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# PXle-8822/ 8842/8862 Specifications

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2026-03-25



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# PXIe-8822/8842/8862 Specifications

## PXIe-8822/8842/8862 Specifications

These specifications apply to the PXIe-8822, PXIe-8842, and PXIe-8862 controllers.



**Note** Specifications are subject to change without notice.



**Caution** Using the PXIe-8822/8842/8862 controller in a manner not described in this document can impair the protection the controller provides.

## Revision History

| Version    | Date changed | Description                                         |
|------------|--------------|-----------------------------------------------------|
| 378928C-01 | October 2025 | Added front panels for variants without GPIB ports. |
| 378928B-01 | August 2025  | Updated memory specification, added front panels.   |
| 378928A-01 | October 2022 | Initial release.                                    |

## Looking For Something Else?

For information not found in the specifications for your product, such as operating instructions, browse *Related Information*.

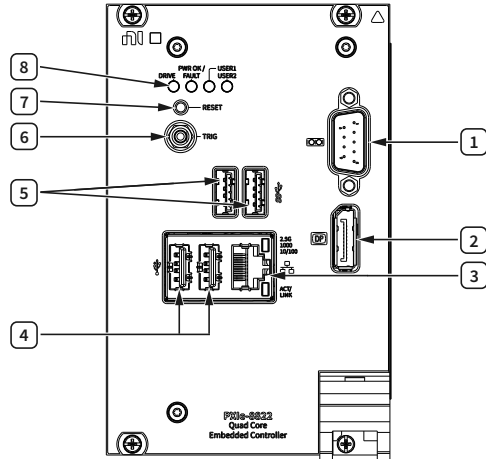
### Related information:

- [PXIe-8822/42/62 Getting Started](#)
- [PXIe-8822, PXIe-8842, PXIe-8862 Letter of Volatility](#)
- [Dimensional Drawings](#)
- [Product Certifications](#)
- [Discussion Forums](#)
- [NI Learning Center](#)

# PXIe-8822/8842/8862 Front Panel

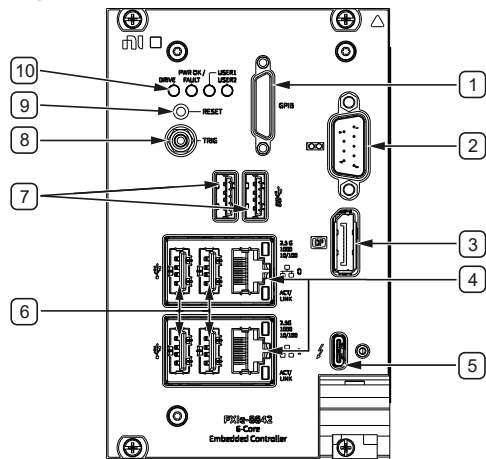
The following figures show the PXIe-8822/8842/8862 front panel layouts.

Figure 1. PXIe-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

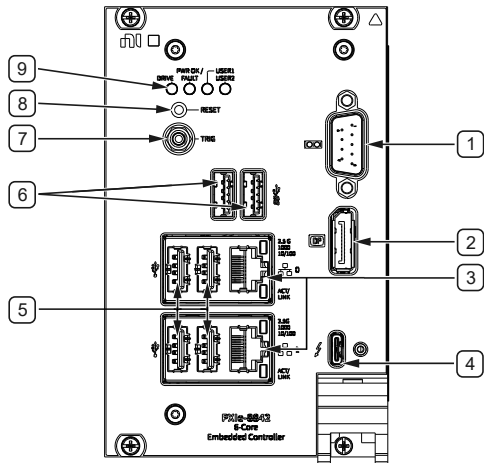
Figure 2. PXIe-8842 Front Panel Layout



1. GPIB

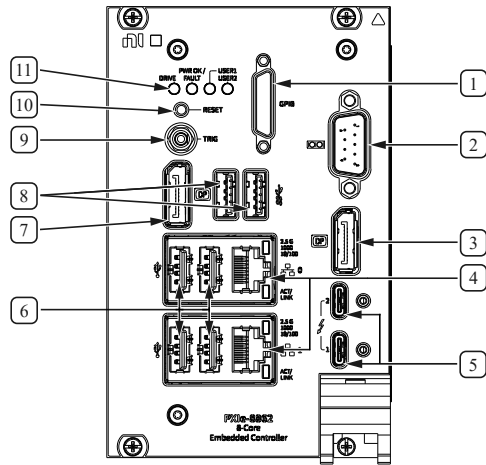
2. RS-232 Serial
3. DisplayPort 1.4
4. Ethernet
5. Thunderbolt 4
6. USB 2.0
7. USB 3.2
8. Trigger
9. Reset Button
10. LEDs

Figure 3. PXIe-8842 Without GPIB Front Panel Layout



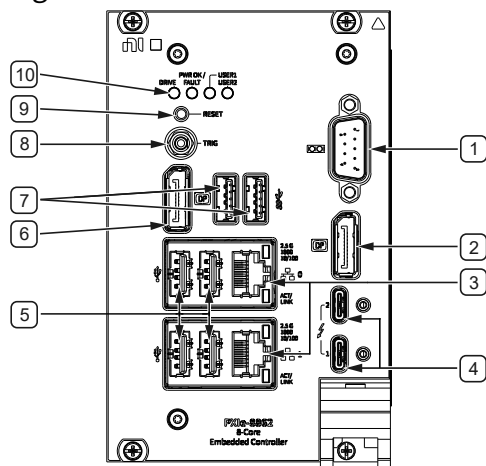
1. RS-232 Serial
2. DisplayPort 1.4
3. Ethernet
4. Thunderbolt 4
5. USB 2.0
6. USB 3.2
7. Trigger
8. Reset Button
9. LEDs

Figure 4. PXIe-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

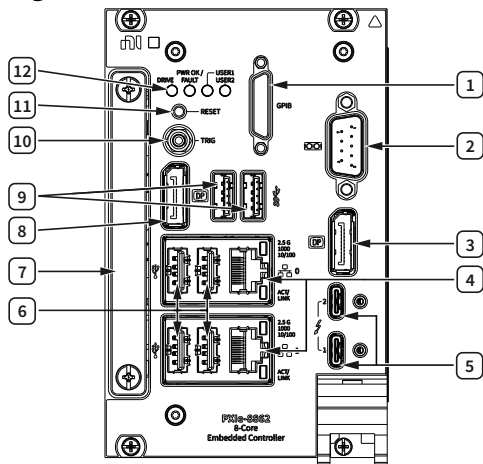
Figure 5. PXIe-8862 Without GPIB Front Panel Layout



1. RS-232 Serial
2. DisplayPort 1.4

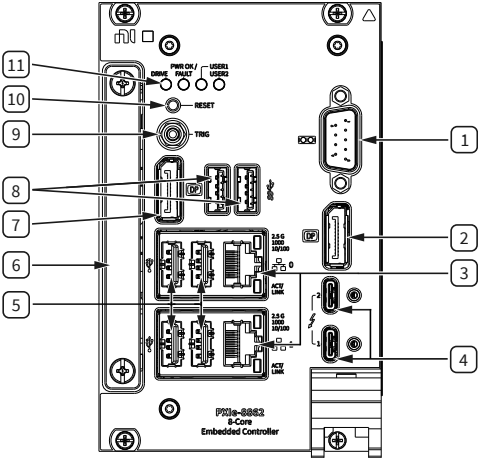
3. Ethernet
4. Thunderbolt 4
5. USB 2.0
6. DisplayPort 1.4
7. USB 3.2
8. Trigger
9. Reset Button
10. LEDs

Figure 6. PXIe-8862 With Removable Hard Drive Front Panel Layout



1. GPIO
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

Figure 7. PXle-8862 With Removable Hard Drive and Without GPIB Front Panel Layout



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

### Front Panel Connectors

The following table lists various peripherals and their corresponding PXle-8822/8842/8862 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                                                 |

| Peripheral      | External Connector                              | Description                                                                            |
|-----------------|-------------------------------------------------|----------------------------------------------------------------------------------------|
|                 |                                                 | Ethernet connection<br><br>Intel I225<br><br>Wake on LAN supported                     |
| Ethernet Port 1 | LAN (RJ45)                                      | 10M/100M/1000M/2.5G Ethernet connection<br><br>Intel I225<br><br>Wake on LAN supported |
| USB 2.0         | USB 4-pin Series A stacked receptacle (4 ports) | Hi-Speed USB 2.0                                                                       |
| 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                                              |

## Controller Features and Characteristics

Table 1. PXle-8822/8842/8862 Features

| Feature | PXle-8822                                                                   | PXle-8842               | PXle-8862                                                                         | PXle-8862 with 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 DDR4-3200 MHz, non-ECC SODIMM |                         | 2 x 8 GB standard (2 x 16 GB maximum), dual channel DDR4-3200 MHz, non-ECC SODIMM |                                |

| Feature                          | PXIe-8822                                                                              | PXIe-8842                                     | PXIe-8862         | PXIe-8862 with Removable Drive |
|----------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------|-------------------|--------------------------------|
| Storage                          | 512 GB (or greater) M.2, NVMe SSD                                                      |                                               |                   | 960 GB U.2, NVMe SSD           |
| Video                            | 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 |                   |                                |
| 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                                                                                 |                                               |                   |                                |
| GPIB (IEEE 488 Controller)       | N/A                                                                                    | 1 mini-GPIB (optional)                        |                   |                                |
| 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                                      |                   |                                |
| 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) |                                               |                   |                                |

# Electrical



**Notice** These specifications do not include any attached devices.

Table 2. PXIe-8822 Electrical

| 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                  |

Table 3. PXIe-8842 Electrical

| 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                  |

Table 4. PXIe-8862 Electrical

| 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                  |

Table 5. PXIe-8862 with Removable Drive Electrical

| 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                  |

| Voltage (V) | Current (Amps) Typical | Current (Amps) Maximum |
|-------------|------------------------|------------------------|
| +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 Characteristics

Table 6. Dimensions, Slot Requirements, Compatibility

|                   |                                                            |
|-------------------|------------------------------------------------------------|
| Board dimensions  | Four-wide 3U PXI Express module                            |
| Slot requirements | One system slot plus three controller expansion slots      |
| Compatibility     | Fully compatible with <i>PXI Express Specification 1.0</i> |

Table 7. 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 |

## Front Panel Dimensions

The following figures show the front panel layout and dimensions of the PXIe-8822/8842/8862. Dimensions are in inches (millimeters).

Figure 8. PXle-8822 Front Panel Layout and Dimensions

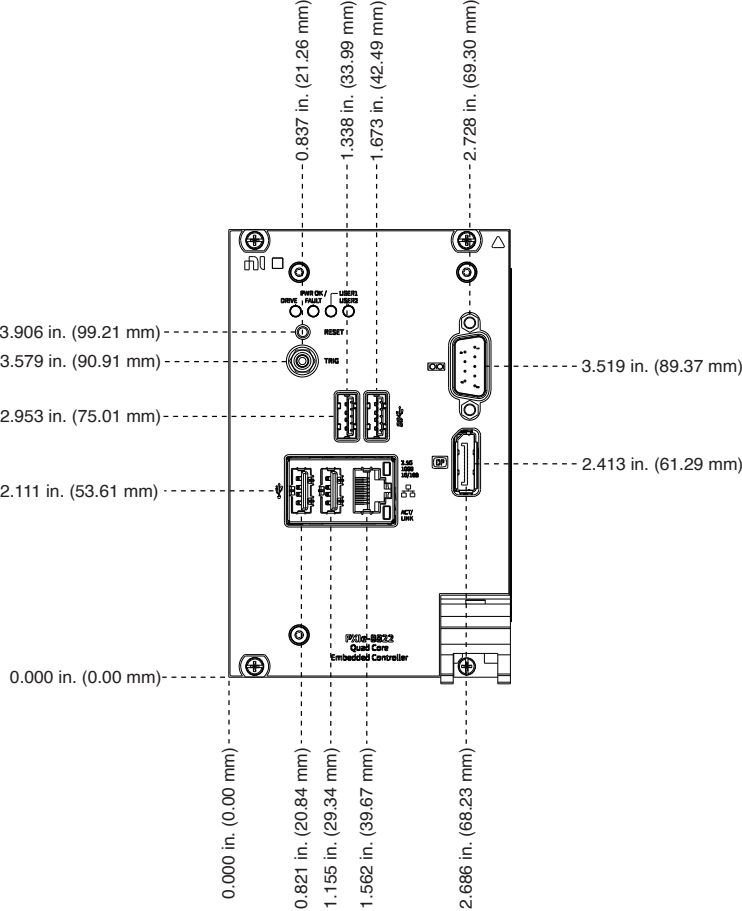




Figure 10. PXle-8842 Without GPIB Front Panel Layout and Dimensions

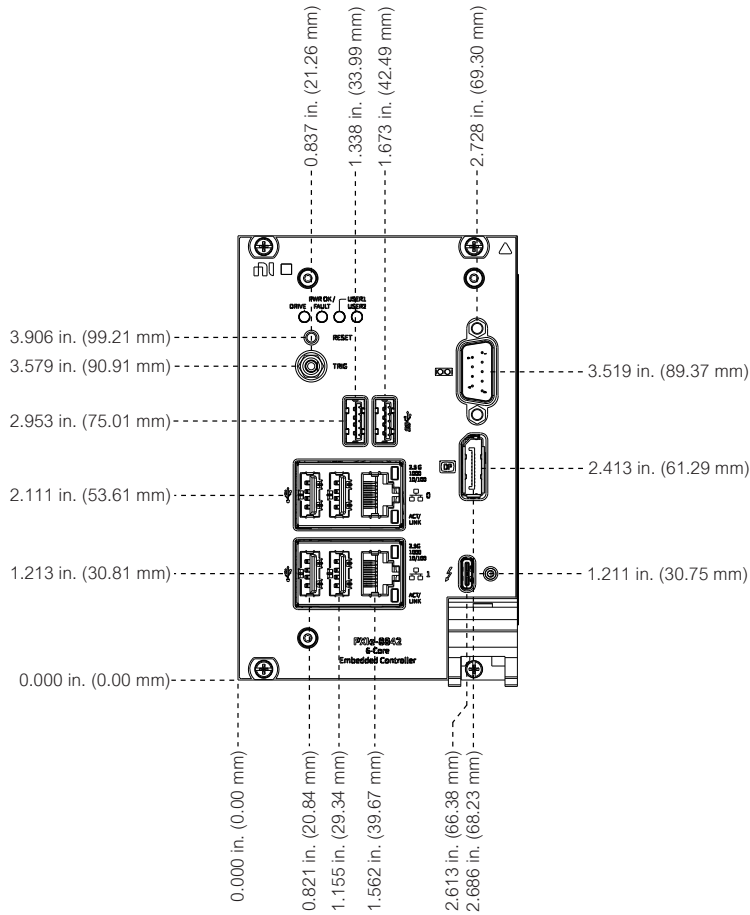


Figure 11. PXle-8862 Front Panel Layout and Dimensions

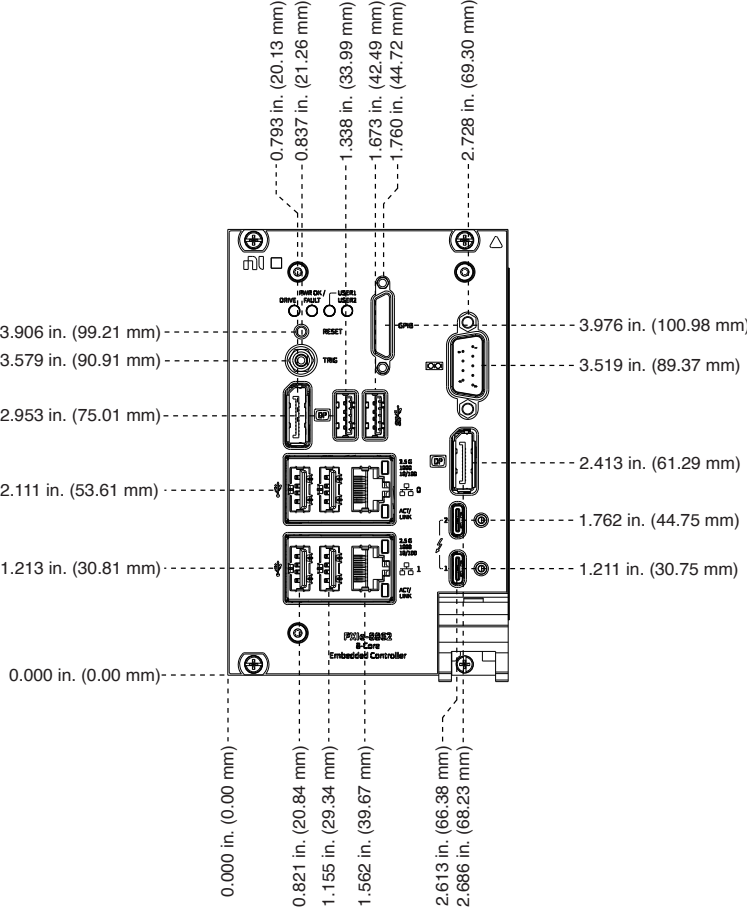


Figure 12. PXIe-8862 Without GPIB Front Panel Layout and Dimensions

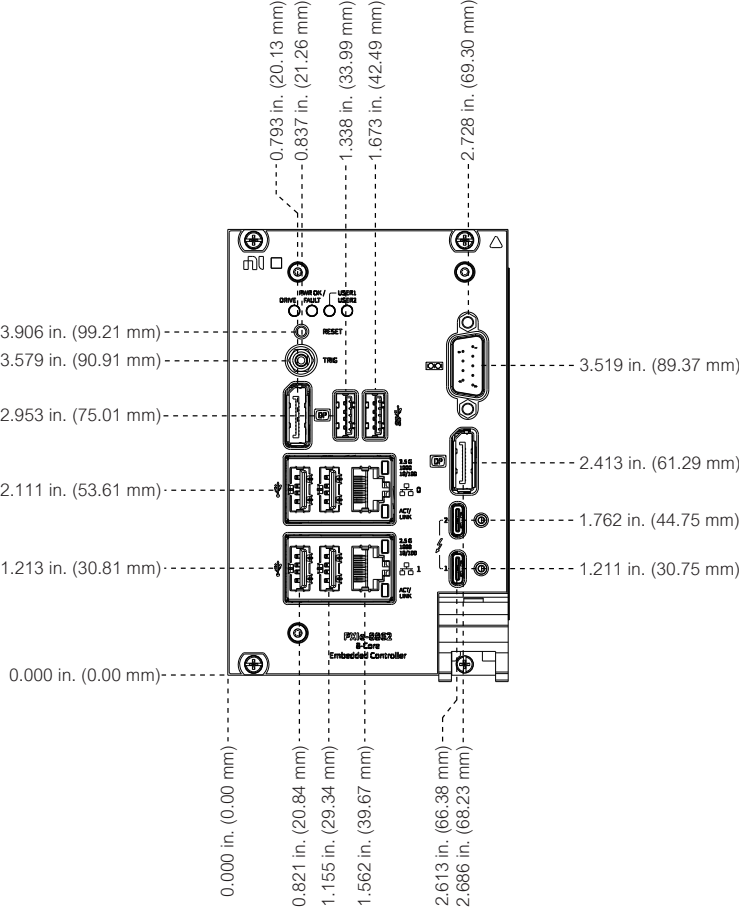


Figure 13. PXIe-8862 with Removable Drive Front Panel Layout and Dimensions

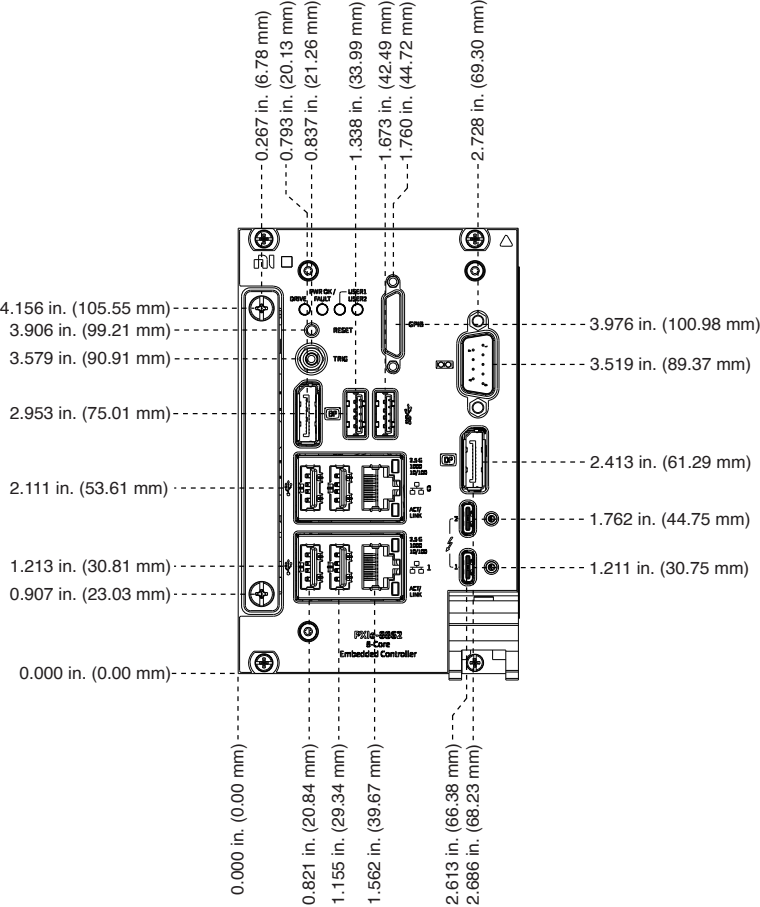
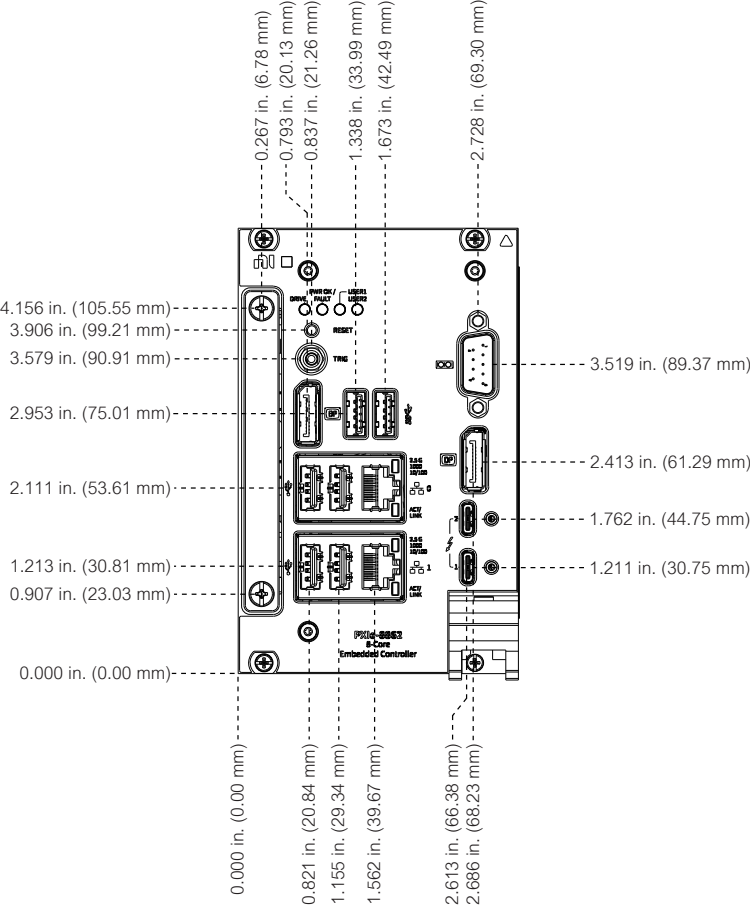


Figure 14. PXIe-8862 with Removable Hard Drive and Without GPIB Front Panel Layout and

Dimensions



Environmental

Table 8. Environmental Characteristics

|                  |                                                                |
|------------------|----------------------------------------------------------------|
| 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.

Table 9. Operating Environment

|                     |               |
|---------------------|---------------|
| Ambient temperature | 0 °C to 55 °C |
|---------------------|---------------|

|                         |                           |
|-------------------------|---------------------------|
| range                   |                           |
| Relative humidity range | 10% to 90%, noncondensing |

## Storage Environment

Table 10. Storage Environment

|                                        |                          |
|----------------------------------------|--------------------------|
| Ambient temperature range <sup>1</sup> | -40 °C to 71 °C          |
| Relative humidity range                | 5% to 95%, noncondensing |

## Shock and Vibration

Table 11. Shock and Vibration

|                                             |                                                                    |
|---------------------------------------------|--------------------------------------------------------------------|
| Operating shock                             | 30 g peak, half-sine, 11 ms pulse                                  |
| Random vibration, operating                 | 5 Hz to 500 Hz, 0.3 g <sub>rms</sub> (with solid-state hard drive) |
| Random vibration, nonoperating <sup>2</sup> | 5 Hz to 500 Hz, 2.4 g <sub>rms</sub>                               |

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.
2. 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.