



DEFENSE INFORMATION SYSTEMS AGENCY

P. O. BOX 549
FORT MEADE, MARYLAND 20755-0549

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

18 Oct 11

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Extension of the Special Interoperability Test Certification of the Fujitsu FLASHWAVE 4100 Extension Shelf (ES) with Software Release 8.2

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 Fujitsu FLASHWAVE 4100 ES with Software Release 8.2 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 System Network (DISN) as a Strategic Network Element. The SUT met the critical interoperability requirements set forth in Reference (c) and (d) using test procedures derived from Reference (e). Although the SUT offers European Basic Multiplex Rate (E1) access interfaces, these interfaces were not tested by JITC and are not covered under this certification. No other configurations, features, or functions, except those cited within this report, are certified by the JITC. This certification expires upon changes that could affect interoperability, but no later than three years from the date the Defense Information Assurance (IA)/Security Accreditation Working Group (DSAWG) provided a positive recommendation.

3. The extension of this certification is based upon Desktop Review (DTR) 1. The original certification is based on interoperability testing conducted by JITC, DISA adjudication of open test discrepancy reports, review of the vendor's Letters of Compliance (LoC), and DSAWG accreditation. Interoperability testing was conducted by JITC at the Global Information Grid Network Test Facility, Fort Huachuca, Arizona from 9 through 20 November 2009. Review of vendor's LoC was completed on 4 December 2009. DISA adjudication of outstanding test discrepancy reports was completed on 18 December 2009. DSAWG grants accreditation based on the security testing completed by DISA-led Information Assurance test teams and published in a separate report, Reference (f). The Field Security Office (FSO) granted accreditation on 28 March 2011. This DTR was requested to include the SUT sub components listed in Table 1, which were tested but excluded in the original IO Certification; therefore, JITC approves this DTR. The IA posture was not changed; therefore, the original IA approval is still valid for this DTR request.

Table 1. SUT Added Subcomponents

Part Number	Part Number Description	Correct/New Version Number	
FC9681L8X1	LUA1-L8X1 OC-48 LINE	I04	
FC9681EL21	OC-12 Line unit (SFP base unit)	I05	
FC9681ECD1	I/O Panel - 56 DS1s (4 64-pin AMP CHAMP)	I03	
FC9681ECE3	I/O Panel - 8 10/100Base-T Ethernet / 3 DS3s (8 RJ45 & 6 BNC)	I01 (non-issue)	
FC9681SFE1	FLASHWAVE 4100ES Shelf	I05	
FC9681LSX5	4-Port OC-3 SU, SFP Base Unit	I03	
PL-MPA450M-R0802	Pre-loaded CPU2 with Software Rel. 8.2	N/A	
PL-DCA450M-R0802	Pre-loaded DCC2 with Software Rel. 8.2	N/A	
NS50004-I01	NETSMART 500 Version 4.1	N/A	
LEGEND:			
CPU	Central Processing Unit2	OC-3	Optical Carrier Level 3 (155 Mbps)
DS1	Digital Signal Level 1 (1.544 Mbps) (2.048 Mbps European)	OC-12	Optical Carrier Level 12 (622 Mbps)
DS3	Digital Signal Level 3	OC-48	Optical Carrier Level 48 (2.448 Gbps)
Gbps	Gigabits per second	SU	Service Unit
Mbps	Megabits per second	SUT	System Under Test
OC	Optical Carrier		

4. The SUT Interoperability Test Summary is shown in Table 2 and the Capability and Feature Requirements used to evaluate the interoperability of the SUT are indicated in Table 3.

Table 2. SUT Interoperability Test Summary

DSN Access Interfaces				
DSN Switch Access	Critical	Status	Remarks	
T1 CAS (AMI/SF) DTMF, MFR1, DP	No ¹	Certified	Met all CRs and FRs.	
T1 CAS (B8ZS/ESF) DTMF, MFR1, DP	No ¹	Certified	Met all CRs and FRs.	
T1 PRI (ANSI 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, DP	No ¹ (Europe only)	Not Tested	The SUT offers this interface; however it was not tested. The SUT E1 CAS interface is therefore not certified by JITC. This is not a required interface for a Strategic Network Element.	
E1 ISDN PRI (ITU-T Q.955.3)	No ¹ (Europe only)	Not Tested	The SUT offers this interface; however it was not tested. The SUT E1 CAS interface is therefore not certified by JITC. This is not a required interface for a Strategic Network Element.	
E1 SS7 (ANSI T1.619a)	No ¹ (Europe only)	Not Tested	The SUT offers this interface; however it was not tested. The SUT E1 CAS interface is therefore not certified by JITC. This is not a required interface for a Strategic Network Element.	
DS3	No ¹	Certified	Met all CRs and FRs.	
DS3C	No ¹	Certified	Met all CRs and FRs.	
10/100 Mbps Ethernet	No ¹	Certified	Met all CRs and FRs.	
Gigabit Ethernet	No ¹	Certified	Met all CRs and FRs.	

Table 2. SUT Interoperability Test Summary (continued)

DSN Transport Interfaces																																
DSN Switch Access		Critical	Status	Remarks																												
Optical Carrier Level	Transport Level	Critical	Status	Remarks																												
OC-3	VT 1.5	No ²	Certified	Met all CRs and FRs.																												
	STS-1	No ²	Certified	Met all CRs and FRs.																												
OC-12	VT 1.5	No ²	Certified	Met all CRs and FRs.																												
	STS-1	No ²	Certified	Met all CRs and FRs.																												
OC-48	VT 1.5	No ²	Certified	Met all CRs and FRs.																												
	STS-1	No ²	Certified	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 ³	Met all CRs and FRs ³ .																												
<p>NOTES:</p> <p>1 The UCR does not stipulate a minimum Access interface requirement for a Strategic Network Element.</p> <p>2 The UCR does not stipulate a minimum Transport interface requirement for a Strategic Network Element.</p> <p>3 Security is tested by DISA-led Information Assurance test teams and published in a separate report, Reference (f).</p>																																
<p>LEGEND:</p> <table> <tr> <td>CR</td> <td>Capability Requirements</td> <td>PRI</td> <td>Primary Rate Interface</td> </tr> <tr> <td>DISA</td> <td>Defense Information Systems Agency</td> <td>SUT</td> <td>System Under Test</td> </tr> <tr> <td>DSN</td> <td>Defense Switched Network</td> <td>STS</td> <td>Synchronous Transport Signal</td> </tr> <tr> <td>FR</td> <td>Feature Requirements</td> <td>T1</td> <td>Digital Transmission Link Level 1 (1.544 Mbps)</td> </tr> <tr> <td>OC-3</td> <td>Optical Carrier Level 3 (155 Mbps)</td> <td>T1.619a</td> <td>SS7 and ISDN MLPP Signaling Standard for T1</td> </tr> <tr> <td>OC-12</td> <td>Optical Carrier Level 12 (622 Mbps)</td> <td>UCR</td> <td>Unified Capabilities Requirements</td> </tr> <tr> <td>OC-48</td> <td>Optical Carrier Level 12 (2.448 Gbps)</td> <td>VT1.5</td> <td>Virtual Tributary 1.5</td> </tr> </table>					CR	Capability Requirements	PRI	Primary Rate Interface	DISA	Defense Information Systems Agency	SUT	System Under Test	DSN	Defense Switched Network	STS	Synchronous Transport Signal	FR	Feature Requirements	T1	Digital Transmission Link Level 1 (1.544 Mbps)	OC-3	Optical Carrier Level 3 (155 Mbps)	T1.619a	SS7 and ISDN MLPP Signaling Standard for T1	OC-12	Optical Carrier Level 12 (622 Mbps)	UCR	Unified Capabilities Requirements	OC-48	Optical Carrier Level 12 (2.448 Gbps)	VT1.5	Virtual Tributary 1.5
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Table 3. SUT Capability and Feature Interoperability Requirements (continued)

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 5.2.12.5.5.1.2.7
Network Management	Yes	<ul style="list-style-type: none"> • Management Option (R) <ul style="list-style-type: none"> - 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 5.2.12.5.5.2.1 • UCR Section 5.2.12.5.5.2.2 • UCR Section 5.2.12.5.5.2.3 • UCR Section 5.2.12.5.5.3
Security	Yes	<ul style="list-style-type: none"> • DIACAP and STIGs (R) 	<ul style="list-style-type: none"> • UCR Sections 3.2.3, 3.2.5, and 5.4.6.1

NOTES:

- The UCR does not stipulate a minimum Access interface requirement for a Strategic Network Element.
- The UCR does not stipulate a minimum Transport interface requirement for a Strategic Network Element.

LEGEND:

ADIMSS	Advanced DSN Integrated Management Support System	ITU-T	International Telecommunication Union - Telecommunication Standardization Sector
AIS	Alarm Indication Signal	LSSGR	Local Access and Transport Area (LATA) Switching Systems Generic Requirements
ANSI	American National Standards Institute	Mbps	Megabits per second
BERT	Bit Error Rate Test	MLPP	Multi-Level Precedence and Preemption
C	Conditional	MOS	Mean Opinion Score
CAS	Channel Associated Signaling	OC-3	Optical Carrier Level 3 (155 Mbps)
DIACAP	DoD Information Assurance Certification and Accreditation Process	OC-12	Optical Carrier Level 12 (622 Mbps)
DoD	Department of Defense	OC-48	Optical Carrier Level 12 (2.448 Gbps)
DS0	Digital Signal Level 0	PRI	Primary Rate Interface
DS1	Digital Signal Level 1	Q.955.3	ISDN Signaling standard for E1 MLPP
DS3	Digital Signal Level 3	R	Required
DS3C	Digital Signal Level 3 - Concatenated	RAI	Remote Alarm Indication
DSN	Defense Switched Network	SONET	Synchronous Optical Network
DSS1	Digital Subscriber Signaling 1	SS7	Signaling System 7
E1	European Basic Multiplex Rate (2.048 Mbps)	STIGs	Secure Technical Implementation Guides
Gbps	Gigabits per second	SUT	System Under Test
GR	Generic Requirement	T1	Digital Transmission Link Level 1 (1.544 Mbps)
GR-253-CORE	SONET Transport Systems: Common Generic Criteria	T1.105-2001	SONET – Basic Description include Multiplexer structure, rates, formats
GR-303-CORE	Integrated Digital Loop Carrier System Generic Requirements, Objectives, and Interface	T1.607	ISDN – Layer 3 Signaling Specification for Circuit Switched Bearer Service for DSS1
GR-436-CORE	Digital Network Synchronization Plan	T1.619a	SS7 and ISDN MLPP Signaling Standard for T1
GR-518-CORE	LSSGR: Synchronization, Section 18	TDM	Time Division Multiplexing
GR-782-CORE	SONET Digital Switch Trunk Interface Criteria	UCR	Unified Capabilities Requirements
IP	Internet Protocol		
ISDN	Integrated Services Digital Network		

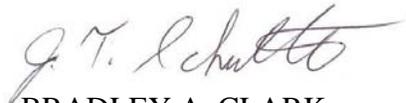
JITC Memo, JTE, Extension of the Special Interoperability Test Certification of the Fujitsu FLASHWAVE 4100 Extension Shelf (ES) with Software Release 8.2

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: ucco@disa.mil.

6. The JITC point of contact is Mr. Khoa Hoang, DSN 879-4376, commercial (520) 538-4376, FAX DSN 879-4347, or e-mail to khoa.hoang@disa.mil. The JITC's mailing address is P.O. Box 12798, Fort Huachuca, AZ 85670-2798. The tracking number for this DTR SUT is 0920401.

FOR THE COMMANDER:

Enclosure a/s


for BRADLEY A. CLARK
Chief
Battlespace Communications Portfolio

Distribution (electronic mail):

Joint Staff J-6

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U.S. Joint Forces Command, Net-Centric Integration, Communication, and Capabilities
Division, J68

Defense Information Systems Agency, GS23

ADDITIONAL REFERENCES

- (c) Office of the Assistant Secretary of Defense, "Department of Defense Unified Capabilities Requirements 2008, Change 1," 22 January 2010
- (d) Office of the Assistant Secretary of Defense, "Department of Defense Unified Capabilities Requirements 2008 Change 2," 31 December 2010
- (e) Joint Interoperability Test Command, "Defense Switched Network Generic Switch Test Plan (GSTP), Change 2," 2 October 2006
- (f) Joint Interoperability test Command, "Information Assurance (IA) Assessment of Fujitsu FLASHWAVE 4100 Extension Shelf (ES) with Software Release 8.2 (Tracking Number 0920401)"