

PRODUCT UNDER TEST

CAP Approved 9/25/2024

Product Info	Details
Model Name:	XG-25M UHF-L
Hardware Capability/Options:	Frequency Bands: UHF, UHF-L
Software Options:	P25 Trunking, P25 Phase 2 TDMA, AES-256 Encryption, Status Message

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
P7	Functionality requires P25 Data software option
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
U5	Functionality is not supported by the representative subscriber tested with the subscriber under test in Conventional Direct Mode
U6	Functionality not tested because the testing was done while under the 2010, 2016, or 2017 requirements which did not prescribe its examination
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.
F (Fail)	Test was failed and did not meet stated requirements where listed

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-P25CAP081017-2181109H6							
The 'test case' number refers to the paragraph number for the test procedure found in the TIA-102.CAAA-E Digital C4FM/COPSK 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
3.1.4	Reference Sensitivity – C4FM	≤ -116 dBm	P				
3.1.4	Reference Sensitivity – Standard Simulcast	≤ -116 dBm	P				
3.1.5	Faded Reference Sensitivity – C4FM	≤ -108 dBm	P				
3.1.5	Faded Reference Sensitivity – Standard Simulcast	≤ -108 dBm	P				
3.1.6	Signal Delay Spread Capability – C4FM	≥ 50 µs	P				
3.1.6	Signal Delay Spread Capability – Standard Simulcast	≥ 80 µs	P				
3.1.7.1	Adjacent Channel Rejection – C4FM	≥ 60 dB	P				
3.1.7.1	Adjacent Channel Rejection – Standard Simulcast	≥ 60 dB	P				
3.1.7.2	Offset Adjacent Channel Rejection – C4FM	≥ 47 dB	P				
3.1.7.2	Offset Adjacent Channel Rejection – Standard Simulcast	≥ 47 dB	P				
3.1.8	Co-Channel Rejection	≤ 9 dB	P				
3.1.9	Spurious Response Rejection	≥ 80 dB Mobile ≥ 70 dB Portable	P				
3.1.10	Intermodulation Rejection	≥ 75 dB Mobile ≥ 70 dB Portable	P				
3.1.11	Signal Displacement Bandwidth	≥ 1000 Hz	P				
3.1.17	Late Entry Unsilence Delay: No Talk Group or Encryption	≤ 125 ms	P				
3.1.18	Receiver Throughput Delay	≤ 125 ms	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
3.2.8	Unwanted Emissions: Adjacent Channel Power Ratio*	≥ 67 dB (non-700MHz)	P				
3.2.12	Transmitter Attack Time	≤ 50 ms	P				
3.2.12	Encoder Attack Time	≤ 100 ms	P				
3.2.14	Transmitter Throughput Delay	≤ 125 ms	P				
3.2.15	Frequency Deviation for C4FM: High-Level Signal Deviation	2544 < f _{dev} < 3111 Hz	P				
3.2.15	Frequency Deviation for C4FM: Low-Level Signal Deviation	848 < f _{dev} < 1037 Hz	P				
3.2.16	Modulation Fidelity – C4FM	≤ 5%					
3.2.18	Transient Frequency Behavior: Time Interval [see t1 value in cell]	Δf ≤ 12.5 kHz		(t1=10ms)			
3.2.18	Transient Frequency Behavior: Time Interval [see t2 value in cell]	Δf ≤ 6.25 kHz		(t2=25ms)			
3.2.18	Transient Frequency Behavior: Time Interval [see t3 value in cell]	Δf ≤ 12.5 kHz		(t3=10ms)			

*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-P25CAP081017-2181109H6							
The 'test case' number refers to the paragraph number for the test procedure found in the TIA-102.CAAA-E Digital C4FM/COPSK Transceiver Measurement Methods for FDMA.							
Trunked Subscriber Unit Receiver 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
3.1.4	Reference Sensitivity – C4FM	≤ -116 dBm	P				
3.1.4	Reference Sensitivity – Standard Simulcast	≤ -116 dBm	P				
3.1.5	Faded Reference Sensitivity – C4FM	≤ -108 dBm	P				
3.1.5	Faded Reference Sensitivity – Standard Simulcast	≤ -108 dBm	P				
3.1.6	Signal Delay Spread Capability – C4FM	≥ 50 µs	P				
3.1.6	Signal Delay Spread Capability – Standard Simulcast	≥ 80 µs	P				
3.1.7.1	Adjacent Channel Rejection – C4FM	≥ 60 dB	P				
3.1.7.1	Adjacent Channel Rejection – Standard Simulcast	≥ 60 dB	P				
3.1.7.2	Offset Adjacent Channel Rejection – C4FM	≥ 47 dB	P				
3.1.7.2	Offset Adjacent Channel Rejection – Standard Simulcast	≥ 47 dB	P				
3.1.8	Co-Channel Rejection	≤ 9 dB	P				
3.1.9	Spurious Response Rejection	≥ 80 dB Mobile ≥ 70 dB Portable	P				
3.1.10	Intermodulation Rejection	≥ 75 dB Mobile ≥ 70 dB Portable	P				
3.1.11	Signal Displacement Bandwidth	≥ 1000 Hz	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
3.2.8	Unwanted Emissions: Adjacent Channel Power Ratio*	≥ 67 dB (non-700MHz)	P				
3.2.12	Power Attack Time	≤ 50 ms	P				
3.2.12	Encoder Attack Time	≤ 100 ms	P				
3.2.14	Transmitter Throughput Delay	≤ 125 ms	P				
3.2.15	Frequency Deviation for C4FM: High-Level Signal Deviation	2544 < f _{dev} < 3111 Hz	P				
3.2.15	Frequency Deviation for C4FM: Low-Level Signal Deviation	848 < f _{dev} < 1037 Hz	P				
3.2.16	Modulation Fidelity – C4FM	≤ 5%					
3.2.18	Transient Frequency Behavior: Time Interval [see t1 value in cell]	Δf ≤ 12.5 kHz		(t1=10ms)			
3.2.18	Transient Frequency Behavior: Time Interval [see t2 value in cell]	Δf ≤ 6.25 kHz		(t2=25ms)			

3.2.18	Transient Frequency Behavior: Time Interval [see t3 value in cell]	$ A_f \leq 12.5 \text{ kHz}$	(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	$2.00 \leq t_{\text{enc}} \leq 4.15 \text{ ms}$	P				
3.3.1	Trunked Control Channel Slot Times - 37.5 ms Slot RF Power Attack Time	$0.00 \leq t_{\text{att}} \leq 4.15 \text{ ms}$	P				
3.3.1	Trunked Control Channel Slot Times - 37.5 ms Slot RF Power Turn Off Time	$\leq 1.57 \text{ ms}$	P				
3.3.1	Trunked Control Channel Slot Times - 45 ms Slot Encode Attack Time	$2.00 \leq t_{\text{enc}} \leq 11.65 \text{ ms}$	U2				
3.3.1	Trunked Control Channel Slot Times - 45 ms Slot RF Power Attack Time	$0.00 \leq t_{\text{att}} \leq 11.65 \text{ ms}$	U2				
3.3.1	Trunked Control Channel Slot Times - 45 ms Slot RF Power Turn Off Time	$\leq 1.57 \text{ ms}$	U2				
3.3.2	Trunked Request Time - 37.5 ms Slot	$\leq 160 \text{ ms}$	P				
3.3.2	Trunked Request Time - 45 ms Slot	$\leq 167.5 \text{ ms}$	U2				
3.3.5	Transmitter Time to Key on a Traffic Channel Short Channel Form	$\leq 150.0 \text{ ms}$	P				
3.3.5	RF Transmitter Time to Key on a Working Channel						
3.3.5	Transmitter Time to Key on a Traffic Channel Short Channel Form	$\leq 150.0 \text{ ms}$	P				
3.3.5	Encoder Transmit Time						
3.3.5	Transmitter Time to Key on a Traffic Channel Explicit Channel Form	$\leq 171.1 \text{ ms}$	P				
3.3.5	RF Transmitter Time to Key on a Working Channel						
3.3.5	Transmitter Time to Key on a Traffic Channel Explicit Channel Form	$\leq 171.1 \text{ ms}$	P				
3.3.5	Encoder Transmit Time						

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-P25CAP081017-2181109H6							
The 'test case' number refers to the paragraph number for the test procedure found in TIA-102.CCA-8 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
3.1.4	Reference Sensitivity - HDQPSK	$\leq -116 \text{ dBm}$	P				
3.1.5	Faded Reference Sensitivity - HDQPSK	$\leq -108 \text{ dBm}$	P				
3.1.6	Signal Delay Spread Capability - HDQPSK	$\geq 65 \mu\text{s}$	P				
3.1.7.1	Adjacent Channel Rejection - HDQPSK	$\geq 60 \text{ dB}$	P				
3.1.7.2	Offset Adjacent Channel Rejection - HDQPSK	$\geq 47 \text{ dB}$	P				
3.1.8	Co-Channel Rejection	$\leq 9 \text{ dB}$	P				
3.1.9	Spurious Response Rejection	$\geq 80 \text{ dB Mobile}$ $\geq 70 \text{ dB Portable}$	P				
3.1.10	Intermodulation Rejection	$\geq 75 \text{ dB Mobile}$ $\geq 70 \text{ dB Portable}$	P				
3.1.11	Signal Displacement Bandwidth	$\geq 1000 \text{ Hz}$	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
3.2.8	Unwanted Emissions: Adjacent Channel Power Ratio*	$\geq 65 \text{ dB (non-700MHz)}$	P				
3.2.12	Frequency Deviation H-CPM – High Level Signal	$2995 < f_{\text{dev}} \leq 3310 \text{ Hz}$	P				
3.2.12	Frequency Deviation H-CPM – Low Level Signal	$998 < f_{\text{dev}} \leq 1104 \text{ Hz}$	P				
3.2.13	Modulation Fidelity	$\leq 5\%$	P				
3.2.14	Symbol Rate Accuracy	Not to exceed 10 parts per million	P				
3.2.15	H-CPM Transmitter Logical Channel Peak Adjacent Channel Power Ratio	$\geq 35 \text{ dB}$	P				
3.2.16	H-CPM Transmitter Logical Channel Off Slot Power	$\leq -57 \text{ dBm}$	P				
3.2.17	H-CPM Transmitter Logical Channel Power Envelop						
3.2.17	Max - On	4 dBc	P				
3.2.17	Slot Max	1 dBc	P				
3.2.17	Slot Min	-3 dBc	P				
3.2.17	Max - Off	4 dBc	P				
3.2.18	H-CPM Transmitter Logical Channel Time Alignment	$\pm 25 \text{ microseconds or less}$	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 – October 2018, 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 #																		
L3Harris (PSPC)	XL-200P portable	1	DTR-P25CAP081017-1240620H																		
Motorola Solutions	APX 8000 portable	2	DTR-P25CAP081017-1180424M																		
Tait	TP9400 portable	3	DTR-P25CAP081017-1170504T																		
EF Johnson	VM600 mobile	4	DTR-P25CAP081017-1170531E2																		
EF Johnson	VP900 portable	5	DTR-P25CAP081017-1170531E4																		
EF Johnson	VM590 mobile	6	DTR-P25CAP081017-1170531E3																		
EF Johnson	VP6430 portable	7	DTR-P25CAP081017-1170531E3																		
JVC Kenwood	TK-5220 portable	8	DTR-P25CAP081017-1171003K2																		
JVC Kenwood	NX-5400 portable	9	DTR-P25CAP081017-1171003K1																		
JVC Kenwood	TK-5410 portable	10	DTR-P25CAP081017-1171003K3																		
BK Technologies	KN2-9800 portable	11	DTR-P25CAP081017-11812198K																		
Icom	IC-F9010TS portable	12	DTR-P25CAP081017-11707051																		
Icom	IC-F7010TS portable	13	DTR-P25CAP081017-11707052																		
Icom	IC-F7040 portable	14	DTR-P25CAP081017-1190604I																		
Unication	U3 portable	15	DTR-P25CAP081017-1190108U1																		
Unication	G5 pager	16	DTR-P25CAP081017-1190108U2																		
Standard Communications	CM60-V25B mobile	17	DTR-P25CAP081017-1171011S																		
L3Harris (Tactical Coms)	AN/PRC-152A military portable	18	DTR-P25CAP081017-1180918HTC																		
L3Harris (Tactical Coms)	RF-345M military portable	19	DTR-P25CAP081017-1190522HTC																		
EF Johnson	VP8000 portable	20	DTR-P25CAP081017-1240718E																		
[Vendor Name]	[Model Name]	[x]	[DTR-P25CAPxxxxx]																		
The 'test case' number refers to the test suite paragraph number and test case number in TIA-102.CABA-A 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 4 Result	Product 5 Result	Product 6 Result	Product 7 Result	Product 8 Result	Product 9 Result	Product 10 Result	Product 11 Result	Product 12 Result	Product 13 Result	Product 14 Result	Product 15 Result	Product 16 Result	Product 17 Result	Product 18 Result	Product 19 Result	Product 20 Result
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	P	P	P	P	P	P	P	P	P	P	P	P	P	P	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	P	P	P	P	P	P	P	P	P	P	P	P	P	P	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	P	P	P	P	P	P	P	P	P	P	P	P	P	P	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 SFTF under Normal and Selective Squelch Modes	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
2.2.4	Emergency Call																				
2.2.4.1	Test Case 1 – Emergency Call	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	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	P	P	P	P	P	P	P	P	P	P	P	US	US	P	P	P	P
2.2.5.4.2	Test Case 2 – Initiate Unit-to-Unit Call from SU 5	P	P	P	P	P	P	P	P	P	P	P	P	P	P	US	US	P	P	P	P

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	P	U4	U4
2.6.4	All Call (System-Wide Call)			
2.6.4.1	Initiate System-Wide Call to Collection of Talk Groups	U3	U3	U3
2.6.5	Unit-to-Unit Voice Call			
2.6.5.1	Test Case 1 – Initiate Unit-to-Unit Call from DMC	P	P	P
2.6.5.2	Test Case 2 – Initiate Unit-to-Unit Call from SU 1	P	P	P
2.6.6	Encryption			
2.6.6.1	Test Case 1 – Call Privacy for Encrypted Call	P4	P4	P4
2.7.1	Emergency Alarm to Dispatch and/or other Monitoring Console			
2.7.1.1	Test Case 1 – Emergency Alarm	P	P	P
2.7.2	Call Alert			
2.7.2.1	Test Case 1 – Initiate Call Alert Request from DMC	U3	U3	U3
2.7.2.2	Test Case 2 – Initiate Call Alert Request from SU 1	U3	U3	U3
2.7.3	Radio Check			
2.7.3.1	Test Case 1 – Initiate Radio Check from DMC	U3	U3	U3
2.7.4	Radio Unit Inhibit			
2.7.4.1	Test Case 1 – Radio Unit Inhibit from DMC	U3	U3	U3
2.7.5	Radio Unit Uninhibit			
2.7.5.1	Test Case 1 – Radio Unit Uninhibit from DMC	U3	U3	U3
2.7.6	Message Update			
2.7.6.1	Test Case 1 – Message Update from DMC	U3	U3	U3
2.7.6.2	Test Case 2 – DMC to Group Message Update	U3	U3	U3
2.7.6.3	Test Case 3 – SU 1 to DMC Message Update	P7	P7	U4
2.7.6.4	Test Case 4 – SU 1 to Group Message Update	U3	U3	U3
2.7.7	Status Update			
2.7.7.1	Test Case 1 – Status Update from SU 1 to DMC	P7	P7	P7
2.7.7.2	Test Case 2 – Talk Group Status Update Initiated by SU 1	U3	U3	U3
2.7.8	Status Query			
2.7.8.1	Test Case 1 – Status Query Initiated by DMC	U3	U3	U3
2.7.9	Radio Unit Monitor			
2.7.9.1	Test Case 1 – Radio Unit Monitor Initiated by DMC – Group Call	U3	U3	U3
2.7.9.2	Test Case 2 – Radio Unit Monitor Initiated by DMC – Unit-to-Unit Call	U3	U3	U3

Trunked Subscriber Unit Interoperability - FDMA	
CAB Test Section Identification	
P25-CAB-CAI_TEST_REQ – October 2018, 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 #
L3Harris	MASTRV	1	DTR-P25CAP081017-1240620H
Motorola Solutions	ASTRO25	2	DTR-P25CAP081011-P18S0008-FDMA-ASTRO25
Tait	TN9400 P25 Core Network, TB9400	3	DTR-P25CAP11MCC081016 TAIT/TN9400/HARRIS
EF Johnson	ATLAS System 4500 repeater, Atlas 8000 controller	4	DTR-P25CAP081010-18110801 – XL200P Portable
[Vendor Name]	[Model Name]	[x]	[DTR-P25CAPxxxxx]

The 'test case' number refers to the test suite paragraph number and test case number in ITIA-102.CAB.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													
2.2.1.1	Test Case 1 – Valid Registration	P	P	U4	P	P	P	P	U4	U4	P	P	P	
2.2.1.2	Test Case 2 – Denied or Refused Registration	P	P	U4	P	P	P	P	U4	U4	P	P	P	
2.2.1.3	Test Case 3 – Unverified Registration	P	P	U4	P	U4	U4	P	U4	U4	P	U4	U4	
2.2.2	Group Voice Call													
2.2.2.1	Test Case 1 – Group Call Granted	P	P	U4	P	P	P	P	U4	U4	P	U4	U4	
2.2.2.2	Test Case 2 – Group Call Denied	P	P	U4	P	P	P	P	U4	U4	P	P	P	
2.2.2.3	Test Case 3 – Group Call Request Queued	P	P	U4	P	P	P	P	U4	U4	P	U4	U4	
2.2.2.4	Test Case 4 – Group Call Interrupt	P	P	U4	P	P	P	U6	U4	U4	P	U4	U4	
2.2.3	Unit-to-Unit Voice Call													
2.2.3.1	Test Case 1 – Unit-to-Unit Call with Target Availability Check	P	P	U4	P	U4	U4	P	U4	U4	P	U4	U4	
2.2.3.2	Test Case 2 – Unit-to-Unit Call with Target Availability Check – Denied by Target	P	P	U4	P	U4	U4	F	U4	U4	P	U4	U4	
2.2.3.3	Test Case 3 – Unit-to-Unit Call Queued with Target Availability Check – Traffic Channel Assignment After Target Availability Check	P	P	U4	P	U4	U4	P	U4	U4	P	U4	U4	
2.2.3.4	Test Case 4 – Unit-to-Unit Call Queued with Target Availability Check – Traffic Channel Assignment Before Target Availability Check	U3	U3	U3	U3	U3	U3	U3	U3	U3	U3	U3	U3	
2.2.3.5	Test Case 5 – Unit-to-Unit Call without Target Availability Check	P	P	U4	U4	U4	U4	U4	U4	U4	U4	U4	U4	
2.2.3.6	Test Case 6 – Unit-to-Unit Call Queued without Target Availability Check	P	P	U4	U4	U4	U4	U4	U4	U4	U4	U4	U4	
2.2.3.7	Test Case 7 – Unit-to-Unit Call Denied	P	P	U4	P	U4	U4	P	U4	U4	P	U4	U4	
2.2.4	Broadcast Voice Call													
2.2.4.1	Test Case 1 – Broadcast Voice Call	P	P	U4	P	P	P	P	U4	U4	P	U4	U4	
2.2.5	Affiliation													
2.2.5.1	Test Case 1 – Radio Permitted to Affiliate with New Group	P	P	U4	P	P	P	P	U4	U4	P	U4	U4	
2.2.5.2	Test Case 2 – Radio Denied Affiliation to New Group	P	P	U4	P	P	P	P	U4	U4	P	P	P	
2.2.6	Announcement Group Call													
2.2.6.1	Test Case 1 – Collection of Talk Groups Receive Call	P	P	U4	P	P	P	P	U4	U4	P	U4	U4	
2.2.7	Emergency Alarm													
2.2.7.1	Test Case 1 – Emergency Alarm	P	P	U4	P	P	P	P	U4	U4	P	P	P	
2.2.8	Emergency Group Call													
2.2.8.1	Test Case 1 – Emergency Call	P	P	U4	P	P	P	P	U4	U4	P	U4	U4	
2.2.10	Encryption													
2.2.10.1	Test Case 1 – Call Privacy for Encrypted Call	P4	P4	U4	P4	P4	P4	P4	U4	U4	P4	U4	U4	
2.2.11	Intra-Location Registration Area Roaming													
2.2.11.1	Test Case 1 – Idle Radio	P	NA	NA	P	NA	NA	P	NA	NA	P	NA	NA	
2.2.13	Deregistration													
2.2.13.1	Test Case 1 – Deregistration	P	P	U4	P	P	P	U6	U6	U6	P	P	P	
2.2.14	System Call													
2.2.14.1	Test Case 1 – System Call	U4	U4	U4	U4	U4	U4	U6	U6	U6	U4	U4	U4	
2.2.15	Call Alert													
2.2.15.1	Test Case 1 – Call Alert	P	P	U4	P	U4	U4	U6	U6	U6	P	U4	U4	
2.2.16	Short Message													
2.2.16.1	Test Case 1 – Short Message	P	P	U4	U4	U4	U4	U6	U6	U6	U4	U4	U4	
2.2.17	Status Query													
2.2.17.1	Test Case 1 – Status Query	U3	U3	U3	U3	U3	U3	U6	U6	U6	U3	U3	U3	
2.2.18	Status Update													
2.2.18.1	Test Case 1 – Status Update	P	P	U4	P	U4	U4	U6	U6	U6	P	U4	U4	
2.2.19	Radio Unit Monitoring													
2.2.19.1	Test Case 1 – Individual Non-Silent	P	P	U4	U4	U4	U4	U6	U6	U6	U4	U4	U4	
2.2.19.2	Test Case 2 – Individual Silent	P	P	U4	U4	U4	U4	U6	U6	U6	U4	U4	U4	
2.2.19.3	Test Case 3 – Group Non-Silent	P	P	U4	U4	U4	U4	U6	U6	U6	U4	U4	U4	
2.2.19.4	Test Case 4 – Group Silent	P	P	U4	P	U4	U4	U6	U6	U6	U4	U4	U4	
2.2.20	Radio Unit Disable/Re-Enable													
2.2.20.1	Test Case 1 – Radio Unit Disable	P	P	U4	P	U4	U4	U6	U6	U6	U4	U4	U4	
2.2.20.2	Test Case 2 – Radio Unit Re-Enable	P	P	U4	P	U4	U4	U6	U6	U6	U4	U4	U4	
2.2.21	Radio Check													
2.2.21.1	Test Case 1 – Radio Check Successful	P	P	U4	P	U4	U4	U6	U6	U6	U4	U4	U4	

Trunked Subscriber Unit Interoperability - TDMA	
CAB Test Section Identification	
P25-CAB-CAI_TEST_REQ – October 2018, 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 #
L3Harris	MASTRV	1	DTR-P25CAP081017-1240620H
Motorola Solutions	ASTRO25	2	DTR-P25CAP081011-P18S0008-TDMA-ASTRO25
EF Johnson	ATLAS System 4500 repeater, Atlas 8000 controller	3	DTR-P25CAP081010-18110801 – XL200P Portable
Airbus	VESTA P25 Trunking System	4	DTR-P25CAP081016-1326U18-TDMA TRUNKING SU IOT-HARRIS

The 'test case' number refers to the test suite paragraph number and test case number in ITIA-102.CAB.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 4 Result Home	Product 4 Result Inter-SYS Roaming	Product 4 Result Inter-WACN Roaming	Add columns as needed
2.2.1	Full Registration													
2.2.1.1	Test Case 1 – Valid Registration	P	P	U4	P	P	P	U4	U4		P	U4	U4	
2.2.2	Group Voice Call													
2.2.2.1	Test Case 1 – Group Call Granted	P	P	U4	P	P	P	U4	U4		P	U4	U4	
2.2.2.3	Test Case 3 – Group Call Request Queued	P	P	U4	P	P	P	U4	U4		P	U4	U4	
2.2.2.4	Test Case 4 – Group Call Interrupt	P	P	U4	P	P	P	U4	U4		U4	U4	U4	
2.2.3	Unit-to-Unit Voice Call													
2.2.3.1	Test Case 1 – Unit-to-Unit Call with Target Availability Check	P	P	U4	P	U4	U4	U4	U4		P	U4	U4	
2.2.3.3	Test Case 3 – Unit-to-Unit Call Queued with Target Availability Check – Traffic Channel Assignment After Target Availability Check	P	P	U4	P	U4	U4	U4	U4		U4	U4	U4	
2.2.3.4	Test Case 4 – Unit-to-Unit Call Queued with Target Availability Check – Traffic Channel Assignment Before Target Availability Check	U3	U3	U3	U3	U3	U3	U3	U3		U3	U3	U3	
2.2.3.5	Test Case 5 – Unit-to-Unit Call without Target Availability Check	P	P	U4	U4	U4	U4	U4	U4		U4	U4	U4	
2.2.3.6	Test Case 6 – Unit-to-Unit Call Queued without Target Availability Check	P	P	U4	U4	U4	U4	U4	U4		U4	U4	U4	
2.2.4	Broadcast Voice Call													
2.2.4.1	Test Case 1 – Broadcast Voice Call	P	P	U4	P	P	P	U4	U4		P	U4	U4	
2.2.6	Announcement Group Call													
2.2.6.1	Test Case 1 – Collection of Talk Groups Receive Call	P	P	U4	P	P	P	U4	U4		P	U4	U4	
2.2.8	Emergency Group Call													
2.2.8.1	Test Case 1 – Emergency Call	P	P	U4	P	P	P	U4	U4		P	U4	U4	
2.2.10	Encryption													
2.2.10.1	Test Case 1 – Call Privacy for Encrypted Call	P4	P4	U4	P	P	P	P4	U4		P4	U4	U4	
2.2.14	System Call													
2.2.14.1	Test Case 1 – System Call	U4	U4	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	P	P	U4	U4	U4	U4	U4	U4		U4	U4	U4	
2.2.19.2	Test Case 2 – Individual Silent	P	P	U4	U4	U4	U4	U4	U4		U4	U4	U4	
2.2.19.3	Test Case 3 – Group Non-Silent	P	P	U4	U4	U4	U4	U4	U4		U4	U4	U4	
2.2.19.4	Test Case 4 – Group Silent	P	P	U4	P	U4	U4	U4	U4		U4	U4	U4	
2.2.26	Transmitting Subscriber Forced Preemption													
2.2.26.1	Test Case 1 – TDMA SU Forced Audio Preemption	U4	U4	U4	U4	U4	U4	U4	U4		U4	U4	U4	
2.2.26.2	Test Case 2 – TDMA SU Forced Emergency Call Ruthless Preemption	P	P	U4	P	P	P	U4	U4		P	U4	U4	