

# USB 3.1 Gen1/Gen2 Receiver Test Solution

## Signal Quality Analyzer-R MP1900A

USB Link Training MX183000A-PL022



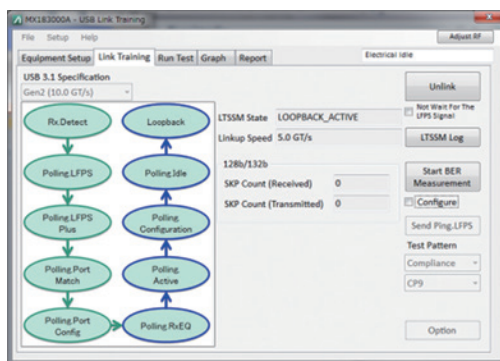
Digital devices are handling huge data volumes due to the spread of the IoT and cloud computing services, resulting in increased use of faster and serial interfaces between devices. The USB interface used for connecting these digital devices is switching to USB3.1 Gen2 supporting speeds of 10 Gbit/s for transmitting large data volumes faster and is also adopting the smaller Type-C connector.

The High-Speed Serial Data Test Software MX183000A is application software for the Signal Quality Analyzer-R MP1900A supporting evaluation of USB3.1 receivers. Using the MX183000A supports consistent and smooth data exchange with devices as well as jitter Tolerance Margin tests required by USB3.1, helping efficient design verification.

[Wide Application Support]  
USB3.1 Gen1/Gen2 Rx Test

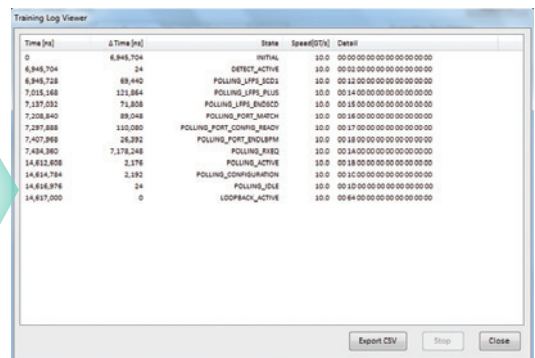
### Key Features

- All-in-one Protocol Aware USB3.1 Rx test solution
- All-in-one measurement support for wideband BERT 2.4 Gbit/s to 32.1 Gbit/s, PCI Express Gen4 and Thunderbolt 3
- High-reproducibility measurement using high-quality waveforms with low Intrinsic Jitter, and ED with high-sensitivity input
- Link Training and LTSSM Analysis functions
- 10Tap Emphasis function and 12-dB CTLE function
- Jitter (SJ, RJ, BUJ, SSC) Addition and automated Jitter Tolerance measurement function

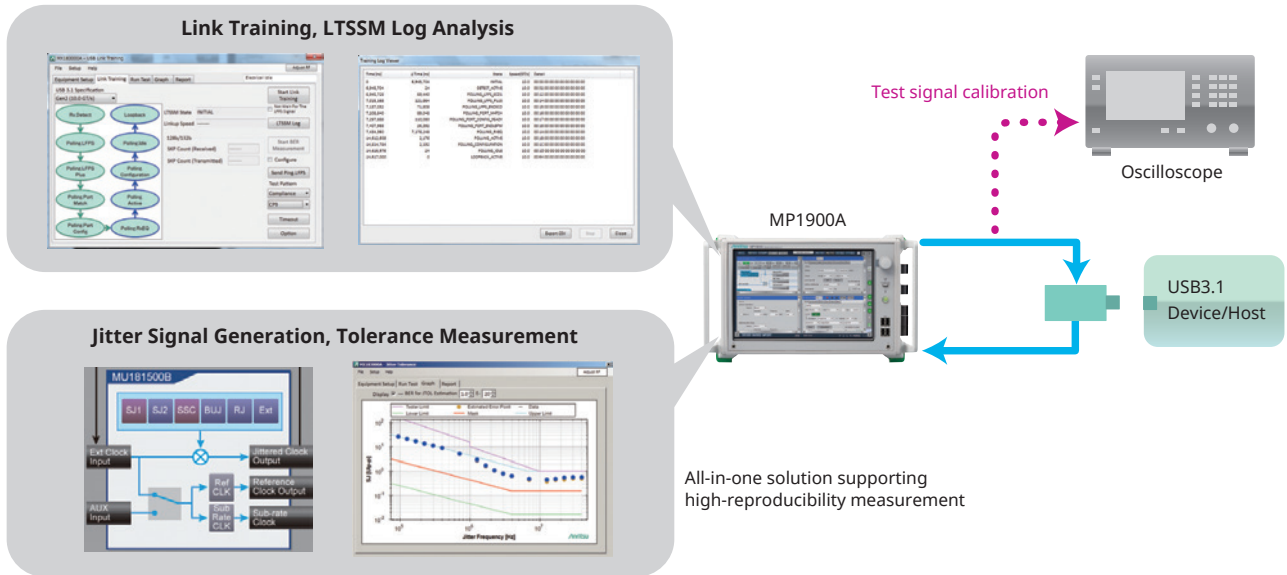


Loopback Transition Control (Link Training Function)

Detect and Display LTSSM State Transition and Transition Time



Easy Link Troubleshooting (LTSSM Analysis Function)



## Typical Specifications

### 21G/32G bit/s SI PPG MU195020A

Bit Rate	2.4 Gbit/s to 21 Gbit/s 2.4 Gbit/s to 32.1 Gbit/s (MU195020A-001)
Number of Channels	1 or 2
Output Amplitude	0.2 Vp-p to 2.6 Vp-p (Differential)
Emphasis Taps (MU195020A-011)	10Tap
Tr/Tf (20 to 80%)	12 ps (typ.)

### 21G/32G bit/s SI ED MU195040A

Bit Rate	2.4 Gbit/s to 21 Gbit/s 2.4 Gbit/s to 32.1 Gbit/s (MU195040A-001)
Number of Channels	1 or 2
Input Amplitude	0.1 Vp-p to 2 Vp-p (Differential)
Input Sensitivity	13 mV (Eye Height 21 Gbit/s) (typ.)
Clock Recovery (MU195040A-022)	2.4 Gbit/s to 32.1 Gbit/s, support SSC input
CTLE (MU195040A-011)	0 to -12 dB

### USB Link Training MX183000A-PL022

Link Training	Yes
JTOL Auto Measurement	Yes (MX183000A-PL001)

## 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/Order No.	Name
MP1900A	Signal Quality Analyzer-R
MU195020A	21G/32G bit/s SI PPG
MU195020A-010	1ch Data Output
MU195020A-011	1ch 10Tap Emphasis
MU195040A	21G/32G bit/s SI ED
MU195040A-010	1ch ED
MU195040A-011	1ch CTLE
MU195040A-022	Clock Recovery
MU195050A*	Noise Generator

Model/Order No.	Name
MU181000B	12.5 GHz 4 port Synthesizer
MU181500B	Jitter Modulation Source
MX183000A-PL001	Jitter Tolerance Test
MX183000A-PL022	USB Link Training

\*: Not required when using Pick Off Tee J1510A (2 pcs)

The contents of this leaflet may change without prior notice.