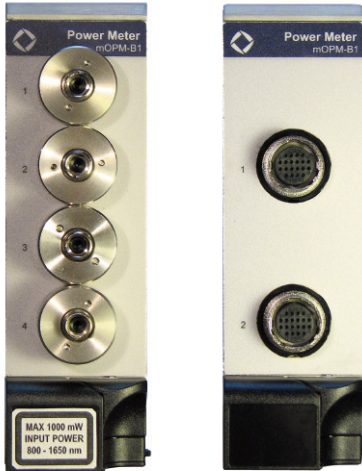


MAP Optical Power Meter Module (mOPM-B1)



Applications

- Amplifier characterization
- Receiver and transmitter testing
- Absolute power measurement
- Optical switching time measurement

Compliance

- The MAP Optical Power Meter, when installed in a MAP chassis, complies with CE, CSA/UL/IEC61010-1, plus LXI Class C requirements

Key Features

- Panel mount or remote head configuration
- Single, dual, or quad channel configurations available
- 250 kHz sampling rate for high-speed applications
- 750 to 1700 nm operating wavelength range
- Maximum input power up to 27 dBm available
- Compatible with single-mode and multimode fiber

The Multiple Application Platform (MAP-200) Optical Power Meter Module (mOPM-B1) is a second-generation power meter that brings a range of panel mount and remote head configurations to the JDSU MAP-200 platform.

The MAP-200 is the first photonic layer lab and manufacturing platform to be LAN Extensions for Instrumentation (LXI)-compliant, bringing the full power of Ethernet connectivity and ease of use of interchangeable virtual instrument (IVI) drivers to the optical test environment. The MAP-200 platform's industry-leading density and configurability enables test engineers to meet specific application requirements in the smallest possible footprint.

The MAP Optical Power Meter Module extends the optical power measurement capability of the MAP-200 by offering three grades of optical performance available in panel-mount or remote-head configurations with 1, 2, or 4 inputs per module.

Optical Performance

All three performance grades are based on indium gallium arsenide (InGaAs) detectors and are suitable for applications using single-mode (SM) or multimode (MM) fiber. They feature high accuracy, high linearity, and extremely low polarization dependant loss (PDL). The general purpose grade provides a measurement range of -70 to +10 dBm. The high-performance detector features thermal stabilization, which results in an extended wavelength range and a power measurement range of -80 to +10 dBm. The high power grade extends high-power measurement capability to +27 dBm.

Packaging Options

The mOPM-B1 comes factory-configured with panel-mounted detectors or as an interface module with 1, 2, or 4 electrical connections for remote heads. Remote heads facilitate positioning the detector close to the device under test (DUT) and away from other test equipment. The interface module is compatible with all performance grades of remote head and can accommodate a mix of performance grades. For example, an application requiring a general purpose optical power measurement (OPM) and a high-power OPM could be connected to the same Remote Head Base module, thereby reducing the number of slots used in the MAP-200 chassis.

Enhanced Functionality

All mOPM-B1 configurations support array capture with memory depth of 100,000 points per optical sensor. This feature combined with an adjustable sampling frequency (up to 250 kHz) is ideal for data logging applications or for capturing transient events.

Accessories

For ultimate flexibility, the detector heads offer JDSU AC1xx-series interchangeable detector adapters that are available for most connector types, as well as a fiber holder that permits bare fiber measurements. The mOPM-B1 is supplied with a detector cover and fixed connection (FC)-detector adapter as standard accessories. As an option for remote head users, a 1.8 m (6 foot) extension cable is available.

GUI

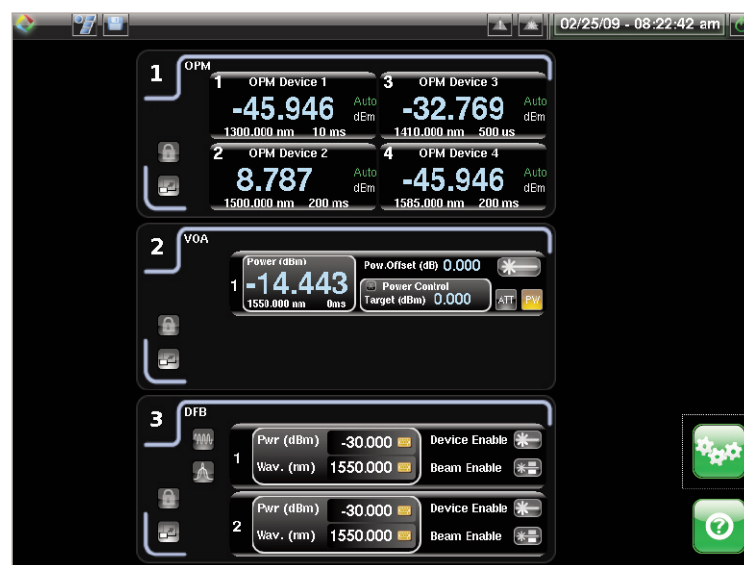


Figure 1 mOPM main user interface

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Specifications

Parameters	General Purpose	Premium Performance	High Power
Detector type	InGaAs	TEC InGaAs	Filtered InGaAs
Detector size	2 mm	3 mm	2 mm
Wavelength range	800 1630 nm	750 1700 nm	800 1630 nm
Fiber type	SMF and MMF with NA 0.27 (maximum core size 62.5 μ m)		
Dynamic range	+10 dBm to 70 dBm	+10 dBm to 80 dBm	+27 dBm to 45 dBm
Uncertainty at reference condition		$\pm 2.5\%$	
Total uncertainty		$\pm 4.5\%$	
Linearity	0.02 dB	0.02 dB	0.02 dB
Noise		5 pW	
Return loss		>55 dB	
Relative uncertainty due to polarization	$<\pm 0.015$ dB	$<\pm 0.01$ dB	$<\pm 0.07$ dB
Maximum number of channels (Panel mount)	1,2, or 4	1,2, or 4	1,2, or 4
Sampling time		4 μ s (250 kHz)	
Averaging time		(Between 4 & 100 μ s) to 5 s	
Buffer size		100000 points	
Supported connectors		FC, ST, LC, E2000, MU, MTP, Bare Fiber	
Recalibration period		1 year	
Warm-up time		30 minutes	
Operating temperature		5 to 40°C	
Humidity		15 – 95% Relative humidity, non-condensing	
Dimension (W x H x D)		4.06 x 13.26 x 37.03 cm (1.6 x 5.22 x 14.58 in)	
Weight		1.2 kg (2.65 lb)	
Parameters	Remote Head		
Cable Length	4.5 feet (1.4 m)		

Ordering Information

Panel-Mount Head Application

Base Module Options (Required)

MOPM-B1PMH Panel-Mount Head Module

Panel-Mount Detector Options (Select type and specify quantity)

MPMGP	2 mm InGaAs Panel-Mount Head General Purpose	Qty 1, 2, or 4 per Module
MPMHP	2 mm InGaAs Panel-Mount Head High Power	Qty 1, 2, or 4 per Module
MPMPP	3 mm InGaAs Panel-Mount Head Premium Performance	Qty 1, 2, or 4 per Module

Remote Head Application

Base Module Options (Required: Select one)

MOPM-B1RH1 Single-Channel Remote Head Module










MOPM-B1RH2 Dual-Channel Remote Head Module

MOPM-B1RH4 Quad-Channel Remote Head Module

Remote Head Options (Select type and specify quantity)

MOPM-B1RHGP	2 mm InGaAs Remote Head General Purpose	1 detector per head
MOPM-B1RHHP	2 mm InGaAs Remote Head High Power	1 detector per head
MOPM-B1RHPP	3 mm InGaAs Remote Head Premium Performance	1 detector per head

Optional Accessories

Part Number	Description	Image
AC100	Detector cap	
AC101	FC adapter	
AC102	ST adapter	
AC103	SC adapter	
AC112	MT (ribbon connector)	
AC114	MU	
AC115	E2000	
AC118	LC	
AC120	Adapter holder (for AC121 and AC113)	

Note: All MOPM are supplied with an AC100 and an AC101 per detector.

Test & Measurement Regional Sales

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