DEFENSE INFORMATION SYSTEMS AGENCY
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IN REPLY REFER TO: Joint Interoperability Test Command (JTE) 2 November 2017

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Extension of the Joint Interoperability Certification of the Thinklogical Velocity Closed Video Matrix Switching Solution, Software Revision 4

References: (a) Department of Defense Instruction 8100.04, "DoD Unified Capabilities (UC)," 9 December 2010
(b) Office of the Department of Defense Chief Information Officer, "Department of Defense Unified Capabilities Requirements 2013, Errata 1," 1 July 2013
(c) through (e), see Enclosure

1. **Certification Authority.** Reference (a) establishes the Joint Interoperability Test Command (JITC) as the Joint Interoperability Certification Authority (CA) for the Department of Defense Information Network (DoDIN) products, Reference (b).

2. **Conditions of Certification.** The Thinklogical Velocity Closed Video Matrix Switching Solution, Software Revision 4, hereinafter referred to as the System Under Test (SUT), meets the critical requirements of the Unified Capabilities Requirements (UCR), Reference (b), and is certified for joint use on the Defense Information Systems Network (DISN) as a closed Video Distribution System (VDS) with the conditions described in Table 1. This certification expires upon changes that affect interoperability, but no later than the expiration date specified in the DoDIN Approved Products List (APL) memorandum.

The extension of this certification is for Desktop Review (DTR) 2. DTR 2 was requested to extend the expiration date of the DoDIN APL memorandum for an additional three (3) years. See Paragraph 4 for the test details.

Table 1. Conditions

Condition	Operational Impact	Remarks
UCR Waivers		
None.		
Conditions of Fielding		
None.		

Enclosure

Table 1. Conditions (continued)

Condition	Operational Impact	Remarks
Open Test Discrepancies		
The VDS Matrix Switch (MX-48 Router) was unable to identify input and original signal resolution.	Minor	See note 1.
The SUT does not have a device or method present to support remote control diagnostics or operation of VPCCs and Signal Extenders	Minor	See note 2.

NOTE(S):
1. DISA adjudicated this discrepancy as minor and stated the intent to change this requirement in the next version of the UCR to optional or conditional.
2. DISA adjudicated this discrepancy as minor and stated the intent to change this requirement in the next version of the UCR to conditional.

LEGEND:
DISA Defense Information Systems Agency
SUT System Under Test
UCR Unified Capabilities Requirements
VDS Video Distribution System
VPCC VDS Peripheral Connector Conversion

3. **Interoperability Status.** Table 2 provides the SUT interface interoperability status, Table 3 provides the Capability Requirements (CR) and Functional Requirements (FR) status and Table 4 provides the DoDIN APL product summary.

Table 2. SUT Interface Status

Interface	Threshold CR/FR Requirements (See note 1.)	Status	Remarks
Closed VDS Interfaces			
Serial (TIA-232) (C)	1, 2, 4	Not Tested	See note 2.
Serial (TIA/EIA-422) (C)	1, 2, 4	Not Tested	See note 2.
Serial (EIA-485) (C)	1, 2, 4	Not Tested	The SUT does not support this conditional interface.
HDMI (C)	1, 2, 4	Met	
VGA (C)	1, 2, 4	Met	
DVI (C)	1, 2, 4	Met	
Multi-rate SDI (C)	1, 2, 4	Met	
HD-SDI	1, 2, 4	Met	
USB HID	1, 2, 4	Met	See note 3.
VDS-IP Interfaces			
Serial (TIA-232) (C)	1, 3, 4, 5	Not Tested	The SUT is a closed VDS; therefore, this does not apply.
10Base-X (C)	1, 3, 4, 5	Not Tested	The SUT is a closed VDS; therefore, this does not apply.
100Base-X (C)	1, 3, 4, 5	Not Tested	The SUT is a closed VDS; therefore, this does not apply.
1000Base-X (C)	1, 3, 4, 5	Not Tested	The SUT is a closed VDS; therefore, this does not apply.
Management Interfaces			
Serial (TIA-232) (C)	1, 5	Met	See note 2.
10/100/1000BaseT (C)	1, 5	Met	See note 4.

NOTE(S):
1. The SUT high-level CR and FR ID numbers depicted in the Threshold CRs/FRs column can be cross-referenced in Table 3. These high-level CR/FR requirements refer to a detailed list of requirements provided in Enclosure 3 of Reference (c).
2. Closed VDS Systems shall support serial RS-232, RS-422, or RS-485 interfaces as required by the system. Although the vendor's LoC states compliance to these serial interfaces, only the RS-232 was tested and certified for use to manage the system.

Table 2. SUT Interface Status (continued)

NOTE(S): (continued)
3. The USB HID interface is an interface that supports High Definition video and audio. This is not a required interface. This interface was tested and is certified in a point-to-point configuration. This interface was not tested and is not certified over a local area network.
4. The 10BaseT interface is used by a workstation located in a logically and physically separated VDS System. SPAWAR analysis determined that the 10BaseT interface is a low risk for certification based on testing and complies with the IEEE 802.3i standard and the testing data collected at all other data rates.

LEGEND:

Base-T	Ethernet generic designation (Baseband)	LoC	Letter of Compliance
C	Conditional	RS	Recommended Standard
CR	Capability Requirements	SDI	Serial Digital Interface
DVI	Digital Visual Interface	SPAWAR	Space and Naval Warfare Center
EIA	Electronic Industries Alliance	SUT	System Under Test
FR	Functional Requirements	TIA	Telecommunications Industry Association
HD	High Definition	UCR	Unified Capabilities Requirements
HDMI	High Definition Multimedia Interface	USB	Universal Serial Bus
HID	Human Interface Device	VDS	Video Distribution System
IEEE	Institute of Electrical and Electronics Engineers	VGA	Video Graphics Array

Table 3. SUT Capability Requirements and Functional Requirements Status

CR/FR ID	UCR Requirement (High-Level) (See note 1.)	UCR 2013 Reference	Status
1	General VDS System	9.1	Met
2	Closed VDS System	9.2	Met
3	VDS over IP (VDS-IP)	9.3	Not Tested (See note 2.)
4	VDS Recording	9.4	Not Tested (See note 2.)
5	Quality of Service Features for IP Interfaces	7.2.1.6	Not Tested (See note 2.)

NOTE(S):
1. The annotation of 'required' refers to a high-level requirement category. The applicability of each sub-requirement is provided in Enclosure 3 of Reference (c).
2. The SUT does not support this requirement and it is not required for a closed VDS system.

LEGEND:

CR	Capability Requirement	SUT	System Under Test
FR	Functional Requirement	UCR	Unified Capabilities Requirements
ID	Identification	VDS	Video Distribution System
IP	Internet Protocol		

Table 4. DoDIN APL Product Summary

Product Identification			
Product Name	Thinklogical Velocity Closed Video Switching Matrix Solution		
Software Release	4.0		
DoDIN Product Type(s)	Video Distribution System (VDS)		
Product Description	The SUT provides video transmission capability utilizing different motion picture format over a closed network.		
Product Components	**Component Name (See note 2.)**	**Versions**	**Remarks**
VDS Matrix Switch	**MXR-00048-FM,** MXR-000048-FM REV B, MXR-000048-RM, MXR-000048-RM REV B, MXR-000048-SA, MXR-000048-SA REV B, MXR-000E48, MXR-000E48-FM, MXR-000E48-RM, MXR-000E48-SA, MXR-000S48, MXR-000S48-FM, MXR-000S48-RM, MXR-000S48-SA, MXR-A00048-SA	Linux 2.6.25.10.atmel.20, BusyBox v1.12.1	

Table 4. DoDIN APL Product Summary (continued)

Product Components	Component Name (See note 2.)	Versions	Remarks
VDS Signal Extenders	**VEL-W00M08-LCTX** **VEL-W00M08-LCRX** **VEL-AV0M12-LCTX** **VEL-0H00003-LCRX**	Firmware Version v1.01	See note 3.
	VTS-004200	Firmware Version v2.0	
	VTM-U00004-LCTX **VTM-U00004-LCRX**	Firmware Version v20.04	
	VQS-004300	Firmware Version v21.12	
	VQM-0H0003-LCTX **VQM-HA0006-LCRX** **VQM-UAP001-LCTX** **VQM-UAP001-LCRX**	Firmware Version v22.12	
	SDC-000001-LC	Firmware Version v22.13	
	HDC-000001-LC	Firmware Version v51.20	
	SDI-C100X1-LCRX	Firmware Version v52.11	
VDS Master Control Switch	**MXM-000004**	Firmware v1.01	
Management Workstation	Site-Provided, STIG-compliant Computer	Microsoft Windows 7, X4 Configurator X44.02.41	

NOTE(S):
1. The detailed component and subcomponent list is provided in Enclosure 3 of Reference (c).
2. Components bolded and underlined were tested by SPAWAR. The other components in the family series were not tested; however, JITC certified the other components for joint use because they utilize the same software/firmware and similar hardware as the tested components and SPAWAR analysis determined that they were functionally identical for interoperability certification purposes.
3. A complete listing of all devices certified by similarity can be found in Enclosure 3 of Reference (c).

LEGEND:

APL	Approved Products List	SPAWAR	Space and Naval Warfare Center
DoDIN	Department of Defense Information Network	SUT	System Under Test
JITC	Joint Interoperability Test Command	STIG	Security Technical Implementation Guides
MXR	Matrix Router	TX	Transmit
OS	Operating System	VDS	Video Distribution System
RX	Receive		

4. **Test Details.** The extension of this certification is based on DTR 2. The original certification, documented in Reference (c), was based on interoperability testing, review of the vendor's Letters of Compliance (LoC), Defense Information Systems Agency (DISA) adjudication of open test discrepancy reports (TDRs), and DISA Certifying Authority (CA) Recommendation for inclusion on the DoDIN APL. Conducted testing at the SPAWAR DoDIN Capabilities (DC) APL Test Laboratory at St Juliens Creek, Portsmouth, Virginia, from 07 April 2014 through 09 April 2014, using test procedures derived from Reference (d). Completed review of the vendor's LoC on 25 August 2014. DISA completed adjudication of outstanding TDRs on 23 September 2014. SPAWAR DC APL Test Laboratory-led Cybersecurity (CS) test teams performed CS testing and published results in a separate report, Reference (e). The DISA CA provided a positive recommendation based on the CS test results.

DTR 2 was requested to extend the expiration date of the DoDIN APL memorandum for an additional three (3) years. JITC analysis of the documentation, with input from SPAWAR, determined that there was no change to the certified features and functions of the SUT with this extension; therefore, no interoperability testing was required. In addition, analysis determined the previous CA approval applies to this DTR without further CS testing because this extension

did not alter the approved CS posture of the SUT. Therefore, with no change to the approved hardware, software, nor cybersecurity posture of the SUT, JITC approves this DTR.

5. **Additional Information.** JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses Sensitive but Unclassified IP Data (formerly known as NIPRNet) e-mail. Interoperability status information is available via the JITC System Tracking Program (STP). STP is accessible by .mil/.gov users 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 https://jit.fhu.disa.mil/. Due to the sensitivity of the information, the Cybersecurity Assessment Package (CAP) that contains the approved configuration and deployment guide must be requested directly from the APCO via e-mail: disa.meade.ie.list.approved-products-certification-office@mail.mil. All associated information is available on the DISA APCO website located at http://www.disa.mil/Services/Network-Services/UCCO.

6. **Point of Contact (POC).** SPAWAR testing POC: Leroy Fung; commercial telephone (757) 541-6794; DSN telephone 578-6794; e-mail address: leroy.a.fung@navy.mil. JITC POC: Kathleen Kendall; commercial telephone (520) 538-0507; DSN telephone 879-0507; FAX DSN 879-4347; e-mail address: kathleen.a.kendall2.civ@mail.mil; mailing address: Joint Interoperability Test Command, ATTN: JTE (Kathleen Kendall), P.O. Box 12798, Fort Huachuca, AZ 85670-2798. The APCO tracking number for the SUT is 1324203.

FOR THE COMMANDER:

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Enclosure a/s

for RIC HARRISON
Chief
Networks/Communications &
DoDIN Capabilities Division

JITC Memo, JTE, Extension of the Joint Interoperability Certification of the Thinklogical, Velocity Closed Video Matrix Switching Solution, Software Revision 4

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ADDITIONAL REFERENCES

(c) Joint Interoperability Test Command, JTE, “Joint Interoperability Certification of the Thinklogical, Velocity Closed Video Matrix Switching Solution, Software Revision 4,” 2 February 2015
(d) Joint Interoperability Test Command, "Video Distribution System (VDS) Test Procedures for Unified Capabilities Requirements (UCR) 2013," Draft
(e) Space and Naval Warfare Center (SPAWAR) Atlantic, "Information Assurance Assessment Report for Thinklogical, Velocity Closed Video Switching Matrix Solution, Revision 4 (Tracking Number: 1324203),” October 2014