



Project 25 Compliance Assessment Program

ISSI-CSSI Interoperability Testing Supplier Declaration of Compliance

Critical Connect ISSI Gateway

Date of Last CAP-Approved Revision: **January 25, 2022**

EQUIPMENT UNDER TEST PRODUCT INFORMATION

| Equipment Info | Detail |
|--------------------------------|-------------------------------------|
| Vendor Name: | Motorola Solutions, Inc. |
| Gateway Model Name: | Critical Connect ISSI Gateway |
| System Platform Brand, Version | ASTRO |
| Tested Software Versions: | UGW -10.0.2 WRG - LMR-GW-R10.0.0.92 |
| Relevant Options: | - |

SUMMARY TEST REPORT IDENTIFIER

| | |
|---|--|
| CAP Summary Test Report (STR) Identifier: | STR - MSI - ASTRO CC ISSI 211020 |
| P25 CAP Test Requirements CAB | P25 CAP ISSI/CSSI Interoperability Test REQ CAB, Rev 2 (June 2021) |

POINT OF CONTACT INFORMATION

| Vendor Info | Details |
|------------------------|--|
| Vendor Name: | Motorola Solutions, Inc. |
| Vendor Website URL: | motorolasolutions.com |
| P25 CAP Contact Name: | John Lambrou |
| P25 CAP Contact Phone: | +1 (480) 473-0725 |
| P25 CAP Contact Email: | john.lambrou@motorolasolutions.com |

EQUIPMENT SUPPORTING THE SDOC EQUIPMENT UNDER TEST

| Equipment Info | Detail |
|-------------------------------|--|
| Vendor Name: | Motorola Solutions and Vesta Solutions |
| Model Name: | ASTRO and VESTA |
| Equipment Type: | Trunked System |
| Tested Software Versions: | A7.18 and V3.02 E19.00.05 |
| Options: | - |
| P25 CAP Test Requirements CAB | P25 CAP ISSI/CSSI Interoperability Test REQ CAB, Rev 2 (June 2021) |

**Project 25 Compliance Assessment Program
SDOC - Critical Connect ISSI Gateway**

ISSI-RFSS INTEROPERABILITY TESTS

The test cases in this section apply to the Inter Sub System Interface (ISSI) of a Radio Frequency Sub-System (RFSS) under test when connected to a Radio Frequency Sub-System (RFSS) supporting the tests. All test cases including all the role combinations required for each test case passed except for those test cases/role combinations identified below under Unsupported, Not Tested or Failed Test Cases.

P25 CAP ISSI-RFSS Interoperability Testing Coverage

Group Voice Services (FDMA): Unit Registration (including Valid Registration, Denied Registration and SU Roamed Procedure), Group Voice Call (including Unconfirmed Group Call, Confirmed Group Call Grant after RF Resources Become Available and Group Call Denied), Unit-to-Unit Call (including With Availability Check, Without Availability Check and Call Denied), Broadcast Call, Talk Group Registration (including Registration Permitted and Registration Denied), Announcement Group Call, Emergency Group Call (including Emergency Group Call, Emergency Group Call Request Queued and Emergency Call Request Ruthless Preemption) and Encrypted Group Call

Group Voice Services (TDMA): Unit Registration (Valid Registration), Group Voice Call (including Unconfirmed Group Call and Confirmed Group Call Grant after RF Resources Become Available), Unit-to-Unit Call (including With Availability Check and Without Availability Check), Broadcast Call, Talk Group Registration (including Registration Permitted), Announcement Group Call, Emergency Group Call (including Emergency Group Call, Emergency Group Call Request Queued and Emergency Call Request Ruthless Preemption) and Encrypted Group Call

Test Configuration remarks:

These tests were executed in the inter-WACN and inter-System ID configurations. The intra-System configuration is unsupported.

Unsupported, Not Tested or Failed Test Cases

[Delete from above if not tested, list with Test Case number; add all applicable.]

The following test cases are Unsupported:

2.3.2.5.2 Group Call Granted – Unconfirmed, No Units Roaming, RFSS tested in GC5 and GC8 roles

Remarks: MSI does not support unconfirmed group calls in the serving role.

2.3.3 Individual (unit-to-unit) Voice Call

Remarks: MSI does not support unit-to-unit calls over ISSI.

The following test cases were Not Tested:

2.3.2.5.7 Group Call Denied – No Units roaming, RFSS tested in GC7 and GC8 roles.

Remarks: VESTA RFSS as RFSS Supporting the Test (RST) does not support denying non-emergency group calls for local groups.

2.3.8.5.6 Emergency Group Call Request Queued – No Units Roaming, RFSS tested in GC5 and GC7 roles

Remarks: VESTA RFSS (as RST) supports ruthless pre-emption but not emergency call queued.

The following test cases Failed:

None.

Project 25 Compliance Assessment Program
SDOC - Critical Connect ISSI Gateway

CSSI-RFSS INTEROPERABILITY TESTS

The test cases in this section apply to the Console Sub System Interface (CSSI) of a Radio Frequency Sub-System (RFSS) under test when connected via a CSSI to either an RFSS with integrated console equipment or a Console Sub-System (CSS) without RF resources supporting the tests. All test cases including all the role combinations required for each test case passed except for those test cases/role combinations identified below under Unsupported, Not Tested or Failed Test Cases.

P25 CAP CSSI-RFSS Interoperability Testing Coverage

Group Voice Services (FDMA): Group Voice Call (including Unconfirmed Group Call, Confirmed Group Call Grant after RF Resources Become Available, Group Call Denied and Group Call Interrupt), Unit-to-Unit Call (including With Availability Check, Without Availability Check and Call Denied), Broadcast Call, Talk Group Registration (including Registration Permitted and Registration Denied), Announcement Group Call, Emergency Group Call (including Emergency Group Call, Emergency Group Call Request Queued and Emergency Call Request Ruthless Preemption) and Encrypted Group Call.

Group Voice Services (TDMA): Group Voice Call (including Unconfirmed Group Call, Confirmed Group Call Grant after RF Resources Become Available, Group Call Denied and Group Call Interrupt), Unit-to-Unit Call (including With Availability Check and Without Availability Check), Broadcast Call, Talk Group Registration (including Registration Permitted), Announcement Group Call, Emergency Group Call (including Emergency Group Call, Emergency Group Call Request Queued and Emergency Call Request Ruthless Preemption) and Encrypted Group Call

Test Configuration remarks:

These tests may be executed in the inter-WACN, inter-System ID, and intra-System ID configurations. No tests were executed with a CSS as the RST. Tests passed with the MSI RFSS as the RST. The tests could not be executed with the VESTA RFSS as the RST; see “Note” below for more details.

Note on ISSI/CSSI Interoperability Test Requirements Compliance Assessment Bulletin (CAB):

The tests found in the referenced CAB are a subset of the tests found in the TIA/P25 ISSI/CSSI Interoperability testing standard. The tests found in the TIA/P25 ISSI/CSSI Interoperability testing standard allow the talkgroup home to be either the RFSS Under Test (RUT) or the RFSS Supporting the Test (RST). The referenced edition of the CAB requires testing only where the talkgroup home is the RUT.

- The MSI RFSS with integrated console equipment supports the current edition of CAB tests when the talkgroup is home to the RUT. These tests passed with the MSI RFSS as an RST.
- The VESTA RFSS with integrated console equipment does not support tests where the talkgroup is home to the RUT; thus, the tests in the current edition of CAB could not be executed when a VESTA RFSS was used as the RST.
- The MSI RFSS with integrated console equipment and the VESTA RFSS with integrated console equipment both support the TIA/P25 tests when the talkgroup is home to the RST; however, these tests are not required in the current edition of the CAB.

Project 25 Compliance Assessment Program
SDOC - Critical Connect ISSI Gateway

Unsupported, Not Tested or Failed Test Cases

[Delete from above if not tested, list with Test Case number; add all applicable.]

Please refer to the Note on Project 25 Compliance Assessment Bulletin (CAB) Testing Requirements above explaining why this test suite was not executed when VESTA RFSS is RST.

The following test cases are Unsupported:

2.3.2.5.2 Group Call Granted – Unconfirmed, No Units Roaming, RFSS tested in GC5 and GC8 roles

Remarks: MSI does not support unconfirmed group calls in the serving role.

2.3.3 Individual (unit-to-unit) Voice Call

Remarks: MSI does not support unit-to-unit calls over ISSI.

The following test cases Failed:

None.

CSSI INTEROPERABILITY TESTING FOR CONSOLES

The test cases in this section apply to the Console Subsystem (either standalone or when integrated in an RFSS) when connected via a CSSI to an RFSS supporting the tests. All test cases including all the role combinations required for each test case passed except for those test cases/role combinations identified below under Unsupported, Not Tested or Failed Test Cases.

P25 CAP CSSI-Console Interoperability Testing Coverage

Group Voice Services (FDMA): Group Voice Call (including Unconfirmed Group Call, Confirmed Group Call Grant after RF Resources Become Available, Group Call Denied and Group Call Interrupt), Unit-to-Unit Call (including With Availability Check, Without Availability Check and Call Denied), Broadcast Call, Talk Group Registration (including Registration Permitted and Registration Denied), Announcement Group Call, Emergency Group Call (including Emergency Group Call, Emergency Group Call Request Queued and Emergency Call Request Ruthless Preemption) and Encrypted Group Call

Group Voice Services (TDMA): Group Voice Call (including Unconfirmed Group Call, Confirmed Group Call Grant after RF Resources Become Available, Group Call Denied and Group Call Interrupt), Unit-to-Unit Call (including With Availability Check and Without Availability Check), Broadcast Call, Talk Group Registration (including Registration Permitted), Announcement Group Call, Emergency Group Call (including Emergency Group Call, Emergency Group Call Request Queued and Emergency Call Request Ruthless Preemption) and Encrypted Group Call

Test Configuration remarks:

These tests were executed in the inter-WACN, inter-System ID, and intra-System ID configurations. The RFSS Under Test (RUT) used an integrated console instead of a CSS.

Project 25 Compliance Assessment Program
SDOC - Critical Connect ISSI Gateway

Unsupported, Not Tested or Failed Test Cases

The following test cases are Unsupported:

2.3.3 Individual (unit-to-unit) Voice Call

Remarks: The MSI Console does not support unit-to-unit calls with roaming talkgroups over ISSI.

The following test cases were Not Tested:

2.3.2.5.7 Group Call Denied – No Units roaming, Console tested in GC7 role.

Remarks: The VESTA RFSS (as RST) does not support denying non-emergency group calls for local groups.

2.3.8.5.6 Emergency Group Call Request Queued – No Units Roaming, Console tested in GC7

Remarks: The VESTA RFSS (as RST) supports ruthless pre-emption but not emergency call queued.

2.3.10.5.1 Privacy for Encrypted Call, Console tested in GC6 role, TDMA mode.

Remarks: The VESTA RFSS (as RST) does not support this functionality.

The following test cases Failed:

None.

