

# PXle-3987

## 3U Intel® Core™ i7-7820EQ Quad-Core Processor-based PXI Express Gen3 Controller with 16GB/s System Bandwidth Capability

### Features

- Intel® Core™ i7-7820EQ 3.0 GHz 14nm processor, 3.7 GHz maximum in single-core, Turbo Boost mode
- 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 x16 + x8 PXI Express link capability to PXI express chassis
- 240GB (or greater) SSD
- 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 PXle-3987 PXI Express embedded controller, based on the 7th gen Intel® Core™ i7 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 3.0GHz quad-core Intel® Core™ i7-7820EQ processors (3.7GHz maximum in single-core, Turbo Boost mode), and up to 32 GB of 2400 MHz DDR4 memory, the PXle-3987 utilizes four separate computing engines on a single processor, enabling execution of numerous independent tasks simultaneously in a multi-tasking environment. With a configurable PCIe switch, the PXle-3987 can support four links x4 or two links x16 and x8 PXI Express link capability, with maximum system throughput up to 16 GB/s by PCI Express 3.0 bus.

The ADLINK PXle-3987 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

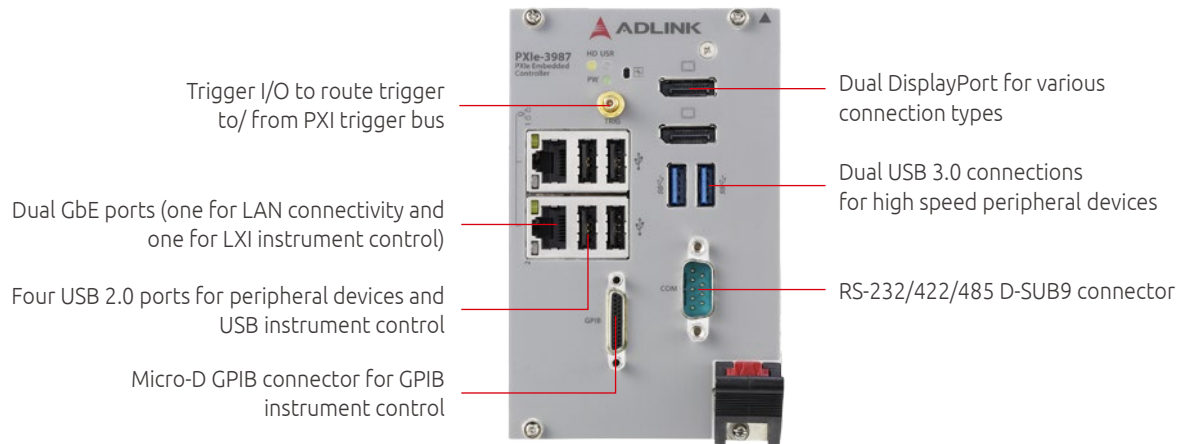
- **PXle-3987/M8G/SSD**  
3U PXI Intel® Core™ i7-7820EQ 3.0GHz system controller with 8 GB memory & 240 GB SSD
- **PXle-3987/M16G/SSD**  
3U PXI Intel® Core™ i7-7820EQ 3.0GHz system controller with 16 GB memory & 240 GB SSD

### 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 PXle-3987 unit

## Product Illustration



## Specifications

Model Name	PXIe-3987
<b>Core Features</b>	
CPU	Intel® Core™ i7-7820EQ 3.0GHz (Turbo 3.7GHz)
DMI	DMI 3.0 8GT/s
Chipset	Mobile Intel® QM175
Memory	Up to 32 GB dual channel DDR4 at 2133/2400 MHz (supports non-ECC memory)
<b>Display</b>	
DisplayPort	3840 x 2160 @60Hz DisplayPort adapters to other standards are available, w/ max. resolution dependent on adapter
<b>PXI Express Chassis I/O</b>	
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 : x16 x8 4 Link Mode : x4 x4 x4 x4
<b>I/O Connectivity</b>	
Storage	One SATA 6.0 Gb/s port with a 2.5" SATA SSD/HDD bracket
Ethernet	One Intel® Ethernet controller I219-LM and one Intel® Ethernet controller 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
<b>Mechanical and Environmental</b>	
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/ optional 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	EN 61326-1, FCC Class B
CE Compliance	Immunity: EN 61326-1
Operating System	Windows 10 64bit

# PXIe-3987 Block Diagram

