TETRA IOP CERTIFICATE

DEKRA
Digital & Product Solutions
Innovating Safety & Security

TETRA Interoperability Certificate

Trunked Mode Operation

Airbus Defence & Space, Airbus TETRA System Rel7.0 – SwMI
Motorola Solutions, TPG2200 – Terminal

Test Session #1002, hosted by Motorola on BDBOS/Airbus SwMI in Berlin, GER, June 2025

Latest Certified SwMI SW Release:	Rel 7.0	**Latest Certified MS SW Release:**	MR2025.1
Latest Certified SwMI HW Release:	M98F (DXTip)	**Latest Certified MS HW Release:**	PTPA512NE

DEKRA certifies, that the Airbus Defence & Space Airbus TETRA System Rel7.0 SwMI and the Motorola Solutions TPG2200 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.

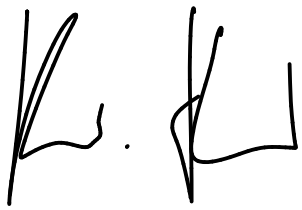
A feature is "Certified" when it has been successfully tested during the last test session with one of the testing method described in the TETRA process document part 1 (TPD001-01).

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 Motorola Solutions in Berlin, GER during June 2025.

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.

Authorized CB signatory:



Head of DEKRA TETRA Certification Body

Date of Issue:
December 18 - 2025
version: v0

Certified features

Tetra Association TTR001-01: Core	
Registration	Certified
Group Management	Certified
Group call	-
Individual call	-
Status messages	Certified
Pre-emptive Priority Call	-
Emergency Call	-
Cell Re-selection	Certified
PSTN interconnect	-
MS-ISDN Numbering	-
In Call Signalling	-
Subscriber Class Procedures	Certified
Common Secondary Control Channels	Certified
BS Fallback Operation	Certified
Energy Economy Mode	Certified
Transmit Inhibit	Certified
Mixed band operation	-
Tetra Association TTR001-02: SDS	
SDS Type 1, 2 or 3	Certified
SDS-TL	Certified
Store and Forward	-
Multipart SDS	Certified
Tetra Association TTR001-04: AUTH	
SwMI Initiated (non-mutual) Authentication	Certified
SwMI Initiated Authentication made Mutual by MS	Certified
MS Initiated Authentication made Mutual by SwMI	-
TEI Query using "Authentication downlink"	Certified
HW, SW version, Model number and/or TEI	-

Tetra Association TTR001-11: AIE	
Security Class 2 Air Interface Encryption	Certified
Security Class 3 Air Interface Encryption	Certified
Security Class 3G Air Interface Encryption	-
Management of CMG and GSKO(X)	-
Key Status demand	-
Change of Security Class for Fallback operation	Certified
Change of Security Class (other than for Fallback operation)	-
Key Management for Secure Direct Mode Operation	-
Air Interface Encryption using a KSG from TEA Set A (only includes the "Category Both" test cases mandatory for Set A)	Certified
Air Interface Encryption using a KSG from TEA Set B (only includes the "Category Both" and "SetB" test cases mandatory for Set B)	-
Tetra Association TTR001-13: ED	
Enable and temporary disable of an MS	Certified
Permanent disable of an MS	Certified
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
Graceful Service Degradation Mode (GSDM)	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

DEKRA made every effort to ensure that every result has been correctly evaluated in accordance with the relevant TIPs, Test Plans and TIC-RTs.

DERKA 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://tcca.info/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	M98F (DXTip)
SwMI SW Release	Rel 7.0
MS Manufacturer	Motorola Solutions
MS Model	TPG2200
MS HW Release	PTPA512NE
MS SW Release	MR2025.1

Document references

Core	TTR001-01 v6.4.0 IOP001-01 v3.4.0 TIC-RT001-01 v279
SDS	TTR001-02 v2.1.3 IOP001-02 v2.2.0 TIC-RT001-02 v225
AUTH	TTR001-04 v4.0.0 IOP001-04 v3.0.0 TIC-RT001-04 v300
AIE	TTR001-11 v4.1.0 IOP001-11 v4.1.0 TIC-RT001-11 v402
ED	TTR001-13 v3.0.0 IOP001-13 v2.0.0 TIC-RT001-13 v200
CallOut	TTR001-21 v2.1.1 IOP001-21 v2.3.0 TIC-RT001-21 v119

Feature compliance report

Core - Fully Witnessed Testing	
Registration	PASSED Complete 5_pass_of_5
Initial registration	PASSED Complete 2_pass_of_2
SwMI initiated location updating	PASSED Complete 1_pass_of_1
LA timer based Periodic location updating	PASSED Complete 1_pass_of_1
De-registration	PASSED Complete 1_pass_of_1
Group Management	PASSED Complete 4_pass_of_4
Single group attachment	PASSED Complete 2_pass_of_2
Multiple group attachment	Not Supported
MS initiated group detachment	PASSED Complete 1_pass_of_1
SwMI initiated group detachment	PASSED Complete 1_pass_of_1
SwMI initiated group attachment	PASSED Complete 1_pass_of_1
Group call	
Normal group call	Not Supported
Late entry	Not Supported
Priority Group scanning	Not Supported
Call setup modifications	Not Supported
Resource Queuing based on Call Priority	Not Supported
Broadcast Call	Not Supported
Limited coverage notification	Not Supported
Individual call	
Simplex individual call	Not Supported
Duplex individual call	Not Supported
Call setup modifications	Not Supported
Resource Queuing based on Call Priority	Not Supported
Indication of imminent call disconnection	Not Supported
Status messages	PASSED Complete 1_pass_of_1
Individual addressed Status transfer	PASSED Complete 1_pass_of_1
Group addressed Status transfer	Not Supported
Pre-emptive Priority Call	
Pre-emption of Resources	Not Supported
Pre-emption of Busy Users	Not Supported
Emergency Call	
Pre-emption of Resources	Not Supported
Pre-emption of Busy Users	Not Supported
Call setup modifications	Not Supported
Call disconnection by non-call owner	Not Supported

Cell Re-selection	PASSED Complete 4_pass_of_4
Undeclared	PASSED Complete 1_pass_of_1
Unannounced	Not Supported
Announced - with Call Restoration	Not Supported
Announced - without Call Restoration	Not Supported
Expedited	Not Supported
Graceful Service Degradation Mode (GSDM)	PASSED Complete 3_pass_of_3
Single-site operation	Not Supported
PSTN interconnect	
TETRA Originated Call	Not Supported
PSTN Originated Call	Not Supported
DTMF over-dial	Not Supported
Emergency Telephone Calls	Not Supported
MS-ISDN Numbering	
MS ISDN - Voice Call	Not Supported
MS-ISDN Status	Not Supported
In Call Signalling	
Slow Signalling on Traffic Channel (SACCH)	Not Supported
Fast Signalling on Traffic Channel (FACCH)	Not Supported
Subscriber Class Procedures	PASSED Complete 6_pass_of_6
Cell Selection based on Subscriber Class	PASSED Complete 2_pass_of_2
Subscriber Class Delivery during Location Update	PASSED Complete 1_pass_of_1
Use of Subscriber Class Preference Levels	PASSED Complete 3_pass_of_3
Common Secondary Control Channels	PASSED Complete 7_pass_of_7
One C-SCCH per cell	PASSED Complete 5_pass_of_5
Two C-SCCH per cell	PASSED Complete 2_pass_of_2
Three C-SCCH per cell	PASSED Complete 2_pass_of_2
BS Fallback Operation	PASSED Complete 6_pass_of_6
Switch to/from BS Fallback Operation	PASSED Complete 2_pass_of_2
Roaming to avoid a cell in BS Fallback Operation	PASSED Complete 2_pass_of_2
Roaming to and from a cell in BS Fallback operation offering some services	Not Supported
Services with BS Fallback Operation	PASSED Complete 1_pass_of_1
Ignore a cell in Fallback Operation	PASSED Complete 1_pass_of_1
User selectable Fallback behaviour	Not Supported
Energy Economy Mode	PASSED Complete 4_pass_of_4
Energy Economy Mode Operation	PASSED Complete 4_pass_of_4
Transmit Inhibit	PASSED Complete 7_pass_of_7
TXI Activation & De-Activation	PASSED Complete 3_pass_of_3
TXI Activation & De-Activation with TxI Status available to the Dispatcher	PASSED Complete 3_pass_of_3
Receipt of group addressed service during TXI	PASSED Complete 1_pass_of_1

Mixed band operation	
Mixed band operation, inter-cell	Not Supported
Mixed band operation, intra-cell	Not Supported
Mixed band operation, Full	Not Supported

SDS - Fully Witnessed Testing	
SDS Type 1, 2 or 3	PASSED Complete 3_pass_of_3
SDS Type 1	PASSED Complete 1_pass_of_1
SDS Type 2	PASSED Complete 1_pass_of_1
SDS Type 3	PASSED Complete 1_pass_of_1
SDS-TL	PASSED Complete 12_pass_of_12
Individually Addressed	PASSED Complete 3_pass_of_3
Group Addressed	PASSED Complete 1_pass_of_1
Using MS-ISDN dialling	Not Supported
SDS Reception	PASSED Complete 6_pass_of_6
Using UCS2 coding scheme	PASSED Complete 2_pass_of_2
Using 7-bit coding scheme	PASSED Complete 2_pass_of_2
Using 8-bit Latin 1 coding scheme	PASSED Complete 2_pass_of_2
Using 8-bit Latin/Cyrillic coding scheme	Not Supported
Using 8-bit Latin 9 coding scheme	PASSED Complete 2_pass_of_2
Store and Forward	
Individually Addressed	Not Supported
Group Addressed	Not Supported
Multipart SDS	PASSED Complete 1_pass_of_1
Multipart SDS	PASSED Complete 1_pass_of_1

Auth - Fully Witnessed Testing	
SwMI Initiated (non-mutual) Authentication	PASSED Complete 3_pass_of_3
Attach with authentication	PASSED Complete 1_pass_of_1
Roaming with authentication	PASSED Complete 1_pass_of_1
SwMI rejects MS during authentication	PASSED Complete 1_pass_of_1
MS rejects SwMI during authentication	Not Supported
SwMI Initiated Authentication made Mutual by MS	PASSED Complete 2_pass_of_2
Attach with authentication	PASSED Complete 1_pass_of_1
Roaming with authentication	PASSED Complete 1_pass_of_1
MS Initiated Authentication made Mutual by SwMI	
Roaming with authentication	Not Supported
TEI Query using ''Authentication downlink''	PASSED Complete 1_pass_of_1
TEI Query using ''Authentication downlink'' Operation	PASSED Complete 1_pass_of_1
HW, SW version, Model number and/or TEI	
Transfer of HW, SW version, Model number and/or TEI	Not Supported

AIE - Fully Witnessed Testing	
Security Class 2 Air Interface Encryption	PASSED Complete 1_pass_of_1
Location Updating and AI Signalling Protection	PASSED Complete 1_pass_of_1
TM-SCK(X) provisioning during location updating	Not Supported
Communications between parties using encryption	Not Supported
Communications between clear and encrypted parties	Not Supported
Communications between encrypted parties on a channel designated to operate in clear	Not Supported
OTAR of TM-SCK(X)	Not Supported
Change of TM-SCK(X)	Not Supported
Packet Data with Class 2 Air Interface Encryption	Not Supported
Tolerance of SwMI not supporting SCK(X)-OTAR	Not Supported
Security Class 3 Air Interface Encryption	PASSED Complete 5_pass_of_5
Clear Location Updating and AI Signalling Protection	PASSED Complete 2_pass_of_2
Encrypted Location Updating and AI Signalling Protection	PASSED Complete 2_pass_of_2
DCK Forwarding at MS request	PASSED Complete 1_pass_of_1
DCK Forwarding by SwMI (without MS request)	Not Supported
DCK Retrieval	PASSED Complete 1_pass_of_1
CCK(X) provisioning during location updating	PASSED Complete 2_pass_of_2
Communications between parties using encryption	Not Supported
Communications between clear and encrypted parties	Not Supported
Communications between encrypted parties on a channel designated to operate in clear	Not Supported
OTAR of CCK(X)	Not Supported
Change of CCK(X)	Not Supported
Packet Data with Class 3 Air Interface Encryption	PASSED Complete 1_pass_of_1
Security Class 3G Air Interface Encryption	
GCK(X) Key Association setting	Not Supported
Communications between parties using encryption	Not Supported
Communications between clear and encrypted parties	Not Supported
OTAR of GCK(X)	Not Supported
Change of GCK(X)	Not Supported
Management of CMG and GSKO(X)	
OTAR and change of CMG and GSKO(X)	Not Supported
Key Status demand	
SCK/SCKX Key Status demand	Not Supported
GCK/GCKX Key Status demand	Not Supported
GSKO/GSKOX Key Status demand	Not Supported
Change of Security Class for Fallback operation	PASSED Complete 3_pass_of_3
Seamless change to Security Class 2 for BS Fallback operation	Not Supported
Non-seamless change to Security Class 2 for BS Fallback operation	PASSED Complete 3_pass_of_3
Provisioning of TM-SCK(X) for fallback to Security Class 2 operation	Not Supported
Change to Security Class 1 for BS Fallback operation	Not Supported

Change of Security Class (other than for Fallback operation)	
Change between Security Class 3 and Security Class 3G	Not Supported
Change between Security Class 2 and Security Class 3	Not Supported
Change from Security Class 3G to Security Class 2	Not Supported
Key Management for Secure Direct Mode Operation	
OTAR of DM-SCK(X)	Not Supported
Change of DM-SCK(X)	Not Supported
Air Interface Encryption using a KSG from TEA Set A (only includes the "Category Both" test cases mandatory for Set A)	PASSED Complete 4_pass_of_4
Security Class 2 Air Interface Encryption	Not Supported
Security Class 3 Air Interface Encryption	PASSED Complete 4_pass_of_4
Security Class 3G Air Interface Encryption	Not Supported
Management of CMG and GSKO	Not Supported
Air Interface Encryption using a KSG from TEA Set B (only includes the "Category Both" and "SetB" test cases mandatory for Set B)	
Security Class 2 Air Interface Encryption	Not Supported
Security Class 3 Air Interface Encryption	Not Supported
Security Class 3G Air Interface Encryption	Not Supported
Identity Encryption ESI (Encrypted Short Identity)	Not Supported
Identity Encryption MAE (MAC Address Encryption)	Not Supported
Management of CMG and GSKOX	Not Supported

ED - Fully Witnessed Testing	
Enable and temporary disable of an MS	PASSED Complete 8_pass_of_8
Enable and temporary disable of an MS without authentication	Not Supported
Enable and temporary disable of an MS with authentication	PASSED Complete 4_pass_of_4
Registration of a temporary disabled MS	PASSED Complete 2_pass_of_2
Rejection of applicable invalid enable/disable requests	PASSED Complete 1_pass_of_1
Removable SIMs do not affect the subscriber or equipment that has been enabled/disabled	Not Supported
Disabling of an MS during a call or while on the PDCH	PASSED Complete 1_pass_of_1
Permanent disable of an MS	PASSED Complete 3_pass_of_3
Permanent disable of an MS with authentication	PASSED Complete 2_pass_of_2
Permanently Disabled MS cannot send air interface signalling	PASSED Complete 1_pass_of_1

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 10_pass_of_10
Interaction with previous Callout	PASSED Complete 1_pass_of_1
Interaction with emergency call	Not Supported
Interaction with non-emergency call	Not Supported
Interaction with data and status	PASSED Complete 8_pass_of_8
Interaction with local services	Not Supported
Manual exit	PASSED Complete 1_pass_of_1
Callout Test and Callout Availability	PASSED Complete 4_pass_of_4
Callout Test	PASSED Complete 2_pass_of_2
Callout Availability	PASSED Complete 2_pass_of_2
Callout Availability request	PASSED Complete 1_pass_of_1
Callout Text and Callout Pre-Coded Status	PASSED Complete 10_pass_of_10
Callout Text	PASSED Complete 2_pass_of_2
Concatenated Callout Text using Callout Specific Concatenation	PASSED Complete 1_pass_of_1
Concatenated Callout Text using mSDS	PASSED Complete 1_pass_of_1

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
Graceful Service Degradation Mode (GSDM)	PASSED Complete 2_pass_of_2
Graceful Service Degradation Mode (GSDM)	PASSED Complete 2_pass_of_2

Document History

Date	Version	Comment
14.11.2025	0	Published version
		•