TETRA Interoperability Certificate

Airbus D&S , Tetra System Rel 6.0, SwMI – Motorola Solutions, MTP850FuG, Terminal

Berlin, November 2015

Latest Certified SwMI SW Release:	Rel 6.0	**Latest Certified Terminal SW Release:**	MR15
Latest Certified SwMI HW Release:	M98F (DXTip)	**Latest Certified Terminal HW Release:**	PT912BG

ISCTI (Istituto Superiore delle Comunicazioni e delle Tecnologie dell'Informazione) certifies, that the Airbus D&S , Tetra System Rel 6.0, SwMI and the Motorola Solutions, MTP850FuG, 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 Airbus D&S and Motorola Solutions on November 2015. 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 TTR001-21:CALLOUT	
Full Calllout	-
Simple Callout	Certified
Interaction with other services and events	Certified
Callout Test and Callout Availability	Certified
Callout Text and Callout Pre-Coded Status	Certified
Storage of Callout Information	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' results 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 a 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 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 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 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	Airbus D&S , Berlin, November 2015			
SwMI Type	Tetra System Rel 6.0			
SwMI HW Release	M98F (DXTip)			
SwMI SW Release	Rel 6.0			
Terminal Type	MTP850FuG			
Terminal HW Release	PT912BG			
Terminal SW Release	MR15			
TIP Specs and TIP Compliance Test Plans				
Callout	TTR001-21 v2.1.1 IOP001-21 v2.1.0 TIC-RT001-21 v1.0.9			
SwMI Paladine Callout Application SW Release	Callout Tool Version: 1.1.0 rev 10			

SwMI Testbench Callout Application SW Release	Motorola VAT Tool Version: 2.0.1.6			

Feature compliance report

Test Session	Airbus D&S Berlin November 2015			
Callout - Fully Witnessed Testing				
Full Calllout				
Individually Addressed Full Callout with request for Terminal Receipt message and with request for User Receipt message	Not Supported			
Group Addressed Full Callout without request for Terminal Receipt message and without request for User Receipt message	Not Supported			
Using current selected group during Full Callout	Not Supported			
Full Callout with immediate change to Callout Group	Not Supported			
Full Callout with change to Callout Group on non-rejecting user response	Not Supported			
Full Callout with rejecting User Receipt message	Not Supported			
Full Callout with timeout for User Receipt message	Not Supported			
Callout Incident Information messages	Not Supported			
Group Call to Callout Group	Not Supported			
End of Full Callout	Not Supported			

Simple Callout	PASSED Complete 6_pass_of_6			
Individually Addressed Callout with request for Terminal Receipt message and with request for User Receipt message	PASSED Complete 1_pass_of_1			
Individually Addressed Callout with request for Terminal Receipt message and without request for User Receipt message	PASSED Complete 1_pass_of_1			
Group Addressed Callout without request for Terminal Receipt message and without request for User Receipt message	PASSED Complete 1_pass_of_1			
Group Addressed Callout without request for Terminal Receipt message and with request for User Receipt message	PASSED Complete 1_pass_of_1			
Simple Callout with rejecting User Receipt message	PASSED Complete 1_pass_of_1			
Simple Callout with timeout for User Receipt message	PASSED Complete 1_pass_of_1			
Interaction with other services and events	PASSED Complete 29_pass_of_29			
Interaction with previous Callout	PASSED Complete 1_pass_of_1			
Interaction with emergency call	PASSED Complete 3_pass_of_3			
Interaction with non-emergency call	PASSED Complete 11_pass_of_11			
Interaction with data and status	PASSED Complete 13_pass_of_13			
Interaction with local services	Not Supported			
Manual exit	PASSED Complete 1_pass_of_1			
Callout Test and Callout Availability	PASSED Complete 3_pass_of_3			
Callout Test	PASSED Complete 2_pass_of_2			
Callout Availability	PASSED Complete 1_pass_of_1			
Callout Availability request	Not Supported			

Callout Text and Callout Pre-Coded Status	PASSED Complete 11_pass_of_11			
Callout Text	PASSED Complete 3_pass_of_3			
Concatenated Callout Text using Callout Specific Concatenation	PASSED Complete 2_pass_of_2			
Concatenated Callout Text using mSDS	Not Supported			
Callout Pre-Coded Status	PASSED Complete 6_pass_of_6			
Storage of Callout Information	PASSED Complete 2_pass_of_2			
Viewing Callout information from previous Callout(s)	PASSED Complete 1_pass_of_1			
Deletion of Callout information from previous Callout(s)	PASSED Complete 1_pass_of_1			