



PowerPXle-1601

# PowerPXle 1600 Series

## Inline Power Meter

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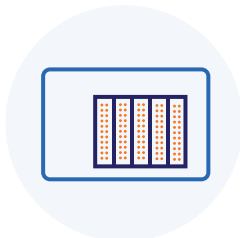
### SPEC SHEET

Coherent Solutions' PowerPXle 1600 Series inline optical power meters provide quick and accurate inline power monitoring in a compact PXle form factor.

The PowerPXle-1600 integrates seamlessly with our range of PXle optical modules and will become an essential component of your optical test system.



# Features



## 2 power meters per single-slot module

Achieve high channel density with up to 34 channels in an 18-slot PXI chassis.



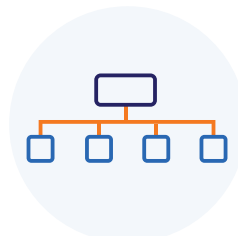
## Suitable for high power measurements

Suitable for high power measurements from -50 dBm to +20 dBm



## Low insertion loss

Maximise your power budget with low insertion loss.



## Seamless PXI integration

Take advantage of PXI's integrated triggering and synchronization capabilities across electrical and optical instruments.



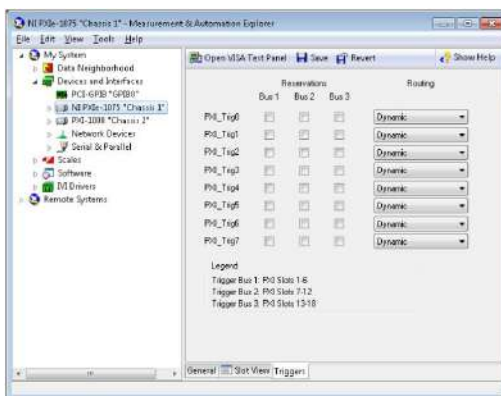
## Simple, intuitive operation with cohesionUI

Control the Power-PXIe from your PC or mobile device. Plus, large format view mode makes it easy to monitor your instrument even when working away from your desk.

# Integrated Hardware Triggering

PXI's integrated timing and hardware triggering capabilities allow the user to synchronize a variety of instruments through the trigger bus and system reference clock features of the PXI platform. This offers a number of advantages over more traditional software-initiated measurements.

- True parallel measurements of multiple devices under test allows you to scale your manufacturing and decrease the test time per DUT.
- Extremely low latency allows you to capture fast events or measure your DUTs very quickly.
- Precise timing alignment between optical and electrical modules gives you control of trigger events to occur exactly when required.



|           | Reservations                        |                          |                                     | Routing         |
|-----------|-------------------------------------|--------------------------|-------------------------------------|-----------------|
|           | Bus 1                               | Bus 2                    | Bus 3                               |                 |
| PXI_Trig0 | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | Dynamic         |
| PXI_Trig1 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Away From Bus 2 |
| PXI_Trig2 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Away From Bus 2 |
| PXI_Trig3 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Away From Bus 2 |
| PXI_Trig4 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Away From Bus 2 |
| PXI_Trig5 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Away From Bus 2 |
| PXI_Trig6 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Away From Bus 2 |
| PXI_Trig7 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Away From Bus 2 |

Legend  
 Trigger Bus 1: PXI Slots 1-6  
 Trigger Bus 2: PXI Slots 7-12  
 Trigger Bus 3: PXI Slots 13-18

Each slot can create a trigger and the trigger event can be transferred through each PXI Trigger line. Configuring the trigger line can be done easily through NI MAX software interface for the PXIe mainframe.

# Target Applications

- Fiber optic manufacturing test.
- Power measurement integration for automated test systems.
- Fiber optic laser test and characterization.
- General and versatile R&D and production tool.

# The world-leader in PXI optical test & measurement

Our portfolio of PXI optical test modules is rapidly expanding to meet a wide range of customer requirements and applications.

Our experience designing and building advanced coherent optical communications instruments gives us the expertise to quickly and cost-effectively customize our products to meet your requirements. If you don't see what you need, contact us today at [sales@coherent-solutions.com](mailto:sales@coherent-solutions.com).



## LaserPXIe 1000 Series Tunable Laser Source

Full tunability across C or L band. Narrow 100 kHz linewidth, up to 16.5 dBm of power.



## LaserPXIe 1200 Series DFB Laser Source

Highly customizable DFB laser source available in a wide range of wavelengths and powers.



## BERTPXIe Bit Error Rate Tester

2 or 4-channel Pulse Pattern Generator and Error Detector at data rates up to 29 Gbps.



## PowerPXIe 1400 Series Optical Power Meter

Fast monitoring of signal power from -60 to +10 dBm and broad wavelength range of 750 – 1700 nm.



## PowerPXIe 1500 Series Optical Power Meter with Analog Output

Logarithmic analog output plus convenient digital optical power readout. -60 to +10 dBm power monitoring across 750 – 1700 nm wavelength range.



## PPGPXIe Pulse Pattern Generator

4 channel Pulse Pattern Generator with data rate from 0.3 to 30 Gbps.



## VOAPXIe Variable Optical Attenuator

Operates in fixed attenuation or constant output power modes.

Integrated power meter for precise output power control.



## O2EPXIe Optical-to-Electrical Converter

High bandwidth, broadband O-to-E converter. AC or DC coupling, various conversion gain and operating wavelength range.



## SwitchPXIe Automated Optical Switch

Proven reliability and fast switching time.

Various switch configurations: 1x4, 1x16, 16x16 and more.



## OSAPXIe Optical Spectrum Analyzer

Fast spectral test and measurement in a compact 2-slot module. O, C and L band options.



## EDFAPXIe Erbium-Doped Fiber Amplifier

High power Erbium-Doped Fiber Amplifier for signal power amplification in C and L bands with various control modes, including automatic gain control.



## DopplerPXIe Photonic Doppler Velocimeter

Purpose-built module for Photonic Doppler Velocimetry (PDV).

A circulator, two VOAs and a passive coupler all built into one compact module.



## PassivePXIe Passive Component Integration

Integrate passive optical components of your choice. WDM couplers, splitters, band-pass filters, PM beamsplitters, circulators and more.



## TrayPXIe Passive Component Organizer

Protect your passive fiber optic components to keep your workspace tidy & safe.

## Why choose PXI?

- Complete instrument platform
- Multi vendor, open standard
- Low latency, high throughput

# Technical Specifications

| General Specifications    | PowerPXle                                    |
|---------------------------|--|
| Bus connection            | PXle   |
| Optical connector type    | FC/APC, FC/PC, SC/PC, SC/APC                 |
| Slot count                | 1  |
| Dimensions (HxWxD)        | 130 mm x 20 mm x 215 mm   5.1" x 0.8" x 8.5" |
| Weight                    | ~0.4kg   ~0.88 lbs                           |
| Storage temperature range | -40 °C to 70 °C   -40 °F to 158 °F           |

| Model Number   | 1601  | 1611  |
|--|---|---|
| Number of channels                                   | 2   |   |
| Sensor   | Inline  |   |
| Wavelength range                                     | 1260 to 1650 nm   | 800 to 900 nm   |
| Power  | -50 to +20 dBm  |   |
| Damage level <sup>9</sup>                            | +24 dBm   | +23 dBm   |
| Uncertainty at reference conditions <sup>2,3,5</sup> | ± 0.34 dB (Typical)   ± 0.55 dB (Max)                           | -   |
| Linearity <sup>2,5</sup>                             | ± 0.1 dB, -40 to 0 dBm; ± 0.15 dB, -50 to -40 dBm               | ± 0.25 dB, 0 to -30dBm  |
| Insertion loss                                       | ± 0.15 dB (Typical) <sup>3</sup>   ± 0.25 dB (Max) <sup>3</sup> | ± 0.6 dB (Typical) <sup>2,3,5</sup>   ± 0.8 dB (Max) <sup>2,3,5</sup> |
| Return loss  | >50 dB <sup>6</sup>   | >20 dB <sup>7</sup>   |
| Averaging time                                       | 0.01 Hz to 12 kHz   |   |
| Data logging capability                              | Yes   |   |
| External trigger                                     | Yes   |   |

## PRELIMINARY SPECS AS OF MARCH 2020

### Notes:

1 Specifications are valid at 23 °C ± 3 °C.

2 +10 dBm to -40 dBm, 23 °C.

3 Excluding connectors, add 0.2 dB for SMF and 0.1 dB for MMF per connector.

4 < 10 dB attenuation.

5 At calibration wavelengths.

6 1550 nm ± 30 nm, standard single-mode fiber, angled connector 8°, T=23 °C ± 5 °C.

7 850 nm ± 30 nm, standard single mode fiber, angled connector 8°, T=23 °C ± 5 °C.

8 ORL specifications require output port to be terminated into high ORL termination and/or into a fiber network with >60dB optical return loss.

9 20 minute exposure.



# Ordering Information

PowerPXle - XXXX - 2 - XX

**Model number**

**1601** = 1260 to 1650 nm

**1611** = 800 to 900 nm

**Connector type**

**FC** = FC/PC

**FA** = FC/APC

**SC** = SC/PC

**SA** = SC/APC

**2** = 2 channels



## Product Warranty

This product comes with a 3 year warranty.

## About Coherent Solutions

Coherent Solutions is the world-leader in PXI optical test and measurement. Our portfolio of PXI optical test modules is rapidly expanding to meet the needs of engineers and scientists around the globe. From enabling pioneering experiments to driving highly-efficient production testing, you'll find us working with customers to solve complex problems with simple and intuitive solutions.

**To find out more, get in touch with us today.**

### Coherent Solutions Ltd

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