M8070A - IEEE 802.3 Transmitter Equalization Training

IEEE TX EQ Training is a plugin for M8070A. It performs the start-up protocol training for IEEE 802.3 (2015) 10GBASE-KR, 25GBASE-KR and 100GBASE-KR4 conformant devices.

User Guide

After installation of the plugin the user guide can be found in the following folder:
C:\Program Files\Keysight\M8070A\Plugins\M8070A_IEEE_TxEqTraining\doc\

This path can deviate from the above depending on the installation folder selected while installing M8070A.

Hardware Notes

M8062A

This module has specific limitations regarding its capability to capture data.

As of the writing of this readme file pattern capture is only supported above 16.207 GHz. Also, it is only supported to use a single hardware generated PRBS pattern as an RX sequence sync block.

For up to date information on the capture and sequencing capabilities of the M8062A module please check the M8070A readme and user guide.

KEYSIGHT
TECHNOLOGIES

Software Licensing

10GBASE-KR TX EQ Training

- 10GBASE-KR TX EQ Training requires one of the following module bound options 0SX, USX or TSX. These are available for M8041A and M8051A modules.
  Additionally the modules need to support a generator capable of running at test speed (option C16) with de-emphasis capability (option 0G4) and an analyzer (option ED1).
  For more details on these options and possible substitute options refer to the user guide.

25GBASE-KR and 100GBASE-KR4 TX EQ Training

- Can only be used with a M8062A module in conjunction with a M8041A module.
  When using this plugin, the M8062A module requires options C32, 0G4 and 0A4 and the M8041A module requires options G16, 0G2 and 0A2.
  For more details on these options and possible substitute options refer to the user guide.

Version History

2.0.42.2

Build Date	June 26, 2017
M8070A Required	3.6.0.0 or newer with options 0TP or 0NP
Operating System	Same as M8070A System Software
Software Pre-requisites	Same as M8070A System Software
10GBASE-KR TX EQ Training Requirements	M8041A or M8051A with options C16, 0G4, ED1 and one of the following: 0SX, USX or TSX. For more details on the available options and combinations refer to the user guide.
25GBASE-KR and 100GBASE-KR4 TX EQ Training Requirements	M8041A with options C16, 0G2, 0A2 and M8062A with options C32, 0G4 and 0A4. For more details on the available options and combinations refer to the user guide.
File Name:	M8070A_IEEE_TxEqTraining.m8kp

New Features

- Start-up protocol training for 25GBASE-KR and 100GBASE-KR4 as defined in clauses 111.7.10 and 93.7.12 of IEEE 802.3.

- Enables seamless receiver (jitter) tolerance testing for 25GBASE-KR and 100GBASE-KR4 devices which requires TX EQ training as a prerequisite.

Fixes

- 10GBASE-KR: Fixed peak-peak amplitude for certain TX EQ Training sequences becoming too small under certain conditions.

2

- 10GBASE-KR: Fixed incorrect scaling of differential voltage parameters

Notes

- Please take note that the fixes contained in this release can cause old settings to become incompatible.

1.0.22.2

Build Date	December 01, 2016
M8070A Required	3.5.0.0 or newer with options 0TP or 0NP
Operating System	Same as M8070A System Software
Software Pre-requisites	Same as M8070A System Software
10GBASE-KR TX EQ Training Requirements	M8041A or M8051A with options C16, 0G4, ED1 and one of the following: 0SX, USX or TSX. For more details on the available options and combinations refer to the user guide.
File Name:	M8070A_IEEE_TxEqTraining.m8kp

Features

- Start-up protocol training for 10GBASE-KR as defined in clause 72.6.10 of IEEE 802.3 (2015).

- Enables seamless receiver tolerance testing for 10GBASE-KR devices which requires TX EQ training as a prerequisite.

- Allows definition of arbitrary test sequences before and after TX EQ training without output signal interruption.