

# MT1040A Network Master Pro Release Notes

## Product Configuration

The following table shows the relationship between the changed application and modules described in the Revision History.

| Main frame/Module                                                                        | Changed Application                       |
|------------------------------------------------------------------------------------------|-------------------------------------------|
| MT1040A                                                                                  | [Framework][Remote][SEEK]                 |
| MU104014A<br>MU104014B<br>MU104015A<br>MU104011A<br>MU100010A<br>MU100010A1<br>MU100011A | [ETH][OTN][CPRI][FC][SDH/SONET][PDH][MxH] |
| MU100020A<br>MU100021A<br>MU100022A<br>MU100023A                                         | [OTDR][FTTA][OLTS]                        |

## Critical Update

| ID<br>fixed version | Cause   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ID0001<br>V15.07~   | Bug fix | <p>In versions prior to V15.06, if SFP information is read while the clock stretching function is active—a function that temporarily pauses the master (MT1040A) to allow the slave side (SFP) sufficient processing time—there is a possibility that the SFP register data may be unintentionally overwritten. This issue has been fixed in V15.07 and later versions, so please update your software.</p> <p>Please note that this issue only occurs with a very small subset of SFPs that meet both of the following conditions:</p> <ol style="list-style-type: none"><li>1. The SFP uses the clock stretching function.</li><li>2. The vendor area has no read-only protection and is rewritable.</li></ol> <p>To check for the presence of this issue, verify the component (SFP, SFP+, SFP28) part number using the MT1040A as follows:</p> <ol style="list-style-type: none"><li>1. Launch the Ethernet application and open the [Transceiver] menu in the port settings screen.</li><li>2. From the dropdown menu within the Transceiver information, select [Vendor Information].</li><li>3. Verify the manufacturer name and part number at the Vendor information screen.</li><li>4. Check for garbled characters in the manufacturer name or part number display.</li></ol> <p>If this issue is present, garbled characters are displayed in the text. Contact your Anritsu sales representative if the issue is confirmed.</p> |

## Latest Installer File Name

|                                                                                     |
|-------------------------------------------------------------------------------------|
| MT1040A                                                                             |
| 15.09.MT1040A_SW<br>MX100001A-Setup-15.09-xxxxx.exe<br>MX100003A-2.0.0.65-xxxxx.exe |

The following table shows the latest software and corresponding operation manuals.

| Operation Manual                                                          | Doc. No.  | Version |
|---------------------------------------------------------------------------|-----------|---------|
| MT1040A Transport Modules Operation Manual                                | M-W4038AE | 22      |
| MT1000A/MT1100A/MT1040A Remote Scripting Operation Manual                 | M-W4041AE | 20      |
| MT1000A Network Master Pro Transport modules Operation Manual             | M-W3933AE | 36      |
| MT1000A Network Master Pro OTDR Modules Operation Manual                  | M-W3810AE | 25      |
| MT1000A Network Master Pro OTDR Modules Remote Scripting Operation Manual | M-W3859AE | 8       |
| MX100003A Scenario Edit Environment Kit Operation Manual                  | M-W4042AE | 5       |

## Installation Procedure

### Installation Procedure via USB memory

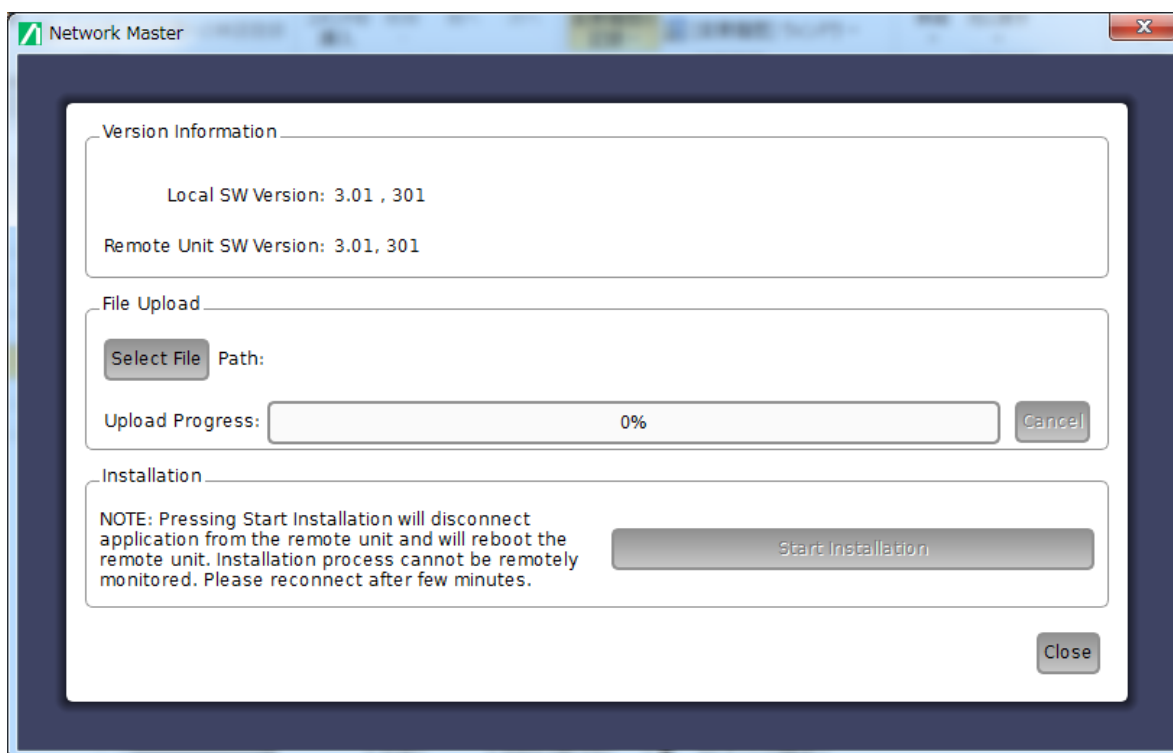
1. Confirm that the USB memory used for installation is recognized by the MT1040A and that the USB memory is empty. (\*1)
2. When using battery, make sure that there is 40% (or more) power in the battery of the instrument.
3. Remove the USB memory from the MT1040A.
4. Press the power button to shut down the MT1040A. Never force to power off by holding the power button pressed for several seconds.
5. Remove the AC adapter or cable and see the power button turns to gray.
6. Copy the installer (X.XX.MT1040\_SW) to an empty USB memory stick (refer to step 1) formatted to FAT32 or NTFS file system.
7. Insert the USB memory stick into MT1040A.
8. Boot MT1040A to start installer.  
The instrument will detect the USB stick, and start installing the software. After the installation has finished the instrument will reboot and start with the new software.
9. Remove USB stick after installation is complete.

You can check the installed version at **System Information** screen.

(\*1) The USB memory can be used when it is recognized by the File Manager after insertion in the MT1040A. (Refer section 4.2.1 Toolbar in the Network Master Pro MT1040A Transport Module operation manual for the File Manager display method.) If the inserted USB memory is not recognized, it cannot be used for installation. Choose another USB memory instead.

## Installation Procedure via network.

1. When using battery, make sure that there is 40% (or more) power in the battery of the instrument.
2. Install the Control Software(MX100001A) on your PC.  
(Please refer “3.4.1 Installation of Control Software” on MT1040A Transport Modules Operation Manual.)
3. Configure the Ethernet communication between the Control Software(MX100001A) and MT1040A.  
(Please refer “3.4.2 Connection and Setup” on MT1040A Transport Modules Operation Manual.)  
Select the update tab on Control Software to show the upgrading box.



4. Touch Select File to launch the dialog box.
5. Select the software file. Progress bar shows Upload Progress. Touching Cancel aborts the file uploading.
6. After file uploading finishes, touch Start Installation.  
Touching Start Installation will reboot the Network Master. Installation process cannot be remotely monitored. Please reconnect after several minutes.

## Notes on Use

### SEEK Scenario

After installing the software, a set of SEEK scenario is copied in the “*/Internal/windowsinstaller/ scenario*” folder. Register the scenario to use it. Refer to the “4.2.1 Registering the Scenario” in the Scenario Edit Environment Kit Operation Manual.

| Scenario Name                  | Description                                                                                                                                          | Module                                                                                              |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| xCVRQuickCheckMT1040A_10.obcfg | This scenario quickly checks optical modules.<br>Refer to the “Optical Transceiver Simple Check xCVR Quick Check SEEK Scenario” on Anritsu WEB Site. | MT1040A<br>MU104011A<br>MU104014A<br>MU104014B<br>MU104015A<br>MU100010A<br>MU100010A1<br>MU100011A |

### File Sharing

Sharing files with MT1000A and MT1040A from PCs running Windows 11 24H2 or later now requires entering username and password. Refer to the operation manual for details.

### Touch Panel Display

The TFT display is used for most interactions between the user and Network Master. Since this display has a touch panel, navigate and operate directly by touching the display screen. The touch panel is designed to operate using only light pressure from a fingertip or included stylus (Anritsu model number: Z1746A). Pressing too hard on the touch panel might damage it; the design load is about 200 grams.

## Revision History

| Version | Date       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| 15.09   | Oct 1,2026 | <ul style="list-style-type: none"> <li>● Key Added Feature <ul style="list-style-type: none"> <li>➤ [ETH] Added ability to change Ethernet type to arbitrary value in Y.1564 application (15780)</li> <li>➤ [OTN][MU100011A/MU104014B/MU104011A/MU104015A] Added ability to configure timeout duration during OTN-APS measurement when using QSFP+/QSFP28 (15756)</li> <li>➤ [ETH][MU100011A/MU104014B/MU104011A/MU104015A] Added ability to disable automatic interface reset during 40G/100G Ethernet measurement (15744)</li> <li>➤ [ETH] Added ability to display optical wavelength in optical module power monitor (15743)</li> <li>➤ [SCPI] Added Burst Read SCPI command for accessing optical modules via MDIO/I2C (15786)</li> <li>➤ [Framework] Added support for G0449A as new GNSS receiver (15742)</li> </ul> </li> <li>● Fixed bug <ul style="list-style-type: none"> <li>➤ [ETH][OTN] Fixed display corruption of header text when opening QFactor/QMargin detail menu in Transceiver — ZR Media/Host menu of measurement results (15745)</li> <li>➤ [ETH] Fixed issue where FEC distribution graph and counters failed to operate when Port 2 configured during 100G Ethernet measurement (15738)</li> <li>➤ [ETH] Fixed issue where FEC threshold settings incorrectly displayed during 10G Ethernet measurement using V15.08 (15723)</li> <li>➤ [ETH] Fixed issue where system frame transmission and reception halted when large volume of ARP or PING packets received simultaneously (15736)</li> <li>➤ [ETH] Fixed issue (no impact on measurement results) where IPv6 addresses not displayed in Y.1564 application report (15781)</li> <li>➤ [ETH] Fixed issue where irrelevant strings displayed for symbol error rate and maximum symbol error rate during link-down state at 200G and 400G Ethernet measurement (15750)</li> <li>➤ [ETH] Changed (no change to generated symbol error rate) average number of symbol errors inserted per codeword from</li> </ul> </li> </ul> |

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|       |            | 8.5 to 4.25 to reduce occurrence of uncorrectable errors when using HiSER error insertion function (15779)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 15.08 | Apr 1,2026 | <ul style="list-style-type: none"> <li>● Key Added Feature <ul style="list-style-type: none"> <li>➤ [ETH] A function is supported to measure FEC-corrected codeword distribution in 25G and 100G Ethernet measurements. (15682)</li> <li>➤ [ETH] When used with the ZR or ZR+ optical module inserted, the MT1000A can obtain results of Q-factor and Q-margin measurements specified in C-CMIS. (15656)</li> <li>➤ [ETH] The MT1000A is now able to determine whether the detected local fault has been generated within the measuring instrument or received from outside the measuring instrument in 40G, 100G, 200G, and 400G Ethernet measurements. (15672)</li> <li>➤ [ETH] A function has been added to output statistics with time zones in a CSV file. (15694)</li> </ul> </li> <li>● Fixed bug <ul style="list-style-type: none"> <li>➤ [Framework] Previously, connecting the MT1000A or MT1040A to a PC via a USB Type-B generated an error dialog, making files inaccessible. This bug has been fixed. (15653)</li> <li>➤ [ETH][Sync Test] Previously, when test frames were sent using the IEEE 1588v2 function with the frame size set to a value other than a power of two on the master side, the slave-side state did not become stable, resulting in an announce timeout or other error occurring at regular intervals. This bug has been fixed. (15096)</li> <li>➤ [ETH] There were cases in which the measuring instrument became inoperable when an error message was displayed after the end of a measurement using the RFC 2544 application. This bug has been fixed. (15658)</li> <li>➤ [Framework] The exponent part in the result obtained from "ETH:PORT1:IFET? (TRMEDCORRBITRATEMAX)" of the SCPI command was not correctly indicated. This bug has been fixed. (15659)</li> <li>➤ [OTN] Previously, the current values were displayed for the items shown below, instead of total values, in 100GBASE-ZR statistics of OTN-BERT. This bug has been fixed. (15657)<br/>CD, SOP ROC, DGD, SOPMD, OSNR, Tx Power, Rx Signal Power, CFO</li> </ul> </li> </ul> |

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|       |            | <ul style="list-style-type: none"> <li>➤ [GPS] Previously, the instrument froze if the file name included "@" when a log file was saved using the GPS/GNSS utility. This bug has been fixed. (15128)</li> <li>➤ [ETH] Previously, when FEC symbol error insertion was performed by inserting an alarm or error in 4x100G breakout mode in an ETH-N-Port BERT, the maximum burst length for Ports 2 to 4 was 4. This bug has been fixed. (15582)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 15.07 | Dec 3,2025 | <ul style="list-style-type: none"> <li>● Fixed bug <ul style="list-style-type: none"> <li>➤ [Remote] Fixed bug preventing use of SCPI commands PMODule:PORT&lt;Pt&gt;:I2C:WRITE and PMODule:PORT&lt;Pt&gt;:I2C:READ? that access registers in QSFP28 during measurement. (15615)</li> <li>➤ [ETH] Fixed bug in Ethernet application causing actual transmission interval to become twice configured value when enabling OAM settings and configuring transmission intervals for CCM and other protocols. (15592)</li> <li>➤ [ETH] Fixed bug in Y.1564 application causing time synchronization failure and SAC Violation or Time Sync Error when one-way test selected in test mode. (15092)</li> <li>➤ [ETH] Fixed bug in RFC2544 application causing replacement of jitter measurement results by latency data when latency/jitter measurement enabled with number of iterations set to 1 or more and cumulative repeat step setting enabled. (15640)</li> <li>➤ [ETH] Fixed bug preventing use of clock stretching function when accessing optical transceiver via I2C. (15049)</li> <li>➤ [SEEK] Fixed bug in MX100003A causing error and preventing editing from scenario manager edit screen of MT1000A and MT1040A when STRING global variable created with value set only to spaces. (15534)</li> </ul> <p>From MX100003A version 2.0.0.65 and later, global variables containing only spaces will cause error when saving scenario. Use dummy characters, such as hyphens or underscores, instead.</p> <li>➤ [SEEK] Fixed bug preventing connection to MT1000A and MT1040A via MX100003A from PCs running Windows 11 24H2 or later. (15574)</li> </li></ul> <p>Combination of MX100003A version 2.0.0.65 or later and MT1000A/MT1040A version V15.06 or later required to use PC</p> |

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|       |             | with Windows 11 24H2 or later.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 15.06 | Oct 29,2025 | <ul style="list-style-type: none"> <li>● Key Added Feature <ul style="list-style-type: none"> <li>➤ [ETH] [MU100011A/MU104014B/MU104011A/MU104015A] Added 100G pluggable coherent option (MU10x01xA-006/306) supporting 100ZR-compliant QSFP28 optical transceivers. (15598)</li> <li>➤ [ETH] Added 3x100G client mode to OpenZR+ multi-client BERT option (MU104014B-036/336). (15599)</li> <li>➤ [[ETH] FEC Symbol Error (Per lane) and FEC Symbol Error (CW) error insertion functions are now supported for 100G Ethernet measurements in BERT and Mon/Gen applications. This change allows 100G Ethernet measurements to<br/>The SCPI command "ETHernet:PORT &lt;Pt&gt;:STIMuli:ERRor FSYMB" will no longer be available. Please use "ETHernet:PORT &lt;Pt&gt;:STIMuli:PCS:ERRor FSYMBLANE" and "ETHernet:PORT &lt;Pt&gt;:STIMuli:PCS:ERRor FSYMBCW". (15600)</li> <li>➤ [Framework] Added SCPI command to retrieve time difference from UTC according to standard time setting. (15407)</li> </ul> </li> <li>● Fixed bug <ul style="list-style-type: none"> <li>➤ [Framework] Fixed bug causing MT1000A/MT1040A to freeze and become inoperable when performing operations such as ScreenCapture or ShutDown from power button while time-intensive processes running in measurement applications. (15090)</li> <li>➤ [ETH] Fixed bug causing ClientMode selection to change to Custom and preventing further change when loading result files saved in ZR+ multi-client application with MX100001A Viewer. (15514)</li> <li>➤ [ETH] Fixed bug in BERT application causing PRBS sync alarm, which only enabled when cross pattern ON, to increment even when payload pattern set to cross pattern OFF. (15094)</li> <li>➤ [MU104014B] Fixed issue causing self-test result to fail on MU104014B when executing self-test in low-temperature environment, although within guaranteed operating temperature range. (15093)</li> <li>➤ [Wireshark] Fixed bug causing MT1000A/MT1040A to forcibly terminate when opening file captured on MT1000A/MT1040A</li> </ul> </li> </ul> |

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|       |            | <p>using Wireshark and repeatedly performing Edit and Mark/Unmark Packet operations. (15105)</p> <ul style="list-style-type: none"> <li>➤ [Wireshark] Fixed bug preventing closure of dialog displayed when selecting Summary from Statistics in Wireshark menu. (13671)</li> <li>➤ [ETH] There were cases in which the link-up became unstable depending on the type of QSFP-DD or QSFP28. This bug has been fixed. (15582)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 15.04 | Apr 2,2025 | <ul style="list-style-type: none"> <li>● Key Added Feature <ul style="list-style-type: none"> <li>➤ [ETH]Added Invalid Alignment Marker (FEC) and LOA Alarm insertion to N-port BERT (Bit Error Rate Test) application. (15037)</li> </ul> </li> <li>● Fixed bug <ul style="list-style-type: none"> <li>➤ [ETH] Fixed issue preventing channel setting when using QSFP-DD module with MU104014B in Custom Coherent mode and Media I/F is either Custom or Reserve. (15018)</li> <li>➤ [ETH] Fixed bug causing incorrect functioning of Power Class 2 SFP28 transceivers. (15035)</li> <li>➤ [ETH/OTN/CPRI/MxH] Fixed bug related to clock stretching function when accessing optical transceivers via I2C (Inter-Integrated Circuit) communication. (15049)</li> <li>➤ [ETH] Fixed bug in MU104011A/14A/14B/15A module occasionally causing packet loss at high-rate 10GbE (10 Gigabit Ethernet) packet traffic when using Reflector application. (15053)</li> <li>➤ [ETH] Fixed bug in Version 15.03 causing failure to establish Link when receiving 400G Ethernet signals with frequency deviation exceeding <math>\pm 50</math> ppm. (15055)</li> <li>➤ [ETH] Fixed bug in MU104011A/14A/14B/15A module causing failure to detect Loss of Signal (LOS) when I2C clock speed mode set to 100 kHz. (15058)</li> <li>➤ [ETH] Fixed bug in MU104014A/14B module causing failure to detect Loss of Signal (LOS) within 1 second when I2C clock speed mode set to 400 kHz. (15059)</li> <li>➤ [ETH]Fixed bug in IEEE 1588 (Precision Time Protocol) processing causing Sync timeout error despite being in Passive state. (15076)</li> <li>➤ Fixed bug where optical transceiver information not read</li> </ul> </li> </ul> |

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|       |             | <p>correctly due to time from power-on to register access for SFP/SFP+/SFP28 not meeting specifications. (15079)</p> <ul style="list-style-type: none"> <li>➤ [ETH] Fixed bug causing Sequence Errors when receiving broadcast packets during BERT (Bit Error Rate Test) measurement of 40G/100G/400GbE networks. (15080)</li> <li>➤ [NoFrame] Fixed bug in NoFrame application versions 13.01 to 15.03 causing Loss of Signal State (LSS) when using QSFP28 transceiver. (15081)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 15.03 | Aug 14,2024 | <ul style="list-style-type: none"> <li>● Key Added Feature <ul style="list-style-type: none"> <li>➤ [ETH] Added frequency and wavelength settings in addition to channel setting when using with either QSFP-DD ZR or ZR+ optical module installed. (15010)</li> <li>➤ [ETH] When using with either QSFP-DD ZR or ZR+ optical module installed, supports saving and reading of frequency Spacing Grid, channel, wavelength, and TxTargetOutputPower parameters set at optical module. (15011)</li> <li>➤ [ETH] Added mode for measuring interrupted service time even at Layer-1 alarm when using MU104011A, MU104014A/B, and MU104015A. (15009)</li> </ul> </li> <li>● Fixed bug <ul style="list-style-type: none"> <li>➤ [ETH] Fixed issue preventing channel setting when using QSFP-DD module with MU104014B in Custom Coherent mode and Media I/F is either Custom or Reserve. (15018)</li> <li>➤ [ETH] Fixed MU104014B QSFP-DD ZR mode boot sequence. (15006)</li> <li>➤ [OTN] Fixed bug causing LOF at Rx side when impressing LOS alarm with OTU4. (15017)</li> <li>➤ [ETH] Fixed bug causing the latency measurement result at 10/100/1000 Mbit electrical Ethernet are larger than the actual value due to the addition of MU10401X's internal delay. (15001)</li> <li>➤ [Framework] Fixed bug preventing identification of second transport module when two transport modules installed in MT1040A. (15014)</li> </ul> </li> </ul> |
| 15.02 | Apr 17,2024 | <ul style="list-style-type: none"> <li>● Key Added Feature <ul style="list-style-type: none"> <li>➤ [ETH] Added function for setting APSEL code when using ZR or ZR+ module with MT1040A (14980)</li> <li>➤ [ETH] Added 100G Ethernet FEC analysis function (Opt-X24)</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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|       |             | <p>for MU100011A (14977)</p> <ul style="list-style-type: none"> <li>● Fixed bug <ul style="list-style-type: none"> <li>➤ [Remote] Fixed bug causing capture of different value from actual result captured by "ETHeTnet:STATus:PORT&lt;Pt&gt;:TIMing?" SCPI command for interfaces other than 1GbE (14959)</li> <li>➤ [OTN] Fixed bug causing OTN Skew insertion for OTU3x and OTU4 (14956)</li> <li>➤ [ETH] Changed frequency spacing grid set to stored value in the register at QSFP-DD ZR or ZR module startup from 100 GHz. (14988)</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 15.01 | Mar 6,2024  | <ul style="list-style-type: none"> <li>● Fixed bug <ul style="list-style-type: none"> <li>➤ [ETH]Fixed bug causing Open ZR+ Multi-Client BERT application doesn't launch. (14960)</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 15.00 | Jan 24,2024 | <ul style="list-style-type: none"> <li>● Key Added Feature <ul style="list-style-type: none"> <li>➤ Added 400G(QSFP-DD) Multirate Module MU104014B to measurement module product line.</li> </ul> </li> <li>● Fixed bug <ul style="list-style-type: none"> <li>➤ [ETH] Fixed QSFP-DD ZR frequency Grid Spacing setting note. (14939)</li> <li>➤ [ETH] Changed QSFP-DD ZR frequency Grid Spacing setting default to 100 GHz. (14891)</li> <li>➤ [ETH] Changed number of Corr.bits and Max corr.bits rate display digits in 400ZR/ZR+ Media Host measurement items. (14903)</li> <li>➤ [ETH] Added QSFP-DD's information to measurement results report. (14941)</li> <li>➤ [ETH] Fixed error displaying A units instead of mA units for I2C Analysis TxBias when using QSFP-DD. (14894)</li> <li>➤ [ETH]Fixed bug causing FCS error when specific-length Ethernet Frame received in 25GbE. (14912)</li> <li>➤ [ETH] Fixed bug allowing selection of undefined standard items at SyncE Tx QL setting. Removed QL-PRTC, QL-ePRTC, QL-eEEC, and QL-ePRC from QL selection items at G.8624 QL type, and removed QL-INV16, QL-INV17, QL-INV18, and QL-INV19 from QL selection items at G.781 QL type. (14916)</li> <li>➤ [ETH] Fixed bug causing undefined QL measurement result error in QL measurement item name and profile at SyncE G.781</li> </ul> </li> </ul> |

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|       |              | <p>profile measurement. (14916)</p> <ul style="list-style-type: none"> <li>➤ [ETH] Fixed bug causing QL-PRTC, QL-ePRTC, QL-eEEEC, and QL-ePRC measurement result errors at SyncE G8266 profile measurement. (14916)</li> <li>➤</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 14.00 | Aug 30, 2023 | <ul style="list-style-type: none"> <li>● Key Added Feature <ul style="list-style-type: none"> <li>➤ [New HW] Added new 10G Multirate Module MU100010A1 to measurement module line</li> </ul> </li> <li>● Fixed bug <ul style="list-style-type: none"> <li>➤ [ETH] Fixed bug preventing red display of failed AVAIL result in Y.1564 application report file (14627)</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 12.09 | May 8, 2023  | <ul style="list-style-type: none"> <li>● Key Added Features <ul style="list-style-type: none"> <li>➤ [ETH] The latency upper limit of the RFC2544 application has been extended from 99 <math>\mu</math>s to 999 ms (14648)</li> <li>➤ [ETH][OTN]A variable I2C clock speed function has been added to the MU10401xA QSFPX and OSFP interfaces. Although usually 400 kHz, it can be switched to 100 kHz for testing</li> </ul> </li> <li>● Fixed bugs <ul style="list-style-type: none"> <li>➤ [ETH] Fixed bug in the MU1x0010A Mon/Gen application preventing Burst Gap input during Burst transmission (13897)</li> <li>➤ [ETH] Fixed bug in the MU1x0010A Mon/Gen application causing Frame loss misdetection when stopping traffic during measurement (14615)</li> <li>➤ [ETH] Fixed bug causing a Tx pattern code violation during 1000BASE-X Autonegotiation and Link-down (14589)</li> <li>➤ Fixed bug causing disconnection of the test instrument from the server during long-term MX109020A Site Over Remote Access operation (14644)</li> </ul> </li> </ul> |
| 12.08 | Feb 1, 2023  | <ul style="list-style-type: none"> <li>● Fixed bugs <ul style="list-style-type: none"> <li>➤ [ETH] Fixed bug causing Frame Loss and large latency result exceeding 200 <math>\mu</math>s when using Reflector application at 10GbE (14629)</li> <li>➤ [ETH] Fixed bug preventing recovery when inserting/removing transceiver at QSFP-DD temperature alarm (14635)</li> <li>➤ [ETH] Fixed bug sometimes causing Unavailable occurrence when Frame Loss mis-detected at long-term Performance Test at E-Mix sending using SAT (Y.1564) application (14639)</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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| 12.07 | Dec 8, 2022  | <ul style="list-style-type: none"> <li>● Key Added Features <ul style="list-style-type: none"> <li>➤ Added 200G/400G support to function for dynamically varying size of Ethernet frames sent by test equipment (14588)</li> <li>➤ Added output of FEC distribution graph to FEC Distribution PDF report (14557)</li> </ul> </li> <li>● Fixed bugs <ul style="list-style-type: none"> <li>➤ Fixed bug causing unexpected Ping Reply to Ping Request including checksum error (12819)</li> <li>➤ [ETH] Fixed bug causing TX Code counter to lose consistency when TX frequency changed by Stimuli function (14446)</li> <li>➤ [CPRI] Fixed bug causing incorrect high-layer Hyperframe and Code word counts (undefined value) whether Loss of signal (LOS) and/or LOF detected (14505)</li> <li>➤ [OTN] Fix bug causing incorrect excess LOF count due to severe jitter out-of-specification test equipment conditions when evaluating OTU3 and OTU4 signal using MU104011A/14A/15A (14513)</li> <li>➤ [ETH] Fixed bug causing incorrect UDP checksum in Sync message sent by test equipment 25GbE IEEE1588v2 function (14552)</li> <li>➤ [ETH] Fixed bug sometimes preventing detection of LOS and LOSA recovering in less than 1 s (14527, 14572)</li> <li>➤ [OTDR] Added screen operation for registering calibration date to solve issue of lost test-equipment calibration date after equipment shipment (14555)</li> <li>➤ [ETH] Fixed bug causing missing High SER alarm in output report (14557)</li> <li>➤ Fixed bug causing sudden shutdown when MU100011A and any one of MU101411A/MU104014A/MU101415A installed in MT1040A main unit (14596)</li> <li>➤ [ETH] Changed Clock Source default setting at IEEE1588v2 setting screen from Internal to GPS (14614)</li> <li>➤ [ETH][OTN] Fixed bug preventing change settings at MU100011A Transceiver setting (14622)</li> </ul> </li> </ul> |
| 12.06 | Aug 31, 2022 | <ul style="list-style-type: none"> <li>● Key Added Features <ul style="list-style-type: none"> <li>➤ [ETH] Added Operation mode to Reflector application at reception of multicast MAC frame. Supports "Layer 2</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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|       |              | <p>Transparency test". (14502)</p> <ul style="list-style-type: none"> <li>● Fixed bugs <ul style="list-style-type: none"> <li>➤ [ETH] Fixed bug causing PRBS Sync Alarm detection when multicast frame, such as PAUSE frame, STP or LLDP, received during BERT measurement. (13412)</li> <li>➤ [ETH] Fixed bug at measurement port setting preventing obtaining correct DHCP client IPv4 address on VLAN network. (14289)</li> <li>➤ Increased QSFP+, QSFP28, and QSFP-DD I2C communications speed. (14397)</li> <li>➤ [ETH] Fixed bug causing incorrect time stamp when using SyncE frame dedicated capture function. (14433)</li> <li>➤ [ETH] Fix bug causing wrong description of 400G-ZR at I2C Analysis screen. (14438)</li> <li>➤ [ETH] Fixed bug sometimes preventing 400G-2FR4 Link up. (14445)</li> <li>➤ [ETH] Fixed bug sometimes preventing LOS detection at QSFP-DD, OSFP, and QSFP56. (14447)</li> <li>➤ [ETH] Solved issue of non-starting 400G-ZR modules from specific vendors. (14508)</li> </ul> </li> </ul> |
| 12.05 | Feb 22, 2022 | <ul style="list-style-type: none"> <li>● Key Added Features <ul style="list-style-type: none"> <li>➤ [ETH] Added N Port BERT application. (14389)<br/>Adding software option supports measurement using breakout-type 400G optical transceivers.</li> <li>➤ [ETH] Added support for use of OIF 400ZR-compliant QSFP-DD optical transceivers. (14388)</li> <li>➤ [ETH] Added 400G and 200G support to SAT(Y.1564) application. (14390)</li> </ul> </li> <li>● Fixed bugs <ul style="list-style-type: none"> <li>➤ [ETH] At 400G measurement with BERT application, fixed bug causing PRBS Sync Alarm detection when receiving Frame with mismatched address filter when "Include addresses in frame filter on receiver" set. (13281)</li> <li>➤ [ETH] At 400G rate setting with BERT application, fixed bug causing PRBS Sync Alarm detection due to loss of Rx signal. (14391)</li> <li>➤ [MxH] When using MU100011A module, fixed bug causing dual-port mis-selection even when not using 25G eCPRI/RoE</li> </ul> </li> </ul> |

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|       |              | <p>Dual Port Ability function. (14342)</p> <ul style="list-style-type: none"> <li>➤ [ETH] When creating report after loading measurement results, fixed bug preventing output of LOS item with and without optical transceiver. (13916)</li> <li>➤ [ETH] [MxH] When using 25GbE or faster interface, fixed bug causing BER_Alarm when MPLS protocol set. (14401) <ul style="list-style-type: none"> <li>- MU104011A/14A/15A Module: Occurs with V12.04 or later</li> <li>- MU100011A Module: Occurs with V12.00 or later</li> </ul> </li> <li>➤ [VIP] Fixed bug preventing operation of Auto Capture function when using G0306B. (14356)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 12.04 | Dec 20, 2021 | <ul style="list-style-type: none"> <li>● Fixed bugs <ul style="list-style-type: none"> <li>➤ [ETH] [MxH] Fixed bug causing screen freeze when receiving packets at destination UDP port with different setting to send source UDP port when using UDP protocol at either Ethernet or CPRI/RoE BERT applications (12575)</li> <li>➤ [ETH] Fixed bug causing non-existent FCS error when setting interface of 10GbE or less at Reflector application (13954)</li> <li>➤ [ETH] Fixed bug causing status alarm when long-term measurement stops (14085)</li> <li>➤ [SDH/SONET] Fixed bug causing incorrect display of AU3 pointer monitor results (14089)</li> <li>➤ [ETH] Fixed bug causing lost configuration and inability to test when executing One-way Test with VLAN enabled at Y.1564 application (14139)</li> <li>➤ [ETH] Fixed bug preventing error identification when receiving ICMP reply packet including packet length error of 463 or more bytes at 10GbE or slower interface (14273)</li> <li>➤ [ETH] Changed initialization of FEC settings when switching interface to 100GbE (14053)</li> <li>➤ [Remote][ETH] Fixed bug causing free change of latency-measurement timestamp resolution at SCPI control; fixed parameter to 5 ns (14193)</li> <li>➤ [ETH] Fixed bug preventing correct reflection of FEC threshold setting (14209)</li> <li>➤ [Remote][ETH] Fixed bug causing instrument restart when setting IFG lower threshold at SCPI control (14271)</li> <li>➤ [MU100090B][Framework] Fixed bug causing screen freeze when rebooting with GPS/GNSS setting in fixed-location mode</li> </ul> </li> </ul> |

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|       |              | and clicking GPS/GNSS icon (14301)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 12.03 | Oct 04, 2021 | <ul style="list-style-type: none"> <li>● Fixed bugs <ul style="list-style-type: none"> <li>➤ [ETH]Fixed bug in Mon/Gen application v7.01 and later preventing sending at set burst interval. (13893)</li> <li>➤ [ETH][OTN][SDH][MxH][FC] Fixed bug causing crash when report output set to include Event Log and CSV format. Limited number of report output logs; to output all the logs, use CSV output from Event Log in application. (13579)</li> <li>➤ [ETH] Fixed bug in Ping application causing output of IPv4 address instead of IPv6 address in port setting report when outputting measurement results using IPv6 as PDF report. (14083)</li> <li>➤ [Framework] Now displays location name in GPS/GNSS report column when fixed position setting enabled at MU100090B. (13992)</li> <li>➤ [ETH][Framework] Now displays changes in MU100090B status in Transport application Event Log. (13865)</li> <li>➤ [Framework] Now permits holdover guide setting only when MU100090B-001 option (Multi-band) installed. Displays [Ready for Holdover] only when Holdover guide not enabled. (13873)</li> <li>➤ [Framework] Fixed bug preventing GPS/GNSS reception when Fixed Position setting enabled at MU100090B. (13963)</li> <li>➤ [Framework] Revised calculation error in permissible drift amount at Holdover using MU100090B. (13993)</li> <li>➤ [Framework] Fixed bug enabling QZSS Setting when no MU100090B-002 option installed (Multi-GNSS). (13928)</li> <li>➤ [Framework] Fixed bug sometimes causing OFF WLAN setting to revert mistakenly to ON. (13973)</li> <li>➤ [ETH] Fix bug at IEEE1588v2 Time source [Atomicclock] setting causing drift in time at Master side when source is Internal and not GPS. (14081)</li> <li>➤ [ETH][MU104011A/MU104014A/MU104015A] Revised latency measurement results. (14132)</li> </ul> </li> </ul> |
| 12.02 | Aug 30, 2021 | <ul style="list-style-type: none"> <li>● Key Added Features <ul style="list-style-type: none"> <li>➤ Supports configuration with combination of two transport modules; as a result, one unit can perform both dual-port 400GbE and quad-port 100GbE measurements. (14087)</li> <li>➤ [ETH] Added 200GbE measurement function for MU104014A</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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|       |                              | <p>module. (14086)</p> <ul style="list-style-type: none"> <li>➤ [ETH] Added support for use of Single Lambda MSA-compliant QSFP28 optical transceivers.</li> <li>● Fixed bugs <ul style="list-style-type: none"> <li>➤ [Framework] Fixed bug causing power cut at continuous operation; update firmware if using V12.00. (14075)</li> <li>➤ [Framework] Fixed bug causing notification about power supply connector. (14075)</li> <li>➤ Fixed bug when using QSFP-DD causing optical transceiver configuration error. (13933)</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                |
| 12.00 | May 24, 2021                 | <ul style="list-style-type: none"> <li>● Key Added Features <ul style="list-style-type: none"> <li>➤ Added High Performance GNSS Disciplined Oscillator MU100090B module to product line supporting GPS, Galileo, GLONASS, Beidou, and QZSS. (13901)</li> <li>➤ [ETH] Added SyncE support for VLAN tags. (13907)</li> </ul> </li> <li>● Fixed bugs <ul style="list-style-type: none"> <li>➤ [ETH][MU100011A] Fixed bug causing incorrect lane settings for VOD, Pre, Post, and DEF values at QSFP28 and CFP4 transceiver settings. (13851)</li> <li>➤ [ETH] Fixed bug causing application crash when outputting IEEE1588v2 log output and setting long-term measurement. (13755)</li> <li>➤ [ETH] Fixed bug in SyncE Frame Capture function sometimes enabling extra size-0 file. (13782)</li> <li>➤ [Framework] Fixed bug preventing correct folder specification setting when removing USB memory while results folder set to USB. (13880)</li> </ul> </li> </ul> |
| 11.08 | Mar 18, 2021<br>Mar 30, 2021 | <ul style="list-style-type: none"> <li>● Key Added Features <ul style="list-style-type: none"> <li>➤ [Framework] Added WLAN communications function using USB WLAN dongle.</li> <li>➤ [ETH] Added OAM function for Reflector application. (13651)</li> <li>➤ [ETH] Added function to Reflector application to respond to VLAN ARP and ping (12517)</li> <li>➤ [SEEK][Framework] Added Opt-003 to MX109020A supporting upload of SEEK scenario execution results to cloud storage and customer's server (13833)</li> <li>➤ [Framework] Added function for updating instrument connected to MX109020A to latest firmware version (13832)</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                       |

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|  |  | <ul style="list-style-type: none"> <li>➤ [OTDR] Added fiber length check Enable/Disable function When this setting is Enable, the fiber length is examined prior to measurement and if it exceeds the distance range, the optical pulse output interval is adjusted automatically to prevent generation of unwanted reflections from points other than the event point. When this setting is Disable, the time until measurement starts is shortened. This function is always enabled for older version, but can be enabled/disabled in this version.<br/><br/>When the language setting is not Japanese, the Enable default is set automatically at a version upgrade. (13698)</li> <li>● Fixed bugs <ul style="list-style-type: none"> <li>➤ [ETH] Fixed bug causing normal Link status even when HighSER detected at 400GbE interface. (13645)</li> <li>➤ [ETH] Fixed bug causing non-detection of Local Fault at Link-down at 400GbE interface. (13562)</li> <li>➤ [ETH][OTN][NoFrame] Added improvements to MU10401xA module QSFP-DD/QSFP28/QSFP+ start sequence (13715)</li> <li>➤ [Wireshark] Fixed bug causing error when using eCPRI decode Lua script when using Wireshark version later than 3.4 on PC. (13682)</li> <li>➤ [ETH] Fixed bug preventing recognition of 1519-byte Frame over size error. (13679)</li> <li>➤ [SEEK] Fixed error message when SEEK results file name includes illegal character (/ , ! , ? , etc.). (13644)</li> <li>➤ [ETH] Fixed bug preventing correct generation of report file at long-term measurement at RFC2544 application. (13507)</li> <li>➤ [PDH] Fixed bug preventing communications at E3 and DS3 interfaces (13744)</li> <li>➤ [ETH] Fixed bug causing instrument crash when executing IPv6 Stateless for IEEE1588 (13743)</li> <li>➤ [ETH] Fixed bug causing detection of unintentional frame loss when executing burst test in RFC2544 application (12818)</li> <li>➤ [Framework] Fixed bug preventing display of cursor when USB mouse connected (13800)</li> <li>➤ [SEEK] Fixed a bug where the MU104011A or MU104015A module was not displayed in the MX100003A Scenario Edit Environment kit. (13861)</li> </ul> </li> </ul> |
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| 11.05 | Feb 4, 2021  | <ul style="list-style-type: none"> <li>● Key Added Features <ul style="list-style-type: none"> <li>➤ [Framework] A warning pop-up is added for AC adapter connection. Please follow the instructions as shown.(13767)</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 11.04 | Sep 30, 2020 | <ul style="list-style-type: none"> <li>● Key Added Features <ul style="list-style-type: none"> <li>➤ [ETH] Added support for 400GbE FEC Degrade function. (13620) <ul style="list-style-type: none"> <li>✧ Detect Degrade SER</li> <li>✧ Detect/Insert Remote/Local Degrade</li> </ul> </li> <li>➤ [ETH] Changed default symbol error rate threshold setting from 1E-6 to 1E-4 due to FEC symbol error status at 400GbE interface. (13639)</li> </ul> </li> <li>● Fixed bugs <ul style="list-style-type: none"> <li>➤ [ETH] Fixed bug causing continuing frame loss count after receiving normal frame at Link-down for 1 or more minutes during 400GbE frame loss measurement. (13577)</li> <li>➤ [ETH] Fixed bug causing measurement result output without errors and no saved LOFA counter history log. (13624)</li> <li>➤ [ETH][MxH] Fixed bug causing sending of IFG of less than 5 bytes at line rate of at least 80% at following frame size(s) at 25GbE interface. (13559)</li> <li>➤ [ETH] Fixed bug causing Ping application crash at output of PDF report after long-term measurement covering several days. (13410)</li> <li>➤ [ETH] Fixed bug causing generation of file with missing data at Ping application when outputting PDF report after long-term measurement of several days. (13408)</li> <li>➤ [MxH] Fixed bug preventing correct bit-rate setting at startup and file loading. (13612)</li> <li>➤ Removed following security vulnerability. (13544) <ul style="list-style-type: none"> <li>✧ X11 server at MT1000A/MT1100A/MT1040A GUI accepts unrestricted connections from host</li> </ul> </li> </ul> </li> </ul> |
| 11.03 | Aug 11, 2020 | <ul style="list-style-type: none"> <li>● Initial release. Support for the following products: <ul style="list-style-type: none"> <li>➤ MT1040A Network Master Pro</li> <li>➤ MU104014A 400G(QSFP-DD) Multirate Module</li> <li>➤ MU104015A 400G(OSFP) Multirate Module</li> <li>➤ MU104011A 100G Multirate Module</li> <li>➤ MU100010A 10G Multirate Module</li> <li>➤ MU100011A 100G Multirate Module</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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|  |  | <ul style="list-style-type: none"> <li>➤ MU100020A OTDR Module 1310/1550nm SMF</li> <li>➤ MU100021A OTDR Module 1310/1550/850/1300nm SMF/MMF</li> <li>➤ MU100022A OTDR Module 1310/1550/1625nm SMF</li> <li>➤ MU100023A OTDR Module 1310/1550/1650nm SMF</li> <li>➤ MU100090A High Performance GPS Disciplined Oscillator</li> </ul> |
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## Known Problems

|                                                                                                     | Version | Description                                                                                                                                                  |
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| MT1040A<br>MU100010A<br>MU100010A1<br>MU100011A<br>MU104011A<br>MU104014A<br>MU104014B<br>MU104015A | 15.09   | <ul style="list-style-type: none"><li>● [ETH] Bug causes incorrect Ping Reply in responses to Ping Request packets larger than 2048 bytes. (15800)</li></ul> |