

Project 25 Compliance Assessment Program
SDOC - TAIT COMMUNICATIONS – TBDK4G
March 2, 2023 [Date submitted or resubmitted to P25 CAP]

BASE STATION REPEATER PRODUCT INFORMATION

Base Station Repeater Info	Detail
Model Name:	TBDK4G
Tested Software Versions:	Reciter FW: p25-3.40.00.0005 Front Panel: 1.10.04.0004
Hardware Capabilities/Options & Software Options:	762-870 MHz, 35 Watts TBAS041 Analog Air Interface TBAS050 P25 Common Air Interface TBAS056 P25 Trunking Full TBAS060 P25 DFSI TBAS074 Modem Passthrough TBAS084 20/25 kHz Unrestricted WB TBAS093 P25 Analog Line Vocoder

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.

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

SUMMARY TEST REPORT IDENTIFIER¹

Summary Test Report (STR) Identifier:	STR - TAIT COMMUNICATIONS - BASE STATION REPEATER
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¹ The Summary Test Report for this product is available upon request. Please send your STR request to P25CAP@hq.dhs.gov and include the base station repeater 'Vendor Name'.

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CONTACT INFORMATION

Company Info	Details
Company Name:	Tait Communications Limited
Company Website URL:	https://www.taitradio.com/
P25 CAP Contact Name:	David Jackson
P25 CAP Contact Phone:	+64 3 357 0283
P25 CAP Contact Email:	david.jackson@taitcommunications.com

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 Unsquelch 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. Receiver Late Entry Unsquelch Delay and Receiver Throughput Delay tests do not apply since the fixed station does not provide an audio (analog) output. Functionality is not supported by the base station repeater.
2. Transmitter Throughput Delay test does not apply since the fixed station does not provide an audio (analog) input. Functionality is not supported by the base station repeater.

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.

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Unsupported or Failed Requirements

1. Transmitter Throughput Delay test does not apply since the fixed station does not provide an audio (analog) input. Functionality is not supported by the base station repeater.

TRUNKING PERFORMANCE - TDMA

The Base Station Repeater product has not been tested for Trunking Performance - TDMA.

The Base Station Repeater product is not capable of P25 TDMA (Phase II) modulation.

CONVENTIONAL REPEAT MODE INTEROPERABILITY

The Base Station Repeater product has been tested for Conventional Repeat Mode Interoperability. All test cases were passed except for those 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 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. Radio Unit Monitor - Test Case 3 – Radio Unit Monitor Initiated by SU 1 – Unit-to-Unit Call - Functionality is not supported by the representative subscriber units tested with the base station repeater under test.

Optional Product Capabilities Required to Pass Test Cases

1. None.

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CONVENTIONAL REPEAT MODE with DISPATCH MONITORING CONSOLE INTEROPERABILITY

The Base Station Repeater product has been tested for Conventional Repeat Mode with Dispatch Monitoring Console Interoperability. 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 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. Emergency Call – *Test Case 2 – Emergency Call from DMC*, Radio Check - *Test Case 1 – Initiate Radio Check from DMC*, Message Update - *Test Case 1 – Message Update from DMC & Test Case 2 – DMC to Group Message Update*, Status Update - *Test Case 2 – Talk Group Status Update Initiated by SU 1* - Functionality is not supported by the representative FNE dispatch monitoring consoles tested with the base station repeater under test.
2. Radio Unit Monitor - *Test Case 2 – Radio Unit Monitor Initiated by DMC – Unit-to-Unit Call* - Functionality is not supported by the representative subscriber units tested with the base station repeater under test.

Optional Product Capabilities Required to Pass Test Cases

1. None.

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 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. Inter-SYS Roaming and Inter-WACN Roaming are unsupported.
2. Unit-to-Unit Voice Call - *Test Case 3 – Unit-to-Unit Call Queued with Target Availability Check – Traffic Channel Assignment After Target Availability Check*, *Test Case 4 – Unit-to-Unit Call Queued with Target Availability Check – Traffic Channel Assignment Before Target Availability Check*, *Test Case 5 – Unit-to-Unit Call without Target Availability Check*, and *Test Case 6 – Unit-to-Unit Call Queued without Target Availability Check* are unsupported.
3. System Call is unsupported.

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4. Radio Unit Monitoring - *Test Case 1 – Individual Non-Silent, Test Case 2 – Individual Silent, Test Case 3 – Group Non-Silent, and Test Case 4 – Group Silent* are unsupported.

Optional Product Capabilities Required to Pass Test Cases

1. None.

SIGNATURE AND DATE

March 2, 2023



Date Signed

Vendor's Authorized Representative Signature

Brian Emmett

Vendor's Authorized Representative Printed Name

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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.