



## New Optical Units

(For MP1570A SONET/SDH/PDH/ATM Analyzer)



*For Evaluating OC-192/STM-64 Optical Signals*

These three new optical units are used in the MP1570A.

The MU150031A/C and MU150061A/B units are E/O converters supporting the high-power (+2 dBm) 1.55  $\mu\text{m}$  output and the 1.31  $\mu\text{m}$  optical output for OC-192/STM-64, respectively.

In addition, the MU150017A/B unit is an O/E converter unit with a built-in wideband clock regeneration circuit for 10G jitter measurement.

### ● Supports for Five 2.5G/10G Outputs

The MP1570A supports the following five types of interface, any of which can be chosen to match the measurement application.

Interface	Unit	Remarks
Optical	MU150031A/C Optical 10G Tx (1.55) High-Power Unit*	1550 nm, +2 dBm, 2 km transmission
	MU150061A/B Optical 10G Tx (1.31) Unit*	1310 nm, +3 dBm, 2 km transmission
	MU150001A Optical 10G Tx (1.55) Unit*	1550 nm, -4 dBm, 2 km transmission
	MU150001B Optical 10G Tx (1.55) Unit*	1550 nm, -4 dBm, 40 km transmission
Electrical	MU150000A 2.5G/10G Unit	

\* Used with MU150000A

### ● For 2.5G/10G Jitter Measurement

Optical jitter (2.5G/10G) can be measured by installing the MU150017A/B unit in the MP1570A. When used in combination with the MP1580A Portable 2.5G/10G Analyzer and MU150018A 2.5G/10G Jitter Unit, an automatic system can be set up for measuring jitter tolerance, jitter transfer, etc., in accordance with the ITU-T O.171/O.172 recommendations.

## Specifications

### ● MU150031A/C Optical 10G Tx(1.55) High Power Unit

Bit rate	MU150031A: 9953.28 Mbit/s MU150031C: 9953.28 Mbit/s, 2488.32 Mbit/s
Optical output	Wavelength: 1525 to 1565 nm Output level: +2 dBm $\pm$ 2 dB Optical safety: IEC825-1 (Class 3A), 21CFR1040.10 (Class III b) Connector: FC-PC (SM-F)
Electrical input	Data input H: 0 to -0.2 V, L: -0.85 to -1.4 V Clock input H: 0 to -0.2 V, L: -0.85 to -1.3 V Connector: SMA (50 $\Omega$ )

### ● MU150061A/B Optical 10G Tx (1.31) Unit

Bit rate	MU150061A: 9953.28 Mbit/s MU150061B: 9953.28 Mbit/s, 2488.32 Mbit/s
Optical output	Wavelength: 1290 to 1330 nm Output level: +3 dBm $\pm$ 2 dB Optical safety: IEC825-1(Class 3A), 21CFR1040.10 (Class III b) Connector: FC-PC (SM-F)
Electrical input	Data input H: 0 to -0.2 V, L: -0.85 to -1.4 V Clock input H: 0 to -0.2 V, L: -0.85 to -1.3 V Connector: SMA (50 $\Omega$ )

● **MU150017A/B Optical 10G Rx (Wide) Unit**

Bit rate	MU150017A: 9953.28 Mbit/s ±100 ppm MU150017B: 9953.28 Mbit/s ±100 ppm, 2488.32 Mbit/s ±100 ppm
Optical input	Wavelength 10G: 1550 nm band, 2.5G: 1310/1550 nm band (MU150017B) Sensitivity -11 to -3 dBm (10G, BER10 <sup>-12</sup> , NRZ, VC4-64c, scramble: on, mark ratio: 1/2, PRBS2 <sup>23</sup> -1) -15 to -3 dBm (2.5G, BER10 <sup>-12</sup> , NRZ, VC4-16c, scramble: on, mark ratio: 1/2, PRBS2 <sup>23</sup> -1) Connector: FC-SPC (SM-F) Power measurement Range: -16 to -2 dBm (10G, average power), -36 to -2 dBm (2.5G average power) Accuracy: ≤±2 dB
Electrical output	Data output: 0.7 to 1.3 Vp-p Clock output: 0.65 to 1.3 Vp-p Connector: SMA (50 Ω) Output phase: Variable output clock phase according to output data (10G only)

## Ordering Information

Please specify model/order number, name, and quantity when ordering.

Model/Order No.	Name	Remarks
MU150017A MU150017B MU150031A MU150031C MU150061A MU150061B	<p>– Units –</p> <p>Optical 10G Rx (Wide) Unit Optical 2.5G/10G Rx (Wide) Unit Optical 10G Tx (1.55) High Power Unit Optical 2.5G/10G Tx (1.55) High Power Unit Optical 10G Tx (1.31) Unit Optical 2.5G/10G Tx (1.31) Unit</p>	
J1002B J0747A J0635A J0907Q J1002A J0908 E0008A	<p>– Standard accessories –</p> <p>Semi-rigid cable: 2 pcs Fixed optical attenuator (5 dB): 1 pc Optical fiber cable (FC•PC-FC•PC), 1 m: 1 pc Remote inter rock cord: 1 pc Semi-rigid cable: 2 pcs Remote inter rock termination: 1 pc Optical output control key: 2pcs</p>	<p>For MU150017A/B For MU150017A/B For MU150017A/B For MU150031A/C, MU150061A/B For MU150031A/C, MU150061A/B For MU150031A/C, MU150061A/B For MU150031A/C, MU150061A/B</p>
MU150017A/B-37 MU150031A/C-37 MU150061A/B-37 MU150017A/B-38 MU150031A/C-38 MU150061A/B-38 MU150017A/B-39 MU150031A/C-39 MU150061A/B-39 MU150017A/B-40 MU150031A/C-40 MU150061A/B-40 MU150017A/B-43 MU150031A/C-43 MU150061A/B-43 MU150002A-04	<p>– Options –</p> <p>FC connector FC connector FC connector ST connector ST connector ST connector DIN connector DIN connector DIN connector DIN connector SC connector SC connector SC connector SC connector HMS-10/A connector HMS-10/A connector HMS-10/A connector Available for 10G (1.31)</p>	<p>User replaceable, 1 pc User replaceable, 1 pc User replaceable, 1 pc User replaceable, 1 pc User replaceable, 1 pc User replaceable, 1 pc User replaceable, 1 pc User replaceable, 1 pc User replaceable, 1 pc User replaceable, 1 pc User replaceable, 1 pc User replaceable, 1 pc User replaceable, 1 pc User replaceable, 1 pc User replaceable, 1 pc User replaceable, 1 pc User replaceable, 1 pc</p>
MU150017A/B-90 MU150031A/C-90 MU150061A/B-90	<p>– Maintenance service –</p> <p>Extension service 3 years Extension service 3 years Extension service 3 years</p>	
MP1580A MU150018A	<p>– Peripherals –</p> <p>Portable 2.5G/10G Analyzer 2.5G/10G Jitter Unit</p>	For MP1580A

Model/Order No.	Name	Remarks
	<b>– Application parts –</b>	
J0796A	ST connector	User replaceable (with protective cap), 1 pc
J0796B	DIN connector	User replaceable (with protective cap), 1 pc
J0796C	SC connector	User replaceable (with protective cap), 1 pc
J0796D	HMS-10/A connector	User replaceable (with protective cap), 1 pc
J0796E	FC connector	User replaceable (with protective cap), 1 pc
J0635A	Optical fiber cable, 1 m	SM, both-ends FC-PC connector
J0635B	Optical fiber cable, 2 m	SM, both-ends FC-PC connector
J0635C	Optical fiber cable, 3 m	SM, both-ends FC-PC connector
J0660A	Optical fiber cable, 1 m	SM, both-ends SC connector
J0660B	Optical fiber cable, 2 m	SM, both-ends SC connector
J0660C	Optical fiber cable, 3 m	SM, both-ends SC connector
J0756A	Optical fiber cable, 1 m	SM, both-ends ST connector
J0756B	Optical fiber cable, 2 m	SM, both-ends ST connector
J0756C	Optical fiber cable, 3 m	SM, both-ends ST connector
J0747A	Fixed optical attenuator (5 dB)	
J0747B	Fixed optical attenuator (10 dB)	
J0747C	Fixed optical attenuator (15 dB)	
J0747D	Fixed optical attenuator (20 dB)	
J1049A	Fixed optical attenuator: SC (5 dB)	
J1049B	Fixed optical attenuator: SC (10 dB)	
J1049C	Fixed optical attenuator: SC (15 dB)	
J1049D	Fixed optical attenuator: SC (20 dB)	
J1050A	Fixed optical attenuator: ST (5 dB)	
J1050B	Fixed optical attenuator: ST (10 dB)	
J1050C	Fixed optical attenuator: ST (15 dB)	
J1050D	Fixed optical attenuator: ST (20 dB)	



Specifications are subject to change without notice.

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