

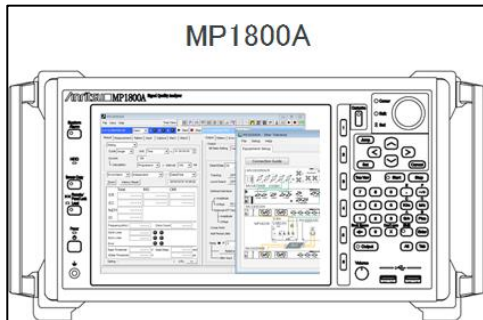
High-Speed Serial Data Test Software

MX183000A

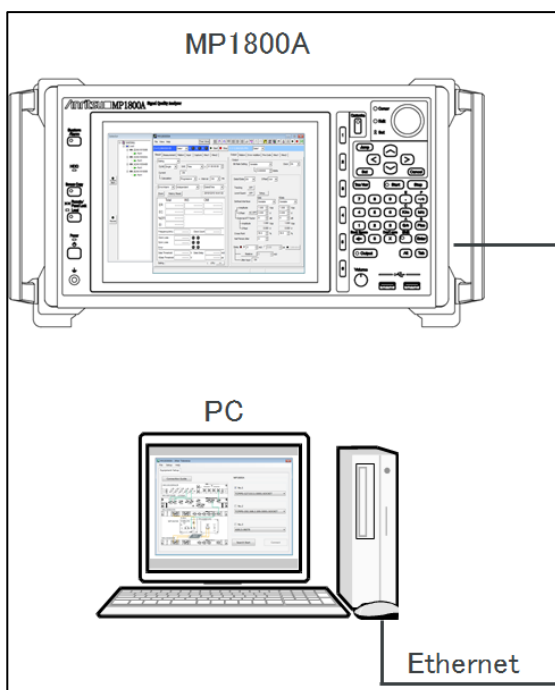
Chapter 1. Installation

MX183000A software supports the Windows 7 OS; it does not run under Windows XP. Confirm OS version before installing.

[Case1]: Installing MX180000A and MX183000A in the MP1800A.

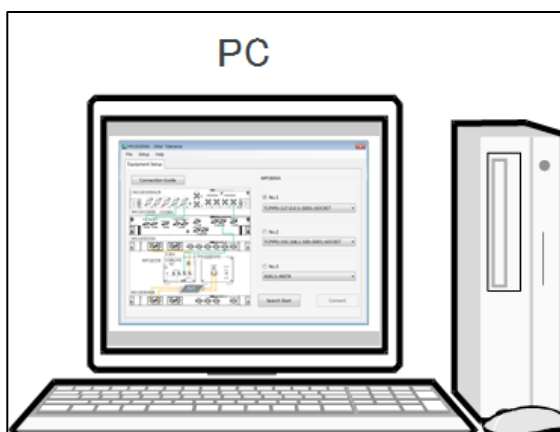


[Case2]: Installing MX180000A in the MP1800A, Installing MX183000A in a PC.



[Case3]: Installing MX180000A and MX183000A in a PC (using module simulator).

For the GUI demonstration purpose.



(1) Installing MX180000A

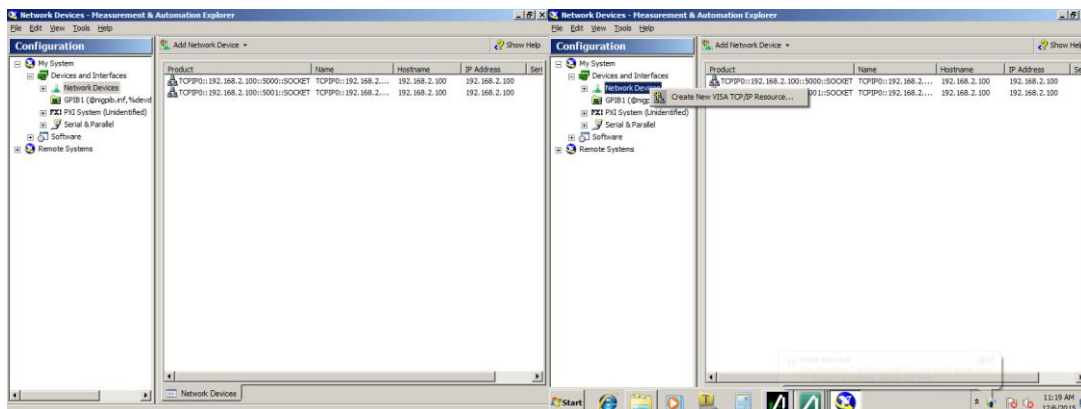
[Case1, Case2]. Install the MX180000A_VER_8_01_9x.exe file (hereafter Ver. 8.01.90) in the MP1800A
 [Case3] Install the MX180000A_VER_8_01_9x.exe file (hereafter Ver. 8.01.90) in a PC.

(2) Installing VISA

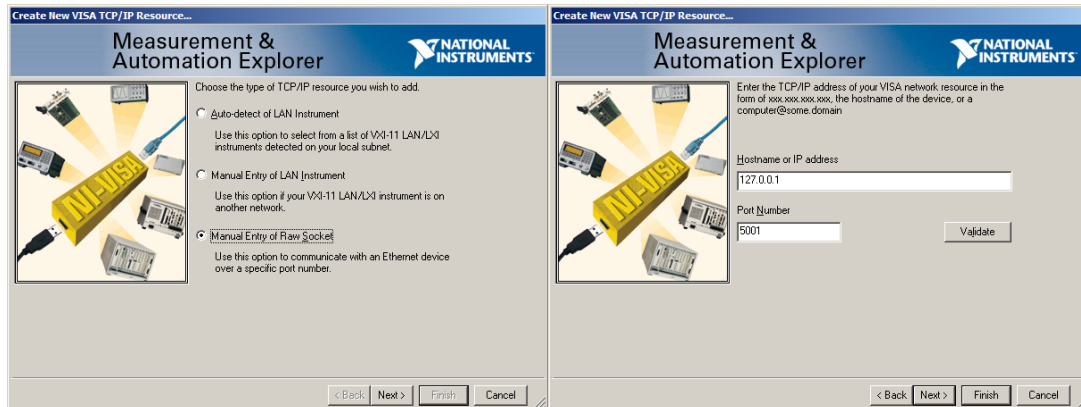
[Case1] Install the visa462full.exe (NI-VISA 4.6.2) in the MP1800A.
 [Case2, Case3] Install the visa462full.exe (NI-VISA 4.6.2) in a PC.

(3) Setting VISA

[Case1, Case2, Case3]



1. Start NI-Measurement&Automation Explorer.
2. Right-click Network Devices and click Create New VISA TCP/IP Resource... .

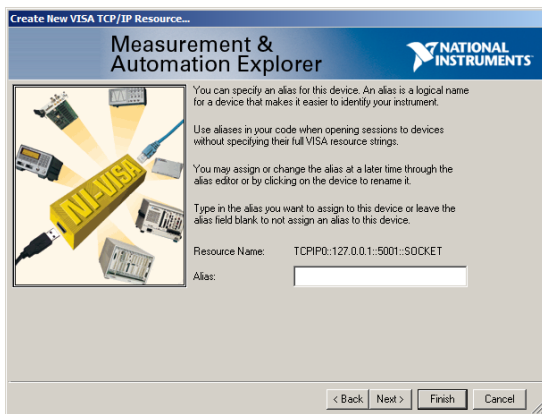


3. Select Manual Entry of Raw Socket and click Next.
4. Input the values for the MP1800A at Hostname or IP address and Port Number and click Next.

	IP address	Port
Case1	192.168.2.100* or 127.0.0.1	5001**
Case2	192.168.2.100*	5001**
Case3	127.0.0.1	5001**

*The MP1800A default is IP Address 192.168.2.100.

**The MX180000A default is Port Number 5001.



5. Check the IP Address and Port Number input at step 4 in Resource Name and click Finish.

(1) Installing MX183000A

[Case1] Install the MX183000A_VER_0_99_xx.exe in the MP1800A.

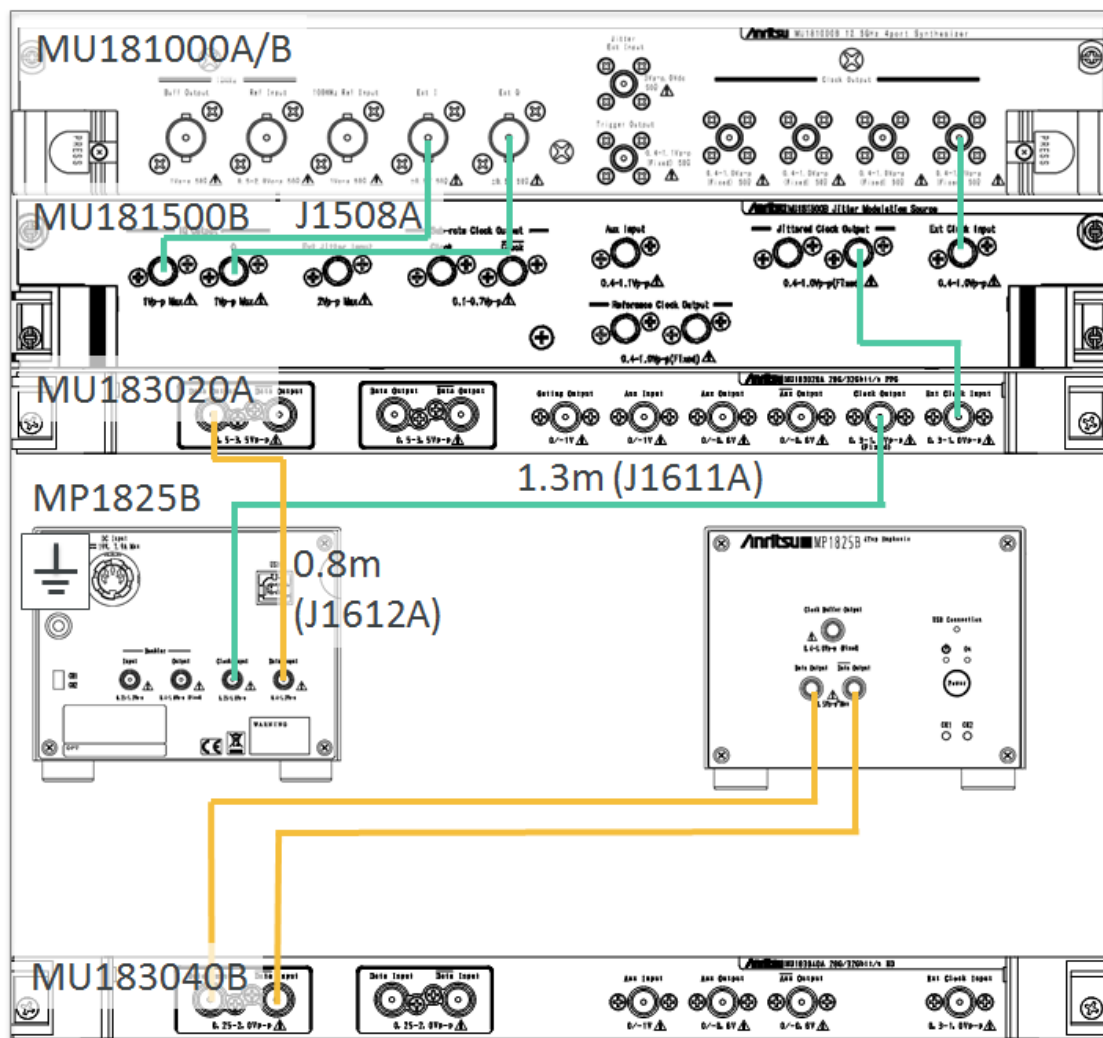
[Case2, Case3] Install the MX183000A_VER_0_99_xx.exe in a PC.

Chapter2. Demonstration of PCIe without DUT

Procedure for sending PCIe Link Sequence and measuring Jitter Tolerance **without** DUT

(1) Connecting Instruments

[Case1, Case2] Make a loopback connection between the instruments using the cable connections shown in the below diagram.



(2) Execute the module simulator before starting MX180000A.

[Case3] These processes are needed for only Case3.

1. Copy the Sim_xxxxxx.zip into a PC and unzip it.

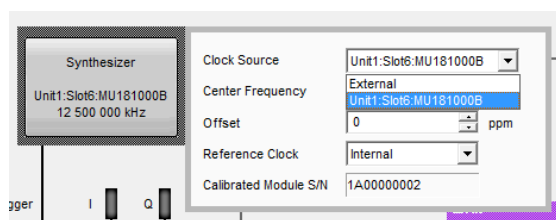
MX180000A_VER_8_01_90.exe	2015/12/11 18:43	アプリケーション	154,097 KB
MX183000A_quickguide_e.pdf	2015/12/15 17:55	Adobe Acrobat ...	1,543 KB
MX183000A_VER_0_99_00.exe	2015/12/14 16:16	アプリケーション	58,378 KB
sim_151215.zip	2015/12/15 9:01	圧縮 (zip 形式) ...	1,387 KB

2. Execute the start.bat.

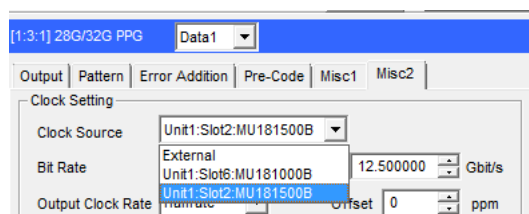
名前	更新日時	種類	サイズ
Unit1 32G_PPG-ED_03	2015/12/14 10:06	ファイル フォル...	
Unit1 32G_PPG-ED_04	2015/12/14 10:06	ファイル フォル...	
Unit1 MU181000A	2015/12/14 9:58	ファイル フォル...	
Unit1 MU181500	2015/12/14 9:59	ファイル フォル...	
Unit1 PPG-ED	2015/12/14 9:59	ファイル フォル...	
start.bat	2015/09/04 9:54	Windows バッチ...	1 KB

(3) Start the MX180000A (hereafter Ver. 8.01.90) and set as follows:

- Link the MU181000B and MU181500B Clock Source.



- Link the MU183020A and MU181500B Clock Source.

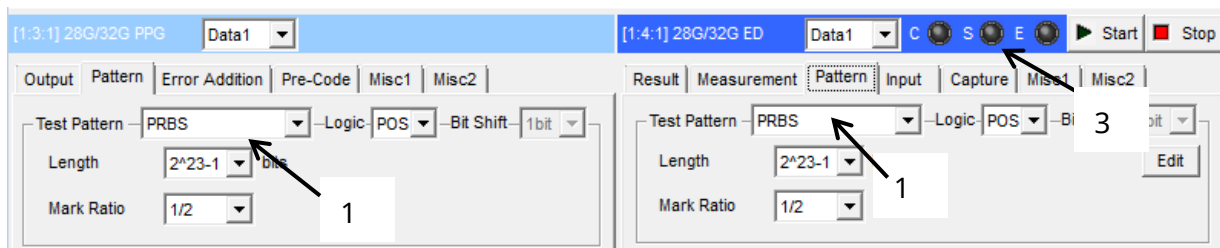


- Set the MU183020A Output Clock Rate to Fullrate.

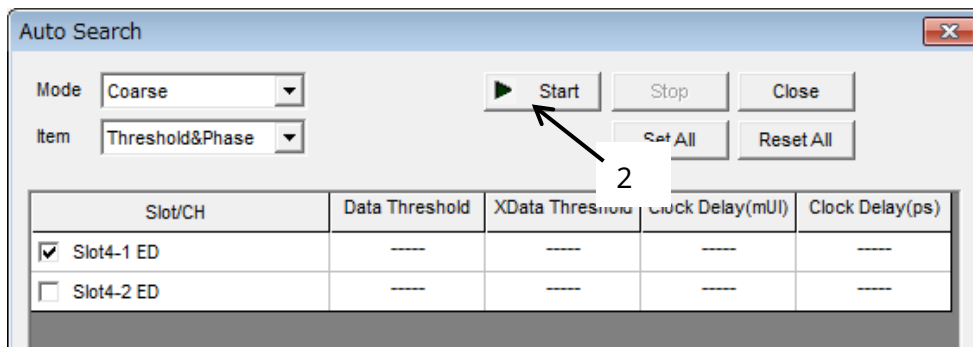


- Link the MU183020A and MP1825B.

(4) Confirming Error Free



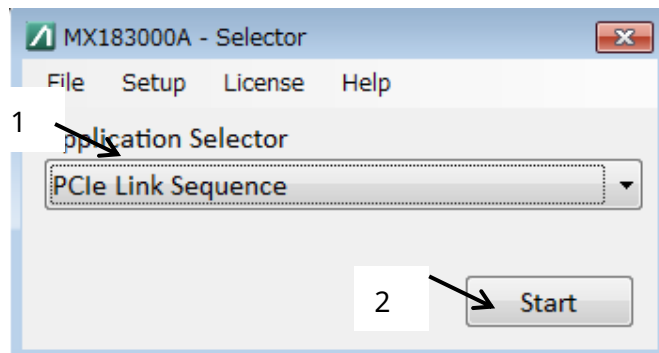
1. Set the same Test Pattern and Length at the PPG and ED.
2. Set the MP1800A Data Output to ON and run the ED Auto Search.



3. Use the ED screen to confirm the Error Free condition.

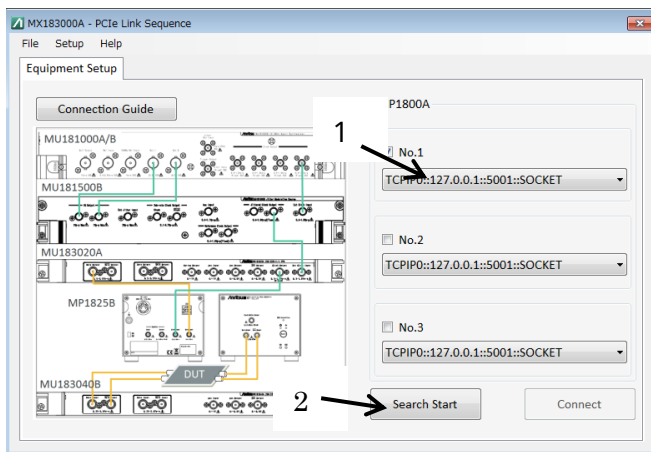
(5) Start the MX183000A.

(6) Selecting Application (PCIe)



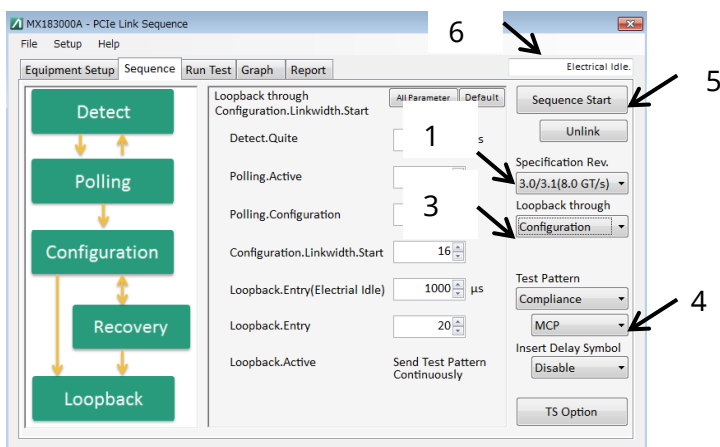
1. Select PCIe Link Sequence at Application Selector.
2. Click Start.

(7) Setting Network Device (Equipment Search)



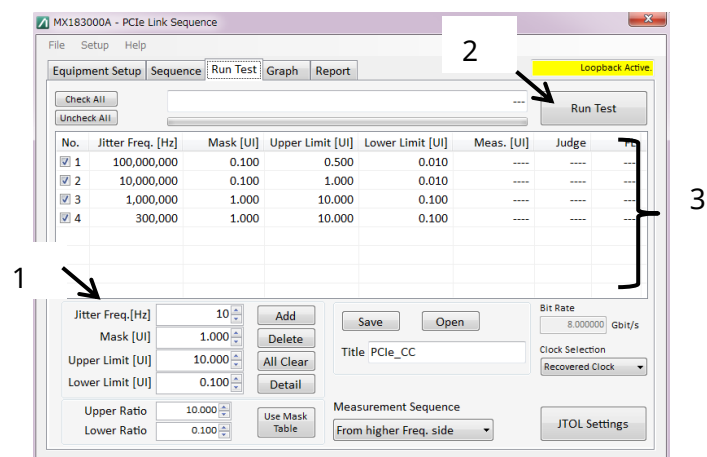
1. Select the network device created by setting the network device (in step ②Setting VISA).
2. Click Search Start and then click Connect.

(8) Sending PCIe Link Sequence



1. Specification Rev.: Set the Generation to measure.
 2. Loopback through: Select Configuration/Recovery.
 3. Test Pattern: Select MCP / CP.
 4. Click Sequence Start to start sending the Training Sequence.
 5. Sending of the sequence pattern is completed when Electrical Idle changes to Loopback Active.
- The ED Auto Search runs automatically after sending of the Training Sequence finishes.
- After Auto Search finishes, the status is Error Free if field 6 (above) is green.

(9) Measuring Jitter Tolerance



1. Set the measurement frequency.
2. Click Run Test to start measurement.
3. The measurement result is displayed.

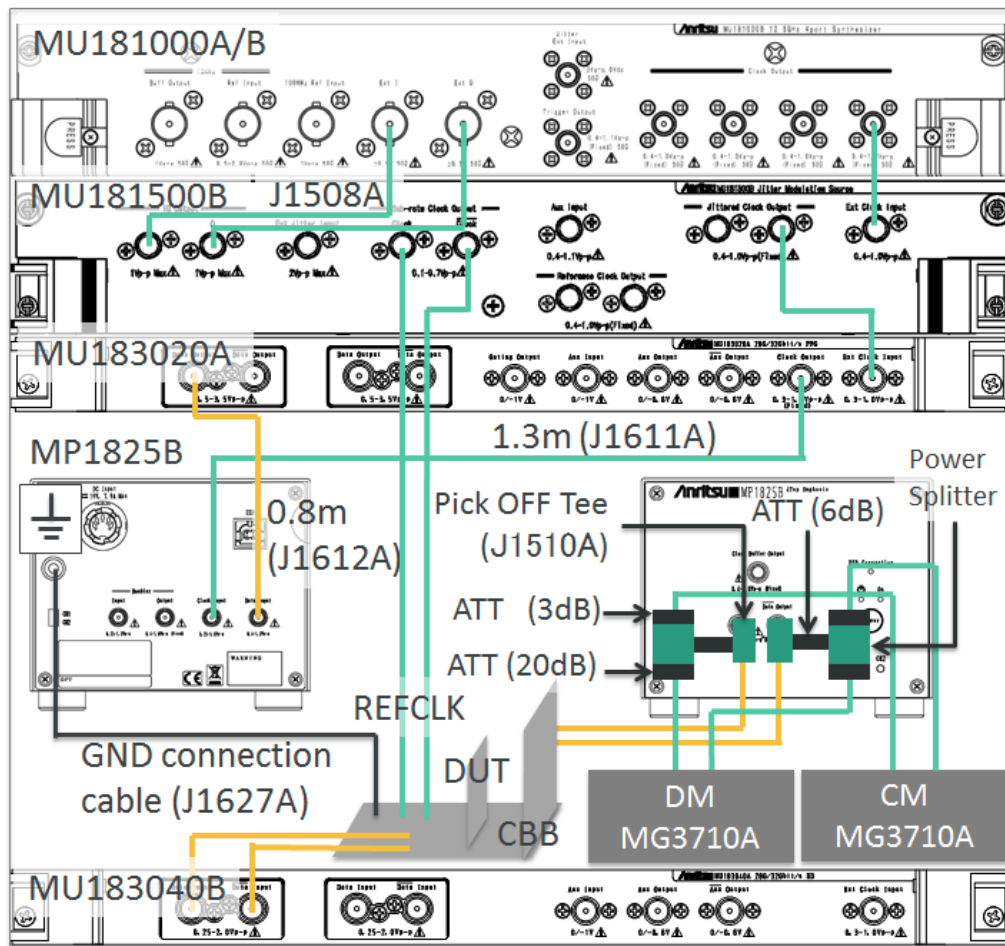
Chapter3. Demonstration of PCIe with using DUT

Procedure for sending PCIe Link Sequence and measuring Jitter Tolerance with using DUT

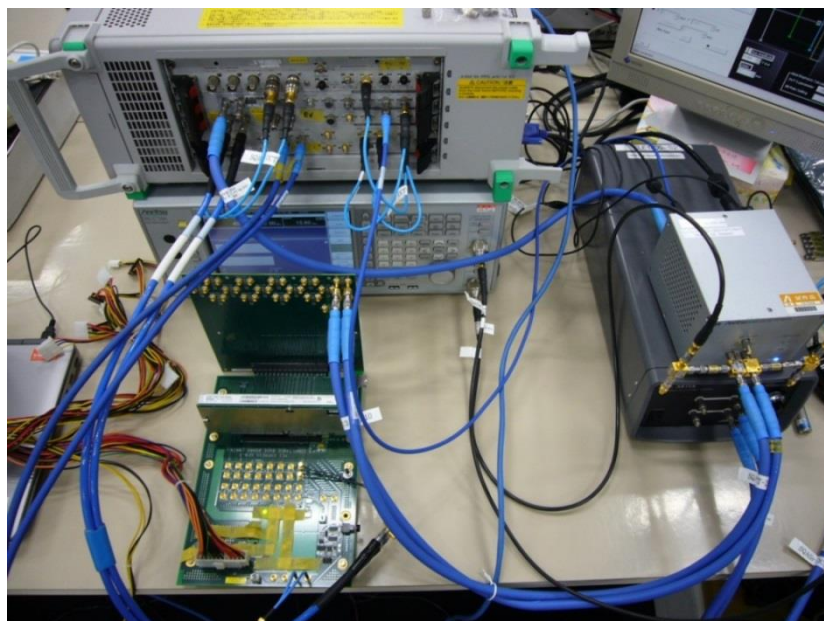
(1) Setting MX183000A

Set MX183000A referring Chapter2.

(2) Connecting Instruments

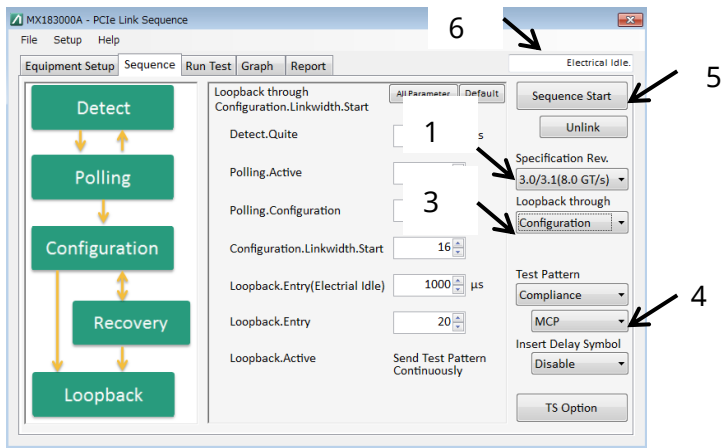


Connect the instruments and DUT as shown in the above diagram.



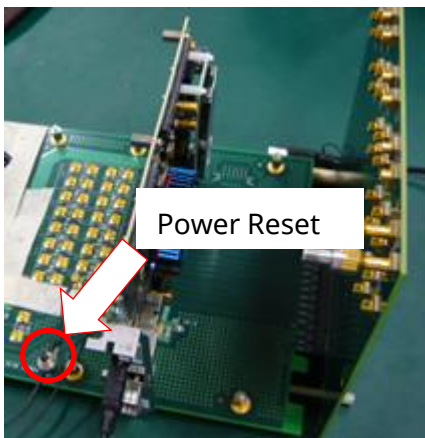
Reference: PCIe Compliance Test Connections

(3) Sending PCIe Link Sequence



1. 3. 4. Set the parameter to measure.

2. Press Power Reset once to restart the DUT. (Press the Power button on the Compliance Base Board.)



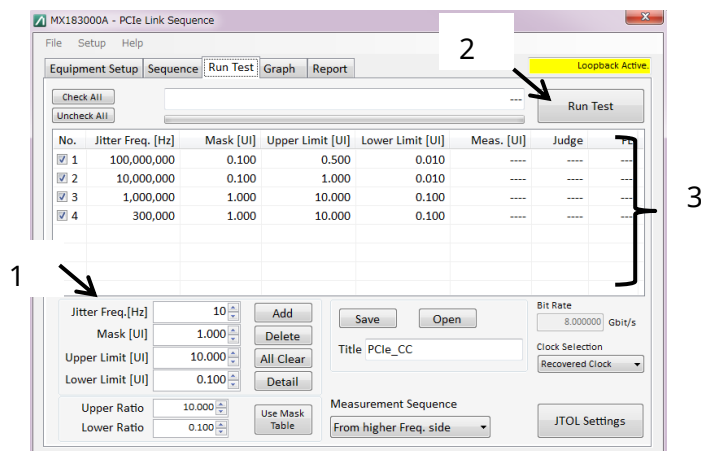
5. Click Sequence Start to start sending the Training Sequence.

6. Sending of the sequence pattern is completed when Electrical Idle changes to Loopback Active.

The ED Auto Search runs automatically after sending of the Training Sequence finishes.

After Auto Search finishes, the status is Error Free if field 6 (above) is green.

(4) Measuring Jitter Tolerance



1. Set the measurement frequency.

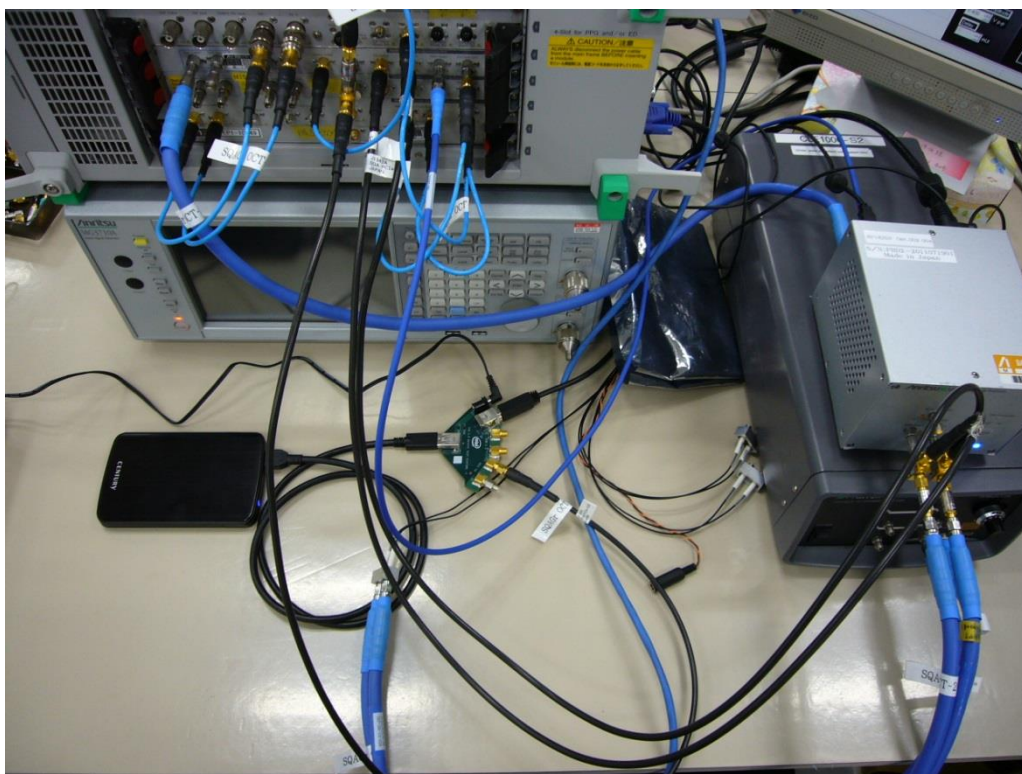
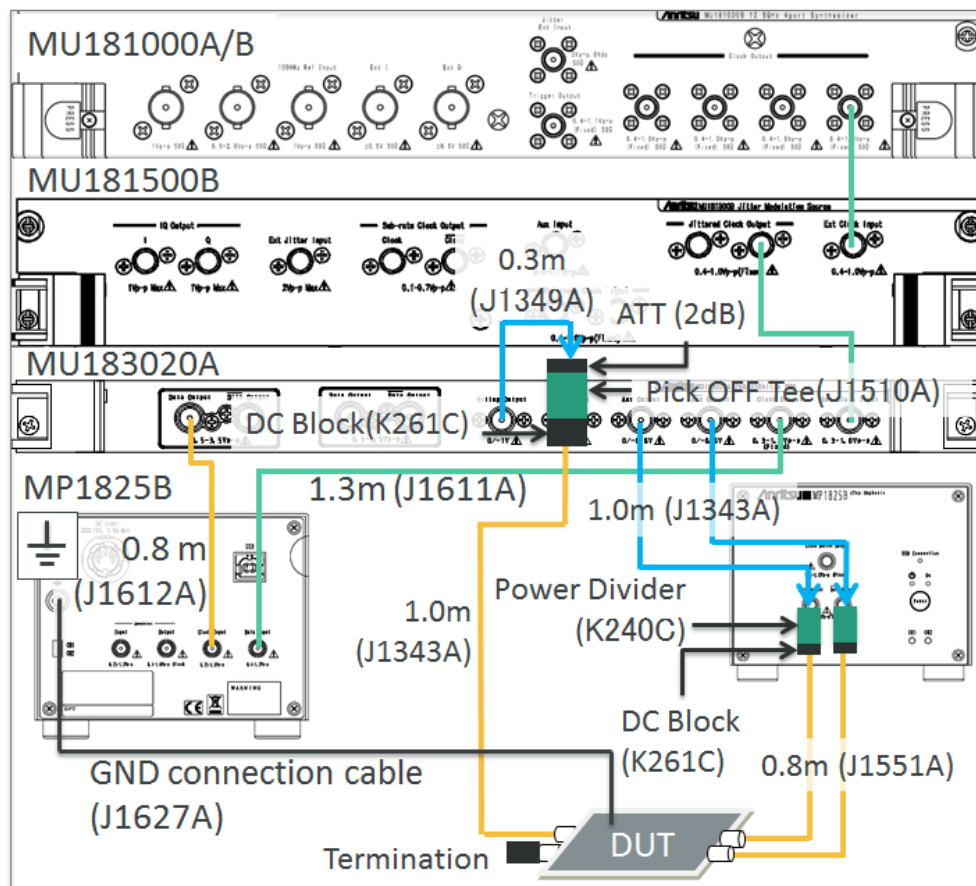
2. Click Run Test to start measurement.

3. The measurement result is displayed.

Chapter4. Demonstration of USB-3.1 with using DUT

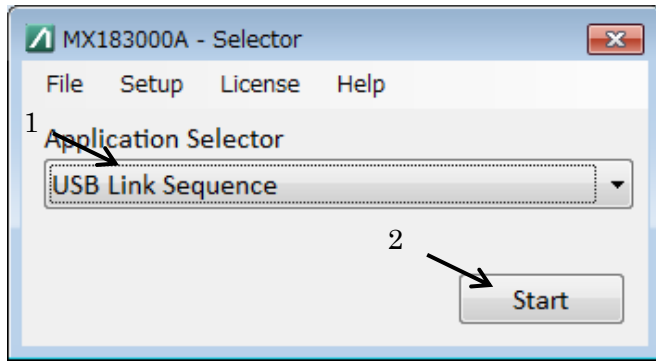
Procedure for sending USB-3.1 Link Sequence with using DUT

The USB connection method is shown below.



Reference: USB Compliance Test Connections

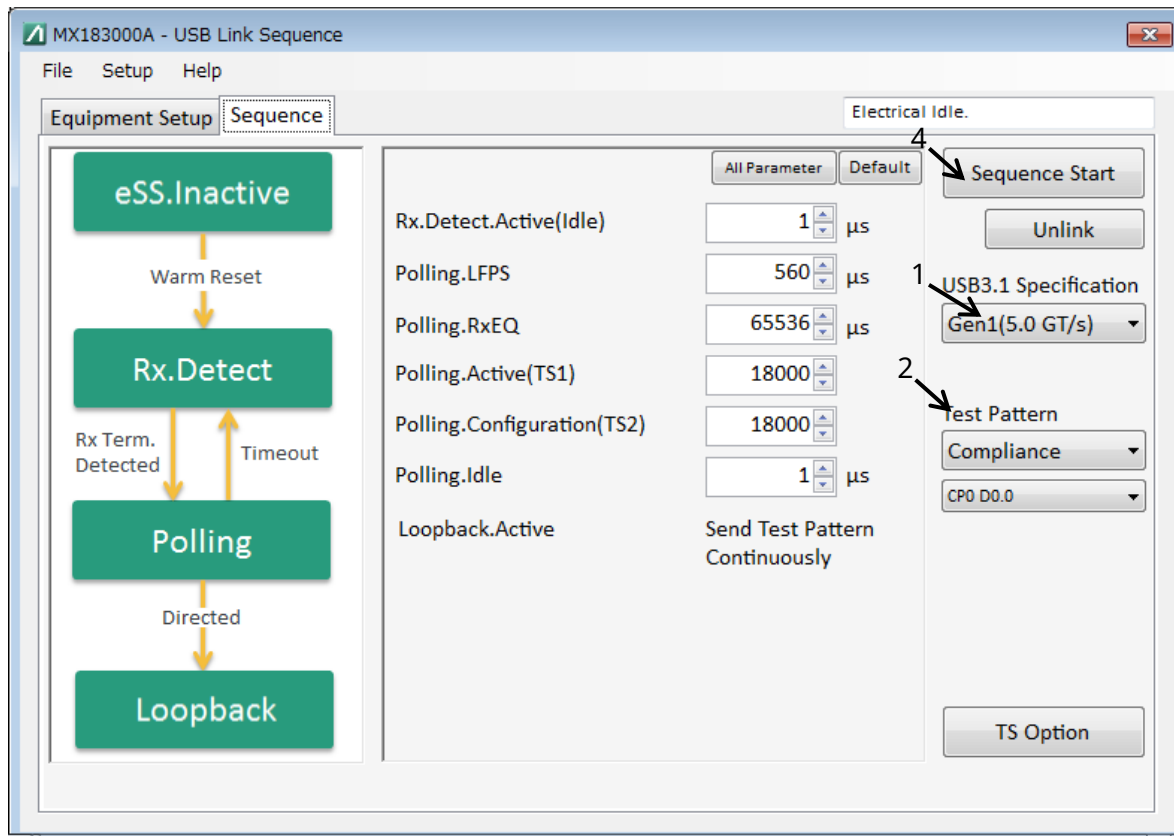
(1) Selecting Application (USB)



1. Select USB Link Sequence at Application Selector.
2. Click Start.

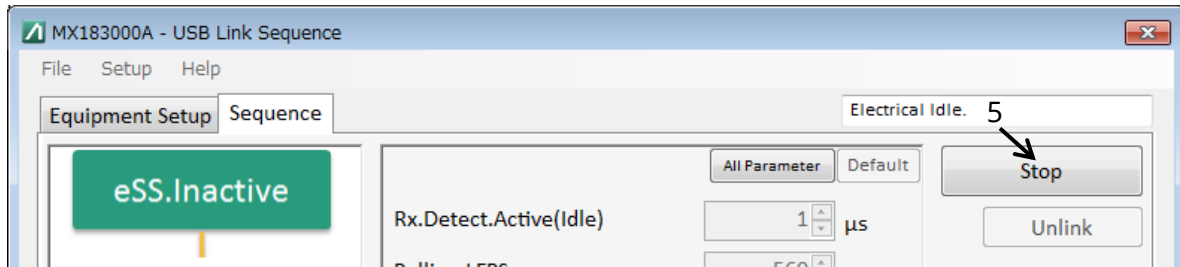
(2) Run Search and Connect for the required equipment using the same procedure as described in step ⑧ of the page 4.

(3) Run the following procedure at the Sequence tab.

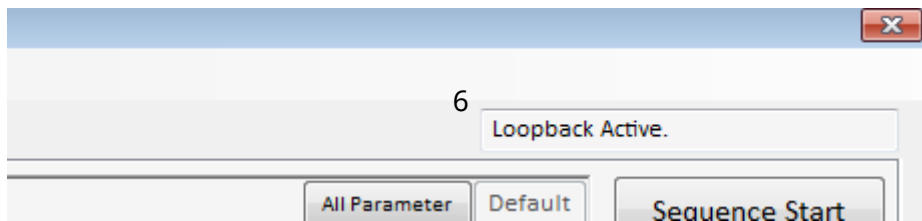


1. Set Specification.
2. Set Test Pattern.
3. Disconnect the DUT (HOST/DEVICE) from the USB Test Fixture.
4. Click Sequence Start.
5. When Sequence Start is clicked, the Sequence Start button changes to Stop.

While in this condition, connect the DUT to the USB Test Fixture. When the DUT is connected, the LFPS signal output from the DUT is detected by the MU183020A and sending of the training sequence starts.



6. Loopback Active is displayed when sending of the training sequence is completed.



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