



# SystemPXle

## Customizable Transceiver Test System

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### SPEC SHEET

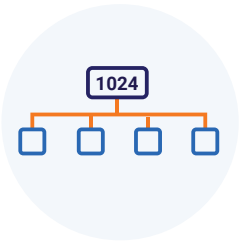
- Single platform PXle-based optical and electrical high-density transceiver test system.
- Optical loopback system with switches, VOA and power meter capabilities.
- Up to 1024 BERT channels (Pattern Generators and Error Detectors).
- Fully integrated system including rack, power distribution and simplified cable management.
- Advanced API for full automation.

# Features

The SystemPXle is a highly customizable optical and electrical test system designed for automated transceiver testing in Mil/Aero environments.

This flexible and scalable platform allows you to customize your system to perform a range of optical test measurements using Coherent Solutions' optical PXI test modules. Electrical PXI test modules provide BERT (Pulse Pattern Generation and Error Detection) for multichannel high-speed applications.

To discuss a customized SystemPXle to meet your test and measurement requirements, contact [sales@coherent-solutions.com](mailto:sales@coherent-solutions.com).



### Up to 1024 BERT channels

Multichannel BERT (PPG + ED) at data rates from 1 to 14.5 Gbps NRZ. SystemPXle supports 4 to 1024 BERT channels.



### Advanced optical conditioning

Multichannel optical conditioning: switches + VOA with power monitoring. SystemPXle supports 12 to 1024 optical channels.

# Technical Specifications

General Specifications	SystemPXle
Fiber type	OM3 Multimode fiber (50/125 μm)
Wavelength	800 to 900 μm
Damage input level	+20 dBm
Warm up time	< 20 minutes
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
Attenuator	SystemPXle
Calibration wavelengths	850 nm
Attenuation range <sup>2</sup>	>20 dB (Typical)
Resolution	0.01 dB
Attenuation speed	1000 dB/s
Power stability in Power Feedback Mode (15mins)	± 0.1dB
Power meter	SystemPXle
Calibration wavelengths	850 nm
Power	-40 to +10 dBm
Sensor	Inline
Linearity <sup>2,5</sup>	± 0.2 dB
Total uncertainty <sup>2,3,4</sup>	± 0.34 dB (Typical)   ± 0.65 dB (Max)
Averaging time	25 ms to 10 s
Resolution	0.01 dB

PPG Output	SystemPXIe
Number of channels	4 to 1024
RF output	Differential
RF connector	Please consult us for connector options
Impedance	100 ohms between differential outputs
Data coding	NRZ
Data rate	1.25 to 14.50 Gbps
Data rate step size	2 kbps
PRBS patterns	2n-1, n = 9, 15 or 31
Output amplitude (mV differential)	Adjustable 200 to 1100
Output amplitude steps (mV differential)	5
Rise/fall time (20% to 80%)	<18 ps
Intrinsic jitter	<850 fs rms (Typical)
Crossing point adjustment	40% to 60%
Programmable de-emphasis	2 pre taps, 1 post tap
Polarity inversion	Yes
Error Detector	SystemPXIe
Number of channels	4 to 1024
RF input	AC coupled differential
Impedance	100 ohms between differential outputs
Data rate	1.25 Gbps to 14.50 Gbps
Data rate step size	2 kbps
PRBS patterns	2n-1, n = 7, 9, 10, 11, 15, 23 or 31
Sensitivity	25 mV
Max input	1000 mV
Clock source	Independent CDR on each input channel
Polarity inversion	Yes
Equalizer	Programmable linear input CTLE equalizer
Eye contours	3D Eye Monitor on each input to allow advanced measurements such as BER contours and eye parameters
Divided Clock Output	SystemPXIe
Rf output	Single-ended SMA
Impedance	50 ohms
Frequency	100 - 156.25 MHz Programmable Synthesizer Reference Out
Intrinsic jitter	TBD
Output amplitude	700 mV (Typical)
Selectable clock divider	Divide by n, with n = 2,4,8
Clock and Data Recovery	SystemPXIe
Data rate	1.25 to 14.5 Gbps
Loop bandwidth	Tunable 6 to 10 MHz
CDR output	No

#### SPECS AS OF DECEMBER 2019

Notes:

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

2 +10dBm to -40dBm, 23 ° C.

3 Excluding connectors.

4 <10dB Attenuation.

5 At calibration wavelengths.

6 Insertion loss includes the 1:3 splitter in the optical path but excludes connectors.

# Ordering Information

SYSTEMPXIE- XXXX - XX

**Model number**

- 1901** = 60 channels (5 x 12ch transceivers)
- 1902** = 120 channels (10 x 12ch transceivers)
- 1903** = 180 channels (15 x 12ch transceivers)
- 1904** = 240 channels (20 x 12ch transceivers)
- 190X** = Please contact us to discuss additional channel count configurations

**Optical Connector Type**

- FC** = FC/PC
- FA** = FC/APC
- SC** = SC/PC
- SA** = SC/APC
- MT** = Elite MTP



## Product Warranty

This product comes with a standard 1 year warranty. Optional 3 or 5 year extended warranties are also available.

## About Coherent Solutions




Coherent Solutions is a world-leader in photonics test and measurement. Our portfolio of benchtop and modular test instruments is rapidly expanding to meet the needs of scientists, engineers and manufacturers around the world. No matter where you are, we'll work with you to solve complex problems with simple, intuitive solutions.

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

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