

DATA SHEET

KVS4-8001VX, KVS4-8001DX, KVS4-8001HX

SECURE DVI, DP, AND HDMI DEFENDER

24/7 TECHNICAL SUPPORT AT 877.877.2269 OR VISIT BLACKBOX.COM



BLACK BOX

OVERVIEW

SECURE DEFENDER DVI, DISPLAYPORT, HDMI DATA SHEET

INTRODUCTION

The Secure Defender isolates the computer from the display, keyboard, and mouse to ensure safety and security.

Available models include:

- KVS4-8001VX, Secure DisplayPort Defender
- KVS4-8001DX, Secure DVI Defender
- KVS4-8001HX, Secure HDMI Defender

KEY FEATURES

- CERTIFIED FOR NIAP PROTECTION PROFILE FOR PERIPHERAL SHARING DEVICE VERSION 4.0
- SINGLE-HEAD DVI-I, HDMI, AND DISPLAYPORT™ VIDEO INTERFACE
- NATIVE DVI-I RESOLUTIONS SUPPORT UP TO 2560 X 1600 @ 60 HZ; 4K ULTRA-HD DVI RESOLUTION SUPPORT UP TO 3840 X 2160 @ 30 HZ VIA ADAPTER
- 4K ULTRA-HD DISPLAYPORT AND HDMI RESOLUTION SUPPORT UP TO 3840 X 2160 @ 30 HZ
- ADVANCED CONFIGURABLE CAC PORT
- SUPPORTS WINDOWS, MAC, AND LINUX OS
- FRONT-PANEL TACTILE BUTTONS WITH LED INDICATOR
- EXTERNAL POWER SUPPLY WITH LOCKING CONNECTOR
- MADE IN THE USA
- TAA COMPLIANT

SECURITY FEATURES

- NON-REPROGRAMMABLE ROM
- ACTIVE ANTI-TAMPER SWITCHES
- LONG-LIFE INTERNAL ANTI-TAMPERING BATTERY
- EXTERNAL TAMPER-EVIDENT SEALS
- KEYBOARD, MOUSE, AND VIDEO EMULATION
- ABSOLUTE ISOLATION – NO DATA LEAKAGE BETWEEN PORTS

APPLICATIONS

- GOVERNMENT OPERATIONS
- DEFENSE APPLICATIONS
- SECURE CONTROL ROOMS
- CORPORATE COMMUNICATIONS
- SERVER OPERATIONS
- EDUCATIONAL ADMINISTRATIONS
- MEDICAL FACILITIES
- BANKING NETWORK
- INSURANCE DATA CENTERS
- TRANSIT MANAGEMENT
- INDUSTRIAL OPERATION
- INTELLIGENCE COMMUNICATIONS

COMPARISON CHART

SPECIFICATION COMPARISON CHART			
	KVS4-8001VX	KVS4-8001DX	KVS4-8001HX
VIDEO FORMAT	DISPLAYPORT	DVI	HDMI
RESOLUTION	UP TO 4K (3840 X 2160 @ 30 HZ)	2560 X 1600 @ 60 HZ; 3840 X 2160 @ 30 HZ VIA ADAPTER	UP TO 4K (3840 X 2160 @ 30 HZ)
USB INPUT INTERFACE	(2) USB TYPE B	(2) USB TYPE B	(2) USB TYPE B
USB OUTPUT INTERFACE	(2) USB 1.1 TYPE A FOR KM DEVICES	(2) USB 1.1 TYPE A FOR KM DEVICES	(2) USB 1.1 TYPE A FOR KM DEVICES
USB EMULATION	USB 1.1 AND USB 2.0 COMPATIBLE	USB 1.1 AND USB 2.0 COMPATIBLE	USB 1.1 AND USB 2.0 COMPATIBLE
CAC	CONFIGURABLE USB 2.0 PORT	CONFIGURABLE USB 2.0 PORT	CONFIGURABLE USB 2.0 PORT
AUDIO INPUT	(1) 3.5-MM STEREO AUDIO	(1) 3.5-MM STEREO AUDIO	(1) 3.5-MM STEREO AUDIO
AUDIO OUTPUT	(1) 3.5-MM STEREO AUDIO	(1) 3.5-MM STEREO AUDIO	(1) 3.5-MM STEREO AUDIO

NOTE: Product appearance and specifications are subject to change without notice



OVERVIEW (CONTINUED)

SECURE DEFENDER DVI, DISPLAYPORT, OR HDMI DATA SHEET

WHY SECURE KVM?

Connecting peripherals such as a keyboard, mouse, and speakers to a PC introduces potential data leakage and hacking risks as there are no filters nor data detection and protection features between the PC and the peripherals.

Black Box's Secure Defender is designed for use in secure defense and intelligence applications where sensitive data must be protected. The Isolator is Certified for NIAP Protection Profile for Peripheral Sharing Device Version 4.0 and equipped with the highest security features that meet today's Information Assurance safe control standards. The switch prevents data leakage between a PC and connected peripherals, and eliminates any potential cyber threat.

KEYBOARD AND MOUSE EMULATION

The Secure Defender emulates (simulates) the presence of a keyboard and mouse for every attached computer through a USB cable. Emulation of keyboard and mouse prevents direct connection between the peripherals and the connected computer, shielding systems from potential vulnerabilities.

CAC SUPPORT

Many secure KVM switches support CAC devices, such as smart-card and biometric readers, bolstering security when using the device. However, Black Box takes CAC security even further, allowing users to assign specific peripheral devices to the Secure Defender's CAC port.

ULTRA-SECURE KVM SWITCHING

The Secure Defender allow users to control KVM (Keyboard, Video and Mouse) operation on one computer with a DVI (KVS4-8001DX), DisplayPort™ (KVS4-8001VX), or HDMI (KVS4-8001HX) display. It features mechanical, electrical, and optical signal isolation to prevent hacking and data leakage in environments where security is paramount.

With the Secure Defender, all data relays are controlled by inverted signals, shielding connections from outside intrusion by forcing them each to work one at a time. Each port uses its own isolated data channel and each unit features non-reprogrammable ROM to better protect the switch's functions. Better yet, the KVS4-8001 offers the highest security when accessing classified and public networks over the internet through these isolated connections. By isolating connections, the KVS4-8001 ensures no data is leaked between secure ports and the outside world.

SECURE EDID LEARN AND VIDEO EMULATION

The KVS4-8001 simulates a generic EDID as default, allowing it to operate most of the connected monitors. Upon activating the KVM, the unit will quickly and automatically learn a new EDID for specific monitors. The unit then prevents unwanted and unsecure data from getting transmitted through DDC lines by means of secure EDID learning and emulation.



SPECIFICATIONS

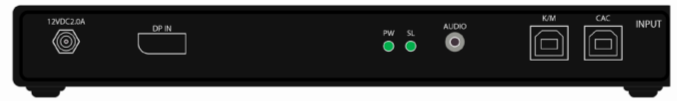
SECURE DISPLAYPORT DEFENDER (KVS4-8001VX)

FRONT VIEW



KVS4-8001VX

BACK VIEW



KVS4-8001VX

1-PORT SH SECURE KVM DISPLAYPORT DEFENDER (KVS4-8001VX)

VIDEO	
FORMAT	DisplayPort™
MAX. PIXEL CLOCK	248 MHz
INPUT INTERFACE	(1) DisplayPort
OUTPUT INTERFACE	(1) DisplayPort
RESOLUTION	Up to 4K (3840 x 2160 @ 30 Hz)
DDC	5 volts p-p (TTL)
INPUT EQUALIZATION	Automatic
INPUT CABLE LENGTH	Up to 20 ft. (6.1 m)
OUTPUT CABLE LENGTH	Up to 20 ft. (6.1 m)
DATA RATE	1.65 Gbps
USB	
INPUT INTERFACE	(2) USB Type B
OUTPUT INTERFACE	(2) USB 1.1 Type A for KM Devices
EMULATION	USB 1.1 and USB 2.0 Compatible
CAC	Configurable USB 2.0 Port
AUDIO	
AUDIO INPUT	(1) 3.5-mm stereo audio
AUDIO OUTPUT	(1) 3.5-mm stereo audio
OTHER	
POWER	External 100 to 240 VAC/12 VDC, 2 A @ 24 W
DIMENSIONS	1" H x 4.75" W x 3" D (2.54 x 12.07 x 7.62 cm)
WEIGHT	1 lb. (0.45 kg)
OPERATING TEMP.	+32 to +131°F (0 to +55°C)
STORAGE TEMP.	-4 to 185°F (-20 to +85°C)
HUMIDITY	Up to 95%

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SPECIFICATIONS

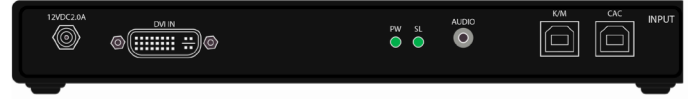
SECURE DVI DEFENDER (KVS4-8001DX)

FRONT VIEW



KVS4-8001DX

BACK VIEW



KVS4-8001DX

1-PORT SH SECURE KVM DVI DEFENDER (KVS4-8001DX)

VIDEO

FORMAT	DVI-D Single Link, DVI 1.0
MAX. PIXEL CLOCK	248 MHz
INPUT INTERFACE	(1) DVI-D 23-pin
OUTPUT INTERFACE	(1) DVI-I 23-pin
RESOLUTION	2560 x 1600 @ 60 Hz; 3840 x 2160 @ 30 Hz via adapter
DDC	5 volts p-p (TTL)
INPUT EQUALIZATION	Automatic
INPUT CABLE LENGTH	Up to 20 ft. (6.1 m)
OUTPUT CABLE LENGTH	Up to 20 ft. (6.1 m)
DATA RATE	1.65 Gbps

USB

INPUT INTERFACE	(2) USB Type B
OUTPUT INTERFACE	(2) USB 1.1 Type A for KM Devices
EMULATION	USB 1.1 and USB 2.0 Compatible
CAC	Configurable USB 2.0 Port

AUDIO

AUDIO INPUT	(1) 3.5-mm stereo audio
AUDIO OUTPUT	(1) 3.5-mm stereo audio

OTHER

POWER	External 100 to 240 VAC/12 VDC, 2 A @ 24 W
DIMENSIONS	1" H x 4.75" W x 3" D (2.54 x 12.07 x 7.62 cm)
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SPECIFICATIONS

SECURE HDMI DEFENDER (KVS4-8001HX)

FRONT VIEW



KVS4-8001HX

BACK VIEW



KVS4-8001HX

1-PORT SH SECURE KVM HDMI DEFENDER (KVS4-8001HX)

VIDEO	
FORMAT	HDMI
MAX. PIXEL CLOCK	248 MHz
INPUT INTERFACE	(1) HDMI
OUTPUT INTERFACE	(1) HDMI
RESOLUTION	Up to 4K (3840 x 2160 @ 30 Hz)
DDC	5 volts p-p (TTL)
INPUT EQUALIZATION	Automatic
INPUT CABLE LENGTH	Up to 20 ft. (6.1 m)
OUTPUT CABLE LENGTH	Up to 20 ft. (6.1 m)
DATA RATE	1.65 Gbps
USB	
INPUT INTERFACE	(2) USB Type B
OUTPUT INTERFACE	(2) USB 1.1 Type A for KM Devices
EMULATION	USB 1.1 and USB 2.0 Compatible
CAC	Configurable USB 2.0 Port
AUDIO	
AUDIO INPUT	(1) 3.5-mm stereo audio
AUDIO OUTPUT	(1) 3.5-mm stereo audio
OTHER	
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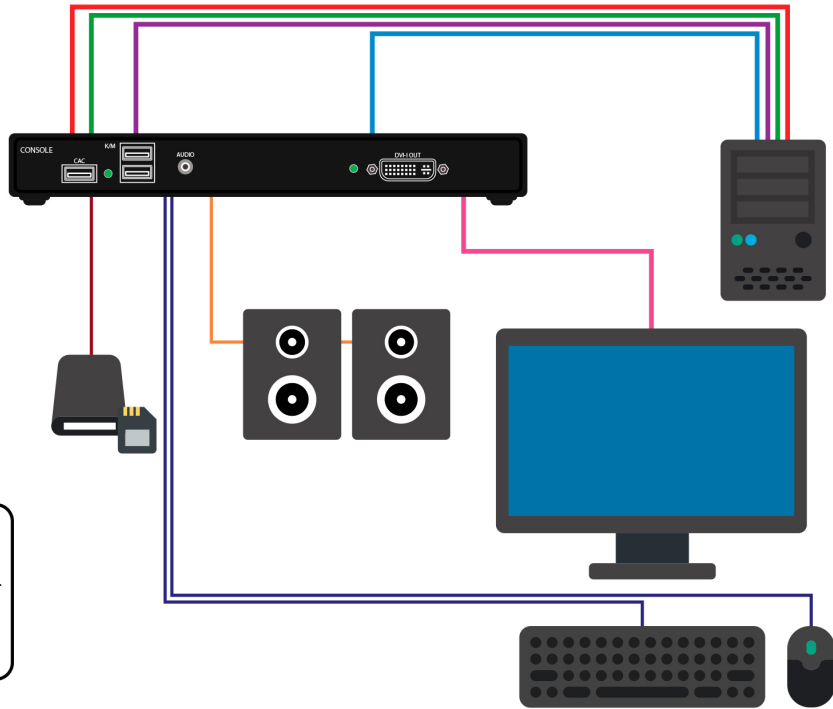
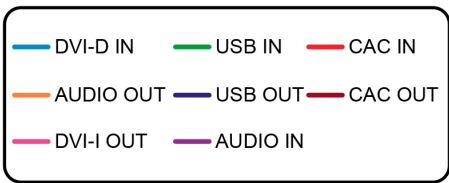
DIAGRAMS

SECURE DVI OR HDMI DEFENDER



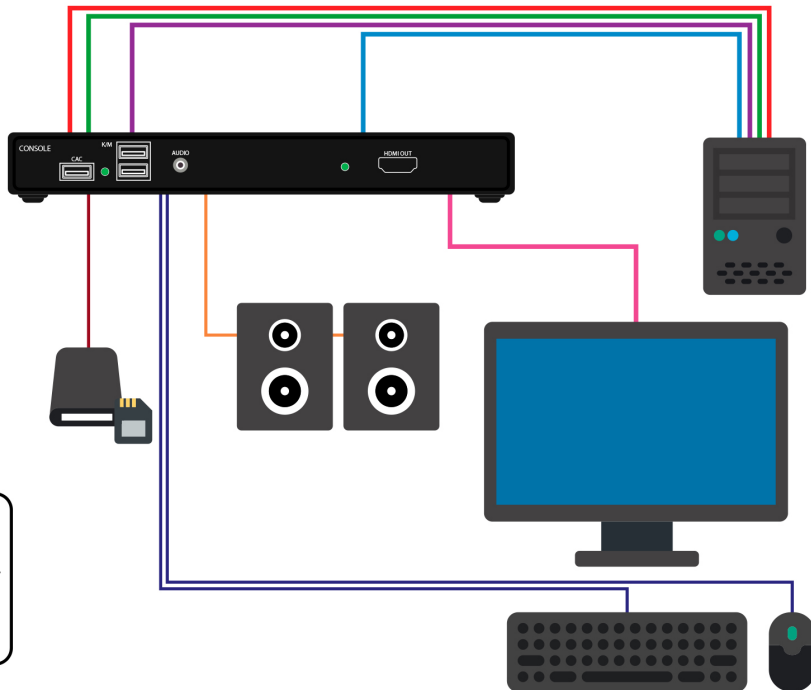
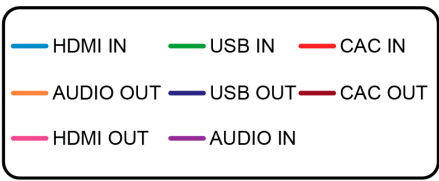
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KVS4-8001DX



BLACK BOX

KVS4-8001HX



DIAGRAMS

SECURE DISPLAYPORT™ DEFENDER

