

# Efficient Multichannel Optical Transceiver Measurement

Quad Optical Scope MP2110A-030/039/040/049  
BERTWave MP2110A



Optical transceivers required by Large-scale networks, such as 100/400 GbE, are securing bandwidth using multichannel parallel processing. Consequently, all-at-once multichannel measurement is extremely effective for improving productivity.

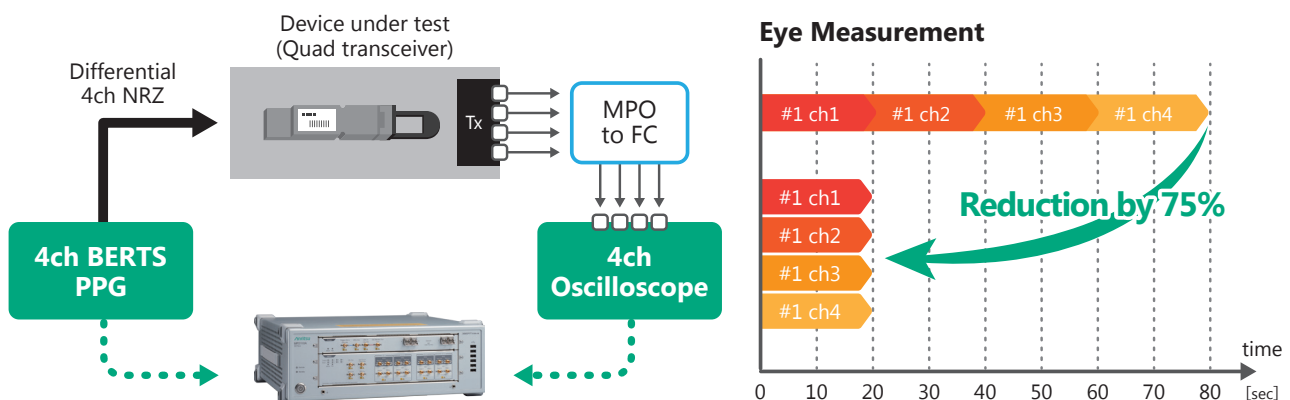
The BERTWave MP2110A featuring fast measurement speeds and high sensitivity not only assures high efficiency but also improves productivity by addition of the Quad Optical Scope option to halve measurement costs per channel compared to previous instruments.

## Features

- 4ch optical sampling oscilloscope with all-at-once simultaneous measurement of all channels
- Lower measurement costs per channel for either single mode or multimode
- All-in-one Jitter analysis, PAM4 analysis and clock recovery
- Stable, fast measurement due to built-in PC

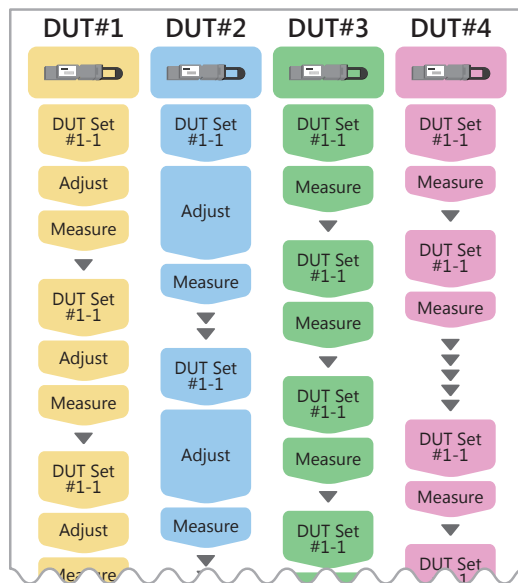
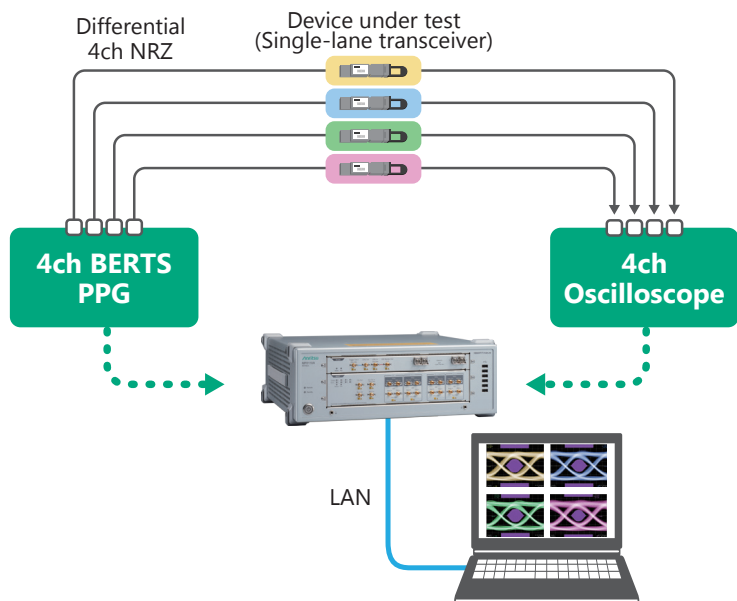
## Efficiencies of Using Quad Optical Scope

< Application Example 1: QSFP28 Optical Transceiver Tx Waveform Evaluation >



- All-in-one 4ch BERTS and 4ch oscilloscope
- Lower measurement costs (halved per channel)
- Faster measurement (time cut by 75% using all-at-once measurement)
- All-at-once 4ch PAM4 analysis

< Application Example 2: Multiple SFP28 Optical Transceiver Tx Waveform Evaluation >



**Evaluate four DUTs with one 4ch oscilloscope**

- Cuts costs and benchtop space compared to four 1ch oscilloscopes
- Channel-independent auto-scaling and measurement start/stop**
- Improves usage efficiency for each channel
- Easy remote programming

**Specification**

	MP2110A-030/040	MP2110A-039/049
Wavelength	1260 nm to 1650 nm	800 nm to 860 nm
Bandwidth (w/o filter)	35 GHz (typ.)	25 GHz (typ.)
Sensitivity	MP2110A-030: -13.5 dBm (typ.) MP2110A-040: -12.0 dBm (typ.)	MP2110A-039: -12.0 dBm (typ.) MP2110A-049: -12.0 dBm (typ.)
Noise	MP2110A-030: 4.8 μW (typ.) MP2110A-040: 5.8 μW (typ.)	MP2110A-039: 6.7 μW (typ.) MP2110A-049: 7.0 μW (typ.)
Maximum Input Power (Unsaturated range)	+2 dBm (at 1310 nm, ExR 4 dB signal input)	+2 dBm (at 850 nm, ExR 3 dB signal input)

**Ordering Information**

Please specify the model/order number, name and quantity when ordering. The names listed in the chart below are Order Names. The actual name of the item may differ from the Order Name. Contact your sales representative for more details.

Model/Code	Name
MP2110A	BERTWave
MP2110A-040	Quad Optical Scope for Singlemode*
MP2110A-049	Quad Optical Scope for Multimode*
MP2110A-030	Quad Optical Scope for Singlemode Baseband Flat*
MP2110A-039	Quad Optical Scope for Multimode Baseband Flat*
<b>Optional Extras</b>	
MP2110A-054	Clock Recovery (Electrical/Optical)
MP2110A-095	PAM4 Analysis Software
MP2110A-096	Jitter Analysis Software

\*: Can select any one, including other oscilloscope interface options