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CANADIAN CENTRE FOR **CYBER SECURITY**

COMMON CRITERIA CERTIFICATION REPORT

PP-Configuration for Peripheral Sharing Device, Analog Audio Output Devices, Keyboard/Mouse Devices, and Video/Display Devices, version 1.0, 19 July 2019

9 July 2021

CCCS-PP-008-CR

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FOREWORD

This certification report is an UNCLASSIFIED publication, issued under the authority of the Chief, Communications Security Establishment (CSE).

The PP Configuration identified in this certification report has been evaluated at an approved testing laboratory established under the Canadian Centre for Cyber Security (CCCS). This certification report applies only to the identified version and release of the PP Configuration. The evaluation has been conducted in accordance with the provisions of the Canadian CC Scheme, and the conclusions of the testing laboratory in the evaluation report are consistent with the evidence adduced.

If your organization has identified a requirement for this certification report and would like more detailed information, please contact:

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OVERVIEW

The Canadian Common Criteria Scheme provides a third-party evaluation service for determining the trustworthiness of Information Technology (IT) security products. Evaluations are performed by a commercial Common Criteria Testing Laboratory (CCTL) under the oversight of the Certification Body, which is managed by the Canadian Centre for Cyber Security.

A CCTL is a commercial facility that has been approved by the Certification Body to perform Common Criteria evaluations; a significant requirement for such approval is accreditation to the requirements of ISO/IEC 17025, the General Requirements for the Competence of Testing and Calibration Laboratories.

This certification report is posted to the Common Criteria portal (the official website of the International Common Criteria Program).

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EXECUTIVE SUMMARY

This report documents the results of the evaluation of the PP-Configuration for Peripheral Sharing Device, Analog Audio Output Devices, Keyboard/Mouse Devices, and Video/Display Devices, version 1.0 (PP-Config. for PSD-AO-KM-VI_v1.0). It presents a summary of the PP-Config. for PSD-AO-KM-VI_v1.0 together with the evaluation results.

This PP-Configuration defines (by reference to the Supporting Documents for the included PP-Modules) how to evaluate a TOE that claims conformance to the following:

- Protection Profile for Peripheral Sharing Device Version 4.0;
- PP-Module for Analog Audio Output Devices Version 1.0;
- PP-Module for Keyboard/Mouse Devices Version 1.0; and
- PP-Module for Video/Display Devices Version 1.0.

In order to promote thoroughness and efficiency, the evaluation of the PP-Config. for PSD-AO-KM-VI_v1.0 was performed concurrent with the first product evaluation against the PP-Configuration's requirements. In this case the Target of Evaluation (TOE) for this first product was the Belkin F1DN104KVM-UNN4, F1DN204KVM-UNN4, F1DN102KVM-UNN4, F1DN202KVM-UNN4 Firmware Version 44404-E7E7 Peripheral Sharing Devices (hereafter referred to as "Belkin KVM Devices"). The evaluation was performed by the EWA-Canada Common Criteria Testing Laboratory and was completed in April 2021. This evaluation addressed the base requirements of PP-Config. for PSD-AO-KM-VI_v1.0, as well as most of the requirements contained in Appendices A and B.

An additional evaluation of the PP-Configuration was performed by the EWA-Canada Common Criteria Testing Laboratory to confirm that it meets the claimed ACE assurance requirements.

The evaluations determined that the PP-Config. for PSD-AO-KM-VI_v1.0 is both Common Criteria Part 2 Extended and Part 3 Conformant. The PP-Config. for PSD-AO-KM-VI_v1.0 was evaluated at an approved Common Criteria Testing Laboratory using the Common Methodology for IT Security Evaluation (version 3.1, revision 5) for conformance to the Common Criteria for IT Security Evaluation (version 3.1, revision 5).

The Canadian Centre for Cyber Security, as the Certification Body, found that the evaluations demonstrated that the PP-Config. for PSD-AO-KM-VI_v1.0 meets the requirements of the ACE components. The conclusions of the testing laboratory in the Assurance Activity Report (AAR) are consistent with the evidence produced.

1 IDENTIFICATION

The evaluation of the PP-Configuration for Peripheral Sharing Device, Analog Audio Output Devices, Keyboard/Mouse Devices, User Authentication Devices, and Video/Display Devices, version 1.0 (PP-Config. for PSD-AO-KM-VI_v1.0) was performed concurrently with the first product evaluation against the PP-Configuration. The Target of Evaluation (TOE) was the Belkin F1DN104KVM-UNN4, F1DN204KVM-UNN4, F1DN102KVM-UNN4, F1DN202KVM-UNN4 Firmware Version 44404-E7E7 Peripheral Sharing Devices (hereafter referred to as “Belkin KVM Devices”). The evaluation was performed by the EWA-Canada Common Criteria Testing Laboratory and was completed in July 2021.

The PP-Config. for PSD-AO-KM-VI_v1.0 contains a set of “base” requirements, comprised of “base” requirement that all conformant STs must include, and additionally contains “Optional” and “Selection-based” requirements. The PP-Configuration contains Implementation-Dependent Optional Requirements that are dependent on the TOE implementing a particular function. The Selection-based requirements are additional requirements based on selections made within the PP-Configuration; if certain selections are made, then additional requirements will need to be included.

The following identifies the PP-Configuration that was the subject of the evaluation and certification, together with supporting information from the base evaluation performed against this PP-Configuration.

PP-Configuration	PP-Configuration for Peripheral Sharing Device, Analog Audio Output Devices, Keyboard/Mouse Devices, and Video/Display Devices, version 1.0
Base-PP	Protection Profile for Peripheral Sharing Device, version 4.0 (PP_PSD_v4.0)
PP-Modules in PP-Configuration	PP-Module for Analog Audio Output Devices Version 1.0 (MOD_AO_v1.0) PP-Module for Keyboard/Mouse Devices Version 1.0 (MOD_KM_v1.0) PP-Module for Video/Display Devices Version 1.0 (MOD_VI_v1.0)
Security Target	Belkin F1DN104KVM-UNN4, F1DN204KVM-UNN4, F1DN102KVM-UNN4, F1DN202KVM-UNN4 Firmware Version 44404-E7E7 Peripheral Sharing Devices Security Target, Version 1.9, 8 July 2021
CC Version	Common Criteria for Information Technology Security Evaluation, Version 3.1, Revision 5
Conformance Result	CC Part 2 Extended, CC Part 3 Conformant
CC Testing Lab	EWA-Canada

2 PP-CONFIGURATION DESCRIPTION

The PP-Config. for PSD-A0-KM-VI_v1.0 describes common security requirements for Peripheral Sharing Devices (PSDs). That includes functionality for analog audio devices, keyboard/mouse devices, and video/display devices. The PSD can share these peripherals between multiple computers or support a single connected computer.

3 SECURITY PROBLEM DESCRIPTION AND OBJECTIVES

3.1 ASSUMPTIONS

The specific conditions listed here are assumed to exist in the TOE's Operational Environment. These assumptions include both practical realities in the development of the TOE security requirements and the essential environmental conditions on the use of the TOE.

Table 1: Assumptions

Assumption Name	Assumption Definition
From PP_PSD_v4.0	
A.NO_TEMPEST	Computers and peripheral devices connected to the PSD are not TEMPEST approved.
A.PHYSICAL	The environment provides physical security commensurate with the value of the TOE and the data it processes and contains.
A.NO_WIRELESS_DEVICES	The environment includes no wireless peripheral devices.
A.TRUSTED_ADMIN	PSD Administrators and users are trusted to follow and apply all guidance in a trusted manner.
A.TRUSTED_CONFIG	Personnel configuring the PSD and its operational environment follow the applicable security configuration guidance.
A.USER_ALLOWED_ACCESS	All PSD users are allowed to interact with all connected computers. It is not the role of the PSD to prevent or otherwise control user access to connected computers. Computers or their connected network shall have the required means to authenticate the user and to control access to their various resources.
From MOD_AO_v1.0	
A.NO_MICROPHONES	Users are trained not to connect a microphone to the TOE audio output interface.
From MOD_VI_v1.0	
A.NO_SPECIAL_ANALOG_CAPABILITIES	The computers connected to the TOE are not equipped with special analog data collection cards or peripherals such as analog to digital interface, high performance audio interface, digital signal processing function, or analog video capture function.

3.2 THREATS

TOEs conforming to the PP-Config. for PSD-AO-KM-VI_v1.0 counter the following threats.

Table 2: Threats

Threat Name	Threat Definition
From PP_PSD_v4.0	
T.DATA_LEAK	A connection via the PSD between one or more computers may allow unauthorized data flow through the PSD or its connected peripherals.
T.SIGNAL_LEAK	A connection via the PSD between one or more computers may allow unauthorized data flow through bit-by-bit signaling.
T.RESIDUAL_LEAK	A PSD may leak (partial, residual, or echo) user data between the intended connected computer and another unintended connected computer.
T.UNINTENDED_USE	A PSD may connect the user to a computer other than the one to which the user intended to connect.
T.UNAUTHORIZED_DEVICES	The use of an unauthorized peripheral device with a specific PSD peripheral port may allow unauthorized data flows between connected devices or enable an attack on the PSD or its connected computers.
T.LOGICAL_TAMPER	An attached device (computer or peripheral) with malware, or otherwise under the control of a malicious user, could modify or overwrite code or data stored in the PSD's volatile or non-volatile memory to allow unauthorized information flows.
T.PHYSICAL_TAMPER	A malicious user or human agent could physically modify the PSD to allow unauthorized information flows.
T.REPLACEMENT	A malicious human agent could replace the PSD during shipping, storage, or use with an alternate device that does not enforce the PSD security policies.
T.FAILED	Detectable failure of a PSD may cause an unauthorized information flow or weakening of PSD security functions.
From MOD_AO_v1.0	
T.MICROPHONE_USE	A malicious agent could use an unauthorized peripheral device such as a microphone, connected to the TOE audio out peripheral device interface to eavesdrop or transfer data across an air-gap through audio signaling.
T.AUDIO_REVERSED	A malicious agent could repurpose an authorized audio output peripheral device by converting it to a low-gain microphone to eavesdrop on the surrounding audio or transfer data across an air-gap through audio signaling.

3.3 ORGANIZATIONAL SECURITY POLICIES

No organizational security policies have been identified that are specific to Peripheral Sharing Devices.

3.4 SECURITY OBJECTIVES

The following table contains security objectives for the TOE.

Table 3: TOE Security Objectives

TOE Security Objective	TOE Security Objective Definition
From PP_PSD_v4.0	
O.COMPUTER_INTERFACE_ISOLATION	The PSD shall prevent unauthorized data flow to ensure that the PSD and its connected peripheral devices cannot be exploited in an attempt to leak data. The TOE-Computer interface shall be isolated from all other PSD-Computer interfaces while TOE is powered. (Addressed by: FDP_APC_EXT.1)
O.COMPUTER_INTERFACE_ISOLATION_TOE_UNPOWERED	The PSD shall not allow data to transit a PSD-Computer interface while the PSD is unpowered. (Addressed by: FDP_APC_EXT.1)
O.USER_DATA_ISOLATION	The PSD shall route user data, such as keyboard entries, only to the computer selected by the user. The PSD shall provide isolation between the data flowing from the peripheral device to the selected computer and any non-selected computer. (Addressed by: FDP_APC_EXT.1)
O.NO_USER_DATA_RETENTION	The PSD shall not retain user data in non-volatile memory after power up or, if supported, factory reset. (Addressed by: FDP_RIP_EXT.1, FDP_RIP_EXT.2 (optional))
O.NO_OTHER_EXTERNAL_INTERFACES	The PSD shall not have any external interfaces other than those implemented by the TSF. (Addressed by: FDP_PDC_EXT.1)
O.LEAK_PREVENTION_SWITCHING	The PSD shall ensure that there are no switching mechanisms that allow signal data leakage between connected computers. (Addressed by: FDP_SWI_EXT.1, FDP_SWI_EXT.2 (selection-based))
O.AUTHORIZED_USAGE	The TOE shall explicitly prohibit or ignore unauthorized switching mechanisms, either because it supports only one connected computer or because it allows only authorized mechanisms to switch between connected computers. Authorized switching mechanisms shall require express user action restricted to console buttons, console switches, console touch screen, wired remote control, and peripheral devices using a guard. Unauthorized switching mechanisms include keyboard shortcuts, also known as "hotkeys," automatic port scanning, control through a connected computer, and control through keyboard shortcuts. Where applicable, the results of the switching activity shall be indicated by the TSF so that it is clear to the user that the switching mechanism was engaged as intended. A conformant TOE may also provide a management function to configure some aspects of the TSF. If the TOE provides this functionality, it shall ensure that whatever management functions it provides can only be performed by authorized administrators and that an audit trail of management activities is

TOE Security Objective	TOE Security Objective Definition
	generated. (Addressed by: FAU_GEN.1 (optional), FDP_SWI_EXT.1, FDP_SWI_EXT.2 (selection-based), FIA_UAU.2 (optional), FIA_UID.2 (optional), FMT_MOF.1 (optional), FMT_SMF.1 (optional), FMT_SMR.1 (optional), FPT_STM.1 (optional), FTA_CIN_EXT.1 (selection-based))
O.PERIPHERAL_PORTS_ISOLATION	The PSD shall ensure that data does not flow between peripheral devices connected to different PSD interfaces. (Addressed by: FDP_APC_EXT.1)
O.REJECT_UNAUTHORIZED _PERIPHERAL	The PSD shall reject unauthorized peripheral device types and protocols. (Addressed by: FDP_PDC_EXT.1)
O.REJECT_UNAUTHORIZED _ENDPOINTS	The PSD shall reject unauthorized peripheral devices connected via a Universal Serial Bus (USB) hub. (Addressed by: FDP_PDC_EXT.1)
O.NO_TOE_ACCESS	The PSD firmware, software, and memory shall not be accessible via its external ports. (Addressed by: FPT_NTA_EXT.1)
O.TAMPER_EVIDENT_LABEL	The PSD shall be identifiable as authentic by the user and the user must be made aware of any procedures or other such information to accomplish authentication. This feature must be available upon receipt of the PSD and continue to be available during the PSD deployment. The PSD shall be labeled with at least one visible unique identifying tamper-evident marking that can be used to authenticate the device. The PSD manufacturer must maintain a complete list of manufactured PSD articles and their respective identification markings' unique identifiers. (Addressed by: FPT_PHP.1)
O.ANTI_TAMPERING	The PSD shall be physically enclosed so that any attempts to open or otherwise access the internals or modify the connections of the PSD would be evident, and optionally thwarted through disablement of the TOE. Note: This applies to a wired remote control as well as the main chassis of the PSD. (Addressed by: FPT_PHP.1, FPT_PHP.3 (optional))
O.SELF_TEST	The PSD shall perform self-tests following power up or powered reset. (Addressed by: FPT_TST.1)
O.SELF_TEST_FAIL_TOE_DISABLE	The PSD shall enter a secure state upon detection of a critical failure. (Addressed by: FPT_FLS_EXT.1, FPT_TST_EXT.1)
O.SELF_TEST_FAIL_INDICATION	The PSD shall provide clear and visible user indications in the case of a self-test failure. (Addressed by: FPT_TST_EXT.1)
From MOD_AO_v1.0	
O.UNIDIRECTIONAL_AUDIO_OUT	The PSD shall enforce the unidirectional flow of audio data from the analog audio computer interface to the analog audio peripheral interface.
O.COMPUTER_TO_AUDIO_ ISOLATION	The PSD shall isolate the analog audio output function from all other TOE functions.
From MOD_KM_v1.0	

TOE Security Objective	TOE Security Objective Definition
O.EMULATED_INPUT	The TOE shall emulate the keyboard and/or mouse functions from the TOE to the connected computer.
O.UNIDIRECTIONAL_INPUT	The TOE shall enforce unidirectional keyboard and/or mouse device's data flow from the peripheral device to only the selected computer.
From MOD_VI_v1.0	
O.PROTECTED_EDID	The TOE shall read the connected display Extended Display Identification Data (EDID) once during the TOE power up or reboot sequence and prevent any EDID channel write transactions that connected computers initiate.
O.UNIDIRECTIONAL_VIDEO	The TOE shall enforce unidirectional video data flow from the connected computer video interface to the display interface only.

The following table contains security objectives for the Operational Environment.

Table 4: Environmental Security Objectives

Environmental Security Obj.	Environmental Security Objective Definition
From PP_PSD_v4.0	
OE.NO_TEMPEST	The operational environment will not use TEMPEST approved equipment
OE.PHYSICAL	The operational environment will provide physical security, commensurate with the value of the PSD and the data that transits it.
OE.NO_WIRELESS_DEVICES	The operational environment will not include wireless keyboards, mice, audio, user authentication, or video devices.
OE.TRUSTED_ADMIN	The operational environment will ensure that trusted PSD Administrators and users are appropriately trained.
OE.TRUSTED_CONFIG	The operational environment will ensure that administrators configuring the PSD and its operational environment follow the applicable security configuration guidance.
From MOD_AO_v1.0	
OE.NO_MICROPHONES	The operational environment is expected to ensure that microphones are not plugged into the TOE audio output interfaces.
From MOD_VI_v1.0	
OE.NO_SPECIAL_ANALOG_CAPABILITIES	The operational environment will not have special analog data collection cards or peripherals such as analog to digital interface, high performance audio interface, or a component with digital signal processing or analog video capture functions.

4 SECURITY REQUIREMENTS

4.1 BASE SECURITY FUNCTIONAL REQUIREMENTS

The following table contains the “base” requirements that are levied by the PP_PSD_v4.0 and were certified as part of the Belkin KVM Devices evaluation activity.

Table 5: “Base” Security Functional Requirements for the PP_PSD_v4.0

Requirement Class	Requirement Component	Verified By
FDP: User Data Protection	FDP_APC_EXT.1: Active PSD Connections	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_PDC_EXT.1: Peripheral Device Connection	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_RIP_EXT.1: Residual Information Protection	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_SWI_EXT.1: PSD Switching	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
FPT: Protection of the TSF	FPT_FLS_EXT.1: Failure with Preservation of Secure State	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FPT_NTA_EXT.1: No Access to TOE	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FPT_PHP.1: Passive Detection of Physical Attack	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FPT_TST.1: TSF Testing	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FPT_TST_EXT.1: TSF Testing	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)

The PP Modules that comprise this PP-configuration levy the following additional “base” requirements that were certified as part of the Belkin KVM Devices evaluation activity.

Table 6: “Base” Security Functional Requirements for the PP-Modules

Requirement Class	Requirement Component	Verified By
For MOD_AO_v1.0		
FDP: User Data Protection	FDP_AFL_EXT.1: Audio Filtration	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_APC_EXT.1/AO: Active PSD Connections	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_PDC_EXT.2/AO: Peripheral Device Connection (Audio Output)	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_PUD_EXT.1: Powering Unauthorized Devices	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_UDF_EXT.1/AO: Unidirectional Data Flow (Audio Output)	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
For MOD_KM_v1.0		
FDP: User Data Protection	FDP_APC_EXT.1/KM: Active PSD Connections	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_PDC_EXT.2/KM: Authorized Devices (Keyboard/Mouse)	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_PDC_EXT.3/KM: Authorized Connection Protocols (Keyboard/Mouse)	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_UDF_EXT.1/KM: Unidirectional Data Flow (Keyboard/Mouse)	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
For MOD_VI_v1.0		
FDP: User Data Protection	FDP_APC_EXT.1/VI: Active PSD Connections	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_PDC_EXT.2/VI: Peripheral Device Connection (Video Output)	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_PDC_EXT.3/VI: Authorized Connection Protocols (Video Output)	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_UDF_EXT.1/VI: Unidirectional Data Flow (Video Output)	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)

4.2 OPTIONAL SECURITY FUNCTIONAL REQUIREMENTS

The following table contains the “optional” requirements that are specified within the PP_PSD_v4.0 and were certified as part of the Belkin KVM Devices evaluation activity.

Table 7: “Optional” Security Functional Requirements for the PP_PSD_v4.0

Requirement Class	Requirement Component	Verified By
FAU: Security Audit	FAU_GEN.1: Audit Data Generation	ACE Evaluation
FDP: User Data Protection	FDP_RIP_EXT.2: Purge of Residual Information	ACE Evaluation
FIA: Identification and Authentication	FIA_UAU.2: User Authentication Before Any Action	ACE Evaluation
	FIA_UID.2: User Identification Before Any Action	ACE Evaluation
FMT: Security Management	FMT_MOF.1: Management of Security Functions Behaviour	ACE Evaluation
	FMT_SMF.1: Specification of Management Functions	ACE Evaluation
	FMT_SMR.1: Security Roles	ACE Evaluation
FPT: Protection of the TSF	FPT_PHP.3: Resistance to Physical Attack	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FPT_STM.1: Reliable Time Stamps	ACE Evaluation

The PP Modules that comprise this PP-configuration levy the following additional “optional” requirements, that were certified as part of the Belkin KVM Devices evaluation activity.

Table 8: “Optional” Security Functional Requirements for the PP-Modules

Requirement Class	Requirement Component	Verified By
For MOD_KM_v1.0		
FDP: User Data Protection	FDP_FIL_EXT.1/KM: Device Filtering (Keyboard/Mouse)	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_RDR_EXT.1: Re-Enumeration Device Rejection	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)

4.3 SELECTION-BASED SECURITY FUNCTIONAL REQUIREMENTS

The following table contains the “selection-based” requirements that are specified within the PP_PSD_v4.0 and were certified as part of the Belkin KVM Devices evaluation activity.

Table 9: “Selection-Based” Security Functional Requirements for the PP_PSD_v4.0

Requirement Class	Requirement Component	Verified By
FDP: User Data Protection	FDP_SWI_EXT.2: PSD Switching Methods	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
FTA: TOE Access	FTA_CIN_EXT.1 : Continuous Indications	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)

The PP Modules that comprise this PP-configuration levy the following additional “selection-based” requirements. Some of these requirements were certified as part of the Belkin KVM Devices evaluation activity, and the remainder were certified as part of the independent ACE evaluation activity.

Table 10: “Selection-Based” Security Functional Requirements for the PP-Modules

Requirement Class	Requirement Component	Verified By
For MOD_KM_v1.0		
FDP: User Data Protection	FDP_RIP.1/KM: Residual Information Protection (Keyboard Data)	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_SWI_EXT.3: Tied Switching	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
For MOD_VI_v1.0		
FDP: User Data Protection	FDP_CDS_EXT.1: Connected Displays Supported	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_IPC_EXT.1: Internal Protocol Conversion	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_SPR_EXT.1/DP: Sub-Protocol Rules (DisplayPort Protocol)	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	FDP_SPR_EXT.1/DVI-D: Sub-Protocol Rules (DVI-D Protocol)	ACE Evaluation
	FDP_SPR_EXT.1/DVI-I: Sub-Protocol Rules (DVI-I Protocol)	ACE Evaluation
	FDP_SPR_EXT.1/HDMI: Sub-Protocol Rules (HDMI Protocol)	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)

Requirement Class	Requirement Component	Verified By
	FDP_SPR_EXT.1/USB: Sub-Protocol Rules (USB-C Protocol)	ACE Evaluation
	FDP_SPR_EXT.1/VGA: Sub-Protocol Rules (VGA Protocol)	ACE Evaluation

4.4 SECURITY ASSURANCE REQUIREMENTS

The following are the assurance requirements contained in the PP_PSD_v4.0. None of the PP Modules comprising the PP-configuration levied any additional assurance requirements.

Table 11: Security Assurance Requirements

Requirement Class	Requirement Component	Verified By
ASE: Security Target	ASE_CCL.1: Conformance Claims	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	ASE_ECD.1: Extended Components Definition	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	ASE_INT.1: ST Introduction	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	ASE_OBJ.2: Security Objectives	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	ASE_REQ.2: Derived Security Requirements	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	ASE_SPD.1: Security Problem Definition	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	ASE_TSS.1: TOE Summary Specification	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
ADV: Development	ADV_FSP.1: Basic Functional Specification	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
AGD: Guidance Documents	AGD_OPE.1: Operational User Guidance	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	AGD_PRE.1: Preparative Procedures	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)

Requirement Class	Requirement Component	Verified By
ALC: Life Cycle Support	ALC_CMC.1: Labeling of the TOE	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
	ALC_CMS.1: TOE CM Coverage	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
ATE: Tests	ATE_IND.1: Independent Testing – Conformance	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)
AVA: Vulnerability Assessment	AVA_VAN.1: Vulnerability Survey	ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0)

5 RESULTS OF THE EVALUATION

Note that for ACE elements and work units identical to ASE elements and work units, the testing laboratory performed the ACE work units concurrent to the ASE work units. In addition, the testing laboratory performed an independent ACE evaluation of the PP-Modules that comprised the PP-Configuration.

Table 12: Evaluation Results

ACE Requirement	Evaluation Verdict	Verified By
ACE_INT.1: PP-Module Introduction	Pass	<ul style="list-style-type: none"> ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0) ACE Evaluation
ACE_CCL.1: PP-Module Conformance Claims	Pass	<ul style="list-style-type: none"> ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0) ACE Evaluation
ACE_SPD.1: PP-Module Security Problem Definition	Pass	<ul style="list-style-type: none"> ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0) ACE Evaluation
ACE_OBJ.1: PP-Module Security Objectives	Pass	<ul style="list-style-type: none"> ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0) ACE Evaluation
ACE_ECD.1: PP-Module Extended Components Definition	Pass	<ul style="list-style-type: none"> ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0) ACE Evaluation
ACE_REQ.1: PP-Module Security Requirements	Pass	<ul style="list-style-type: none"> ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0) ACE Evaluation
ACE_MCO.1: PP-Module Consistency	Pass	<ul style="list-style-type: none"> ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0) ACE Evaluation
ACE_CCO.1: PP-Configuration Consistency	Pass	<ul style="list-style-type: none"> ST: Belkin KVM Devices (PP-Config. for PSD-AO-KM-VI_v1.0) ACE Evaluation

6 REFERENCES

Reference
Common Criteria for Information Technology Security Evaluation, Version 3.1 Revision 5, April 2017.
Common Methodology for Information Technology Security Evaluation, CEM, Version 3.1 Revision 5, April 2017.
Protection Profile for Peripheral Sharing Device, Version 4.0, 19 July 2019.
PP-Module for Analog Audio Output Devices, Version 1.0, 19 July 2019
PP-Module for Keyboard/Mouse Devices, Version 1.0, 19 July 2019
PP-Module for Video/Display Devices, Version 1.0, 19 July 2019
PP-Configuration for Peripheral Sharing Device, Analog Audio Output Devices, Keyboard/Mouse Devices, and Video/Display Devices, Version 1.0, 19 July 2019.
Supporting Document: Mandatory Technical Document PP-Module for Analog Audio Output Devices, Version 1.0, 19 July 2019
Supporting Document: Mandatory Technical Document PP-Module for Keyboard/Mouse Devices, Version 1.0, 19 July 2019
Supporting Document: Mandatory Technical Document PP-Module for Video/Display Devices, Version 1.0, 19 July 2019
Belkin F1DN104KVM-UNN4, F1DN204KVM-UNN4, F1DN102KVM-UNN4, F1DN202KVM-UNN4 Firmware Version 44404-E7E7 Peripheral Sharing Devices Security Target, Version 1.9, 8 July 2021.
Assurance Activity Report Belkin F1DN104KVM-UNN4, F1DN204KVM-UNN4, F1DN102KVM-UNN4, F1DN202KVM-UNN4 Firmware Version 44404-E7E7 Peripheral Sharing Devices, Version 1.2, 8 July 2021.