

PCIe Device Receiver Test Solution

High-Speed Serial Data Test Software MX183000A
Signal Quality Analyzer MP1800A

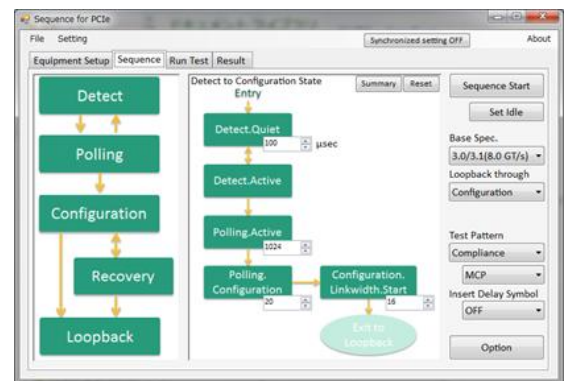
Evaluate PCIe Serial Transport

The explosion in data volumes created by the spread of IoT and Cloud Computing services is leading to development of faster serial equipment interfaces. The transport rates of PCI Express and high-speed serial interfaces used by digital equipment are moving to higher speeds to handle these large data volumes and next generation PCI Express Rev4.0 will support speeds of 16 GT/s.

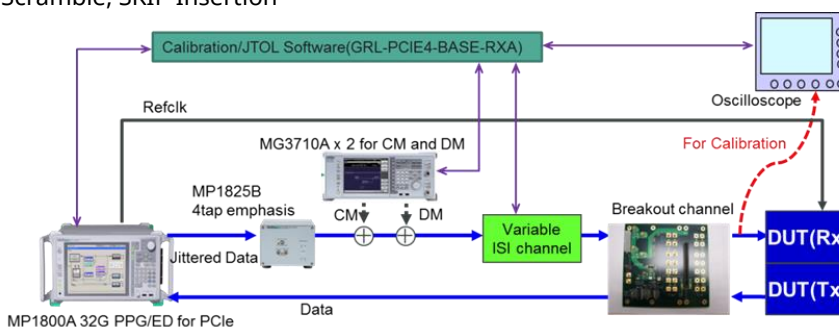
The High-Speed Serial Data Test Software MX183000A is application software for the Signal Quality Analyzer MP1800A; it is targeted at design and testing for PCI Express Base Specification standards. It supports communications with devices required for evaluating PCI Express devices, as well as Jitter Load tests for testing device design margins, making design and verification efficient.

Features of High-Speed Serial Data Test Software MX183000A

- Jitter Tolerance Tests Function(MX183000A Option-PL001)
 - ✓ Jitter Tolerance tests of PHY devices with impressed SJ/RJ/BUJ
 - ✓ Device margin tests using low-rate estimated BER measurements
 - ✓ Measurement results reporting function (HTML and CSV format)
- PCIe Link Sequence Generation Function (MX183000A Option-PL011)
 - ✓ PCI Express Base Specification Rev 4.0 device Logical Sub Block evaluation using control of status by sequence generation
 - ✓ 8B/10B, 128B/130B, Scramble, SKIP Insertion 8B/10B, 128B/130B, Scramble, SKIP Insertion



PCIe Link Sequence Generation Screen



PCIe Device Evaluation Setup

■ Typical Specifications

Jitter Tolerance Test MX183000A-PL001

Jitter frequency/Amplitude Setting Range	In accordance with Jitter Modulation Source MU181500B standard
Direction Search	Binary, Downward Linear, Downward Log, Upward Linear, Upward Log, Binary+Linear
Detection	Error Rate, Error Count, Estimate
Error Threshold	1.0E-3 to 1.0E-14
Highlight Error Rate	9.9E-9 to 1.0E-20 (at estimate)
Report Function	Reports results in HTML and CSV formats

PCIe Link Sequence MX183000A-PL011

Specification	PCIe Rev 1.x (2.5 GT/s), 2.0 (5 GT/s), 3.x (8 GT/s), 4.0 (16 GT/s)
Test Pattern	Compliance (MCP, CP), PRBS (7, 9, 10, 11, 15, 20, 23, 31)
LTSSM State	Transition to Detect, Polling, Configuration, Recovery, Loopback
Loopback through	Configuration, Recovery
TS Setting Parameter	SKIP Insertion, 8B/10B, 128B/130B, FTS, Link Number, Lane Number, Scrambling

■ Typical Configuration

Model	Name	Options	Qty
MP1800A	Signal Quality Analyzer	001, 007, 014, 032	1
MU183020A	28G/32Gbit/s PPG	012, 030	1
MU183040B	28G/32Gbit/s High Sensitivity ED	010, 022	1
MU181500B	Jitter Modulation Source	-	1
MU181000A	12.5 GHz Synthesizer	001	1
MP1825B	4Tap Emphasis	002	1
MG3710A	Vector Signal Generator	002, 029, 036, 041, 066, 071	1 or 2
Components	K241C Power Splitter		2
	41KC-3 Fixed Attenuator 3dB		2
	41KC-6 Fixed Attenuator 6dB		2
	41KC-20 Fixed Attenuator 20dB		2
	J1510A Pick OFF Tee		2
	J1343A Coaxial Cable 1.0 m (SMA, DC to 18 GHz)		4
	J1551A Coaxial Matched Skew Cable (0.8 m, K-connector)		2

■ Ordering Information

Model/Code	Name
MX183000A	High-Speed Serial Data test software
MX183000A-PL001	Jitter Tolerance Test
MX183000A-PL011	PCIe Link Sequence