

PRODUCT UNDER TEST

DATE APPROVED: 20240522

Product Info	Details
Model_Name:	TP9900-TPHNOA
Hardware Capability/Options:	136-174 MHz, 378-520 MHz, 757-870 MHz, 896-941 MHz, TPHB13-N000_0002
Software Options:	P25 Conventional, P25 Trunked, P25 TDMA Trunked

TEST CASE RESULT NOTATIONS AND DEFINITIONS (Vendors may define additional notations/definitions)

Notation	Test Case Result Definition
P (Pass)	Test was passed and met stated requirements where listed
P1	Functionality requires product with DTMF keypad
P2	Functionality requires product with display capable of ID display
P3	Functionality requires DTMF microphone
P4	Functionality requires AES 256 encryption
P5	Interoperability verified with only one representative base station repeater
P6	Interoperability verified with only two representative base station repeaters
U (Unsupported)	Test examines functionality the Product Under Test does not support
U1	37.5 millisecond slot times is not supported
U2	45 millisecond slot times is not supported
U3	Functionality is not supported by subscriber unit
U4	Functionality is not supported by the representative base station repeater tested with the subscriber under test
UC1 (additional notation)	Functionality is not supported by the representative subscriber unit tested with the subscriber under test
UC2 (additional notation)	Functionality is not supported by the representative FNE dispatch monitoring console tested with the subscriber under test
E (Exception)	DHS OIC Approved Test Case Exception
E1	In accordance with the guidance given in TIA 102.CAAB-D §3.2.18, if the transmitter carrier output power rating is 6 watts or less, the mean frequency difference during t1 and t3, may be greater than ±12.5 kHz.
E2	Exception allowed by DHS OIC; not tested due to test equipment limitation
EC1 (additional notation)	Test not required per TIA-102.CABA for assessing the Interoperability of a single SU model against a single FNE model
F (Fail)	Test was failed and did not meet stated requirements where listed
NT (additional notation)	Functionality was NOT TESTED since not required in previous DTR or DTR only covers gap testing from previous CAB

Conventional Subscriber Performance	
P25 CAP Test Identification	
P25-CAB-CAI_TEST_REQ – October 2018, Section 2.1.1.1 – Conventional Subscriber Unit Performance	
Detailed Test Report Identification	
DTR_P25CAP081015_4243	

The 'test case' number refers to the paragraph number for the test procedure found in the TIA-102.CAAA-E Digital C4FM/CQPSK Transceiver Measurement Methods for FDMA.

Conventional Subscriber Unit Receiver Tests		Only display results for tested frequency band(s)						
Test Case	Test Case Description	Requirement	VHF Result	UHF-L Result	UHF-H Result	700 Result	800 Result	900 Result
3.1.4	Reference Sensitivity – C4FM	≤ -116 dBm	P	P	P	P	P	P
3.1.4	Reference Sensitivity – Standard Simulcast	≤ -116 dBm	P	P	P	P	P	P
3.1.5	Faded Reference Sensitivity – C4FM	≤ -108 dBm	P	P	P	P	P	P
3.1.5	Faded Reference Sensitivity – Standard Simulcast	≤ -108 dBm	P	P	P	P	P	P
3.1.6	Signal Delay Spread Capability – C4FM	≥ 50 μs	P	P	P	P	P	P
3.1.6	Signal Delay Spread Capability – Standard Simulcast	≥ 80 μs	P	P	P	P	P	P
3.1.7.1	Adjacent Channel Rejection – C4FM	≥ 60 dB	P	P	P	P	P	P
3.1.7.1	Adjacent Channel Rejection – Standard Simulcast	≥ 60 dB	P	P	P	P	P	P
3.1.7.2	Offset Adjacent Channel Rejection – C4FM	≥ 47 dB	P	P	P	P	P	P
3.1.7.2	Offset Adjacent Channel Rejection – Standard Simulcast	≥ 47 dB	P	P	P	P	P	P
3.1.8	Co-Channel Rejection	≤ 9 dB	P	P	P	P	P	P
3.1.9	Spurious Response Rejection	≥ 80 dB Mobile ≥ 70 dB Portable	P	P	P	P	P	P
3.1.10	Intermodulation Rejection	≥ 75 dB Mobile ≥ 70 dB Portable	P	P	P	P	P	P
3.1.11	Signal Displacement Bandwidth	≥ 1000 Hz	P	P	P	P	P	P
3.1.17	Late Entry Unsilence Delay: No Talk Group or Encryption	≤ 125 ms	P	P	P	P	P	P
3.1.18	Receiver Throughput Delay	≤ 125 ms	P	P	P	P	P	P

Conventional Subscriber Unit Transmitter Tests		Only display results for tested frequency band(s)						
Test Case	Test Case Description	Requirement	VHF Result	UHF-L Result	UHF-H Result	700 Result	800 Result	900 Result
3.2.8	Unwanted Emissions: Adjacent Channel Power Ratio*	≥ 67 dB (non-700MHz)	P	P	P	P	P	P
3.2.12	Transmitter Attack Time	≤ 50 ms	P	P	P	P	P	P
3.2.12	Encoder Attack Time	≤ 100 ms	P	P	P	P	P	P
3.2.14	Transmitter Throughput Delay	≤ 125 ms	P	P	P	P	P	P
3.2.15	Frequency Deviation for C4FM: High-Level Signal Deviation	2544 < f _{dev} ≤ 3111 Hz	P	P	P	P	P	P
3.2.15	Frequency Deviation for C4FM: Low-Level Signal Deviation	848 < f _{dev} ≤ 1037 Hz	P	P	P	P	P	P
3.2.16	Modulation Fidelity – C4FM	≤ 5%	P	P	P	P	P	P
3.2.18	Transient Frequency Behavior: Time Interval [see t1 value in cell]	Δf ≤ 12.5 kHz	[t1=5ms] P	[t1=10ms] P	[t1=20ms] P	[t1=20ms] P	[t1=20ms] P	[t1=20ms] P
3.2.18	Transient Frequency Behavior: Time Interval [see t2 value in cell]	Δf ≤ 6.25 kHz	[t1=20ms] P	[t1=25ms] P	[t2=50ms] P	[t2=50ms] P	[t2=50ms] P	[t2=50ms] P
3.2.18	Transient Frequency Behavior: Time Interval [see t3 value in cell]	Δf ≤ 12.5 kHz	[t3=5ms] P	[t3=10ms] P	[t3=10ms] P	[t3=10ms] P	[t3=10ms] P	[t3=10ms] P

*700MHz Adjacent Channel Power Ratio test is passed based on test results submitted for FCC equipment authorization.

Trunked Subscriber Performance - FDMA	
P25 CAP Test Identification	
P25-CAB-CAI_TEST_REQ – October 2018, Section 2.1.1.2 – Trunked Subscriber Unit Performance - FDMA	
Detailed Test Report Identification	
DTR_P25CAP081015_4243	

The 'test case' number refers to the paragraph number for the test procedure found in the TIA-102.CAAA-E Digital C4FM/CQPSK Transceiver Measurement Methods for FDMA.

Trunked Subscriber Unit Receiver Tests - FDMA		Only display results for tested frequency band(s)						
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Test Case	Test Case Description	Requirement	VHF Result	UHF-L Result	UHF-H Result	700 Result	800 Result	900 Result
3.1.4	Reference Sensitivity – C4FM	≤ -116 dBm	P		P	P	P	P
3.1.4	Reference Sensitivity – Standard Simulcast	≤ -116 dBm	P		P	P	P	P
3.1.5	Faded Reference Sensitivity – C4FM	≤ -108 dBm	P		P	P	P	P
3.1.5	Faded Reference Sensitivity – Standard Simulcast	≤ -108 dBm	P		P	P	P	P
3.1.6	Signal Delay Spread Capability – C4FM	≥ 50 μs	P		P	P	P	P
3.1.6	Signal Delay Spread Capability – Standard Simulcast	≥ 80 μs	P		P	P	P	P
3.1.7.1	Adjacent Channel Rejection – C4FM	≥ 60 dB	P		P	P	P	P
3.1.7.1	Adjacent Channel Rejection – Standard Simulcast	≥ 60 dB	P		P	P	P	P
3.1.7.2	Offset Adjacent Channel Rejection – C4FM	≥ 47 dB	P		P	P	P	P
3.1.7.2	Offset Adjacent Channel Rejection – Standard Simulcast	≥ 47 dB	P		P	P	P	P
3.1.8	Co-Channel Rejection	≤ 9 dB	P		P	P	P	P
3.1.9	Spurious Response Rejection	≥ 80 dB Mobile ≥ 70 dB Portable	P		P	P	P	P
3.1.10	Intermodulation Rejection	≥ 75 dB Mobile ≥ 70 dB Portable	P		P	P	P	P
3.1.11	Signal Displacement Bandwidth	≥ 1000 Hz	P		P	P	P	P

Trunked Subscriber Unit Transmitter Tests - FDMA

Only display results for tested frequency band(s)

Test Case	Test Case Description	Requirement	VHF Result	UHF-L Result	UHF-H Result	700 Result	800 Result	900 Result
3.2.8	Unwanted Emissions: Adjacent Channel Power Ratio*	≥ 67 dB (non-700MHz)	P		P	P	P	P
3.2.12	Power Attack Time	≤ 50 ms	P		P	P	P	P
3.2.12	Encoder Attack Time	≤ 100 ms	P		P	P	P	P
3.2.14	Transmitter Throughput Delay	≤ 125 ms	P		P	P	P	P
3.2.15	Frequency Deviation for C4FM: High-Level Signal Deviation	2544 < f _{dev} ≤ 3111 Hz	P		P	P	P	P
3.2.15	Frequency Deviation for C4FM: Low-Level Signal Deviation	848 < f _{dev} ≤ 1037 Hz	P		P	P	P	P
3.2.16	Modulation Fidelity – C4FM	≤ 5%			P	P	P	P
3.2.18	Transient Frequency Behavior: Time Interval [see t1 value in cell]	Δf ≤ 12.5 kHz	[t1=5ms] P		[t1=10ms] P	[t1=20ms] P	[t1=20ms] P	[t1=20ms] P
3.2.18	Transient Frequency Behavior: Time Interval [see t2 value in cell]	Δf ≤ 6.25 kHz	[t1=20ms] P		[t1=25ms] P	[t2=50ms] P	[t2=50ms] P	[t2=50ms] P
3.2.18	Transient Frequency Behavior: Time Interval [see t3 value in cell]	Δf ≤ 12.5 kHz	[t3=5ms] P		[t3=10ms] P	[t3=10ms] P	[t3=10ms] P	[t3=10ms] P

*700MHz Adjacent Channel Power Ratio test is passed based on test results submitted for FCC equipment authorization.

Trunked Subscriber Unit Trunked Tests - FDMA

Test Case	Test Case Description	Requirement	Result
3.3.1	Trunked Control Channel Slot Times - 37.5 ms Slot Encode Attack Time	2.00 ≤ t _{slot} ≤ 4.15 ms	E2
3.3.1	Trunked Control Channel Slot Times - 37.5 ms Slot RF Power Attack Time	0.00 ≤ t _{slot} ≤ 4.15 ms	E2
3.3.1	Trunked Control Channel Slot Times - 37.5 ms Slot RF Power Turn Off Time	≤ 1.57 ms	E2
3.3.1	Trunked Control Channel Slot Times - 45 ms Slot Encode Attack Time	2.00 ≤ t _{slot} ≤ 11.65 ms	P
3.3.1	Trunked Control Channel Slot Times - 45 ms Slot RF Power Attack Time	0.00 ≤ t _{slot} ≤ 11.65 ms	P
3.3.1	Trunked Control Channel Slot Times - 45 ms Slot RF Power Turn Off Time	≤ 1.57 ms	P
3.3.2	Trunked Request Time - 37.5 ms Slot	≤ 160 ms	E2
3.3.2	Trunked Request Time - 45 ms Slot	≤ 167.5 ms	P
3.3.5	Transmitter Time to Key on a Traffic Channel Short Channel Form RF Transmitter time to Key on a Working Channel	≤ 150.0 ms	P
3.3.5	Transmitter Time to Key on a Traffic Channel Short Channel Form Encoder Transmit Time	≤ 150.0 ms	P
3.3.5	Transmitter Time to Key on a Traffic Channel Explicit Channel Form RF Transmitter Time to Key on a Working Channel	≤ 171.1 ms	P
3.3.5	Transmitter Time to Key on a Traffic Channel Explicit Channel Form Encoder Transmit Time	≤ 171.1 ms	P

Trunked Subscriber Performance - TDMA

Test Identification
P25-CAB-CAI_TEST_REQ – October 2018, Section 2.1.1.3 - Trunked Subscriber Unit Performance TDMA
Detailed Test Report Identification
DTR_P25CAP081015_4243

The 'test case' number refers to the paragraph number for the test procedure found in TIA-102.CCAA-B Two-Slot Time Division Multiple Access Transceiver Measurement Methods for TDMA.

Trunked Subscriber Unit Receiver Tests - TDMA

Only display results for tested frequency band(s)

Test Case	Test Case Description	Requirement	VHF Result	UHF-L Result	UHF-H Result	700 Result	800 Result	900 Result
3.1.4	Reference Sensitivity - HDQPSK	≤ -116 dBm	P		P	P	P	P
3.1.5	Faded Reference Sensitivity - HDQPSK	≤ -108 dBm	P		P	P	P	P
3.1.6	Signal Delay Spread Capability - HDQPSK	≥ 65 μs	P		P	P	P	P
3.1.7.1	Adjacent Channel Rejection - HDQPSK	≥ 60 dB	P		P	P	P	P
3.1.7.2	Offset Adjacent Channel Rejection - HDQPSK	≥ 47 dB	P		P	P	P	P
3.1.8	Co-Channel Rejection	≤ 9 dB	P		P	P	P	P
3.1.9	Spurious Response Rejection	≥ 80 dB Mobile ≥ 70 dB Portable	P		P	P	P	P
3.1.10	Intermodulation Rejection	≥ 75 dB Mobile ≥ 70 dB Portable	P		P	P	P	P
3.1.11	Signal Displacement Bandwidth	≥ 1000 Hz	P		P	P	P	P

Trunked Subscriber Unit Transmitter Tests - TDMA

Only display results for tested frequency band(s)

Test Case	Test Case Description	Requirement	VHF Result	UHF-L Result	UHF-H Result	700 Result	800 Result	900 Result
3.2.8	Unwanted Emissions: Adjacent Channel Power Ratio*	≥ 65 dB (non-700MHz)	P		P	P	P	P
3.2.12	Frequency Deviation H-CPM – High level Signal	2995 < f _{dev} ≤ 3310 Hz	P		P	P	P	P
3.2.12	Frequency Deviation H-CPM – Low Level Signal	998 < f _{dev} ≤ 1104 Hz	P		P	P	P	P
3.2.13	Modulation Fidelity	≤ 5%	P		P	P	P	P
3.2.14	Symbol Rate Accuracy	Not to exceed 10 parts per million			P	P	P	P
3.2.15	H-CPM Transmitter Logical Channel Peak Adjacent Channel Power Ratio	≥ 35 dB	P		P	P	P	P
3.2.16	H-CPM Transmitter Logical Channel Off Slot Power	≤ -57dBm	P		P	P	P	P
3.2.17	H-CPM Transmitter Logical Channel Power Envelope							
3.2.17		Max - On 4 dBc	P		P	P	P	P

3.2.17		Slot Max	1 dBc	P		P	P	P	P
3.2.17		Slot Min	-3 dBc	P		P	P	P	P
3.2.17		Max - Off	4 dBc	P		P	P	P	P
3.2.18	H-CPM Transmitter Logical Channel Time Alignment		±25 microseconds or less	P		P	P	P	P

*700MHz Adjacent Channel Power Ratio test is passed based on test results submitted for FCC equipment authorization.

Conventional Subscriber Unit Interoperability - Direct Mode			
Test Identification			
P25-CAB-CAI_TEST_REQ – July 2017, Section 2.1.3.1 - Conventional Subscriber Unit Interoperability – Direct Mode			
Representative Conventional Subscriber Unit Products tested with the Subscriber Unit for Conventional Interoperability - Direct Mode			
Subscriber Vendor	Model Name	Product No.	Detailed Test Report #
Tait Communicatio	TP9400	1	DTR-P25CAP081011-P18A0011-DMO-TP9400-TP9400
Motorola Solutions Inc.	APX8000	2	DTR-P25CAP081011-P18S0007-DMO-APX8K
ICOM	IC-F7040	3	DTR-P25CAP081011-P18A0011-DMO-TP9400-IC-F7040
[add as needed]		[x]	
The 'test case' number refers to the test suite paragraph number and test case number in TIA-102.CABA Interoperability Testing for Voice Operation in Conventional Systems.			

Conventional Subscriber Unit Interoperability Tests - Direct Mode						
Test Case	Description	Product 1 Result	Product 2 Result	Product 3 Result	Product x Result	Add columns as needed
2.2.1**	Matching NAC Operation and SU Unaddressed Voice Call**					
2.2.1.4.1	Test Case 1 – Unaddressed Voice Call	P	P	P		
2.2.2**	Matching NAC Operation and SU Routine Group Voice Call**					
2.2.2.4.1	Test Case 1 – Routine Group Voice Call	P	P	P		
2.2.3**	Monitor Mode – SU Group Voice Call**					
2.2.3.4.1	Test Case 1 – Receiving Group Call	P	P	P		
2.2.8**	Accept Any NAC in Normal & Selective Squelch Mode – SU Group Voice Call**					
2.2.8.4.1	Test Case 1 – Receiving Group Call with Receive NAC SF7E under Normal and Selective Squelch Modes	P	P	P		
2.2.4	Emergency Call					
2.2.4.4.1	Test Case 1 – Emergency Call	P	P	P		
2.2.5	Unit-to-Unit Voice Call					
2.2.5.4.1	Test Case 1 – Initiate Unit-to-Unit Call from SU 1	P	P	P		
2.2.5.4.2	Test Case 2 – Initiate Unit-to-Unit Call from SU 5	P	P	P		
2.2.6	Unit-to-Unit Voice Call – Receiving Units also in Monitor Mode					
2.2.6.4.1	Test Case 1 – Initiate Unit-to-Unit Call from SU 1	P	P	P		
2.2.6.4.2	Test Case 2 – Initiate Unit-to-Unit Call from SU 5	P	P	P		
2.2.7	Encryption					
2.2.7.4.1	Test Case 1 – Call Privacy for Encrypted Call	P	P	P		
2.3.1	Call Alert					
2.3.1.4.1	Test Case 1 – Call Alert (SU 1 to SU 5)	P	P	P		
2.3.1.4.2	Test Case 2 – Call Alert (SU 5 to SU 1)	P	P	P		
2.3.2	Radio Check					
2.3.2.4.1	Test Case 1 – Radio Check (SU 1 to SU 5)	P	P	P		
2.3.2.4.2	Test Case 2 – Radio Check (SU 5 to SU 1)	P6	UC1	P6		
2.3.3	Message Update					
2.3.3.4.1	Test Case 1 – Message Update (SU 1 to SU 5)	P6	UC1	P6		
2.3.3.4.2	Test Case 2 – Message Update (SU 5 to SU 1)	P	P	P		
2.3.4	Status Update					
2.3.4.4.1	Test Case 1 – Status Update (SU 1 to SU 5)	P6	UC1	P6		
2.3.4.4.2	Test Case 2 – Status Update (SU 5 to SU 1)	P	P	P		
2.3.5	Status Query					
2.3.5.4.1	Test Case 1 – Status Query (SU 1 to SU 5)	P	P	P		
2.3.5.4.2	Test Case 2 – Status Query (SU 5 to SU 1)	P6	UC1	P6		
2.3.6	Radio Unit Monitor					
2.3.6.4.1	Test Case 1 – Radio Unit Monitor Initiated by SU 1 – Group Call	U3	U3	U3		
2.3.6.4.2	Test Case 2 – Radio Unit Monitor Initiated by SU 5 – Group Call	U3	U3	U3		
2.3.6.4.3	Test Case 3 – Radio Unit Monitor Initiated by SU 1 – Unit-to-Unit Call	P6	UC1	P6		
2.3.6.4.4	Test Case 4 – Radio Unit Monitor Initiated by SU 5 – Unit-to-Unit Call	P5	UC1	UC1		

** P25 CAP Minimum Feature Requirement - Test Case Result must be a Pass (P)

For further information: https://www.dhs.gov/sites/default/files/publications/P25-CAB-MIN-FEATURE_REQ_171113-508.pdf

Conventional Subscriber Unit Interoperability - Repeat Mode			
CAB Test Section Identification			
P25-CAB-CAI_TEST_REQ – July 2017, Section 2.1.3.2 - Conventional Subscriber Unit Interoperability – Repeat Mode			
Representative Conventional Subscriber Unit Products tested with the Subscriber Unit for Conventional Interoperability - Repeat Mode			
Base Station Repeater Vendor	Model Name	Product No.	Detailed Test Report #
Motorola Solutions Inc.	GTR 8000	1	DTR-P25CAP081011-P18S0007-RMO-GTR8K
Codan	MT-4E Repeater	2	DTR-P25CAP081016-1476CUT17TestReport_Rev3
RF Technology	Eclipse Digital 2 Repeater	3	DTR-P25CAP081016-1476CUT17TestReport_Rev3
[add as needed]		[x]	
The 'test case' number refers to the test suite paragraph number and test case number in TIA-102.CABA Interoperability Testing for Voice Operation in Conventional Systems.			

Conventional Subscriber Unit Interoperability Tests- Repeat Mode						
Test Case	Description	Product 1 Result	Product 2 Result	Product 3 Result	Product x Result	Add columns as needed
2.4.1**	Matching NAC Operation and SU Unaddressed Voice Call **					
2.4.1.4.1	Test Case 1 – Matching NAC operation – Unaddressed Voice Call	P	P	P		
2.4.2**	Matching NAC Operation – SU Routine Group Call Mode **					
2.4.2.4.1	Test Case 1 – Matching NAC – SU Routine Group Call Mode	P	P	P		
2.4.3	Transmit NAC Independent of Receive NAC – SU Unaddressed Voice Call					
2.4.3.4.1	Test Case 1 – Independent NAC Operation – SU Unaddressed Voice Call	P	P	P		
2.4.4	Transmit NAC Independent of Receive NAC – SU Routine Group Call					
2.4.4.4.1	Test Case 1 – Independent NAC Operation – SU Routine Group Call	P	P	P		
2.4.5	Any NAC (SF7F) Operation – SU Unaddressed Voice Call					
2.4.5.4.1	Test Case 1 – NAC SF7F Operation – SU Unaddressed Voice Call	P	P	P		

2.4.6	Any NAC (SF7F) Operation – SU Routine Group Call				
2.4.6.4.1	Test Case 1 – NAC SF7F Operation – SU Routine Group Voice Call	P	P	P	
2.4.7	Any NAC (SF7E) Operation with Fixed Transmit NAC – SU Group Call				
2.4.7.4.1	Test Case 1 – NAC SF7E Operation – SU Group Voice Call	P	P	P	
2.4.8	Emergency Call				
2.4.8.4.1	Test Case 1 – Emergency Call	P	P	P	
2.4.9**	Monitor Mode – SU Group Call **				
2.4.9.4.1	Test Case 1 – Monitor Mode – Receiving Group Call	P	P	P	
2.4.10	Unit-to-Unit Voice Call				
2.4.10.4.1	Test Case 1 – Initiate Unit-to-Unit Call from SU 1	P	P	P	
2.4.10.4.3	Test Case 3 – Initiate Unit-to-Unit Call from SU 1, No Co-Channel Interference Suppression	P	P	P	
2.4.11	Unit-to-Unit Voice Call Co-Channel Interference Suppression by FNE				
2.4.11.4.1	Test Case 1 – Initiate Unit-to-Unit Call from SU 1	P	P	P	
2.4.12	Unit-to-Unit Voice Call – Receiving Units Also in Monitor Mode				
2.4.12.4.1	Test Case 1 – Initiate Unit-to-Unit Call from SU 1	P	P	P	
2.4.13	Encryption				
2.4.13.4.1	Test Case 1 – Call Privacy for Encrypted Call	P	P	P	
2.4.14	Accept Any NAC in Normal and Selective Squelch Mode – SU Group Call				
2.4.14.4.1	Test Case 1 – Receiving group Call with receive NAC SF7F under Normal and Selective Squelch Modes	P	P	P	
2.5.1	Call Alert				
2.5.1.4.1	Test Case 1 – Initiate Call Alert Request from SU 1	P	P	P	
2.5.2	Radio Check				
2.5.2.4.1	Test Case 1 – Initiate Radio Check from SU 1	P	P	P	
2.5.3	Message Update				
2.5.3.4.1	Test Case 1 – Message Update Initiated by SU 1	P	P	P	
2.5.3.4.3	Test Case 3 – SU 1 to Group Message Update	P	P	P	
2.5.4	Status Update				
2.5.4.4.1	Test Case 1 – Status Update Initiated by SU 1	P	P	P	
2.5.4.4.3	Test Case 3 – SU to Talk Group Status Update Initiated by SU 1	P	P	P	
2.5.5	Status Query				
2.5.5.4.1	Test Case 1 – Status Query Initiated by SU 1	P	P	P	
2.5.6	Radio Unit Monitor				
2.5.6.4.1	Test Case 1 – Radio Unit Monitor Initiated by SU 1 – Group Call	U3	P6	P6	
2.5.6.4.3	Test Case 3 – Radio Unit Monitor Initiated by SU 1 – Unit-to-Unit Call	P5	U3	U3	

** P25 CAP Minimum Feature Requirement - Test Case Result must be a Pass (P)
For further information: https://www.dhs.gov/sites/default/files/publications/P25-CAB-MIN-FEATURE_REQ_171113-508.pdf

Conventional Subscriber Unit Interoperability - FNE Dispatch Monitoring Console - Repeat Mode			
CAB Test Section Identification			
P25-CAB-CAI_TEST_REQ – July 2017, Section 2.1.3.3 - Conventional Subscriber Unit Interoperability - FNE Dispatch Monitoring Console - Repeat Mode			
Representative Conventional Base Station Repeater Products tested with the Subscriber Unit for Conventional Interoperability - FNE Dispatch Monitoring Console - Repeat Mode			
Base Station Repeater Vendor	Model Name	Product No.	Detailed Test Report #
Tait	TB9400	1	DTR-P25CAP081011-P18A0011-DMC-TP9400-TB9400
Motorola Solutions Inc.	GTR 8000	2	DTR-P25CAP081011-P1850007-DMC-GTR8K
Codan	MT-4E Repeater	3	DTR-P25CAP081011-P18A0011-DMC-TP9400-MT4E
[add as needed]		[x]	

The 'test case' number refers to the test suite paragraph number and test case number in TIA-102.CABA Interoperability Testing for Voice Operation in Conventional Systems.

Conventional Subscriber Unit Interoperability Tests - FNE Dispatch Monitoring Console - Repeat Mode						
Test Case	Description	Product 1 Result	Product 2 Result	Product 3 Result	Product x Result	Add columns as needed
2.6.1	Unaddressed Voice Call					
2.6.1.4.1	Test Case 1 – Unaddressed Voice Call	P	P	P		
2.6.2	Routine Group Call					
2.6.2.4.1	Test Case 1 – Routine Group Call	P6	UC2	P6		
2.6.3	Emergency Call					
2.6.3.4.1	Test Case 1 – Emergency Call from SU	P	P	P		
2.6.3.4.2	Test Case 2 – Emergency Call from DMC	UC2	UC2	UC2		
2.6.4	All Call (System-Wide Call)					
2.6.4.4.1	Initiate System-Wide Call to Collection of Talk Groups	P6	P6	UC2		
2.6.5	Unit-to-Unit Voice Call					
2.6.5.4.1	Test Case 1 – Initiate Unit-to-Unit Call from DMC	P	P	P		
2.6.5.4.2	Test Case 2 – Initiate Unit-to-Unit Call from SU 1	P	P	P		
2.6.6	Encryption					
2.6.6.4.1	Test Case 1 – Call Privacy for Encrypted Call	P	P	P		
2.7.1	Emergency Alarm to Dispatch and/or other Monitoring Console					
2.7.1.4.1	Test Case 1 – Emergency Alarm	P	P	P		
2.7.2	Call Alert					
2.7.2.4.1	Test Case 1 – Initiate Call Alert Request from DMC	P	P	P		
2.7.2.4.2	Test Case 2 – Initiate Call Alert Request from SU 1	P	P	P		
2.7.3	Radio Check					
2.7.3.4.1	Test Case 1 – Initiate Radio Check from DMC	UC2	P5	UC2		
2.7.4	Radio Unit Inhibit					
2.7.4.4.1	Test Case 1 – Radio Unit Inhibit from DMC	P	P	P		
2.7.5	Radio Unit Uninhibit					
2.7.5.4.1	Test Case 1 – Radio Unit Uninhibit from DMC	P	P	P		
2.7.6	Message Update					
2.7.6.4.1	Test Case 1 – Message Update from DMC	UC2	UC2	UC2		
2.7.6.4.2	Test Case 2 – DMC to Group Message Update	UC2	UC2	UC2		
2.7.6.4.3	Test Case 3 – SU 1 to DMC Message Update	P	P	P		
2.7.6.4.4	Test Case 4 – SU 1 to Group Message Update	U3	P5	U3		
2.7.7	Status Update					
2.7.7.4.1	Test Case 1 – Status Update from SU 1 to DMC	P	P	P		
2.7.7.4.2	Test Case 2 – Talk Group Status Update Initiated by SU 1	U3	P5	U3		
2.7.8	Status Query					
2.7.8.4.1	Test Case 1 – Status Query Initiated by DMC	P	P	P		
2.7.9	Radio Unit Monitor					
2.7.9.4.1	Test Case 1 – Radio Unit Monitor Initiated by DMC – Group Call	UC2	U3	UC2		
2.7.9.4.2	Test Case 2 – Radio Unit Monitor Initiated by DMC – Unit-to-Unit Call	U3	P5	U3		

Trunked Subscriber Unit Interoperability - FDMA	
CAB Test Section Identification	
P25-CAB-CAI_TEST_REQ – July 2017, Section 2.1.3.4 - Trunked Subscriber Unit Interoperability – FDMA (Phase 1)	

Representative Trunked Base Station Repeater Products tested with the Subscriber Unit for Trunked Interoperability - FDMA

Base Station Repeater Vendor	Model Name	Product No.	Detailed Test Report #
Tait Communications	TN9400	1	DTR-P25CAP081011-P18A0011-FDMA-TAIT-T9400-TAIT-TN9400
Harris Corporation	MASTR V	2	DTR-P25CAP081017-1160412T
Harris Corporation	MASTR V	3	DTR-P25CAP081017-1180223T
Motorola Solutions Inc.	ASTO25	4	DTR-P25CAP081011-P1850007-FDMA-ASTRO25
[add as needed]		[x]	

The 'test case' number refers to the test suite paragraph number and test case number in TIA-102.CABC-C Interoperability Testing for Voice Operation in Trunked Systems

Trunked Subscriber Unit Interoperability Tests - FDMA

Test Case	Description	Product 1 Result Home	Product 1 Result Inter-SYS Roaming	Product 1 Result Inter-WACN Roaming	Product 2 Result Home	Product 2 Result Inter-SYS Roaming	Product 2 Result Inter-WACN Roaming	Product 3 Result Home	Product 3 Result Inter-SYS Roaming	Product 3 Result Inter-WACN Roaming	Product 4 Result Home	Product 4 Result Inter-SYS Roaming	Product 4 Result Inter-WACN Roaming	Add columns as needed
2.2.1	Full Registration													
2.2.1.4.1	Test Case 1 – Valid Registration	P	U4	U4	P	U3	U4	NT	U3	U4	P	U3	U3	
2.2.1.4.2	Test Case 2 – Denied or Refused Registration	P	U4	U4	P	U3	U4	NT	U3	U4	P	U3	U3	
2.2.1.4.3	Test Case 3 – Unverified Registration	P	U4	U4	P	U3	U4	NT	U3	U4	P	U3	U3	
2.2.2	Group Voice Call													
2.2.2.4.1	Test Case 1 – Group Call Granted	P	U4	U4	P	U3	U4	NT	U3	U4	P	U3	U3	
2.2.2.4.2	Test Case 2 – Group Call Denied	P	U4	U4	P	U3	U4	NT	U3	U4	P	U3	U3	
2.2.2.4.3	Test Case 3 – Group Call Request Queued	P	U4	U4	P	U3	U4	NT	U3	U4	P	U3	U3	
2.2.2.4.4	Test Case 4 – Group Call Interrupt	P	U4	U4	NT	NT	NT	P	U3	U4	P	U3	U3	
2.2.3	Unit-to-Unit Voice Call													
2.2.3.4.1	Test Case 1 – Unit-to-Unit Call with Target Availability Check	P	U4	U4	P	U3	U4	NT	U3	U4	P	U4	U4	
2.2.3.4.2	Test Case 2 - Unit-to-Unit Call with Target Availability Check- Denied by Target	P	U4	U4	P	U3	U4	NT	U3	U4	P	U4	U4	
2.2.3.4.3	Test Case 3 – Unit-to-Unit Call Queued with Target Availability Check – Traffic Channel Assignment After Target Availability Check	U4	U4	U4	P6	U3	U4	NT	U3	U4	P6	U4	U4	
2.2.3.4.4	Test Case 4 – Unit-to-Unit Call Queued with Target Availability Check – Traffic Channel Assignment Before Target Availability Check	U4	U4	U4	U4	U4	U4	U4	U4	U4	U4	U4	U4	
2.2.3.4.5	Test Case 5 – Unit-to-Unit Call without Target Availability Check	U4	U4	U4	U3	U3	U4	U3	U3	U4	U4	U4	U4	
2.2.3.4.6	Test Case 6 – Unit-to-Unit Call Queued without Target Availability Check	U4	U4	U4	U3	U3	U4	U3	U3	U4	U4	U4	U4	
2.2.3.4.7	Test Case 7 – Unit-to-Unit Call Denied	P	U4	U4	P	U3	U4	NT	U3	U4	P	U4	U4	
2.2.4	Broadcast Voice Call													
2.2.4.4.1	Test Case 1 – Broadcast Voice Call	P	U4	U4	P	U3	U4	NT	U3	U4	P	U3	U3	
2.2.5	Affiliation													
2.2.5.4.1	Test Case 1 – Radio Permitted to Affiliate with New Group	P	U4	U4	P	U3	U4	NT	U3	U4	P	U3	U3	
2.2.5.4.2	Test Case 2 – Radio Denied Affiliation to New Group	P	U4	U4	P	U3	U4	NT	U3	U4	P	U3	U3	
2.2.6	Announcement Group Call													
2.2.6.4.1	Test Case 1 – Collection of Talk Groups Receive Call	P	U4	U4	P	U3	U4	NT	U3	U4	P	U3	U3	
2.2.7	Emergency Alarm													
2.2.7.4.1	Test Case 1 – Emergency Alarm	P	U4	U4	P	U3	U4	NT	U3	U4	P	U3	U3	
2.2.8	Emergency Group Call													
2.2.8.4.1	Test Case 1 – Emergency Call	P	U4	U4	P	U3	U4	NT	U3	U4	P	U3	U3	
2.2.10	Encryption													
2.2.10.4.1	Test Case 1 – Call Privacy for Encrypted Call	P	U4	U4	P	U3	U4	NT	U3	U4	P	U3	U3	
2.2.11	Intra-Location Registration Area Roaming													
2.2.11.4.1	Test Case 1 – Idle Radio	P	U4	U4	P	U3	U4	NT	U3	U4	P	U3	U3	
2.2.13	Deregistration													
2.2.13.4.1	Test Case 1 – Deregistration	P	U4	U4	NT	NT	NT	P	U3	U4	P	U3	U3	
2.2.14	System Call													
2.2.14.4.1	Test Case 1 – System Call	U4	U4	U4	NT	NT	NT	U4	U4	U4	U4	U4	U4	
2.2.15	Call Alert													
2.2.15.4.1	Test Case 1 – Call Alert	P	U4	U4	NT	NT	NT	P	U3	U4	P	U4	U4	
2.2.16	Short Message													
2.2.16.4.1	Test Case 1 – Short Message	P6	U4	U4	NT	NT	NT	P6	U3	U4	U4	U4	U4	
2.2.17	Status Query													
2.2.17.4.1	Test Case 1 – Status Query	P5	U4	U4	NT	NT	NT	U4	U4	U4	U4	U4	U4	
2.2.18	Status Update													
2.2.18.4.1	Test Case 1 – Status Update	P	U4	U4	NT	NT	NT	P	U3	U4	P	U4	U4	
2.2.19	Radio Unit Monitoring													
2.2.19.4.1	Test Case 1 – Individual Non-Silent	U4	U4	U4	NT	NT	NT	U4	U4	U4	U4	U4	U4	
2.2.19.4.2	Test Case 2 – Individual Silent	U4	U4	U4	NT	NT	NT	U4	U4	U4	U4	U4	U4	
2.2.19.4.3	Test Case 3 – Group Non-Silent	U4	U4	U4	NT	NT	NT	U4	U4	U4	U4	U4	U4	
2.2.19.4.4	Test Case 4 – Group Silent	U4	U4	U4	NT	NT	NT	U4	U4	U4	U3	U4	U4	
2.2.20	Radio Unit Disable/Re-Enable													
2.2.20.4.1	Test Case 1 – Radio Unit Disable	P	U4	U4	NT	NT	NT	P	U3	U4	P	U4	U4	
2.2.20.4.2	Test Case 2 – Radio Unit Re-Enable	P	U4	U4	NT	NT	NT	P	U3	U4	P	U4	U4	
2.2.21	Radio Check													
2.2.21.4.1	Test Case 1 – Radio Check Successful	P6	U4	U4	NT	NT	NT	U4	U4	U4	P6	U4	U4	

Trunked Subscriber Unit Interoperability - TDMA

CAB Test Section Identification
P25-CAB-CAI_TEST_REQ – July 2017, Section 2.1.3.5 - Trunked Subscriber Unit Interoperability – TDMA (Phase 2)

Representative Trunked Base Station Repeater Products tested with the Subscriber Unit for Trunked Interoperability - TDMA

Base Station Repeater Vendor	Model Name	Product No.	Detailed Test Report #
Tait	TN9400	1	DTR-P25CAP081011- P18A0011-TDMA-TAIT-T9400-TAIT-TN9400
Motorola Solutions Inc.	ASTRO25	2	DTR-P25CAP081011-P1850007-TDMA-ASTRO25
Harris Corporation	MASTR V	3	DTR-P25CAP081017-1180223T
[add as needed]		[x]	

The 'test case' number refers to the test suite paragraph number and test case number in TIA-102.CABC-C Interoperability Testing for Voice Operation in Trunked Systems

Trunked Subscriber Unit Interoperability Tests - TDMA

Test Case	Description	Product 1 Result Home	Product 1 Result Inter-SYS Roaming	Product 1 Result Inter-WACN Roaming	Product 2 Result Home	Product 2 Result Inter-SYS Roaming	Product 2 Result Inter-WACN Roaming	Product 3 Result Home	Product 3 Result Inter-SYS Roaming	Product 3 Result Inter-WACN Roaming	Product x Result Home	Product x Result Inter-SYS Roaming	Product x Result Inter-WACN Roaming	Add columns as needed
2.2.1	Full Registration													
2.2.1.4.1	Test Case 1 – Valid Registration	P	U4	U4	P	U3	U3	P	U3	U4				
2.2.2	Group Voice Call													
2.2.2.4.1	Test Case 1 – Group Call Granted	P	U4	U4	P	U3	U3	P	U3	U4				
2.2.2.4.3	Test Case 3 – Group Call Request Queued	P	U4	U4	P	U3	U3	P	U3	U4				
2.2.2.4.4	Test Case 4 – Group Call Interrupt	U4	U4	U4	P6	U3	U3	P6	U3	U4				
2.2.3	Unit-to-Unit Voice Call													
2.2.3.4.1	Test Case 1 – Unit-to-Unit Call with Target Availability Check	P6	U4	U4	U3	U4	U4	P6	U3	U4				

2.2.3.4.3	Test Case 3 – Unit-to-Unit Call Queued with Target Availability Check – Traffic Channel Assignment After Target Availability Check	U4	U4	U4	U3	U4	U4	P5	U3	U4			
2.2.3.4.4	Test Case 4 – Unit-to-Unit Call Queued with Target Availability Check – Traffic Channel Assignment Before Target Availability Check	U4	U4	U4	U4	U4	U4	U4	U4	U4			
2.2.3.4.5	Test Case 5 – Unit-to-Unit Call without Target Availability Check	U4	U4	U4	U4	U4	U4	P6	U3	U4			
2.2.3.4.6	Test Case 6 – Unit-to-Unit Call Queued without Target Availability Check	U4	U4	U4	U4	U4	U4	P6	U3	U4			
2.2.4	Broadcast Voice Call												
2.2.4.1	Test Case 1 – Broadcast Voice Call	P	U4	U4	P	U3	U3	P	U3	U4			
2.2.6	Announcement Group Call												
2.2.6.1	Test Case 1 – Collection of Talk Groups Receive Call	P	U4	U4	P	U3	U3	P	U3	U4			
2.2.8	Emergency Group Call												
2.2.8.1	Test Case 1 – Emergency Call	P	U4	U4	P	U3	U3	P	U3	U4			
2.2.10	Encryption												
2.2.10.1	Test Case 1 – Call Privacy for Encrypted Call	P	U4	U4	P	U3	U3	P	U3	U4			
2.2.14	System Call												
2.2.14.1	Test Case 1 – System Call	U4	U4	U4	U4	U4	U4	U4	U4	U4			
2.2.19	Radio Unit Monitoring												
2.2.19.1	Test Case 1 – Individual Non-Silent	U4	U4	U4	U4	U4	U4	U4	U4	U4			
2.2.19.2	Test Case 2 – Individual Silent	U4	U4	U4	U4	U4	U4	U4	U4	U4			
2.2.19.3	Test Case 3 – Group Non-Silent	U4	U4	U4	U4	U4	U4	U4	U4	U4			
2.2.19.4	Test Case 4 – Group Silent	U4	U4	U4	U3	U4	U4	U4	U4	U4			
2.2.26	Transmitting Subscriber Forced Preemption												
2.2.26.1	Test Case 1 – TDMA SU Forced Audio Preemption	P5	U4	U4	U4	U4	U4	U4	U4	U4			
2.2.26.2	Test Case 2 – TDMA SU Forced Emergency Call Ruthless Preemption	P	U4	U4	P	U3	U3	P	U3	U4			