

TETRA Interoperability Certificate

**Motorola Solutions, Dimetra IP R8.3, SwMI A –
Airbus Defence & Space, Airbus TETRA System Rel6.5, SwMI B**

Glostrup, October 2016

Latest Certified SwMI A SW Release:	8.3	Latest Certified SwMI B SW Release:	Rel6.5 CD 3.18
Latest Certified SwMI A HW Release:	DIMETRA IP R8.3	Latest Certified SwMI B HW Release:	DXT3c (M98F2)

ISCTI (Istituto Superiore delle Comunicazioni e delle Tecnologie dell'Informazione) certifies, that the Motorola Solutions, Dimetra IP R8.3, SwMI and the Airbus Defence & Space, Airbus TETRA System Rel6.5, SwMI 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.

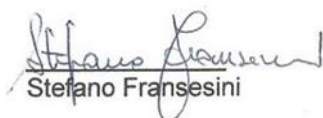
The table lists all the available TETRA interoperability profiles, and summarizes the main functionalities of every profile according to the TETRA interoperability requirement tables.

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.

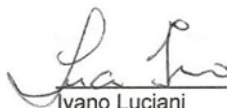
This certificate has been issued following a fully witnessed single test session between Motorola Solutions and Airbus Defence & Space on October 2016. Detailed test results are listed in the Test Report associated to this Certificate. Details and explanation about the procedure used to provide verdicts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

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2 December 2016

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Certified features

Tetra Association, TTR003-01: IMM	
ISI Migration Service	Partial
Linked Group Attachment/Detachment Service	-
Tetra Association TTR003-02: IIC	
ISI Individual Call	Certified
Resource Allocation Policy	Certified
MS-ISDN	-
Tetra Association TTR003-03: ISD	
Individually addressed ISI Short Data Service	Certified
Group addressed ISI Short Data Service	Certified
Transmit Inhibit Status Messages	-
Tetra Association TTR003-06: IGC	
Normal ISI Group Call	Certified
Transmission Control	Certified
Emergency Group Call	Certified
Abnormal Cases	Certified
Use of Linked Group Attachment	-

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-features, the verdicts 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 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 tests linked to this functionality failed to match the TIP specification relevant to this feature or sub-feature.

The verdict associated to the feature or sub-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 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 un-witnessed 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 A and/or SwMI B 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 A and SwMI B 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](http://www.tandcca.com/interop/page/12476) 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, Airbus Defence & Space Glostrup, October 2016			
SwMIA Type	Dimetra IP R8.3			
SwMIA HW Release	DIMETRA IP R8.3			
SwMIA SW Release	8.3			
SwMIB Type	Airbus TETRA System Rel6.5			
SwMIB HW Release	DXT3c (M98F2)			
SwMIB SW Release	Rel6.5 CD 3.18			
TIP Specs and TIP Compliance Test Plans				
IMM	TTR003-01 v2.1.0 IOP003-01 v1.1.0 TIC-RT003-01 v1.1.0			

IIC	TTR003-02 v2.1.2 IOP003-02 v1.1.0 TIC-RT003-02 v1.1.3			
ISD	TTR003-03 v1.5.0 IOP003-03 v1.1.0 TIC-RT003-03 v1.1.6			
IGC	TTR003-06 v2.1.1 IOP003-06 v1.0.0 TIC-RT003-06 v1.0.1			

Feature compliance report

Test Session	Motorola Solutions Airbus Defence & Space Glostrup October 2016			
IMM - Fully Witnessed Testing				
ISI Migration Service	Incomplete 15_pass_of_18			
ISI Migration Service without Authentication	PASSED Complete 4_pass_of_4			
ISI Migration Service with Authentication	PASSED Complete 4_pass_of_4			
ISI Re-Authentication of Migrated MS	Incomplete 3_pass_of_6			
ISI Migration Service between two Foreign SwMIs	Not Supported			
ISI Deregistration and return to Home SwMI	PASSED Complete 4_pass_of_4			
Linked Group Attachment/Detachment Service				

Linked Group Attachment/Detachment	Not Supported			
IIC - Fully Witnessed Testing				
ISI Individual Call	PASSED Complete 12_pass_of_12			
ISI Individual Simplex Call	PASSED Complete 2_pass_of_2			
ISI Individual Duplex Hook Call	PASSED Complete 8_pass_of_8			
Handling of Call Establishment Failures	PASSED Complete 2_pass_of_2			
Resource Allocation Policy	PASSED Complete 6_pass_of_6			
Permanent Resource Allocation	Not Supported			
Temporary Resource Allocation	Not Supported			
Mixed Resource Allocation	PASSED Complete 6_pass_of_6			
MS-ISDN	Incomplete 0_pass_of_2			

MSISDN as CPI in PSTN originated calls over ISI	Incomplete 0_pass_of_2			
SD - Fully Witnessed Testing				
Individually addressed ISI Short Data Service	PASSED Complete 17_pass_of_17			
Individual Status message over ISI	PASSED Complete 1_pass_of_1			
Individual SDS-TL message over ISI	PASSED Complete 16_pass_of_16			
Individual Status message over ISI, forwarding to a third SwMI	Not Supported			
Individual SDS-TL message over ISI, forwarding to a third SwMI	Not Supported			
Individual SDS-TL message over ISI using MS-ISDN as CPI	Not Supported			
Group addressed ISI Short Data Service	PASSED Complete 10_pass_of_10			
Group addressed Status message over ISI	PASSED Complete 5_pass_of_5			
Group addressed SDS message over ISI	PASSED Complete 5_pass_of_5			

Transmit Inhibit Status' status messages				
Transmit Inhibit Status' status messages	Not Supported			
IGC2 - Fully Witnessed Testing				
Normal ISI Group Call	PASSED Complete 8_pass_of_8			
Normal ISI Group Call	PASSED Complete 4_pass_of_4			
Delayed ISI Group Call Setup	Not Supported			
Late Entry triggered by a timer	PASSED Complete 3_pass_of_3			
Late Entry triggered by PTT	PASSED Complete 1_pass_of_1			
Transmission control	PASSED Complete 2_pass_of_2			
Transmission queuing management	Not Supported			
Transmission pre-emption management	PASSED Complete 2_pass_of_2			

Emergency Group Call	PASSED Complete 4_pass_of_4			
Emergency Group Call	PASSED Complete 4_pass_of_4			
Abnormal Cases	PASSED Complete 6_pass_of_6			
Abnormal Cases	PASSED Complete 6_pass_of_6			
Use of Linked Group Attachment				
Use of Linked Group Attachment	Not Supported			