Specificaţii tehnice

Anexa nr. 22
la Documentația standard nr._____
din "15" noiembrie 2024

[Acest tabel va fi completat de către ofertant în coloanele 2, 3, 4, 6, 7, iar de către autoritatea contractantă – în coloanele 1, 5,]

Numărul procedurii de achiziție ocds-b3wdp1-MD-1730470595171 din 01 noiembrie 2024
Obiectul achiziției: Echipament informatic

Denumirea bunurilor/serviciilor	Denumirea modelului bunului/serviciului	Ţara de origine	Produ-cătorul	Specificarea tehnică deplină solicitată de către autoritatea contractantă	Specificarea tehnică deplină propusă de către ofertant	Standarde de referinţă
1	2	3	4	5	6	7
Bunuri/servicii						
Lot 1. Calculatoare de birou				*Calculatoare de birou de tip All-in-One Display/Monitor: min 24"- max. 27"; Full HD; 1920 x 1080 CPU: Arhitectura x86, 2.0 GHz; 64 bit, min.4 nuclee RAM: DDR4/DDR5 min 16 GB, Placa Grafică/Video Integrată SSD: min.512 GB Sistem de operare: Microsoft Windows*		

				11 Suite de birou: Microsoft Office sau echivalentul Porturi: USB 3.0; Ethernet; Port Audio 3.5 mm; HDMI Tastieră: Externă; QWERTY Perioada de garanție: min. 36 de luni Anul de producere: Nu mai vechi de 1 an din momentul livrării		
Lot 2. Imprimante multifuncționale alb-negru				*Imprimante MFP (imprimantă, scaner, copiator)* *imprimare cu laser alb/negru; 38 ppm* *Format maxim de imprimare A4 (210 × 297 mm)* *dimensiunea maximă a amprentei: 216 × 356 mm* *ecran LCD color;* *imprimarea față-verso* *interfețe: Wi-Fi, Ethernet (RJ-45), USB* *Termen de garantie: 36 luni*		
Lot 3. Imprimanta laser				*Tehnologia imprimarii Laser* *Viteza imprimari min pagini - 18/min*		

				Imprimarea pe plicuri Da *Imprimarea pe carduri Da* *Rezolutie max. pe X imprimare 600* *Rezolutie max. pe Y imprimare 600* *Termen de garantie: 36 luni*		
Lot 4. Imprimante color cu jet de cerneală				*Imprimante cu rezervoare de umplere a cernelii și containere de scurgere.* *Rezoluţie printare: 5.500 x 1.300 DPI (minim), viteza de imprimare: 20 pag/min monocrom, 10 pag/min color,* *Interfață USB* *Termen de garantie: 36 luni*		
Lot 5. ***Terminale radio Portabile TETRA***	MXP600 TEA1	Malaysia	Motorola	*Pentru Terminalele radio mobile TETRA , serviciile de instalare se includ în preț.* *Lista deplină de cerințe asupra caracteristicilor, conform Anexei Nr.1*	*Specificarea tehnică deplină conform Anexei Nr. 1* Linkul la certificat ISCOM: https://tcca.info/interoperability/interoperability-certificates-and-test-reports/	-
Terminale radio mobile TETRA	MTM5400 - TEA1					
Lot 6. Echipamente periferice:				*Iluminarea tastaturii : Nu*		

Setură tastatură și mouse fără fir				*Tip conectivitate : Fără fir* *Segment : Home and Office* *Compatibilitate : Windows* *Tip tastatură : Membrane* *Tastatură : En/ Ru* *Tip conectivitate: Fără fir* *Interfață de conexiune modul: USB*		
Stickuri de memorie flash				*Memorie min 32GB* *Tip extern* *Viteza de citire(min), MB/s 150* *Viteza de scriere(min) 8 MB/s* *Form factor USB Type-A* *Versiunea interface USB 3.2*		
HDD pentru NAS				*HDD 3.5"* *Destinație: Pentru NAS* *Volumul de memorie:4 TB* *Volumul memoria-cash, MB:256 MB* *Viteza a fusului, RPM: 7200 RPM* *Viteza maximă de transfer de date, MBps*		

				217 MBps *Interfața de conectare: SATA III (6 Gbps)* *Tehnologia de înregistrare:* *Metoda de înregistrare longitudinală (CMR Drive)* *Advanced Format (4K)* *Suportă NCQ* *NASware 3.0* *3D Active Balance Plus* *OBLIGATORIU COMPATIBILITATE CU NAS SYNOLOGY DS220+*		
Stație de andocare				*Docking Station pentru HDD/SSD hard disk-uri SATA de 2,5 și 3,5 inchi de orice capacitate* *Interfață (min) USB 2.0*		
Switch				*Viteza LAN, Mbit/s 100/1000* *Cantitatea de porturi LAN, buc. 8*		
USB Hub				*USB Hub min 6 port* *Conectivitate USB Type A*		

SSD Extern				*Capacitate memorie: 500 GB* *Interfață: USB 3.2 Gen 2* *Tipul conectorului unității: USB Type-C* *Conector tip: USB Type-C, USB Type-A* *Protecție antișoc: Da* *Viteza de scriere maximă 1000 MB/s* *Viteza maximă de citire 1050 MB/s*		
TOTAL						

Semnat:_____ Numele, Prenumele: Zmeu Ion În calitate de: Director Comercial

Ofertantul: SC „Melitax Grup” SRL Adresa: mun.Chisinau, str. Vasile Alecsandri 143

TETRA Interoperability Certificate

Trunked Mode Operation

Motorola Solutions, DIMETRA X Core – SwMI
Motorola Solutions, MXP600 – Terminal

Test Session #192, hosted by Motorola Solutions in Krakow, May 2023

Latest Certified SwMI SW Release:	R9.2.0	**Latest Certified MS SW Release:**	MR2022.4
Latest Certified SwMI HW Release:	DIMETRA X Core R9.2.0	**Latest Certified MS HW Release:**	PTW952HEB

ISCTI (Istituto Superiore delle Comunicazioni e delle Tecnologie dell'Informazione) certifies, that the Motorola Solutions DIMETRA X Core SwMI and the Motorola Solutions MXP600 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 multiple test session between Motorola Solutions and Motorola Solutions in May 2023. 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.

IOP Test Engineer	Head of the Procedure	Radio Office Manager
Roberto Feroci		Firmato digitalmente da Eva Spina Data: 2023.12.19 12:32:36 +01'00'

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Date of Issue:
21 December 2023
v 1

Certified features

Tetra Association TTR001-01: Core	
Registration	Certified
Group Management	Certified
Group call	Certified
Individual call	Certified
Status messages	Certified
Pre-emptive Priority Call	Certified
Emergency Call	Certified
Cell Re-selection	Certified
PSTN interconnect	Certified
MS-ISDN Numbering	-
In Call Signalling	Certified
Subscriber Class Procedures	Certified
Common Secondary Control Channels	Certified
BS Fallback Operation	Certified
Energy Economy Mode	Certified
Transmit Inhibit	Certified
Mixed band operation	Certified
Tetra Association TTR001-02: SDS	
SDS Type 1, 2 or 3	-
SDS-TL	Certified
Store and Forward	Certified
Multipart SDS	-
Tetra Association TTR001-03: DGNA	
Support for individually addressed DGNA	Certified
Support for group addressed DGNA	Certified
Tolerance of unsupported DGNA functions	-
Tetra Association TTR001-04: AUTH	
SwMI Initiated (non-mutual) Authentication	Certified
SwMI Initiated Authentication made Mutual by MS	Certified
TEI Query using "Authentication downlink"	-
HW, SW version, TEI and/or Model number	-

Tetra Association TTR001-05: PD	
Context Management	Certified
Single Slot Packet Data	Certified
Multi Slot Packet Data	Certified
TEDS	-
Mixed band operation	Certified
Tetra Association TTR001-09: AL	
Ambience Listening	Certified
Interaction with Transmit Inhibit	Certified
Tetra Association TTR001-10: E2EE	
E2EE Voice Call	Certified
E2EE Short Data	Certified
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	Certified
Management of CMG and GSKO	Certified
Key Status demand	Certified
Change of Security Class for Fallback operation	Certified
Change of Security Class (other than for Fallback operation)	Certified
Key Management for Secure Direct Mode Operation	Certified
Tetra Association TTR001-12: SI	
MS initiated Service Interaction	Certified
SwMI initiated Service Interaction	Certified
Call Waiting	Certified
Tetra Association TTR001-13: ED	
Enable and temporary disable of an MS	Certified
Permanent disable of an MS	Certified
Tetra Association TTR001-14: TKD	
Delivery of Authentication Data	Certified
Delivery of SCK	Certified
Delivery method	Certified
Tetra Association TTR001-17: RUA	
Radio User Assignment	Certified
Tetra Association TTR001-19: LIP	
Location Information Protocol	Certified

Tetra Association TTR001-20: CF	
Call Forwarding Unconditional	Certified
Call Forwarding Conditional	Certified
Call Forwarding Information Displayed	Certified
Management of Call Forwarding	Certified
Tetra Association TTR001-21: CallOut	
Full Calllout	Certified
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)	-

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	Motorola Solutions
SwMI Model	DIMETRA X Core
SwMI HW Release	DIMETRA X Core R9.2.0
SwMI SW Release	R9.2.0
MS Manufacturer	Motorola Solutions
MS Model	MXP600
MS HW Release	PTW952HEB
MS SW Release	MR2022.4

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
DGNA	TTR001-03 v2.2.0 IOP001-03 v2.3.0 TIC-RT001-03 v235
AUTH	TTR001-04 v3.2.0 IOP001-04 v2.1.0 TIC-RT001-04 v234
PD	TTR001-05 v4.1.0 IOP001-05 v4.1.0 TIC-RT001-05 v408
AL	TTR001-09 v2.1.0 IOP001-09 v1.2.0 TIC-RT001-09 v132
E2EE	TTR001-10 v2.1.0 IOP001-10 v1.3.0 TIC-RT001-10-1 v133
AIE	TTR001-11 v3.2.0 IOP001-11 v3.2.0 TIC-RT001-11 v337
SI	TTR001-12 v1.1.0 IOP001-12 v1.0.0 TIC-RT001-12 v137
ED	TTR001-13 v2.1.0 IOP001-13 v1.0.0 TIC-RT001-13 v153
TKD	TTR001-14 v1.0.3 IOP001-14 v1.2.0 TIC-RT001-14 v125

RUA	TTR001-17 v1.1.0 IOP001-17 v1.0.0 TIC-RT001-17 v117
LIP	TTR001-19 v1.1.0 IOP001-19 v1.3.0 TIC-RT001-19 v118
CF	TTR001-20 v1.0.1 IOP001-20 v1.0.0 TIC-RT001-20 v117
CallOut	TTR001-21 v2.1.1 IOP001-21 v2.4.0 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 2_pass_of_2
LA timer based Periodic location updating	Not Supported
De-registration	PASSED Complete 1_pass_of_1
Group Management	PASSED Complete 11_pass_of_11
Single group attachment	PASSED Complete 5_pass_of_5
Multiple group attachment	PASSED Complete 4_pass_of_4
MS initiated group detachment	PASSED Complete 2_pass_of_2
SwMI initiated group detachment	Not Supported
SwMI initiated group attachment	Not Supported
Group call	PASSED Complete 10_pass_of_10
Normal group call	PASSED Complete 3_pass_of_3
Late entry	PASSED Complete 1_pass_of_1
Priority Group scanning	PASSED Complete 3_pass_of_3
Call setup modifications	PASSED Complete 1_pass_of_1
Resource Queuing based on Call Priority	PASSED Complete 1_pass_of_1
Broadcast Call	PASSED Complete 1_pass_of_1
Limited coverage notification	Not Supported

Individual call	PASSED Complete 10_pass_of_10
Simplex individual call	PASSED Complete 4_pass_of_4
Duplex individual call	PASSED Complete 2_pass_of_2
Call setup modifications	PASSED Complete 2_pass_of_2
Resource Queuing based on Call Priority	PASSED Complete 2_pass_of_2
Indication of imminent call disconnection	Not Supported
Status messages	PASSED Complete 2_pass_of_2
Individual addressed Status transfer	PASSED Complete 1_pass_of_1
Group addressed Status transfer	PASSED Complete 1_pass_of_1
Pre-emptive Priority Call	PASSED Complete 3_pass_of_3
Pre-emption of Resources	PASSED Complete 1_pass_of_1
Pre-emption of Busy Users	PASSED Complete 2_pass_of_2
Emergency Call	PASSED Complete 3_pass_of_3
Pre-emption of Resources	PASSED Complete 2_pass_of_2
Pre-emption of Busy Users	PASSED Complete 1_pass_of_1
Call setup modifications	Not Supported
Call disconnection by non-call owner	Not Supported
Cell Re-selection	PASSED Complete 16_pass_of_16
Undeclared	PASSED Complete 1_pass_of_1
Unannounced	PASSED Complete 7_pass_of_7
Announced - with Call Restoration	PASSED Complete 8_pass_of_8
Announced - without Call Restoration	Not Supported

Expedited	Not Supported
Graceful Service Degradation Mode (GSDM)	Not Supported
Single-site operation	Not Supported
PSTN interconnect	PASSED Complete 4_pass_of_4
TETRA Originated Call	PASSED Complete 2_pass_of_2
PSTN Originated Call	PASSED Complete 1_pass_of_1
DTMF over-dial	PASSED Complete 1_pass_of_1
Emergency Telephone Calls	Not Supported
MS-ISDN Numbering	
MS ISDN - Voice Call	Not Supported
MS-ISDN Status	Not Supported
In Call Signalling	PASSED Complete 5_pass_of_5
Slow Signalling on Traffic Channel (SACCH)	PASSED Complete 4_pass_of_4
Fast Signalling on Traffic Channel (FACCH)	PASSED Complete 1_pass_of_1
Subscriber Class Procedures	PASSED Complete 7_pass_of_7
Cell Selection based on Subscriber Class	PASSED Complete 4_pass_of_4
Subscriber Class Delivery during Location Update	Not Supported
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 11_pass_of_11
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 6_pass_of_6
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 8_pass_of_8
TXI Activation & De-Activation	PASSED Complete 4_pass_of_4
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	PASSED Complete 4_pass_of_4
Mixed band operation, inter-cell	PASSED Complete 4_pass_of_4
Mixed band operation, intra-cell	PASSED Complete 3_pass_of_3
Mixed band operation, Full	PASSED Complete 3_pass_of_3
SDS - Fully Witnessed Testing	
SDS Type 1, 2 or 3	
SDS Type 1	Not Supported
SDS Type 2	Not Supported
SDS Type 3	Not Supported
SDS-TL	PASSED Complete 14_pass_of_14
Individually Addressed	PASSED Complete 3_pass_of_3

Group Addressed	PASSED Complete 3_pass_of_3
Using MS-ISDN dialling	Not Supported
SDS Reception	PASSED Complete 7_pass_of_7
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	PASSED Complete 3_pass_of_3
Individually Addressed	PASSED Complete 3_pass_of_3
Group Addressed	Not Supported
Multipart SDS	
Multipart SDS	Not Supported
DGNA - Fully Witnessed Testing	
Support for individually addressed DGNA	PASSED Complete 17_pass_of_17
Support for individually addressed DGNA assignment without attachment	PASSED Complete 4_pass_of_4
Support for individually addressed DGNA assignment with attachment as selected group	PASSED Complete 2_pass_of_2
Support for individually addressed DGNA assignment with attachment as scanned group	PASSED Complete 3_pass_of_3
Support for individually addressed DGNA assignment with rejected attachment	Not Supported
Support for individually addressed assigment for pre-programmed group	PASSED Complete 6_pass_of_6
Support for assigning multiple DGNA groups	PASSED Complete 2_pass_of_2
Support for assigning multiple pre-programmed groups	PASSED Complete 1_pass_of_1
Support for removing multiple DGNA groups	PASSED Complete 1_pass_of_1

Support for retaining DGNA groups over a power cycle	PASSED Complete 2_pass_of_2
Support for group addressed DGNA	PASSED Complete 5_pass_of_5
Support for group addressed DGNA assignment	PASSED Complete 2_pass_of_2
Management of 'group assignment lifetime'	PASSED Complete 2_pass_of_2
Support for group addressed DGNA deassignment	PASSED Complete 1_pass_of_1
Tolerance of unsupported DGNA functions	
MS tolerance of unsupported individual addressed DGNA signalling	Not Supported
MS tolerance of unsupported group addressed DGNA signalling	Not Supported
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
TEI Query using ''Authentication downlink''	
TEI Query using ''Authentication downlink'' Operation	Not Supported
HW, SW version, TEI and/or Model number	
Transfer of HW, SW version, TEI and/or Model number	Not Supported
PD - Fully Witnessed Testing	
Context Management	PASSED Complete 11_pass_of_11

Context Activation	PASSED Complete 7_pass_of_7
User authentication	PASSED Complete 4_pass_of_4
Single Slot Packet Data	PASSED Complete 11_pass_of_11
Data Transfer	PASSED Complete 7_pass_of_7
Cell re-selection	PASSED Complete 3_pass_of_3
Packet Data Channel sharing	PASSED Complete 1_pass_of_1
Multi Slot Packet Data	PASSED Complete 4_pass_of_4
Data Transfer	PASSED Complete 4_pass_of_4
TEDS	
TEDS with Context Activation	Not Supported
TEDS Data Transmission, using LLC Optimisation	Not Supported
TEDS Cell Reselection, using LLC Optimisation	Not Supported
Mixed band operation	PASSED Complete 2_pass_of_2
Mixed band operation, inter-cell	PASSED Complete 2_pass_of_2
Mixed band operation, intra-cell	PASSED Complete 2_pass_of_2
Mixed band operation, Full	PASSED Complete 2_pass_of_2
AL - Fully Witnessed Testing	
Ambience Listening	PASSED Complete 5_pass_of_5
SS-AL Call Setup	PASSED Complete 2_pass_of_2
MS initiated SS-AL disconnection	PASSED Complete 3_pass_of_3
No Indication to affected user	PASSED Complete 5_pass_of_5
Interaction with Transmit Inhibit	PASSED Complete 1_pass_of_1
AL can override TxI	Not Supported

AL cannot override TxI	PASSED Complete 1_pass_of_1
E2EE - Fully Witnessed Testing	
E2EE Voice Call	PASSED Complete 9_pass_of_9
Individual (P2P) call	PASSED Complete 4_pass_of_4
Group (P2MP) call	PASSED Complete 2_pass_of_2
Clear Voice Override (CVO): Acceptance	PASSED Complete 1_pass_of_1
Clear Voice Override (CVO): User Initiated	Not Supported
Clear Voice Override (CVO): Automatic	PASSED Complete 1_pass_of_1
OTAK key delivery	PASSED Complete 1_pass_of_1
E2EE Short Data	PASSED Complete 9_pass_of_9
Short Data	PASSED Complete 9_pass_of_9
Multipart Short Data	Not Supported
Short Data Reception	PASSED Complete 5_pass_of_5
Multipart Short Data Reception	Not Supported
AIE - Fully Witnessed Testing	
Security Class 2 Air Interface Encryption	PASSED Complete 20_pass_of_20
Location Updating and AI Signalling Protection	PASSED Complete 7_pass_of_7
TM-SCK provisioning during location updating	PASSED Complete 2_pass_of_2
Communications between parties using encryption	PASSED Complete 2_pass_of_2
Communications between clear and encrypted parties	PASSED Complete 3_pass_of_3
Communications between encrypted parties on a channel designated to operate in clear	PASSED Complete 2_pass_of_2
OTAR of TM-SCK	PASSED Complete 2_pass_of_2

Change of TM-SCK	PASSED Complete 4_pass_of_4
Packet Data with Class 2 Air Interface Encryption	PASSED Complete 2_pass_of_2
Tolerance of SwMI not supporting SCK-OTAR	Not Supported
Security Class 3 Air Interface Encryption	PASSED Complete 21_pass_of_21
Clear Location Updating and AI Signalling Protection	PASSED Complete 3_pass_of_3
Encrypted Location Updating and AI Signalling Protection	PASSED Complete 5_pass_of_5
DCK Forwarding at MS request	Not Supported
DCK Forwarding by SwMI (without MS request)	PASSED Complete 1_pass_of_1
DCK Retrieval	PASSED Complete 4_pass_of_4
CCK provisioning during location updating	PASSED Complete 3_pass_of_3
Communications between parties using encryption	PASSED Complete 2_pass_of_2
Communications between clear and encrypted parties	PASSED Complete 3_pass_of_3
Communications between encrypted parties on a channel designated to operate in clear	PASSED Complete 2_pass_of_2
OTAR of CCK	PASSED Complete 2_pass_of_2
Change of CCK	PASSED Complete 4_pass_of_4
Packet Data with Class 3 Air Interface Encryption	PASSED Complete 2_pass_of_2
Security Class 3G Air Interface Encryption	PASSED Complete 9_pass_of_9
GCK Key Association setting	PASSED Complete 3_pass_of_3
Communications between parties using encryption	PASSED Complete 2_pass_of_2
Communications between clear and encrypted parties	PASSED Complete 1_pass_of_1
OTAR of GCK	PASSED Complete 2_pass_of_2

Change of GCK	PASSED Complete 3_pass_of_3
Management of CMG and GSKO	PASSED Complete 5_pass_of_5
OTAR and change of CMG and GSKO	PASSED Complete 5_pass_of_5
Key Status demand	PASSED Complete 4_pass_of_4
SCK Key Status demand	PASSED Complete 2_pass_of_2
GCK Key Status demand	PASSED Complete 1_pass_of_1
GSKO Key Status demand	PASSED Complete 1_pass_of_1
Change of Security Class for Fallback operation	PASSED Complete 12_pass_of_12
Seamless change to Security Class 2 for BS Fallback operation	PASSED Complete 10_pass_of_10
Non-seamless change to Security Class 2 for BS Fallback operation	Not Supported
Provisioning of TM-SCK for fallback to Security Class 2 operation	PASSED Complete 2_pass_of_2
Change to Security Class 1 for BS Fallback operation	Not Supported
Change of Security Class (other than for Fallback operation)	PASSED Complete 5_pass_of_5
Change between Security Class 3 and Security Class 3G	PASSED Complete 2_pass_of_2
Change between Security Class 2 and Security Class 3	PASSED Complete 2_pass_of_2
Change from Security Class 3G to Security Class 2	PASSED Complete 1_pass_of_1
Key Management for Secure Direct Mode Operation	PASSED Complete 3_pass_of_3
OTAR of DM-SCK	PASSED Complete 3_pass_of_3
Change of DM-SCK	PASSED Complete 2_pass_of_2
SI - Fully Witnessed Testing	
MS initiated Service Interaction	PASSED Complete 7_pass_of_7

MS initiated Circuit Mode Call during another Circuit Mode Call	PASSED Complete 5_pass_of_5
MS initiated Circuit Mode Call during Packet Mode Transfer	PASSED Complete 2_pass_of_2
MS initiated Packet Mode Transfer during Circuit Mode Call	Not Supported
SwMI initiated Service Interaction	PASSED Complete 8_pass_of_8
SwMI initiated Circuit Mode Call during another Circuit Mode Call	PASSED Complete 6_pass_of_6
SwMI initiated Circuit Mode Call during Packet Mode Transfer	PASSED Complete 2_pass_of_2
SwMI initiated Packet Mode Transfer during Circuit Mode Call	Not Supported
Call Waiting	PASSED Complete 6_pass_of_6
Call Waiting in Individual Call	PASSED Complete 3_pass_of_3
Call Waiting in Group Call	PASSED Complete 3_pass_of_3
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	PASSED Complete 2_pass_of_2
Enable and temporary disable of an MS with authentication	Not Supported
Registration of a temporary disabled MS	PASSED Complete 2_pass_of_2
Rejection of applicable invalid enable/disable requests	PASSED Complete 3_pass_of_3
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 2_pass_of_2

Permanent disable of an MS with authentication	PASSED Complete 1_pass_of_1
Permanently Disabled MS cannot send air interface signalling	PASSED Complete 1_pass_of_1
TKD - Fully Witnessed Testing	
Delivery of Authentication Data	PASSED Complete 2_pass_of_2
Authentication Key Delivery	PASSED Complete 1_pass_of_1
ITSI Delivery	PASSED Complete 1_pass_of_1
Delivery of SCK	PASSED Complete 2_pass_of_2
SCK Delivery to SCK delivery	Not Supported
SCK Delivery to SwMI	PASSED Complete 1_pass_of_1
SCK Delivery to SCK loading	PASSED Complete 1_pass_of_1
Delivery method	PASSED Complete 3_pass_of_3
Plain text on physical media	PASSED Complete 3_pass_of_3
Encrypted text on physical media	Not Supported
Electronic transfer	Not Supported
RUA - Fully Witnessed Testing	
Radio User Assignment	PASSED Complete 14_pass_of_14
Radio User Assignment at Location Updating	PASSED Complete 6_pass_of_6
Dispatcher initiated Radio User Assignment	PASSED Complete 2_pass_of_2
Radio User Dis-assignment	PASSED Complete 6_pass_of_6
LIP - Fully Witnessed Testing	
Location Information Protocol	PASSED Complete 29_pass_of_29
LIP over SDS	PASSED Complete 13_pass_of_13

LIP over Packet Data	PASSED Complete 2_pass_of_2
Time based reporting	PASSED Complete 7_pass_of_7
Distance based reporting - NOT TESTABLE	Not Supported
Reporting using Short reports	PASSED Complete 3_pass_of_3
Reporting using Long reports	PASSED Complete 2_pass_of_2
Reporting Enable & Disable	PASSED Complete 2_pass_of_2
User control of Reporting	PASSED Complete 1_pass_of_1
Temporary reporting control	PASSED Complete 1_pass_of_1
Trigger modification	PASSED Complete 4_pass_of_4
Control of Basic Location Parameters	PASSED Complete 1_pass_of_1
Immediate Location Reporting	PASSED Complete 1_pass_of_1
Reporting Lifetimes	PASSED Complete 1_pass_of_1
Error Reporting using Long Reports	PASSED Complete 1_pass_of_1
Error Reporting using Short Reports	PASSED Complete 1_pass_of_1
Positioning on Individual Call Setup	Not Supported
CF - Fully Witnessed Testing	
Call Forwarding Unconditional	PASSED Complete 1_pass_of_1
Call Forwarding Unconditional Individual Call	PASSED Complete 1_pass_of_1
Call Forwarding Unconditional SDS	Not Supported
Call Forwarding Unconditional Status	Not Supported
Call Forwarding Conditional	PASSED Complete 3_pass_of_3
Call Forwarding Conditional Individual Call	PASSED Complete 3_pass_of_3

Call Forwarding Information Displayed	PASSED Complete 4_pass_of_4
Call Forwarding Information Displayed	PASSED Complete 4_pass_of_4
Management of Call Forwarding	PASSED Complete 4_pass_of_4
Change of Call Forwarding Activation Status by Served User	PASSED Complete 4_pass_of_4
Setting of Call Forwarding Parameters by Served User	Not Supported
Callout - Fully Witnessed Testing	
Full Calllout	PASSED Complete 15_pass_of_15
Individually Addressed Full Callout with request for Terminal Receipt message and with request for User Receipt message	PASSED Complete 2_pass_of_2
Group Addressed Full Callout without request for Terminal Receipt message and without request for User Receipt message	PASSED Complete 2_pass_of_2
Using current selected group during Full Callout	PASSED Complete 1_pass_of_1
Full Callout with immediate change to Callout Group	PASSED Complete 2_pass_of_2
Full Callout with change to Callout Group on non-rejecting user response	PASSED Complete 1_pass_of_1
Full Callout with rejecting User Receipt message	PASSED Complete 1_pass_of_1
Full Callout with timeout for User Receipt message	PASSED Complete 1_pass_of_1
Callout Incident Information messages	PASSED Complete 2_pass_of_2
Group Call to Callout Group	PASSED Complete 4_pass_of_4
End of Full Callout	PASSED Complete 3_pass_of_3
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 32_pass_of_32
Interaction with previous Callout	PASSED Complete 2_pass_of_2
Interaction with emergency call	PASSED Complete 4_pass_of_4
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 2_pass_of_2
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 16_pass_of_16
Callout Text	PASSED Complete 6_pass_of_6
Concatenated Callout Text using Callout Specific Concatenation	PASSED Complete 3_pass_of_3

Concatenated Callout Text using mSDS	Not Supported
Callout Pre-Coded Status	PASSED Complete 7_pass_of_7
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)	
Graceful Service Degradation Mode (GSDM)	Not Supported

DMO TETRA Interoperability Certificate

Direct Mode Operation Core - Air Interface Encryption

Motorola Solutions, MXP600, DMO Terminal

Penang, April 2024

Latest Certified DM Terminal SW Release:	MR2023.3
Latest Certified DM Terminal HW Release:	PTW952HEB

ISCTI (Istituto Superiore delle Comunicazioni e delle Tecnologie dell'Informazione) certifies that the Motorola Solutions MXP600, DM Terminal has been subject to interoperability testing for the features DMO Core and DMO Air Interface Encryption listed in the "Certified features" tables of this certificate with the following DM Terminals Motorola Solutions, MTM800FuG, Motorola Solutions MXP600, Motorola Solutions ST7500 and in accordance with the TETRA Interoperability Profiles, TIP compliance Test Plan and related TETRA interoperability requirement tables.

The certificate features associated to each DM terminal are shown in the "Certificate features" 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 on April 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.

IOP test engineer **Head of the Procedure** **Radio Office Manager**

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V 1

Certified feature

DMO Core Test Session Penang, April 2024 Motorola Solutions MTM800FuG	Motorola Solutions MTM800FuG	Motorola Solutions MXP600	Motorola Solutions ST7500
Registration	Certified	Certified	Certified
Group Call	Certified	Certified	Certified
Individual Call	Certified	Certified	Certified
Status Call	Certified	Certified	-
SDS TL	Certified	Certified	-
DMO AIE Encryption	Certified	Certified	Partial

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 result 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 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 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 outcome is derived from 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 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 the 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 has been applied on the verdicts based on the spot testing method.
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-feature cannot be tested. The following table describes meaning of the used abbreviation:

Indication	Definition
Not supported	At least one MS 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 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 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 and document references

Test Session Place/Date	Penang, April 2024
DM Terminal Type	Motorola Solutions MXP600
DM Terminal HW release	PTW952HEB
DM Terminal SW release	MR2023.3
DM Terminal 1 Type	Motorola Solutions MTM800FuG
DM Terminal 1 HW release	MTR953CG
DM Terminal 1 SW release	MR2023.3
DM Terminal 2 Type	Motorola Solutions MXP600
DM Terminal 2 HW release	PTW952HEB
DM Terminal 2 SW release	MR2023.3
DM Terminal 3 Type	Motorola Solutions ST7500
DM Terminal 3 HW release	PTM412DER
DM Terminal 3 SW release	MR2023.3

TIP Specs and TIP Compliance Test Plans	
DCore	TTR002-01 v230 DCore IOP002-01 v110 DCore TIC-RT002-01 v131 DCore
DAIE-Core	TTR002-05_v200_DMO_AIE IOP002-05_v120_DAIE TIC-RT002-05-1 v112 DAIE_Core

Feature compliance report

DMO Test Session Penang, April 2024 Motorola Solutions MXP600	Motorola Solutions MTM800FuG	Motorola Solutions MXP600	Motorola Solutions ST7500
TTR002-01 Core – fully witnessed testing			
Registration	**PASSED Complete 2_pass_of_2**	**PASSED Complete 2_pass_of_2**	**PASSED Complete 2_pass_of_2**
Activation/Deactivation	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1
RF Carrier Selection	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1
Group Call	**PASSED Complete 43_pass_of_43**	**PASSED Complete 43_pass_of_43**	**PASSED Complete 43_pass_of_43**
Intra-MNI Group Calls	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6
Inter-MNI Group Calls	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4
Emergency Group Calls	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6
Pre-emptive priority Calls	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4
Group Call Maintenance	PASSED Complete 19_pass_of_19	PASSED Complete 19_pass_of_19	PASSED Complete 19_pass_of_19
Late Entry Group Calls	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4
Open Group Calls	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6
Individual Call	**PASSED Complete 20_pass_of_20**	**PASSED Complete 20_pass_of_20**	**PASSED Complete 20_pass_of_20**
Intra-MNI Individual Calls	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4
Inter-MNI Individual Calls	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6
Pre-emptive priority Calls	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6

DMO Test Session Penang, April 2024 Motorola Solutions MXP600	Motorola Solutions MTM800FuG	Motorola Solutions MXP600	Motorola Solutions ST7500
Individual Call maintenance	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4
Individual Call with Presence Check	PASSED Complete 8_pass_of_8	PASSED Complete 8_pass_of_8	PASSED Complete 8_pass_of_8
Individual call without Presence Check	PASSED Complete 8_pass_of_8	PASSED Complete 8_pass_of_8	PASSED Complete 8_pass_of_8
Individual Late Entry	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4
Status Call	**PASSED Complete 16_pass_of_16**	**PASSED Complete 16_pass_of_16**	**Incomplete 0_pass_of_16**
Individual Status Calls	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	**Not_Supported**
Group Status call	PASSED Complete 12_pass_of_12	PASSED Complete 12_pass_of_12	**Not_Supported**
Status sent in a Voice Call	PASSED Complete 8_pass_of_8	PASSED Complete 8_pass_of_8	**Not_Supported**
Status sent out of a Call	PASSED Complete 8_pass_of_8	PASSED Complete 8_pass_of_8	**Not_Supported**
SDS TL	**PASSED Complete 8_pass_of_8**	**PASSED Complete 8_pass_of_8**	**Incomplete 0_pass_of_8**
Individual intra-MNI SDS-TL, unacknowledged, 8 bit	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	**Not_Supported**
Individual inter-MNI SDS-TL, unacknowledged, 8 bit	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	**Not_Supported**
Group SDS-TL intra-MNI, unacknowledged, no reports, 8 bit	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	**Not_Supported**
Open TSI addressed SDS-TL, unacknowledged, no reports, 8 bit	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	**Not_Supported**
TTR002-05 DMO AIE-Core – fully witnessed testing			
DMO AIE Encryption	**PASSED Complete 24_pass_of_24**	**PASSED Complete 24_pass_of_24**	**PASSED Complete 18_pass_of_18**
Encrypted Group Calls	PASSED Complete 8_pass_of_8	PASSED Complete 8_pass_of_8	PASSED Complete 8_pass_of_8

DMO Test Session Penang, April 2024 Motorola Solutions MXP600	Motorola Solutions MTM800FuG	Motorola Solutions MXP600	Motorola Solutions ST7500
Encrypted Individual Calls	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4
Encrypted Status messages	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	**Not_Supported**
Pre-emption of encrypted activity	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Handling mismatched keys	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6	PASSED Complete 4_pass_of_4
Encrypted SDS-TL messages	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2	**Not_Supported**

DMO TETRA Interoperability Certificate

Direct Mode Operation Repeater

Motorola Solutions, MXP600, DMO Repeater

Penang, April 2024

Latest Certified Repeater SW Release:	MR2023.3
Latest Certified Repeater HW Release:	PTW952HEB

ISCTI (Istituto Superiore delle Comunicazioni e delle Tecnologie dell'Informazione) certifies that the Motorola Solutions MXP600 DMO Repeater has been subject to interoperability testing for the features DRep1 and DRep1 AIE listed in the "Certified features" tables of this certificate with the following DMO Terminals Motorola Solutions MTM800FuG, Motorola Solutions **MXP600 , in accordance with the TETRA Interoperability Profiles, TIP compliance Test Plan and related TETRA interoperability requirement tables.**

The certificate features of each DM Terminal acting as master during testing is highlighted in light blue.

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 on April . 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.

NOTE: the MXP600 Repeater was tested as Repeater Type 1A only.

IOP test engineer **Head of the Procedure** **Radio Office Manager**

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V1

Certified features

Note: The DM-MSA under test is highlighted in light blue background.

DMO Test Session Penang, April 2024 Motorola Solutions MXP600	Motorola Solutions MTM800FuG	Motorola Solutions MXP600
Presence Signal	Certified	Certified
DM-MS authorization	Certified	Certified
Group Call	Certified	Certified
Individual Call	Certified	Certified
Call Maintenance	Certified	Certified
Status messages	Certified	Certified
SDS TL	Certified	Certified
DMO AIE Encryption - via Repeater Type 1A	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 result depend on a set of sub-feature, the outcomes 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 certified DM Terminal acting as master during testing is highlighted in light blue. The main features are indicated with grey background and the associated sub-features (or second level features) have white background.

The outcome assigned to a sub-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 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 outcome is derived from 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.
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.

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 "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 has been applied on the verdicts based on the spot testing method.
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-feature cannot be tested. The following table describes meaning of the used abbreviation:

Indication	Definition
Not supported	The Repeater and/or MS do not support the minimum features required to verify these items
/	The Result is not relevant (or needed) to verify the Repeater and/or MS features

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 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 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 and document references

Test Session Place/Date	**Penang April 2024**
Repeater Type	Motorola Solutions MXP600
Repeater HW release	PTW952HEB
Repeater SW release	MR2023.3
DM Terminal 1 Type	Motorola Solutions MTM800FuG
DM Terminal 1 HW release	MTR953CG
DM Terminal 1 SW release	MR2023.3
DM Terminal 2 Type	Motorola Solutions MXP600
DM Terminal 2 HW release	PTW952HEB
DM Terminal 2 SW release	MR2023.3
TIP Specs and TIP Compliance Test Plans	
Repeater	TTR002-03_v130_DRep1 IOP002-03_v130_DRep1 TIC-RT002-03_v121_DRep1
DAIE -Rep	TTR002-05_v200_DMO_AIE IOP002-05_v120_DAIE TIC-RT002-05-3_v113_DAIE-Rep1

Feature compliance report

DMO Test Session Penang, April 2024 Motorola Solutions MXP600	Motorola Solutions MTM800FuG	Motorola Solutions MXP600
TTR002-03 Repeater – fully witnessed testing		
Presence Signal-Type 1A Repeater	**PASSED Complete 5_pass_of_5**	**PASSED Complete 5_pass_of_5**
Presence Signal on free channel	PASSED Complete 1_pass_of_1	PASSED Complete 1_pass_of_1
Presence Signal on occupied channel	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4
DM-MS authorization-Type 1A Repeater	**PASSED Complete 8_pass_of_8**	**PASSED Complete 8_pass_of_8**
Usage Restriction Type	PASSED Complete 8_pass_of_8	PASSED Complete 8_pass_of_8
Validity Time	**Not_Supported**	**Not_Supported**
Group call - Type 1A Repeater	**PASSED Complete 6_pass_of_6**	**PASSED Complete 6_pass_of_6**
Intra-MNI Group Calls	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Inter-MNI Group Calls	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Use as parallel DM-MS for Group Call	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Individual Call - Type 1A Repeater	**PASSED Complete 7_pass_of_7**	**PASSED Complete 7_pass_of_7**
Individual Call with Presence Check	PASSED Complete 5_pass_of_5	PASSED Complete 5_pass_of_5
Individual call without Presence Check	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Call Maintenance - Type 1A Repeater	**PASSED Complete 19_pass_of_19**	**PASSED Complete 19_pass_of_19**
Changeover	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Pre-emption	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6

DMO Test Session Penang, April 2024 Motorola Solutions MXP600	Motorola Solutions MTM800FuG	Motorola Solutions MXP600
Procedures in Occupation	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6
Procedures in Reservation	PASSED Complete 7_pass_of_7	PASSED Complete 7_pass_of_7
Status Messages - Type 1A Repeater	**PASSED Complete 16_pass_of_16**	**PASSED Complete 16_pass_of_16**
Intra-MNI Status Calls	PASSED Complete 14_pass_of_14	PASSED Complete 14_pass_of_14
Individual Status Calls	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Group Status call	PASSED Complete 12_pass_of_12	PASSED Complete 12_pass_of_12
Status sent in a Voice Call	PASSED Complete 6_pass_of_6	PASSED Complete 6_pass_of_6
Status sent out of a Call	PASSED Complete 8_pass_of_8	PASSED Complete 8_pass_of_8
Use as parallel DM-MS for Status	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
SDS TL - Type 1A Repeater	**PASSED Complete 10_pass_of_10**	**PASSED Complete 10_pass_of_10**
Group Addressed Intra-MNI SDS-TL	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Open TSI Addressed SDS-TL	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Individually Addressed intra-MNI SDS-TL	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Individually Addressed inter-MNI SDS-TL	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Multipart SDS-TL	**Not_Supported**	**Not_Supported**
Use as parallel DM-MS for SDS-TL	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2

TTR002-05 (clase 2) DMO AIE Encryption - via Repeater – fully witnessed testing		
DMO AIE Encryption- via Repeater Type 1A	**PASSED Complete 18_pass_of_18**	**PASSED Complete 18_pass_of_18**
Encrypted Group Calls	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4
Encrypted Individual Calls	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4
Encrypted Status messages	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Pre-emption of encrypted activity	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2
Handling mismatched keys	PASSED Complete 4_pass_of_4	PASSED Complete 4_pass_of_4
SDS-TL messages	PASSED Complete 2_pass_of_2	PASSED Complete 2_pass_of_2

Anexa nr. 12
la Documentația standard nr._____
din "07" noiembrie 2024
nr. ocds-b3wdp1-MD-1730470595171

DECLARAȚIE
privind lista principalelor livrari/prestări efectuate în ultimii 3 ani de activitate

Nr d/o	**Obiectul contractului**	**Denumirea/ numele beneficiarului/Adresa**	**Calitatea Furnizorului/Prestatorului*)**	**Preţul contractului/ valoarea bunurilor/serviciilor livrate/prestate**	**Perioada de livrare/prestare (luni)**
1	Livrarea Aparatelor de semnalizare acustică	Aeroportul Internațional Chisinau IS	Contractant unic	> 8 mil	Iulie 2024 – Septembrie 2024
2	Livrarea echipamentului radio	Instituție de Stat	Contractant unic	Contractul dat cade sub incidența Legii nr. 245-XVI din 27 noiembrie 2008 cu privire la secretul de stat	Anul 2024

*) Se precizează calitatea în care a participat la îndeplinirea contractului, care poate fi de: contractant unic sau lider de asociaţie; contractant asociat; subcontractant.
Semnat: _____
Nume: : Zmeu Ion
Funcţia: Director Comercial
Denumirea operatorului economic SC "Melitax-Grup" SRL