

# Project 25 Compliance Assessment Program

## Summary Test Report

Codan Radio Communications VR-4E150-A0-000

STR-Codan-100011

Test Item Description	
<b>Manufacturer</b>	Codan Radio Communications
<b>Manufacturer Contact</b>	Mike Cyr
<b>Product Name</b>	MT 4E Receiver VR-4E150-A0-000 (136-174 MHz)
<b>Installed Options</b>	<b>Hardware</b> 60021.1 60013.1 50024.4 50154.4
	<b>Firmware</b> 2.9.5
<b>Installed Vocoder</b>	Enhanced Full Rate

Test Description
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.2.1.1 – Project 25 Phase 1 Common Air Interface Performance Conventional Mode Operation Base Station/Repeaters

Laboratory Information	
<b>P25 CAP Laboratory Code</b>	P25CAP081016
<b>Date(s) of Test</b>	June 24, 2015 to June 30, 2015
<b>Date(s) of Issue</b>	August 4, 2015

Informative References	
Date	Title
March 2010	P25-CAB-CAI_TEST_REQ

<b>P25-CAB-CAI_TEST_REQ – March 2010, Section 2.2.1.1 – Project 25 Phase 1 Common Air Interface Performance Conventional Mode Operation Base Station/Repeaters</b>		<b>DTR-TIMCO081016 VR-4E150-A0-000 VR-4E150-A0-000</b>	
<b>RECEIVER TESTS (136 - 174 MHz)</b>			
<b>Test Case</b>	<b>Description</b>	<b>Requirement</b>	<b>Results</b>
2.1.4	Reference Sensitivity	≤ -113 dBm (Class B)	P
2.1.5	Faded Reference Sensitivity	≤ -105 dBm (Class B)	P
2.1.7	Adjacent Channel Rejection	≥ 60 dB (Class B)	P
2.1.8	Co-Channel Rejection	≤ 9 dB	P
2.1.9	Spurious Response Rejection	≥ 70 dB (Class B)	P
2.1.10	Intermodulation Rejection	≥ 70 dB (Class B)	P
2.1.11	Signal Displacement Bandwidth	≥ 1000 Hz	P
2.1.17	Late Entry Unsquench Delay		
	No Talk Group or Encryption	≤ 125 ms	P
	Talk Group Only	≤ 370 ms	P
	Encryption Only	≤ 370 ms	P
	Both (on clear or encrypted channel)	≤ 460 ms	P
2.1.18	Receiver Throughput Delay	≤ 125 ms	P
<b>TX TESTS (N/A)</b>			
<b>Test Case</b>	<b>Description</b>	<b>Requirement</b>	<b>Results</b>
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	≤ 67 dB	N/A1
2.2.14	Transmitter Throughput Delay	≤ 125 ms	N/A1
2.2.15	Frequency Deviation for C4FM		N/A1
	High Level signal Deviation	2544 Hz < f <sub>dev</sub> ≤ 3111 Hz	
	Low Level Signal Deviation	848 Hz < f <sub>dev</sub> ≤ 1037 Hz	
2.2.16	Modulation Fidelity	≤ 10 % (Class B)	N/A1
2.2.18	Transient Frequency Behavior		N/A1
	Time Interval t1 = 5.0 ms	Δf  ≤ 12.5 kHz	
	Time Interval t2 = 20.0 ms	Δf  ≤ 6.25 kHz	
	Time Interval t3 = 5.0 ms	Δf  ≤ 12.5 kHz	

<b>Test Case Result Definitions</b>	
<b>No Test Performed</b>	-
<b>Test Does Not Apply to the Test Object</b>	N/A
<b>Test Object Meets Requirements</b>	P (Pass)
<b>Test Object Does Not Meet Requirements</b>	F (Fail)
<b>Test Object is Inconclusive</b>	I (Inconclusive)

<b>Comments</b>
N/A1: VR-4E150-A0 is a modular receiver and therefore P25-CAB-CAI_TEST_REQ –March 2010 Transmitter tests are not applicable and not supported by this module.

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**OMB NO:** 1640-0015

**EXPIRATION DATE:** 07/31/2015      New OMB Date: 04/30/2016 - KRT for DHS OIC

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