

4ch Oscilloscope Supports Single and Multimode

MP2110A Opt-061: Low Noise and Multimode Support for Opt.040
BERTWave™ MP2110A



The explosive increase in optical communications data traffic is driving current growth in the datacenter market which is accelerating demand by datacenter operators for 400G and 800G optical transceivers. Optical-transceiver transmitters use either single-mode or multimode lasers. Both types secure large transmission capacity using 4ch and 8ch optical signal lanes. Efficient production and inspection of these multichannel optical transceivers requires simultaneous channel tests. With its 4ch optical sampling oscilloscope, Anritsu's MP2110A helps increase productivity while cutting capital equipment costs. However, Anritsu now adds a new option supporting both single-mode and multimode for even more efficient cost cutting. Installing this option makes it easy to configure a versatile production line for testing both single-mode and multimode optical transceivers using Anritsu's powerful all-in-one MP2110A.

MP2110A-061 Added Value

1. Measure both single-mode and multimode

Multimode supports 900 nm band measurements in addition to the 850 nm band supported by the previous Opt-049.

2. Higher single-mode sensitivity performance

The single-mode mask sensitivity^{*3} is improved by 2 dB compared to the previous Opt-040 due to better optical noise performance.

4ch Oscilloscope Specifications (nominal)

Option	MP2110A-040	MP2110A-040+061		MP2110A-049	
Bandwidth (no filter) ^{*1}	35 GHz	35 GHz		25 GHz	
Wavelength	1260 nm to 1650 nm	850 nm to 1650 nm		800 nm to 860 nm	
Sensitivity ^{*1,*2}	@1310 nm	@1310 nm	@850 nm	@850 nm	
	Optical Noise	5.8 μ W	4.1 μ W	12.2 μ W	7.0 μ W
	Mask Sensitivity ^{*3}	-12.0 dBm	-14.0 dBm	-10.0 dBm	-12.0 dBm

*1: Typical value

*2: The 850 nm wavelength specification for Opt-040 + 061 is the value with 100GbE/4 filter. Other values are with an OTU4 filter.

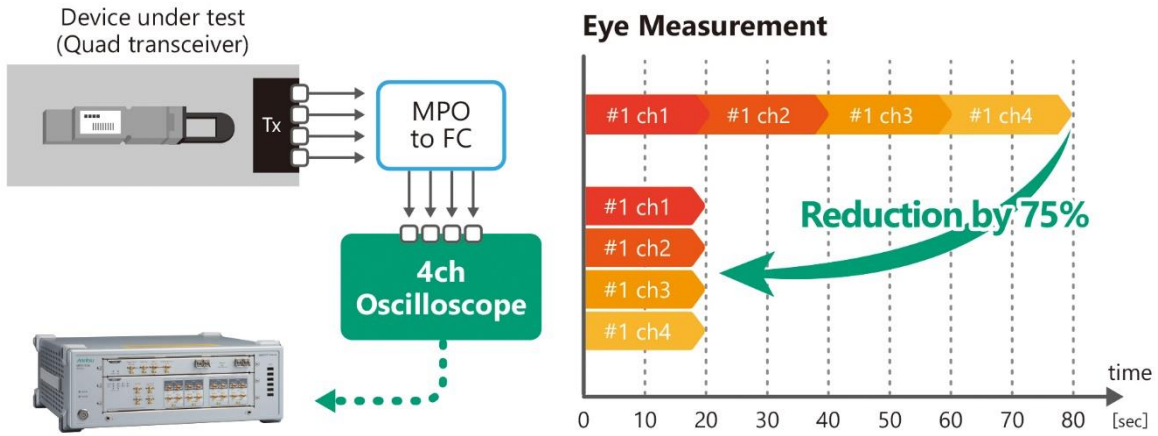
*3: Estimated optical power at which mask margin (Hit Count 0) reaches 0%.

Applications

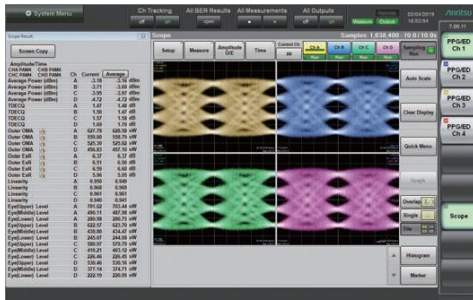
Evaluating transmitter section of 10G to 800G optical transceivers including:

- 900 nm band SWDM4/BiDi/SR4.2 optical transceivers
- Silicon Photonics low-power-consumption optical transceivers requiring high-sensitivity measurements

Usage Example: 4ch Optical Transceiver Modules



- Supports both SM and MM measurements using one MP2110A
- Lower measurement costs (about half of dual-channel model cost per channel)
- Faster measurement (time cut by 75% using all-at-once measurement)



4ch PAM4 TDECQ Measurement



4ch NRZ Mask Margin Measurement

Ordering Information

Specify the model, name, and quantity when ordering.

The listed product name may be slightly different from the name on the product. For details, please contact our sales section.

Model	Name
MP2110A	BERTWave
MP2110A-040	Quad Optical Scope for Singlemode
MP2110A-061*	Low Noise and Multimode Support for Opt.040
Additional Options	
MP2110A-054	Clock Recovery (Electrical/Optical)
MP2110A-055	26/53 Gbaud Clock Recovery (SM Optical)
MP2110A-095	PAM4 Analysis Software
MP2110A-096	Jitter Analysis Software

* The MP2110A-061 is added at factory shipment and cannot be retrofitted.

Learn more about the MP2110A at:

<https://www.anritsu.com/en-us/test-measurement/products/mp2110a>