

3G

A circular inset image showing two women in business attire looking at a mobile phone. The woman on the right is holding the phone and looking at the screen, while the woman on the left is looking towards the phone with a slight smile.

discover...

GCF Protocol Conformance Test Toolkit for Release 99 (WI-010) MX785220A

- Designed for GCF Certification of W-CDMA and dual mode mobile terminals
- Delivers TS34.123 TTCN conformance test cases defined in GCF Work Item 010
- Can be used for UE validation and GCF certification through an accredited test lab
- Enables UE manufacturers to carry out pre-conformance testing in a cost effective manner
- Contains the specific executable conformance test cases and PTS test environment required by the GCF for terminal certification
- Regularly updated to deliver new and re-validated test cases once they are approved by the GCF

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Introduction

A key part of the market introduction of a new 3G mobile phone is to prove that it conforms to the 3GPP standards. This is done through a formal conformance testing process defined by the Global Certification Forum (GCF) and agreed by its members, made up of the 3G manufacturers and the network operators.

For signalling protocol the mobile terminal must pass the conformance tests defined in 3GPP specification TS34.123.

For 3GPP Release 99 terminals the GCF has defined an initial set of high priority test cases that must be run against a W-CDMA or dual mode terminal. These test are detailed in GCF Work Item 010. Currently there are around 400 tests in WI-010.

The Anritsu Protocol Test System (PTS) has been designed to run all the TTCN conformance test cases in TS34.123. MX785220A GCF Conformance Test Toolkit for Release 99 (Work Item 010) will deliver specifically the WI-010 test cases for the PTS.

Applications

MX785220A is designed for both pre-conformance testing and formal GCF certification of 3G mobiles.

For GCF accredited test labs, either within a manufacturer's own organisation or an independent test house, MX785220A provides the correct PTS environment required for UE certification.

The cost of using an independent test house for conformance testing can be very high, requiring several weeks' time in the test lab. MX785220A enables manufacturers to prepare as much as possible in advance of formal certification by replicating the GCF test environment in their own lab.

This toolkit will also be important to network operators who may use the GCF approved test cases as the basis of mobile acceptance testing from their suppliers or require their UE suppliers to test against the latest GCF approved test cases.

Toolkit Overview

MX785220A will deliver initially 80% of each of packages 1,2,3 and 4 within GCF work Item 010. The 80% threshold is set by the GCF at which formal certification of 3G terminals must commence.

Additional test cases will be added to MX785220A once they are approved by the GCF and have been validated and approved on the PTS platform. The GCF approves new test cases at its UAG meetings, held every three months.

In addition existing test cases may be downgraded by the GCF and need to be re-submitted and revalidated on the approved test platforms, including the PTS.

Newly approved GCF test cases and re-validated test cases will be supplied through regular MX785220A upgrades. These are available with the associated Annual Software Update and Maintenance Contract, MX785220A-20.



Anritsu use RFI Limited, a leading conformance test house based in the UK, to independently validate the conformance test cases on the PTS platform. RFI are fully accredited for validation testing and have many years experience in validating 2G and 2.5G test systems. RFI are a GCF accredited test house independently validate the PTS and submit the results to the GCF for approval.

Content of MX785220A GCF Conformance Test Toolkit

The toolkit contains the test cases and PTS software required to replicate the GCF validated tests on the PTS. This includes:

- Specific PTS software version used for validation and approved by the GCF
- Validated and GCF approved conformance test cases in Executable Test Suite (ETS) form
- Operation manual, installation manual and release notes
- RFI Certificate of GCF approvals
- Copy of GCF approvals submission documentation

System Requirements

The exact hardware and software configuration required for an individual test case or toolkit depends on the test resource requirements defined within the test(s).

The following MD8480 hardware configuration and PTS software configuration is recommended to run W-CDMA and dual mode W-CDMA/GSM/GPRS conformance tests requiring fewer than three W-CDMA cells or one TDMA cell. Test cases with cell requirements above this will require additional MD8480s. Details are available on request.

MD8480B

MD8480B	W-CDMA Signalling Tester
MD8480B-02	ADDITIONAL RF UNIT
MU848053A	RX BASEBAND
MU848057A	FRAME CODER
MU848058A	X2TX BASEBAND
MU848060B	TDMA Hardware
MX848041A	W-CDMA Signalling Tester Ciphering
MX848041A-02	Compressed mode
MX848041A-05	GSM FREQUENCY HOPPING
MD8480B-20	Annual software update and maintenance

Details of which test cases are currently supplied in MX785220A is available on request. In addition log files for each test case supplied are also available on request.

Any MD8480B firmware or FPGA software that may also be required will be provided as part of the PTS annual software upgrade and maintenance contract and delivered through Anritsu's local support organisation.

Note that the toolkit can be used only with an existing valid PTS test system license and cannot be used in isolation.

Licensing

MX785220A is licensed on a per seat basis. A single user licence will enable one PTS user to access and run the test cases.

Support

Support of the toolkit is provided through an annual software update and maintenance contract (MX785220A-20). The user must also have a valid software update and maintenance contract for his PTS system.

PTS Software

MX785201A	Core software - single cell ETS framework
MX785201A-01	National Instruments TestStand
MX785201A-10	Multi-cell capability (Inter frequency - SHO)
MX785201A-11	Multi-cell capability (Inter-frequency - HHO)
MX785201A-12	InterRAT capability
MX785201A-15	3GPP Compliant TTCN adapter
MX785201A-40	Ciphering (Note 1)
MX785201A-20	Annual software update and maintenance contract

Note 1 Ciphering is subject to export control and requires an export licence

Ordering Information

MX785220A	GCF Protocol Conformance Test Toolkit for R99 (WI-010)
MX785220A-20	Annual software update and maintenance contract

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