Project 25 Compliance Assessment Program
SDOC -JVCKENWOOD- NX5700H
Date of Last CAP-Approved Revision: August 23, 2021

SUBSCRIBER PRODUCT INFORMATION

Subscriber Info	Detail
Model Name:	**NX-5700H**
Tested Software Versions:[1]	**K4.21**
Hardware Note:	The "H" model indicates 110W high power models
Hardware Capabilities/Options & Software Options:	Mobile subscriber unit, VHF, Frequency Band 139-172 MHz, P25 Conventional, P25 FDMA Trunking, P25 TDMA Trunking, AES-256 Encryption

SUMMARY TEST REPORT IDENTIFIER

CAP Summary Test Report (STR) Identifier:	P25CAP JVCKENWOOD - NEW SUB STR v0.24 (8-16-21)

CONTACT INFORMATION

Vendor Info	Details
Vendor Name:	JVCKENWOOD USA
Vendor Website URL:	www.kenwood.com/usa/
P25 CAP Contact Name:	JVCKENWOOD USA Product Management
P25 CAP Contact Phone:	310-639-4200
P25 CAP Contact Email:	p25cap@us.jvckenwood.com

ENCRYPTION STATEMENT

This product complies with the P25 CAP Encryption Requirements CAB (P25-CAB-ENC_REQ). The checked box indicates how the product was tested.

X	Tested with the AES 256 encryption algorithm and shall be available with AES 256 encryption at a minimum or without any encryption of any type.
	Tested without the AES 256 encryption algorithm and shall only be available without any encryption of any type.

[1] Current and previous software versions are listed in the 'Models & Software' worksheet tab of the Summary Test Report (STR).

CONVENTIONAL SUBSCRIBER PERFORMANCE

The Subscriber 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 – C4FM, Reference Sensitivity – Standard Simulcast, Faded Reference Sensitivity – C4FM, Faded Reference Sensitivity – Standard Simulcast, Signal Delay Spread Capability – C4FM, Signal Delay Spread Capability – Standard Simulcast, Adjacent Channel Rejection – C4FM, Adjacent Channel Rejection – Standard Simulcast, Offset Adjacent Channel Rejection – C4FM, Offset Adjacent Channel Rejection – Standard Simulcast, 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 Power and Encoder Attack Time, Transmitter Throughput Delay, Frequency Deviation for C4FM, and Modulation Fidelity, Transient Frequency Behavior across three time intervals.

Unsupported or Failed Test Cases

None

TRUNKING SUBSCRIBER PERFORMANCE - FDMA

The Subscriber 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 -C4FM, Reference Sensitivity – Standard Simulcast, Faded Reference Sensitivity – C4FM, Faded Reference Sensitivity – Standard Simulcast, Signal Delay Spread Capability – C4FM, Signal Delay Spread Capability – Standard Simulcast, Adjacent Channel Rejection – C4FM, Adjacent Channel Rejection – Standard Simulcast, Offset Adjacent Channel Rejection – C4FM, Offset Adjacent Channel Rejection – Standard Simulcast, Co-Channel Rejection, Spurious Response Rejection, Intermodulation Rejection, and Signal Displacement Bandwidth.
Transmitter Tests: Unwanted Emissions: Adjacent Channel Power Ratio, Transmitter Power and Encoder Attack time, Transmitter Throughput Delay, Frequency Deviation for C4FM, and Modulation Fidelity, Transient Frequency Behavior across three time intervals.
Trunked Tests: Trunking Control Channel Slot Times, Trunking Request Time, and Transmitter Time to Key on a Traffic Channel (Explicit Channel Form).

Unsupported or Failed Test Cases

None

TRUNKING SUBSCRIBER PERFORMANCE - TDMA

The Subscriber 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 - HDQPSK, Faded Reference Sensitivity - HDQPSK, Signal Delay Spread Capability - HDQPSK, Adjacent Channel Rejection - HDQPSK, Offset Adjacent Channel Rejection - HDQPSK, Co-Channel Rejection, Spurious Response Rejection, Intermodulation Rejection, and Signal Displacement Bandwidth.
Transmitter Tests: Unwanted Emissions: Adjacent Channel Power Ratio, Frequency Deviation for H-CPM, Modulation Fidelity, Symbol Rate Accuracy for H-CPM, H-CPM Transmitter Logical Channel Peak Adjacent Channel Power Ratio, H-CPM Transmitter Logical Channel Off Slot Power, H-CPM Transmitter Logical Channel Power Envelop, and H-CPM Transmitter Logical Channel Time Alignment.

Unsupported or Failed Test Cases

None

CONVENTIONAL SUBSCRIBER UNIT INTEROPERABILITY – DIRECT MODE (DMO)

The Subscriber product has been tested for Conventional Direct Mode 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. In order to pass the Encryption test case, a subscriber with AES-256 encryption is required.

P25 CAP Direct Mode Interoperability Testing Coverage

Matching NAC Operation and SU; Unaddressed Voice Call and Routine Group Voice Call, Monitor Mode SU Group Voice Call, Accept any NAC Normal/Selective Squelch Mode in SU Group Void Call, Emergency Call, Unit-to-Unit Voice Call, Encryption.

Unsupported Test Cases

- Call Alert (2.3.1), Radio Check (2.3.2), Message Update (2.3.3), Status Update (2.3.4), Status Query (2.3.5), and Radio Unit Monitor (2.3.6) are Unsupported in Conventional Direct Mode.

CONVENTIONAL SUBSCRIBER UNIT INTEROPERABILITY – REPEAT MODE

The Subscriber product has been tested for Conventional Repeat Mode 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. In order to pass the Encryption test case, a subscriber with AES-256 encryption is required.

P25 CAP Repeat Mode Interoperability Testing Coverage

Matching (NAC) Operation – SU Unaddressed Voice Call and Routine Group Call Mode, Transmit NAC Independent of Receive NAC – SU Unaddressed Voice Call and Routine Group Call, Any NAC Operation – SU Unaddressed Voice Call, Routine Group Call and Fixed Transmit NAC – SU Group Call, Emergency Call, Monitor Mode – SU Group Call, Unit-to-Unit Voice Call – Co-Channel Interference Suppression by FNE and Receiving Units Also in Monitor Mode, Encryption, Accept Any NAC in Normal and Selective Squelch Mode – SU Group Call.

Unsupported Test Cases

- Call Alert (2.3.1), Radio Check (2.3.2), Message Update (2.3.3), Status Update (2.3.4), Status Query (2.3.5), and Radio Unit Monitor (2.3.6) are Unsupported in Conventional Repeat Mode.

CONVENTIONAL SUBSCRIBER UNIT INTEROPERABILITY – FNE DISPATCH MONITORING CONSOLE (DMC) – REPEAT MODE

The Subscriber 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. In order to pass the Encryption test case, a subscriber with AES-256 encryption is required.

P25 CAP Repeat Mode with DMC Interoperability Testing Coverage

Unaddressed Voice Call, Routine Group Call, Emergency Call from SU (2.6.3.4.1), All Call, Unit-to-Unit Voice Call, Encryption, Emergency Alarm to DMC, Radio Check, Radio Unit Inhibit/Uninhibit from DMC, Radio Unit Monitor Initiated by DMC – Group Call (2.7.9.4.1).

Test Cases Recorded with One Representative CAP-Tested FNE

The following test cases were executed and recorded tested against a single Representative FNE:

- Emergency Call from DMC (2.6.3.4.2), Radio Check (2.7.3.4.1), Radio Unit Inhibit from DMC (2.7.4), Radio Unit Un-Inhibit from DMC (2.7.5); Radio Unit Monitor Initiated by DMC – Group Call (2.7.9.4.1).

Test Cases Recorded with Two Representative CAP-Tested FNEs

The following test cases were executed and recorded tested against two Representative FNEs:

- Routine Group Call (2.6.2.4.1), All Call (2.6.4.4.1)

Unsupported or Failed Test Cases

- Call Alert (2.7.2), Message Update (2.7.6), Status Update (2.7.7), Status Query (Test Case 2.7.8.4.1), Radio Unit Monitor from DMC Unit to Unit Call (Test Case 2.7.9.4.2) are Unsupported.

TRUNKED SUBSCRIBER UNIT INTEROPERABILITY – FDMA

The Subscriber 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. In order to pass the Encryption test case, a subscriber with AES-256 encryption is required.

P25 CAP FDMA Trunked Interoperability Testing Coverage

Full Registration, Group Voice Call, Group Call Interrupt, Individual (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 Update, Radio Unit Monitoring, Radio Unit Inhibit/Un-Inhibit (Disable/Re-Enable) and Radio Check.

Test Cases Recorded with One Representative CAP-Tested FNE

The following test cases were executed and recorded tested against a single Representative FNE:

- Individual (unit to unit) Call Without Target Availability Check (TAC) (2.2.3.4.5, 2.2.3.4.6), System Call (2.2.1); and Radio Unit Monitoring - Individual (2.2.19.4.1, 2.2.19.4.2)

Test Cases Recorded with Two Representative CAP-Tested FNE

The following test cases were executed and recorded tested against two Representative FNE:

- Short Message (2.2.16.4.1), Radio Unit Monitoring – Group (2.2.19.4.3, 2.2.19.4.4)

Unsupported or Failed Test Cases

- Status Query (Test Case 2.2.17.4.1) is Unsupported.

Test Case Not Required (NR) by P25 CAP

The following test is Not Required: Individual (unit to unit) Call With TAC, Traffic Channel Assigned before TAC (Test Case 2.2.3.4.4).

TRUNKED SUBSCRIBER UNIT INTEROPERABILITY – TDMA

The Subscriber 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

Full Registration, Group Voice Call, Group Call Interrupt, Individual Call, Broadcast Call, Announcement Group Call, Emergency Group Call, Encrypted Group Call, System Call, Radio Unit Monitoring, and Transmitting Subscriber Forced Emergency Call Ruthless Preemption (2.2.26.4.2).

Test Cases Recorded with One Representative FNE

The following test cases were executed and recorded tested against a single Representative FNE:

- Individual (unit to unit) Call Without Target Availability Check (TAC) (Test Cases 2.2.3.4.5, 2. 2.3.4.6), System Call (2.2.14.4.1), System Call (2.2.14) and Radio Unit Monitoring - Individual (2.2.19.4.1, 2.2.19.4.2).

Test Cases Recorded with Two Representative FNE

The following test cases were executed and recorded tested against two Representative FNE:

- Individual (unit to unit) Call WITH Target Availability Check (TAC) (Test Cases 2.2.3.4.1, 2. 2.3.4.3), Radio Unit Monitoring – Group (2.2.19.4.3, 2.2.19.4.4), Transmitting Subscriber Forced Emergency Call Ruthless Preemption (2.2.26.4.2)

Unsupported or Failed Test Cases

- Transmitting Subscriber Forced Preemption (Test Case 2.2.26.4.1) is unsupported and TDMA Group Call Interrupt (2.2.2.4.4) failed and could not be verified.

Test Case Not Required (NR) by P25 CAP

- The following test is Not Required: Individual (unit to unit) Call With TAC, Traffic Channel Assigned before TAC (Test Case 2.2.3.4.4).

SIGNATURE AND DATE

19 August 2021

Date Signed

Vendor's Authorized Representative Signature

Lonny Anway

Vendor's Authorized Representative Printed Name

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BURDEN STATEMENT

OMB NO: 6040-0015 (additional questions are pending OMB approval)

EXPIRATION DATE: 6/30/2019 (additional questions are pending OMB approval)

An agency may not conduct or sponsor information collection and a person is not required to respond to this information collection unless it displays a current valid Office of Management and Budget control number and expiration date. The control number for this collection is 6040-0015 and this form will expire on 06/30/2019 (additional questions are pending OMB approval). The estimated average time to complete this form is 60 minutes per respondent. If you have any comments regarding the burden estimate, you can write to the U.S. Department of Homeland Security, Science and Technology Directorate, Washington, D.C. 20528.

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