



DEFENSE INFORMATION SYSTEMS AGENCY

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IN REPLY
REFER TO: Joint Interoperability Test Command (JTE)

26 Jul 12

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Extension of the Special Interoperability Test Certification of the Network Equipment Technologies (NET) Promina NX1000 from Software Release 4.x5.03, Version 95.55 to Software Release 4.x5.04, Version 95.56

References: (a) DOD Directive 4630.05, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," 5 May 2004
(b) CJCSI 6212.01E, "Interoperability and Supportability of Information Technology and National Security Systems," 15 December 2008
(c) through (f), see Enclosure

1. References (a) and (b) establish the Defense Information Systems Agency (DISA), Joint Interoperability Test Command (JITC), as the responsible organization for interoperability test certification.

2. The NET Promina NX1000 with Software Release 4.x5.03, Version 95.55 is hereinafter referred to as the System Under Test (SUT). The SUT meets all of its critical interoperability requirements and is certified as interoperable for joint use within the Defense Information Switched Network (DISN) as a Fixed Network Element (F-NE) and Deployable Network Element (D-NE). The SUT is deployed as a mated pair, but can also be connected to a Promina 800 Version 95.55 or Promina 400 Version 105.55 providing both SUTs are loaded with the same certified Software Release 4.x5.03 in order to interoperate correctly. The SUT has the following access interfaces that are certified for joint use within the DISN: Digital Transmission Link Level 1 (T1) Channel Associated Signaling (CAS), Primary Rate Interface (PRI), Signaling System 7 (SS7); European Basic Multiplex Rate (E1) CAS, PRI, SS7; and Electronic Industries Alliance (EIA)-530 Serial. The SUT also has three transport interfaces that are certified for joint use within the DISN, EIA-530 Serial, Trunk 3 (T1 only), and Internet Protocol. The T1 CAS access interface over the Trunk 3 transport interface is certified for clearmode only with the Primary Voice Secure (PVS) card. Additionally, the T1 CAS access interface is certified with clearmode and 9.6 Kilobits per second compression with the PVS-enhanced card. The SUT meets the critical interoperability requirements set forth in Reference (c) and testing was conducted using test procedures derived from Reference (d). No other configurations, features, or functions, except those cited within this report, are certified by the JITC. This certification expires upon changes that affect interoperability, but no later than 16 February 2015, which is three years from the date of the Unified Capabilities (UC) Approved Products List (APL) memorandum.

3. The extension of this certification is based upon Desktop Review (DTR) 1. The original certification is based on interoperability testing, review of the vendor's Letters of Compliance

JITC, Memo, JTE, Extension of the Special Interoperability Test Certification of the Network Equipment Technologies (NET) Promina NX1000 from Software Release 4.x5.03, Version 95.55 to Software Release 4.x5.04, Version 95.56

(LoC), and DISA Certifying Authority (CA) accreditation. Interoperability testing was conducted by JITC at the Global Information Grid Network Test Facility, Fort Huachuca, Arizona, from 12 September through 10 November 2011 and documented in Reference (e). Review of the vendor’s LoC was completed on 29 November 2011. DISA CA granted accreditation on 9 February 2012 based on the security testing completed by DISA-led Information Assurance (IA) test teams and published in a separate report, Reference (f). This DTR was requested to update the certified 4.x5.03 release to release 4.x5.04, Version 95.56, which only includes fixes for IA findings found during the initial IA test event. There is no modification to the functionality or interoperability of the SUT. Therefore, JITC approves this DTR. The DISA CA approved the new configuration on 12 June 2012, based on review of the DISA-led IA test teams updated report, Reference (f).

4. The overall interoperability status of the SUT is indicated in Table 1. The interfaces and associated Capability Requirements (CR) and Feature Requirements (FR) critical used to evaluate the interoperability status are listed in Table 2. The interoperability test status is based on the SUT’s ability to meet:

- a. DISN services for Network and Applications specified in Reference (c).
- b. The overall system interoperability performance derived from test procedures listed in Reference (d).

Table 1. SUT Interoperability Test Summary

DISN Access Interfaces			
Interface & Signaling	Critical	Status	Remarks
T1 CAS (AMI/SF) DTMF, MFR1	No ¹	Certified	Met all CRs and FRs.
T1 CAS (B8ZS/ESF) DTMF, MFR1	No ¹	Certified	Met all CRs and FRs.
T1 PRI (ANSI T1.607/T1.619a)	No ¹	Certified	Met all CRs and FRs.
T1 SS7 (ANSI T1.619a)	No ¹	Certified	Met all CRs and FRs.
E1 CAS (HDB3) DTMF, MFR1	No ¹ (Europe only)	Certified	Met all CRs and FRs.
E1 ISDN PRI (ITU-T Q931/Q.955.3)	No ¹ (Europe only)	Certified	Met all CRs and FRs.
E1 SS7 (ANSI T1.619a)	No ¹ (Europe only)	Certified	Met all CRs and FRs.
Serial (EIA-530)	No ¹	Certified	Met all CRs and FRs.
DISN Transport Interfaces			
Transport Level	Critical	Status	Remarks
Fast Ethernet (IEEE 802.3u)	No ²	Certified	Met all CRs and FRs.
Serial (EIA-530) SA-TRK	No ²	Certified	Met all CRs and FRs.
T1 TRK- 3	No ²	Certified ³	Met all CRs and FRs.
Features And Capabilities			
Features And Capabilities	Critical	Status	Remarks
Synchronization	Yes	Certified	Met all CRs and FRs.
Network Management	Yes	Certified	Met all CRs and FRs.
Security	Yes	Certified	Met all CRs and FRs. ⁴

Table 1. SUT Interoperability Test Summary (continued)

NOTES:		
1. The UCR does not stipulate a minimum Access interface requirement for a F-NE or D-NE.		
2. The UCR does not stipulate a minimum Transport interface requirement for a F-NE or D-NE.		
3. The TRK-3 Transport offers T1, E1, and Serial back plane interfaces; however, only the T1 interfaces were tested and are certified for joint use within the DISN.		
4. Information assurance testing is accomplished via DISA-led Information Assurance test teams and published in a separate report, Reference (e).		
LEGEND:		
802.3u	Standard for carrier sense multiple access with collision detection at 100 Mbps	IEEE Institute of Electrical and Electronics Engineers
AMI	Alternate Mark Inversion	ISDN Integrated Services Digital Network
ANSI	American National Standards Institute	ITU-T International Telecommunication Union – Telecommunication Standardization Sector
B8ZS	Bipolar Eight Zero Substitution	Mbps Megabits per second
CAS	Channel Associated Signaling	MFR1 Multi-Frequency Recommendation 1
CR	Capability Requirements	MLPP Multi-Level Precedence and Preemption
D-NE	Deployable Network Element	PRI Primary Rate Interface
DCE	Data Circuit-terminating Equipment	Q.931 Signaling Standard for ISDN
DISA	Defense Information Systems Agency	Q.955.3 ISDN Signaling Standard for E1 MLPP
DISN	Defense Information System Network	SA -TRK Symmetric Asymmetric-Trunk
DSS1	Digital Subscriber Signaling 1	SF Super Frame
DTE	Data Terminal Equipment	SS7 Signaling System 7
DTMF	Dual Tone Multi-Frequency	SUT System Under Test
E1	European Basic Multiplex Rate (2.048 Mbps)	T1 Digital Transmission Link Level 1 (1.544 Mbps)
EIA	Electronic Industries Alliance	T1.607 ISDN – Layer 3 Signaling Specification for Circuit Switched Bearer Service for DSS1
EIA-530	Standard for 25-position interface for DTE and DCE employing serial binary data interchange	T1.619a SS7 and ISDN MLPP Signaling Standard for T1
ESF	Extended Super Frame	TRK-3 Trunk-3
F-NE	Fixed Network Element	UCR Unified Capabilities Requirements
FR	Feature Requirements	

Table 2. SUT CR and FR Interoperability Requirements

DISN Access Interfaces			
Interface	Critical	Requirements Required or Conditional	References
T1 CAS (AM/5F) DTMF, MFR1 T1 CAS (B8ZS/ESF) DTMF, MFR1 T1 PRI (ANSI T1.607/T1.619a) T1 SS7 (ANSI T1.619a) E1 CAS (HDB3) DTMF, MFR1 E1 ISDN PRI (ITU-T Q.931/Q.955.3) E1 SS7 (ANSI T1.619a) Serial (EIA-530)	No ¹	<ul style="list-style-type: none"> • DS1 Interface Characteristics (C) • DS1 Supervisory Channel Associated Signaling (C) • DS1 Clear Channel Capability (C) • DS1 Alarm and Restoral Requirements (C) • E1 Interface Characteristics (C) • E1 Supervisory Channel Associated Signaling (C) • E1 Clear Channel Capability (C) • E1 Alarm and Restoral Requirements (C) • MOS (R) (F-NE Only) • MOS (R) (D-NE Only) • BERT (R) (F-NE Only) • BERT (R) (D-NE Only) • Secure Transmission (Voice and Data) (R) (F-NE Only) • Secure Transmission (Voice and Data) (R) (D-NE Only) • Modem (R) • Facsimile (R) • Call Control Signals (R) • Alarms (R) (F-NE Only) • Alarms (R) (D-NE Only) • Call Congestion Control (R) (F-NE Only) • Call Congestion Control (R) (D-NE Only) • Call Congestion for TDM Transport (R) (D-NE Only) • Voice Compression (C) (F-NE Only) • Voice Compression (C) (D-NE Only) • EIA-530 (R) 	<ul style="list-style-type: none"> • UCR Section 5.9.2.3.4 • UCR Section 5.9.2.3.4 • UCR Section 5.9.2.3.4 • UCR Section 5.9.2.3.4 • UCR Section 5.9.2.3.5 • UCR Section 5.9.2.3.5 • UCR Section 5.9.2.3.5 • UCR Section 5.9.2.3.5 • UCR Section 5.9.2.1 • UCR Section 5.9.2.1 • UCR Section 5.9.3.1 • UCR Section 5.9.3.8 • UCR Section 5.9.2.1 • UCR Section 5.9.2.1 • UCR Section 5.9.2.1 • UCR Section 5.9.2.1 • UCR Section 5.9.2.1.1 • UCR Section 5.9.3.5 • UCR Section 5.9.2.1 • UCR Section 5.9.3.1 • UCR Section 5.9.3.4 • UCR Section 5.9.2.2 • UCR Section 5.9.3.1 • UCR Section 5.5.3.6.10
Serial (EIA-530) SA-TRK	No ²	<ul style="list-style-type: none"> • MOS (R) (F-NE Only) • MOS (R) (D-NE Only) • BERT (R) (F-NE Only) • BERT (R) (D-NE Only) • Secure Transmission (Voice and Data) (R) (F-NE Only) • Secure Transmission (Voice and Data) (R) (D-NE Only) • Modem (R) • Facsimile (R) • Call Control Signals (R) • Alarms (R) (F-NE Only) • Alarms (R) (D-NE Only) • Call Congestion Control (R) (F-NE Only) • Call Congestion Control (R) (D-NE Only) • Call Congestion for TDM Transport (R) (D-NE Only) • Voice Compression (C) (F-NE Only) • Voice Compression (C) (D-NE Only) • Delay (R) (F-NE Only) • Delay (R) (D-NE Only) 	<ul style="list-style-type: none"> • UCR Section 5.9.2.1 • UCR Section 5.9.3.1 • UCR Section 5.9.2.1 • UCR Section 5.9.3.1 • UCR Section 5.9.2.1 • UCR Section 5.9.3.8 • UCR Section 5.9.2.1 • UCR Section 5.9.2.1 • UCR Section 5.9.2.1 • UCR Section 5.9.2.1 • UCR Section 5.9.2.1.1 • UCR Section 5.9.3.5 • UCR Section 5.9.2.1 • UCR Section 5.9.3.1 • UCR Section 5.9.3.4 • UCR Section 5.9.2.2 • UCR Section 5.9.3.1 • UCR Section 5.9.2.3.9 • UCR Section 5.9.3.3

Table 2. SUT CR and FR Interoperability Requirements (continued)

DISN Transport Interfaces			
Interface	Critical	Requirements Required or Conditional	References
T1 TRK-3	No ²	<ul style="list-style-type: none"> • DS1 Interface Characteristics (R) • MOS (R) (F-NE Only) • MOS (R) (D-NE Only) • BERT (R) (F-NE Only) • BERT (R) (D-NE Only) • Secure Transmission (Voice and Data) (R) (F-NE Only) • Secure Transmission (Voice and Data) (R) (D-NE Only) • Modem (R) • Facsimile (R) • Call Control Signals (R) • Alarms (R) (F-NE Only) • Alarms (R) (D-NE Only) • Call Congestion Control (R) (F-NE Only) • Call Congestion Control (R) (D-NE Only) • Call Congestion for TDM Transport (R) (D-NE Only) • Voice Compression (C) (F-NE Only) • Voice Compression (C) (D-NE Only) • Delay (R) (F-NE Only) • Delay (R) (D-NE Only) 	<ul style="list-style-type: none"> • UCR Section 5.9.2.3.4 • UCR Section 5.9.2.1 • UCR Section 5.9.3.1 • UCR Section 5.9.2.1 • UCR Section 5.9.3.1 • UCR Section 5.9.2.1 • UCR Section 5.9.3.8 • UCR Section 5.9.2.1 • UCR Section 5.9.2.1 • UCR Section 5.9.2.1 • UCR Section 5.9.2.1.1 • UCR Section 5.9.3.5 • UCR Section 5.9.2.1 • UCR Section 5.9.3.1 • UCR Section 5.9.3.4 • UCR Section 5.9.2.2 • UCR Section 5.9.3.1 • UCR Section 5.9.2.3.9 • UCR Section 5.9.3.3
IP	No ²	<ul style="list-style-type: none"> • MOS (R) (F-NE Only) • MOS (R) (D-NE Only) • BERT (R) (F-NE Only) • BERT (R) (D-NE Only) • Secure Transmission (Voice and Data) (R) (F-NE Only) • Secure Transmission (Voice and Data) (R) (D-NE Only) • Modem (R) • Facsimile (R) • Call Control Signals (R) • Alarms (R) (F-NE Only) • Alarms (R) (D-NE Only) • Call Congestion Control (R) (F-NE Only) • Call Congestion Control (R) (D-NE Only) • Call Congestion for TDM Transport (R) (D-NE Only) • Voice Compression (C) (F-NE Only) • Voice Compression (C) (D-NE Only) • Delay (R) (F-NE Only) • Delay (R) (D-NE Only) • Jitter (R) (F-NE Only) • Jitter (R) (D-NE Only) • Packet Loss (R) (F-NE Only) • Packet Loss (R) (D-NE Only) • IPv6 (R) 	<ul style="list-style-type: none"> • UCR Section 5.9.2.1 • UCR Section 5.9.3.1 • UCR Section 5.9.2.1 • UCR Section 5.9.3.1 • UCR Section 5.9.2.1 • UCR Section 5.9.3.8 • UCR Section 5.9.2.1 • UCR Section 5.9.2.1 • UCR Section 5.9.2.1 • UCR Section 5.9.2.1 • UCR Section 5.9.2.1.1 • UCR Section 5.9.3.5 • UCR Section 5.9.2.1 • UCR Section 5.9.3.1 • UCR Section 5.9.3.4 • UCR Section 5.9.2.2 • UCR Section 5.9.3.1 • UCR Section 5.9.2.3.9 • UCR Section 5.9.3.3 • UCR Section 5.9.2.3.9 • UCR Section 5.9.3.3 • UCR Section 5.9.2.3.9 • UCR Section 5.9.3.3 • UCR Section 5.3.5.4
SUT Features And Capabilities			
Feature/Capability	Critical	Requirements Required or Conditional	References
Synchronization	Yes	<ul style="list-style-type: none"> • Timing (R) 	<ul style="list-style-type: none"> • UCR Section 5.9.2.3.7
Network Management	Yes	<ul style="list-style-type: none"> • Management Option (R) Local Management (Front Panel and/or External Console) (C) ADIMSS (C) • Fault Management (C) • Loop Back Capability (C) • Operational Configuration Restoral (R) 	<ul style="list-style-type: none"> • UCR Section 5.9.2.4.1 • UCR Section 5.9.2.4.2 • UCR Section 5.9.2.4.3 • UCR Section 5.9.2.4.4
Security	Yes	<ul style="list-style-type: none"> • STIGs and DoDI 8510.01 (DIACAP) (R) 	<ul style="list-style-type: none"> • UCR Section 5.9.2.6

Table 2. SUT CR and FR Interoperability Requirements (continued)

NOTES:		
1. The UCR does not stipulate a minimum required DISN access interface.		
2. The UCR does not stipulate a minimum required DISN transport interface.		
LEGEND:		
ADIMSS	Advanced DSN Integrated Management Support System	F-NE Fixed Network Element
AMI	Alternate Mark Inversion	HDB3 High Density Bipolar Three
ANSI	American National Standards Institute	IP Internet Protocol
B8ZS	Bipolar Eight Zero Substitution	ISDN Integrated Services Digital Network
BERT	Bit Error Rate Test	ITU-T International Telecommunication Union – Telecommunication Standardization Sector
C	Conditional	MFR1 Multi-Frequency Recommendation 1
CAS	Channel Associated Signaling	MLPP Multi-Level Precedence and Preemption
D-NE	Deployable Network Element	MOS Mean Opinion Score
DIACAP	Department of Defense Information Assurance Certification and Accreditation Process	PRI Primary Rate Interface
DoDI	Department of Defense Instruction	Q.931 Signaling Standard for ISDN
DP	Dial Pulse	Q.955.3 ISDN Signaling Standard for E1 MLPP
DS1	Digital Signal Level 1	R Required
DSS1	Digital Subscriber Signaling 1	SA-TRK Symmetric Asymmetric-Trunk
DISN	Defense Information System Network	SF Super Frame
DTMF	Dual Tone Multi-Frequency	SS7 Signaling System 7
E1	European Basic Multiplex Rate (2.048 Mbps)	STIGs Security Technical Implementation Guides
EIA	Electronic Industries Alliance	SUT System Under Test
EIA-232	Standard for defining the mechanical and electrical characteristics for connecting DTE and DCE data communications devices	T1 Digital Transmission Link Level 1 (1.544 Mbps)
EIA-530	Standard for 25-position interface for DTE and DCE employing serial binary data interchange	T1.607 ISDN – Layer 3 Signaling Specification for Circuit Switched Bearer Service for DSS1
ESF	Extended Super Frame	T1.619a SS7 and ISDN MLPP Signaling Standard for T1
		TDM Time Division Multiplexing
		TRK-3 Trunk-3
		UCR Unified Capabilities Requirements

5. 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). Information related to DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at <http://jitc.fhu.disa.mil/tssi>. Due to the sensitivity of the information, the Information Assurance Accreditation Package (IAAP) that contains the approved configuration and deployment guide must be requested directly through government civilian or uniformed military personnel from the Unified Capabilities Certification Office (UCCO), e-mail: disa.meade.ns.list.unified-capabilities-certification-office@mail.mil.

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6. The JITC point of contact is Capt Stéphane Arsenault, DSN 879-5269, commercial (520) 538-5269, FAX DSN 879-4347, or e-mail to Stephane.P.Arsenault.fm@mail.mil. The JITC's mailing address is P.O. Box 12798, Fort Huachuca, AZ 85670-2798. The tracking number for the SUT is 1014701.

FOR THE COMMANDER:



for RICHARD A. MEADOR
Chief
Battlespace Communications Portfolio

Enclosure a/s

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UCCO

ADDITIONAL REFERENCES

- (c) Defense Information Systems Agency (DISA), "Department of Defense Unified Capabilities Requirements 2008, Change 2," 31 December 2010
- (d) Joint Interoperability Test Command, "Defense Switched Network Generic Switch Test Plan (GSTP), Change 2," 2 October 2006
- (e) Joint Interoperability Test Command, Memo, JTE, "Special Interoperability Test Certification of the Network Equipment Technologies (NET) Promina NX1000 from Software Release 4.x5.03, Version 95.55,"
- (f) Joint Interoperability Test Command, "Information Assurance (IA) Assessment of NET Promina Network Exchange (NX) 1000 with Software Release 4.x5.04 (Tracking Number 1014701)," Draft