

TETRA Interoperability Certificate

Motorola Solutions, Dimetra IP Rel 8.2, SwMI – Motorola Solutions, MTM5400, Terminal

Krakow, April 2016

Latest Certified SwMI SW Release:	8.2	Latest Certified Terminal SW Release:	MR15
Latest Certified SwMI HW Release:	Dimetra IP R8.2	Latest Certified Terminal HW Release:	MT953C

ISCTI (Istituto Superiore delle Comunicazioni e delle Tecnologie dell'Informazione) certifies, that the Motorola Solutions, Dimetra IP Rel 8.2, SwMI and the Motorola Solutions, MTM5400, terminal have been subject to interoperability testing for the “certified” features listed on second page of this certificate, in accordance with the TETRA Interoperability Profiles, TIP compliance Test Plan and related TETRA interoperability requirement tables.

The table lists all the available TETRA interoperability profiles, and summarizes the main functionalities of every profile according to the TETRA interoperability requirement tables.

A feature is “Certified” when it has been successfully tested during the last test session with one of the testing method described in the TETRA process document part 1 (TPD001-01).

A breakdown into the feature details is given in the Feature Compliance Overview section of this certificate.

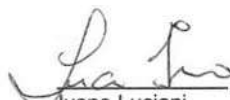
This certificate has been issued following a fully witnessed single test session between Motorola Solutions and Motorola Solutions on April 2016. Detailed test results are listed in the Test Report associated to this Certificate. Details and explanation about the procedure used to provide verdicts are in the TIC process TPD001-01.

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v 1

Certified features

Tetra Association TTR001-03:DGNA	
Support for individually addressed DGNA	Certified
Support for group addressed DGNA	Certified
Tolerance of unsupported DGNA functions	-
Tetra Association TTR001-09:AL	
Ambience Listening	Certified
Interaction with Transmit Inhibit	Certified

Feature Compliance Overview

The first pages of this certificate provide an indication about the main interoperable TETRA features for each TIP specification (as described in the TIC-RT). The main interoperable TETRA features result depend on a set of sub-feature, the outcomes associated to each sub-feature are directly derived from the analysis of the performed test cases.

The results associated to each feature and sub-feature are shown in the "Feature compliance report" table below. The main features are indicated with blue background and the associated sub-features (or second level features) have white background.

The outcome assigned to a sub-feature as shown on page 2, is derived by the Feature compliance report tables.

Outcome	Definition
Certified	All required tests have been performed and passed
Partial	Not all the required tests have been performed but none have failed
-	Feature cannot be certified e.g. it is not supported by at least one product, no tests were performed, or some tests were performed but at least one failed

The outcome is derived from the verdict assigned to a sub feature which is the result of an analysis of the test case results listed in the Test Report. The verdict assigned to each sub-feature is derived from one or several test case results or test steps result, the TETRA Interoperability requirement tables (TIC-RTs) indicate the link between sub-features and test cases for the certified set of equipment capabilities (see Test Report)

Verdict	Definition
Passed	All mandated tests or steps of tests linked to this functionality (as per TIC-RT indication) are compliant with the TIP specification relevant to this feature or sub-feature
Incomplete	Not all mandated tests (as per TIC-RT indication) have been executed
Failed	At least one of mandated test or steps of test linked to this functionality failed to match the TIP specification relevant to this feature or sub-feature

The verdict associated to the feature gives also indication about the method used to test that feature or sub-feature. The allowed testing Methods are listed in the table below, a complete description of the procedures and constraints associated to each of them can be found in the "TPD001-01 TETRA Interoperability Certification Process Description" document.

Testing Method	Description
Complete	All mandated tests associated to the feature or sub-feature have been executed
Spot	Only a selection of the mandatory test cases associated to the feature or sub-feature has been executed during the test session. These tests are a subset of the tests performed on an equivalent software which has been "completely" tested against the same functionality on a different equipment, see manufacturer declaration in the associated Test Report
Regression	Only a selection of the mandatory test cases associated to the feature or sub-feature has been executed during the test session. These tests are a subset of the tests performed on a previous version of the same software which has been "completely" tested in a previous test session against the same functionality, see manufacturer definition in the associated Test Report
Regression on spot	The regression method (see the previous item) has been applied at this session on the verdicts from the referenced (previous) session where the spot testing method (see above) had been applied
Witnessed	The TIP heading lines in the Feature Compliance Report indicate whether each TIP is partially or fully witnessed by the Certification Body. Additionally, for a partially-witnessed TIP, the number of witnessed test cases that passed is shown for each the feature and sub-feature. There may have been some unwitnessed passed tests and they will have been found to be successful based on the log file evaluation

Depending on equipment capabilities declared by the manufacturer, some features or sub features cannot be tested. The following table describes meaning of the used abbreviation

Indication	Definition
Not Supported	The SwMI and/or MS do not support the minimum features required to verify these items.

ISCTI has made every effort to ensure that every result has been correctly evaluated in accordance with the relevant TIPs, Test Plans and TIC-RTs. ISCTI has no liability for the test results, or towards the manufacturers,

The table on the following page lists HW and SW releases of SwMI and Terminal under test in the last four test sessions and the used TIP specifications, Test Plans and TIC-RTs

This Certificate and Certificates from previous test sessions are available on the TETRA + Critical Communications Association web site (<http://www.tandcca.com/interop/page/12476>).

The feature results are shown in the tables below

Information on equipment under test and document references

Test Session Date/Place	Motorola Solutions April 2016 Krakow	Motorola Solutions April 2014 Krakow		
SwMI Type	Dimetra IP R8.2	Dimetra IP		
SwMI HW Release	8.2	8.2		
SwMI SW Release	8.2	8.2		
Terminal Type	MTM5400	MTM5400		
Terminal HW Release	MT953C	MT953C		
Terminal SW Release	MR15	MR10.6.10		

TIP Specs and TIP Compliance Test Plans	Motorola Solutions April 2016 Krakow	Motorola Solutions April 2014 Krakow		
DGNA	TTR001-03 v2.0.0 IOP001-03 v2.0.1 TIC-RT001-03 v224	TTR001-03 v2.0.0 IOP001-03 v2.0.1 TIC-RT001-03 v222		
AL	TTR001-09 v2.0.0 IOP001-09 v1.1.0 TIC-RT001-09 v125	TTR001-09 v2.0.0 IOP001-09 v1.1.0 TIC-RT001-09 v122		

Feature compliance report

Test Session	Motorola Solutions April 2016 Krakow	Motorola Solutions April 2014 Krakow		
Dynamic Group Number Assignment (DGNA) - Fully Witnessed Testing				
Support for individually addressed DGNA	PASSED Regression 4_pass_of_11	FAILED Regression 6_pass_of_11		
Support for individually addressed DGNA assignment without attachment	PASSED Regression 1_pass_of_3	PASSED Regression 1_pass_of_3		
Support for individually addressed DGNA assignment with attachment as selected group	Regression 0_pass_of_3	PASSED Complete 3_pass_of_3		
Support for individually addressed DGNA assignment with attachment as scanned group	PASSED Regression 2_pass_of_3	FAILED Complete 2_pass_of_3		
Support for individually addressed DGNA assignment with rejected attachment	Not Supported	Not Supported		
Support for individually addressed assignment for pre-programmed group	PASSED Regression 2_pass_of_5	FAILED Regression 0_pass_of_5		
Support for group addressed DGNA	PASSED Regression 1_pass_of_5	PASSED Regression 3_pass_of_5		
Support for group addressed DGNA assignment	Regression 0_pass_of_2	PASSED Complete 2_pass_of_2		
Management of 'group assignment lifetime'	PASSED Regression 1_pass_of_2	PASSED Regression 1_pass_of_2		
Support for group addressed DGNA deassignment	Regression 0_pass_of_1	Regression 0_pass_of_1		
Tolerance of unsupported DGNA functions				
MS tolerance of unsupported individual addressed DGNA signalling	Not Supported	Not Supported		
MS tolerance of unsupported group addressed DGNA signalling	Not Supported	Not Supported		
TETRA Ambience Listening (SS-AL) - Fully Witnessed Testing				
Ambience Listening	PASSED Regression 2_pass_of_5	FAILED Complete 4_pass_of_5		
SS-AL Call Setup	PASSED Regression 1_pass_of_2	PASSED Complete 2_pass_of_2		

MS initiated SS-AL disconnection	PASSED Regression 1_pass_of_3	FAILED Complete 2_pass_of_3		
No Indication to affected user	PASSED Regression 2_pass_of_5	FAILED Complete 4_pass_of_5		
Interaction with Transmit Inhibit	Regression 0_pass_of_1	PASSED Complete 1_pass_of_1		
AL can override TxI	Not Supported	Not Supported		
AL cannot override TxI	Regression 0_pass_of_1	PASSED Complete 1_pass_of_1		