National Information Assurance Partnership

Common Criteria Evaluation and Validation Scheme

TM

Validation Report

for

Black Box Secure KVM/Matrix and KM Peripheral Sharing Switches

Report Number: **CCEVS-VR-10893-2018**

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ACKNOWLEDGEMENTS

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1 Executive Summary

This Validation Report (VR) is intended to assist the end-user of this product and any security certification agent for that end-user to determine the suitability of this Information Technology (IT) product in their environment. End-users should review the Security Target (ST), (which is where specific security claims are made) as well as this Validation Report (VR) (which describes how those security claims were evaluated, tested, and any restrictions that may be imposed upon the evaluated configuration) to help in that determination. Prospective users should carefully read the Assumptions and Clarification of Scope in Section 4 and the Validator Comments in Section 10, where any restrictions on the evaluated configuration are highlighted.

This report documents the National Information Assurance Partnership (NIAP) assessment of the evaluation of the Black Box KVM/Matrix and KM Peripheral Sharing Switches. It presents the evaluation results, their justifications, and the conformance results. This VR is not an endorsement of the Target of Evaluation (TOE) by any agency of the U.S. Government and no warranty of the TOE is either expressed or implied. This VR applies only to the specific version and configurations of the products as evaluated and as documented in the ST.

The evaluation of the Black Box KVM/Matrix and KM Peripheral Sharing Switches was performed by Leidos Common Criteria Testing Laboratory (CCTL) in Columbia, Maryland, in the United States and was completed in July 2018. The evaluation was conducted in accordance with the requirements of the Common Criteria and Common Methodology for IT Security Evaluation (CEM), version 3.1, revision 4 and the assurance activities specified in the Protection Profile for Peripheral Sharing Switch, Version 3.0 (PSS).

The evaluation was consistent with NIAP Common Criteria Evaluation and Validation Scheme (CCEVS) policies and practices as described on their web site (www.niap-ccevs.org).

The Leidos evaluation team determined that the Black Box Secure KVM/Matrix and KM Peripheral Sharing Switches is conformant to the claimed Protection Profile (PP) and, when installed, configured and operated as specified in the evaluated guidance documentation, satisfied all of the security functional requirements stated in the ST. The information in this VR is largely derived from the publicly available Assurance Activities Report (AAR) and the associated proprietary test report produced by the Leidos evaluation team.

The validation team monitored the activities of the evaluation team, examined evaluation evidence, provided guidance on technical issues and evaluation processes, and reviewed the evaluation results produced by the evaluation team. The validation team found that the evaluation results showed that all assurance activities specified in the claimed PP had been completed successfully and that the product satisfied all of the security functional and assurance requirements as stated in the ST.

Therefore, the validation team concludes that the testing laboratory's findings are accurate, the conclusions justified, and the conformance results are correct. The conclusions of the testing laboratory in the evaluation technical report are consistent with the evidence produced.

The products, when configured as specified in the guidance documentation, satisfy all of the security functional requirements stated in the Black Box Secure KVM/Matrix and KM Switch Security Target.

Item	Identifier
Evaluated Product	Black Box Secure KVM/Matrix and KM Peripheral Sharing Switches identified in Table 1, Table 2, and Table 3
Sponsor & Developer	John Hickey Black Box, Inc. 1000 Park Drive Lawrence, PA 15055
CCTL	Leidos Common Criteria Testing Laboratory 6841 Benjamin Franklin Drive Columbia, MD 21046
Completion Date	August 2018
CC	Common Criteria for Information Technology Security Evaluation, Version 3.1, Revision 4, September 2012
Interpretations	There were no applicable interpretations used for this evaluation.
CEM	Common Methodology for Information Technology Security Evaluation: Version 3.1, Revision 4, September 2012
PP	Protection Profile for Peripheral Sharing Switch, Version 3.0
Disclaimer	The information contained in this Validation Report is not an endorsement of the Black Box Secure KVM/Matrix and KM Peripheral Sharing Switches by any agency of the U.S. Government and no warranty of the product is either expressed or implied.
Evaluation Personnel	Gregory Beaver Cody Cummins Justin Fisher Gary Grainger Allen Sant Kevin Steiner
Validation Personnel	Stelios Melachrinoudis, Lead Validator Paul Bicknell, Senior Validator Michelle Carlson, ECR Team Jenn Dotson, ECR Team The MITRE Corporation

Table 1: Evaluation Details

2 Identification

The CCEVS is a joint National Security Agency (NSA) and National Institute of Standards and Technology (NIST) effort to establish commercial facilities to perform trusted product evaluations. Under this program, security evaluations are conducted by commercial testing laboratories called Common Criteria Testing Laboratories (CCTLs) in accordance with National Voluntary Laboratory Assessment Program (NVLAP) accreditation.

The NIAP Validation Body assigns validators to monitor the CCTLs to ensure quality and consistency across evaluations. Developers of information technology products desiring a security evaluation contract with a CCTL and pay a fee for their product's evaluation. Upon successful completion of the evaluation, the product is added to NIAP's Product Compliant List (PCL).

The following table identifies the evaluated Security Target and TOE.

Name	Description
ST Title	Black Box Secure KVM/Matrix and KM Switch Security Target
ST Version	1.14
Publication Date	May 10, 2018
Vendor and ST Author	Black Box, Inc.
TOE Reference	Black Box KVM/Matrix and KM Peripheral Sharing Switches identified in Table 1, Table 2, and Table 3
TOE Software Version	Black Box KVM/Matrix and KM Peripheral Sharing Switches identified in Table 1, Table 2, and Table 3
Keywords	KVM, KM, Isolator, Matrix, Secure, BLACK BOX, Protection Profile 3.0

2.1 Threats

The Security Problem Definition, including the threats, may be found in the PSS.

That information has not been reproduced here.

2.2 Organizational Security Policies

There are no Organizational Security Policies in the PSS.

2.3 Secure Usage Assumptions

The Security Problem Definition, including the assumptions, may be found in the PSS.

3 Architectural Information

The Black Box Secure Peripheral Sharing Switches provide a secure medium to share a single set or more of peripheral components such as keyboard, video display and mouse/pointing devices among one or multiple computers over USB, DVI, HDMI, and DisplayPort for KVM/Matrix Switches and keyboard, mouse/pointing devices among multiple computers over USB for KM Switches. For KVM/Matrix models, the architecture is such that only one set of keyboard and mouse operation is permitted at a time, thereby enforcing a single user mode of operation even when multiple input port groups are present.

Some Black Box Secure KVM models with DVI video input and output also include PS/2 connection for keyboard and mouse on the console side. Any text, comment, description and notation mentioning PS/2 throughout the Security Target are related to KVM models with PS/2 connectors only. Tables 9, 10 and 11 in the Security Target list PS/2 supported models. The PS/2 keyboard and mouse signal is converted to a USB signal using a PS/2 to USB adapter before the data flow from the keyboard and mouse reaches the microcontroller.

The Black Box Secure PSS product utilizes multiple isolated microcontrollers to emulate the connected peripherals in order to prevent a multitude of threats. The TOE is also equipped with numerous unidirectional data flow forcing devices to guarantee isolation of connected computer data channels.

Black Box Secure KVM port models:

- 1-Port
- 2-Port
- 4-Port
- 8-Port
- 16-Port

Black Box Secure KVM video outputs (displays):

- Single head
- Dual-head
- Quad-head

Black Box Secure Matrix port models:

- 4-Port
- 8-Port

Black Box Secure Matrix video outputs (displays):

- Single head – 2 or 4 displays

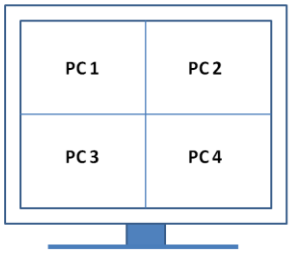
Black Box Secure KM port models:

- 4-Port
- 8-Port

The Black Box KVM with Preview Screen provides the capability of presenting one or more video input over a single or two monitors. For instance -

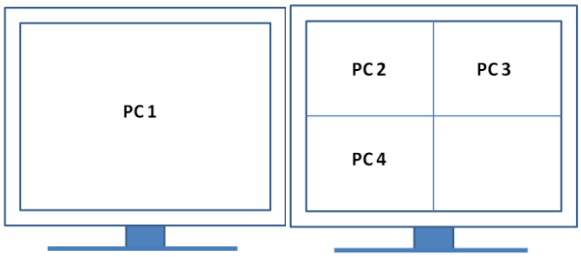
Single monitor system:

All connected PC's to the TOE (PC 1, 2, 3 and 4) can output video into one monitor.



Two monitor system:

PC 1 outputs video to monitor 1 on the left and the rest (PC 2, 3 and 4) are outputting video to monitor 2.



The Black Box Secure KVM/Matrix and KM switches are compatible with standard personal/portable computers, servers or thin-clients. Connected computers are assumed to run off-the-shelf general-purpose operating systems such as Windows or Linux. The PSS includes ports for the following interfaces:

- USB keyboard (KVM/Matrix and KM)
- USB mouse (KVM/Matrix and KM)
- PS/2 keyboard and mouse (KVM) – supported models only
- DVI, HDMI 1.4 and DisplayPort 1.2 Video Input (computer ports) (KVM/Matrix) – specific port depends on model
- DVI, HDMI 1.4 and DisplayPort 1.2 Video Output (peripheral port) (KVM/Matrix) – specific port depends on model
- 3.5mm Audio Input (computer ports) (KVM/Matrix and KM)
- 3.5mm Audio Output (peripheral port) (KVM/Matrix and KM)
- USB Smart-card reader, PIV/CAC reader, Token or Biometric reader (KVM/Matrix and KM) – supported models only

Computers of varying sensitivities are connected to a single TOE that is intended to restrict peripheral connectivity to one computer at a time. Data leakage is prevented across the TOE to avoid severe compromise of the user's information.

4 Assumptions

The ST identifies the following assumptions about the use of the product:

- It is assumed that the computers and peripheral devices connected to the TOE are not TEMPEST approved.
- It is assumed that 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, and analog video capture function.
- Physical security, commensurate with the value of the TOE and the data it contains, is assumed to be provided by the environment.
- TOE Administrators and users are trusted to follow and apply all guidance in a trusted manner.
- Personnel configuring the TOE and its operational environment will follow the applicable security configuration guidance.

4.1 Clarifications of Scope

All evaluations (and all products) have limitations, as well as potential misconceptions that need clarification. This text covers some of the more important limitations and clarifications of this evaluation. Note that:

1. As with any evaluation, this evaluation only shows that the evaluated configuration meets the security claims made, with a certain level of assurance (the assurance activities specified in the claimed PPs and performed by the evaluation team).
2. This evaluation covers only the specific hardware products, and firmware versions identified in this document, and not any earlier or later versions released or in process.
3. The evaluation of security functionality of the product was limited to the functionality specified in the claimed PPs. Any additional security related functional capabilities of the product were not covered by this evaluation. Any additional non-security related functional capabilities of the product, even those described in the ST, were not covered by this evaluation.
4. This evaluation did not specifically search for, nor attempt to exploit, vulnerabilities that were not “obvious” or vulnerabilities to objectives not claimed in the ST. The CEM defines an “obvious” vulnerability as one that is easily exploited with a minimum of understanding of the TOE, technical sophistication and resources.

5 Security Policy

The TOE implements the User Data Protection and Data Isolation security function policies of the *Protection Profile for Peripheral Sharing Switch* as specified in the ST.

The TOE allows an individual user to utilize a single set of peripherals (or in the case of KVM/Matrix models, an individual user to utilize one of several sets of keyboard/mouse peripherals) to operate in an environment with several isolated computers (or in the case of the isolator model, a single isolated computer). All TOE models switch keyboard/mouse input and audio output from one isolated computer to another. KVM models additionally switch display output. Some models (those with -UCAC in the model name) additionally switch USB/CAC authentication devices. Consequently, the TOE security policy consists of data isolation policies for the traffic that is transmitted to/from peripherals that are connected to the TOE and computers that are connected to the TOE along with supporting audit, authentication, management and self-protection policies.

5.1 Keyboard and Mouse Subsystem

The keyboard and mouse processor is programmed in firmware only to accept basic keyboard and mouse USB devices (standard 108-key keyboard and 3-button mouse). Wireless keyboard and mouse are not allowed by the TOE. Only USB host peripheral devices are allowed by TOE keyboard and mouse host emulators. A secure peripheral switch (multiplexer) is used to assure the selection of just one tied keyboard and mouse serial data stream during TOE operation. The secure multiplexer has a third position, isolation, which is activated when the TOE has been tampered with or self-test has failed to disable the keyboard and mouse stream.

5.2 TOE External Interfaces

The TOE only supports AC/DC power, USB keyboard and mouse, video out on supported models (DVI in/DVI out, DP 1.2 in/DP 1.2 out, DP 1.2 in/HDMI 1.4 out, or VGA in/VGA out via adapter), analog audio output, and USB authentication devices on supported models. Docking protocols are not supported by the TOE. Analog microphone or audio line inputs are not supported by the TOE. Unidirectional audio diodes are placed in parallel on both right and left stereo channels to ensure unidirectional data flow from the connected computer to the user peripheral device. Audio data from the connected peripheral devices to the connected computer is blocked by the audio data diodes.

5.3 Audio Subsystem

Electrical isolation of the audio subsystem from all other TOE interfaces prevents data leakage to and from the audio paths. The use of microphones or audio line input devices is prohibited. All TOE devices support analog audio out switching and all TOE devices will prevent the use of microphone devices. These microphones are stopped through the use of unidirectional audio diodes on both left and right stereo channels (which force data flow from only the computer to the connected audio device) and the analog output amplifier which enforces unidirectional audio

data flow. The TOE audio subsystem does not delay, store, or convert audio data flows. This prevents any audio overflow during switching between isolated audio channels.

5.4 Video Subsystem (KVM/Matrix devices only)

Each connected computer has its own TOE isolated channel with its own Extended Display Identification Data (EDID) emulator and video input port. Data flows from the input video source through its respective EDID emulator and out of the monitor display port. Each video input interface is isolated from one another using different EDID ICs, power planes, ground planes, and electronic components in each independent channel. The TOE supports DVI/DP 1.2 video input, and DVI/HDMI 1.4 video output (depending on the TOE model).

5.5 TOE Administration and Security Management

Each TOE is equipped with an Administration and Security Management Tool that can be initiated by running an executable file on a computer with keyboard connected to the same computer via the TOE. The tool requires administrator or a user to be successfully identified and authenticated by the TOE in order to gain access to any supported feature. Some features are restricted to the Administrator role only, while other features can be performed by either the Administrator or User role.

5.6 User Authentication Device Subsystem

TOE models that support USB authentication devices are shipped with default Device Filtration for the CAC port. The filter is set at default to allow only standard smart-card reader, PIV/CAC USB 1.1/2.0 token, or biometric reader. All devices must be bus powered only (no external power source allowed). The TOE default settings accept standard smart-card reader, PIV/CAC USB 1.1/2.0 token or biometric reader. Authenticated users and administrator can register (whitelist) other USB devices. All other USB devices are prohibited (blacklisted).

5.7 User Control and Monitoring Security

User monitoring and control of the TOE is performed through the TOE front panel LED illuminated push-buttons. These buttons are tied to the TOE system controller functionality. All push-buttons for selecting computer channels are internally illuminated via LEDs. The current selected channel is indicated by the illumination of the current channel push-button LED (the other channel LEDs remain off). During operation, all front panel LED indications cannot be turned off or dimmed by the user in any way including after Restore Factory Default (reset).

KM models of the TOE also support cursor control of selected channel. This identifies the selected computer by visual position of the mouse cursor. KVM models of the TOE (though not Matrix models) can also support this if configured to be in KM mode.

All features of the TOE front panel are tested during power up self-testing. From power up until the termination of the TOE self-test, no channel is selected.

5.8 Tampering Protection

In order to mitigate potential tampering and replacement, the TOE is devised to ensure that any replacement is be detected, any physical modification is evident, and any logical modification is prevented. The TOE is designed so that access to the TOE firmware, software, or its memory via its accessible ports is prevented. The TOE is designed to prevent any physical or logical access its internal memory. There is a mechanical switch on the inside of the TOE that triggers the anti-tampering state when the enclosure is manually opened. Once the anti-tampering state is triggered, the TOE is permanently disabled.

5.9 Self-Testing and Security Audit

The TOE has a self-testing function that executes immediately after power is supplied including Restore Factory Default (reset) and power reset. Self-testing must complete successfully before normal operational access is granted to the TSF. The self-test function includes the following activities:

- Basic integrity test of the TOE hardware (no front panel push buttons are jammed).
- Basic integrity test of the TOE firmware.
- Integrity test of the anti-tampering system and control function.
- Test the data traffic isolation between ports.

The TOE has a non-volatile memory event log which records all abnormal security events that occur within TOE operation. This log can be accessed by the identified and authorized administrator and dumped into a .txt file using a connected computer and the Administration and Security Management tool that is provided by the TOE vendor.

6 Documentation

The guidance documentation examined during the course of the evaluation and delivered with the TOE is as follows:

- *Black Box Secure KVM Administration and Security Management Tool Guide (KVM/Matrix and KM),* Document ID ADG-2S0-ALL Version 1.1, May 11, 2018
- *Advanced 4/8-Port Secure KM Switch User Manual*, Document ID USM-2S0-1M0, Version 1.1A, July 3, 2018
- *Advanced 1/2/4-Port DVI-I Secure KVM Switch User Manual*, Document ID USM-2S0-MM1, Version 1.1A, July 3, 2018
- *Advanced 2/4/8-Port DisplayPort Secure KVM Switch User Manual*, Document ID USM-2S0-MM3, Version 1.1A, July 3, 2018
- *Advanced 8/16-Port DVI-I Secure KVM Switch User Manual*, Document ID USM-2S0-MM1, Version 1.1A, July 3, 2018
- *Advanced 2/4-Port HDMI Secure KVM Switch User Manual*, Document ID USM-2S0-MM2, Version 1.1A, July 3, 2018
- *Advanced 4/8-Port DVI-D Matrix Secure KVM Switch User Manual*, Document ID USM-2S0-3M1, Version 1.00, April 3, 2018
- *4-Port Single-Head Secure Pro DVI-D KVM Switch with KB/Mouse USB Emulation, CAC and Preview Screen User Manual*, Document ID USM-2S0-M21, Version 1.1A, July 3, 2018

The above documents are considered to be part of the evaluated TOE. The documentation is delivered with the product and is also available by download from: https://www.blackbox.com/NIAP3/documentation.

Any additional customer documentation delivered with the TOE or made available through electronic downloads should not be relied upon for using the TOE in its evaluated configuration.

The Security Target used is:

- Black Box Secure KVM/Matrix and KM Switch Security Target, Document ID: SST-2S0-ALL, Revision: 1.14, Release Date: May 10, 2018

7 Independent Testing

7.1 Evaluation team independent testing

This section describes the testing efforts of the evaluation team. It is derived from information contained in the following proprietary document:

- *Black Box Secure KVM Switch Series Common Criteria Test Report and Procedures,* Version 1.0, May 25, 2018

A non-proprietary summary of the test configuration, test tools, and tests performed may be found in:

- *Assurance Activities Report For Black Box Secure KVM/Matrix and KM Switches,* Version 1.0, June 4, 2018

The purpose of the testing activity was to confirm the TOE behaves in accordance with the TOE security functional requirements as specified in the ST for a product claiming conformance to the *Protection Profile for Peripheral Sharing Switch,* Version 3.0.

The evaluation team performed the independent testing activities to confirm the TOE operates to the TOE security functional requirements as specified in the ST for a product claiming conformance to the PSS. The evaluation team devised a Test Plan based on the Testing Assurance Activities specified in PSS.

Independent testing took place at the vendor facility in North Hollywood, California from April 23, 2018 to April 27, 2018.

Prior to testing, the evaluation team performed an onsite evaluation per NIAP Labgram #078/Valgram #098: CCTL Evaluation Test Requirements. The vendor site-controlled access to the test facility. Only the employees who were involved in testing were allowed in the testing facility. This ensured that testing was performed in an isolated environment to prevent tampering. All test equipment was verified to be functioning properly before being used as part of testing.

The evaluators received the TOE in the form that normal customers would receive it, installed and configured the TOE in accordance with the provided guidance, and exercised the Team Test Plan on equipment configured in the testing laboratory.

Given the complete set of test results from the test procedures exercised by the evaluators, the testing requirements for *Protection Profile for Peripheral Sharing Switch,* Version 3.0 were fulfilled.

7.2 Vulnerability analysis

A search of public domain sources for potential vulnerabilities in the TOE conducted in May of 2018 did not reveal any known vulnerabilities.

The evaluator conducted penetration testing based on the threat model defined in the claimed PP. The testing did not exploit any vulnerability.

8 Results of the Evaluation

The evaluation was conducted based upon the assurance activities specified in *Protection Profile for Peripheral Sharing Switch*, Version 3.0, in conjunction with version 3.1, revision 4 of the CC and the CEM, and all applicable NIAP Technical Decisions, scheme policies, scheme publications, and official responses to Technical Queries. A verdict for an assurance component is determined by the resulting verdicts assigned to the corresponding evaluator action elements.

The validation team's assessment of the evidence provided by the evaluation team is that it demonstrates that the evaluation team performed the assurance activities in the claimed PPs, and correctly verified that the product meets the claims in the ST.

The details of the evaluation are recorded in the Evaluation Technical Report (ETR), which is controlled by the Leidos CCTL. The security assurance requirements are listed in the following table.

Table 2: TOE Security Assurance Requirements

Assurance Component ID	Assurance Component Name
ADV_FSP.1	Basic Functional Specification
AGD_OPE.1	Operational User Guidance
AGD_PRE.1	Preparative Procedures
ALC_CMC.1	Labeling of the TOE
ALC_CMS.1	TOE CM Coverage
ATE_IND.1	Independent Testing – Sample
AVA_VAN.1	Vulnerability Survey

9 Validator Comments/Recommendations

The validators suggest that the consumer pay particular attention to the evaluated configuration of the device(s). The functionality evaluated is scoped exclusively to the security functional requirements specified in the Security Target, and only the functionality implemented by the SFR's within the Security Target was evaluated. All other functionality provided by the devices, to include software, firmware, or hardware that was not part of the evaluated configuration, needs to be assessed separately and no further conclusions can be drawn about their effectiveness.

NIAP established a Peripheral Sharing Switch Technical Rapid Response Team (PSS-TRRT) to address questions and concerns related to evaluations claiming conformance to *Protection Profile for Peripheral Sharing Switch.* A Technical Decision is an issue resolution statement that clarifies or interprets protection profile requirements and assurance activities. PSS-TRRT has formally posted six Technical Decisions related to *Protection Profile for Peripheral Sharing Switch*: TD0083, TD0086, TD0136, TD0144, TD0251, and TD0298 (see https://www.niap-ccevs.org/Documents_and_Guidance/view_tds.cfm). All six PSS-TRRT Technical Decisions applied to this evaluation.

There was one TRRT decision made throughout the course of this evaluation. The TRRT decision was captured in a modified version of TD0251.

Deprecated TD0141 addressed an issue where no Test F1 existed in the PSS PP; however, TD0251, which superseded TD0141, did not incorporate that part of the Technical Decision. As a result, the issue was raised to the PSS TRRT team. Upon review, the PSS Technical Community (PSS TC) agreed to modify TD0251 to incorporate changes to FMT_MOF.1.1 and FMT_SMF.1.1 as follows:

FMT_MOF.1.1

The TSF shall restrict the ability to [perform] the functions [selection: modify TOE user authentication device filtering (CDF) whitelist and blacklist, [assignment: list of functions], none] to **[the authorized administrators]**.

Application Note: If there are additional management functions performed by the TOE (including those specified in Section 4.2.4, FMT_SMF), they should be added in the assignment.

Test

The testing for this SFR is covered in Test 4.5, Part 5.

FMT_SMF.1.1a Test

The testing for this SFR is covered in: FMT_SMF.1.1 a - Test 4.5, Part 5

Test 4.5, Part 5

SFRs mapped to the following test steps:

CDF management: FMT_SMF.1.1 a and FMT_SMF.1.1 b

In addition to the items mentioned above, some additional product administration and usability features are worth considering:

- The vendor provides an administrative tool to configure the product. This tool is a software application that runs on a general-purpose Windows computer. The security of the application was not separately assessed as part of the evaluation of the product. Distribution of this tool should only be to systems that are required to perform administrative functions.
- The product provides administrative functionality, but this is limited to role-based administration with administrative accounts defined on the product itself. The administrator must take care to ensure that the account credentials are provided to the necessary individuals over secure channels.
- The product provides default passwords for its management accounts. The administrator should ensure that these passwords are changed to secure values. When a credential is changed the old credential is overwritten with the new credential. This applies to both the username and password. Since there is no interface to change only the password, an administrator can perform a similar action by inputting the previous username to the new username prompt and inputting a different password to the new password prompt.
- An administrator mode is supported in the product, but its usability and features are limited. The administrator should make sure they enable multiple users and change default passwords.
- An audit feature is supported but is of a limited nature given the product.
- Different TOE models provide support for different peripheral interfaces. Vendor guidance must be consulted to determine the interfaces that are supported for a given TOE model. There is no difference in the underlying security architecture for each TOE model, so for those interfaces that are shared across multiple models, the required security functionality is implemented in the same manner.
- Some TOE models support matrix switching functionality (i.e., multiple sets of keyboard/mouse peripherals can be connected to the TOE simultaneously). The security policy enforced by the TSF prevents multiple port groups from being used simultaneously, so this capability does not violate the claimed PP.
- The PSS PP requires that for compliant TOEs, wireless keyboards cannot be used and that only authorized supported switched methods (e.g. push-buttons) can be used. This is consistent with the PE-5 access controls for Output Devices as documented in the DoD Joint Special Access Program (SAP) Implementation Guide (JSIG).

10 Security Target

Name	Description
ST Title	Black Box Secure KVM/Matrix and KM Switch Security Target
ST Version	1.14
Publication Date	May 10, 2018

11 Abbreviations and Acronyms

Acronym	Full Definition
CAC	Common Access Card
CCTL	Common Criteria Test Lab
CC	Common Criteria
CCEVS	Common Criteria Evaluation and Validation Scheme
CCLT	Common Criteria Testing Laboratory
DC	Direct Current
DP	DisplayPort
DVI	Digital Visual Interface
EDID	Extended Display Identification Data
ETR	Evaluation Technical Report
HDMI	High Definition Multimedia Interface
KM	Keyboard, Mouse
KVM	Keyboard, Video and Mouse
LED	Light-Emitting Diode
NIAP	National Information Assurance Program
NIST	National Institute of Standards and Technology
NSA	National Security Agency
PCL	Product Compliance List
PC	Personal Computer
PP	Protection Profile
PS/2	IBM Personal System/2 series
PSS	Peripheral Sharing Switch
SFR	Security Functional Requirements
ST	Security Target
TOE	Target of Evaluation
TSF	TOE Security Functions
USB	Universal Serial Bus
VGA	Video Graphics Array
VR	Validation Report

12 Bibliography

The Validation Team used the following documents to produce this Validation Report:

- *Common Criteria for Information Technology Security Evaluation Part 1: Introduction, Version 3.1, Revision 4, September 2012.*
- *Common Criteria for Information Technology Security Evaluation Part 2: Security Functional Requirements, Version 3.1 Revision 4, September 2012.*
- *Common Criteria for Information Technology Security Evaluation Part 3: Security Assurance Components, Version 3.1 Revision 4, September 2012.*
- *Common Methodology for Information Technology Security Evaluation, Evaluation Methodology, Version 3.1, Revision 4, September 2012.*
- *Common Criteria Evaluation and Validation Scheme - Guidance to CCEVS Approved Common Criteria Testing Laboratories, Version 2.0, 8 Sep 2008.*
- *Black Box Secure KVM/Matrix and KM Switch Security Target, Document ID: SST-2S0-ALL, Revision: 1.14, Release Date: May 10, 2018*
- *Evaluation Technical Report for Black Box Secure KVM/Matrix and KM Switch, Version 0.4, June 4, 2018*
- *Black Box Secure KVM Switch Series Common Criteria Test Report and Procedures, Version 1.0, May 25, 2018*
- *Black Box Secure KVM/Matrix and KM Switch Vulnerability Survey, Version 1.0, May 18, 2018*
- *Assurance Activities Report For Black Box Secure KVM/Matrix and KM Switches, Version 1.0, June 4, 2018*