

TETRA Interoperability Certificate

**Airbus D&S , Tetra System Rel 7.0, SwMI –
Motorola Solution, MTM5400, Terminal**

Helsinki, June 2015

| | | | |
|--|--------------|--|--------|
| Latest Certified SwMI SW Release: | Rel7.0 | Latest Certified Terminal SW Release: | MR14 |
| Latest Certified SwMI HW Release: | M98F (DXTip) | Latest Certified Terminal HW Release: | MT953C |

ISCTI (Istituto Superiore delle Comunicazioni e delle Tecnologie dell'Informazione) certifies, that the Airbus D&S , Tetra System Rel 7.0, SwMI and the Motorola Solution, 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).

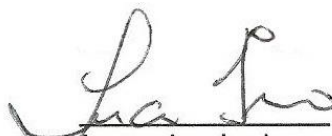
A breakdown into the feature details is given in the Feature Compliance Overview section of this certificate.

This certificate has been issued following a fully witnessed single test session between Airbus D&S and Motorola Solution on June 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.

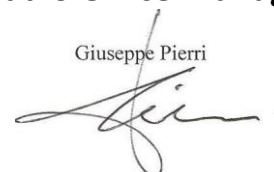
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v 1

Certified features

| Tetra Association TTR001-05:PD | |
|--------------------------------|-----------|
| Context Management | Certified |
| Single Slot Packet Data | Certified |
| Multi Slot Packet Data | - |
| TEDS | Certified |
| Mixed band operation | - |

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 , Helsinki, June 2015 | | | |
| SwMI Type | Tetra System Rel 7.0 | | | |
| SwMI HW Release | M98F (DXTip) | | | |
| SwMI SW Release | Rel7.0 | | | |
| Terminal Type | MTM5400 | | | |
| Terminal HW Release | MT953C | | | |
| Terminal SW Release | MR14 | | | |
| TIP Specs and TIP Compliance Test Plans | | | | |
| PD | TTR001-05 v3.0.0 IOP001-05 v4.0.0 TIC-RT001-05 v4.0.0 | | | |

Feature compliance report

| | | | | |
|--|-------------------------------------|--|--|--|
| Test Session | Airbus D&S Helsinki June 2015 | | | |
| Packet Data - Fully Witnessed Testing | | | | |
| Context Management | PASSED Complete 13_pass_of_13 | | | |
| Context Activation | PASSED Complete 9_pass_of_9 | | | |
| User authentication | PASSED Complete 4_pass_of_4 | | | |
| Single Slot Packet Data | PASSED Complete 10_pass_of_10 | | | |
| Data Transfer | PASSED Complete 7_pass_of_7 | | | |
| Cell re-selection | PASSED Complete 3_pass_of_3 | | | |
| Multi Slot Packet Data | | | | |
| Data Transfer | Not Supported | | | |
| TEDS | PASSED Complete 15_pass_of_15 | | | |
| TEDS with Context Activation | PASSED Complete 2_pass_of_2 | | | |
| TEDS Data Transmission, using LLC Optimisation | PASSED Complete 7_pass_of_7 | | | |
| TEDS Cell Reselection, using LLC Optimisation | PASSED Complete 6_pass_of_6 | | | |
| Mixed band operation | | | | |
| Mixed band operation, inter-cell | Not Supported | | | |
| Mixed band operation, intra-cell | Not Supported | | | |
| Mixed band operation, Full | Not Supported | | | |