Multiport Manufacturing Test Solution

High-Throughput Automated Testing with ML4035

Multiport Cable & Connector Tester

ML1105

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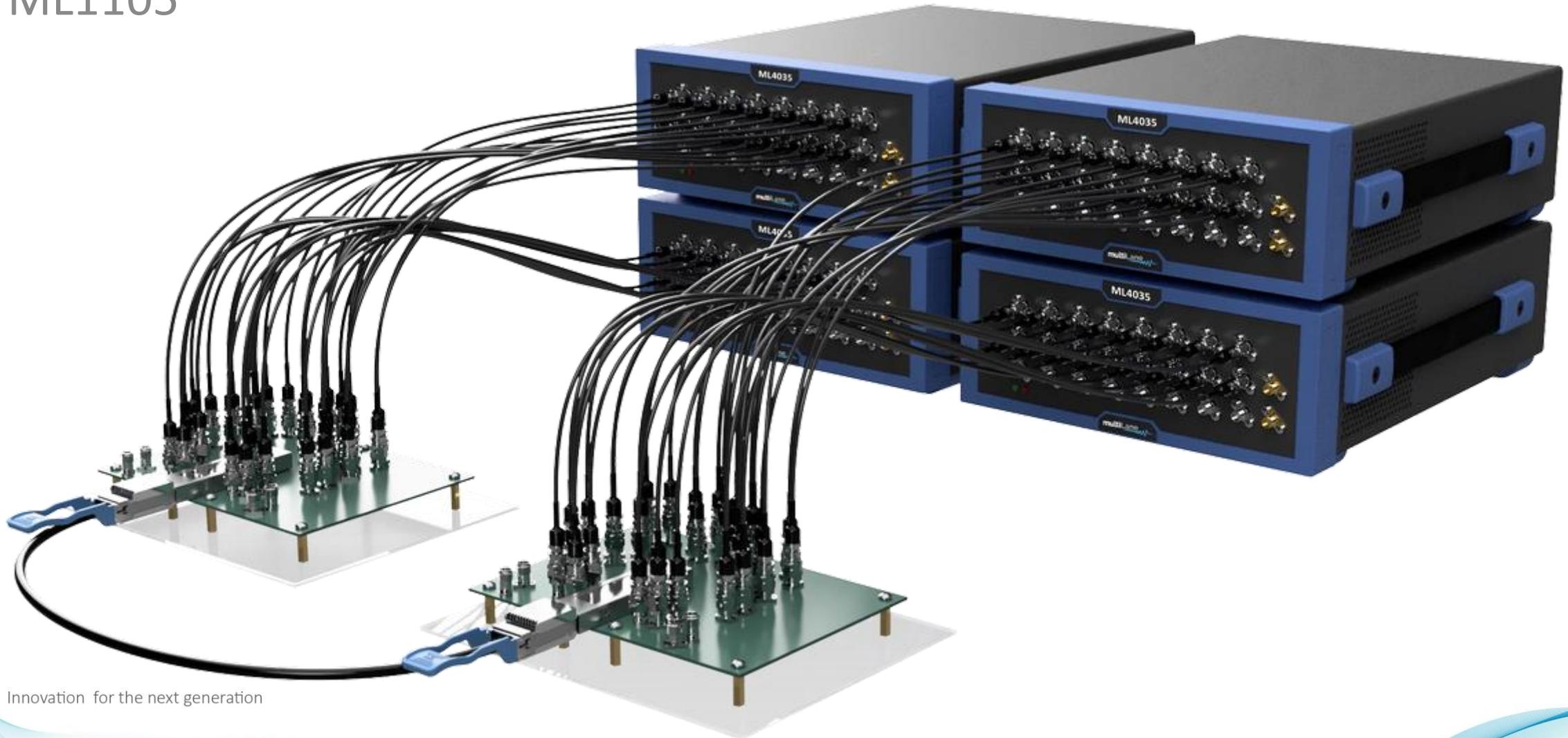
High-Throughput Multiport Tester
Automated S-Parametric Validation
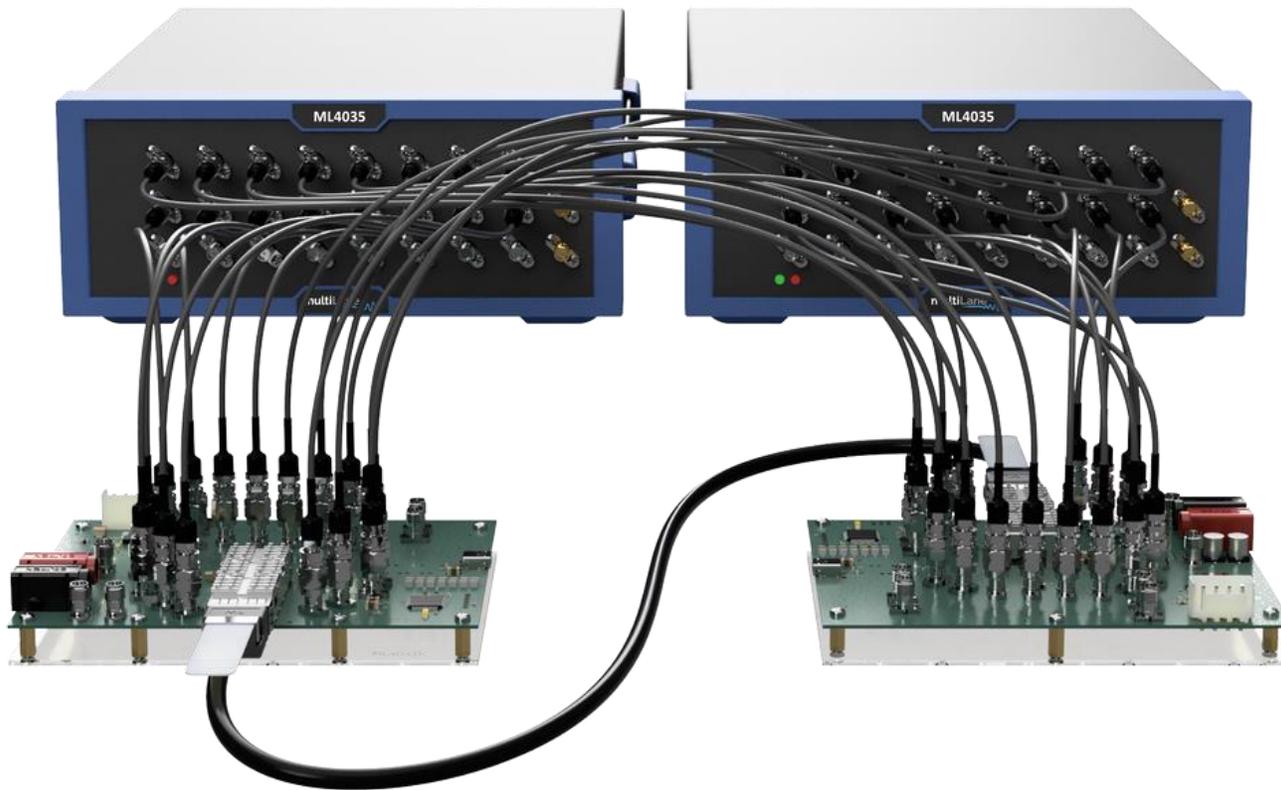
VNA Type Measurements

- Insertion Loss
- Return Loss
- Crosstalk
- ICN & COM
- TDR

- Ultrafast Test Throughput (< 15s)
- Fully Automated S-Parametric Validation
- Supports DAC & high-density backplane cables
- Test Report Generation
- Scalable to 64 ports & more
- Simple & Fast Calibration Procedure (< 15s)

ML4035   ML4035

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High-Density Cable & Connector Testing

Supports All Types of High-Speed Passive Cables

Tests both DAC & high-density backplane cables:

- SFP, QSFP, QSFP-DD, & OSFP DAC
- PCIe
- Mini-SAS
- SlimSAS
- ExaMAX
- Genz
- EDSFF
- CXL

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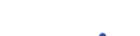
ML4035: Swiss Army Knife of SI

Key Features

- 4-Lane Sampling Scope
- 4-Lane 53GBd PPG
- 4-Lane True-Differential TDR/TDT
- 400G Bit Error Ratio Tester
- Automation SW for DAC Testing
- High Throughput

	Port Name	Description
1	Clk In/Out	The trigger input for the sampling scope (DSO). It is used in DSO mode only.
2	CH1 - CH4	35GHz DSO & TDR ports.
3	TX1 – TX4	PPG ports. Each channel can transmit a 53GBd NRZ/PAM4 signal.
4	RX1 – RX4	Error Detector ports. Used to measure BER.
5	LAN	RJ-45 port for data transfer and communication with the GUI

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Optimized for Production

Fast

TDR & S-Parameters
Impedance Profile
Insertion Loss
Crosstalk

Eye Diagram
Eye Height/Width
Mask Test
Jitter Decomposition

ML4035

Manual Software
For Debugging/Verification

Automated Software
For Production/RMA
Pass/Fail
Report Generation

Reliable

Scalable

API

Bit Error Rate

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ML1105 Automated Software

Engineered for High-Volume Testing

- Fully Automated
- High Throughput
- Pass/Fail Indicator
- Automatic Report Generation
- Spec Defined & Custom Masks
- Barcode Scanning Capability
- User Friendly GUI

Throughput Optimization

Calibration	Time (seconds)
	12.8

Testing	Test Type	Time (seconds)	
		QSFP	QSFP-DD/OSFP
	IL + RL	4.6	4.6
	IL, RL, XTALK, ICN	8.8	12.8

Report Generation	Report Type	Time (seconds)	
	Screenshots	0.63	→ CPU Dependent
	CSV	0.25	→ CPU Dependent
	PDF	8	→ CPU Dependent
	Excel	11	→ CPU Dependent

Repeatability & Accuracy

Repeatability
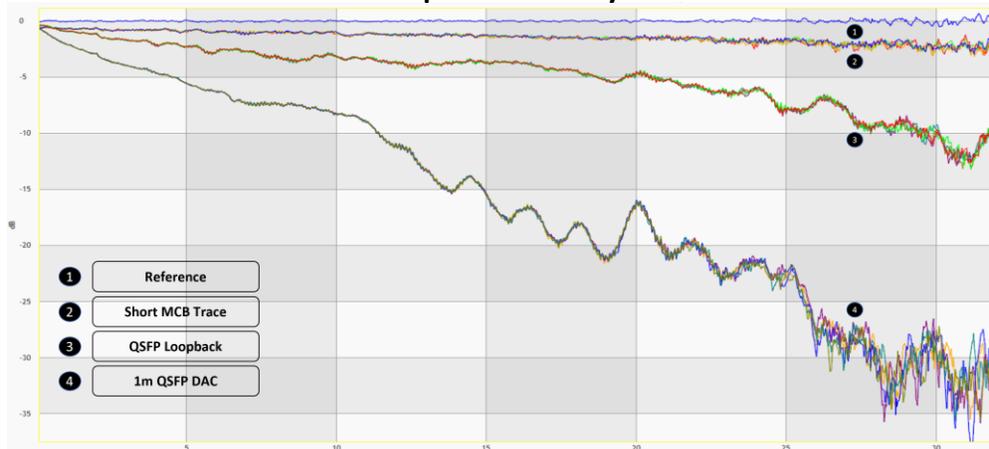
Sdd11 ML4035 vs Keysight PNA

Sdd21 ML4035 vs Keysight PNA
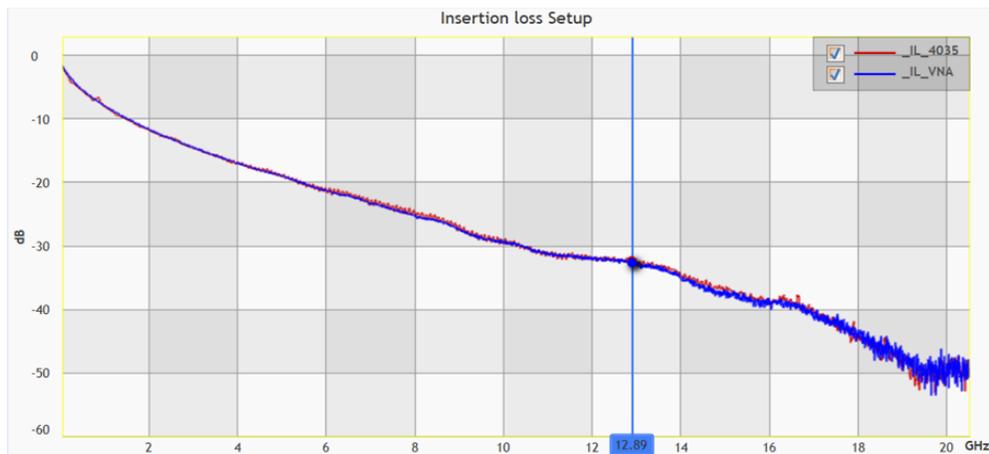
XTALK ML4035 vs Keysight PNA

Full Correlation Report vs Keysight PNA

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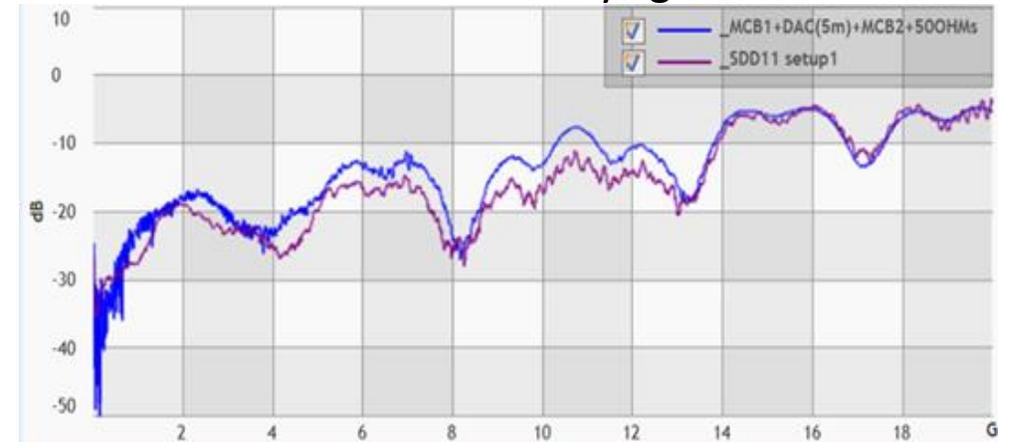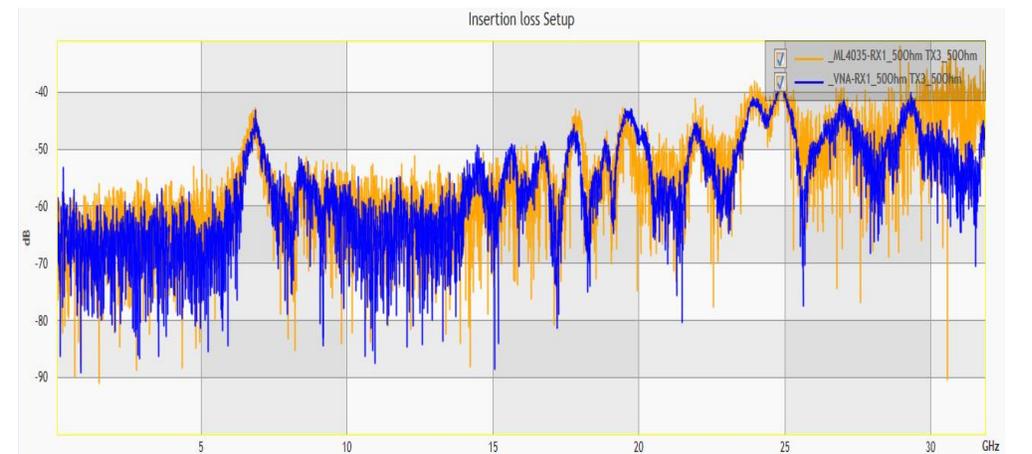
Calibration

Engineered for HVT

〜 MultiLane pioneered a KGU-based calibration technique, reducing calibration time and complexity.

〜 Calibration of up to 64 ports can be performed in under 15 seconds.

〜 Calibration procedure includes the following two steps:

　〜 Plug in the provided KGU, which is a qualified standard cable with low ILD and known S-parameters.

　〜 Press "Calibrate" on the GUI.

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THANK YOU