
PXIe-8822/42/ 62

Specifications

2025 05 05



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Note Specifications are subject to change without notice.



Caution Using the PXle-8822/42/62 controller in a manner not described in this user manual can impair the protection the controller provides.

Features

Table 1. PXle-8822/42/62 Features

Model	PXle-8822	PXle-8842	PXle-8862	PXle-8862 Removable Drive
CPU	Intel® Core™ i3-11100HE	Intel® Core™ i5-11500HE	Intel® Core™ i7-11850HE	
Cache	8 MB Smart Cache	12 MB Smart Cache	24 MB Smart Cache	
Memory	8 GB standard (16 GB maximum), single channel DD4-3200 MHz, non-ECC SODIMM		2 x 8 GB standard (2 x 16 GB maximum), dual channel DD4-3200 MHz, non-ECC SODIMM	
Storage	512 GB (or greater) M.2, NVMe SSD		512 GB (or greater) M.2, NVMe SSD	960 GB U.2, NVMe SSD
Video	1 DisplayPort 1.4	1 DisplayPort 1.4	2 DisplayPort 1.4	
Ethernet	1 i225 port, 1588, 10M/100M/1000M/2.5G Base-T	2 i225 port, 1588, 10M/100M/1000M/2.5G Base-T	2 i225 port, 1588, 10M/100M/1000M/2.5G Base-T	
PCI Express Link Speed	2.5 GT/s	5.0 GT/s	8.0 GT/s	
PXI Express 4 Link Configuration	x4, x4, x4, x4			
PXI Express 2 Link Configuration	x8, x8			

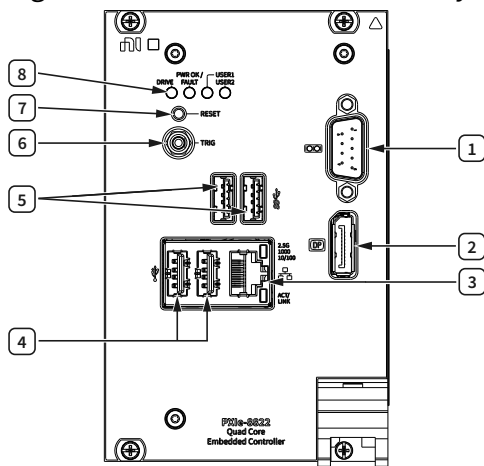


Model	PXle-8822	PXle-8842	PXle-8862	PXle-8862 Removable Drive
GPIB (IEEE 488 Controller)	N/A	1 mini-GPIB	1 mini-GPIB	
Serial Port (RS-232)	1 DB-9			
Thunderbolt 4 Ports	N/A	1 Type-C	2 Type-C	
Hi-Speed USB (2.0) Ports	2 Type-A	4 Type-A	4 Type-A	
SuperSpeed USB (3.0) Ports	2 Type-A			
PXI Trigger Bus Input/Output	1 SMB			
Installed Operating System	Windows 10 IOT, Windows 11 IOT, or Linux RT			
Trusted Platform Module	Optional TPM 2.0 (Infineon/ST TPM for global market, NationsTech TPM for China market)			

PXle-8822/42/62 Front Panel

The following figures show the PXle-8822/42/62 front panel layouts.

Figure 1. PXle-8822 Front Panel Layout

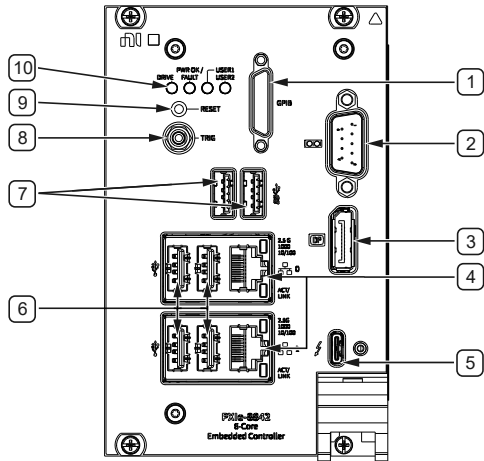


1. RS-232 Serial



2. DisplayPort 1.4
3. Ethernet
4. USB 2.0
5. USB 3.2
6. Trigger
7. Reset Button
8. LEDs

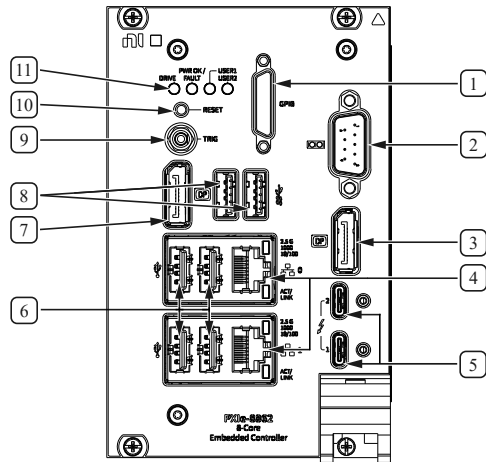
Figure 2. PXle-8842 Front Panel Layout



1. GPIB
2. RS-232 Serial
3. DisplayPort 1.4
4. Ethernet
5. Thunderbolt 4
6. USB 2.0
7. USB 3.2
8. Trigger
9. Reset Button
10. LEDs

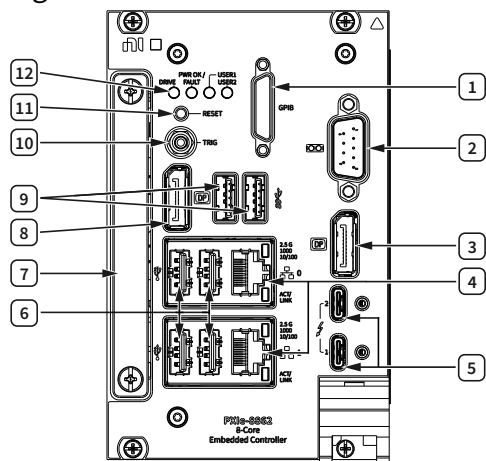


Figure 3. PXle-8862 Front Panel Layout



1. GPIB
2. RS-232 Serial
3. DisplayPort 1.4
4. Ethernet
5. Thunderbolt 4
6. USB 2.0
7. DisplayPort 1.4
8. USB 3.2
9. Trigger
10. Reset Button
11. LEDs

Figure 4. PXle-8862 with Removable Hard Drive Front Panel Layout



1. GPIB
2. RS-232 Serial



3. DisplayPort 1.4
4. Ethernet
5. Thunderbolt 4
6. USB 2.0
7. Removable Hard Drive
8. DisplayPort 1.4
9. USB 3.2
10. Trigger
11. Reset Button
12. LEDs

Front Panel Connectors

The following table lists various peripherals and their corresponding PXle-8822/42/62 external connectors, bus interfaces, and functions.

Peripheral	External Connector	Description
Video (DisplayPort 1.4)	DisplayPort	Intel HD Graphics
Thunderbolt 4	USB Type C (2 ports)	Thunderbolt 4 compliant, supports USB, PCI Express, and DisplayPort
Serial	COM1 (9-pin DSUB)	RS-232 serial port
Ethernet Port 0	LAN (RJ45)	10M/100M/1000M/2.5G Ethernet connection Intel I225 Wake on LAN supported
Ethernet Port 1	LAN (RJ45)	10M/100M/1000M/2.5G Ethernet connection Intel I225 Wake on LAN supported
USB 2.0	USB 4-pin Series A stacked	Hi-Speed USB 2.0

Peripheral	External Connector	Description
	receptacle (4 ports)	
USB 3.2 Gen 1	USB 9-pin Series A stacked receptacle (2 ports)	SuperSpeed USB, backwards compatible with USB 2.0
PXI trigger	Trigger (SMB)	Routing PXI triggers to or from the backplane trigger bus
GPIB	GPIB (25-pin Micro D)	General-Purpose Interface Bus, IEEE 488.2

Front Panel Features

The PXIe-8822/42/62 has two front panel LEDs that show PC status and two user LEDs:

- DRIVE LED—Indicates when an access to the internal drive is occurring.
- PWR OK/FAULT LED—Indicates the controller status. The LED indicates one of the following states:
 - Green ON steady—PXI and onboard power is on and within regulation limits.
 - Green BLINKING—The controller has entered the soft off state and is safe to power down.



Note This status is applicable only when the chassis is set to **Manual Inhibit Mode**.

- Green FADING—The controller has entered the sleep (S3) state.
 - OFF—The controller is powered off.
 - Red BLINKING—The controller detected a power rail fault when trying to boot.
 - Red SOLID—The controller detected a thermal fault and has shut down to protect the system.
- USER LEDs — Two bi-color green/yellow LEDs (USER1 and USER2) that you can define to meet the needs of your LabVIEW application.

The following table lists and describes the 10M/100M/1000M/2.5G LAN connector LED states.

Table 2. 10M/100M/1000M/2.5G LAN Connector LED States

LED	Color	LED State	Condition
2.5G	Green	On	2.5 Gb/s data rate is selected
1000	Amber	On	1000 Mb/s data rate is selected
10/100	Unlit	Off	10/100 Mb/s data rate is selected
ACT/LINK	Unlit	Off	LAN link is not established
	Green	On (steady state)	LAN link is established
		On (pulsing)	The controller is communicating with another device on the LAN

Front Panel Dimensions

The following figures show the front panel layout and dimensions of the PXle-8822/42/62. Dimensions are in inches (millimeters).

Figure 5. PXle-8822 Front Panel Layout and Dimensions

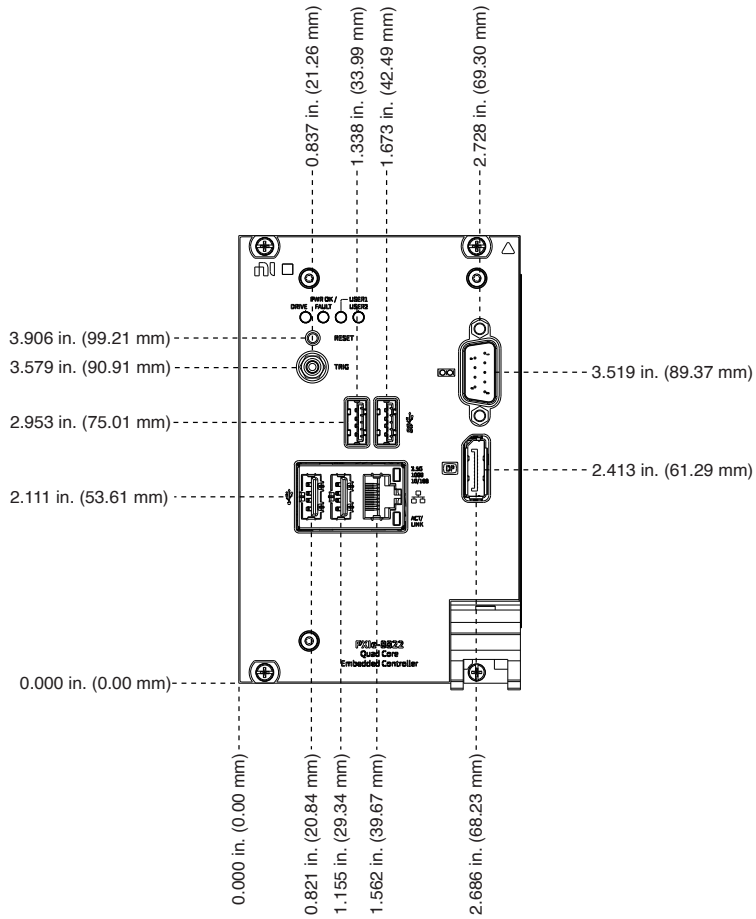


Figure 6. PXle-8842 Front Panel Layout and Dimensions

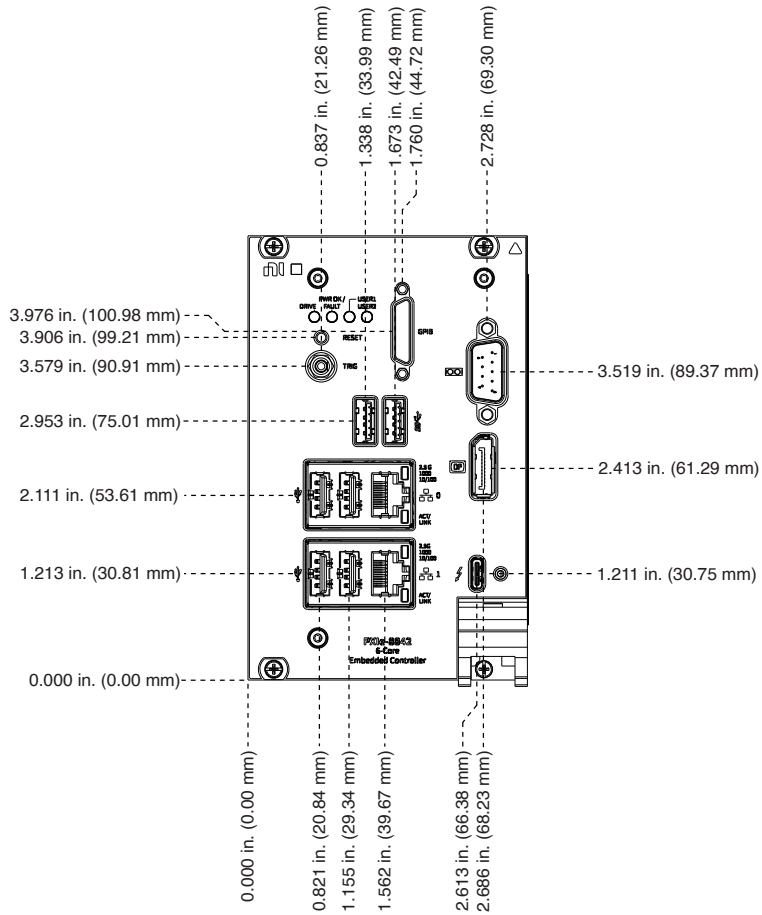


Figure 7. PXle-8862 Front Panel Layout and Dimensions

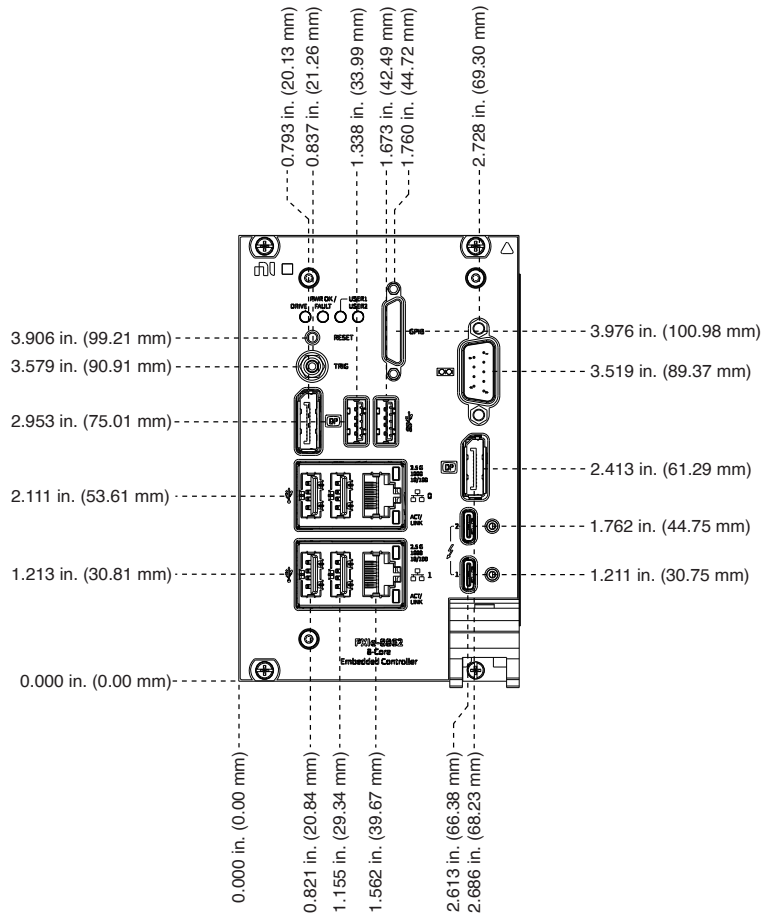
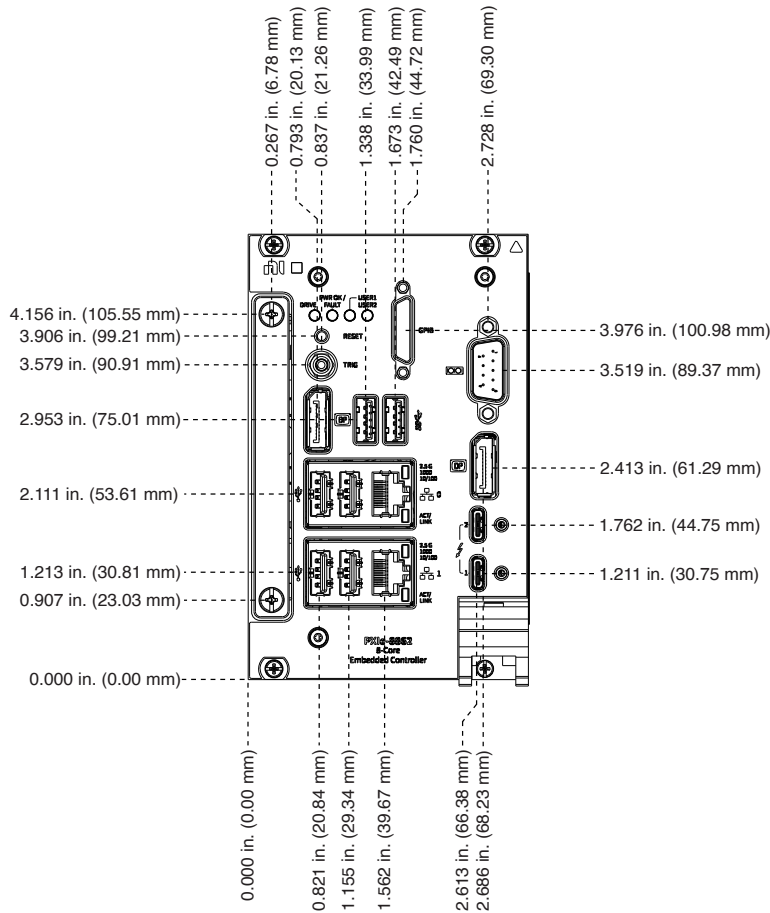


Figure 8. PXle-8862 with Removable Drive Front Panel Layout and Dimensions



Electrical



Notice These specifications do not include any attached devices.

PXle-8822

Voltage (V)	Current (Amps) Typical	Current (Amps) Maximum
+3.3 V	1.2 A	2.6 A
+5 V	0.5 A	2.5 A
+12 V	4.5 A	7 A
+5 Vaux	0.3 A	0.6 A

PXle-8842

Voltage (V)	Current (Amps) Typical	Current (Amps) Maximum
+3.3 V	1.2 A	2.6 A
+5 V	0.9 A	3 A
+12 V	5.1 A	7.1 A
+5 Vaux	0.4 A	0.7 A

PXle-8862

Voltage (V)	Current (Amps) Typical	Current (Amps) Maximum
+3.3 V	1.4 A	3.3 A
+5 V	1.2 A	3 A
+12 V	7.1 A	8.5 A
+5 Vaux	0.4 A	0.9 A

PXle-8862 with removable drive

Voltage (V)	Current (Amps) Typical	Current (Amps) Maximum
+3.3 V	0.7 A	1.7 A
+5 V	1.2 A	3 A
+12 V	7.7 A	8.5 A
+5 Vaux	0.4 A	0.9 A



Notice Power delivered to external loads though USB and Thunderbolt 4 ports should be included in system power budgets that include this controller module and peripheral modules.

Physical

Board dimensions	Four-wide 3U PXI Express module
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Slot requirements	One system slot plus three controller expansion slots
Compatibility	Fully compatible with PXI Express Specification 1.0
Weight	
PXIe-8822	728 g (1.60 lb) typical
PXIe-8842	753 g (1.66 lb) typical
PXIe-8862	783 g (1.73 lb) typical
PXIe-8862 with removable drive	906 g (2.00 lb) typical

Environmental

Maximum altitude	4,600 m (570 mbar) (at 25°C ambient) with chassis fans on high
Pollution Degree	2

Indoor use only.

Operating Environment



Caution The operating temperature must not be exceeded, even when used in a chassis with a higher temperature range.

Ambient temperature range	0 °C to 55 °C
Relative humidity range	10% to 90%, noncondensing

Storage Environment

Ambient temperature range ¹	-40 °C to 71 °C
Relative humidity range	5% to 95%, noncondensing

Shock and Vibration

Operating shock	30 g peak, half-sine, 11 ms pulse
Random vibration	
Operating	5 Hz to 500 Hz, 0.3 grms (with solid-state hard drive)
Nonoperating ¹	5 Hz to 500 Hz, 2.4 grms

1. CPU performance may decrease for some workloads if a unit is stored at the extreme ambient temperature range and then subjected to max nonoperating random vibration limits.