



## DEFENSE INFORMATION SYSTEMS AGENCY

JOINT INTEROPERABILITY TEST COMMAND

P.O. BOX 12798

FORT HUACHUCA, ARIZONA 85670-2798

IN REPLY  
REFER TO: Networks and Transport Division (JTE)

6 September 2005

### MEMORANDUM FOR DISTRIBUTION

**SUBJECT:** Special Interoperability Test Certification of the Lucent Ascend VSX Multiband Basic Rate Interface (MBRI) with Software Version 4.5CP14+, Black Box ABC Switch box – no software, and Audio/Visual Simulator (AVSIM) 366 Dial Isolator - no software

**References:** (a) DOD Directive 4630.5, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," 5 May 2004  
(b) CJCSI 6212.01C, "Interoperability and Supportability of Information Technology and National Security Systems," 20 November 2003

1. References (a) and (b) establish the Defense Information Systems Agency, Joint Interoperability Test Command (JITC), as the responsible organization for interoperability test certification. Additional references are provided in enclosure 1.
2. The Lucent Ascend VSX MBRI with Software Version 4.5CP14+, Black Box ABC Switch box - no software, and AVSIM 366 Dial Isolator - no software, hereinafter referred to as the system under test (SUT), met all of the interface and functional requirements and are certified for joint use within the Defense Switched Network (DSN). The SUT met the interface and functional requirements for a Terminal Adapter as set forth in appendix 7 of reference (c). Testing was conducted using test procedures derived from reference (d). This certification expires upon changes that affect interoperability, but no later than three years from the date of this memorandum.
3. This certification is based on interoperability testing conducted by JITC at the Global Information Grid Network Test Facility, Fort Huachuca, Arizona, from 7 March through 8 April 2005, and approval of vendor Letters of Compliance completed on 21 July 2005. The Certification Testing Summary (enclosure 2) documents the test results and describes the test configuration. Users should verify interoperability before deploying the SUT in an environment that varies significantly from that described.
4. The Functional Requirements used to evaluate the interoperability of the SUT and the interoperability statuses are indicated in table 1.

JITC Memo, JTE, Special Interoperability Test Certification of the Lucent Ascend VSX Multiband Basic Rate Interface (MBRI) with Software Version 4.5CP14+, Black Box ABC Switch box – no software, and Audio/Visual Simulator (AVSIM) Dial Isolator - no software

**Table 1. SUT Functional Requirements and Interoperability Status**

Interfaces	Critical	Certified	Functional Requirements	Status	Reference
ISDN BRI NI 1/2 U	Yes	Yes	MLPP in accordance with GSCR Section 3 (C)	Met	A7.5
			FCC Part15/Part 68 (R)	Met <sup>1</sup>	A7.5
			ISDN B Channel connect (R)	Met	A7.5.4
			ISDN NI 1/2 compatible in accordance with GSCR 2.3.3(R)	Met	A7.5.4
<b>SERIAL INTERFACES</b> EIA-366A EIA-530	Yes	Yes	IMUX in accordance with ITU-T H.244 (C)	Met	A7.5.4
	Yes	See note 2.	Security in accordance with DITSCAP (R)	See note 2.	A7.6.5
<b>LEGEND:</b> A - GSCR Appendix BRI - Basic Rate Interface C - Conditional DISA - Defense Information Systems Agency DITSCAP - Department of Defense Information Technology Security Certification and Accreditation Program EIA - Electronic Industries Alliance EIA-366A - Standard for interface between data terminal equipment and automatic calling equipment for data communication EIA-530 - Standard for 25-position interface for data terminal equipment and data circuit-terminating equipment employing serial binary data interchange FCC - Federal Communications Commission GSCR - Generic Switching Center Requirements H.244 - Synchronized Aggregation of Multiple 64 or 56 kbps channels IMUX - Inverse Multiplexing ISDN - Integrated Services Digital Network ITU-T - International Telecommunication Union – Telecommunication Standardization Sector kbps - kilobits per second MLPP - Multi-Level Precedence and Preemption NI 1/2 - National ISDN 1 or 2 R - Required SUT - System Under Test U - 2-Wire BRI Interface  <b>NOTES:</b> 1 - Verified by vendor submission of Letter of Compliance (LoC). 2 - DITSCAP information assurance testing is accomplished via DISA-led Information Assurance test teams and published in a separate report.					

5. JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses Unclassified-But-Sensitive Internet Protocol Router Network (NIPRNet) e-mail. More comprehensive interoperability status information is available via the JITC System Tracking Program (STP). The STP is accessible by .mil/.gov users on the NIPRNet at <https://stp.fhu.disa.mil>. Test reports, lessons learned, and related testing documents and references are on the JITC Joint Interoperability Tool (JIT) at <http://jit.fhu.disa.mil> (NIPRNet), or <http://199.208.204.125> (SIPRNet). Information related to DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at <http://jitc.fhu.disa.mil/tssi>.

6. The JITC point of contact is Mr. John Hooper, DSN 879-5041, commercial (520) 538-5041, FAX DSN 879-4347, or e-mail to [John.Hooper@disa.mil](mailto:John.Hooper@disa.mil).

FOR THE COMMANDER:

2 Enclosures a/s

  
RICHARD A. MEADOR  
Chief  
Networks and Transport Division

JITC Memo, JTE, Special Interoperability Test Certification of the Lucent Ascend VSX Multiband Basic Rate Interface (MBRI) with Software Version 4.5CP14+, Black Box ABC Switch box – no software, and Audio/Visual Simulator (AVSIM) Dial Isolator - no software

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Commander, Defense Information Systems Agency (DISA), ATTN: GS23 (Mr. Osman), Room 5w23, 5275 Leesburg Pike (RTE 7), Falls Church, VA 22041

## **ADDITIONAL REFERENCES**

- (c) Defense Information Systems Agency, "Department of Defense Voice Networks Generic Switching Center Requirements (GSCR), Incorporated Change 1," 1 March 2005
- (d) Joint Interoperability Test Command, "Defense Switched Network Generic Switch Test Plan (GSTP)," 23 April 2004

## CERTIFICATION TESTING SUMMARY

- 1. SYSTEM TITLE.** The Lucent Ascend VSX Multiband Basic Rate Interface (MBRI) with Software Version 4.5CP14+, Black Box ABC Switch box - no software, and Audio/Visual Simulator (AVSIM) 366 Dial Isolator - no software, hereinafter referred to as the system under test (SUT).
- 2. PROPONENT.** Defense Information Systems Agency (DISA).
- 3. PROGRAM MANAGER.** Mr. Howard Osman, GS23, Room 5W23, 5275 Leesburg Pike, Falls Church, VA 22041, e-mail: Howard.Osman@disa.mil.
- 4. TESTER.** Joint Interoperability Test Command (JITC), Ft. Huachuca, Arizona.
- 5. SYSTEM UNDER TEST DESCRIPTION.** The SUT is a legacy solution and is no longer manufactured or supported. The SUT solution has three components: the Lucent Ascend VSX MBRI, the Black Box ABC Switch box, and the AVSIM 366 Dial isolator. The Lucent Ascend VSX MBRI is an Integrated Services Digital Network (ISDN) Service Unit that connects data terminal equipment to the ISDN network. The Lucent Ascend VSX MBRI is specifically designed for Video Teleconferencing (VTC) as an inverse multiplexer for 384 kilobits per second (kbps) VTC. The Lucent Ascend VSX MBRI connects directly to the ISDN network using up to four Basic Rate Interface (BRI) ISDN lines. By terminating four BRI lines, the SUT can create an aggregate bandwidth of up to 512 kbps. The ABC switch box allows the subscriber to choose between secure and non-secure calling mode by a turn of a knob. The AVSIM 366 Dial Isolator permits out-of-band calling through the use of the EIA-366A dialer. The SUT features include:

Lucent Ascend VSX MBRI:

- U-Interface, high-speed inverse multiplexer for ISDN
- Terminates up to four BRI-U lines
- Bonding mode 1 synchronizes data over up to eight 64 kbps Bearer-Channels
- Personal computer configuration and management via a serial connection (default connection: VT100 monitor type, connects at 9.6 kbps, using 8 parity bits, 1 stop bit and no flow control)

Black Box ABC Switch box:

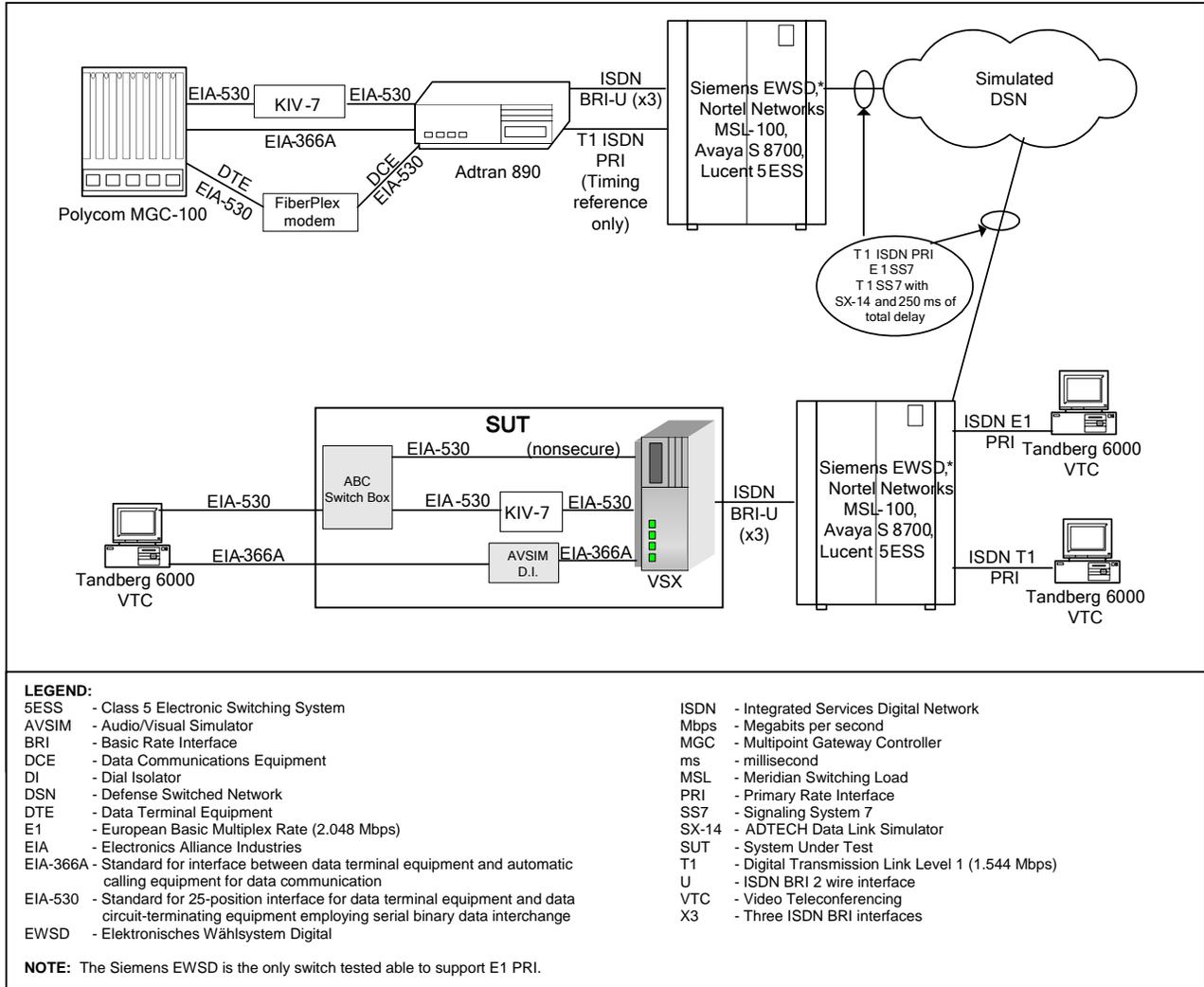
- Provides interconnecting point for Electronic Industries Alliance (EIA)-530 red and black serial cables used for secure communication
- Provides interconnecting point for EIA-366A serial cable used for dial isolation
- Provides interconnecting point for the Lucent Ascend VSX MBRI via proprietary high density serial cable
- Has a front panel knob that allows a choice between secure and non-secure calling



**Table 2-1. SUT Functional Requirements and Interoperability Status**

Interfaces	Critical	Certified	Functional Requirements	Status	Reference
ISDN BRI NI 1/2 U	Yes	Yes	MLPP in accordance with GSCR Section 3 (C)	Met	A7.5
			FCC Part15/Part 68 (R)	Met <sup>1</sup>	A7.5
			ISDN B Channel connect (R)	Met	A7.5.4
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<b>SERIAL INTERFACES</b> EIA-366A EIA-530	Yes	Yes	IMUX in accordance with ITU-T H.244 (C)	Met	A7.5.4
	Yes	See note 2.	Security in accordance with DITSCAP (R)	See note 2.	A7.6.5
<b>LEGEND:</b> A - GSCR Appendix BRI - Basic Rate Interface C - Conditional DISA - Defense Information Systems Agency DITSCAP - Department of Defense Information Technology Security Certification and Accreditation Program EIA - Electronic Industries Alliance EIA-366A - Standard for interface between data terminal equipment and automatic calling equipment for data communication EIA-530 - Standard for 25-position interface for data terminal equipment and data circuit-terminating equipment employing serial binary data interchange FCC - Federal Communications Commission GSCR - Generic Switching Center Requirements H.244 - Synchronized Aggregation of Multiple 64 or 56 kbps channels IMUX - Inverse Multiplexing ISDN - Integrated Services Digital Network ITU-T - International Telecommunication Union – Telecommunication Standardization Sector kbps - kilobits per second MLPP - Multi-Level Precedence and Preemption NI 1/2 - National ISDN 1 or 2 R - Required SUT - System Under Test U - 2-Wire BRI Interface  <b>NOTES:</b> 1 - Verified by vendor submission of Letter of Compliance (LoC). 2 - DITSCAP information assurance testing is accomplished via DISA-led Information Assurance test teams and published in a separate report.					

**8. TEST NETWORK DESCRIPTION.** The SUT was tested at JITC’s Global Information Grid Network Test Facility (GNTF) in a manner and configuration similar to that of its DSN operational environment. Testing the system’s required functions and features was conducted using the test configuration depicted in figure 2-2.



**Figure 2-2. Test Configuration**

**9. SYSTEM CONFIGURATIONS.** Table 2-2 provides the system configurations used in the test.

**Table 2-2. Tested System Configurations**

System Name		Hardware/Software Release
Siemens EWSD		19d with Patch Set 43
Nortel Networks MSL-100		SE06
Lucent 5ESS		5E16.2 SU 4-10
Avaya S8700		CM 2.0.1 (R012x.00.1.221.1)
Adtran 890		Firmware Version A.10, Boot ROM Version. A.03
Polycom MGC-100		7.0.0.72
FiberPlex modem		N/A
KIV-7		N/A
Tandberg 6000		E4.1 NTSC
Tandberg 6000		B9.1 NTSC
SUT	Lucent Ascend VSX MBRI	SW 4.5CP14+
	AVSIM 366 Dial Isolator	N/A
	Black Box ABC switch	N/A
<b>LEGEND:</b> 5ESS - Class 5 Electronic Switching System AVSIM - Audio/Visual Simulator CM - Communication Manager EWSD - Elektronisches Wählsystem Digital MBRI - Multiband Basic Rate Interface MGC - Multipoint Gateway Controller MSL - Meridian Switching Load N/A - Not Applicable NTSC - National Television Standards Committee ROM - Read Only Memory SE - Succession Enterprise SU - Software Update SUT - System Under Test SW - Software		

**10. TEST LIMITATIONS.** None.

**11. TEST RESULTS**

**a. Discussion.** The SUT minimum critical interface and functional requirements were met through both interoperability certification testing conducted at the JITC GNTF and review of the vendor's LoC.

**(1) Test Conduct.** Bonding mode 1 was tested to requirements defined in GSCR, paragraph A8.5 and Federal Telecommunications Recommendation 1080B-2002. Bonding, often referred to as channel aggregation, takes place through inverse multiplexing. Inverse multiplexing takes a high-bandwidth signal and splits it for transport through the network over multiple lower-bandwidth channels. At the receiving end, the multiple, lower-bandwidth signals are recombined into the original high-bandwidth signal. Multiple bonding mode 1 VTC test calls at 384 kbps for various durations (i.e., 15 minute, 30 minute, 1 hour, and 24 hours) were placed over the test network shown in figure 2-2 via all the combinations shown in table 2-2. Calls included seven- and ten-digit calls at the five precedence levels (ROUTINE, PRIORITY, IMMEDIATE, FLASH, and FLASH OVERRIDE). Seven- and ten-digit calls were placed to verify that the SUT met the capability to support both the North American Numbering Plan and the DSN World Wide Numbering and Dialing Plan defined in GSCR, paragraph A8.5. Bonding mode 1 calls placed via the SUT were conducted over ITU-T V.35 and EIA-530 serial interfaces with an EIA-366A dialer to test the SUT capability to support Inverse Multiplexing (synchronous aggregation of multiple 56-kbps and 64-kbps calls). The electrical physical interface tested was ITU-T V.35 in accordance with ITU-T V.36/V.37. The calls were placed over a DSN simulated network as shown in

figure 2-2 using the SX-14 satellite simulator to inject 500 milliseconds of delay (2 satellite hops) and random bit errors at  $1 \times 10^{-9}$ .

**(2) Test Results.** Secure and non secure VTC calls were placed via the SUT using the test configuration depicted in figure 2-2 with a 100 percent success rate. All VTC calls received a score of four or better on the subjective quality scale as defined in table 2-3. Table 2-4 provides the KIV-7 COMSEC device configuration settings. The EIA-530 cables used with the KIV-7 required all control leads to be in place. Dial Isolation was performed from the Data Terminal Equipment connected to the SUT during secure call attempts.

**Table 2-3. Video and Voice Subjective Quality Scale**

Rating	Reference	Definition
1	<i>Unusable</i>	<u>Quality is unusable.</u> Voice and video may be heard and seen but is unrecognizable.
2	<i>Poor</i>	<u>Quality is unusable.</u> Words and phrases are not fully understandable or video cannot be properly identified.
3	<i>Fair</i>	<u>Quality is seriously affected by distortion.</u> Repeating words and phrases are required to convey speech or video is seriously impacted and barely recognizable.
4	<i>Good</i>	<b><u>Quality is usable. Audio or video is not impaired but some distortion is noticeable</u></b>
5	<i>Excellent</i>	<u>Quality is unaffected.</u> No discernable problems with either audio or video.
<p><b>NOTE:</b> Audio and video quality during a conference will <b>receive</b> a subjective rating on the Data Collection Form. A rating of lower than 4 on this reference scale is considered a failure.</p>		

**Table 2-4. COMSEC Configuration**

	KIV-7 HSB Serial Number	KIV-7 HSB SETUP Storage Location	Channel ID/Description	Date
		<input checked="" type="checkbox"/> STO 1 <input type="checkbox"/> STO2 <input type="checkbox"/> STO3	OC-256 KIV-7 HSB Setup	12-16-04
Setup ABCD	Setup Item	Options (Check the box to the left of the selected option. The highlighted box [x] indicates the setting during test)		
[-SETUP A]	[=CikSel]	<input type="checkbox"/> MASTER <input checked="" type="checkbox"/> SLAVE <input type="checkbox"/> STA CLK <input type="checkbox"/> TT SEL1 <input type="checkbox"/> TT SEL2		
	[=SyncSel]	<input type="checkbox"/> RED <input type="checkbox"/> RED-as <input type="checkbox"/> NR <input type="checkbox"/> NR-as <input checked="" type="checkbox"/> OP2 <input type="checkbox"/> ACT1 <input type="checkbox"/> ACT2 <input type="checkbox"/> HF <input type="checkbox"/> HF-as <input checked="" type="checkbox"/> EXT <input type="checkbox"/> EXT-as		
	[=CommSel]	<input checked="" type="checkbox"/> FDX <input type="checkbox"/> FDX Ind <input type="checkbox"/> TX only <input type="checkbox"/> RX only <input type="checkbox"/> SPLX 2W <input type="checkbox"/> SPLX 4W		
	[=DataMod]	<input type="checkbox"/> BB cond <input checked="" type="checkbox"/> BB <input type="checkbox"/> DP <input type="checkbox"/> DP cond		
	[=DataLen]	<input checked="" type="checkbox"/> Synch/S <input type="checkbox"/> Synch/A <input type="checkbox"/> 7 bits <input type="checkbox"/> 8 bits <input type="checkbox"/> 10 bits <input type="checkbox"/> 11 bits		
	[=TX Rate]	<input type="checkbox"/> 50 <input type="checkbox"/> 75 <input type="checkbox"/> 100 <input type="checkbox"/> 110 <input type="checkbox"/> 150 <input type="checkbox"/> 200 <input type="checkbox"/> 220 <input type="checkbox"/> 300 <input type="checkbox"/> 600 <input type="checkbox"/> 1.2k <input type="checkbox"/> 2.4k <input type="checkbox"/> 4.8k <input type="checkbox"/> 8.0k <input type="checkbox"/> 9.6k <input type="checkbox"/> 14.4k <input type="checkbox"/> 16k <input type="checkbox"/> 19.2k <input type="checkbox"/> 28.8k <input type="checkbox"/> 32k <input type="checkbox"/> 38.4k <input type="checkbox"/> 57.6k <input type="checkbox"/> 64k <input type="checkbox"/> 115.2k <input type="checkbox"/> 128k <input type="checkbox"/> 192k <input type="checkbox"/> 288k <input type="checkbox"/> EXT 32x <input checked="" type="checkbox"/> EXT DRC		
	[=RX Rate]	<input type="checkbox"/> 50 <input type="checkbox"/> 75 <input type="checkbox"/> 100 <input type="checkbox"/> 110 <input type="checkbox"/> 150 <input type="checkbox"/> 200 <input type="checkbox"/> 220 <input type="checkbox"/> 300 <input type="checkbox"/> 600 <input type="checkbox"/> 1.2k <input type="checkbox"/> 2.4k <input type="checkbox"/> 4.8k <input type="checkbox"/> 8.0k <input type="checkbox"/> 9.6k <input type="checkbox"/> 14.4k <input type="checkbox"/> 16k <input type="checkbox"/> 19.2k <input type="checkbox"/> 28.8k <input type="checkbox"/> 32k <input type="checkbox"/> 38.4k <input type="checkbox"/> 57.6k <input type="checkbox"/> 64k <input type="checkbox"/> 115.2k <input type="checkbox"/> 128k <input type="checkbox"/> 192k <input type="checkbox"/> 288k <input type="checkbox"/> EXT 32x <input checked="" type="checkbox"/> EXT DRC		
	[=TTY Mode]	<input checked="" type="checkbox"/> Auto <input type="checkbox"/> Manual <input type="checkbox"/> Unframd <input type="checkbox"/> SPLXint <input type="checkbox"/> SPLXext		
	[=I/Fctrl]	<input type="checkbox"/> OFF <input checked="" type="checkbox"/> PTRS <input type="checkbox"/> RS&CS <input type="checkbox"/> CTCS <input type="checkbox"/> PTTR <input type="checkbox"/> CTRR <input type="checkbox"/> CTDM <input type="checkbox"/> Resync Level		
	[-SETUP B]	[=Invert]	<input type="checkbox"/> BLKdata <input type="checkbox"/> REDdata <input type="checkbox"/> SyncTX <input type="checkbox"/> SyncRX <input checked="" type="checkbox"/> NONE	
[=TXClock]		<input checked="" type="checkbox"/> contTXC <input type="checkbox"/> gateTXC		
[=RXClock]		<input checked="" type="checkbox"/> contRXC <input type="checkbox"/> gateRC		
[=SyncOOS]		<input checked="" type="checkbox"/> Enabled <input type="checkbox"/> Disabled		
[=IdleSel]		<input checked="" type="checkbox"/> Enabled <input type="checkbox"/> Disabled		
[=AutoPhs]		<input checked="" type="checkbox"/> OFF <input type="checkbox"/> ON 2s <input type="checkbox"/> ON 5s <input type="checkbox"/> ON 10s <input type="checkbox"/> ON 15s		
[=UpdateU]		<input checked="" type="checkbox"/> Enabled <input type="checkbox"/> Disabled <input checked="" type="checkbox"/> Clock Lock		
[-SETUP C]	[=RED I/F]	<input type="checkbox"/> RS-232 <input checked="" type="checkbox"/> EIA-530 <input type="checkbox"/> 422/423		
	[=BLK I/F]	<input type="checkbox"/> RS-232 <input checked="" type="checkbox"/> EIA-530 <input type="checkbox"/> 422/423		
	[=FIL I/F]	<input checked="" type="checkbox"/> 102/Std <input type="checkbox"/> 102/Tag <input type="checkbox"/> 101/Std <input type="checkbox"/> 101/Tag		
	[=FILAddr]	254   Record selected address 1 – 254. Default is 254		
	[=RCUAddr]	31   Record selected address 1 – 31. Default is 31		
	[=Display]	<input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low		
	[=Speaker]	<input checked="" type="checkbox"/> Enabled <input type="checkbox"/> Disabled		
[-SETUP D]	[=Algorithms]	<input type="checkbox"/> Master <input checked="" type="checkbox"/> Slave <input checked="" type="checkbox"/> Algorithm 1		
[-SEL KEY]		<input checked="" type="checkbox"/> X01 <input type="checkbox"/> X02 <input type="checkbox"/> X03 <input type="checkbox"/> X04 <input type="checkbox"/> X05 <input type="checkbox"/> X06 <input type="checkbox"/> X07 <input type="checkbox"/> X08 <input type="checkbox"/> X09 <input type="checkbox"/> X10		

**Table 2-4. COMSEC Configuration (continued)**

<b>LEGEND:</b>	
ACT1	- Asynchronous cipher text to 288 kbps
ACT2	- Asynchronous cipher text to 288 kbps
As	- anti-spoof
Auto	- Automatic
BB	- Baseband
Autophs	- Autophasing Select
BB cond	- Baseband conditioned
BLK	- Black
BLKdata	- Invert black data
ClkSel	- Clock Select
COMSEC	- Communications Security
CommSel	- Communication Select
ContRXC	- Continuous receive clock
ContTXC	- Continuous transmit clock
CTCS	- Cipher text clear to send
CTDM	- Cypher Text Data Mode
CTRR	- Cipher text receiver ready
DataLen	- Data Length
DataMod	- Data Mode
DP	- Diphas
DP Cond	- Conditioned Diphas
EIA	- Electronic Industries Alliance
EXT	- External
EXT DRC	- External Data Rate Clock
FDX	- Full duplex
FDX Ind	- Full duplex independent transmit and receive
FIL	- Fill
FILaddr	- Fill address select
gateRC	- Gated continuous receive clock
gateTXC	- Gated continuous transmit clock
HF	- High Frequency
HSB	- High Speed Bravo model
I/F	- Interface
I/Fctrl	- Interface control
ID	- Identification
IdleSel	- Idle Select
KIV-7	- Cryptographic Data Transmission Removable COMSEC Component
NR	- Non-Redundant
OC	- Outpost Communicator
OP2	- Operational Mode 2
PTRS	- Plain text request-to-send
PTTR	- Plain text terminal ready
RCUaddr	- Remote control address select
RED	- Redundant
Resync	- Resynchronization
RS&CS	- Ready to Send & Clear to Send
RS-232	- Recommended standard 232
RX	- Receive
RXClock	- Receive Clock
RX Rate	- Receive rate
s	- Second
SPLX 2W	- Simplex 2-Wire
SPLX 4W	- Simplex 4-Wire
SPLXext	- Simplex external
SPLXint	- Simplex internal
STA CLK	- Station Clock
Std	- Standard
STO	- Store
Synch/A	- 64 characters, asynchronous 10-bit
Synch/S	- 512 bits, Synchronous
SyncOOS	- Synchronization Out of Sync detect signal
SyncRX	- Invert Synchronization receive control signal
SyncSel	- Synchronization Select
SyncTX	- Invert Synchronization Transmit control signal
TT SEL1	- Terminal Timing Selection 1
TT SEL2	- Terminal Timing Selection 2
TTY	- Teletype
TX	- Transmit
TX Clock	- Transmit Clock
TX rate	- Transmit rate
Unframd	- Frame transmit, but no receive
UpdateU	- Update Unique variable
X01	- Cryptographic traffic key position
X02	- Cryptographic traffic key position
X03	- Cryptographic traffic key position
X04	- Cryptographic traffic key position
X05	- Cryptographic traffic key position
X06	- Cryptographic traffic key position
X07	- Cryptographic traffic key position
X08	- Cryptographic traffic key position
X09	- Cryptographic traffic key position
X10	- Cryptographic traffic key position

**b. Test Summary.** The SUT met the critical interoperability requirements for a Terminal Adapter for the interfaces depicted in table 2-1, as set forth in reference (c), and is certified for joint use within the DSN.

**12. TEST AND ANALYSIS REPORT.** No detailed test report was developed, in accordance with the Program Manager's request. JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses Unclassified-But-Sensitive Internet Protocol Router Network (NIPRNet) e-mail. More comprehensive interoperability status information is available via the JITC System Tracking Program (STP). The STP is accessible by .mil/gov users on the NIPRNet at <https://stp.fhu.disa.mil>. Test reports, lessons learned, and related testing documents and references are on the JITC Joint Interoperability Tool (JIT) at <http://jit.fhu.disa.mil> (NIPRNet), or <http://199.208.204.125> (SIPRNet). Information related to DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at <http://jitc.fhu.disa.mil/tssi>.