Automating UE Verification Tests

Signalling Tester MD8475A
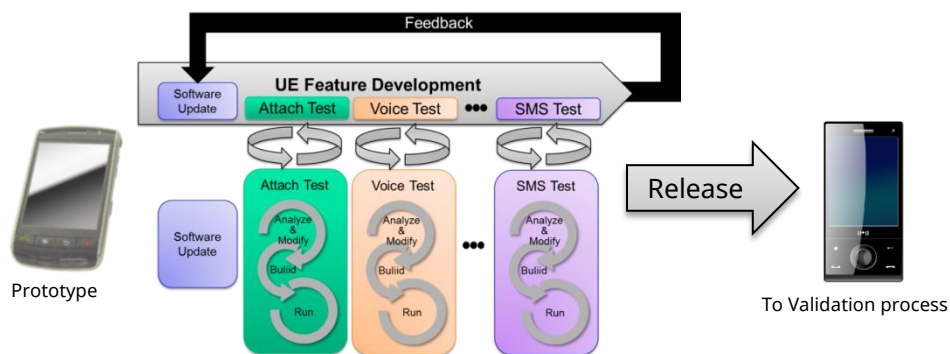SmartStudio MX847570A
SmartStudio Manager MX847503A

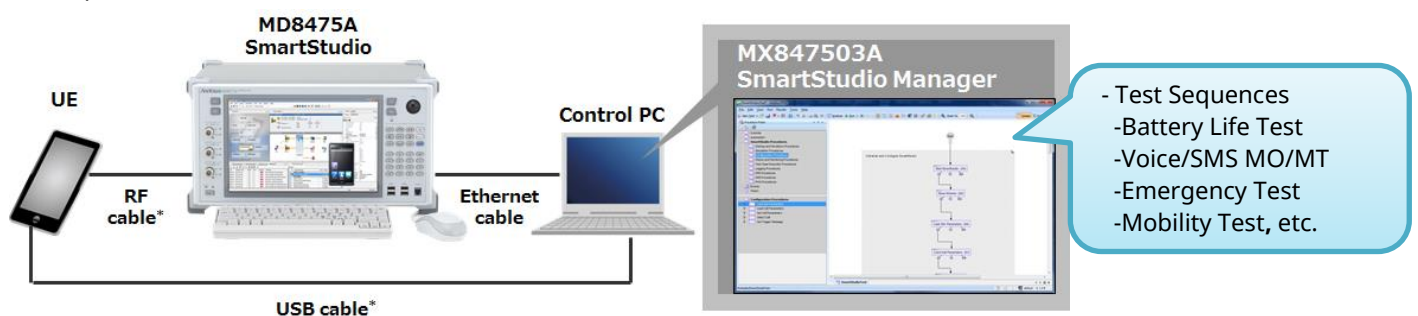- Automation Tool
- Basic Test Sequence

■ Importance of Repeat Testing

Software updates are a key part of UE development and repeat testing is vital to verify UE operation at every update. Efficient repeat testing is an important part of UE development.

Prototype

To Validation process

■ Automated UE Verification with Test Sequences

The MD8475A with intuitive SmartStudio MX847570A GUI software supports easy creation of test environments for various UE functions without test scenarios. In addition, developers can automate various manual operations using the SmartStudio Manager MX847503A option for controlling the GUI externally. Moreover, users do not need to operate UEs under test manually, because the MX847503A control interface supports efficient automatic testing. This solution improves UE performance and software regression tests, such as repeated Attach and Out-of-Service tests to verify UE current consumption and battery durability, voice and SMS sending/receiving tests, etc. The MX847503A also has versatile test sequences for evaluating basic UE functions automatically, greatly shortening development time.

- Test Sequences
-Battery Life Test
-Voice/SMS MO/MT
-Emergency Test
-Mobility Test, etc.

*Provided by users

■ SmartStudio Manager MX847503A Usability

Installing the MX847503A software offers an easy-to-use test environment with consecutive execution of multiple test cases and at-a-glance display of test results. Provided versatile test cases support basic UE operations, such as voice calls, SMS, handover, etc., eliminating problems in creating and editing new test cases. When new test cases are required, they are created easily by dragging, dropping, and changing parameters.

Test Run Report

	Passed
Start	2015-09-18 16:44:06, 15 seconds
Status	Passed; ran to completion
Watermark	Not Watermarked
Comments	n/a
Run name	SampleTestcase_2015-09-18_16.44.06

Criteria Evaluation	
Path_Criteria_Group_1	All Achieved

Criteria Detail	
Path_Criteria_Group_1 / Path_Criteria_1	Achieved

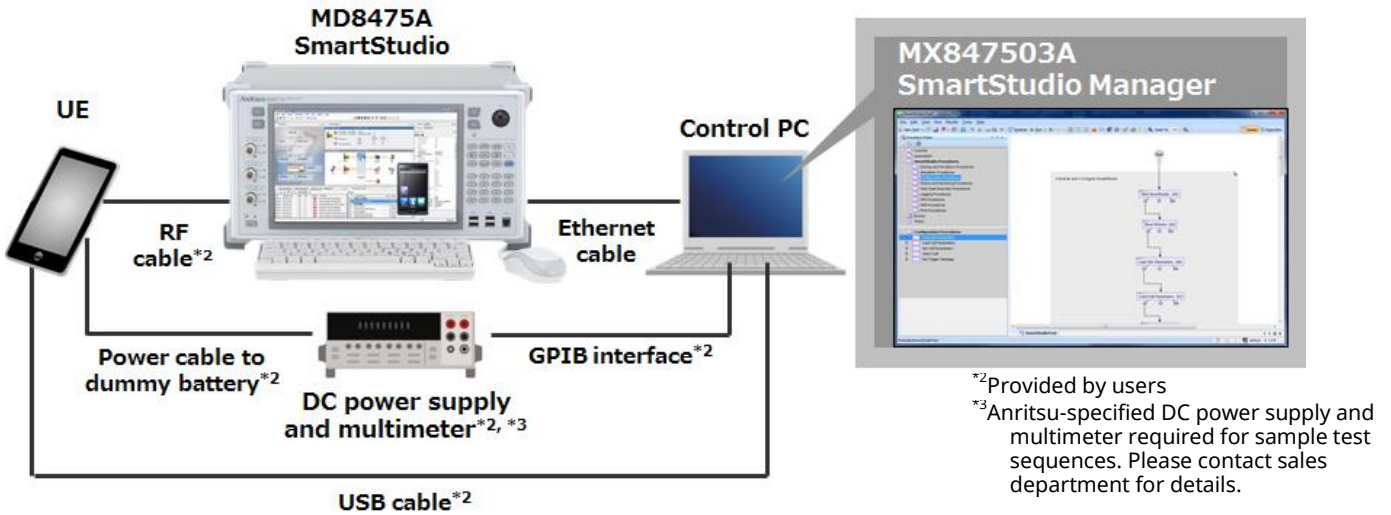| BasicTestPackage1.6.0_Rev1 / SampleTestcase	
Version	n/a
Last-modified	2015-09-18 16:29:03
Procedure Library	SmartStudio Procedures (1.13.0_1.13.0)
Defaults Procedure	None

Report generated: 2015-09-18 16:44:21 by MX847503A_1_6_0_A

■ Versatile Test Sequence Lineup

In addition to test sequences for evaluating basic UE functions, the SmartStudio Manager MX847503A sample test sequences*[1] provide test cases for measuring power consumption. The MX847503A software controls both SmartStudio and peripheral instruments simultaneously, cutting time to configure a UE evaluation environment.

[1]Test sequences may change without prior notice

Battery Durability Test Setup

*[2]Provided by users
*[3]Anritsu-specified DC power supply and multimeter required for sample test sequences. Please contact sales department for details.

Sample Test Sequences (Extract)

Category	Procedure	Comment
Registration	Attach	Testing UE and base station registration, etc.
	Out of Service	
Voice/Packet/SMS	Voice	Basic UE tests such as voice, data, CFSB, etc.
	Packet	
	SMS over SGs	
	MOMR/ MTNR CSFB	
PWS	ETWS Primary + Secondary Notification	Emergency message tests
	CMAS Concurrent Notification	
	CMAS	
Cell Barred	Cell Barred	Network restriction tests
	Access Class Barred	
	PSIST	
CS Emergency	CS emergency	Emergency call tests
	CS emergency CSFB	
Stress Test	Voice	Basic function tests and throughput tests
	Handover	
	Throughput testing	
Mobility	Cell Selection/Reselection	Handover tests
	Handover	
	MOMR/MTNR SRVCC	
WLAN Offload	Untrusted non-3GPP access	WLAN Offload tests
	Trusted non-3GPP access	
IMS/RCS	MO/ MT SMS over IMS	IMS/RCS tests
	MOMR: Voice/Video Call Establishment/Release	
	RCS Registration	
TS 09	Stand-by test	TS 09 power consumption tests
	MOMR: Talk time Test	
	MTNR: Talk time Test	
	Packet Switch Transfer Test	
	Browsing Test	
	Streaming Content Test (Video/Audio)	
	Video Telephony Test	
	FTP Download Test	

[4]This list is an excerpt from available sample test sequences.

■ Option Software for Automated Test Environment
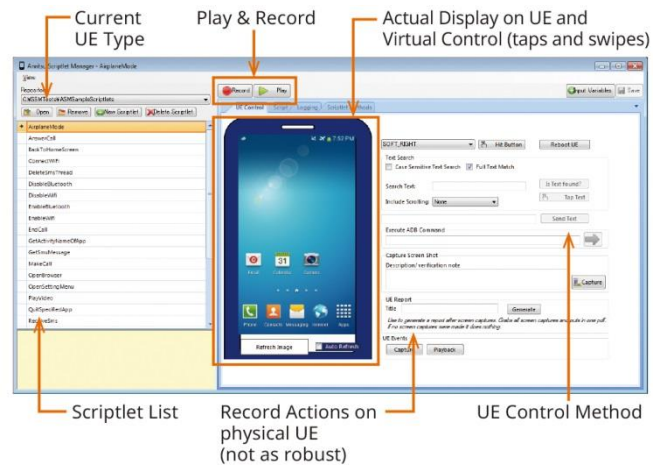
IP Tester Control Library
MX847503A-901

The MX847503A-901 software option controls the IXIA IxChariot remotely to configure a more efficient and flexible automated IP Throughput test environment under various test conditions. Additionally, both the MX847503A-901 and IxChariot control console are accommodated using only one external PC.

MX847503A SmartStudio Manager
MX847503A-901 IP Tester Control Library
IxChariot

UE   MD8475A

IxChariot® is a registered trademark of Ixia.

Smartphone Control Platform
MX847504A

The MX847504A software option records Android OS Smartphone operations and offers an environment for creating, editing, and running UE automated control scripts. UE pre-release regression and stable operation confirmation testing are easy using the intuitive editing environment with pre-installed scripts and GUI.

Current UE Type — Play & Record — Actual Display on UE and Virtual Control (taps and swipes)

Scriptlet List — Record Actions on physical UE (not as robust) — UE Control Method

Android™ is a trademark of Google Inc.

■ Ordering Information

Model	Name	Function Outline	Note
MX847503A	SmartStudio Manager	Software for controlling SmartStudio from external PC, plus test sequences for evaluating UE	- Recommended PC specifications: Intel Core i5 @2.4 GHz or better Memory 4 GB or better 200-GB Hard drive or better 1 Spare USB port for dongle 1 Ethernet interface (1 Gbits/s) Windows7/8 Professional 64-bit (SP1) English Version Second Ethernet port or USB-to-Ethernet converter (When using MX847503A-901)
MX847503A-901	IP Tester Control Library	Software for controlling IxChariot made by IXIA from external PC	
MX847504A	Smartphone Control Platform	Software for controlling Android OS Smartphone from external PC	
Z1813A	USB Dongle (Automation)	USB license dongle for booting MX847503A	