Network Master Pro/Flex 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
MT1100A/MT1000A Common	—	[Framework][Remote]
MT1100A	MU110010A MU110011A MU110012A MU100013A	[ETH][OTN][CPRI][FC][SDH/SONET][SDHPDH][GPS][MxH]
MT1000A	MU100010A MU100090A	
	MU100020A MU100021A MU100022A MU100023A	[OTDR][FTTA][OLTS]
	MU100040A MU100040B	[CPRI-RF]

Latest Installer File Name

MT1000A	MT1100A
10.03.MT1000A_SW	10.03.MT1100A_SW
10.03.MU100011A_DATA	
MX100001A-Setup-10.03-xxxxx.exe	MX100001A-Setup-10.03-xxxxx.exe
MX100003A-2.0.0.54-xxxxx.exe	MX100003A-2.0.0.54-xxxxx.exe

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

Operation Manual	Doc. No.	MT1000A	MT1100A
MT1000A Network Master Pro MT1100A Network Master Flex Remote Scripting Operation Manual	M-W3736AE	27th	27th
MT1000A Network Master Pro Transport modules Operation Manual	M-W3933AE	15th	―
MT1100A Network Master Flex Operation Manual	M-W3735AE	―	28th
MT1000A Network Master Pro OTDR Modules Operation Manual	M-W3810AE	17th	―
MT1000A Network Master Pro OTDR Modules Remote Scripting Operation Manual	M-W3859AE	6th	
MX100003A MT1000A/MT1100A Scenario Edit Environment Kit Operation Manual	M-W3858AE	13th	13th
MT1000A MU100040A/MU100040B Network Master Pro Operation Manual	10580-00443	A	―

The Relation Between Software and Operation Manuals

MX100003A Version	Related MX100003A Operation Manual Edition	Working MT1000A/MT1100A Firmware Version
2.0.0.54	13.0	10.02 to 10.03
2.0.0.53	13.0	10.00 to 10.01
2.0.0.52	12.0	9.09 to 9.13
2.0.0.51	11.0	9.07 to 9.08
2.0.0.36/43/45/48/49/50	5.0 to 10.0	5.04 to 9.06
2.0.0.23	4.0	5.04 to 7.04
1.0.0.76	2.0 to 3.0	5.04 to 7.01
1.0.0.72	1.0	5.04

MT1000A/MT1100A Firmware Version	Related Operation Manual Edition			
	MT1000A			MT1100A
	MU10001xA (Transport)	MU100040A/B (CPRI-RF)	MU10002xA (OTDR)	MU11001xA (Transport)
10.03	15	A	17	28
10.02	14	A	16	27
10.01	13	A	15	26
10.00	13	A	15	26
9.13	13	A	14	26
9.12	12	A	13	26
9.11	11	A	12	25
9.10	10	A	11	25
9.09	9	A	11	24
9.08	8	A	10	23
9.07	8	A	10	22
9.06	7	A	10	21
9.05	6	A	10	20
9.04	5	A	10	19
9.03	5	A	10	19
9.02	5	A	9	19
9.01	5	A	9	19
9.00	4	A Title Changed[1]	9	18

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[1] The title changed from "MT1000A MU100040A Network Master Pro Operation Manual" to "MT1000A MU100040A/MU100040B Network Master Pro Operation Manual".

8.02	3	A	9	17
8.01	2	A	9	16
8.00	1 Title Changed[2]	A	8	-
7.05	15	A	7	15
7.04	14	A	6	13
7.03	14	A	6	13
7.02	13	A	5	12
7.01	12	A	5	10
7.00	12	A	5	10
6.02	11	-	4	10
6.01	11	-	4	10
6.00	11	-	4	10
5.04	10	-	3	9
5.03	10	-	3	9
5.02	10	-	3	9
5.01	10	-	3	9
5.00	9	-	2	8
4.00	8	-	1	7
3.04	8	-	-	7
3.03	8	-	-	7
3.02	7	-	-	6
3.01	6	-	-	5
3.00	5	-	-	4
2.05	4	-	-	4
2.04	4	-	-	3
2.03	3	-	-	2
2.02	2	-	-	2
2.01	2	-	-	2
2.00	2	-	-	1
1.00	1	-	-	1

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[2] The title changed from "MT1000A MU100010A Network Master Pro Operation Manual" to "MT1000A Transport Modules Operation Manual".

Installation Procedure

1. When using battery, make sure that there is 40% (or more) power in the battery of the instrument.
2. Remove the USB memory from the MT1000A/MT1100A.
3. Press the power button to shut down the MT1000A/MT1100A. Never force to power off by holding the power button pressed for several seconds.
4. Remove the AC adapter or cable and see the power button turns to gray.
5. Copy the installer (X.XX.MT1000_SW, X.XX.MU100011A_DATAor X.XX.MT1100_SW) to an empty USB memory stick formatted to FAT32.
6. Insert the USB memory stick into MT1000A/MT1100A.
7. Boot MT1000A/MT1100A 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.
   When installing MT1000A software which includes MU100011A, the installation of MU100011A data starts automatically at the Network Master rebooting.
8. Remove USB stick after installation is complete

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

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 "3.5.1 Installation of Control Software" on MT1000A Transport Modules Operation Manual or MT1100A Network Master Flex Operation Manual.)
3. Configure the Ethernet communication between the Control Software(MX100001A) and MT1000A/MT1100A. (Please refer "3.5.2 Connection and Setup" on MT1000A Transport Modules Operation Manual or MT1100A Network Master Flex Operation Manual.)Select the update tab on Control Software to show the upgrading box.
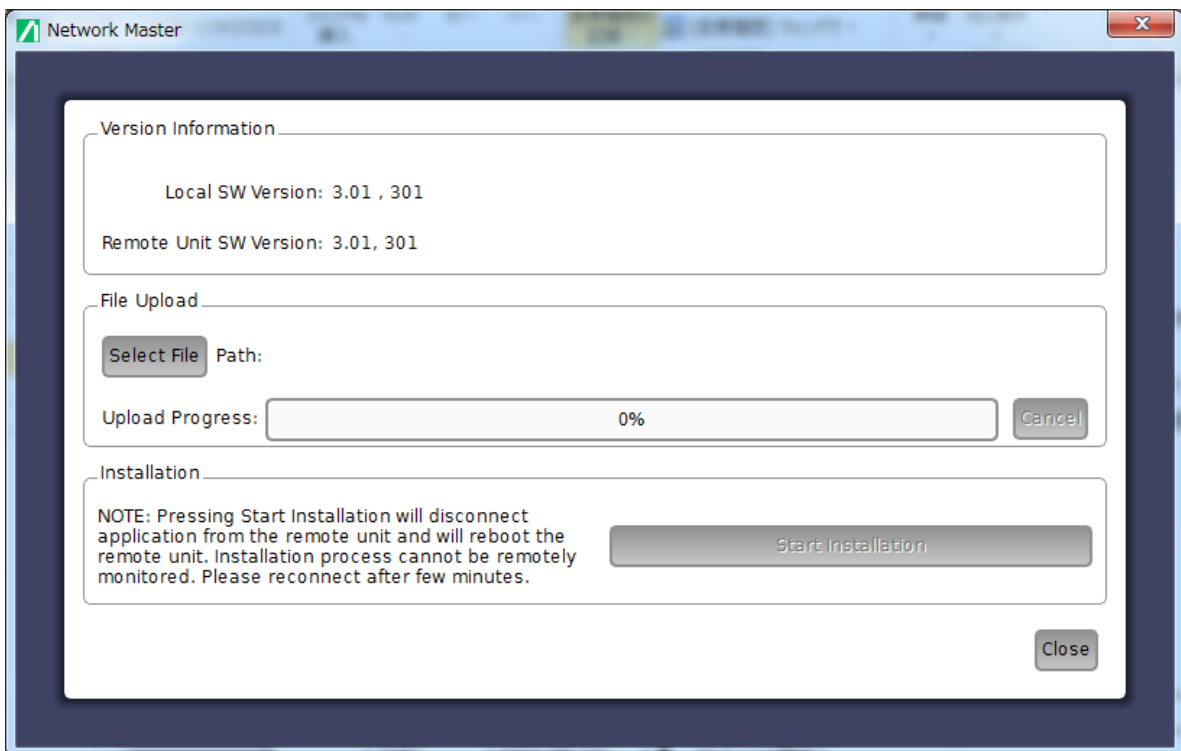
4. Touch Select File to launch the dialog box.
5. Select the software file. Progress bar shows Upload Progress. Touching Cancel aborts the file uploading.
6. After file uploading finishes, touch Start Installation.
   Touching Start Installation will reboot the Network Master. Installation process cannot be remotely monitored. Please reconnect after several minutes.

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
xCVRQuickCheck_03.obcfg	This scenario quickly checks optical modules.. Refer to the "Optical Transceiver Simple Check xCVR Quick Check SEEK Scenario" on Anritsu WEB Site.	MT1000A MU100010A MU100011A
xCVRQuickCheck_00.obcfg		MT1100A MU110013A

Revision History

Version	Date	Description
10.03	2020-07-13	● Key Added Features ➢ [ETH] Added following functions to RFC2544. (12697) 　- Added Latency, Jitter, Throughput Pass/Fail threshold value 　- Added Latency, Jitter, Throughput Pass/Fail threshold value 　- Support for simultaneous Latency and Packet Jitter measurement ➢ [ETH] Improved Latency and Packet Jitter measurement accuracy at RFC2544 and SAT (Y.1564) measurement. (13550) ➢ [OTDR] Added Korean language GUI descriptions. (12847) ● Fixed bugs ➢ [MxH] Fixed bug causing incrementing PRBS sync alarm when executing communications test while either IEEE1588 or SyncE set to ON at eCPRI test. (12368) ➢ [ETH] Fixed bug preventing multicast VLAN support for IEEE1588v2 SMPTE profile. (13485, 13472) ➢ [OTDR] Fixed bug causing slow measurement start after switching wavelength when wavelength set to ALL at Separate (Individual) measurement mode setting. (12894) ➢ [OTDR] Fixed bug at transmission loss Pass/Fail evaluation when Pass/Fail evaluation reference set to ISO/IEC or JIS. (13537)
10.02	2020-06-04	● Key Added Features ➢ Added support for MX109020A Site Over Remote Access; installing MT1000A-011 option enables remote control and file access using MX109020A. (13368) ➢ [VIP] Added support for selection of all G0382A option tips. (13332) ➢ [VIP] Added message display when pass/fail analysis results range off screen edge. (13333) ● Fixed bugs ➢ [ETH] Fixed bug causing one lost Frame at RFC2544 measurement using two MT1000A units with MT1000A operating as Reflector; bug occurs only with 100, 40, and 25GbE interfaces. (12833) ➢ [ETH] Fixed bug causing crash when changing [Line load] unit at 25GbE setting of RFC2544 application. (12939)

		➢ [ETH][MxH] Fixed bug causing incorrect detection of PRBS sync alarm when connecting/disconnecting cable during BER measurement using cross PRBS pattern at 25GbE or faster interface. (12594) ➢ [ETH] Fixed bug causing forced restart when outputting Statistics as .csv file after measuring interval length with [No Interval] set at Ethernet application. (12820) ➢ [ETH] Fixed bug sometimes causing output of incorrect packet when sending packets with Frame Size set to [Step] at 25GbE or faster interface. (12864) ➢ [VIP] Fixed bug preventing normal autofocus operation with some tips. (13326)

10.01	2020-05-11	● Fixed bugs
		
		➢ [ETH][MxH] Fixed bugs when receiving Ping packet of 2048 bytes or more at 25, 40, and 100GbE interfaces. (13380)
		
		   - [ETH][MxH] Sometimes no response to Ping request
		
		   - [Ping] Sometimes unable to measure at applicable conditions
		
		   - [RFC2544] Sometimes unable to measure when performing [Router Latency Test] at applicable conditions

10.00	2020-02-20	● Key Added Features ➢ [New HW] Added new MU100023A OTDR 1.31/1.55/1.65-um SMF module to product line. ➢ [OTDR] Added "Launch Length Correlation" and "Receive Length Correlation" items to Patch Cord settings. ➢ [OTDR] Added 200 ns Pulse Width to 0.5 km Distance Range. ➢ [OTDR] Added function for batch creation of reports (pdf, xml, or csv) using ".sor" file data saved in built-in or USB memory; function enabled only at Standard OTDR and FTTA applications. ➢ [OTDR] Added function for outputting loss table results (pdf, xml, or csv) at OLTS application. ➢ [OTDR] Improved splitter detection accuracy at auto-measurement. ➢ [OTDR] Added SCPI command remote control function at OLTS application. ➢ [SEEK] Added support for outputting each application measurement result as one report (pdf, xml, or csv) for

measurement sequence including several applications.

➢ [SEEK] Added function for describing scenarios such as branch conditions based on information loaded from data described in text file. (12808)

➢ [SEEK] Added OLTS application support for MU100020A/21A/22A/23A OTDR modules.

● Fixed bugs

➢ [ETH] Fixed bug preventing display of SyncTest application start screen depending on option combination when using MU100010A software versions later than 9.10. This bug occurs with the following hardware: (12687)

✧ With MT1000A-005 installed

✧ With MU100010A-011 installed

✧ With MU100010A-001 not installed

➢ [ETH][MxH] Fixed bug preventing FEC Symbol Error insertion for SFP28 when MU100011A-023 not installed when using MU100011A Ethernet application with eCPRI/RoE BERT. (12701)

➢ [OTDR] Fixed bug preventing splitter loss display at Pass/Fail evaluation. (12736)

➢ [OTDR] Fixed bug causing MT1000A freeze when performing averaging measurement when Auto-measurement Mode set to "Advanced" and OTDR Test Mode set to "Auto". (12482)

9.13	2019-12-12	● Key Added Features
		➢ [OTDR] Added Pass/Fail function for measured Loss results based on either ISO/IEC or JIS standards. (12648)
		● Fixed bugs
		➢ [Framework] Updated to not include initialization time (time required until OSC lamp lit) in elapsed time after MU100090A built-in oscillator power-on displayed in GPS pop-up. Now able to correctly confirm 3-hour warm-up time required to meet Holdover specification. (12642)
		➢ [Framework] Fixed bug occasionally preventing recognition of USB memory. (12537)
		➢ [OTDR] Improved issue causing generation of unnecessary reflections at non-Event points (other than connectors and splices) at OTDR waveform measurement. This issue occurs with the old firmware version when setting a short distance

		range for the measured fiber. (12488)	

		➢ [ETH] Fixed bug preventing correct statistical results 'Remote Failure' measurement. This bug occurs when setting Port Mode to 'Forced'. (12585) ➢ [VIP] Fixed following G0382A bugs: (9850) 　✧ Non-detection of G0382A when G0382A connected to Network Master. 　✧ Either operation panel freeze or occasional Network Master reboot when disconnecting G0382A from Network Master.
9.12	2019-10-10	● Key Added Features 　➢ [ETH] Added Link fault signaling (LFS) emulation function for MU100011A module interfaces of 10GbE or faster (12438) ● Fixed bugs 　➢ [ETH] Fixed following bugs related to DHCP functions 　　✧ Bug displaying error message each time expired DHCP lease renewed during measurement (12436) 　　✧ Bug causing unwanted address release when using DHCP server for authenticating validity of "server identifier" option (12367) 　　✧ Bug disabling DHCP settings after address released (12447) 　➢ [ETH] Fixed bug enabling Remote Fault detection function for interfaces other than 1GbE auto-negotiation (12519) 　➢ [ETH][OTN] Fixed bug enabling [+OTN] button for each MonGen, Reflector, RFC2544, and SAT application when MU100011A-001 or MU100011A-003 not installed in MU100011A (12416) 　➢ [Framework] Fixed bug preventing login to WLAN networks including backslash (¥) or double quotation mark (") in SSID. Names after SSID registration are: (¥) becomes (¥¥), and (") becomes (¥") (12433) 　➢ [FC] Fixed bug causing unwanted insertion of IDLE pattern between NOS pattern at insertion of Not operational (NOS) alarm (12440) 　➢ [FC] Fixed bug causing unwanted conversion of Alarm NOS pattern to Remote Fault pattern at 16GFC interface (12440) 　➢ [FC] Fixed bug causing error in insertion pattern value at R_RDY error insertion (12440)

			➢ [FC] Fixed bug preventing insertion of IDLE pattern between EOF pattern and R_RDY pattern when inserting error burst (12440) ➢ [SEEK] Fixed bug causing Fail result without executing loop at scenario with loop processing description (12469)
9.11	2019-09-05	● Fixed bugs ➢ [ETH][MxH] Fixed bug causing abnormally large Latency measurement result when using MU100011A 10GbE or lower interface Related applications are Ethernet BERT, MonGen, RFC2544, SAT (Y.1564), and eCPRI/RoE BERT. In addition, when the SAT (Y.1564) application Latency result is abnormal, the measurement result is an unacceptable SAC violation. (12454, 12472) ➢ [ETH][MxH] Fixed bug in MT1000A Ethernet BERT, Ethernet MonGen, and eCPRI/RoE BERT causing resolution of Latency and Jitter measurement results to not meet product specification (5 ns). (12470)	
9.10	2019-06-18	● Key Added Features ➢ [ETH] Added function to IEEE1588v2 screen to display Clock Class level delivered by network; in addition to Class level, added display of QL value following existing ITU-T conversion rule. (12257) ➢ [ETH] Added G8275.2 to IEEE1588v2 profile. (12238) ➢ [ETH] Added function for editing PTP message joint header flagField and displaying decode results. Added screen for changing master port flagField to IEEE1588v2 settings and screen for displaying code result in the IEEE1588v2 monitor; additionally, flagField value is correctly initiated following the Clock Class setting. (11567, 12319) ➢ [ETH] Increased SyncTest maximum measurement time to 3 days. Added function for auto-saving all measurement results to CSV file for measurement times exceeding 12 hours that cannot be saved to display memory. (12239) ➢ [ETH] For Y.1564, increased decimal points from 0 to 4 places for Availability threshold value and increased measurement result decimal points from 0 to 5 places to support 5G network measurements requiring 99.9999% availability. (12249) ➢ [ETH] Added function in Statistics for switching units between	

byte and bit display. (12105)

➢ [ETH] Added function for outputting Statistics in CSV format to simplify analysis of long-term measurement results with external software, such as Excel. (11989)

➢ [MxH] Added 12G (Opt-9) and 25G (Opt-10) to CPRI/OBSAI BERT line rates. (12237)

➢ [RemoteGUI] Added function for placing remote MT1000A into standby mode using MX100001A software. (12235)

● Fixed bugs

➢ [ETH] At 25G and higher rates when Frame size of 63 bytes or less selected, fixed bug causing displayed Tx Frame value to be twice actual value. (12200)

➢ [ETH] Fixed bug causing the display to freeze when displaying a long-term graph measurement in SyncTest. (11176, 11314)

➢ [ETH] Fixed bug causing inability for gateway to be correctly set when using a DHCP server over IPv4 at v9.09 Ethernet applications. (12248)

➢ [ETH] Fixed bug causing inability to set correct maximum IFG value for the Line Load setting (12175)

➢ [ETH] Fixed bug causing ARP resolution to not work across different VLANs. (12055)

➢ [ETH] Fixed bug preventing the correct output of random address ranges compared to the variable address settings field in the stream settings. (10905, 11117)

➢ [ETH] Changed behaviour when loading a saved file with a source MAC address set to its own unit factory default, will now configure the unit to the factory default source MAC address the file is being loaded on. (11112)

➢ [ETH] Fixed a bug, some settings (announce interval, sync interval, and minimum delay request interval) did not properly recover after loading file setup or result when using ITU-T G.8275.1 or SMPTE 2059 profiles in the IEEE1588v2 settings.(12322)

➢ [RemoteGUI] Added function for placing remote MT1000A into standby mode using MX100001A software. (12235)

➢ [ETH][MxH] SyncTest and Pass Through now start without the requirement of selecting the two ports. (12236)

➢ [ETH][MxH] Fixed bug causing inability to set FEC ON/OFF

			when using SFP28, in Ethernet and eCPRI/RoE BERT applications for v8.01 and later. (12258)
			➢ [Framework] Fixed bug causing inability to display option name correctly in System Information for v9.09 MU100010A and MU110010A. (12308)
			➢ [Framework] Fixed bug preventing file sharing with Windows10 version 1709 and later. (12186)
			➢ [OTDR] Fixed bug preventing update of subsequent power meter measurement values when cancelling the execution of power-meter zero offset. (12240)
9.09	2019-02-13		● Key Added Features
			➢ "[ETH] Added following functions to each BER, MonGen, and SyncTest application. (11970, 12182) 1. IGMP/MLD Join/Leave function 2. Support for SMTPE 2059 IEEE1588v2 profile"
			➢ [ETH] Added Burst Length/Gap input function in the Burst settings of both MonGen and ChannelStat application (12094)
			➢ [ETH][MxH] Added IPv6 Gateway function for Ethernet and MxH categories. (11238)
			➢ [MxH] Added option to eCPRI/RoE application to use 25G eCPRI on two ports simultaneously. (11969)"
			➢ [Framework] Added function to measurement results statistical display to automatically display k/M/G value matching measurement value. (12066)
			➢ [Framework] Added progress bar during application startup. (12065)
			➢ [OTDR] Added function for outputting OTDR measurement results in JSON format. (12168)
			● Fixed bugs
			➢ [ETH] Fixed bug when a very low frequency of errored frames occured, causing rounding of normal frame measurement result to nearest whole number and non-display of decimal points (99.9999% becomes 100.00%). (12056)
			➢ [ETH] Fixed bug preventing display of all measurement results when Latency result is 1 ms or more. (12167)
			➢ [ETH] Fixed bug at SyncTest application causing green status display even with no input signal to Ext10M, Ref1pps and dut1pps. (11819, 9412,10860)

		➢ [ETH][OTN][SDH][CPRI][FC] Fixed bug causing save failure when saving Event log in .csv format after measurement. (11264) ➢ [ETH][OTN][NoFrame] Fixed bug preventing writing of values to page 2 and 3 of QSFP28 internal register when using J1756A CFP2-QSFP28 Adapter with MU110012A/MU110013A. (11988) ➢ [Remote][ETH] Fixed bug preventing capture of Rx Total good bytes using SCPI command (IFETCH). (12115) ➢ [Remote][ETH] Fixed bug causing save error when space character present after file name when saving frame capture using SCPI command. (12024) ➢ [VIP] Fixed bug do not causing G0382A to become active when using VIP application when G0382A entered automatic standby status. (12173) ➢ [ETH] Fixed bug in v9.07 and v9.08 when SFP28 configuration file loaded, forcing IEEE1588v2 and SyncE to OFF and preventing change to ON. (12054)
9.08	2018-11-21	● Fixed bugs ➢ [SEEK] Fixed bug causing inability to change frequency variation setting from 0 ppm when measuring BER at xCVRQuickCheck_02 scenario. (11995)
9.07	2018-09-19	● Key Added Features ➢ [ETH] Added function to RFC2544 application allowing multiple setting of any frame size. (11829) ➢ [ETH] Added ON/OFF function for [Remote Fault] display at negotiation status of BERT/Mon/Gen application. (11861) ➢ [MxH] Added function to CPRI/OBSAI BERT application for generating/analyzing OBSAI frame. (11873) ➢ [Framework] Added function to show who are using the port on the resource monitor screen of MT1000A/MT1100A. (11886) ➢ [Framework] Added Finnish to GUI languages. (10993) ● Fixed bugs ➢ [Framework] Fixed bug preventing backup of application settings when MT1000A/MT1100A WLAN network connection keeps fail for long time. (11313) ➢ [ETH] Fixed bug in the IPv4 checksum header when sending multiple streams including VLAN/IPv4 or MPLS/IPv4 using Mon/Gen application. (11855)

		➤ [ETH] fixed bug displaying a Frame capture buffer size of 513 kB and larger which isn't possible using v9.05/v9.06 25GbE interface. (11950) ➤ [MxH] Changed name of "CPRI/OBSAI P.Thru" application to "CPRI P.Thru". (11976) ➤ [Remote][OTDR] Fixed bug causing main unit to restart when sending :OTDR:TRAC:LOAD:TEXT? command to capture waveform data. (11951)
9.06	2018-07-19	● Key Added Features ➤ [ETH] Added function for synchronizing time of two MT1000A units using 1PPS and 10MHz for Latency when MU100011A installed. (11791) ➤ [ETH] Improved PTP measurement results Accuracy and Latency results Accuracy and Resolution. (10877, 11790) ➤ [ETH] Added support for RFC6349 over IPv6. (10879) ➤ [ETH] Added second (sec) units display to vertical axis in the Latency/Jitter sections of the BERT and RFC2544 applications. (10789, 10824) ➤ [Framework] Increased maximum number of alphanumeric characters from 32 to 64 for PSK (WPA and WPA2) WLAN connection authentication. (11526) ➤ [FC] Added Block Error detection and insertion functions for 10GFC and 16GFC in the BERT application. (11516) ● Fixed bugs ➤ [ETH] Fixed bug in BERT and Mon/Gen applications when reading CFG file causing TCP protocol "Listen mode" setting to always load as "Off". (11214) ➤ [ETH] Fixed bug in BERT application from v9.00 when using 100G interface and inserting FEC symbol error causing application to crash when selecting either "Burst/sec" or "Burst/10 sec" as Insertion setting. (11344) ➤ [ETH] Fixed bug in Mon/Gen application preventing the TCP protocol from establishing TCP sessions on streams 9 to 16. (11221) ➤ [ETH] Fixed bug in Sync application preventing display of Port2 TE1 and Terr graph results even when loading saved measurement-results file. (11655) ➤ [Framework] Fixed bug in File Browser from v9.02 preventing

			the file saved time from being displayed. (11042)
			➢ [Framework] Fixed bug when editing a WLAN network that has already saved the PS Key value and is described as "[key is configured]"", if you save this value the PSK value is overwritten. (11267)
			➢ [OTN] Fixed bug in BERT application causing an error after selecting; RTD measurement mode, quitting application, restarting application, and changing measurement mode to BERT. (11495)
			➢ [OTDR] Fixed bug in Multi-Pulse Measurement preventing correct calculation of dB/km and Cum.Loss (dB) values. (11836)
			➢ [Eth] Fixed bug sometimes causing lower measured throughput result than actual rate using RFC6349 Application. (10883)
9.05	2018-05-08	● Key Added Features	
		➢ [ETH] Added 25 GbE interface to SyncTest application. (10880)	
		➢ [OTN] Added OTU2e-FC1200 mapping for MU100011A module. (10803)	
		➢ [MxH] Added eCPRI/RoE BERT application. (10878)	
		➢ [Framework] Added Korean language to Transport functions. (10837)	
		● Fixed bugs	
		➢ [ETH] Resolved issue returning an incorrect ARP Reply with below IP and MAC configuration for MU100011A with v9.00 or later software. (11069) SrcMAC 00-00-00-00-00-00 SrcIP 0.0.0.0	
		➢ [ETH] Resolved issue displaying incorrect latency measurement when using 2 ports in RFC 2544, MonGen, BERT applications in v9.02/9.03/9.04 if not changing interface settings immediately after application start-up. (10963)	
		➢ [ETH] Resolved issue causing reversed positive / negative 1 PPS TE measurement results at SyncTest application v5.00 and later. (10907)	
		➢ [ETH] Resolved issue in PacketTE measurement graph not displayed when PTP StepMode setting is different between port 1 and port 2 in SyncTest application after v5.00. (10906)	
		➢ [ETH] Resolved issue causing the Frame Count threshold to	

			Fail incorrectly within the Ethernet BER application from v7.02. (9487)
			➢ [ETH][OTN] Resolved issue causing incorrect control of QSFP28 optical modules with Power Class 5, 6, and 7 from v9.00. (10903)
			➢ [ETH][OTN] Fixed bug when QSFP+/QSFP28 modules selected causing incorrect display of all Tx powers in dBm units instead of mA units; now either mA or dBm units displayed according to optical module specifications. (10994)
			➢ [MxH] Resolved issue causing GUI display to not follow the instrument change to CPRI when OBSAI setting has Delay or APS measurement is enabled. (11080)
			➢ [SDHPDH] Resolved issue causing the unit to restart when creating a report from an E1 measurement in the SDH/SONET application from v3.0. (10962)
			➢ [Remote] Resolved issue preventing return of the correct status information when using CFP, CFP2, CFP4, or QSFP28 optical modules, when querying module status using SCPI commands. (10893)
9.04	2018-04-04	●	Fixed bugs
			➢ [Framework] For MU100011A serial numbers 6261738768 to 6261801145, added function for automatically correcting default MAC address of measurement port from "00-00-00-xx-xx-xx" set a result of bug to "00-00-91-xx-xx-xx". Upgrade customers using instruments affected by this problem as soon as possible to this new version. (10966)
			➢ [Framework] Fixed bug when displaying history log (list of previous input characters) at character input dialog causing history log to overlay numeric input buttons and prevent ability to press buttons. (11087)
			➢ [ETH] Fixed bug causing sending of ARP Request using destination IP address instead of Gateway address when executing ARP with Gateway set to ON with Ethernet application v9.03 and later. (11209)
9.03	2018-02-22	●	Improvement
		●	[Standard OTDR][FTTA][Construction] Improved the performance of the connection check function when using a short patch code (3m or less). (10980)

9.02	2017-12-06	• Fixed bugs
		➢ [ETH] Fixed a bug of RFC6349 causing sometimes worse throughput than actual DUT's performance. This bug only happens MU100010A and MU110010A in v9.01. (10888)
9.01	2017-11-30	• Key Added Features
		➢ [ETH] Added function for selecting MDI/MDI-X/Auto at 10M/100M/1000M Ethernet electrical interface. (10810)
		➢ [ETH] Added In-band Remote Function including Discovery application to MT1100A. (10811)
		➢ [NOFRAME] Added 4LaneBER measurement function to MU100011A. (10809)
		➢ [FTTA] Added function for loading CFG file to FTTA application. (10762)
		➢ [Construction] Added function to Construction application to reflect cursor position set at first wavelength at waveforms for other wavelengths when measuring several wavelengths. (10552)
		➢ [Framework] Added function for avoiding problem of delayed main unit start-up resulting from saving of multiple files in internal storage of measuring instrument. (10790)
		➢ [Remote][VIP] Added function for automatically appending .vipi extension even when specifying output file name without extension description when using [Save with File Name] at MMEM:STOR remote command. (10682)
		• Fixed bugs
		➢ [ETH] Fixed bug causing incomplete display of measured result decimal point values when measuring Latency of multiple ports simultaneously at either BERT or MonGen application. (10789)
		➢ [ETH] Fixed bug causing settings change according to dependence of Gateway On/Off setting on ARP On/Off setting. (10791)
		➢ [ETH] Fixed bug causing inability to select IPv6 Frame setting when selecting VLAN ID 2 at Ping application. (10737)
		➢ [ETH][OTN][SDH][FC][CPRI] Fixed bug causing output of space separator at every three numerals when numeric data such as bit count, etc., at report creation and output in .csv format. (10728)
		➢ [NOFRAME] Fixed bug sometimes causing error generation at

		20LaneBER measurement using QSFP28 module with MU100011A module. (10797) ➢ [OTN] Fixed bug causing incorrect 0 dBm display for tunable wavelength SFP receive power. (10799) ➢ [VIP] Fixed bug causing display of [Analysis Failure] dialog instead of [Failed Test] dialog when saving failed evaluation result data. (10773) ➢ [Standard OTDR][Construction] Fixed bug causing Sequence Number to become 0 when loading SOR file captured by Anritsu OTDR (MT908x, MT9090, etc.). (10449) ➢ [Standard OTDR][FTTA] Fixed bug causing test results to not be reflected when displaying Test Status screen at OTDR and FTTA applications. (10320) ➢ [Standard OTDR][FTTA] Fixed bug sometimes causing blank Setup screen List box when reading SOR captured by Anritsu OTDR (MT908x, MT9090, etc.) using "Load with setup". (10755) ➢ [OLTS] Fixed bug causing non-display of OLTS progress bar when Test Status screen displayed at OLTS application. (10767) ➢ [Remote][Standard OTDR] Fixed bug causing non-display of VFL function key when starting client with INST:STAR:GUI after starting OTDR application with SCPI. (10162) ➢ [Remote][Standard OTDR] Fixed bug preventing correct capture of dB/Km (fiber loss) when obtaining measurement results using OTDR:TRACe:LOAD:TEXT? with measurement conditions set to Automatic. (9409)
9.00	2017-09-19	● Key Added Features ➢ [New HW] Added CPRI RF Module MU100040B to measurement module product line. (10764) ➢ [ETH] Added FEC On/Off function to 25G Ethernet settings. (10238) ➢ [ETH][OTN] Added CFP2-QSFP28 Adaptor J1756A (10765) ➢ [ETH][OTN][SDH][CPRI][FC] Added I2C analysis function for SFP/SFP+/SFP28 Module. (10741) ● Fixed bugs ➢ [OTN][SDH] Fixed bug at APS test preventing APS measurement for up to 2 seconds after measurement start.

		(8937)
		➢ [Remote] Fixed bug causing incorrect PASS evalation at Summary Results at ARP failure at Y.1564 and Ping applications under remote control.(9799)
8.02	2017-08-31	● Key Added Features ➢ [ETH][SDH] Added Line Rate Frequency deviation (Max., Min., Avg.) to the measurement items. (10715,10714) ➢ [SDH] Added MS-AIS/AIS-L alarms into the Insert Alarm function during Through Mode operation of the BERT application. (10657) ➢ [NOFRAME] Added No Frame application supporting the following functions to the MU100011A Module. (10443) - 25G BER for SFP28. - 10G x4　lane BER for 40G QSFP+. - 10G x20 lane BER for 100G CFP4/QSFP28. ➢ [SEEK] Added Loop function and character divider command for the MX100003A. (10691) ● Fixed bugs ➢ [ETH] Fixed bug preventing incorrect measurement of one-way delay measurement results while using GPS connected to the MU100090A and the　Y.1564 application with V8.00/V.801. (10733) ➢ [ETH] Fixed bug preventing normal LOS Alarm information on the Status screen when 25GbE is selected while using the MU100011A module. (10732) ➢ [ETH] Fixed bug preventing the selection of IPv6 within the Ping application. (10722) ➢ [ETH] Fixed bug preventing a FAIL test status when ARP failure occurs in the Ping application. (9798) ➢ [SDH][OTN] Fixed bug causing the display of incorrect Signal Power value on the Status screen at 40G/100G line rates. (10736) ➢ [OTN] Fixed bug allowing the selection of LOS as an APS measurement trigger condition when QSFP+/QSFP28 interface is selected within the APS application. (10677) ● [NOFRAME] Fixed bug preventing normal 20 Lane BER measurement on the CFP2 interface while using the No Frame application with the MU110013A module. (10676)

8.01	2017-06-29	● Key Added Features
		➢ [ETH] Added function for stopping stream sending when Pause Frame received at 100GbE/40GbE/25GbE. (9968)
		➢ [ETH][OTN][SDH][FC][CPRI] Added function to support the Tunable SFP/SFP+. (9473)
		➢ [ETH][OTN][SDH][FC][CPRI] When the threshold value is set, the color of the test result value is reflected in the PDF report. (10173)
		➢ [ETH] At SyncTest application, changed so that PacketTE and OWD graph magnified display performed within significant digit range. (10504)
		➢ [OTDR] [FTTA] In Fiber Visualizer mode, added function for displaying help to resolve issues when selecting Fail event icon.
		➢ [SEEK] Added following functions at scenario execution function. (10484) - Function for editing header information used at report output. - Function for outputting results after scenario execution directly to USB memory.
		➢ [VIP] Added exposure-compensation function to G0382. (10354)
		● Fixed bugs
		➢ [ETH] With 100GbE FEC enabled, fixed bug causing PCS Skew injection to be enabled when should not be enabled. (10451)
		➢ [ETH] At SyncTest application, fixed bug causing N/A display for PacketTE measurement results. (10447)
		➢ [ETH] At Y1564 application when executing End-to-End measurement, fixed bug causing main unit to restart when frame received from port other than master port set at slave port. (9622)
		➢ [ETH][OTN][SDH] At MU110013A, fixed bug causing main unit to restart when I2C analysis function executed during measurement. (10098)
		➢ [OTN] At QSFP28 interface, fixed bug preventing correct rate-select setting for device. (10313)
		➢ [RemoteGUI] At MX100001A, fixed bug causing large font display on screen. (9970)
		➢ [OTDR] [FTTA] [Construction] Fixed bug preventing input of comma (,) period (.), forward slash (/), yen symbol (?), and

			question mark (?) characters at header input screen. (10427)
			• [OTDR] [FTTA] Fixed bug causing initialization of calibration period at software update. (10512)
8.00	2017-05-23		• Key Added Features
			➤ [New HW] Added 100G Multirate Module MU100011A to measurement module product line.
			➤ [Framework] Increased battery charge upper temperature limit by 3°C. (9532)
			➤ [ETH] Added following functions to Sync Test Application (10154) :
			- Terr (min), Terr (max), max|Terr| measurement results
			- 1PPS Mode for measuring packet base TE by the external 1PPS
			- Function to reflect the UTC offset valve that the Grand Master announces in broadcast message, when the network master emulates PTP slave.
			➤ [CPRI] Separated CPRI and OBSAI GUIs for easier-to-understand operation (9519)
			➤ [OTDR] Added real-time Check function to Construction application (10244)
			➤ [SEEK] Changed response time-out default value after sending remote command to 30 s (10374)
			• Fixed bugs
			➤ [ETH] Fixed bug causing main unit to restart when attempting to display IEEE1588v2 Log when external logging enabled for IEEE1588v2 function.(10107)
			➤ [ETH] At stream setting, fixed bug preventing obtaining of source IPv4 address from DHCP server.(10226)
			➤ [ETH] Fixed bug sometimes causing unstable results when measuring cables shorter than 10 m with cable test application.(9477)
			➤ [FC] Fixed bug sometimes causing Frame loss when using reflector application.(10214)
			• [VIP] Added SC/APC chip to selection list at G0382A usage screen because not included in list.(10134)
7.05	2017-03-23		• Key Added Features
			➤ [Framework] Added Quick Matrix to File input screen.
			➤ [Framework] Added support for saving/loading file names with

period (.) in file name. (9557)

> [ETH] Added In-Band control function and Discovery application. (9526)

> [ETH] In RFC2544 application, upgraded to display a total of up to 500 steps for measurement results, previously only displayed up to 100 steps for each measurement. (8995)

> [ETH] Added support to RFC254 application Burst test, allowing configuration and displaying results in Burst seconds. (9385)

> [ETH] Added support for Category 6/6a to Cable Test application. (9474)

> [ETH] [OTN] [SDH] [FC] [CPRI] On the SFP module information display screen, change the wavelength display when mounting Bi - Direction SFP to "Tx wavelength (Nominal)". (9520)

> [FC] For FC, added performance test application(Perf. Test) to run RFC2544-like benchmark tests. (9525)

> [FC] For FC, added support for setting in Mbps units to Frame Tx function. (8386)

> [OTDR] Construction application, changed to output to only be in SOR format files. (9560)

> [Remote][ETH][OTN][SDH] Added transceiver control remote commands support. (9530)

> [SEEK] Added the following functions to MX100003A .(9752
    - VIP application.
    - Save file function by using a Variable.
    - Quick Matrix function when specifying file name.
    - Custom Application to Command Selection.
    - Remove command allowing deleting of delete any characters in a string.

> [VIP] Added support for G0382A auto-focus VIP.

> [VIP] Added following functions to VIP application.
    - Auto-measurement function (auto-focus, auto-capture).
    - Auto-recognition of probe connected to main frame.
    (supports G0382A, and G0306A/B; G0382A only supports auto-focus).

● Fixed bugs

> [Framework] Fixed bug causing MT1000A to freeze when repetitive insertion/removal of G0306A/G0306B. (9850)

> [ETH] Fixed bug in MonGen application causing restart when

			terminating application while Threshold Summary screen displayed. (9602)
			➢ [FC] Fixed bug in Reflector application causing Frame Loss at Frame size of 8n + 4 (n = 8..267). (9231)
			➢ [OTN][SDH] Fixed bug in APS application causing switching time to result in larger value, when set to a bit rate of 40 Gbps or more and the trigger setting is pattern error. (9753)
			➢ [OTDR] Fixed bug preventing editing of user-registered macro at Smart File Name. (9559)
			➢ [OTDR] Changed summary from Open to FAIL when far end not detected. (9691)
			➢ [Remote][ETH] Fixed bug causing main frame to restart when performing Through and Frameloss measurement of RFC2544 application via MX100001A. (9688)
			➢ [Remote][ETH] Fixed a bug causing the test application to stop when using the stream copy function of Y1564, MonGen and ChannelStat application via MX100001A, on the main unit it caused a restart. (9797)
			● [Remote][ETH] Fixed bug allowing an unusable rate to be set via SCPI control. (9601)
7.04	2017-02-20	● Fixed bugs	
			➢ [Framework] Fixed bug sometimes causing instrument reboot when performing analysis using G0306A/B on VIP application. (9627)
7.03	2017-01-05	● Key Added Features	
			➢ [ETH] Added support for two stacked VLAN to the Ping application. (9472)
			➢ [Construction] Added setting for File Number Digit length
			➢ [FTTA] Added Manual measurement ability
			➢ [OLTS] Added Wave Code mode for auto measurement of multiple wavelengths.
			➢ [OTDR][OLTS][FTTA][Cnstruction] Added support for German language in Optical fiber test applications.
			➢ [NoFrame] Added ability to save measurement results as Report file to NoFrame application
			➢ [OTDR] Added support for PDF report generating for Bi-Directional analysis result.
			➢ [OTDR] Added settings on Preference for Realtime

			measurement.
			● Fixed bugs
			➢ [ETH] Fixed bug incorrectly enabling/disabling FEC switching during 100G Ethernet measurement with MU110013A (9489)
			➢ [ETH] Fixed bug sometimes preventing correct sending of received packet during instrument response to ARP/PING with Ethernet Reflector (6965)
			➢ [ETH] Fixed bug, causing measurement screen to freeze sometimes during PTP communications when PTP log function is enabled (9424)
			➢ [ETH][OTN] Fixed bug causing lengthened time until event log results displayed on screen (9370)
			➢ [Remote][OTN][SDH] Fixed bug sometimes causing option error when setting RTD application Measurement Period using SCPI command (9469)
			➢ [OTDR] Fixed bug when loading zip format waveform file at Overlay condition causing screen top to display enabled (ON) even when Bi-Directional setting changed automatically from enabled to disabled. (9255)
			➢ [Remote] Fixed bug preventing SCPI commands of MDIO control to work in applications except for NoFrame.(9493)
			➢ [Remote] Fixed bug sometimes preventing correct screen enable/disable control when using SCPI remote control.(9481)
7.02	2016-10-28		● Key Added Features
			➢ [ETH] Added Rate display for FEC counter (9401)
			➢ [ETH] Added I2C analysis function for QSFP28 module (9400)
			➢ [ETH] Changed initial graph display of 1PPS time error test from Deviation to Phase Error (9313)
			➢ [GPS][MU100090A] Added function for displaying elapsed time after lock to GPS (9068)
			➢ [NoFrame] Added function for setting different PRBS pattern at each lane for 4Lane BER measurement function (9402)
			➢ [OTN] Added OTN test using QSFP28 module (9255)
			➢ [Remote][SEEK] Added command copy and paste functions for MX100003A (9336)
			➢ [Remote][SEEK] Add support for OTDR application at scenario creation using MX100003A (9454)
			➢ [SDH] Added AnyError to APS application trigger (9304)

		➢ [SDH] Added M0, M1, and Z2 byte setting and capture display for OH Preset, and OH Capture function (9305) ● Fixed bugs ➢ [ETH] Corrected bug in Frame Capture function ≤10G causing a packet whose timestamp data to be zero (9249) ➢ [ETH] Corrected bug preventing reverse colors at OWD threshold value evaluation in SyncTest application summary screen (9323) ➢ [ETH][OTN] Fixed bug at 40G/100G operation causing initialization of inserted lane when changing Skew insertion lane type (8839) ➢ [ETH][OTN] Fixed bug in MU110012A preventing establishment of Link when restarting application (8961) ➢ [OTN] Fixed bug causing simultaneous SM-BIP8 insertion when inserting AIS/OCI/LCK when operating at 40G/100G (9404) ➢ [RemoteGUI] Fixed bug sometimes causing display of warning message when quitting MX100001A (7222) ● [Remote][ETH] Fixed bug sometimes preventing output of correct measurement results when measuring Latency between Port1 and Port2 using one measuring instrument under SCPI control (9389)
7.01	2016-10-11	● Fixed bugs ➢ [OTDR] Fixed an issue that prevented some MU100020A and MU100021A OTDR modules from changing wavelength when used in a low-temperature environment. ➢ [OTDR] Fixed a bug that caused an error massage when loading a configuration file(.cfg) created by MU100021A to MU100020A or MU100022A.(9298) ➢ [OTDR] Fixed a bug that could prevent remote control of the OTDR modules when "Fail" was returned by connection check.(9287) ➢ [OTDR] Fixed a bug that received remote control commands while running the Construction application.(9392) ➢ [OTDR] Fixed a bug that caused an error when receiving the OTDR:TRACe:TEXT? Command with an argument(s).(9393)
7.00	2016-09-14	● Key Added Features ➢ [New HW] Added New OTDR Module (MU100022A: 3wl. 1310/1550/1625nm model). ➢ [ETH] Separated [Profile] and [Measurement Settings] tabs

		included in [Stream] tab at BERT test into two separate tabs labelled [Stream/Profile] and [Stream/Measurement Settings] (9165) ➢ [OTDR] Added Construction function. ➢ [OTDR] Added Bi directional mode. ➢ [New HW] Added CPRI RF Module. ● Fixed bugs ➢ [Framework] Supports simultaneous installation of three module types. ➢ [Framework] Fixed bug in GPS utility preventing monitoring of GPS signal receive status.(9172) ➢ [Framework] Fixed bug in File Explorer causing main frame to restart when erasing file.(9099) ➢ [Framework] Fixed bug preventing display by laser emitting indicator during measurement when Standard OTDR application started after VIP started.(9144) ➢ [ETH] Fixed bug causing incorrect Frame Loss rate calculation when Total Repeat Steps set to ON at RFC2544 test.(6445) ➢ [ETH] Fixed bug in Sync Test application preventing input of negative value as one-way Delay Threshold value.(9235) ➢ [FC] Fixed bug causing incorrect display of Frame Loss Seconds and Pattern Loss Seconds even when Frame Loss Seconds set to Ignore at BERT application.(9173) ➢ [OTDR] Fixed bug preventing execution of Standard OTDR Mission Control Power Meter Offset Zero function. (9217) ➢ [OTDR] Fixed bug causing main frame to restart when opening OTDR results file with Result File Browser when no OTDR module installed in main frame. (8836) ➢ [OTDR] Fixed bug in OTDR application preventing display of Fiber Visualizer screen waveform window when far end not found. (8806) ➢ [OTDR] Fixed bug causing VFL to light for several seconds when application quit and then restarted while VFL in ON status. (8968)
6.02	2016-08-15	● Key Added Features ➢ [ETH] Changed specification for PRBS Sync Alarm and PRBS Pattern Error detection immediately after measurement start at BER measurement using Ethernet BER application Cross

		PRBS pattern (9130) ➤ [OTN][SDH] Added measurement ON/OFF setting for following items: (9062) OTN: PLM SDH/SONE: HP=PLM, LP-PLM, Threshold Alarm ➤ [SDH] Added Generic-AIS detection function (8555) ● Fixed bugs ● [OTDR] Fixed bug in v6.00 causing display of "Include Performance Verification data" checkmark at report generation screen for results not actually displayed (9141)
6.01	2016-07-14	● Fixed bugs ➤ [ETH][OTN] Fixed bug preventing correct CFP Module Transceiver setting and causing error when using V6.00 software with MU110011A CFP Interface (9116) ➤ [FC] Fixed bug causing periodic Frame Loss when sending FC1200 Frame signal (7877) ➤ [OTN] Fixed bug in V5.01 and later software causing doubling of output clock frequency when selecting any one of OTU1f/2f/2e bit rates when using Tx Reference Clock Output with MU110010A (9084) ➤ [FTTA] Fixed bug causing disabled software key when moving to TRACE tab at TTA application after starting measurement (9138)
6.00	2016-06-23	● Key Added Features ➤ [New HW] Added MU110013A module and dedicated option ➤ [Framework] Added autosave function for MT1100A CFP/CPF2 Interface transceiver settings (8568) ➤ [ETH] Added following settings to Traffic Tx function ・Burst Tx Setting ・Frame Length Increment Tx ・Tx Rate Inter-Frame Gap Specification ・Tx Rate Millisecond Unit Lamp Tx Setting ・Tx Rate over 100% stream Setting ➤ [ETH] Added Cross PRBS pattern setting to Payload patterns for BERT Application ➤ [ETH] Added function for automatically allocating IPv6 Tx source address using RS/RA function ➤ [OTDR] Added function for SCPI Remote command control to

		OTDR application
		
		● Fixed bugs
		
		  ➤ [Framework] Fixed bug causing restart of main frame when inputting "e" character while file load/save dialog displayed (8873)
		
		  ➤ [Framework] Fixed bug causing license error display when loading settings file saved by MT1000A+MU100010A configuration at MT1000A+MU1000xxA+MU100010A configuration and corrected notification to comment on configuration difference (8633)
		
		  ➤ [ETH] Fixed bug causing non-stop sending at Pause Frame receiving even when Auto Negotiation set to off for 10/100/1000M electrical interface and "Respond to Pause Frame" set (8643)
		
		  ➤ [ETH] Fixed bug causing output of all selection items when outputting test results to CSV or XML file using Channel Statistics application (8523)
		
		  ➤ [ETH] Fixed bug causing inclusion of MPLS label value in Address Filter Stream ID conditions using Mon/Gen application (8543)
		
		  ➤ [ETH] Fixed bug causing Skew value to be displayed as ">0.000" and incorrect measurement when selecting any Interval result at "Relative Skew" results display of Result screen (8838)
		
		  ➤ [ETH] Fixed bug preventing correct display of result table service details at measurement results for Y1564 (8527)
		
		  ➤ [FC] Fixed bug causing monitoring of Frame Loss seconds even when "ignore Frame Loss seconds for BERT measurement results" set at BERT application (8730)
		
		  ➤ [PTP] Fixed bug causing locking for only up to 4 hours in locking state using GPS utility. (8548)
		
		● [OTDR] Fixed bug sometimes causing error in Reflectance analysis results when Auto Mode Test set to Advanced. (8933)

5.04
5.03
	2016-05-23	● Key Added Features
		
		  ➤ [Framework] Added the One-Button Test.
		
		● Fixed bugs
		
		  ➤ [Framework] Fixed bug causing the unavailable access to USB stick after the specific procedure on V5.01.(8826)

		➤ [Framework] Fixed bug causing main frame to restart when USB memory stick removed while File Manager focused on sub-folder in inserted USB memory.(8733) ● [ETH] Fixed bug causing the application crashes when outputting report of Ethernet RFC 2544 "End to end network test" results (8614)
5.01	2016-03-25	● Key Added Features ➤ [Framework] Added to fiberscope with 60 degrees tip (7961) ➤ [OTDR] Expanded maximum settable pulse width for each distance range (8044) ➤ [OTDR] Changed dummy fiber (launch spool) display color to clearly show the start of the fiber under test. (8045) ➤ [ETH] Added auto MAC address resolution function when a generating IPv6 Stream (NDP NS/NA) (7712) ➤ [ETH] Added possibility to ignore Frame loss seconds count in Ethernet BERT application (8057) ➤ [ETH] In SyncTest application, added calibration parameter for GPS antenna cable length. (8026) ➤ [ETH] In SyncTest application, added high-resolution frequency counter function (7945) ➤ [OTN] Added LOS insertion function (7366) ➤ [OTN] Added following APS trigger items (7775) OTU3x/4: FAS-OTL, LOF-OTL, OOF-OTL, LOR-OTL, OOR-OTL, OTU1x/2x/3x/4: OTU-AIS, OOM ➤ [SDH] Added possibility to disable the display of Pointer Movement measurements (7905) ● Fixed bugs ➤ [Framework] Fixed bug when disabling WLAN sometimes causing instrument to temporarily freeze (8272) ➤ [Framework] Fixed bug causing the NWM Flex with battery option MU11001A from fully shutting down.(8391) ➤ [Framework] Fixed the problem that MU100090A power On/Off status isn't stored properly occasionally. (8273) ➤ [OTDR] Fixed bug that "Restore Default" operation does not work after creating OTDR report.(8448) ➤ [ETH] Fixed bug for 10GbE sometimes causing transmitter to insert wrong IFG (7673) ➤ [ETH] Fixed bug in IEEE1588 function sometimes causing UDP

			checksum errors in transmitted PTP frames (7835)
			➢ [OTN] Fixed problem when starting applications with +OTN option sometimes causing invalid option warning message (7683)
			➢ [OTN][ETH] Fixed bug in Ethernet transmitter causing BER alarm when Ethernet mapped over OTN using GFP-F. (7519)(8075)
		●	[OTN][ETH] Fixed bug causing BER alarms for MPLS mapped over OTN using 46 byte frame size. (7844)
5.00	2016-02-19	●	Key Added Features
			➢ Added MU100090A Module
			➢ [ETH] Added IEEE1588 Time error measurement function. (7892)
			➢ [ETH] Added ITU-T8275.1 profile for IEEE1588 functions (7992)
			➢ [CPRI] Added APS measurement function to BERT application (7099)
			➢ [Framework] Expanded MDIO Analysis functions for CFP/CFP2/CFP4. (7976)
			➢ [OTN] Added mappings for packet based client signal. (7975,7977,7978)
			➢ [OTN][SDH] Added BERT/APS/RTD switch mode to BERT application (7980)
			➢ [OTN][SDH] Added SDH Transparent mapping for SDH over OTN start (7981)
			➢ [Remote] Added support for VNC control via HTTP with JAVA 1.8 (6353)
			➢ [Remote] Added support for simultaneous SCPI and Remote GUI control (7681)
			➢ [Remote][ETH] Added remote command for specifying save destination for IEEE1588/SyncE Frame capture data (8198) - ETH:PORT1:PTP:FCAP:DIR
			➢ [Remote][ETH] Added following remote commands for performing IEEE1588 ARP analysis and querying analysis results (8157) - ETHernet:PORT<Pt>:PTP:MAC:ARP - ETHernet:PORT<Pt>:PTP:MAC:ARP:RESult?
		●	Fixed bugs

		➢ [OTDR] Upgraded Event (fault point) detection (search) accuracy (8034) ➢ [Framework] Fixed problem causing Chinese and Japanese UTF-8 encoded CSV reports to display garbage characters when opened in MS-Excel. (7750) Japanese: UTF-8 to Shift JIS Chinese: UTF-8 to GB2312 ➢ [Framework] Fixed bug preventing re-acquisition of IP address when switching WLAN access point (7360) ➢ [Framework] Simplified Password dialog and fixed problem when initially enabling system password protection requiring user to know old (default) password. (7551) ➢ [Framework] Fixed bug causing sudden shutdown when starting with remaining battery charge of ≤6% (7662) ➢ [ETH] Fixed bug only permitting insertion of less than directed block errors when inserting errors while testing at Frame rates of >2000 bytes when testing at interface of10/40/100 Gbps (7020) ➢ [ETH] Fixed bug causing Frame loss when receiving IPv4 + UDP header Ethernet Frame when Frame length not multiple of 8 bytes at 40/100GbE (7836) ➢ [ETH] Fixed bug ristricting the minimum payload size of 38-byte when selecting custom header at BERT application stream setting (7725) ➢ [ETH] Fixed bug causing [Timing: Bit rate Difference] to remain unchanged at 0 even when clearing History at Ethernet test (6884) ➢ [ETH] Fixed bug causing IEEE15888 status Wall Clock Current time affects from local MT1000A time setting (7850) ➢ [ETH] Fixed bug causing sending of incorrect time data at IEEE1588 communications (7715) ➢ [ETH] Fixed bug causing display of NMX_WARNING message when starting Ethernet application when 100GbE option installed with MT1100A+MU110011A+MU110012A configuration (7904) ➢ [ETH] Fixed bug causing main frame to reboot when switching BERT application custom header settings when loading settings file saved with V2.xx when using V3.03 software (7894)

		➢ [ETH] Fixed bug causing display of NMX_WARNING message when executing ARP on IEEE1588 function (8112) ➢ [ETH] Fixed bug causing IP header protocol type field setting to become UDP(0x11) or TCP(0x06) automatically after previous setting when None set after setting Frame Format Layer 4 to either TCP or UDP (7777) ➢ [OTN] Fixed bug causing display of screen for making additions when low-order ODU errors and alarms cannot be inserted at OTN through-mode test (6950),(6643) ➢ [Remote] Fixed bug preventing release of port resources even when executing INST:TERM command (7369) ➢ [Remote] Fixed bug preventing normal termination processing of application when using multiple user control by SCPI command (7816,7847,7029,7968) ➢ [Remote] Fixed bugs causing MX100001A to crash at following operations. (7933) (1) At remote connection from MX100001A when measuring instrument Remote PC connection set to OFF (2) When changing measuring instrument Remote PC connection setting from OFF to ON (3) At remote connection from MX100001A ➢ [Remote][ETH] Removed explanation of following unsupported commands: (7537) - ETHernet:CSTat:SETup:PORT<Pt>:PSELect - ETHernet:CSTat:SETup:PORT<Pt>:PWIDth? ➢ [Remote][OTN] Fixed bug preventing correct reading of PSI[0] value using OH capture remote query command (7788) ➢ [SDH/SONET] Fixed bug preventing reflection of measured error in test results during measurement with APS application (6982) ➢ [Wireshark] Fixed bug causing Wireshark restart when reading file format not supported by Wireshark (7595)
4.00	2015-12-10	● Key Added Features ➢ [NewHW] Added New OTDR Module for MT1000A MU100020A OTDR Module 1310/1550 nm SMF MU100021A OTDR Module 1310/1550/850/1300 nm SMF/MMF ● Fixed bugs ➢ [Framework] Fixed problem causing Chinese and Japanese

			UTF-8 encoded CSV reports to display garbage characters when opened in MS-Excel.

UTF-8 encoded CSV reports to display garbage characters when opened in MS-Excel.

Japanese: UTF-8 to Shift JIS

Chinese: UTF-8 to GB2312

> [Framework] Simplified Password dialog and fixed problem when initially enabling system password protection requiring user to know old (default) password.

> [ETH] Fixed problem in RFC2544 application causing instrument to restart when transmitting IPv6 formatted Learning Frames. (7808)

> [ETH] Fixed problem preventing saving of PTP message logs at IEEE 1588v2 log. (7421)

> [ETH] Fixed problem running 10G with frame sizes above 2000 bytes, sometimes preventing insertion of sufficient block errors using error insertion function. (7020)

> [OTN] Fixed problem reading PSI[0] OH byte (Payload type) using SCPI command. (7788)

3.04	2015-11-06	● Fixed bugs

● Fixed bugs

> [OTN] Fixed bug preventing normal detection at continuous OLA alarm (7703)

> [OTN] Fixed problem preventing PM-BIP and PM-BEI errors being reported in Event Log. (7702)

> [OTN] [ETH] Fixed problem causing Warning message while re-loading settings file generated in an Ethernet over OTN application. (7727)

> [ETH] Fixed problem causing instrument to restart when using Layer 2 custom header and exceeding the setup frame length by enabling either Jitter or Latency measurement. (7674)

● [ETH] Fixed problem with Latency result sometimes being incorrect when measuring between two ports on same module. (7691)

3.03	2015-10-02	● Key Added Features

● Key Added Features

> [Remote] Added Remote Commands and GPIB-USB converter.

> [ETH] Added Function for Custom Editing of Ethernet Header.

> [ETH] Added Function for PCS at 10 GbE.

> [ETH] Added Function for continues Stream address Creation.

> [OTN] Added Null to Client Signals for OTN Mappings.

> [ETH] Enhanced RFC2544 GUI for Easier Access and Better Overview.

		➢ [ETH] Enhanced RFC2544/Y.1564 Reporting Providing More Information. ➢ [ETH] Renamed 'CFI' bit in VLAG tag to 'DEI' according to 2015 version of IEEE802.1Q. ➢ [Framework] Improved Report Layout: Better Look and Distinct Header Styles. ➢ [Framework] Added Function for Filtering Results Display at Report Output. ● Fixed Bugs ➢ [Framework] Fixed problem with removing USB storage while viewing PDF or XML file stored on device (7359) ➢ [Framework] Fixed problem with garbage characters sometimes occurring in Japanese PDF reports created using MX100001A Control Software and read under Windows 7 64-bit OS environment (7028) ➢ [ETH] Fixed problem with IEEE 1588 Log sometimes repeating old events. (7390) ➢ [ETH] Fixed problem with PTP clock system when running high rates of Sync/Announce/Delay Request packets for IEEE 1588 protocol data (7389) ➢ [ETH] Fixed problem with 40/100G Reflector application causing statistics engine to drop frames when swapping of IP/MAC disabled (7376) ➢ [ETH] Fixed problem initiating OAM 802.ah Remote Loopback on Accedian NIDs (7365) ➢ [ETH] Fixed problem with Disruption errors sometimes reported in Event Log while running RFC 2544 Latency Test (7361) ➢ [ETH] Fixed problem with Pass-Through application running GbE electrical causing dropped frames when changing clock advertisement (master/slave) configuration (7284) ➢ [ETH] Fixed problem with storing RFC 2544 result files when test includes more than 148 steps (7136) ➢ [ETH] Fixed problem with the Unicast/Multicast Tx frame counters on "Ethernet - Transmit" statistics page not updating when U/L bit of destination MAC address set (7108)(7103) ➢ [ETH] When using GPS as Master Clock reference for IEEE1588v2, fixed problem with current Wall Clock differing from displayed UTC time (6996)

> ➤ [ETH] For RFC 2544 and SAT (Y.1564) applications running end-to-end network test, fixed problem with "Abort" window remaining on slave after test finishes (6957)

> ➤ [ETH] For SAT Y.1564 and Mon/Gen. applications, fixed problem with automatically stored settings files potentially causing applications to fail when re-launched (6956)(7529)

> ➤ [ETH] Solved problem with disabling SyncE sometimes leaving pending SSF Alarm History and Event Log entry (6912)

> ➤ [ETH] Fixed problem with local port losing link when inserting "No Link" alarm, although incoming signal OK (6877)

> ➤ [ETH] Corrected table headings in RFC 2544 Latency report when "Mesaure jitter by means of Latency test" enabled (7538)

> ➤ [OTN] Fixed problem with not showing correct values for GMP Justification Max/Min Cm. (7482)

> ➤ [OTN] Fixed problem when using multistage mapping on OTN where "false" LOFLOM alarms sometimes reported on lower-order ODUs (7006)

> ➤ [PDH] Fixed problem on E1 interface when Distant and No CAS MFAS alarms sometimes also insert pattern errors (7019)

> ➤ [SDH/SONET] Fixed problem with duplication of APS detailed results when switching between ports (7382)

> ➤ [Remote][NoFrame] Fixed problem setting Frequency Offset via SCPI: NFRame:PORT<Pt>:STIMuli:TX:FOFFset <offset> (7465)

> ➤ [Remote] Fixed problem with instrument potentially freezing/restarting when SCPI session closed immediately after starting or terminating application server (7012) (7347)

> ➤ [Remote] Fixed problem copying multiple files simultaneously to PC from MT1000A/MT1100A using MX100001A Remote Control Software (6986)

> ➤ [Remote][CPRI] Fixed problem using
>   ✧ MEASurement:SETup:EVALuation:RX:INTerface?
> command in CPRI BERT application (6992)"

> ➤ [Remote][CPRI] When running CPRI Pass-Through application, fixed problem preventing use of SCPI commands for setting evaluation of measurement results (7042)
>   ✧ MEASurement:SETup:EVALuation:RX<Pt>[:ENABle]
>   ✧ MEASurement:SETup:EVALuation:RX<Pt>:INTerface

			✧ MEASurement:SETup:EVALuation:CPRI:PORT\<Pt>:ITEM
			
			✧ MEASurement:SETup:EVALuation:CPRI:PORT\<Pt>:ITEM:ALARm
			
			✧ MEASurement:SETup:EVALuation:CPRI:PORT\<Pt>:ITEM:ERRor
			
			✧ MEASurement:SETup:EVALuation:CPRI:PORT\<Pt>:TYPE
			
			✧ MEASurement:SETup:EVALuation:CPRI:PORT\<Pt>:CNT:FAIL
			
			✧ MEASurement:SETup:EVALuation:CPRI:PORT\<Pt>:RATio:PASS
			
			✧ MEASurement:SETup:EVALuation:CPRI:PORT\<Pt>:RATio:FAIL
			
			✧ MEASurement:SETup:EVALuation:TMBPs:RX\<Pt>:ITEM"
			
			➤ [Remote][ETH] Fixed problem with SCPI command for setting stimuli alarm state (ETHernet:POER\<Pt>:STIMuli:ALARm) unnecessarily resetting electrical PHY, causing link loss for several seconds (6993)
			
			➤ [Remote][OTN] When configured via SCPI remote control, fixed problem with Ethernet client not obtaining link when mapped to OTU3/4 using GFP-T (6955)
			
			➤ [OTN] Fixed problem using SCPI MAX and DEF parameter values for setting Error Bits for GMP JC1/JC2 Error Items (6775)
			
			   ✧ OTN:STIM:TX1:GMP:AEIN:EBIT MAX
			
			   ✧ OTN:STIM:TX1:GMP:AEIN:EBIT DEF

3.02	2015-07-29	● Fixed Bugs ➤ [Framework] Fixed Problem of Incorrectly Loading Configuration File made Using MT1000A/MT1100A with Different Options.(7110,7053,7038,7000) ➤ [Framework] Using Remote GUI Software (MX100001A), Fixed Problem Causing Inability to Start Editor and Viewer.(6990) ➤ [ETH] Removed "Communication Port" for RFC 6349 End-to-End Test.(7172) ➤ [ETH] Fixed Problem of Failing to Reflect "Expected preamble length" Value at Loading Configuration File for Ethernet Pass Through Application.(7156) ➤ [ETH] Using Ethernet BERT Application, Fixed Problem of Incorrect File Save/Read when Stream Setting for Port 2 and Later Ports set to Unframed.(7041) ➤ [ETH] Using Ethernet application, fixed problem causing inability to reboot main frame when sending following query commands and quitting application.(7022) ETHernet:PORT\<Pt>:OAM:DISCovery:CATalog?	

		➢ [ETH] Fixed Problem of Disappearing Latency Results when Saving and Loading Latency/Burst Result using RFC 2544 Application.(7010) ➢ [ETH] Using Ethernet BERT Application, Fixed Problem Causing Frame Loss when Reading V2.04 Settings File.(7004) ➢ [ETH] After executing Ethernet Ping function, fixed problem causing reboot when executing other Ethernet application.(6999) ➢ [ETH] Using Ethernet Application, Fixed Problem Causing Screen Freeze when Sending/Receiving OAM 802.1ag/VLAN CCM.(6980) ➢ [ETH] Added following query parameters to SCPI commands.(6975) ETHernet:PORT\<Pt\>:IFETch? TDL: Stream 1 Throughput Data Layer (bps). Response: \<Min\>,\<Max\>,\<Avg\> TNL: Stream 1 Throughput Network Layer (bps). Response: \<Min\>,\<Max\>,\<Avg\> TLL: Stream 1 Throughput Link Layer (bps). Response: \<Min\>,\<Max\>,\<Avg\> TPPL: Stream 1 Throughput Physical Layer without Preamble (bps). Response: \<Min\>,\<Max\>,\<Avg\> TPL: Stream 1 Throughput Physical Layer (bps). Response: \<Min\>,\<Max\>,\<Avg\> TUL: Stream 1 Throughput Utilization Layer (bps). Response: \<Min\>,\<Max\>,\<Avg\> ➢ [ETH] Using Ethernet Application, at ARP Reply Sending, Fixed Rare Problem Causing Sending of Excess Stream Data in 1 Frame.(6970) ➢ [ETH] Using Ethernet Application, Fixed Problem Sometimes Blocked Correct traffic with "Include addresses in frame filter on receiver" Settings at Rx Operation.(6964) ➢ [OTN] Fixed Problem of Wrongly Configuring FC800 at Loading of FC400 Configuration File for FC BERT over OTN.(7169) ➢ [OTN] Fixed Boot Failure Problem of FC BERT over OTN Application.(7166) ➢ [OTN] Fixed problem causing no response when sending OTN:RX\<Pt\>:IFET ch? S0MSIM SCPI command.(7066)

> ➤ [OTN] Using OTN Application, Fixed Problem of Wrongly Displaying MSIM Results Without Masking even at Higher-Level Alarm.(7066)

> ➤ [OTN] Using OTN application, fixed problem of incorrectly reading Performance measurement results using SCPI command when reading V2.02 or earlier results file.(7066)

> ➤ [OTN] Fixed Problem Causing Higher-Level Summary LEDs to Light when cHEC and tHEC Errors Detected at GFP-F/T Mapping of OTN Application.(6972)

> ➤ [OTN] Fixed Problem of Failing to Count Justification when LOFLOM Detected using OTN Application.(6962)

> ➤ [SDHPDH] Changed mistakes in SCPI command parameter names.(7140)

T1:RX<Pt>:IFETch?	(NFRame) -> (OOF)
T1:APS:RX<Pt>:EVENt	NFR -> OOF
T1:STATus:RX<Pt>:ALARm?	Loss Of Frame -> OOF
TMBPs:APS:RX<Pt>:EVENt	NFR -> NFRame
- similar GUI value	"LOF"-> "No frame"

> ➤ [SDHPDH] Using SDH/PDH application, fixed problem of inability to reboot main frame when sending following query commands and quitting application.(7031)

E3:RX1:IFET? (PBBE)

> ➤ [SDHPDH] Added E1 Balanced connector pin assignments to manual.(6958)

> ➤ [SDHPDH] Fix problem causing reboot when loading settings file with set PDH rate at MU110011A module.(6915)

> ➤ problem preventing use of threshold parameters set by following SCPI commands at evaluation of actual measurement results.(7042)

MEASurement:SETup:EVALuation:RX$<$Pt$>$[:ENABle]

MEASurement:SETup:EVALuation:RX$<$Pt$>$:INTerface

MEASurement:SETup:EVALuation:CPRI:PORT$<$Pt$>$:ITEM

MEASurement:SETup:EVALuation:CPRI:PORT$<$Pt$>$:ITEM:ALARm

MEASurement:SETup:EVALuation:CPRI:PORT$<$Pt$>$:ITEM:ERRor

MEASurement:SETup:EVALuation:CPRI:PORT$<$Pt$>$:TYPE

MEASurement:SETup:EVALuation:CPRI:PORT$<$Pt$>$:CNT:FAIL

MEASurement:SETup:EVALuation:CPRI:PORT$<$Pt$>$:RATio:PASS

MEASurement:SETup:EVALuation:CPRI:PORT$<$Pt$>$:RATio:FAIL

			MEASurement:SETup:EVALuation:TMBPs:RX$<$Pt$>$:ITEM
			➢ [CPRI] Fixed Problem of Incorrect RTD Result Display at Each Testing Interval of CPRI BERT Application.(6875)
			➢ [FC] Fixed Problem of Missing CRC Error in Errors/Alarms List of Fibre Channel BERT Application.(6862)
3.01	2015-06-05	●	Key Added Features
			➢ [All] Added Error/Alarm indication summary.(6888)
			➢ [All] Added Performance Verification date in test report.(6890)
			➢ [All] Added Spanish Language support.(6891)
			➢ [Framework] Added the functionality of Storage formatting.(6895)
			➢ [RemoteGUI] Added "Settings Editor" and "Result Viewer" on MX100001A (Windows application).(6894, 6942)
			➢ [ETH] Added the functionality of "Answering ARP/PING request" and reflector MAC/IP address settings on Reflector application. (6897)
			➢ [OTN] Added the client signal frequency result.(6887, 6868)
			➢ [OTN] Added "Pattern Bit Error Trigger" and "LOS Trigger" on APS application. (6867)
			➢ [ETH] Added "LOS" as a Ethernet Service Disruption test type for optical interfaces
		●	Fixed Bugs
			➢ [Framework] Fixed battery display information to show correctly on MU110001A. (6902)
			➢ [RemoteGUI] Fixed the problem regarding sorting files on windows application.(6878)
			➢ [ETH] Fixed the problem regarding SCPI command for stream Line load. (6866)
			➢ [ETH] Fixed the problem regarding multi stream measurement on Mon/Gen application. (6940)
			➢ [ETH] Fixed the problem regarding SDT(Service Disruption Time) result. (6857)
			➢ [ETH] Fixed the problem regarding long term measurement on PING application. (6834)
			➢ [ETH] Fixed the problem regarding the variable field of VLAN ID. (6860)
			➢ [ETH] Fixed the problem regarding Remote Fault on Electrical

			Interface.(6859)
			➢ [ETH] Fixed the problem regarding the maximum rate(CIR/EIR) on 40/100G Y.1564 application. (6855, 4246)
			➢ [FC] Fixed the problem regarding SDT(Service Disruption Time) result. (6863)
			➢ [FC] Fixed the problem regarding "Frame Loss Seconds" result. (6864)
			➢ [OTN] Fixed application crash issue when starting a measurement with threshold enabled. (6939)
			➢ [OTN] Improved regarding frequency offset.(6887)
3.00	2015-05-25	● Added CPRI applications.(6465)	
		● Added following functions to Ethernet applications:	
		➢ Added RFC6349 application.(6366)	
		➢ Added Layer 2 frame format support on Y.1564 application.(6398)	
		➢ Added automatic service name on Y.1564 application.(6360)	
		➢ Added "Include addresses in frame filter on receiver ON/OFF" on RFC2544/Y.1564/MonGen applications.(6557)	
		● Added following functions to OTN applications:	
		➢ Added 3stage mapping on OTU3/4.(6369)	
		➢ Added BMP mapping of SDH client.(6372)	
		➢ Added FTFL alarm insertion/detection.(6373)	
		➢ Improved the setting order of OTN Client.(6374)	
		➢ Supported GFP-F Client signal up to 100G.(6369)	
		➢ Added Error/Alarm statistics on APS application.(6399)	
		● Added following functions to SDH applications:	
		➢ Added Pattern Error Trigger on APS application.(6419)	
		➢ Added Error/Alarm statistics on APS application.(6399)	
		● Added following functions to FC applications:	
		➢ Added Frequency offset Insertion/Monitor.(6405)	
		➢ Added Reflector application.	
		● Added following common functions:	
		➢ Added GUI remote functionality from PC.(6342,6341)	
		➢ Added Event Log functionality.(6400)	
		➢ Added VIP application on Utility.(6367)	
		➢ Added MDIO analysis functionality for CFP module.(6351)	
		➢ Added electrical extender module support.(6483)	
		➢ Added external 10MHz clock support.(6464)	

		➢ Added Emphasis and Equalizer functionality for CFP/CFP2.(6352)
		➢ Added Swedish keyboard input support.(6345)
		➢ Added CSV format report support.(6340)
		➢ Improved Utility Icon visualization.(6365,6362,6361)
		➢ Fixed Bugs [All] Fixed the problem that CFP2 interface may not work correctly when configuring the timing source, "Received".(6667)
		➢ [All] Fixed the problem that MT1100 which mounts MU110010A sometimes shutdown when launching with battery.(6880)
		➢ [SCPI] Fixed the problem of Measurement Stop just after Measurement Start.(6726)
		➢ [SCPI] Improved the stability of long term SCPI running.(6707)
		➢ [ETH] Fixed the problem that MPLS-TP result does not count up when MPLS-TP OAM frame received.(6762)
		➢ [ETH] Fixed the problem regarding E2E communication between MT1000/MT1100 and CMA3K on RFC2544 application.(6735)
		➢ [ETH] Fixed the problem regarding selection of throughput type on RFC2544 application.(6658)
		➢ [ETH] Improved the stability of long term running on RFC2544 application.(6656, 6644)
		➢ [ETH] Fixed the problem that SDT result resets when LOS detected.(6570)
		➢ [ETH] Fixed the problem regarding PCS alarm LED.(5892)
		➢ [OTN] Fixed the problem regarding the mapping for 10GbE into ODU2e, mapping procedure is AMP (Asynchronous CBR Mapping). (6372)
		➢ [SDH] Fixed the problem regarding Performance measurement.(5419)
		➢ [FC] Fixed the problem regarding SDT measurement.(6531)
		➢ [FC] Fixed the problem that undersize frame sometimes counts.(6254)
		➢ [NoFrame] Fixed the problem regarding the BERT measurement result on NoFrame application.(6733)
		➢ [ETH] Default setting of throughput calculation layer is changed on RFC 2544

		➤ [ETH] Fixed the process of handling larger test results than the available storage on RFC 2544 ➤ [ETH] RFC 2544 "Average Throughput" test calculation fixed by only calculating during a stable data stream
2.05	2015-03-25	● Bug fixes and Improvements ➤ [OTN] Fixed the problem regarding the error on OUT3-40GbE mapping.(6454) ➤ [All] Fixed the problem on MU110001A without battery operation. (Bug only for ver. 2.04) (6411) ➤ [All] Fixed the problem that application crashed after long term running.(6455, 6552) ➤ [All] Fixed the problem regarding the network configure on the Ethernet Service Interface.(6461)
2.04	2015-01-22	● Enhancements ➤ [SCPI] Added the launching GUI command and the functionality of switching control between the GUI and Remote.(6355) ➤ [PDH] Added the PRBS31 test pattern on E3.(6064) ● Bug fixes and Improvements ➤ [OTN] Fixed the problem regarding through mode.(6386) ➤ [OTN] Fixed the problem regarding the Performance measurement. (6264) ➤ [OTN] Fixed the problem regarding the OTN payload type setting/detection for ODU4-ODU2e-10GE mapping. (6401) ➤ [ETH] Fixed the problem regarding transmitting stream on 40/100G.(6281) ➤ [ALL] Improved the stability when measuring.(6376,6229)
2.03	2014-12-18	● Bug fixes and improvements ➤ [OTN] Added some Errors (LLM-OTL, MFAS-OTL). (6262) ➤ [OTN] Added some Error Trigger Type on APS measurement. (6261) ➤ [OTN] Changed the name of some Errors. (OTL, LOA, LOBL, LOAML) (6262) ➤ [SDH] Improved the updating results on Pointer Movement measurement. (6265) ➤ [ETH] Fixed the problem regarding the showing service number on Y1564 application. (6295) ➤ [ETH] Fixed the problem of End to End measurement on Y.1564

		application. (6291)
		➢ [ETH] Fixed the problem that HiBER is not detected. (6230)
		➢ [FW] Fixed the problem regarding the VNC connections. (6243)
		➢ [FW] Fixed the problem regarding the Battery information on MT1100.(6020)
		➢ [RFS] Supported ETSI R&TTE EN300 328 V1.8.1. (6263)
		➢ [RFS] Improved the stability on all applications. (6318)
		➢ [RFS] Improved the stability of the Ethernet Service Interface. (6404)
2.02	2014-11-11	● Bug fixes and improvements
		➢ [OTN] Fixed the bug which is on decode of ITU-T G709 PSI[0].(6231)
		➢ [ETH] Fixed the bug that NMX_ASSERT is sometimes occurred. (6232)
		➢ [FC] Fixed the bugs which are interoperability issue and some minor issues. (5088, 6253, 6254)
		➢ [Wireshark] Fixed the bugs and improved the stability.(6166)
2.01	2014-10-23	● Support for the following products:
		➢ MT1100A Network Master Flex Main frame
		➢ MU110010A 10G Multirate Module
		➢ MU110011A 100G Multirate Module
		➢ MU110012A 40/100G Module CFP2
		● Added Fibre Channel applications
		● Added following functions to Ethernet applications:
		➢ Support for WAN-PHY interface
		➢ Frame capture include Wireshark
		➢ Channel Statistics
		● Added following functions to OTN applications:
		➢ GFP-F mapping
		➢ FC client mapping
		● Bug fixes and improvements
1.00	2014-06-23	● Initial release. Support for the following products:
		➢ MT100A Network Master Pro Main frame
		➢ MU100010A 10G Multirate Module

Known Problems

	Version	Description
MT1000/MT1100 MU100010A MU100011A MU110010A MU110011A MU110012A MU110013A	V10.03	• [ETH] Service Disruption Time result is ±300 ms measurement accuracy when using CFP2 interface of Ethernet BERT application. (6858) • [ETH] [MxH] With Ethernet or eCPRI/RoE BERT applications, screen may freeze at measurements including UDP packets when receiving UDP packets at different destination port than source port setting. This bug occurs only at Port 1; if this bug occurs, restart the MT1000A as a workaround solution. (12575) • [MxH] Pass-through delay for CPRI interface depends on previous port mode setting. The Pass-through delay which previous port mode is OFF is three times than the previous port mode is NORMAL. (6876) • [SDH/SONET] Resolved issue in APS measurement application after v7.02. On selecting Any Error as a trigger the measurement result detected was about 10ms longer than the actual switching time. (10849) • [ETH] Bug may detect burst at 100% rate when Frame Size set to Random at Ethernet test. (7114) • [ETH] Bug may cause Error frames when Line Rate higher than 99.4% at Frame Size of 15500 bytes when performing RFC2544 test with MT1100A 40G/100G interface. (9671) • [Remote] Bug may cause MT1000A mis-operation when performing continued packet capture at remote operation using MU100010A. (10942) • [ETH] Frame loss confirmed at RFC2544 test when using v9.12, v9.13, and v10.00. (12818) • [ETH] Bug may prevent error recognition when receiving ICMP reply packets including error with packet length of more than 463 bytes. (12819) • [ETH][MxH] Fixed bug causing display of smaller than true measured service loss time when [LOS] selected as measurement type at MT1000A Ethernet BERT and eCPRI/RoE BERT applications; bug avoided by selecting [Ver. 9.05 or earlier] for latency/jitter timestamp. (13429) • [ETH] Fixed bug causing Ping application crash when

	Version	Description
		outputting PDF report after long-term measurement of several days; use MX100001A Viewer report creation function (CREATE REPORT button) to create reports. (13410)