



o2ePXIe-1001

O2EPXIe

Optical-to-Electrical Converter

SPEC SHEET

The O2EPXIe is a high bandwidth, broadband optical to electrical converter available in a range of configurations. Choose from 1 or 2 channels, AC or DC coupling, various conversion gain and operating wavelength ranges.



coherent
solutions

complexity made simple.

Features and Benefits



DC or AC coupled

Choose from DC or AC coupling to suit your specific test application.



Amplified RF output

Various conversion gain options allow you to easily measure low power, high speed optical signals



High bandwidth

Our high performing O2E allows you to successfully test high baudrate signals with up to 50GHz of bandwidth.



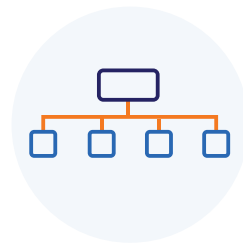
Calibrated readings

Onboard storage of calibration data can be accessed via SCPI commands, making it easier to generate calibrated measurements and scale your measurement capabilities.



Various wavelength ranges

The O2E can be customized to a wide range of wavelengths and is suitable for single mode and multimode applications.



Seamless PXI integration

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

Target Applications

- Optical signal eye diagram measurement
- Relative intensity noise (RIN) measurement
- Optical pulse characterization
- Modulation depth measurement
- Extinction ratio measurement
- Precision timing/triggering
- Frequency response measurement of devices

cohesionUI graphical user interface makes it simple to control PXIe instruments from your PC or mobile device. Its cutting edge design offers a sleek modern interface, cross device compatibility, customizable views and remote network access.

The screenshot displays the cohesionUI interface for an O2EPXIE instrument in Slot 9. The interface is divided into a left sidebar and a main content area. The sidebar contains navigation icons for HOME, MODULES, SETTINGS, Large Format, and Info. The main content area is titled "O2EPXIE | SLOT 9" and includes a hardware identifier "1201-2-FA CSL-181202 HW2.00FW1.18". It features two channel control panels, CHANNEL 1 and CHANNEL 2, each with a list of parameters and their current values. Channel 1 parameters include PDPWR (-100.00 dBm), GAIN (20953.992 V/W), AVERAGING TIME (1.000 s), and WAVELENGTH (1547.000 nm). Channel 2 parameters include PDPWR (-100.00 dBm), GAIN (22454.000 V/W), AVERAGING TIME (0.020 s), and WAVELENGTH (1550.000 nm). Both channels also have a "DARK NULLING" option. Each parameter has a minus and a plus button for adjustment.

Channel	Parameter	Value
CHANNEL 1	PDPWR	-100.00 dBm
	GAIN	20953.992 V/W
	AVERAGING TIME	1.000 s
	WAVELENGTH	1547.000 nm
DARK NULLING		
CHANNEL 2	PDPWR	-100.00 dBm
	GAIN	22454.000 V/W
	AVERAGING TIME	0.020 s
	WAVELENGTH	1550.000 nm
DARK NULLING		

O2EPXIE-1201 2 channel control in cohesionUI

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.



LaserPXIe Versatile Laser Source

Versatile range of laser sources including fully-tunable C and/or L band or fixed wavelength.



PowerPXIe Optical Power Meter

Large-area detector power meter available in various specifications. Options include external trigger input and analog output.



VOAPXIe Variable Optical Attenuator

Operates in fixed attenuation or constant output power modes. Integrated power meter for precise output power control.



OSAPXIe Optical Spectrum Analyzer

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



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 wavelength options including 850 nm, 980 nm, 1310 nm & 1550 nm.



PassivePXIe Passive component integration

Integrate passive optical components of your choice in a single or dual slot module. WDM couplers, splitters, band-pass filters, PM beamsplitters, circulators and more.



DopplerPXIe Photonic Doppler Velocimeter

Purpose-built module for Photonic Doppler Velocimetry. A circulator, two VOAs and a passive coupler all built into one compact module.



TrayPXIe Passive Component Organizer

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



The perfect PXI chassis to suit your application

From a smaller 4-slot to the 18-slot rack mountable chassis, we can provide the perfect National Instruments PXIe chassis to suit your application.

Technical Specifications

General Specifications	O2EPXIe					
Bus connection	PXIe					
PXI slots	1					
Dimensions (HxWxD)	130 mm x 20mm x 215 mm (5.1" x 0.8" x 8.5")					
Weight	~ 1 kg (~2.2 lbs)					
Operating temperature range	5 °C to 45 °C (41 °F to 113 °F)					
Storage temperature range	-40 °C to 70 °C (-40 °F to 158 °F)					
Model Number	1001	1101	1201	1301*	1401	1402
Bandwidth	9.5 GHz (typ) 8.5 GHz (min)	25 GHz (typ) 24 GHz (min)	35 GHz (typ) 30 GHz (min)	50 GHz (typ)	9GHz (typ) 8GHz (min)	
Wavelength	750 to 1650nm	950 to 1650nm	800 to 1650nm	1200 to 1650nm	750 to 1650nm	
Calibrated wavelengths	850, 1310, 1490, 1550	1310, 1490, 1550	850, 1310, 1490, 1550	1310, 1490, 1550	1271, 1291, 1311, 1331, 1351, 1371, 1391, 1411, 1310, 1490, 1550	850, 1310, 1490, 1550
Optical connector type	FC/PC, FC/APC, SC/APC, SC/PC					
Number of channels	1 or 2					
RF coupling	DC	AC	DC		AC	
RF connector	SMA (3.5 mm)	K (2.92 mm)	2.4 mm	V (1.85 mm)	SMA	
RF impedance	50 ohms					
Fiber	62.5u core MMF	SMF-28	50u core MMF	SMF-28	62.5u core MMF	
Damage level peak power	7 dBm	4 dBm	8 dBm		7 dBm	
Optical return loss	30dB SMF ¹ 16 dB MMF	30dB SMF ¹	24dB SMF ¹ 14 dB MMF	30dB SMF ¹	16dB	
PDL at 1550 nm		0.25 dB (max)		0.1 dB (typ) 0.2 dB (max)		
Conversion gain	430 V/W (typ) at 1550 nm 450 V/W (typ) at 1310 nm 250 V/W (typ) at 850 nm	900 V/W (typ) at 1550 nm	100 V/W (typ) at 1550 nm 100 V/W (typ) at 1310 nm 70 V/W (typ) at 850 nm	90 V/W (typ) at 1310 nm	10,000 V/W (typ) 7,000 V/W min at 1310nm	
Low frequency cutoff	0 Hz	< 100 KHz	0 Hz		< 100 KHz	
Noise equivalent power	0.15 fW/Hz	0.18 fW/Hz	0.18 fW/Hz	0.16 fW/Hz	0.26pW/Hz	
Average power reading	Yes					

Notes
¹ SMF at 1550nm
 * Preliminary specs

Ordering Information

02ePXIe - XXXX - X - XX

Model number

1001 = 9.5 GHz, DC coupled,
conversion gain of 430 V/W
1101 = 25 GHz, AC coupled,
conversion gain of 900 V/W
1201 = 35 GHz, DC coupled,
conversion gain of 100 V/W
1301 = 50 GHz, DC coupled,
conversion gain of 90 V/W
1401 = 9 GHz, AC coupled,
conversion gain of 7000 V/W,
CWDM8 calibration
1402 = 9 GHz, AC coupled,
conversion gain of 7000 V/W

Connector type

FC = FC/PC
FA = FC/APC
SC = SC/PC
SA = SC/APC

Number of channels

1 = 1 channel
2 = 2 channels

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 elegant solutions.

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

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