

**Project 25 Compliance Assessment Program**  
**SDOC – L3HARRIS – Two47 Base Station**  
**June 1, 2023**

**BASE STATION REPEATER PRODUCT INFORMATION**

<b>Base Station Repeater Info</b>	<b>Detail</b>
Model Name:	Two47 Base Station
Tested Software Versions:	System Release SR10A.7, SR10A.4, SR10A.2, SR10A.1, SR10A, PR9D, PR9C, PR9B
Hardware Capabilities/Options & Software Options:	Hardware Options: 800 MHz  Software Options: N/A

Test case results and updated software versions for this model can be found in the Summary Test Report identified below.

**TEST REQUIREMENTS CAB IDENTIFICATION**

This product was tested according to the P25 CAP Test Requirements Compliance Assessment Bulletin (CAB) indicated by the checked box.

<b>check one</b>	<b>P25 CAP Test Requirement CAB</b>	<b>Details</b>
	<b>P25-CAB-CAI_TEST_REQ – July 2017</b>	Includes August 2016 P25 CAP Test Requirements; Adds TDMA performance and interoperability testing and trunked supplementary data testing
<b>X</b>	<b>P25-CAB-CAI_TEST_REQ – October 2018</b>	Includes all July 2017 P25 CAP Test Requirements; Adds minor updates to conventional interoperability testing due to TIA standard update

**SUMMARY TEST REPORT IDENTIFIER<sup>1</sup>**

Summary Test Report (STR) Identifier:	STR – L3HARRIS – BASE STATION REPEATER
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**CONTACT INFORMATION**

<b>Company Info</b>	<b>Details</b>
Company Name:	L3Harris Technologies (Communication Systems Segment, PSPC Sector)
Company Website URL:	<a href="http://www.l3harris.com/all-capabilities/public-safety-and-critical-communications">http://www.l3harris.com/all-capabilities/public-safety-and-critical-communications</a>
P25 CAP Contact Name:	David Prather
P25 CAP Contact Phone:	(434) 455-6742
P25 CAP Contact Email:	David.Prather@L3Harris.com

<sup>1</sup> The Summary Test Report for this product is available upon request. Please send your STR request to [P25CAP@hq.dhs.gov](mailto:P25CAP@hq.dhs.gov) and include the base station repeater 'Vendor Name'.

**Project 25 Compliance Assessment Program**  
**SDOC – L3HARRIS – Two47 Base Station**  
**June 1, 2023**

**CONVENTIONAL PERFORMANCE**

The Base Station Repeater product has been tested for Conventional Performance. All requirements were passed except for those requirements identified below under Unsupported or Failed Requirements.

**P25 CAP Conventional Performance Testing Coverage**

**Receiver Tests:** Reference Sensitivity, Faded Reference Sensitivity, Adjacent Channel Rejection, Offset Adjacent Channel Rejection, Co-Channel Rejection, Spurious Response Rejection, Intermodulation Rejection, Signal Displacement Bandwidth, Late Entry Unsquench Delay, and Receiver Throughput Delay.  
**Transmitter Tests:** Unwanted Emissions (Adjacent Channel Power Ratio), Transmitter Throughput Delay, Frequency Deviation for C4FM, and Modulation Fidelity, Transient Frequency Behavior.

**Unsupported or Failed Requirements**

1. Equipment is not equipped with an audio output. All requirements for Receiver Throughput Delay are not supported.
2. Equipment is not equipped with an audio input. All requirements for Transmitter Throughput Delay are not supported.

**TRUNKING PERFORMANCE - FDMA**

The Base Station Repeater product has been tested for Trunking Performance - FDMA. All requirements were passed except for those requirements identified below under Unsupported or Failed Requirements.

**P25 CAP FDMA Trunking Performance Testing Coverage**

**Receiver Tests:** Reference Sensitivity, Faded Reference Sensitivity, Adjacent Channel Rejection, Offset Adjacent Channel Rejection, Co-Channel Rejection, Spurious Response Rejection, Intermodulation Rejection, and Signal Displacement Bandwidth.  
**Transmitter Tests:** Unwanted Emissions (Adjacent Channel Power Ratio), Transmitter Throughput Delay, Frequency Deviation for C4FM, and Modulation Fidelity, Transient Frequency Behavior.  
**Trunked Tests:** Time to Grant

**Unsupported or Failed Requirements**

1. Equipment is not equipped with an audio input. All requirements for Transmitter Throughput Delay are not supported.
2. 45ms trunking control channel slot times not supported.
3. Double and triple TSBK for OSPs not supported.

**TRUNKING PERFORMANCE - TDMA**

The Base Station Repeater product has been tested for Trunking Performance - TDMA. All requirements were passed except for those requirements identified below under Unsupported or Failed Requirements.

**Project 25 Compliance Assessment Program**  
**SDOC – L3HARRIS – Two47 Base Station**  
**June 1, 2023**

P25 CAP TDMA Trunking Performance Testing Coverage

Receiver Tests: Reference Sensitivity, Faded Reference Sensitivity, Adjacent Channel Rejection, Offset Adjacent Channel Rejection, Co-Channel Rejection, Spurious Response Rejection, Intermodulation Rejection, and Signal Displacement Bandwidth.

Transmitter Tests: Unwanted Emissions (Adjacent Channel Power Ratio), Modulation Fidelity, and Symbol Rate Accuracy.

Unsupported or Failed Requirements

1. None.

**CONVENTIONAL REPEAT MODE INTEROPERABILITY**

The Base Station Repeater product does not support Conventional Repeat Mode Interoperability.

P25 CAP Repeat Mode Interoperability Testing Coverage

Network Access Code (NAC) Operation, Group Voice Call, Emergency Call, Unit-to-Unit Voice Call, Encryption, Call Alert, Radio Check, Message Update, Status Update, Status Query, and Radio Unit Monitor.

Unsupported or Failed Test Cases

1. All test cases are unsupported for P25 Conventional interoperability.

Optional Product Capabilities Required to Pass Test Cases

1. N/A

**CONVENTIONAL REPEAT MODE with DISPATCH MONITORING CONSOLE INTEROPERABILITY**

The Base Station Repeater product does not support Conventional Repeat Mode with Dispatch Monitoring Console Interoperability.

P25 CAP Repeat Mode Interoperability Testing Coverage

Group Voice Call, Emergency Call, All Call, Unit-to-Unit Voice Call, Encryption, Emergency Alarm, Call Alert, Radio Check, Radio Unit Inhibit/Uninhibit, Message Update, Status Update, Status Query, and Radio Unit Monitor.

Unsupported or Failed Test Cases

1. All test cases are unsupported for P25 Conventional interoperability.

Optional Product Capabilities Required to Pass Test Cases

1. N/A

**TRUNKED BASE STATION REPEATER INTEROPERABILITY – FDMA**

The Base Station Repeater product has been tested for Trunked Interoperability - FDMA. All test cases were passed except for those test cases identified below under Unsupported or Failed Test Cases. Test

**Project 25 Compliance Assessment Program**  
**SDOC – L3HARRIS – Two47 Base Station**  
**June 1, 2023**

cases that passed but require specific, sometimes optional, product capabilities are also identified below.

**P25 CAP FDMA Trunked Interoperability Testing Coverage**

Full Registration, Group Voice Call, Unit to Unit Voice Call, Broadcast Voice Call, Affiliation, Announcement Group Call, Emergency Alarm, Emergency Group Call, Encryption, Intra-Location Registration Area Roaming, Deregistration, System Call, Call Alert, Short Message, Status Query, Status Update, Radio Unit Monitoring, Radio Unit Disable/Re-Enable, and Radio Check.

**Unsupported or Failed Test Cases**

1. Unit-to-unit call queued with target availability check – traffic channel assignment before target availability check, System Call, and Status Query are not supported.
2. Inter-WACN Roaming Operational Mode is not supported.

**Optional Product Capabilities Required to Pass Test Cases**

1. None.

**TRUNKED BASE STATION REPEATER INTEROPERABILITY – TDMA**

The Base Station Repeater product has been tested for Trunked Interoperability - TDMA. All test cases were passed except for those test cases identified below under Unsupported or Failed Test Cases. Test cases that passed but require specific, sometimes optional, product capabilities are also identified below.

**P25 CAP TDMA Trunked Interoperability Testing Coverage**

Registration, Group Voice Call, Unit-to-Unit Voice Call, Broadcast Call, Announcement Group Call, Emergency Group Call, Encryption Group Call, System Call, Radio Unit Monitoring, and Transmitting Subscriber Forced Preemption.

**Unsupported or Failed Test Cases**

1. Unit-to-unit call queued with target availability check – traffic channel assignment before target availability check, System Call, and Transmitting Subscriber Forced Preemption test case 1: TDMA SU Forced Audio Preemption are not supported.
2. Inter-WACN Roaming Operational Mode not supported.

**Optional Product Capabilities Required to Pass Test Cases**

1. None.

**Project 25 Compliance Assessment Program  
SDOC – L3HARRIS – Two47 Base Station  
June 1, 2023**

**SIGNATURE AND DATE**

June 1, 2023



Date Signed

Vendor's Authorized Representative Signature

David Prather

Vendor's Authorized Representative Printed Name

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**Authority:** The information requested is collected under 6 U.S.C. §§194, 195,195a and 44 U.S.C. 3101

**Purpose:** The Department of Homeland Security (DHS) is requesting this information from you as a designated point of contact for a vendor/supplier participating in DHS' P25 Compliance Assessment Program (CAP). P25 CAP provides public safety agencies with evidence that equipment they purchase is tested against and compliant with standards for performance, conformance, and interoperability. The contact information provided to DHS will be used by DHS to contact the vendor/supplier. The information will also be placed on the P25 CAP website as part of an equipment vendor/supplier's profile and will be available to public safety agencies and others who view that profile.

**Disclosure:** Furnishing point-of-contact information and participating in P25 CAP is voluntary. However, failure to provide point of contact information may be the basis for denying a vendor/supplier participation in P25 CAP.

**Routine Uses:** The information will be used by and disclosed to S&T personnel for the purpose stated above. DHS follows approved routine uses described in the associated published system of records notice [DHS/ALL-002 Department of Homeland Security (DHS) Mailing and Other Lists System] and the published privacy impact assessment [DHS/ALL/PIA-006 DHS General Contact Lists], which you can find at [www.dhs.gov/privacy](http://www.dhs.gov/privacy).