

# TETRA Interoperability Certificate

**Motorola Solutions, Dimetra IP R9.0, SwMI –  
Motorola Solutions, MTM5400, Terminal**

Kraków, September 2017

|                                      |                 |                                          |        |
|--------------------------------------|-----------------|------------------------------------------|--------|
| Latest Certified SwMI<br>SW Release: | R9.0            | Latest Certified Terminal<br>SW Release: | MR16.1 |
| Latest Certified SwMI<br>HW Release: | Dimetra IP R9.0 | Latest Certified Terminal<br>HW Release: | MT953C |

ISCTI (Istituto Superiore delle Comunicazioni e delle Tecnologie dell'Informazione) certifies, that the Motorola Solutions, Dimetra IP R9.0, SwMI and the Motorola Solutions, MTM5400, terminal have been subject to interoperability testing for the “certified” features listed on second page of this certificate, in accordance with the TETRA Interoperability Profiles, TIP compliance Test Plan and related TETRA interoperability requirement tables.

The table lists all the available TETRA interoperability profiles, and summarizes the main functionalities of every profile according to the TETRA interoperability requirement tables.

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

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

This certificate has been issued following a multiple test session between Motorola Solutions and Motorola Solutions on September 2017. 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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**v1**

## Certified features

| 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                     | -         |
| Transmit Inhibit                        | Certified |
| Mixed band operation                    | Certified |
| TTR001-02:SDS                           |           |
| SDS Type 1, 2 or 3                      | -         |
| SDS-TL                                  | Certified |
| Store and Forward                       | Certified |
| Multipart SDS                           | -         |
| TTR001-03:DGNA                          |           |
| Support for individually addressed DGNA | Certified |

|                                                 |           |
|-------------------------------------------------|-----------|
| Support for group addressed DGNA                | Certified |
| Tolerance of unsupported DGNA functions         | -         |
| <b>TTR001-04:Auth</b>                           |           |
| SwMI Initiated (non-mutual) Authentication      | Certified |
| SwMI Initiated Authentication made Mutual by MS | Certified |
| TEI Query                                       | -         |
| <b>TTR001-05:PD</b>                             |           |
| Context Management                              | Certified |
| Single Slot Packet Data                         | Certified |
| Multi Slot Packet Data                          | Certified |
| TEDS                                            | Certified |
| Mixed band operation                            | Certified |
| <b>TTR001-06:AIM</b>                            |           |
| Registration                                    | Certified |
| Group management                                | Certified |
| Group call                                      | Certified |
| Individual call                                 | Certified |
| Status/SDS message                              | Certified |
| Security                                        | Certified |
| <b>TTR001-09:AL</b>                             |           |
| Ambience Listening                              | Certified |
| Interaction with Transmit Inhibit               | Certified |
| <b>TTR001-10:E2EE</b>                           |           |
| E2EE Voice Call                                 | Certified |
| <b>TTR001-11:AIE</b>                            |           |
| 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) | -         |
| Key Management for Secure Direct Mode Operation              | Certified |
| <b>TTR001-12:SI</b>                                          |           |
| MS initiated Service Interaction                             | Certified |
| SwMI initiated Service Interaction                           | Certified |
| Call Waiting                                                 | Certified |
| <b>TTR001-13:ED</b>                                          |           |
| Enable and temporary disable of an MS                        | Certified |
| Permanent disable of an MS                                   | Certified |
| <b>TTR001-14:TKD</b>                                         |           |
| Delivery of Authentication Data                              | Certified |
| Delivery of SCK                                              | Certified |
| Delivery method                                              | Certified |
| <b>TTR001-17:RUA</b>                                         |           |
| Radio User Assignment                                        | Certified |
| <b>TTR001-19:LIP</b>                                         |           |
| Location Information Protocol                                | Certified |
| <b>TTR001-20:CF</b>                                          |           |
| Call Forwarding Unconditional                                | Certified |
| Call Forwarding Conditional                                  | Certified |
| Call Forwarding Information Displayed                        | Certified |
| Management of Call Forwarding                                | Certified |
| <b>TTR001-21:Callout</b>                                     |           |
| Full Callout                                                 | Certified |
| Simple Callout                                               | Certified |
| Interaction with other services and events                   | Certified |
| Callout Test and Callout Availability                        | Certified |



|                                                  |           |
|--------------------------------------------------|-----------|
| <b>Callout Text and Callout Pre-Coded Status</b> | Certified |
| <b>Storage of Callout Information</b>            | 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                                                                                                                                                  |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Certified</b> | All required tests have been performed and passed                                                                                                           |
| <b>Partial</b>   | 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                                                                                                                                                                    |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Passed</b>     | 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 |
| <b>Incomplete</b> | Not all Mandated tests (as per TIC-RT indication) have been executed                                                                                                          |
| <b>Failed</b>     | 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                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Complete</b>           | All mandated tests associated to the feature or sub-feature have been executed                                                                                                                                                                                                                                                                                                                                              |
| <b>Spot</b>               | 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                                                           |
| <b>Regression</b>         | 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                                         |
| <b>Regression on spot</b> | 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.                                                                                                                                                                                                                           |
| <b>Witnessed</b>          | The TIP heading lines in the Feature Compliance Report indicate whether each TIP is partially or fully witnessed by the Certification Body.<br>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 unwitnessed passed tests and they will have been found to be successful based on the log file evaluation |

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

| Indication | Definition |
|------------|------------|
|------------|------------|

## Not supported

The SwMI and/or MS do not support the minimum features required to verify these items

ISCTI has made every effort to ensure that every result has been correctly evaluated in accordance with the relevant TIPs, Test Plans and TIC-RTs. ISCTI has no liability for the test results, or towards the manufacturers.

The table on the following page lists HW and SW releases of SwMI and Terminal under test in the last four test sessions and the used TIP specifications, Test Plans and TIC-RTs.

This Certificate and Certificates from previous test sessions are available on the 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 and document references

| Test Session Date/Place                 | Motorola Solutions, Kraków, September 2017 |  |  |  |
|-----------------------------------------|--------------------------------------------|--|--|--|
| SwMI Type                               | Dimetra IP R9.0                            |  |  |  |
| SwMI HW Release                         | Dimetra IP R9.0                            |  |  |  |
| SwMI SW Release                         | R9.0                                       |  |  |  |
| Terminal Type                           | MTM5400                                    |  |  |  |
| Terminal HW Release                     | MT953C                                     |  |  |  |
| Terminal SW Release                     | MR16.1                                     |  |  |  |
| TIP Specs and TIP Compliance Test Plans |                                            |  |  |  |

|             |                                                           |  |  |  |
|-------------|-----------------------------------------------------------|--|--|--|
| <b>Core</b> | TTR001-01 v6.2.2<br>IOP001-01 v3.2.1<br>TIC-RT001-01 v271 |  |  |  |
| <b>SDS</b>  | TTR001-02 v2.1.3<br>IOP001-02 v2.1.0<br>TIC-RT001-02 v222 |  |  |  |
| <b>DGNA</b> | TTR001-03 v2.0.0<br>IOP001-03 v2.0.1<br>TIC-RT001-03 v228 |  |  |  |
| <b>Auth</b> | TTR001-04 v3.0.0<br>IOP001-04 v2.0.0<br>TIC-RT001-04 v230 |  |  |  |
| <b>PD</b>   | TTR001-05 v4.1.0<br>IOP001-05 v4.1.0<br>TIC-RT001-05 v405 |  |  |  |
| <b>AIM</b>  | TTR001-06 v2.1.0<br>IOP001-06 v1.0.0<br>TIC-RT001-06 v126 |  |  |  |
| <b>AL</b>   | TTR001-09 v2.1.0<br>IOP001-09 v1.2.0<br>TIC-RT001-09 v129 |  |  |  |
| <b>E2EE</b> | TTR001-10 v2.1.0<br>IOP001-10 v1.2.0<br>TIC-RT001-10 v128 |  |  |  |
| <b>AIE</b>  | TTR001-11 v3.1.0<br>IOP001-11 v3.1.0<br>TIC-RT001-11 v331 |  |  |  |
| <b>SI</b>   | TTR001-12 v1.1.0<br>IOP001-12 v1.0.0<br>TIC-RT001-12 v133 |  |  |  |
| <b>ED</b>   | TTR001-13 v2.1.0<br>IOP001-13 v1.0.0<br>TIC-RT001-13 v151 |  |  |  |
| <b>TKD</b>  | TTR001-14 v1.0.3<br>IOP001-14 v1.2.0<br>TIC-RT001-14 v122 |  |  |  |



|                                                                   |                                                           |  |  |  |
|-------------------------------------------------------------------|-----------------------------------------------------------|--|--|--|
| <b>RUA</b>                                                        | TTR001-17 v1.1.0<br>IOP001-17 v1.0.0<br>TIC-RT001-17 v114 |  |  |  |
| <b>LIP</b>                                                        | TTR001-19 v1.1.0<br>IOP001-19 v1.2.0<br>TIC-RT001-19 v114 |  |  |  |
| <b>CF</b>                                                         | TTR001-20 v1.0.1<br>IOP001-20 v1.0.0<br>TIC-RT001-20 v114 |  |  |  |
| <b>Callout</b>                                                    | TTR001-21 v2.1.1<br>IOP001-21 v2.2.0<br>TIC-RT001-21 v114 |  |  |  |
| <b>SwMI Test bench<br/>Callout<br/>Application SW<br/>Release</b> | -Call Out Console v2.7.0<br>rev 10<br>- SDTS R02.00.05    |  |  |  |

## Feature compliance report

| Test Session                              | Motorola Solutions, September 2017 Krakow |  |  |  |
|-------------------------------------------|-------------------------------------------|--|--|--|
| Core - Fully Witnessed Testing            |                                           |  |  |  |
| Registration                              | PASSED Complete<br>5_pass_of_5            |  |  |  |
| Initial registration                      | PASSED Complete<br>2_pass_of_2            |  |  |  |
| SwMI initiated location updating          | PASSED Complete<br>2_pass_of_2            |  |  |  |
| LA timer based Periodic location updating | Not Supported                             |  |  |  |
| De-registration                           | PASSED Complete<br>1_pass_of_1            |  |  |  |
| Group Management                          | PASSED Complete<br>11_pass_of_11          |  |  |  |
| Single group attachment                   | PASSED Complete<br>5_pass_of_5            |  |  |  |
| Multiple group attachment                 | PASSED Complete<br>4_pass_of_4            |  |  |  |
| MS initiated group detachment             | PASSED Complete<br>2_pass_of_2            |  |  |  |
| SwMI initiated group management           | Not Supported                             |  |  |  |
| Group call                                | PASSED Complete<br>9_pass_of_9            |  |  |  |
| Normal group call                         | PASSED Complete<br>3_pass_of_3            |  |  |  |
| Late entry                                | PASSED Complete                           |  |  |  |

|                                           |                                |  |  |  |
|-------------------------------------------|--------------------------------|--|--|--|
|                                           | 1_pass_of_1                    |  |  |  |
| Priority Group scanning                   | PASSED Complete<br>3_pass_of_3 |  |  |  |
| Call setup modifications                  | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Resource Queuing based on Call Priority   | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Broadcast Call                            | Not Supported                  |  |  |  |
| Limited coverage notification             | Not Supported                  |  |  |  |
| Individual call                           | PASSED Complete<br>7_pass_of_7 |  |  |  |
| Simplex individual call                   | PASSED Complete<br>3_pass_of_3 |  |  |  |
| Duplex individual call                    | PASSED Complete<br>2_pass_of_2 |  |  |  |
| Call setup modifications                  | Not Supported                  |  |  |  |
| Resource Queuing based on Call Priority   | PASSED Complete<br>2_pass_of_2 |  |  |  |
| Indication of imminent call disconnection | Not Supported                  |  |  |  |
| Status messages                           | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Individual addressed Status transfer      | Not Supported                  |  |  |  |
| Group addressed Status transfer           | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Pre-emptive Priority Call                 | PASSED Complete<br>2_pass_of_2 |  |  |  |
| Pre-emption of Resources                  | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Pre-emption of Busy Users                 | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Emergency Call                            | PASSED Complete<br>2_pass_of_2 |  |  |  |
| Pre-emption of Resources                  | PASSED Complete                |  |  |  |

|                                            |                                  |  |  |  |
|--------------------------------------------|----------------------------------|--|--|--|
|                                            | 1_pass_of_1                      |  |  |  |
| Pre-emption of Busy Users                  | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Call setup modifications                   | Not Supported                    |  |  |  |
| Call disconnection by non-call owner       | Not Supported                    |  |  |  |
| Cell Re-selection                          | PASSED Complete<br>16_pass_of_16 |  |  |  |
| Undeclared                                 | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Unannounced                                | PASSED Complete<br>7_pass_of_7   |  |  |  |
| Announced - with Call Restoration          | PASSED Complete<br>8_pass_of_8   |  |  |  |
| Announced - without Call Restoration       | Not Supported                    |  |  |  |
| Expedited                                  | Not Supported                    |  |  |  |
| Graceful Service Degradation Mode (GSDM)   | Not Supported                    |  |  |  |
| PSTN interconnect                          | PASSED Complete<br>4_pass_of_4   |  |  |  |
| TETRA Originated Call                      | PASSED Complete<br>2_pass_of_2   |  |  |  |
| PSTN Originated Call                       | PASSED Complete<br>1_pass_of_1   |  |  |  |
| DTMF over-dial                             | PASSED Complete<br>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<br>5_pass_of_5   |  |  |  |
| Slow Signalling on Traffic Channel (SACCH) | PASSED Complete<br>4_pass_of_4   |  |  |  |

|                                                  |                                  |  |  |  |
|--------------------------------------------------|----------------------------------|--|--|--|
| Fast Signalling on Traffic Channel (FACCH)       | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Subscriber Class Procedures                      | PASSED Complete<br>6_pass_of_6   |  |  |  |
| Cell Selection based on Subscriber Class         | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Subscriber Class Delivery during Location Update | Not Supported                    |  |  |  |
| Use of Subscriber Class Preference Levels        | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Common Secondary Control Channels                | PASSED Complete<br>7_pass_of_7   |  |  |  |
| One C-SCCH per cell                              | PASSED Complete<br>5_pass_of_5   |  |  |  |
| Two C-SCCH per cell                              | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Three C-SCCH per cell                            | PASSED Complete<br>2_pass_of_2   |  |  |  |
| BS Fallback Operation                            | PASSED Complete<br>10_pass_of_10 |  |  |  |
| Switch to/from BS Fallback Operation             | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Roaming to avoid a cell in BS Fallback Operation | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Services with BS Fallback Operation              | PASSED Complete<br>5_pass_of_5   |  |  |  |
| Ignore a cell in Fallback Operation              | PASSED Complete<br>1_pass_of_1   |  |  |  |
| User selectable Fallback behaviour               | Not Supported                    |  |  |  |
| Energy Economy Mode                              |                                  |  |  |  |
| Energy Economy Mode Operation                    | Not Supported                    |  |  |  |
| Transmit Inhibit                                 | PASSED Complete<br>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<br>3_pass_of_3   |  |  |  |
| Receipt of group addressed service during TXI                              | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Mixed band operation                                                       | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Mixed band operation, inter-cell                                           | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Mixed band operation, intra-cell                                           | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Mixed band operation, Full                                                 | PASSED Complete<br>3_pass_of_3   |  |  |  |
| <b>SDS - Fully Witnessed Testing</b>                                       |                                  |  |  |  |
| 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<br>14_pass_of_14 |  |  |  |
| Individually Addressed                                                     | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Group Addressed                                                            | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Using MS-ISDN dialling                                                     | Not Supported                    |  |  |  |
| SDS Reception                                                              | PASSED Complete<br>7_pass_of_7   |  |  |  |
| Using UCS2 coding scheme                                                   | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Using 7-bit coding scheme                                                  | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Using 8-bit Latin 1 coding scheme                                          | PASSED Complete<br>2_pass_of_2   |  |  |  |

|                                                                                      |                                  |  |  |  |
|--------------------------------------------------------------------------------------|----------------------------------|--|--|--|
| Using 8-bit Latin/Cyrillic coding scheme                                             | Not Supported                    |  |  |  |
| Using 8-bit Latin 9 coding scheme                                                    | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Store and Forward                                                                    | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Individually Addressed                                                               | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Group Addressed                                                                      | Not Supported                    |  |  |  |
| Multipart SDS                                                                        |                                  |  |  |  |
| Multipart SDS                                                                        | Not Supported                    |  |  |  |
| <b>DGNA - Fully Witnessed Testing</b>                                                |                                  |  |  |  |
| Support for individually addressed DGNA                                              | PASSED Complete<br>11_pass_of_11 |  |  |  |
| Support for individually addressed DGNA assignment without attachment                | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Support for individually addressed DGNA assignment with attachment as selected group | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Support for individually addressed DGNA assignment with attachment as scanned group  | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Support for individually addressed DGNA assignment with rejected attachment          | Not Supported                    |  |  |  |
| Support for individually addressed assignment for pre-programmed group               | PASSED Complete<br>5_pass_of_5   |  |  |  |
| Support for group addressed DGNA                                                     | PASSED Complete<br>5_pass_of_5   |  |  |  |
| Support for group addressed DGNA assignment                                          | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Management of 'group assignment lifetime'                                            | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Support for group addressed DGNA deassignment                                        | PASSED Complete<br>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                    |  |  |  |
| <b>Auth - Fully Witnessed Testing</b>                            |                                  |  |  |  |
| SwMI Initiated (non-mutual) Authentication                       | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Attach with authentication                                       | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Roaming with authentication                                      | PASSED Complete<br>1_pass_of_1   |  |  |  |
| SwMI rejects MS during authentication                            | PASSED Complete<br>1_pass_of_1   |  |  |  |
| MS rejects SwMI during authentication                            | Not Supported                    |  |  |  |
| SwMI Initiated Authentication made Mutual by MS                  | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Attach with authentication                                       | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Roaming with authentication                                      | PASSED Complete<br>1_pass_of_1   |  |  |  |
| TEI Query                                                        |                                  |  |  |  |
| TEI Query Operation                                              | Not Supported                    |  |  |  |
| <b>PD - Fully Witnessed Testing</b>                              |                                  |  |  |  |
| Context Management                                               | PASSED Complete<br>11_pass_of_11 |  |  |  |
| Context Activation                                               | PASSED Complete<br>7_pass_of_7   |  |  |  |
| User authentication                                              | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Single Slot Packet Data                                          | PASSED Complete<br>11_pass_of_11 |  |  |  |
| Data Transfer                                                    | PASSED Complete                  |  |  |  |

|                                                |                                  |  |  |  |
|------------------------------------------------|----------------------------------|--|--|--|
|                                                | 7_pass_of_7                      |  |  |  |
| Cell re-selection                              | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Packet Data Channel sharing                    | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Multi Slot Packet Data                         | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Data Transfer                                  | PASSED Complete<br>4_pass_of_4   |  |  |  |
| TEDS                                           | PASSED Complete<br>15_pass_of_15 |  |  |  |
| TEDS with Context Activation                   | PASSED Complete<br>2_pass_of_2   |  |  |  |
| TEDS Data Transmission, using LLC Optimisation | PASSED Complete<br>7_pass_of_7   |  |  |  |
| TEDS Cell Reselection, using LLC Optimisation  | PASSED Complete<br>6_pass_of_6   |  |  |  |
| Mixed band operation                           | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Mixed band operation, inter-cell               | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Mixed band operation, intra-cell               | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Mixed band operation, Full                     | PASSED Complete<br>4_pass_of_4   |  |  |  |
| <b>AIM - Fully Witnessed Testing</b>           |                                  |  |  |  |
| Registration                                   | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Migrating                                      | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Group management                               | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Local group attachment on Foreign SwMI         | PASSED Complete                  |  |  |  |

|                                           |                                |  |  |  |
|-------------------------------------------|--------------------------------|--|--|--|
|                                           | 1_pass_of_1                    |  |  |  |
| Foreign group attachment                  | Not Supported                  |  |  |  |
| Group call                                | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Group call to local group on foreign SwMI | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Group call to foreign group               | Not Supported                  |  |  |  |
| Individual call                           | PASSED Complete<br>2_pass_of_2 |  |  |  |
| SSI/TSI addressed                         | PASSED Complete<br>1_pass_of_1 |  |  |  |
| FSSN addressed                            | Not Supported                  |  |  |  |
| MS-ISDN addressed                         | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Status/SDS message                        | PASSED Complete<br>2_pass_of_2 |  |  |  |
| Individually addressed SDS                | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Group addressed SDS                       | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Individually addressed Status             | Not Supported                  |  |  |  |
| Group addressed Status                    | Not Supported                  |  |  |  |
| SDS Store & Forward                       | Not Supported                  |  |  |  |
| TxI Status                                | Not Supported                  |  |  |  |
| Security                                  | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Air Interface Encryption, Class 3         | PASSED Complete<br>1_pass_of_1 |  |  |  |
| <b>AL - Fully Witnessed Testing</b>       |                                |  |  |  |
| Ambience Listening                        | PASSED Complete<br>5_pass_of_5 |  |  |  |
| SS-AL Call Setup                          | PASSED Complete                |  |  |  |

|                                                 |                                  |  |  |  |
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|                                                 | 2_pass_of_2                      |  |  |  |
| MS initiated SS-AL disconnection                | PASSED Complete<br>3_pass_of_3   |  |  |  |
| No Indication to affected user                  | PASSED Complete<br>5_pass_of_5   |  |  |  |
| Interaction with Transmit Inhibit               | PASSED Complete<br>1_pass_of_1   |  |  |  |
| AL can override TxI                             | Not Supported                    |  |  |  |
| AL cannot override TxI                          | PASSED Complete<br>1_pass_of_1   |  |  |  |
| <b>E2EE - Fully Witnessed Testing</b>           |                                  |  |  |  |
| E2EE Voice Call                                 | PASSED Complete<br>8_pass_of_8   |  |  |  |
| Individual (P2P) call                           | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Group (P2MP) call                               | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Clear Voice Override (CVO): Acceptance          | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Clear Voice Override (CVO): User Initiated      | Not Supported                    |  |  |  |
| Clear Voice Override (CVO): Automatic           | PASSED Complete<br>1_pass_of_1   |  |  |  |
| <b>AIE - Fully Witnessed Testing</b>            |                                  |  |  |  |
| Security Class 2 Air Interface Encryption       | PASSED Complete<br>21_pass_of_21 |  |  |  |
| Location Updating and AI Signalling Protection  | PASSED Complete<br>7_pass_of_7   |  |  |  |
| TM-SCK provisioning during location updating    | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Communications between parties using encryption | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Communications between clear and                | PASSED Complete                  |  |  |  |

|                                                                                      |                                  |  |  |  |
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| encrypted parties                                                                    | 3_pass_of_3                      |  |  |  |
| Communications between encrypted parties on a channel designated to operate in clear | PASSED Complete<br>2_pass_of_2   |  |  |  |
| OTAR of TM-SCK                                                                       | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Change of TM-SCK                                                                     | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Packet Data with Class 2 Air Interface Encryption                                    | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Tolerance of SwMI not supporting SCK-OTAR                                            | Not Supported                    |  |  |  |
| Security Class 3 Air Interface Encryption                                            | PASSED Complete<br>22_pass_of_22 |  |  |  |
| Clear Location Updating and AI Signalling Protection                                 | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Encrypted Location Updating and AI Signalling Protection                             | PASSED Complete<br>5_pass_of_5   |  |  |  |
| DCK Forwarding at MS request                                                         | Not Supported                    |  |  |  |
| DCK Forwarding by SwMI (without MS request)                                          | PASSED Complete<br>1_pass_of_1   |  |  |  |
| DCK Retrieval                                                                        | PASSED Complete<br>4_pass_of_4   |  |  |  |
| CCK provisioning during location updating                                            | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Communications between parties using encryption                                      | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Communications between clear and encrypted parties                                   | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Communications between encrypted parties on a channel designated to operate in clear | PASSED Complete<br>2_pass_of_2   |  |  |  |
| OTAR of CCK                                                                          | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Change of CCK                                                                        | PASSED Complete                  |  |  |  |

|                                                                   |                                  |  |  |  |
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|                                                                   | 4_pass_of_4                      |  |  |  |
| Packet Data with Class 3 Air Interface Encryption                 | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Security Class 3G Air Interface Encryption                        | PASSED Complete<br>9_pass_of_9   |  |  |  |
| GCK Key Association setting                                       | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Communications between parties using encryption                   | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Communications between clear and encrypted parties                | PASSED Complete<br>1_pass_of_1   |  |  |  |
| OTAR of GCK                                                       | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Change of GCK                                                     | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Management of CMG and GSKO                                        | PASSED Complete<br>5_pass_of_5   |  |  |  |
| OTAR and change of CMG and GSKO                                   | PASSED Complete<br>5_pass_of_5   |  |  |  |
| Key Status demand                                                 | PASSED Complete<br>4_pass_of_4   |  |  |  |
| SCK Key Status demand                                             | PASSED Complete<br>2_pass_of_2   |  |  |  |
| GCK Key Status demand                                             | PASSED Complete<br>1_pass_of_1   |  |  |  |
| GSKO Key Status demand                                            | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Change of Security Class for Fallback operation                   | PASSED Complete<br>12_pass_of_12 |  |  |  |
| Seamless change to Security Class 2 for BS Fallback operation     | PASSED Complete<br>10_pass_of_10 |  |  |  |
| Non-seamless change to Security Class 2 for BS Fallback operation | Not Supported                    |  |  |  |

|                                                                   |                                |  |  |  |
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| Provisioning of TM-SCK for fallback to Security Class 2 operation | PASSED Complete<br>2_pass_of_2 |  |  |  |
| Change to Security Class 1 for BS Fallback operation              | Not Supported                  |  |  |  |
| Change of Security Class (other than for Fallback operation)      | FAILED Complete<br>4_pass_of_5 |  |  |  |
| Change between Security Class 3 and Security Class 3G             | FAILED Complete<br>1_pass_of_2 |  |  |  |
| Change between Security Class 2 and Security Class 3              | PASSED Complete<br>2_pass_of_2 |  |  |  |
| Change from Security Class 3G to Security Class 2                 | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Key Management for Secure Direct Mode Operation                   | PASSED Complete<br>3_pass_of_3 |  |  |  |
| OTAR of DM-SCK                                                    | PASSED Complete<br>3_pass_of_3 |  |  |  |
| Change of DM-SCK                                                  | PASSED Complete<br>2_pass_of_2 |  |  |  |
| <b>SI - Fully Witnessed Testing</b>                               |                                |  |  |  |
| MS initiated Service Interaction                                  | PASSED Complete<br>5_pass_of_5 |  |  |  |
| MS initiated Circuit Mode Call during another Circuit Mode Call   | PASSED Complete<br>3_pass_of_3 |  |  |  |
| MS initiated Circuit Mode Call during Packet Mode Transfer        | PASSED Complete<br>2_pass_of_2 |  |  |  |
| MS initiated Packet Mode Transfer during Circuit Mode Call        | Not Supported                  |  |  |  |
| SwMI initiated Service Interaction                                | PASSED Complete<br>8_pass_of_8 |  |  |  |
| SwMI initiated Circuit Mode Call during another Circuit Mode Call | PASSED Complete<br>6_pass_of_6 |  |  |  |
| SwMI initiated Circuit Mode Call during Packet Mode Transfer      | PASSED Complete<br>2_pass_of_2 |  |  |  |

|                                                                                         |                                |  |  |  |
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| SwMI initiated Packet Mode Transfer during Circuit Mode Call                            | Not Supported                  |  |  |  |
| Call Waiting                                                                            | PASSED Complete<br>4_pass_of_4 |  |  |  |
| Call Waiting in Individual Call                                                         | PASSED Complete<br>2_pass_of_2 |  |  |  |
| Call Waiting in Group Call                                                              | PASSED Complete<br>2_pass_of_2 |  |  |  |
| <b>ED - Fully Witnessed Testing</b>                                                     |                                |  |  |  |
| Enable and temporary disable of an MS                                                   | PASSED Complete<br>8_pass_of_8 |  |  |  |
| Enable and temporary disable of an MS without authentication                            | PASSED Complete<br>2_pass_of_2 |  |  |  |
| Enable and temporary disable of an MS with authentication                               | Not Supported                  |  |  |  |
| Registration of a temporary disabled MS                                                 | PASSED Complete<br>2_pass_of_2 |  |  |  |
| Rejection of applicable invalid enable/disable requests                                 | PASSED Complete<br>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<br>1_pass_of_1 |  |  |  |
| Permanent disable of an MS                                                              | PASSED Complete<br>2_pass_of_2 |  |  |  |
| Permanent disable of an MS with authentication                                          | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Permanently Disabled MS cannot send air interface signalling                            | PASSED Complete<br>1_pass_of_1 |  |  |  |
| <b>TKD - Fully Witnessed Testing</b>                                                    |                                |  |  |  |
| Delivery of Authentication Data                                                         | PASSED Complete<br>2_pass_of_2 |  |  |  |
| Authentication Key Delivery                                                             | PASSED Complete<br>1_pass_of_1 |  |  |  |

|                                            |                                  |  |  |  |
|--------------------------------------------|----------------------------------|--|--|--|
| ITSI Delivery                              | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Delivery of SCK                            | PASSED Complete<br>2_pass_of_2   |  |  |  |
| SCK Delivery to SCK delivery               | Not Supported                    |  |  |  |
| SCK Delivery to SwMI                       | PASSED Complete<br>1_pass_of_1   |  |  |  |
| SCK Delivery to SCK loading                | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Delivery method                            | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Plain text on physical media               | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Encrypted text on physical media           | Not Supported                    |  |  |  |
| Electronic transfer                        | Not Supported                    |  |  |  |
| <b>RUA - Fully Witnessed Testing</b>       |                                  |  |  |  |
| Radio User Assignment                      | PASSED Complete<br>14_pass_of_14 |  |  |  |
| Radio User Assignment at Location Updating | PASSED Complete<br>6_pass_of_6   |  |  |  |
| Dispatcher initiated Radio User Assignment | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Radio User Dis-assignment                  | PASSED Complete<br>6_pass_of_6   |  |  |  |
| <b>LIP - Fully Witnessed Testing</b>       |                                  |  |  |  |
| Location Information Protocol              | PASSED Complete<br>25_pass_of_25 |  |  |  |
| LIP over SDS                               | PASSED Complete<br>12_pass_of_12 |  |  |  |
| LIP over Packet Data                       | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Time based reporting                       | PASSED Complete<br>6_pass_of_6   |  |  |  |

|                                               |                                |  |  |  |
|-----------------------------------------------|--------------------------------|--|--|--|
| Distance based reporting - NOT TESTABLE       | Not Supported                  |  |  |  |
| Reporting using Short reports                 | PASSED Complete<br>3_pass_of_3 |  |  |  |
| Reporting using Long reports                  | PASSED Complete<br>2_pass_of_2 |  |  |  |
| Reporting Enable & Disable                    | PASSED Complete<br>2_pass_of_2 |  |  |  |
| User control of Reporting                     | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Temporary reporting control                   | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Trigger modification                          | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Control of Basic Location Parameters          | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Immediate Location Reporting                  | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Reporting Lifetimes                           | PASSED Complete<br>2_pass_of_2 |  |  |  |
| Error Reporting using Long Reports            | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Error Reporting using Short Reports           | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Positioning on Individual Call Setup          | Not Supported                  |  |  |  |
| <b>CF - Fully Witnessed Testing</b>           |                                |  |  |  |
| Call Forwarding Unconditional                 | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Call Forwarding Unconditional Individual Call | PASSED Complete<br>1_pass_of_1 |  |  |  |
| Call Forwarding Unconditional SDS             | Not Supported                  |  |  |  |
| Call Forwarding Unconditional Status          | Not Supported                  |  |  |  |
| Call Forwarding Conditional                   | PASSED Complete<br>3_pass_of_3 |  |  |  |

|                                                                                                                         |                                  |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------|----------------------------------|--|--|--|
| Call Forwarding Conditional Individual Call                                                                             | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Call Forwarding Information Displayed                                                                                   | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Call Forwarding Information Displayed                                                                                   | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Management of Call Forwarding                                                                                           | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Change of Call Forwarding Activation Status by Served User                                                              | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Setting of Call Forwarding Parameters by Served User                                                                    | Not Supported                    |  |  |  |
| <b>Callout - Fully Witnessed Testing</b>                                                                                |                                  |  |  |  |
| Full Callout                                                                                                            | PASSED Complete<br>15_pass_of_15 |  |  |  |
| Individually Addressed Full Callout with request for Terminal Receipt message and with request for User Receipt message | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Group Addressed Full Callout without request for Terminal Receipt message and without request for User Receipt message  | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Using current selected group during Full Callout                                                                        | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Full Callout with immediate change to Callout Group                                                                     | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Full Callout with change to Callout Group on non-rejecting user response                                                | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Full Callout with rejecting User Receipt message                                                                        | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Full Callout with timeout for User Receipt message                                                                      | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Callout Incident Information messages                                                                                   | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Group Call to Callout Group                                                                                             | PASSED Complete                  |  |  |  |

|                                                                                                                       |                                  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------|----------------------------------|--|--|--|
|                                                                                                                       | 4_pass_of_4                      |  |  |  |
| End of Full Callout                                                                                                   | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Simple Callout                                                                                                        | PASSED Complete<br>6_pass_of_6   |  |  |  |
| Individually Addressed Callout with request for Terminal Receipt message and with request for User Receipt message    | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Individually Addressed Callout with request for Terminal Receipt message and without request for User Receipt message | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Group Addressed Callout without request for Terminal Receipt message and without request for User Receipt message     | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Group Addressed Callout without request for Terminal Receipt message and with request for User Receipt message        | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Simple Callout with rejecting User Receipt message                                                                    | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Simple Callout with timeout for User Receipt message                                                                  | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Interaction with other services and events                                                                            | PASSED Complete<br>30_pass_of_30 |  |  |  |
| Interaction with previous Callout                                                                                     | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Interaction with emergency call                                                                                       | PASSED Complete<br>4_pass_of_4   |  |  |  |
| Interaction with non-emergency call                                                                                   | PASSED Complete<br>11_pass_of_11 |  |  |  |
| Interaction with data and status                                                                                      | PASSED Complete<br>11_pass_of_11 |  |  |  |
| Interaction with local services                                                                                       | Not Supported                    |  |  |  |
| Manual exit                                                                                                           | PASSED Complete<br>2_pass_of_2   |  |  |  |

|                                                                |                                  |  |  |  |
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| Callout Test and Callout Availability                          | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Callout Test                                                   | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Callout Availability                                           | Not Supported                    |  |  |  |
| Callout Availability request                                   | Not Supported                    |  |  |  |
| Callout Text and Callout Pre-Coded Status                      | PASSED Complete<br>16_pass_of_16 |  |  |  |
| Callout Text                                                   | PASSED Complete<br>6_pass_of_6   |  |  |  |
| Concatenated Callout Text using Callout Specific Concatenation | PASSED Complete<br>3_pass_of_3   |  |  |  |
| Concatenated Callout Text using mSDS                           | Not Supported                    |  |  |  |
| Callout Pre-Coded Status                                       | PASSED Complete<br>7_pass_of_7   |  |  |  |
| Storage of Callout Information                                 | PASSED Complete<br>2_pass_of_2   |  |  |  |
| Viewing Callout information from previous Callout(s)           | PASSED Complete<br>1_pass_of_1   |  |  |  |
| Deletion of Callout information from previous Callout(s)       | PASSED Complete<br>1_pass_of_1   |  |  |  |