

DMO TETRA Interoperability Certificate

Sepura, SRG3900, Gateway

Berlin, August 2012

Latest Certified Gateway SW Release:	1678 022 03577
Latest Certified Gateway HW Release:	MSUTW201T2C0G00

ISCTI (Istituto Superiore delle Comunicazioni e delle Tecnologie dell'Informazione) certifies that the Sepura SRG3900 Gateway has been subject to interoperability testing for the "certified" features listed on second page of this certificate with the following DM Terminals Sepura STP8000, SRG3900, SRH3900 and the Cassidian Tetra System SwMI 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 single test session between Cassidian and Sepura on August 2012. 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

Gateway Test Session Berlin, August 2012 Sepura SRG3900	Cassidian Tetra System Rel 5.5	Sepura STP8000	Sepura SRG3900	Sepura SRH3900
Software	W5 15.9-4	1678 022 02937	1678 022 03577	1678 022 03150
Hardware	M98F (DXTip)	PSNTW201T300P 00	MSUTW201T2C0 G00	PSPTW201T400G 00
Feature TTR002-02 Gateway				
Registration	Certified	Certified	Certified	Certified
Presence Signal	Certified	Certified	Certified	Certified
Usage Restriction Types	Certified	Certified	Certified	Certified
Individual Call	-	-	-	-
Group Call	Certified	Certified	Certified	Certified
Status	Certified	Certified	Certified	Certified
SDS-TL	Certified	Certified	Certified	Certified
Pre-emption	Certified	Certified	Certified	Certified
Feature TTR002-05 AIE Gateway				
DMO AIE Encryption	Certified	Certified	Certified	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-feature, 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 grey background and the associated sub-features (or second level features) have white background.

The verdict assigned to a sub-feature as showed on Page 2, is derived by the Feature compliance report tables.

Verdict	Definition
Certified	All required tests have been performed and passed.
Partial	Not all the required test cases 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 verdict assigned to a sub-feature is the result of the 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.
Incomplete	Not all Mandated tests (as per TIC-RT indication) have been executed (ran out of time)
Failed	At least one of the required test cases has failed.
No_Equipment	At least one of the required test cases has not been executed due to unavailability of a needed equipment.
	The Result is not relevant (or needed) to verify the SwMI and/or Gateway features

The verdict associated to the feature gives also indication about the method used to test that 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 have been executed.
Spot	Only a selection of the mandatory test cases associated to the 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 annex B.
Regression	Only a selection of the mandatory the test cases associated to the feature is 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 complete tested in a previous test session against the same functionality, see manufacturer declaration in annex B.

Regression on spot	The regression method has been applied on the verdicts based on the spot testing method.
Verified	The CB has verified that the tests were successfully passed based on the log file evaluation. In addition some of the tests may have been witnessed by the CB.

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

Indication	Definition
Not supported	The SwMI and/or MS and/or GW-nr do not support the minimum features required to verify these items

ISCTI has made every effort to ensure that every result have 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 the SwMI, the Gateway and the DM Terminals under test in the test session 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 website (<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 Place/Date	Cassidian, Berlin, August 2012
SwMI Type	Cassidian Tetra System Rel 5.5
SwMI HW Release	M98F (DXTip)
SwMI SW Release	W5 15.9-4
DM Gateway Type	Sepura SRG3900
DM Gateway HW release	MSUTW201T2C0G00
DM Gateway SW release	1678 022 03577
DM Terminal 1 Type	Sepura STP8000
DM Terminal 1 HW release	PSNTW201T300P0001
DM Terminal 1 SW release	1678 022 02937]
DM Terminal 2 Type	Sepura SRG3900
DM Terminal 2 HW release	MSUTW201T2C0G00
DM Terminal 2 SW release	1678 022 03577
DM Terminal 3 Type	Sepura SRH3900
DM Terminal 3 HW release	1678 022 03150
DM Terminal 3 SW release	PSPTW201T400G00
TIP Specs and TIP Compliance Test Plans	
Gateway	TTR002-02 v110 IOP002-02 v100 TIC-RT002-02 v109
AIE Gateway	TTR005-02 v100 IOP002-05 v100 TIC-RT002-05 v005

Feature compliance report

Gateway Test Session Berlin, August 2012 Sepura SRG3900	Cassidian Tetra System 5.5	Sepura STP8000	Sepura SRG3900	Sepura SRH3900
Feature TTR002-02 Gateway				
Registration	PASSED Complete 3_pass_of_3	PASSED Complete 3_pass_of_3	PASSED Complete 3_pass_of_3	PASSED Complete 3_pass_of_3
Registration	PASSED Complete 3_pass_of_3	PASSED Complete 3_pass_of_3	PASSED Complete 3_pass_of_3	PASSED Complete 3_pass_of_3
Presence Signal	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1
Presence Signal	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1
Usage Restriction Types	PASSED Complete 3_pass_of_3	PASSED Complete 3_pass_of_3	PASSED Complete 3_pass_of_3	PASSED Complete 3_pass_of_3
Single Address	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1
Two Addresses	Not Supported	Not Supported	Not Supported	Not Supported
Three addresses	Not Supported	Not Supported	Not Supported	Not Supported
Single MNI	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1
Complying with URT Validity Time	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1
Individual Call				
DMO to TMO individual call	Not Supported	Not Supported	Not Supported	Not Supported
TMO to DMO individual call	Not Supported	Not Supported	Not Supported	Not Supported

Group Call	PASSED Complete 16_pass_of_16	PASSED Complete 16_pass_of_16	PASSED Complete 16_pass_of_16	PASSED Complete 16_pass_of_16
DMO to TMO group call	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6
TMO to DMO group call	PASSED Complete 3_pass_of_3	PASSED Complete 3_pass_of_3	PASSED Complete 3_pass_of_3	PASSED Complete 3_pass_of_3
Call Maintenance (including Changeover)	PASSED Complete 7_pass_of_7	PASSED Complete 7_pass_of_7	PASSED Complete 7_pass_of_7	PASSED Complete 7_pass_of_7
Status	PASSED Complete 8_pass_of_8	PASSED Complete 8_pass_of_8	PASSED Complete 8_pass_of_8	PASSED Complete 8_pass_of_8
Group addressed Status	PASSED Complete 8_pass_of_8	PASSED Complete 8_pass_of_8	PASSED Complete 8_pass_of_8	PASSED Complete 8_pass_of_8
Individually addressed Status	Not Supported	Not Supported	Not Supported	Not Supported
SDS-TL	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Group Addressed SDS- TL	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Individually Addressed SDS-TL	Not Supported	Not Supported	Not Supported	Not Supported
Pre-emption	PASSED Complete 5_pass_of_5	PASSED Complete 5_pass_of_5	PASSED Complete 5_pass_of_5	PASSED Complete 5_pass_of_5
Pre-emption of DMO terminal	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Pre-emption of Gateway	PASSED Complete 3_pass_of_3	PASSED Complete 3_pass_of_3	PASSED Complete 3_pass_of_3	PASSED Complete 3_pass_of_3
Feature TTR002-05 AIE Gateway				
DMO AIE Encryption	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6
Encrypted Group Calls	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Encrypted Individual Calls	Not Supported	Not Supported	Not Supported	Not Supported

Encrypted Status messages	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1
Pre-emption of encrypted activity	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1
Handling mismatched keys	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2