TETRA Interoperability Certificate

Trunked Mode Operation

Airbus Defence & Space, Airbus TETRA System Rel7.0 – SwMI
Sepura, STP9000 – Terminal

Test Session #200, hosted by BDBOS in Berlin, December 2024

Latest Certified SwMI SW Release:	S/W DXT: TSR7.0 DXT CD5.32 TBS: TSR7.0 TBS CD5.25 (13.23-0)	**Latest Certified MS SW Release:**	1824 005 02937
Latest Certified SwMI HW Release:	DXT: M98F2 DXTip TBS: TB3 (TBCu)	**Latest Certified MS HW Release:**	PSYTW201T30WN00

ISCTI (Istituto Superiore delle Comunicazioni e delle Tecnologie dell'Informazione) certifies, that the Airbus Defence & Space Airbus TETRA System Rel7.0 SwMI and the Sepura STP9000 Terminal have been subject to interoperability testing for the "Certified" features listed on the second page of this certificate, in accordance with the TETRA Interoperability Profiles, TIP compliance Test Plan and the related TETRA interoperability requirement tables.

The table lists all the available TETRA interoperability profiles, and summarises 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 single-test session, fully witnessed, between Airbus Defence & Space and Sepura in December 2024. 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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Certified features

Tetra Association TTR001-01: Core	
Registration	-
Group Management	-
Group call	-
Individual call	Partial
Status messages	-
Pre-emptive Priority Call	-
Emergency Call	-
Cell Re-selection	-
PSTN interconnect	-
MS-ISDN Numbering	-
In Call Signalling	-
Subscriber Class Procedures	-
Common Secondary Control Channels	-
BS Fallback Operation	-
Energy Economy Mode	-
Transmit Inhibit	-
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 tables on the following page list HW and SW releases of SwMI and Terminal under test and the used TIP specifications, Test Plans and TIC-RTs.
This Certificate and Certificates from previous test sessions are available on the TCCA web site (https://tandcca.com/interoperability/interoperability-certificates-and-test-reports/).
The feature results are shown in the tables below.

Information on equipment under test

SwMI Manufacturer	Airbus Defence & Space
SwMI Model	Airbus TETRA System Rel7.0
SwMI HW Release	DXT: M98F2 DXTip TBS: TB3 (TBCu)
SwMI SW Release	S/W DXT: TSR7.0 DXT CD5.32 TBS: TSR7.0 TBS CD5.25 (13.23-0)
MS Manufacturer	Sepura
MS Model	STP9000
MS HW Release	PSYTW201T30WN00
MS SW Release	1824 005 02937

Document references

Core	TTR001-01 v7.0.0 IOP001-01 v4.0.0 TIC-RT001-01 v279

Feature compliance report

Core - Fully Witnessed Testing	
Registration	Incomplete 0_pass_of_5
Initial registration	Incomplete 0_pass_of_2
SwMI initiated location updating	Not Supported
LA timer based Periodic location updating	Incomplete 0_pass_of_2
De-registration	Incomplete 0_pass_of_1

Group Management	Incomplete 0_pass_of_17
Single group attachment	Incomplete 0_pass_of_8
Multiple group attachment	Incomplete 0_pass_of_7
MS initiated group detachment	Incomplete 0_pass_of_2
SwMI initiated group detachment	Incomplete 0_pass_of_2
SwMI initiated group attachment	Incomplete 0_pass_of_2
Group call	Incomplete 0_pass_of_14
Normal group call	Incomplete 0_pass_of_6
Late entry	Incomplete 0_pass_of_1
Priority Group scanning	Incomplete 0_pass_of_3
Call setup modifications	Not Supported
Resource Queuing based on Call Priority	Incomplete 0_pass_of_1
Broadcast Call	Incomplete 0_pass_of_2
Limited coverage notification	Incomplete 0_pass_of_1
Individual call	Incomplete 3_pass_of_11
Simplex individual call	Incomplete 3_pass_of_4
Duplex individual call	Incomplete 0_pass_of_2
Call setup modifications	Incomplete 0_pass_of_2
Resource Queuing based on Call Priority	Incomplete 0_pass_of_2
Indication of imminent call disconnection	Incomplete 0_pass_of_1

Status messages	Incomplete 0_pass_of_4
Individual addressed Status transfer	Incomplete 0_pass_of_1
Group addressed Status transfer	Incomplete 0_pass_of_3
Pre-emptive Priority Call	Incomplete 0_pass_of_6
Pre-emption of Resources	Incomplete 0_pass_of_2
Pre-emption of Busy Users	Incomplete 0_pass_of_4
Emergency Call	Incomplete 0_pass_of_7
Pre-emption of Resources	Incomplete 0_pass_of_3
Pre-emption of Busy Users	Incomplete 0_pass_of_1
Call setup modifications	Incomplete 0_pass_of_2
Call disconnection by non-call owner	Incomplete 0_pass_of_1
Cell Re-selection	Incomplete 0_pass_of_21
Undeclared	Incomplete 0_pass_of_1
Unannounced	Incomplete 0_pass_of_3
Announced - with Call Restoration	Incomplete 0_pass_of_11
Announced - without Call Restoration	Incomplete 0_pass_of_4
Expedited	Incomplete 0_pass_of_2
Graceful Service Degradation Mode (GSDM)	Not Supported
Single-site operation	Not Supported
PSTN interconnect	Incomplete 0_pass_of_6
TETRA Originated Call	Incomplete 0_pass_of_3

PSTN Originated Call	Incomplete 0_pass_of_1
DTMF over-dial	Not Supported
Emergency Telephone Calls	Incomplete 0_pass_of_2
MS-ISDN Numbering	Incomplete 0_pass_of_4
MS ISDN - Voice Call	Incomplete 0_pass_of_2
MS-ISDN Status	Incomplete 0_pass_of_2
In Call Signalling	Incomplete 0_pass_of_8
Slow Signalling on Traffic Channel (SACCH)	Incomplete 0_pass_of_4
Fast Signalling on Traffic Channel (FACCH)	Incomplete 0_pass_of_4
Subscriber Class Procedures	Incomplete 0_pass_of_11
Cell Selection based on Subscriber Class	Incomplete 0_pass_of_5
Subscriber Class Delivery during Location Update	Incomplete 0_pass_of_3
Use of Subscriber Class Preference Levels	Incomplete 0_pass_of_3
Common Secondary Control Channels	Incomplete 0_pass_of_7
One C-SCCH per cell	Incomplete 0_pass_of_5
Two C-SCCH per cell	Incomplete 0_pass_of_2
Three C-SCCH per cell	Incomplete 0_pass_of_2
BS Fallback Operation	Incomplete 0_pass_of_8
Switch to/from BS Fallback Operation	Not Supported
Roaming to avoid a cell in BS Fallback Operation	Incomplete 0_pass_of_1
Roaming to and from a cell in BS Fallback operation offering some services	Not Supported

Services with BS Fallback Operation	Incomplete 0_pass_of_6
Ignore a cell in Fallback Operation	Incomplete 0_pass_of_1
User selectable Fallback behaviour	Not Supported
Energy Economy Mode	
Energy Economy Mode Operation	Not Supported
Transmit Inhibit	Incomplete 0_pass_of_17
TXI Activation & De-Activation	Incomplete 0_pass_of_4
TXI Activation & De-Activation with TxI Status available to the Dispatcher	Incomplete 0_pass_of_12
Receipt of group addressed service during TXI	Incomplete 0_pass_of_1
Mixed band operation	Incomplete 0_pass_of_4
Mixed band operation, inter-cell	Incomplete 0_pass_of_4
Mixed band operation, intra-cell	Not Supported
Mixed band operation, Full	Not Supported