



DEFENSE INFORMATION SYSTEMS AGENCY

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IN REPLY
REFER TO:

Joint Interoperability Test Command (JTE)

15 Dec 11

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Extension of the Special Interoperability Test Certification of the Tellabs Gigabit Passive Optical Network (1134 and 1150 Multi-Service Access Platform Optical Line Terminal with 704G, 709GP, and 714G Optical Network Terminals) Fixed Network Element, from version FP25.3.1 to version FP25.6.1

- References:
- (a) Department of Defense Directive 4630.05, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," 5 May 2004
 - (b) Chairman, Joint Chiefs of Staff Instruction 6212.01E, "Interoperability and Supportability of Information Technology and National Security Systems," 15 December 2008
 - (c) through (e), see Enclosure 1

1. References (a) and (b) establish the Joint Interoperability Test Command (JITC), as the responsible organization for interoperability test certification.
2. The Tellabs Gigabit Passive Optical Network (GPON) solution consists of a Multi-Service Access Platform (MSAP) Optical line Terminal (OLT) and an Optical Network Terminal (ONT). The Tellabs 1134 or 1150 MSAP OLT, combined with an ONT (704G, 709GP, and 714G) with software release FP25.6.1, hereinafter referred to as the System Under Test (SUT). JITC originally certified FP25.3.1. JITC certifies the Tellabs SUT for joint use in the Defense Information Systems Network as a Fixed Network Element (F-NE). The Tellabs SUT can be deployed to extend services in high availability Assured Services Local Area Networks or Wide Area Networks. The Defense Information Systems Agency (DISA) adjudicated all open Test Discrepancy Reports (TDR) to have a minor operational impact. The SUT is a layer-2 device that transports Internet Protocol version 4 and Internet Protocol version 6 traffic transparently. The certification status of the SUT will be verified during operational deployment. Any new discrepancy noted in the operational environment will be evaluated for impact on the existing certification. These discrepancies will be adjudicated to the satisfaction of the DISA via a vendor Plan of Action and Milestones that will address all new critical TDRs within 120 days of identification. The JITC conducted testing using Network Element requirements derived from the Unified Capabilities Requirements (UCR), Reference (c), and Network Element test procedures, Reference (d). The JITC does not certify any other configurations, features, or functions, except those cited within this memorandum. This certification expires on 2 February 2013 based upon the UC APL memorandum expiration, or upon changes that affect interoperability.

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3. The extension of this certification is based upon a Desktop Review (DTR). The original certification is based on interoperability testing conducted by JITC, review of the vendor's Letters of Compliance (LoC), and Defense Information Assurance (IA)/Security Accreditation Working Group (DSAWG) accreditation. The JITC, Indian Head, Maryland, conducted interoperability testing from January through March 2010 and completed review of the vendor's LoC on 4 May 2010. The DSAWG granted accreditation based on the security testing completed by DISA-led IA test teams. The JITC published the IA findings in a separate report, Reference (e). The DSAWG granted accreditation of the SUT in September 2010. This DTR included a minor software update and three new hardware changes, adding 704G, 709GP, and 714G ONT to the SUT. After careful review of this DTR, the JITC interoperability test team requested a two-week extension in order to conduct interoperability regression testing for these changes; no additional IA testing was required. JITC, Indian Head, Maryland, conducted interoperability regression testing and a review of the vendor's LoC from July through August 2011. JITC determined, through the interoperability regression testing, that there is low risk in approving this DTR. The IA posture has not changed. The original IA approval applies to this DTR.

4. Section 5.9 of the UCR 2008 Change 2 establishes the interfaces and threshold Capability Requirements (CR)/Functional Requirements (FR) used to evaluate the interoperability of the SUT as an F-NE. Tables 1 and 2 list the interfaces, CRs, FRs, and the component status of the SUT.

Table 1. SUT Interface Interoperability Status

Interface	Critical (See note 1.)	UCR Reference	Threshold CR/FR Requirements (See note 2.)	Status	Remarks
Ingress (LAN side)					
Analog	No	5.9.3.2.1	1, 2, and 4	NA	Not supported by the SUT
Serial	No	5.9.2.3.2	1, 2, and 4	NA	Not supported by the SUT
BRI ISDN	No	5.9.2.3.3	1, 2, and 4	NA	Not supported by the SUT
DS1	No	5.9.2.3.4	1, 2, 3, and 4	NA	Not supported by the SUT
E1	No	5.9.2.3.5	1, 2, 3, and 4	NA	Not supported by the SUT
DS3	No	5.9.2.3.6	1, 2, 3, and 4	NA	Not supported by the SUT
OC-X	No	5.9.2.3.8	1, 2, 3, and 4	NA	Not supported by the SUT
IP (Ethernet)	No	5.9.2.3.9	1, 2, 4, and 7	Certified	SUT's OLTs met requirements for 1 Gbps and 10 Gbps interfaces
Egress (WAN side)					
Serial	No	5.9.2.3.2	1, 2, 3, and 4	NA	Not supported by the SUT
DS1	No	5.9.2.3.4	1, 2, 3, and 4	NA	Not supported by the SUT
E1	No	5.9.2.3.6	1, 2, 3, and 4	NA	Not supported by the SUT
DS3	No	5.9.2.3.6	1, 2, 3, and 4	NA	Not supported by the SUT
OC-X	No	5.9.2.3.8	1, 2, 3, and 4	NA	Not supported by the SUT
IP (Ethernet)	No	5.9.2.3.9	1, 2, 4, and 7	Certified	SUT met requirements for 1 Gbps and 10 Gbps interfaces
DLoS	No	5.9.2.3.9	1, 2, 3, 4, and 5	NA	Not supported by the SUT
NM					
10Base-X	Yes	5.3.2.4.4	8	Certified	SUT met NM requirements for specified interfaces
100Base-X	Yes	5.3.2.4.4	8	Certified	

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Table 1. SUT Interface Interoperability Status (continued)

NOTES:					
1. UCR does not specify any minimum interfaces. The SUT must minimally provide one of the listed ingress and egress interfaces specified.					
2. CR/FR requirements are contained in Table 2. CR/FR numbers represent a roll-up of UCR requirements.					
LEGEND:					
100Base-X	100 Mbps Ethernet generic designation	ISDN	Integrated Services Digital Network		
10Base-X	10 Mbps Ethernet generic designation	LAN	Local Area Network		
BRI	Basic Rate Interface	Mbps	Megabits per second		
CR	Capability Requirement	NA	Not Applicable		
DLoS	Direct Line of Sight	NM	Network Management		
DS1	Digital System Level 1 (1.544 Mbps)	OC-X	Optical Carrier - X (OC-3, OC-12, etc.)		
DS3	Digital System Level 3 (44.736 Mbps)	OLT	Optical line Terminal		
E1	European Interface Standard (2.048 Mbps)	SUT	System Under Test		
FR	Functional Requirement	UCR	Unified Capabilities Requirements		
Gbps	Gigabits per second	WAN	Wide Area Network		
IP	Internet Protocol				

Table 2. SUT Capability Requirements and Functional Requirements Status

CR/FR ID	Capability/ Function	Applicability (See note 1.)	UCR Reference (See note 2.)	Status	Remarks
1	General NE Requirements				
	General Requirements	Required	5.9.2.1	Met	
	Alarms	Required	5.9.2.1.1	Met	
	Congestion Control & Latency	Required	5.9.2.1.2	Met	
2	Compression				
	G.726	Conditional	5.9.2.2	NA	Not supported by the SUT
	G.728	Conditional	5.9.2.2	NA	Not supported by the SUT
	G.729	Conditional	5.9.2.2	NA	Not supported by the SUT
3	Interface Requirements				
	Timing	Required (See note 3.)	5.9.2.3.7	NA	SUT does not provide TDM interfaces
4	Device Management				
	Management Options	Required	5.9.2.4.1	Met	
	Fault Management	Conditional	5.9.2.4.2	Met	
	Loop-Back Capability	Conditional	5.9.2.4.3	NA	
	Operational Configuration Restoral	Required	5.9.2.4.4	Met	
5	DLoS				
	DLoS Transport	Conditional	5.9.2.4.5	NA	Not supported by the SUT

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Table 2. SUT Capability Requirements and Functional Requirements Status (continued)

CR/FR ID	Capability/ Function	Applicability (See note 1.)	UCR Reference (See note 2.)	Status	Remarks
6	D-NE Requirements				
	D-NE General Requirements	Required (See note 4.)	5.9.3.1	Not Tested	Sponsor requested to test the SUT as a fixed NE
	D-NE TDM Requirements	Conditional	5.9.3.2	Not Tested	Sponsor requested to test the SUT as a fixed NE
	D-NE IP Requirements	Conditional	5.9.3.3	Not Tested	Sponsor requested to test the SUT as a fixed NE
	Encapsulated TDM Requirements	Conditional	5.9.3.4	Not Tested	Sponsor requested to test the SUT as a fixed NE
	Carrier Group Alarms	Required (See note 4.)	5.9.3.5	Not Tested	Sponsor requested to test the SUT as a fixed NE
	Long-Local Requirements	Conditional	5.9.3.6	Not Tested	Sponsor requested to test the SUT as a fixed NE
	Proprietary IP Trunk Requirements	Conditional	5.9.3.7	Not Tested	Sponsor requested to test the SUT as a fixed NE
	Secure Call Handling	Required (See note 4.)	5.9.3.8	Not Tested	Sponsor requested to test the SUT as a fixed NE
	Voice Packet Multiplexing	Conditional	5.9.3.9	Not Tested	Sponsor requested to test the SUT as a fixed NE
7	IPv6 Requirements				
	Product Requirements	Required	5.3.5.4	Met	SUT is a layer-2 device and transports IPv4 and IPv6 traffic transparently
8	NM Requirements				
	VVoIP NMS Interface Requirements	Required	5.3.2.4.4	Met	
	General Management Requirements	Required	5.3.2.17.2	Met	
NOTES:					
1. Annotation of 'required' refers to high-level requirement category. See enclosure 3 in the original certification letter for applicability of each sub-requirement.					
2. Reference document is UCR 2008 Change-2.					
3. Applies to TDM interfaces only.					
4. Only applies if SUT seeking certification as an D-NE.					
LEGEND:					
ADPCM	Adaptive Differential Pulse Code Modulation		IPv4	Internet Protocol version 4	
CR	Capabilities Requirement		IPv6	Internet Protocol version 6	
DLoS	Direct Line of Sight		NA	Not Applicable	
D-NE	Deployed Network Element		NE	Network Element	
FR	Functional Requirement		NM	Network Management	
G.726	ITU-T speech codec for ADPCM (32 Kbps)		NMS	Network Management System	
G.728	ITU-T speech codec for LD-CELP (16 Kbps)		SUT	System Under Test	
G.729	ITU-T speech codec for CS-ACELP (8 Kbps)		TDM	Time Division Multiplexing	
ID	Identification		UCR	Unified Capabilities Requirements	
IP	Internet Protocol		VVoIP	Voice and Video over Internet Protocol	

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5. In accordance with the Program Manager's request, JITC did not develop a detailed test report. JITC distributes interoperability information via the JITC Electronic Report Distribution system, which uses Non-secure Internet Protocol Router Network (NIPRNet) e-mail. More comprehensive interoperability status information is available via the JITC System Tracking Program (STP), which .mil/.gov users can access 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 at <http://jit.fhu.disa.mil> (NIPRNet). Information related to Defense Switched Network (DSN) testing is on the Telecommunications Switched Services Interoperability website at <http://jitc.fhu.disa.mil/tssi>. All associated data is available on the DISA Unified Capability Certification Office (UCCO) website at <https://aplits.disa.mil>.

6. The JITC testing point of contact is Mr. Son Pham, commercial (301) 744-2636, or DSN 354-2636. His e-mail address is Son.Pham@disa.mil. The JITC mailing address is 3341 Strauss Avenue, Suite 236, Indian Head, Maryland 20640-5149. The UCCO tracking numbers for the SUT are 0914904 and 0914905.

FOR THE COMMANDER:



for BRADLEY A. CLARK
Chief
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1 Enclosure a

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ADDITIONAL REFERENCES

- (c) Office of the Assistant Secretary of Defense Document, "Department of Defense Unified Capabilities Requirements 2008, Change-2," December 2010
- (d) Joint Interoperability Test Command Document, "Unified Capabilities Test Plan," 04 February 2010
- (e) Joint Interoperability Test Command Document, "Information Assurance (IA) Assessment of Tellabs Gigabit Passive Optical Network (1134 and 1150 Multi-Service Access Platform Optical Line Terminal with 701, 709 and 729 Optical Network Terminals)," 10 December 2009

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