

# DATA SHEET

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KVS4-2002HV, KVS4-2004HV

# SECURE 2- OR 4-PORT DISPLAYPORT™/HDMI FLEXPORT SWITCH

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24/7 TECHNICAL SUPPORT AT 877.877.2269 OR VISIT [BLACKBOX.COM](http://BLACKBOX.COM)



**BLACK BOX**®

# OVERVIEW

## SECURE 2- OR 4-PORT DUAL-HEAD DISPLAYPORT/HDMI FLEXPOR KVM SWITCH DATA SHEET

### INTRODUCTION

The Secure 2- or 4-Port Dual-Head DisplayPort™/HDMI FlexPort KVM Switch isolates the computer from the display, keyboard, and mouse to ensure safety and security.

Available models include:

- KVS4-2002HV, Secure 2-Port Dual-Head DisplayPort/HDMI FlexPort KVM Switch
- KVS4-2004HV, Secure 4-Port Dual-Head DisplayPort/HDMI FlexPort KVM Switch

### KEY FEATURES

- CERTIFIED FOR NIAP PROTECTION PROFILE FOR PERIPHERAL SHARING DEVICE VERSION 4.0
- DUAL-HEAD DISPLAYPORT/HDMI COMBO VIDEO CONNECTOR TO DISPLAYPORT/HDMI CONNECTOR
- 4K ULTRA-HD RESOLUTION SUPPORT UP TO 4K @ 60HZ
- SUPPORTS BALANCED SPEAKERS OUTPUT AND SWITCHING
- 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		
	KVS4-2002HV	KVS4-2004HV
VIDEO FORMAT	(4) DISPLAYPORT OR HDMI COMBO CONNECTOR	(8) DISPLAYPORT OR HDMI COMBO CONNECTOR
RESOLUTION	UP TO 4K @ 60 HZ	UP TO 4K @ 60 HZ
USB INPUT INTERFACE	(2) USB TYPE B	(4) USB TYPE B
USB OUTPUT INTERFACE	(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
AUDIO INPUT	(2) 3.5-MM STEREO AUDIO	(4) 3.5-MM STEREO AUDIO
AUDIO OUTPUT	(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)

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## SECURE 2- OR 4-PORT DUAL-HEAD DISPLAYPORT™/HDMI FLEXPORTRM KVM SWITCH DATA SHEET

### WHY SECURE KVM?

Traditional non-secure KVM switches offer centralized control of multiple computers, but offer no absolute isolation between them. This exposes systems to the possibility of malicious damage and disruption, and acquisition of sensitive data from one computer to another.

Black Box's Secure KVM Switch is designed for use in secure defense and intelligence applications where sensitive data must be protected. The Secure KVM Switch 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 computers that can run at different security levels, and eliminates any potential cyber threat.

### SECURE EDID LEARN AND VIDEO EMULATION

The KVS4-2002HV or KVS4-2004HV simulates a generic EDID as default, allowing it to operate most of the connected monitors. Both selected and non-selected computers maintain a constant connection with the unit's video emulation controllers, allowing for ultra-fast switching and restricting discovery of newly connected monitors during switching operations. Upon activating the KVM, the unit will quickly and automatically learn 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.

### ULTRA-SECURE KVM SWITCHING

The KVS4-2002HV or KVS4-2004HV allows users to control KVM (Keyboard, Video and Mouse) operation on up to two or four computers with two HDMI displays. It features mechanical, electrical and optical signal isolation to prevent hacking and data leakage in environments where security is paramount.

With the KVS4-2002HV or KVS4-2004HV, 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 switch offers the highest security when accessing classified and public networks over the internet through these isolated connections.

By isolating connections between networks, the KVS4-2002HV or KVS4-2004HV ensures no data is leaked between secure ports and the outside world.

The KVS4-2002HV or KVS4-2004HV has clearly marked front-panel buttons for controlling the device, so securely switching between sources is always simple. For high-grade secure switching made easy, look no further than the KVS4-2002HV or KVS4-2004HV.

### SECURE EDID LEARN AND VIDEO EMULATION

The Secure KVM emulates (simulates) the presence of a keyboard and mouse for every attached computer through a USB cable. Both selected and non-selected computers maintain a constant connection with the unit's keyboard-mouse emulation controllers, allowing for ultra-fast switching and restricting discovery of newly connected peripherals during switching operations. Emulation of keyboard and mouse also prevents direct connection between the peripherals and the connected computers, shielding systems from potential vulnerabilities.



# SPECIFICATIONS

## SECURE 2-PORT DUAL-HEAD DISPLAYPORT/HDMI FLEXPOR KVM SWITCH (KVS4-2002HV)

SECURE 2-PORT DUAL-HEAD DISPLAYPORT/HDMI FLEXPOR KVM SWITCH (KVS4-2002HV)	
<b>VIDEO</b>	
FORMAT	DisplayPort™ or HDMI FlexPort connector
MAX. PIXEL CLOCK	248 MHz
INPUT INTERFACE	(4) DisplayPort or HDMI FlexPort connectors
OUTPUT INTERFACE	(2) DisplayPort or HDMI FlexPort connectors
RESOLUTION	Up to 4K @ 60 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
<b>USB</b>	
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
<b>AUDIO</b>	
AUDIO INPUT	(2) 3.5-mm stereo audio
AUDIO OUTPUT	(1) 3.5-mm stereo audio
<b>CONTROL</b>	
FRONT PANEL	Front-panel SELECT buttons
<b>OTHER</b>	
POWER	External 100 to 240 VAC/12 VDC, 2 A @ 24 W
DIMENSIONS	2.63" H x 8.8" W x 6.69" D (6.68 x 22.35 x 16.99 cm)
WEIGHT	3.85 lb. (1.75 kg)
OPERATING TEMP.	+32 to +104°F (0 to +40°C)
STORAGE TEMP.	-4 to 140°F (-20 to +60°C)
HUMIDITY	Up to 80% (no condensation)

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



# SPECIFICATIONS

## SECURE 4-PORT DUAL-HEAD DISPLAYPORT/HDMI FLEXPOR T KVM SWITCH (KVS4-2004HV)

SECURE 4-PORT DUAL-HEAD DISPLAYPORT/HDMI FLEXPOR T KVM SWITCH (KVS4-2004HV)	
<b>VIDEO</b>	
FORMAT	DisplayPort™ or HDMI FlexPort connector
MAX. PIXEL CLOCK	248 MHz
INPUT INTERFACE	(8) DisplayPort or HDMI FlexPort connectors
OUTPUT INTERFACE	(2) DisplayPort or HDMI FlexPort connectors
RESOLUTION	Up to 4K @ 60 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
<b>USB</b>	
INPUT INTERFACE	(4) USB Type B
OUTPUT INTERFACE	(2) USB 1.1 Type A for KM Devices
EMULATION	USB 1.1 and USB 2.0 Compatible
<b>AUDIO</b>	
AUDIO INPUT	(4) 3.5-mm stereo audio
AUDIO OUTPUT	(1) 3.5-mm stereo audio
<b>CONTROL</b>	
FRONT PANEL	Front-panel SELECT buttons
<b>OTHER</b>	
POWER	External 100 to 240 VAC/12 VDC, 2 A @ 24 W
DIMENSIONS	1.76" H x 12.57" W x 6.69" D (4.47 x 31.92 x 16.99 cm)
WEIGHT	4.2 lb. (1.9 kg)
OPERATING TEMP.	+32 to +104°F (0 to +40°C)
STORAGE TEMP.	-4 to 140°F (-20 to +60°C)
HUMIDITY	Up to 80% (no condensation)

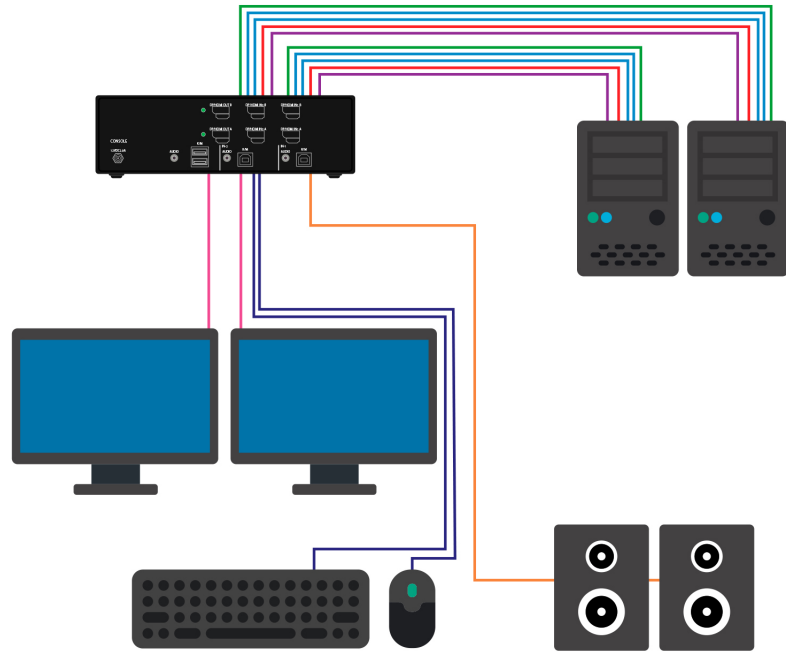
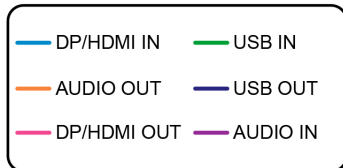
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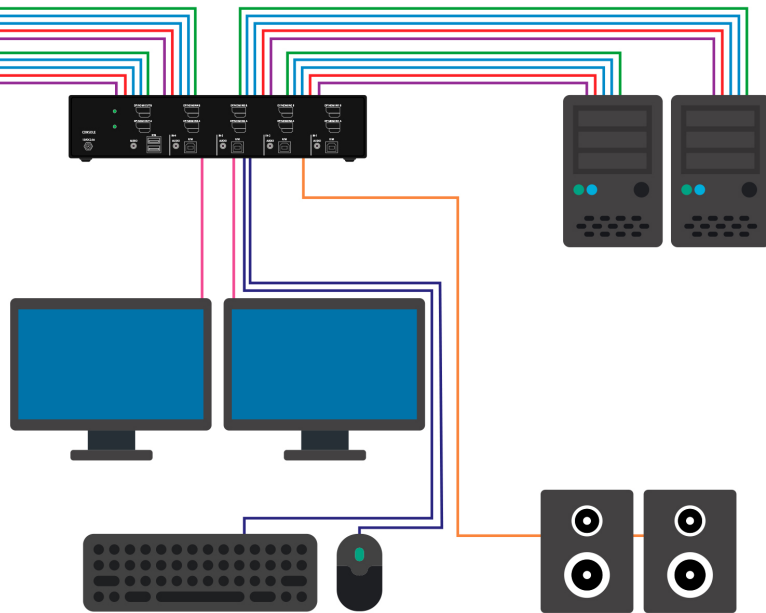
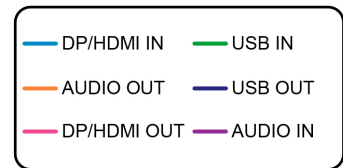
# DIAGRAMS

## SECURE 2- OR 4-PORT DUAL-HEAD DISPLAYPORT™/HDMI FLEXPORTRM/HDMI FLEXPORTRM KVM SWITCH DATA SHEET

 **BLACK BOX**  
KVS4-2002HV



 **BLACK BOX**  
KVS4-2004HV



# ORDERING INFORMATION

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ITEM	CODE
Secure Dual-Head DisplayPort™/HDMI FlexPort KVM Switch	
2-Port	<b>KVS4-2002HV</b>
4-Port	<b>KVS4-2004HV</b>

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Black Box® is a trusted IT solutions provider delivering cutting-edge technology products and world-class consulting services to businesses across the globe in every industry. The breadth of our global reach and depth of our expertise accelerate customer success by bringing people, ideas, and technology together to solve real-world business problems.

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