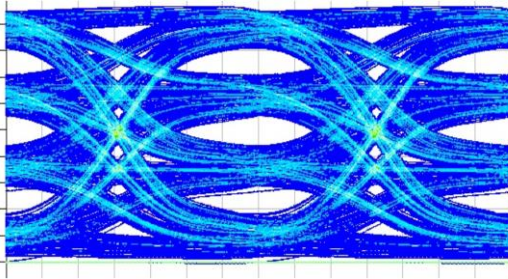


Improves SERDES Testing – Test Pre-Silicon – EDA Kit Friendly

FEATURES

- Suited for **224G PAM4 characterization and compliance testing**
- Very **low return-loss** out to 112 GHz
- Selectable losses from **-8dB to -28dB** at 56GHz Nyquist
- Causal/Passive high-quality S-parameters included
- **Very clean loss** out to 112GHz – suited for Design-of-Experiments (DOE)
- Spread weave material used – no group delay noise
- Optional matched low-skew cables available (500 femtosecond or 1 picosecond skew max options)
- COM metrics included
- Measured S-parameters included, tested for quality



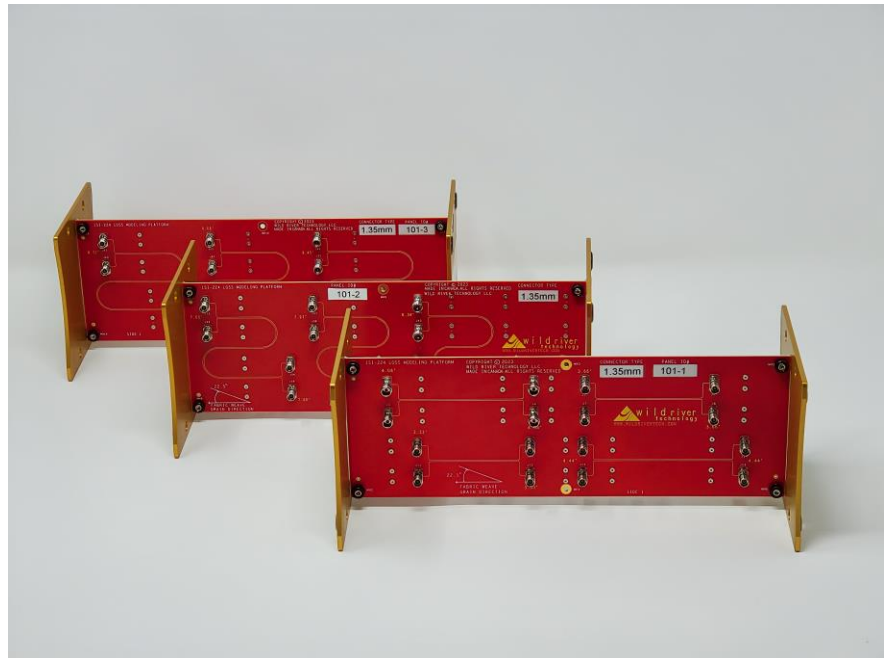
INCLUDES

- **Insertion Loss Platforms** – Provides IL ranging from 8db to 28db at 56 GHz, 1dB resolution
- **NIST traceable TDR impedance compliance report** for every connection/trace
- **Option for 2 sets of matched cable pairs** with ultra-low 350 femtosecond skew and stellar phase stability to 70GHz

224 Gbaud Advanced SERDES Inter-symbol Interference Loss Platform Set

The ISI-224 is an advanced inter-symbol interference (ISI) platform specifically designed for the demanding signal integrity requirements for 112 Gbaud PAM-4. True ISI is created by loss generated with dielectric, skin effect and metal conductor losses only. The laminate system is ultra-low weave, with similar copper roughness profile expected in practical backplanes. Group delay variation and Block resonance, an important loss consideration for data rates exceeding 25 Gbpsec, has been eliminated with special layout techniques, homogenous laminate system, pristine connector launch design, and the use of controlled weave dielectric material.

The ISI-224 Loss Modeling Platforms are composed of 21 stripline differential pairs of various lengths.



The ISI-224 Loss Modeling kit includes the 3 assembled and tested ISI platforms shown above, s-parameters, User Guide, and ruggedized case.

For more information call Al Neves at 503 679 2429 or email us at info@wildrivertech.com.

ISI-224 – Advanced ISI Loss Modeling Platforms

NEW PRODUCT

Product Release Date January 2024

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ISI-224 platform set specifications

Table 1 – ISI-224 platform set specifications

PC board material	Low loss
Insertion loss	Typical values see Tables 3 (excludes cable losses)
Return loss	27 dB typical at 56 GHz
Connectors	1.35mm vertical launch female, compression mount, replaceable All connector launches are NIST traceable tested.

Table 2 – ISI-224 Insertion Loss for each fixed variable trace length

IL @ 56 Gb/s	Length		IL @ 56 Gb/s	Length	
	in.	mm		in.	mm
-1.8 dB	1.1	28.4	-21.3 dB	15.6	396.7
-3.4 dB	2.2	56.6	-24.3 dB	17.9	453.6
-4.8 dB	3.3	85.1	-27.4 dB	20.1	510.9
-6.3 dB	4.5	113.3	-30.6 dB	22.3	566.9
-9.2 dB	6.7	170.2	-33.4 dB	24.5	623.6
-12.3 dB	8.9	226.8	-36.5 dB	26.8	680.5
-15.2 dB	11.2	283.5	-43.3 dB	32.4	822.2
-18.1 dB	13.3	340.1	-39.1 dB	39.1	922.1

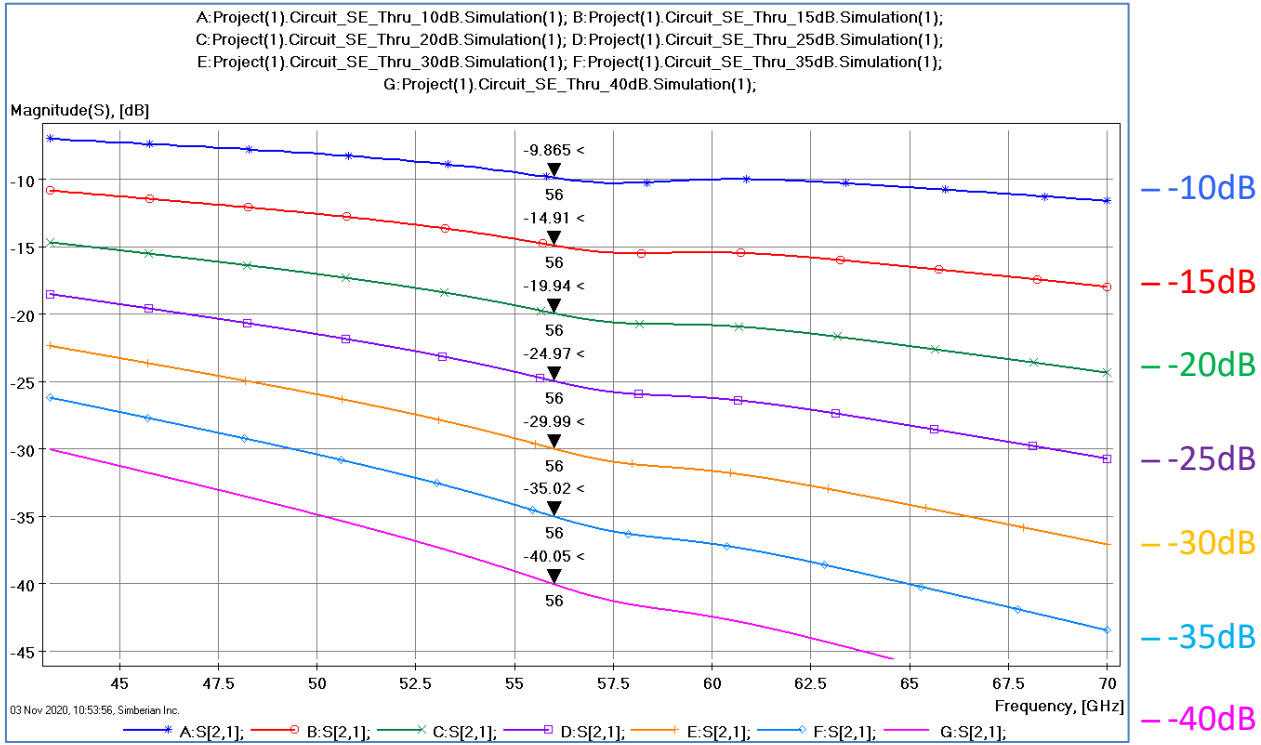
Table 3 – Optional ultra-low skew matched cable pair specifications

Maximum Insertion loss	1.6dB (0.5M), 2.8dB (1.0M)
Minimum Return loss	14.5dB
Intra-pair skew	5 degrees (0.35ps)
Input impedance	50 Ohms
Max input voltage levels	NA
Connectors	1.35mm
Screw Torque	.5 – 1 in·lb
Compliance	RoHS Directive 2011/65/EU in its entirety

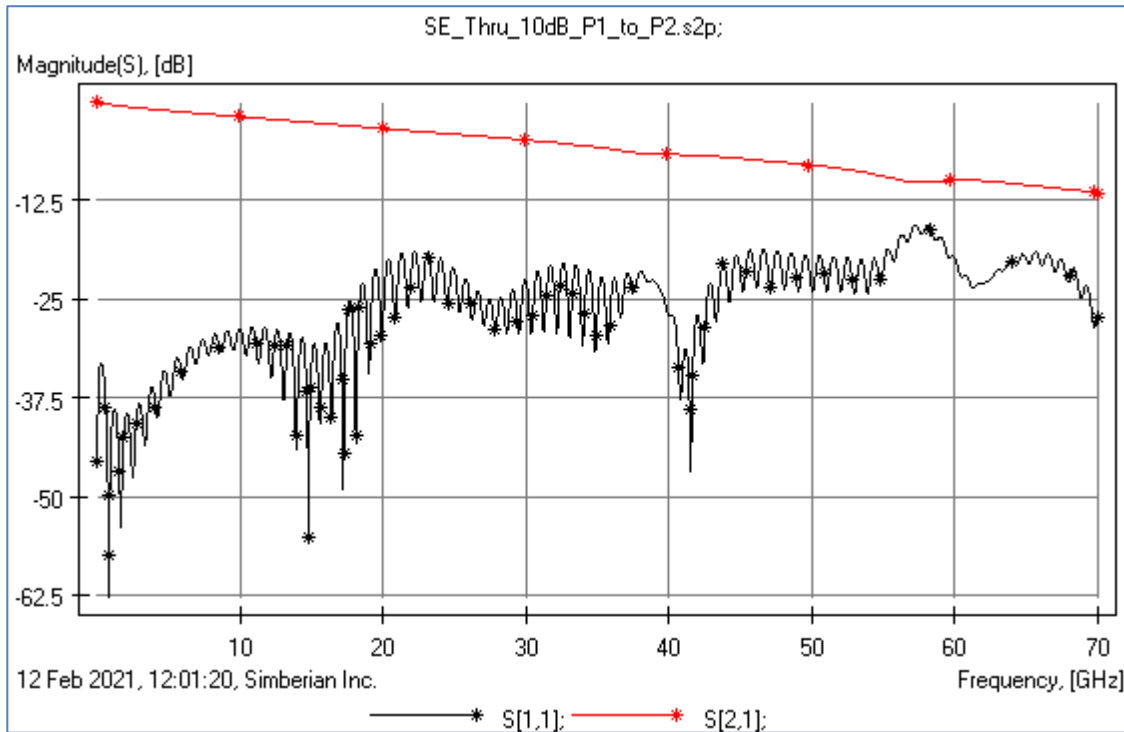


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Insertion Loss (Simulated)



Prototype measurement example, 6 inch trace



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Option: Skew Matched Cables



Ultra-low Skew Cable Assembly Pair

1.35mm male connector on both ends, 1 meter long black 1206 type cable, no-modes thru 56GHz, 16dB return loss or better through 50 GHz, 5 degrees (0.35ps) skew, red/green heat shrink for cable determination, additional heat shrink at 220mm (8.66") from end of cable pair for mechanical separation, label in center of cable for replacement part number.

Compliant with RoHS Directive 2011/65/EU in its entirety, inclusive of any further amendments or modifications of said Directive. 3-year replacement guarantee.

Each matched cable pair comes with graphs of insertion loss and return loss for each cable, plus a thumb drive containing the measured s-parameter files.

Deliverables

- 3 fully assembled ISI Platforms assembled with 1.35mm connectors, 100% NIST traceable TDR tested, report included
- Ruggedized Case
- COM metrics
- Web-based product training with WRT Applications Engineer, scheduled at customers convenience
- Option – Low skew matched cable pair bundle, 375 femto-second skew out to 70GHz

Ordering Instructions

P/N 917-0002-00

Model ISI-224

10-56 Gbpsec Advanced SERDES Intersymbol Interference Loss Platform Set, assembled with 1.35mm connectors