

Project 25 Compliance Assessment Program

SDOC - ZETRON – VR-4Z150-00-000

October 25, 2022

BASE STATION REPEATER PRODUCT INFORMATION

Base Station Repeater Info	Detail
Model Name:	VR-4Z150-00-000
Tested Software Versions:	RX FW: 2.11.0d / Synth FW: 4.6
Hardware Capabilities/Options & Software Options:	P25 Conventional, Software Front End Filter, Receiver Module only, Helical Filter Front End, Class A, Frequency band: 136-174 MHz

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 - ZETRON - BASE STATION REPEATER
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CONTACT INFORMATION

Company Info	Details
Company Name:	ZETRON
Company Website URL:	www.zetron.com
P25 CAP Contact Name:	Werner Hoepf
P25 CAP Contact Phone:	+1 250 414 6270
P25 CAP Contact Email:	werner.hoepf@zetron.com

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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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 Unsilence 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. This is a Receiver module. All Transmitter Tests are unsupported.
2. [Add as many notes as needed]

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. The Receiver module does not support Trunking functionality.
2. [Add as many notes as needed]

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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.

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. The Receiver module does not support TDMA Trunking functionality. All Receiver and Transmitter Tests are unsupported.
2. [Add as many notes as needed]

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. Unsupported Test Cases: Message Update – Test Case 2, Status Update – Test Case 2
2. [Add as many notes as needed]

Optional Product Capabilities Required to Pass Test Cases

1. [Example: None]
2. [Add as many notes as needed]

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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. All Test cases under CONVENTIONAL REPEAT MODE with DISPATCH MONITORING CONSOLE are unsupported.
2. [Add as many notes as needed]

Optional Product Capabilities Required to Pass Test Cases

1. [Example: None]
2. [Add as many notes as needed]

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. All TRUNKED BASE STATION REPEATER INTEROPERABILITY – FDMA test cases are unsupported.
2. [Add as many notes as needed]

Optional Product Capabilities Required to Pass Test Cases

1. [Example: None]
2. [Add as many notes as needed]

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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

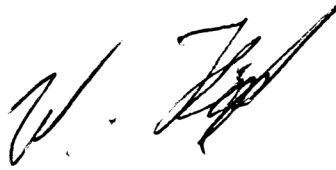
1. All TRUNKED BASE STATION REPEATER INTEROPERABILITY – TDMA test cases are unsupported.
2. [Add as many notes as needed]

Optional Product Capabilities Required to Pass Test Cases

1. [Example: None]
2. [Add as many notes as needed]

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SIGNATURE AND DATE



September 2, 2022

Date Signed

Vendor's Authorized Representative Signature

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.