



Passive

PASSIVE COMPONENT INTEGRATION

SPECIFICATION SHEET

AVAILABLE IN PXI

AVAILABLE IN MATRIQ

The PassivePXle module can be customized to meet your specific requirements. If you don't see what you need below, please contact us.

Model Number	Configuration	Connector type	Slot count in PXI
Passive-1001	1310 \pm 80 nm, 1x2 (50/50) splitter	FC/PC, FC/APC, SC/PC, SC/APC	1
Passive-1002	1260 to 1650 nm, 1x4 (25/25/25/25) splitter	FC/PC, FC/APC, SC/PC, SC/APC	1
Passive-1003	CWDM8 MUX	SC/PC, SC/APC	2
Passive-1004	CWDM8 DeMUX	SC/PC, SC/APC	2
Passive-1005	1310 nm, 1x2 (99/1) splitter	FC/PC, FC/APC, SC/PC, SC/APC	1
Passive-1006	CWDM4 MUX	FC/PC, FC/APC, SC/PC, SC/APC	1
Passive-1007	CWDM4 DeMUX	FC/PC, FC/APC, SC/PC, SC/APC	1
Passive-1008	1550 \pm 80 nm, 1x2 (50/50) splitter	FC/PC, FC/APC, SC/PC, SC/APC	1
Passive-1009	1550 nm optical circulator	FC/PC, FC/APC, SC/PC, SC/APC	1
Passive-1010	1310 nm, 1x8 splitter	SC/PC, SC/APC	2
Passive-1011	1260 to 1650 nm, 1x16 fiber tree splitter, SMF-28 fiber	SC/PC, SC/APC	2
Passive-1012	1550 \pm 40nm, 1x2 (30/70) splitter	FC/PC, FC/APC, SC/PC, SC/APC	1
Passive-1013	1550 \pm 40nm, 1x2 (40/60) splitter	FC/PC, FC/APC, SC/PC, SC/APC	1
Passive-1014	1000 m fiber delay element, 4.890 μ s @1310 nm, 4.893 μ s at 1550 nm, SMF-28e fiber	FC/PC, FC/APC, SC/PC, SC/APC	1
Passive-1015	1230 to 1390 nm optical circulator	FC/PC, FC/APC, SC/PC, SC/APC	1
Passive-1016	WDM bi-direction MUX/DEMUX (C34=1550.116 nm, C42=1543.730 nm, C50 =1537.397 nm, C58=1531.116 nm), <1.8 dB insertion loss	FC/PC, FC/APC, SC/PC, SC/APC	1
Passive-1017	1550 \pm 40 nm, 1x2 (90/10) splitter	FC/PC, FC/APC, SC/PC, SC/APC	1
Passive-1101	Encircle Flux mode conditioner IEC 61280-4-1: 2009 850/1310 nm, OM3 fiber, 3 dB insertion loss (typical), max power 10 mW	FC/PC, FC/APC, SC/PC, SC/APC	1
Passive-1301	1310 nm PM fiber 1x2 (50/50) splitter	FC/PC, FC/APC, SC/PC, SC/APC	1
Passive-1302	1550 nm PM fiber 1x4 (25/25/25/25) splitter	FC/PC, FC/APC, SC/PC, SC/APC	1
Passive-1401	Encircle Flux mode conditioner IEC 61280-4-1: 2009 850/1310 nm, OM1 fiber, 3 dB insertion loss (typical), max power 10 mW	FC/PC, FC/APC, SC/PC, SC/APC	1

CHOOSE YOUR FORM FACTOR

PXIe – MODULAR

Our expanding range of PXIe optical test solutions are used by customers in mixed-signal test and measurement systems, reducing complexity, lowering the cost of test and accelerating time to market.

- Multi vendor, open standard with over 2500 PXI modules available
- Advanced timing and synchronization capabilities across instruments
- Low latency, high performance processing and fast data throughput
- Design and build scalable, high channel count systems
- Small footprint and lower power consumption



MATRIQ – COMPACT & PORTABLE

The MATRIQ series provides the same high-performance test capabilities of our PXIe modules in an compact benchtop design. MATRIQ instruments are simple to setup and easy to operate, making them the perfect choice for your optical lab or test bench.

- Same performance and control as our PXIe modules
- Plug and play with USB or Ethernet connectivity
- Control via the web-based GUI, COHESIONUI or SCPI commands
- Compact and portable design saves benchtop space

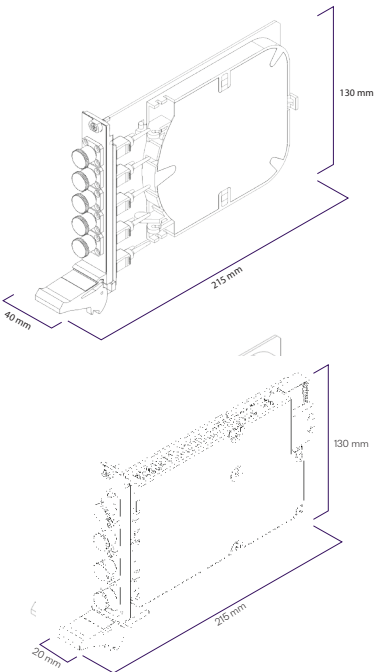


PASSIVE TECHNICAL SPECIFICATIONS

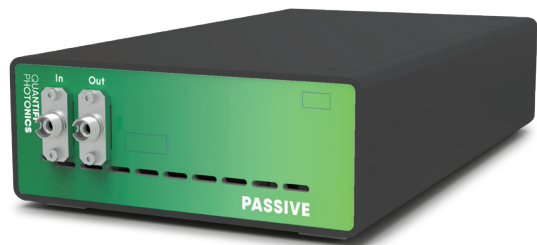
PXI – MODULAR



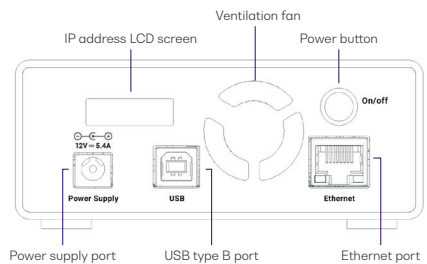
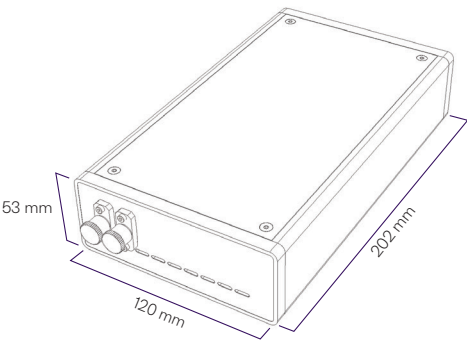
PASSIVE-1002-1-FC-PXIE



MATRIQ – COMPACT & PORTABLE



PASSIVE-1002-1-FC-MTRQ



The Passive 1101 and 1401 modules are passive mode conditioning instruments which guarantee the correct launch conditions are achieved regardless of the light source. This improves measurement accuracy, consistency between tests, and compliance with international standards.

It's well known that the modal condition of light sources can significantly affect measurements of loss and bandwidth in multimode fibers. This can mean for example, that an OTDR measurement may give a different result because an OTDR employs a laser source versus an LED.

TECHNICAL SPECIFICATIONS

Product Specifications	PXI		MATRIQ	
	1101	1401	1101	1401
Fiber type	OM3 50 µm	OM1 62.5 µm	OM3 50 µm	OM1 62.5 µm
Optical connector type	FC/PC, FC/APC, SC/PC, SC/APC	FC/PC, FC/APC, SC/PC, SC/APC	FC/PC, FC/APC, SC/PC, SC/APC	FC/PC, FC/APC, SC/PC, SC/APC
Wavelength range	850 nm and 1310 nm	850 nm and 1310 nm	850 nm and 1310 nm	850 nm and 1310 nm
Insertion loss	< 3 dB	< 3 dB	< 3 dB	< 3 dB
Encircled flux compliance	IEC 61280-4-1: 2009	IEC 61280-4-1: 2009	IEC 61280-4-1: 2009	IEC 61280-4-1: 2009
Maximum power	10 dBm	10 dBm	10 dBm	10 dBm
Return loss	> 45 dB	> 45 dB	> 45 dB	> 45 dB

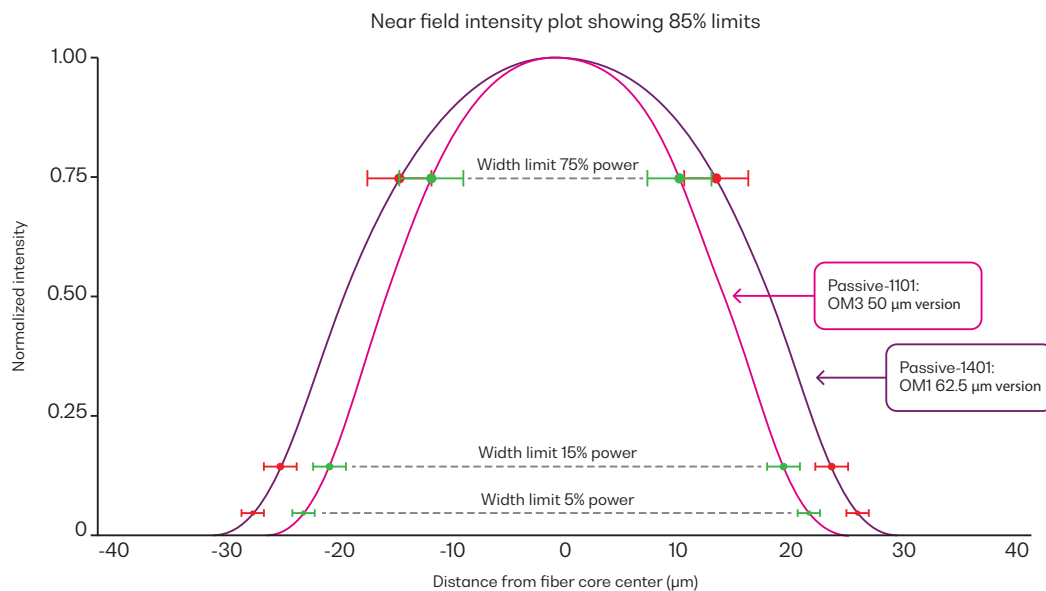
Power Specifications	PXI	MATRIQ
AC input voltage range	Please refer to the latest PXI Express Hardware Specifications published by the PXI Systems Alliance.	90 to 264 VAC
AC input current		1.3A (115Vac), 0.9A (230Vac)
AC frequency range		47 to 63 Hz
DC output voltage		12V
DC output current max		5.41A
Dimensions (LxWxH)		4.58 x 2.06 x 1.23" (116.3 x 52.4 x 31.3 mm)

The Modal Launch Condition for the Passive 1101 and 1401 modal controllers is specified in terms of the width of the Near Field Pattern at 5, 15 and 75% of the maximum. The specification limits are shown below. On request, we can supply a Certificate of Conformance or a Test Certificate (850 and 1300 nm) which includes details on how the measurement was taken.

PASSIVE TECHNICAL SPECIFICATIONS

Product Specifications	1101	1401	1101	1401
Fiber type	OM3 50 μm	OM1 62.5 μm	OM3 50 μm	OM1 62.5 μm
Intensity (% of max): 5	40.8 μm (min) 44.0 μm (max)	51.0 μm (min) 55.0 μm (max)	40.8 μm (min) 44.0 μm (max)	51.0 μm (min) 55.0 μm (max)
Intensity (% of max): 15	36.0 μm (min) 41.6 μm (min)	45.0 μm (min) 52.0 μm (max)	36.0 μm (min) 41.6 μm (min)	45.0 μm (min) 52.0 μm (max)
Intensity (% of max): 75	16.0 μm (min) 26.4 μm (min)	20.0 μm (min) 33.0 μm (max)	16.0 μm (min) 26.4 μm (min)	20.0 μm (min) 33.0 μm (max)

Product Specifications	1301	1302	1301	1302
Model description	1310 nm PM fiber 1x2 (50/50) splitter	1550 nm PM fiber 1x4 (25/25/25/25) splitter	1310 nm PM fiber 1x2 (50/50) splitter	1550 nm PM fiber 1x4 (25/25/25/25) splitter
Optical connector type	FC/PC, FC/APC, SC/PC, SC/APC	FC/PC, FC/APC, SC/PC, SC/APC	FC/PC, FC/APC, SC/PC, SC/APC	FC/PC, FC/APC, SC/PC, SC/APC
Center wavelength	1310 nm	1550 nm	1310 nm	1550 nm
Port configuration	1 x 2	1 x 4	1 x 2	1 x 4
Split ratio	50:50	25:25:25:25	50:50	25:25:25:25
Bandwidth	+ 40 nm	+ 30 nm	+ 40 nm	+ 30 nm
Return loss	> 50 dB	> 7.8 dB	> 50 dB	> 7.8 dB
Insertion loss	< 3.8 dB	> 20 dB	< 3.8 dB	> 20 dB
Extinction ratio	> 20 dB	> 50 dB	> 20 dB	> 50 dB
Fiber type	PM Panda fiber all ports	PM Panda fiber all ports	PM Panda fiber all ports	PM Panda fiber all ports
Axis transmission	Slow axis and fast axis both working	Slow axis and fast axis both working	Slow axis and fast axis both working	Slow axis and fast axis both working
Axis alignment	Slow axis aligned to connector key	Slow axis aligned to connector key	Slow axis aligned to connector key	Slow axis aligned to connector key



ORDERING INFORMATION

PASSIVE - **XXXX - X - XX - PXIE**
PASSIVE - **XXXX - X - XX - MTRQ**

Model number

1001 = 1310 \pm 80 nm, 1x2 (50/50) splitter
1002 = 1260 to 1650 nm, 1x4 (25/25/25/25) splitter
1003 = CWDM8 MUX (SC/SA only)
1004 = CWDM8 DeMUX (SC/SA only)
1005 = 1310 \pm 80 nm, 1x2 (99/1) splitter
1006 = CWDM4 MUX
1007 = CWDM4 DeMUX
1008 = 1550 \pm 80 nm, 1x2 (50/50) splitter
1009 = 1550 nm optical circulator
1010 = 1310 nm, 1x8 splitter (SC/SA only)
1011 = 1260 to 1650 nm, 1x16 fiber tree splitter (SC/SA only)
1012 = 1550 \pm 40nm, 1x2 (30/70) splitter
1013 = 1550 \pm 40nm, 1x2 (40/60) splitter
1014 = 1000 m fiber delay, SMF-28e fiber
1015 = 1230 to 1390 nm optical circulator
1016 = WDM bi-direction MUX/DEMUX
1017 = 1550 \pm 40nm, 1x2 (90/10) splitter
1101 = Encircle Flux mode conditioner, OM3 fiber
1301 = 1310 \pm 40nm, PM fiber 1x2 (50/50) splitter
1302 = 1550 nm, PM fiber 1x4 (25/25/25/25) splitter
1401 = Encircle Flux mode conditioner, OM1 fiber

Connector type

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

Number of channels

1 = 1 channel

WARRANTY INFORMATION

This product comes with a standard 1 year warranty.

EXTENDED WARRANTIES AND CALIBRATION PLANS

With an **extended warranty and calibration plan** you'll spend more time focused on your priorities and less time worrying about maintenance.

Your choice: add a **3 or 5 year extended warranty** when you buy.



Guarantee performance

Ensure your equipment is operating at the best it can be for reliable and accurate results.

Lower cost of ownership

Lock in savings and maximise your testing budget with a lower base cost of ownership.

Peace of mind

Spend less time worrying about maintenance and more on generating results.

CALIBRATION PLANS FOR ADDITIONAL DISCOUNTS

Order a **calibration plan** when purchasing your Quantifi Photonics instruments and get additional discounts.

10% Discount

On calibrations ordered at the time of purchase.

25% Discount

Add on an extended warranty and receive a 25% discount on calibrations.

Over time and with regular use, all optical parts and connectors require re-calibration and maintenance to guarantee accurate and reliable performance. We recommend Quantifi Photonics optical instruments are re-calibrated every 12 months. With an instrument calibration performed by Quantifi Photonics technicians you receive:

- Comprehensive calibration to factory specifications
- End-to-end inspection to ensure all instrument functions are working and connectors are clean
- Firmware, software and documentation updates
- Certificate of calibration which includes detailed test results

How to do I secure my extended warranty or calibration plan?

Contact your Quantifi Photonics sales representative or email sales@quantifiphotonics.com

Extended warranties and calibration plans must be ordered at the time of purchase and are available only for Quantifi Photonics' products. The 25% calibration discount only applies to calibrations while the product is covered by the extended warranty period.

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

Tunable Laser Sources

Versatile telecom laser sources with full tunability across C or L bands. Narrow 100 kHz linewidth, up to 16.5 dBm of power, optional whisper mode to disable frequency dither.



Fixed Wavelength Laser Sources

Highly customizable DFB or FP laser sources available in a wide range of wavelengths and powers. Models support SMF, MMF and PMF.



Swept, Tunable Continuous Wave Laser

Swept, tunable continuous wave (CW) laser source with 0.01 dB power stability and 400 nm/s high-speed scan rate for R&D and production testing.



Superluminescent Diode Broadband Light Source

Super-luminescent LED light source with high output power, large bandwidth and low spectral ripple and various wavelengths.



Erbium-Doped Fiber Amplifier (EDFA)

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



Variable Optical Attenuator (VOA)

Fast attenuation speed with low insertion loss and built-in power monitoring. Operates in fixed attenuation or constant output power modes. Models support SMF, MMF and PMF connector types.



Polarization Controller & Scrambler

High-speed automated polarization control with broad wavelength coverage from 1260nm to 1650nm, low insertion loss and back reflection. Full remote control via intuitive GUI, LabVIEW or SCPI.



Optical-to-Electrical Converter

High bandwidth, broadband O-to-E converter. Available in a range of configurations; choose from 1 or 2 channels, AC or DC coupling and various conversion gain and operating wavelength ranges.



Optical Switch

Proven reliability and fast switching time. Wide variety of switch configurations: 1x4, 1x16, 16x16 and more. Models support SMF, MMF and PMF.



Optical Spectrum Analyzer (OSA)

Low cost, spectral measurement in a compact module with built-in analysis for: SMSR, OSNR & spectral width. Targeted wavelengths for specific applications in O band, C band & L band.



Optical Power Meters

Fast terminating or inline monitoring of optical signal power from -60 to +10 dBm across 750 – 1700 nm wavelengths. Model with logarithmic analog output for applications such as silicon photonics fiber alignment.



Bit Error Rate Tester (BERT)

2, 4 or 8-channel Pulse Pattern Generator and Error Detector at rates up to 29 Gbps for the design, characterization and production of optical transceivers and opto-electrical components.



Photonic Doppler Velocimeter (PDV)

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



Passive Component Integration

Integrate passive optical components of your choice such as WDM couplers, splitters, band-pass filters, PM beamsplitters and circulators. Models support SMF, MMF and PMF.



Passive Component Storage

Protect and store your own passive fiber optic components such as splitters, connector adaptor patchcords, WDM couplers, and isolators in one handy module.



PXI – MODULAR SYSTEM

MATRIQ – COMPACT BENCHTOP

See our website for more details
quantifotonics.com/products

Test. Measure. Solve.TM

Quantifi Photonics is transforming the world of photonics test and measurement. Our portfolio of optical and electrical test instruments is rapidly expanding to meet the needs of engineers and scientists around the globe. From enabling ground-breaking experiments to driving highly efficient production testing, you'll find us working with customers to solve complex problems with experience and innovation.

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

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