# 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.



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## Ordering Information

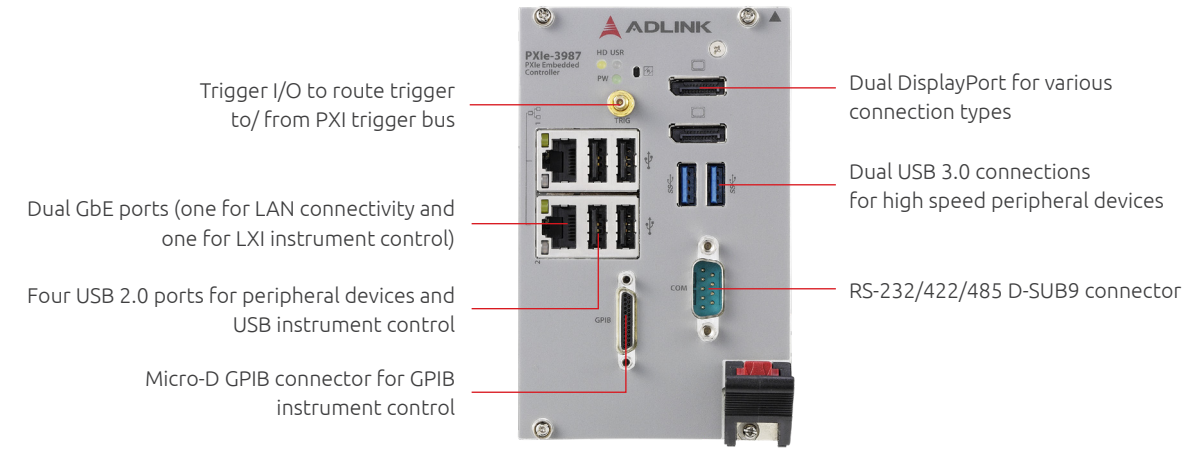
- **PXIe-3987/M8G/SSD**
  3U PXI Intel® Core™ i7-7820EQ 3.0GHz system controller with 8 GB memory & 240 GB SSD
- **PXIe-3987/M16G/SSD**
  3U PXI Intel® Core™ i7-7820EQ 3.0GHz system controller with 16 GB memory & 240 GB SSD
- **PXIe-3977/M8G/SSD**
  3U PXI Intel® Core™ i5-7440EQ 2.9 GHz system controller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

## Accessories

- **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






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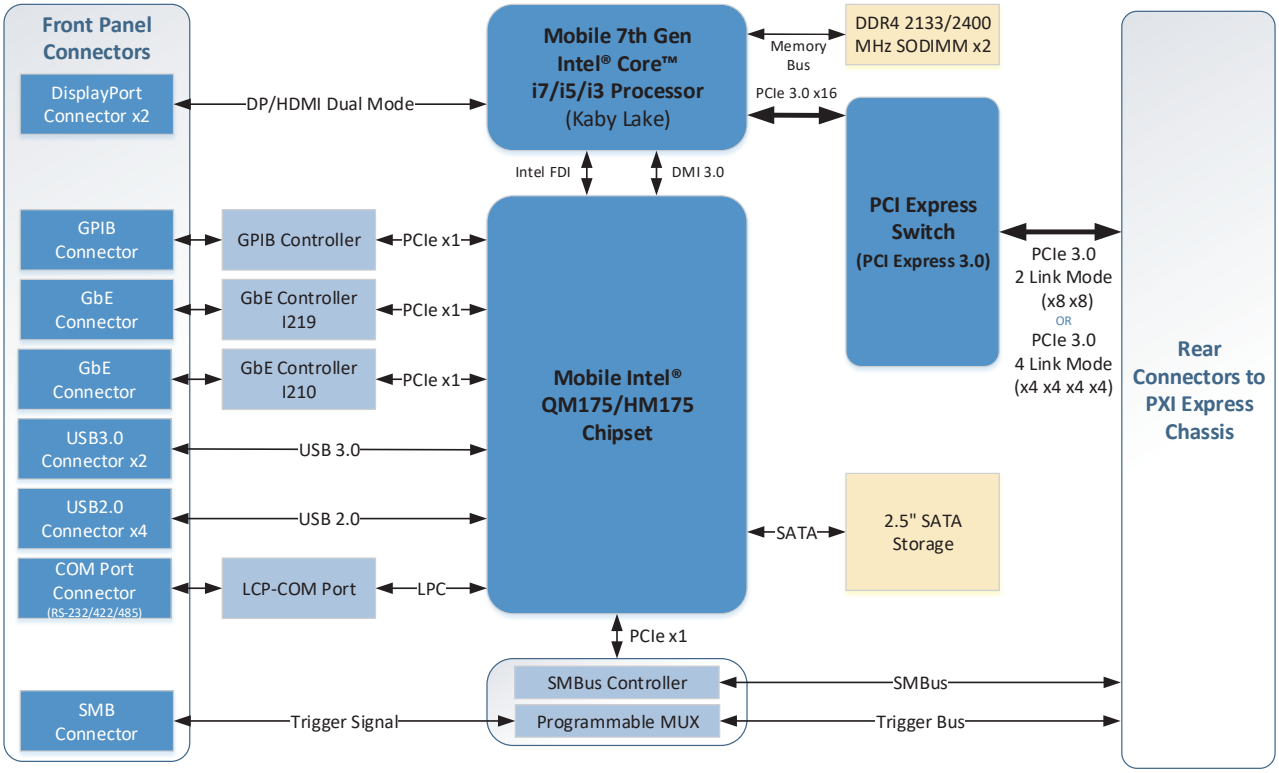
## Specifications

| 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<br>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<br>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 | 2x USB 3.0 and 4x USB 2.0, front-mounted | | |
| GPIB | Onboard IEEE488 GPIB controller<br>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)<br>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<br>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 | | |



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## PXIe-3987/3977/3937 Block Diagram




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