Keysight Technologies

8163B Lightwave Multimeter
8164B Lightwave Measurement System
8166B Lightwave Multichannel System

Data Sheet

KEYSIGHT TECHNOLOGIES

Keysight 8163B Mainframe

The Keysight Lightwave Multimeter system includes the mainframe and a variety of plug-in modules, suited for set-ups requiring:

- Single or dual channel power meters
- Single or dual wavelength fixed or tunable sources
- Loss test sets
- Return loss test sets

Specifications

Display	Graphical active color display 300 x 240 points visible, 4 updates per second
Display resolution (power meters)	0.0001 dB/dBm, 0.0 1pW to 10 pW (depending on power meter), up to 6.5 digits (user definable)
Chipset	Mobile Intel QM57Express
Compatibility	The Keysight 8163B mainframe supports all 8153A Series and 8163A & B Series modules. [1]
Trigger	True synchronous on all channels. Max. 100 kHz for triggering and 1 MHz (50% duty cycle) for external digital modulation.
Environmental Storage temperature Operating temperature Humidity	 –40 °C to +70 °C 0 °C to +45 °C < 95% rH from 0 °C to 55 °C The products are designed for pollution degree 2 The maximum operation altitude is 2000 m
Power	AC 100 to 240 V ± 10%, 50 to 60 Hz 5%, 120 VA max.
Dimensions (height x width x length) Weight	88 mm x 213 mm x 380 mm (3.5" x 8.4" x 15") net 4.200 kg (9.3 lbs), shipping 6.5 kg (14.5 lbs)
GPIB capability	All modes and parameters accessible via GP-IB interface
GPIB interface function codes [2]	SH1, AH1, T6, L4, SR0, RL1, PP0, DC1, DT0, C0. SCPI Standard
GPIP interface performance	Max. 300 kB/sec (burst data rate during read of 12001 data points from power meter)
Parallel printer interface	Centronics
RS232 interface: max. baud rate	115200 bps
Number of modules	2 modules
Ordering information Keysight 8163B Lightwave Multimeter Option 908 Rack mount kit 08163-44101 Filler panel for empty slots	

1. Keysight 8163B Series modules are NOT compatible with the HP 8153A Lightwave Multimeter.
2. For code compatibility to the HP 8153A Lightwave Multimeter please refer to the mainframe's Programming Guide, part number 08764-91026.

Keysight 8164B Mainframe

The Keysight 8164B mainframe, supports a range of high-performance tunable laser modules, as well as all of the fixed source and sensor modules of the 8153A and 8163A/B Lightwave Multimeter Series.

Specifications

Display	Graphical active color display, 640 x 480 points visible, 4 updates per second, VGA connector for external monitor
Display resolution	
Compatibility	The Keysight 8164B mainframe supports all 8153A Series and 8163A & B Series modules. [1]
Trigger	True synchronous on all channels. Max. 100 kHz for triggering and 1 MHz (50% duty cycle) for external digital modulation.
Environmental Storage temperature Operating temperature Humidity	 –40 °C to +70 °C 0 °C to +35 °C < 80% rH from 10 °C to 35 °C The products are designed for pollution degree 2 The maximum operation altitude is 2000 m
Power	AC 100 to 240 V ± 10%, 50/60 Hz , 280 VA max.
Dimensions (height x width x length) Weight	145 mm x 426 mm x 545 mm (5.8" x 16.9" x 21.6") net 20 kg, shipping 23 kg
GPIB capability	All modes and parameters accessible via GP-IB interface
GPIB interface function codes [2]	SH1, AH1, T6, L4, SR0, RL1, PP0, DC1, DT0, C0. SCPI Standard
GPIP interface performance	Max. 300 kB/sec (burst data rate during read of 12001 data points from power meter)
Parallel printer interface	Centronics
RS232 interface: max. baud rate	115200 bps
Number of modules	4/1 modules
Ordering information Keysight 8164B Lightwave Multimeter Option 908 Rack mount kit 08163-44101 Filler panel for empty slots (compact slots only)	

1. Keysight 8163B Series modules are NOT compatible with the HP 8153A Lightwave Multimeter.
2. For code compatibility to the HP 8153A Lightwave Multimeter please refer to the mainframe's Programming Guide, part number 08764-91026.

Keysight 8166B Mainframe

The Keysight 8166B mainframe can be easily integrated into test environments by using plug and play drivers over GPIB, or by using the configurable hardware input and output trigger ports.

All modules of the 8163A/B Lightwave Multimeter family can be used in any combination in the Multichannel System.

Specifications

Display	Graphical active color display, 300 x 240 points visible, 4 updates per second, VGA connector for external monitor
Display resolution	0.0001 dB/dBm, 0.01 pW to 10 pW (depending on power range), up to 6.5 digits (user definable)
Compatibility	The Keysight 8166B mainframe supports all modules from the 8163A/B Lightwave Multimeter series. [1]
Trigger	True synchronous on all channels. Max. 100 kHz for triggering and 1 MHz (50% duty cycle) for external digital modulation.
Environmental Storage temperature Operating temperature Humidity	 –40 °C to +70 °C 0 °C to +45 °C < 95% rH from 0 °C to 45 °C The products are designed for pollution degree 2 The maximum operation altitude is 2000 m
Power	AC 100 to 240 V ± 10%, 50/60 Hz, 450 VA max.
Dimensions (height x width x length) Weight	240 mm x 430 mm x 580 mm (9.5” x 17” x 23”) net 23 kg, shipping 45 kg
GPIB capability	All modes and parameters accessible via GP-IB interface
GPIB interface function codes [2]	SH1, AH1, T6, L4, SR0, RL1, PP0, DC1, DT0, C0. SCPI Standard
GPIP interface performance	Max. 300 kB/sec (burst data rate during read of 12001 data points from power meter)
Parallel printer Interface	Centronics
RS232 interface: max. baud rate	115200 bps
Number of modules	17 modules
Ordering information Keysight 8166B Lightwave Multimeter Option 908 Rack mount kit 08163-44101 Filler panel for empty slots	

1. Modules designed for the HP 8153A Lightwave Multimeter are NOT compatible with the Keysight 8166A/B Lightwave Multichannel System.
2. For code compatibility to the HP 8153A Lightwave Multimeter please refer to the mainframe's Programming Guide, part number 08764-91026.

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