QUANTIFI PHOTONICS®
A Teradyne Company

Laser

1200 SERIES
CUSTOM LASER SOURCE

SPECIFICATION SHEET

AVAILABLE IN PXI

AVAILABLE IN MATRIQ

quantifiphotonics.com

The Laser 1200 Series is a flexible platform that is designed to be customized for your specific needs. It can accommodate a wide range of butterfly-packaged laser diodes, allowing you to choose different wavelengths or power outputs, while conveniently controlling the laser channels via SCPI, CohesionUI™, or your preferred programming language.

Highly-customizable

Novel design architecture enables the Laser 1200 Series to be quickly customized with different wavelengths and power options to meet customer requirements.

Simple, intuitive operation with CohesionUI

CohesionUI is an intuitive web-based user interface that makes it simple to control our PXI instruments from modern web browsers or smartphones.

Superior power accuracy

Advanced calibration for flat power response, ideal for applications including Coherent, Orthoganal Frequency-Division Multiplexing (OFDM) transmission and WDM networks.

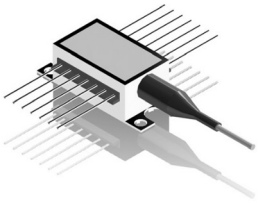
1, 2 or 4 lasers in a single instrument

Achieve high channel density with up to 68 channels in an 18-slot PXI chassis or 4 channels in an ultra-compact benchtop instrument.

Seamless PXI integration

Take advantage of PXI's integrated triggering and synchronization capabilities across electrical and optical instruments for a true mixed-signal test platform.

Define your laser requirements



The Laser 1200 Series can be customized with a wide range of butterfly packaged laser sources. For a quote and lead time on a customized Laser 1200 instrument please contact our sales engineers at sales@quantifiphotonics.com

Please include the following information:

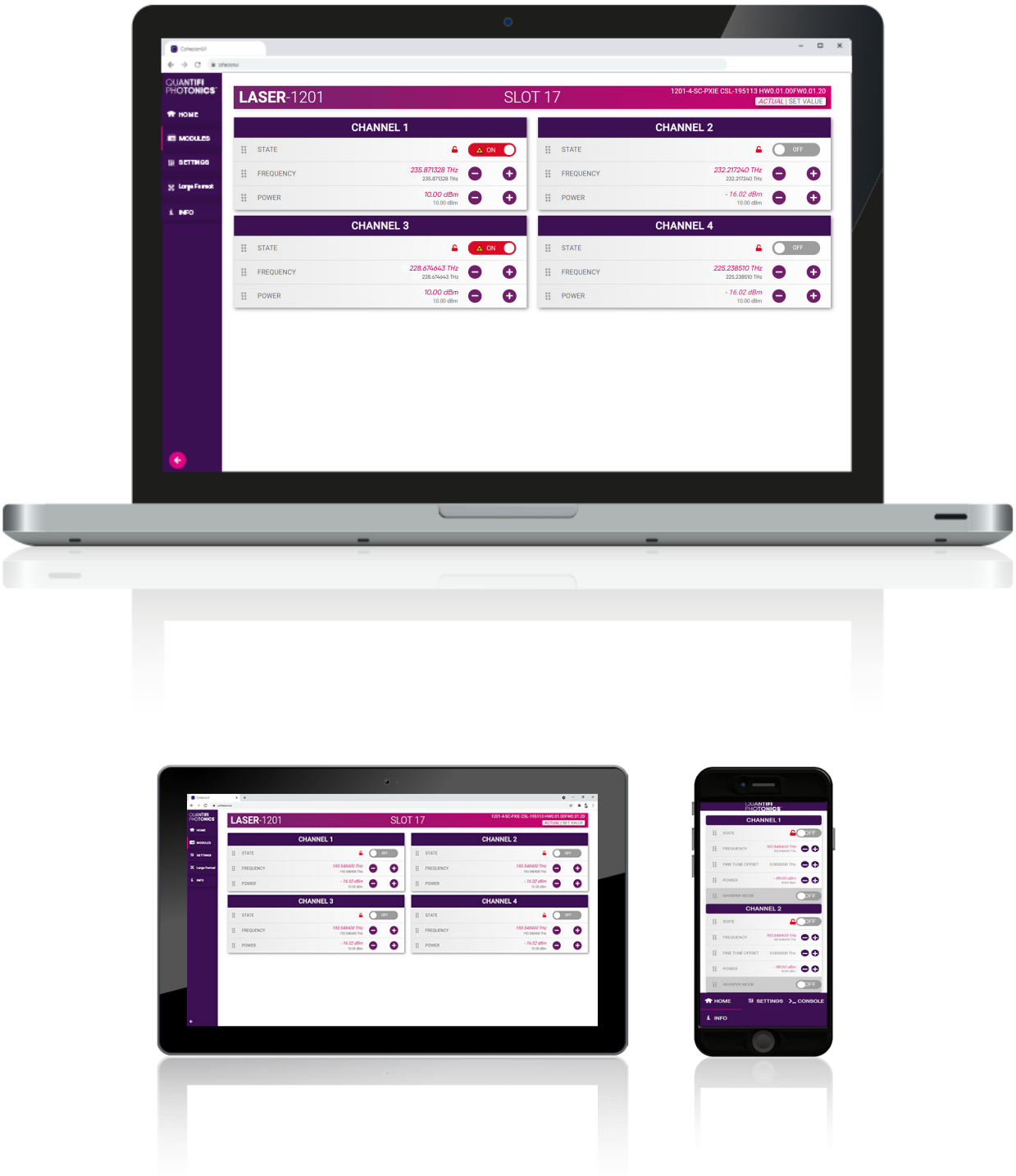
- Center wavelength [nm]:
- Center wavelength accuracy [+/- nm]:
- Output power [dBm]:
- Laser linewidth [MHz]:
- Fiber type (SMF or PMF):
- Number of channels per instrument (1,2 or 4):
- Connector type (FC/PC, FC/APC, SC/PC, SC/APC):
- Form factor (PXI module or benchtop):

TARGET APPLICATIONS

- WDM network loading
- Amplifier testing
- CWDM reference light source
- General purpose stable light source for telecom and physics

Simple, intuitive control with Cohesion**UI**™

Cohesion**UI** makes it simple to control our PXI or MATRIQ instruments from a PC, tablet or smartphone. Its cutting-edge design offers a sleek modern interface, cross device compatibility, customizable views and remote network access.



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

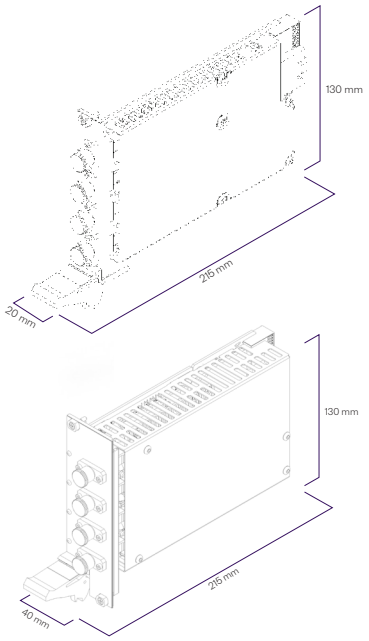
MATRIQ – COMPACT & PORTABLE

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

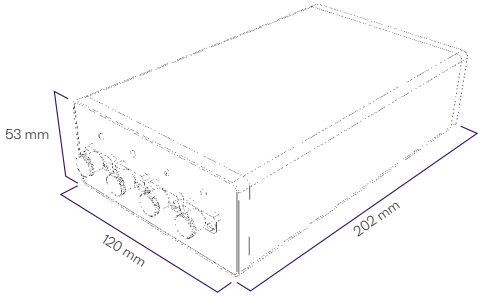
PXI – MODULAR

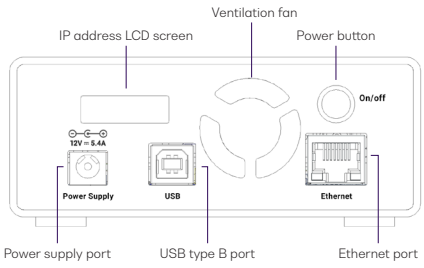
LASER-1201-4-FC-PXIE LASER-1207-4-FC-PXIE



MATRIQ – COMPACT & PORTABLE

LASER-1201-4-FC-MTRQ





LASER 1200 SERIES TECHNICAL SPECIFICATIONS

Specifications for a limited number of models used for common applications are listed below. If you don't see a model that meets your wavelength and power requirements, please contact us at sales@quantifiphotonics.com

General Specifications	PXI	MATRIQ
Bus connection	PXIe	USB and Ethernet
Optical connector type	FC/PC, FC/APC, SC/PC, SC/APC	FC/PC, FC/APC, SC/PC, SC/APC
Number of channels	1, 2 or 4	1, 2 or 4
Slot count	**1 slot:** 1207, 1222, 1223, 1225 **2 slots:** 1201, 1203, 1210	-
Dimensions (HxWxD)	**1 slot:** 130 x 20 x 215 mm (5.1 x 0.8 x 8.5 inches) **2 slot:** 130 x 40 x 215 mm (5.1 x 1.6 x 8.5 inches)	53 x 120 x 202 mm | 2.1 x 4.7 x 8.0 inches
Weight	~ 1 kg | ~ 2.2 lbs	~ 1.1 kg | ~ 2.4 lbs
Operating temperature range	5 °C to 45 °C | 41 °F to 113 °F	5 °C to 45 °C | 41 °F to 113 °F
Storage temperature range	-40 °C to 70 °C | -40 °F to 158 °F	-40 °C to 70 °C | -40 °F to 158 °F

Power Specifications	PXI	MATRIQ
AC input voltage range	Please refer to the latest PXI Express Hardware Specifications published by the PXI Systems Alliance.	100 to 240 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)

Model Number	1201	1201
Fiber Type	SMF 28	SMF 28
Number of channels	4	4
Operating wavelengths (nm)	1271, 1291, 1311, 1331	1271, 1291, 1311, 1331
Wavelength accuracy	±3 nm (Typical) ±5 nm (Max)	±3 nm (Typical) ±5 nm (Max)
Linewidth	0.2 nm / 36 GHz	0.2 nm / 36 GHz
Maximum optical output power	7 dBm	7 dBm
Side mode suppression ratio	30 dB	30 dB

Model Number	1203	1203
Fiber Type	SMF 28	SMF 28
Number of channels	4	4
Operating wavelengths (nm)	1351, 1371, 1391, 1411	1351, 1371, 1391, 1411
Wavelength accuracy	±3 nm (Typical) ±5 nm (Max)	±3 nm (Typical) ±5 nm (Max)
Linewidth	0.32 nm / 50 GHz	0.32 nm / 50 GHz
Maximum optical output power	7 dBm	7 dBm
Side mode suppression ratio	30 dB	30 dB

LASER 1200 SERIES TECHNICAL SPECIFICATIONS

Model Number	1207	1207
Fiber Type	PM1310	PM1310
Number of channels	1, 2 or 4	1, 2 or 4
Operating wavelengths (nm)	1310	1310
Wavelength accuracy	±3 nm (Typical) ±5 nm (Max)	±3 nm (Typical) ±5 nm (Max)
Linewidth	0.3 nm / 52 GHz	0.3 nm / 52 GHz
Maximum optical output power	14.5 dBm	14.5 dBm
Side mode suppression ratio	30 dB (Min) 50 dB (Typical)	30 dB (Min) 50 dB (Typical)

Model Number	1208[3]	1208[3]
Fiber Type	SMF-28	SMF-28
Number of channels	1, 2 or 4	1, 2 or 4
Operating wavelengths (nm)	1550	1550
Wavelength accuracy	±3 nm (Typical) ±5 nm (Max)	±3 nm (Typical) ±5 nm (Max)
Linewidth	1 MHz (Typical)	1 MHz (Typical)
Maximum optical output power	10 dBm	10 dBm
Side mode suppression ratio	30 dB (Min) 50 dB (Typical)	30 dB (Min) 50 dB (Typical)

Model Number	1210	1210
Fiber Type	SMF 28	SMF 28
Number of channels	2 or 4	2 or 4
Operating wavelengths (nm)	1310, 1550	1310, 1550
Wavelength accuracy	±3 nm (Typical) ±5 nm (Max)	±3 nm (Typical) ±5 nm (Max)
Linewidth	1310 nm: 0.2nm 1550 nm: 1 MHz (Typical)	1310 nm: 0.2 nm 1550 nm: 1 MHz (Typical)
Maximum optical output power	1310nm: 7 dBm 1550nm: 10 dBm	1310nm: 7 dBm 1550nm: 10 dBm
Side mode suppression ratio	30 dB (Min)	30 dB (Min)

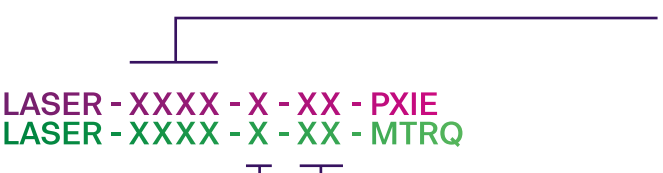
Model Number	1222	1222
Fiber Type	PMF	PMF
Number of channels	4	4
Operating wavelengths (nm)	1283.16, 1285.11, 1287.06, 1289.02	1283.16, 1285.11, 1287.06, 1289.02
Wavelength accuracy	± 0.5 nm (Max)	± 0.5 nm (Max)
Linewidth	5 MHz	5 MHz
Maximum optical output power	16 dBm (Max)	16 dBm (Max)
Side mode suppression ratio	40 dB (Min)	40 dB (Min)

Model Number	1223	1223
Fiber Type	PMF	PMF
Number of channels	4	4
Operating wavelengths (nm)	1290.98, 1292.95, 1294.93, 1296.91	1290.98, 1292.95, 1294.93, 1296.91
Wavelength accuracy	± 0.5 nm (Max)	± 0.5 nm (Max)
Linewidth	5 MHz	5 MHz
Maximum optical output power	16 dBm (Max)	16 dBm (Max)
Side mode suppression ratio	40 dB (Min)	40 dB (Min)

Model Number	1225	1225
Fiber Type	PMF	PMF
Number of channels	4	4
Operating wavelengths (nm)	1310	1310
Wavelength accuracy	±0.5 nm (Max)	±0.5 nm (Max)
Linewidth	5 MHz (Max)	5 MHz (Max)
Maximum optical output power	16 dBm	16 dBm
Side mode suppression ratio	40 dB (Min)	40 dB (Min)

Notes
1. PM optical connector key alignment: slow axis
2. These laser powers are consider class 1M as per the IEC 60825-1 standard
3. Advanced specifications

ORDERING INFORMATION



Model number
2 slot modules:
1201 = 1271, 1291, 1311, 1331 nm; 7 dBm
1203 = 1351, 1371, 1391, 1411 nm; 7 dBm
1208 = 1550 nm; 10 dBm
1210 = 1310, 1550; 7dBm, 10 dBm

1 slot modules:
1207 = 1310 nm; 14.5 dBm, PM
1222 = 1283.16, 1285.11, 1287.06, 1289.02 nm; 16 dBm
1223 = 1290.98, 1292.95, 1294.93, 1296.91 nm; 16 dBm
1225 = 1310 nm; 16 dBm

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

Number of channels
1 = 1 Channel
2 = 2 Channels
4 = 4 Channels

*Please contact us at sales@quantifiphotonics.com for other wavelength and power requirements.

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.

Add a **3 or 5 year extended warranty** when you purchase your Quantifi Photonics instruments.

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.

For more details visit **quantifiphotonics.com/products**

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 up to 24 dBm. Supports 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 Fibre 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. Support SMF, MMF and PMF.

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 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.

Optical Spectrum Analyzer (OSA)

Cost-effective, 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-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.

Digital Sampling Oscilloscope (DSO)

Digital equivalent-time sampling oscilloscope (DSO) with high-quality precision timebase and low jitter mode, available in 1 or 2 channels in a compact benchtop instrument.

Bit Error Rate Tester (BERT)

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.

Optical Switch

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

Photocurrent Amplifier

Versatile photodiode amplifier to measure photocurrent in photonic integrated circuit (PIC) applications. Digital and analog measurement.

Passive Component Integration

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

Test. Measure. Solve.™

Quantifi Photonics provides test solutions to help customers unlock scalable and cost-effective high-volume manufacturing of photonic integrated circuits (PICs), co-packaged optics and pluggable optics. The company's portfolio includes a wide range of photonic test instruments, and digital sampling oscilloscopes, available as benchtop or the industry-standard PXI format to support cost-effective, high-throughput design verification testing and high-volume manufacturing.

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

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