

Ordering Information

- **PCIe-U304**
4-ch PCI Express x4 Gen2 USB3 Vision frame grabber
- **PCIe-U308**
8-ch PCI Express x4 Gen2 USB3 Vision frame grabber
- **PCIe-U312**
12-ch PCI Express x4 Gen2 USB3 Vision frame grabber

Optional Accessories

- **CB-USB3-A/microB-3LS**
USB 3.0 cable, 3 meters with locking screws
- **CB-USB5-A/microB-5LS**
USB 3.0 cable, 5 meters with locking screws

Specifications

	PCIe-U304	PCIe-U308	PCIe-U312	
PCI Express Specification	4-lane PCI Express Gen 2.1 (5 GT/s), 1 slot			
Differential Output Peak to Peak Voltage	+0.8 V to +1.2 V			
Differential Input Peak to Peak Voltage	+0.175 V to +1.2 V			
Input voltage for PERST#, WAKE#, and SMBus	-0.75 V to +4.05 V			
USB				
USB Port Number (on Bracket)	4	8	12 (4 via extension)	
USB Port Connector (on Bracket)	USB Type A Connector			
USB Host Controller	4 x Fresco FL1100 Host Controller			
	Compliant with USB 3.0 Specification and Intel® xHCI Specification, Revision 1.0			
Data Transfer Rate	SuperSpeed (5.0 Gbps), High Speed (480.0 Mbps) Full Speed (12.0 Mbps), Low Speed (1.5 Mbps)			
USB Power				
Output Voltage (at PSE)	5V ± 5%		5V of 4-Pin cable minus 0.25V	
Current Limit Range (Per Port)	1700 mA ± 7%		Port 1-8: 1700 mA ± 7% Port 9-12: 1100 mA ± 7%	
USB Power Management	Software-programmable per-port power on/off			
	Voltage, current overload and short circuit protection			
PCBA max. Power Requirement w/o USB Power Delivery	+3.3V 2A, +12V @ 0.1A			
USB Power Delivery Capacity (at PSE)	PCIe Slot only w/o 4-pin Molex Connector	Max. 20W USB Power		4-pin Molex connector req'd for extension ports
	PCIe Slot w/ 4-pin Molex Connector	Max. 30W USB Power	Max. 60W USB Power	Max. 78W USB Power
Physical				
Dimensions (W x L)	167.65 mm x 111.15 mm (6.59" x 4.37")			
Operating Temperature	0°C to 60°C (32°F to 140°F)			
Humidity	5% to 90% RHNC			
Storage Temperature	-40°C to 85°C (-40°F to 185°F)			
Safety Compliance	CE/FCC, Class A			