ADLINK
Leading EDGE COMPUTING

PXIe-3987/3977/3937

3U 7th Generation Intel® Core™ i7/i5/i3 Processor based PXI Express Gen3 Controller with 16GB/s System Bandwidth Capability

Features

- 7th Generation Intel® Core™ i7/i5/i3 Processors (Kaby Lake)
- Up to 32 GB Dual Channel DDR4 at 2133/2400 MHz (supports non-ECC memory)
- Maximum system throughput up to 16 GB/s by PCI Express 3.0 Bus
- Supports four links x4 or two links x8 PXI Express link capability to PXI express chassis
- 240GB (or greater) SSD / 500GB (or greater) HDD
- Dual GbE, Four USB 2.0, Dual USB 3.0, GPIB (IEEE488) controller
- Dual DisplayPort connectors, one RS-232/422/485 D-SUB9 connector
- Trigger I/O for advanced PXI trigger functions

Introduction

The ADLINK PXIe-3987/3977/3937 PXI Express embedded controller, based on the 7th gen Intel® Core™ i7/i5/i3 processor, is specifically designed for hybrid PXI Express-based testing systems, delivering maximum computing power for a wide variety of testing and measurement applications.

Combining state-of-the-art 7th Generation Intel® Core™ i7/i5/i3 processor and up to 32 GB of 2400 MHz DDR4 memory, the PXIe-3987/3977/3937 utilizes separate computing engines on a single processor, enabling execution of numerous independent tasks simultaneously in a multi-tasking environment. With a auto configure PCIe switch, the PXIe-3987/3977/3937 can support four links x4 or two links x8 PXI Express link capability, with maximum system throughput up to 16 GB/s by PCI Express 3.0 bus.

The ADLINK PXIe-3987/3977/3937 provides ample interface flexibility, including two DisplayPort connectors, allowing connection to two monitors, dual USB 3.0 connections for high speed peripheral devices, dual Gigabit Ethernet ports, with one for LAN connection and the other for controlling LXI instruments, four USB 2.0 ports for peripheral devices and USB instrument control, and a Micro-D GPIB connector for GPIB instrument connection, for hybrid PXI-based testing systems control.

Ordering Information

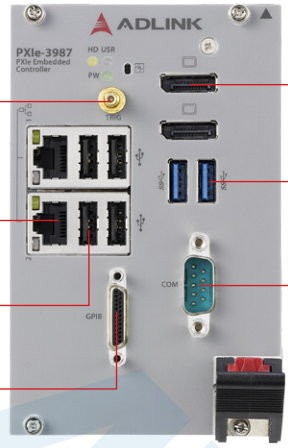
- **PXIe-3987/M8G/SSD**
  3U PXI Intel® Core™ i7-7820EQ 3.0GHz system controller with 8 GB memory & 240 GB SSD
- **PXIe-3987/M16G/SSD**
  3U PXI Intel® Core™ i7-7820EQ 3.0GHz system controller with 16 GB memory & 240 GB SSD
- **PXIe-3977/M8G/SSD**
  3U PXI Intel® Core™ i5-7440EQ 2.9 GHz system controller with 8 GB memory & 240 GB SSD
- **PXIe-3937**
  3U PXI Intel® Core™ i3-7100E 2.9GHz system controller with 4 GB memory & 500 GB HDD

Accessory

- **ACL-IEEE488-MD1-A**
  25-pin Micro-D to GPIB cable, 1M
- **DisplayPort to VGA cable**
  Displayport (Plug) to D-DUB 15PIN (F) cable, 150mm
- **DisplayPort to DVI cable**
  Displayport (Plug) to DVI (F) cable, 150mm
- **DisplayPort to HDMI cable**
  Displayport (Plug) to HDMI (F) cable, 150mm

*One DisplayPort to DVI cable ships with the ADLINK PXIe-3987/3977/3937 unit

Product Illustration



Trigger I/O to route trigger to/ from PXI trigger bus

Dual GbE ports (one for LAN connectivity and one for LXI instrument control)

Four USB 2.0 ports for peripheral devices and USB instrument control

Micro-D GPIB connector for GPIB instrument control

Dual DisplayPort for various connection types

Dual USB 3.0 connections for high speed peripheral devices

RS-232/422/485 D-SUB9 connector

Specifications

Model Name	PXIe-3987	PXIe-3977	PXIe-3937
Core Features			
CPU	Intel® Core™ i7-7820EQ 3.0GHz (Turbo 3.7GHz)	Intel® Core™ i5-7440EQ 2.9GHz (Turbo 3.6GHz)	Intel® Core™ i3-7100E 2.9GHz
DMI	DMI 3.0 8GT/s		
Chipset	Mobile Intel® QM175		Mobile Intel® HM175
Memory	Up to 32 GB dual channel DDR4 at 2133/2400 MHz (supports non-ECC memory)		
Display			
DisplayPort	3840 x 2160 @60Hz DisplayPort adapters to other standards are available, w/ max. resolution dependent on adapter		
PXI Express Chassis I/O			
Bus	PCI Express 3.0 (back compatible with 2.x and 1.x)		
System Bandwidth	Up to 16GB/s		
PXIe Link Configuration	2 Link Mode : x8 x8 4 Link Mode : x4 x4 x4 x4		
I/O Connectivity			
Storage	One SATA 6.0 Gb/s port with a 2.5" SATA SSD/HDD bracket		
Ethernet	Intel® Ethernet controller I219-LM, I210		Intel® Ethernet controller I219-V, I210
USB	2 x USB 3.0 and 4 x USB 2.0, front-mounted		
GPIB	Onboard IEEE488 GPIB controller Micro-D 25-pin connector, front-mounted (ACL-IEEE488-MD1-A cable required)		
Trigger I/O	SMB connector, front-mounted, to route an external trigger signal to/from PXI trigger bus		
Mechanical and Environmental			
Dimensions	3U/4-slot PXI standard		
Slot Requirements	1 system slot plus 3 controller expansion slots		
Weight	1 kg (2.2 lbs)		
Operating Temp.	0°C to 55°C (32˚F to 131˚F) (w/ SSD) 0°C to 50°C (32˚F to 122˚F) (w/ HDD)		
Storage Temp.	-20°C to 70°C (-4˚F to 158˚F)		
Relative Humidity	5% to 95%, non-condensing		
Shock	30 G, half-sine, 11 ms pulse duration		
Vibration	Operating: 5 to 500 Hz, 0.21 GRMS, 3 axes Non-operating: 5 to 500 Hz, 2.46 GRMS, 3 axes		
Emissions Compliance	EEN 61326-1, FCC Class B	EN 61326-1, FCC Class A	
CE Compliance	Immunity: EN 61326-1		
Operating System	Windows 10 64bit		

PXIe-3987/3977/3937 Block Diagram