



## DEFENSE INFORMATION SYSTEMS AGENCY

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

IN REPLY  
REFER TO:

Joint Interoperability Test Command (JTE)

10 Sep 13

### MEMORANDUM FOR DISTRIBUTION

**SUBJECT:** Extension of the Special Interoperability Test Certification of the Aruba Networks, Inc., 6000-400-F1, 6000-400-USF1 with M3mk1-S-F1 Wireless Products from Software Release ArubaOS\_MMC\_6.1.4.3-FIPS to ArubaOS\_MMC\_6.1.4.5-FIPS

**References:** (a) Department of Defense Directive 4630.05, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," 5 May 2004  
(b) Department of Defense Instruction 8100.04, "DoD Unified Capabilities (UC)," 9 December 2010  
(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 Aruba Networks, Inc. 6000-400-F1, 6000-400-USF1 with M3mk1-S-F1 Wireless Products with with Software Release ArubaOS\_MMC\_6.1.4.0-FIPS, was originally certified for joint use in the Defense Information System Network as Wireless Access Local Area Network (LAN) Systems (WLASs) and Wireless Access Bridges (WABs), Reference (c). The vendor submitted Desktop Reviews 1 and 2 to add support for display of the DoD banner to administrative Common Access Card users, to correct a known Information Assurance (IA) discrepancy with Lightweight Directory Access Protocol server communication, and update to the new ArubaOS\_MMC\_6.1.4.3-FIPS Software Release. Desktop Review 3 (DTR3) was submitted to correct a software version error in their initial product submission and update to the new ArubaOS\_6xx\_6.1.4.5-FIPS release. The TIC and JITC analysis of the release notes submitted with DTR3 shows that the new release primarily addressed an Open SSL vulnerability that had minimal IA and IO implications. . JITC concurred with the TIC's recommendation that the certification be extended to include the ArubaOS\_6xx\_6.1.4.5-FIPS release. No other configurations, features, or functions, except those cited within this memorandum, are certified by JITC or authorized by the Program Management Office for use. This certification expires upon changes that affect interoperability, but no later than three years from the date of the DoD Unified Capabilities Approved Product List approval memorandums (30 November 2012).

3. JITC approves the extension of this certification for DTR3. JITC reviewed the submissions and determined that no additional IA or IO testing was needed to accept the update to the ArubaOS\_6xx\_6.1.4.5-FIPS code release.

JITC Memo, JTE, Extension of the Special Interoperability Test Certification of the Aruba Networks, Inc., 6000-400-F1, 6000-400-USF1 with M3mk1-S-F1 Wireless Products from Software Release ArubaOS\_MMC\_6.1.4.3-FIPS to ArubaOS\_MMC\_6.1.4.5-FIPS

4. The interface, Capability Requirements (CRs), Functional Requirements (FRs), and component status of the SUT are listed in Table 1. The Threshold CR/FR Requirements for WLASs and WABs are established by Section 5.3.1 of Reference (c) and were used to evaluate the interoperability 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
<b>WLAS</b>					
802.11a	N	5.3.1.7.2.3-1	1, 2, 3, 5, and 7	Certified	
802.11b	N	5.3.1.7.2.3-1	1, 2, 3, 5, and 7	Certified	
802.11g	N	5.3.1.7.2.3-1	1, 2, 3, 5, and 7	Certified	
802.11n	N	5.3.1.7.2.3-1	1, 2, 3, 5, and 7	Certified	
802.16	N	5.3.1.7.2.3-4	1, 2, 3, 5, and 7	N/A	
802.3i	N	5.3.1.7.2.5-5	1, 2, 3, 5, and 7	Certified	
802.3j	N	5.3.1.7.2.5-5	1, 2, 3, 5, and 7	Certified	See note 3.
802.3u	N	5.3.1.7.2.5-5	1, 2, 3, 5, and 7	Certified	
802.3 z	N	5.3.1.7.2.5-5	1, 2, 3, 5, and 7	Certified	See note 3.
802.3ab	N	5.3.1.7.2.5-5	1, 2, 3, 5, and 7	Certified	
<b>WAB</b>					
802.11a	N	5.3.1.7.2.6-1	1, 2, 3, 6, and 7	Certified	
802.11b	N	5.3.1.7.2.6-1	1, 2, 3, 6, and 7	Certified	
802.11g	N	5.3.1.7.2.6-1	1, 2, 3, 6, and 7	Certified	
802.11n	N	5.3.1.7.2.6-1	1, 2, 3, 6, and 7	Certified	
802.16	N	5.3.1.7.2.6-1	1, 2, 3, 6, and 7	N/A	
802.3i	N	5.3.1.7.2.6-1	1, 2, 3, 6, and 7	Certified	
802.3j	N	5.3.1.7.2.6-1	1, 2, 3, 6, and 7	Certified	See note 3.
802.3u	N	5.3.1.7.2.6-1	1, 2, 3, 6, and 7	Certified	
802.3z	N	5.3.1.7.2.6-1	1, 2, 3, 6, and 7	Certified	See note 3.
802.3ab	N	5.3.1.7.2.6-1	1, 2, 3, 6, and 7	Certified	
<b>WEI</b>					
802.11a	N	5.3.1.7.2.3	1, 3, and 4	N/A	Products tested did not include WEIs.
802.11b	N	5.3.1.7.2.3	1, 3, and 4	N/A	
802.11g	N	5.3.1.7.2.3	1, 3, and 4	N/A	
802.16	N	5.3.1.7.2.3	1, 3, and 4	N/A	
<b>NOTES:</b>					
1. The “UCR 2008, Change 3,” does not define any minimum interfaces. The SUT must minimally provide one of the wired interfaces (to the ASLAN) and wireless interfaces (subscriber).					
2. The SUT need not provide wireless capabilities; however, if such capabilities are present, the SUT must meet all threshold CR/FR requirements. The detailed CRs/FRs are listed in Enclosure 3, System Capability Requirements and Functional Requirements.					
3. Support for this interface type is through the use of an appropriate SFP installed at the controller.					
<b>LEGEND:</b>					
ASLAN	Assured Services LAN	SFP	Small Form-Factor Pluggable		
CR	Capability Requirement	SUT	System Under Test		
FR	Functional Requirement	UCR	Unified Capabilities Requirements		
LAN	Local Area Network	WAB	Wireless Access Bridge		
N	No	WEI	Wireless End Instrument		
N/A	Not Applicable	WLAS	Wireless LAN Access System		

**Table 2. SUT Capability Requirements and Functional Requirements Status**

CR/FR ID	Capability/Function	Applicability (See note 1.)	UCR Reference	Status	Remarks
1	<b>General Wireless Requirements</b>				
	IPv6	Required	5.3.1.7.2.1	Met	See note 2.
	Wi-Fi Certified	Required (See note 3.)	5.3.1.7.2.1	Met	See note 4.
	Redundancy	Required	5.3.1.7.2.1	Met	
	FIPS 140-2 Level 1	Required	5.3.1.7.2.1	Met	See note 4.
	Latency	Required	5.3.1.7.2.1	Met	
	Traffic Prioritization	Required	5.3.1.7.2.1	Met	
	Wireless STIGs	Required	5.3.1.7.2.1	Met	See note 5.
CAPWAP	Required	5.3.1.7.2.1	Partially Met	TDR issued See note 6.	
2	<b>WIDS Requirements</b>				
	Continuous Scanning			Met	See note 7.
	Location-sensing			Met	See note 7.
3	<b>Wireless Interface Requirements</b>				
	Interface Standards	Required (See note 8.)	5.3.1.7.2.3	Met	
	802.11 Interface Standards	Required (See note 9.)	5.3.1.7.2.3	Met	
	802.16 Interface Standards	Required (See note 10.)	5.3.1.7.2.3	N/A	See note 11.
Fixed/Nomadic WEIs	Required (See note 12.)	5.3.1.7.2.3	N/A	See note 13.	
4	<b>WEI Requirements</b>				
	VoIP Solution	Required (See note 14.)	5.3.1.7.2.4	N/A	
	Access Methods	Required (See note 15.)	5.3.1.7.2.4	N/A	
	Call Control Authentication	Required (See note 14.)	5.3.1.7.2.4	N/A	
Call Termination	Required (See note 12.)	5.3.1.7.2.4	N/A		
5	<b>WLAS Requirements</b>				
	Loss of Call upon WLAS failure	Required (See note 16.)	5.3.1.7.2.5	Met	See note 17.
	Maximum supported EIs	Required (See note 16.)	5.3.1.7.2.5	Met	See notes 17 and 18.
	MOS	Required (See note 16.)	5.3.1.7.2.5	Met	See notes 17 and 18.
Roaming	Required (See note 16.)	5.3.1.7.2.5	Met	See note 17.	

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

CR/FR ID	Capability/Function	Applicability (See note 1.)	UCR Reference	Status	Remarks
6	<b>WAB Requirements</b>				
	Individual Interface Standards	Required (See note 9.)	5.3.1.7.2.6	Met	For specified interfaces.
	Maximum Voice Calls Transported	Required (See note 9.)	5.3.1.7.2.6	Met	See notes 17 and 18.
	Voice MOS	Required (See note 9.)	5.3.1.7.2.6	Met	See note 17.
	E2E BER	Required (See note 9.)	5.3.1.7.2.6	Met	
	Secure Voice Transmission	Required (See note 9.)	5.3.1.7.2.6	Met	See note 19.
	Call Signaling Transport	Required (See note 9.)	5.3.1.7.2.6	Met	See note 19.
	Latency	Required (See note 9.)	5.3.1.7.2.6	Met	
	Jitter	Required (See note 9.)	5.3.1.7.2.6	Met	TDR issued. See note 20.
	WLAS/WAB Combination	Required (See note 9.)	5.3.1.7.2.6	Met	
7	<b>ASLAN Requirements Applicable to Wireless Products</b>				
	General Performance Parameters	Required	5.3.1.3	Met	
<p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>The SUT need not provide wireless capability. However, if wireless capability is present, the SUT must meet the wireless requirements (as applicable for product type WLAS, WAB, or WEI) in order to be certified.</li> <li>Vendor demonstrated IPv6 management and packet transfer via wireless and wired Ethernet.</li> <li>Only applies to 802.11 interfaces.</li> <li>Verified via vendor LoC and testing.</li> <li>Vendor met STIG requirements with submitted mitigations.</li> <li>The TDR was adjudicated by DISA on 10 July 2012, and was determined to be "Condition of Fielding" with operations limited to Aruba Wireless Controllers.</li> <li>The SUT support WIDS extensive features of continuous scanning and location sensing.</li> <li>Individual sub-requirements apply to specific interface types.</li> <li>Applicable to 802.11 interfaces only.</li> <li>Applicable to 802.16 interfaces only.</li> <li>SUT does not provide 802.16 interfaces.</li> <li>Applies to WEIs; not applicable to WLASs or WABs.</li> <li>SUT does not include WEIs.</li> <li>The WEI is certified in conjunction with a call-control agent (VoIP solution).</li> <li>The WEI may be dedicated service (single traffic type) or shared service (voice, video, and data).</li> <li>Specified requirements are only applicable to WLAS products.</li> <li>Verified via emulated VoIP phone calls using test, measurement and diagnostic equipment.</li> <li>The SUT was not tested to the maximum 96 EIs – see Testing Limitations in Enclosure 2.</li> <li>No direct measurement available. Reference the SUT's demonstrated suitable quality wireless transport confirmed with collaborating measurements. The SUT is considered to meet this requirement with a low-risk assessment.</li> <li>The TDR was adjudicated by DISA on 10 July 2012, and was determined to be a "Change Requirement" from 1ms, allowing for 3 ms or less jitter.</li> </ol>					

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

LEGEND:			
802.11	IEEE Set of Wireless Standards in the 2.4,3.6, and 5 GHz	MOS	Mean Opinion Score
802.16	IEEE Series of Wireless Broadband Standards	ms	Millisecond
ASLAN	Assured Services LAN	N/A	Not Applicable
BER	Bit Error Rate	STIG	Security Technical Implementation Guide
CAPWAP	Control and Provisioning of Wireless Access Point	SUT	System Under Test
DISA	Defense Information Systems Agency	TDR	Test Discrepancy Report
CR	Capability Requirement	UCR	Unified Capabilities Requirements
E2E	End-to-End	WAB	Wireless Access Bridge
EI	End Instrument	WEI	Wireless End Instrument
FIPS	Federal Information Processing Standard	WIDS	Wireless Intrusion Detection System
FR	Functional Requirement	Wi-Fi	Trademark of the Wi-Fi Alliance that Refers to a Range of Connectivity Technologies Including WLAN
GHz	Gigahertz		
ID	Identification	WLAN	Wireless LAN
IEEE	Institute of Electrical and Electronics Engineers	WLAS	Wireless LAN Access System
IPv6	Internet Protocol Version 6	VoIP	Voice Over Internet Protocol
LAN	Local Area Network		
LoC	Letter of Compliance		

5. In accordance with the Program Manager’s request, the JITC did not prepare a detailed test report. The 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). 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 Defense Switched Network (DSN) testing is on the Telecom Switched Services Interoperability website at <http://jitc.fhu.disa.mil/tssi>. All associated data is available on the Defense Information Systems Agency Unified Capability Coordination Office (UCCO) website located at <http://www.disa.mil/Services/Network-Services/UCCO>.

6. The JITC point of contact is Lisa Esquivel, commercial 520-538-5531 or DSN 312-879-5531, e-mail: [Lisa.R.Esquivel.civ@mail.mil](mailto:Lisa.R.Esquivel.civ@mail.mil). The JITC’s mailing address is P.O. Box 12798, Fort Huachuca, AZ 85670-2798. The Defense Information Systems Agency (DISA) Unified Capability Coordination Office (UCCO) Tracking Number: 1134803.

FOR THE COMMANDER:



for RICHARD A. MEADOR  
Chief  
Battlespace Communications Portfolio

Enclosure a/s

JITC Memo, JTE, Extension of the Special Interoperability Test Certification of the Aruba Networks, Inc., 6000-400-F1, 6000-400-USF1 with M3mk1-S-F1 Wireless Products from Software Release ArubaOS\_MMC\_6.1.4.3-FIPS to ArubaOS\_MMC\_6.1.4.5-FIPS

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DoD CIO

Joint Staff J-6, JCS

USD (AT&L)

ISG Secretariat, DISA, JTA

U.S. Strategic Command, J665

JITC, Liaison, TE3/JT1

US Navy, OPNAV N2/N6FP12

US Army, DA-OSA, CIO/G-6 ASA(ALT), SAIS-IOQ

US Air Force, A3CNN/A6CNN

US Marine Corps, MARCORSYSCOM, SIAT, A&CE Division

US Coast Guard, CG-64

DISA/TEMC

DIA, Office of the Acquisition Executive

NSG Interoperability Assessment Team

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HQUSAISEC, AMSEL-IE-IS

Medical Health Systems, JMIS IV&V

## **ADDITIONAL REFERENCES**

- (c) Joint Interoperability Test Command, Memo, JTE, "Joint Interoperability Certification of the Aruba Networks, Inc., 6000-400-F1, 6000-400-USF1 with M3mk1-S-F1 Wireless Products with Software Release ArubaOS\_MMC\_6.1.4.0-FIPS", 30 November 2012
- (d) Office of the Assistant Secretary of Defense, "Department of Defense Unified Capabilities Requirements 2008 (UCR 2008), Change 3," September 2011
- (e) JITC "Unified Capabilities Test Plan (UCTP)," February 2012