KVS4-1002D, KVS4-1004D

SECURE 2- OR 4-PORT DVI-I KVM SWITCH

BLACK BOX®

OVERVIEW

SECURE 2- OR 4-PORT SINGLE-HEAD DVI-I KVM SWITCH DATA SHEET

INTRODUCTION

The Secure 2- or 4-Port Single-Head DVI-I KVM Switch isolates the computer from the display, keyboard, and mouse to ensure safety and security.

Available models include:

– KVS4-1002D, Secure 2-Port Single-Head DVI-I KVM Switch

– KVS4-1004D, Secure 4-Port Single-Head DVI-I KVM Switch

KEY FEATURES

- CERTIFIED FOR NIAP PROTECTION PROFILE FOR PERIPHERAL SHARING DEVICE VERSION 4.0
- SINGLE-HEAD DVI-I VIDEO INTERFACE
- NATIVE DVI-I RESOLUTIONS SUPPORT UP TO 2560 X 1600 @ 60 HZ
- 4K ULTRA-HD RESOLUTION SUPPORTS UP TO 3840 X 2160 @ 30 HZ VIA ADAPTER
- 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		
	KVS4-1002D	**KVS4-1004D**
VIDEO FORMAT	(2) DVI-I CONNECTORS	(4) DVI-I CONNECTORS
RESOLUTION	UP TO 4K (3840 X 2160 @ 30 HZ) WITH ADAPTER	UP TO 4K (3840 X 2160 @ 30 HZ) WITH ADAPTER
USB INPUT INTERFACE	(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
USB EMULATION	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
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.

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OVERVIEW (CONTINUED)

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 KVS4-1004D 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 KVS4-1002D or KVS4-1004D allows users to control KVM (Keyboard, Video and Mouse) operation on up to two or four computers with DVI-I displays. It features mechanical, electrical and optical signal isolation to prevent hacking and data leakage in environments where security is paramount.

With the KVS4-1002D or KVS4-1004D, 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 KVS4-1002D or KVS4-1004D ensures no data is leaked between secure ports and the outside world.

The KVS4-1002D or KVS4-1004D 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 KVS4-1002D or KVS4-1004D.

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 SINGLE-HEAD DVI-I KVM SWITCH (KVS4-1002D)

SECURE 2-PORT SINGLE-HEAD DVI-I KVM SWITCH (KVS4-1002D)	
VIDEO	
FORMAT	DVI-I
MAX. PIXEL CLOCK	248 MHz
INPUT INTERFACE	(2) DVI-I connectors
OUTPUT INTERFACE	(1) DVI-I connector
RESOLUTION	Up to 4K (3840 x 2160 @ 30 Hz) with 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
AUDIO	
AUDIO INPUT	(2) 3.5-mm stereo audio
AUDIO OUTPUT	(1) 3.5-mm stereo audio
CONTROL	
FRONT PANEL	Front-panel SELECT buttons
OTHER	
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)

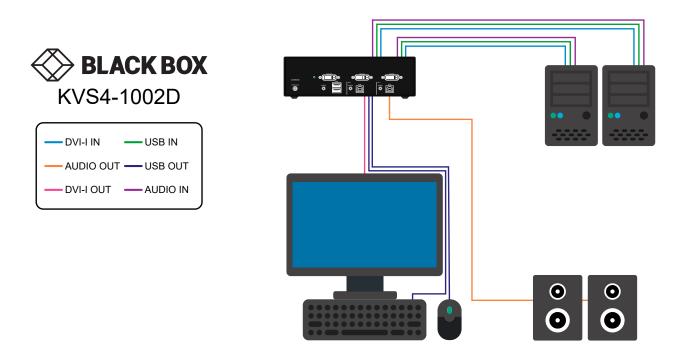NOTE: Product appearance and specifications are subject to change without notice.

SPECIFICATIONS

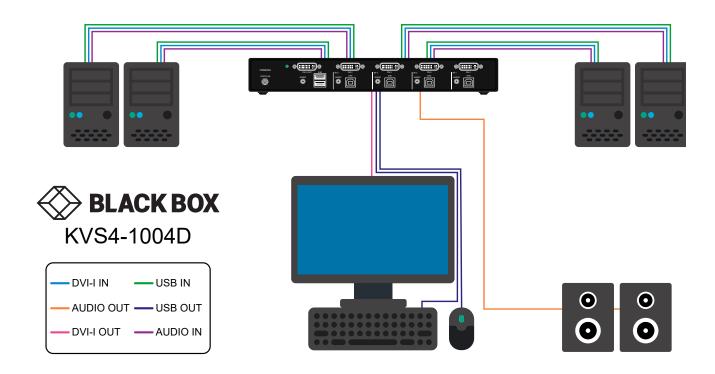## SECURE 4-PORT SINGLE-HEAD DVI-I KVM SWITCH (KVS4-1004D)

SECURE 4-PORT SINGLE-HEAD SECURE DVI-I KVM SWITCH (KVS4-1004D)	
VIDEO	
FORMAT	DVI-I
MAX. PIXEL CLOCK	248 MHz
INPUT INTERFACE	(4) DVI-I connectors
OUTPUT INTERFACE	(1) DVI-I connector
RESOLUTION	Up to 4K (3840 x 2160 @ 30 Hz) with 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	(4) USB Type B
OUTPUT INTERFACE	(2) USB 1.1 Type A for KM Devices
EMULATION	USB 1.1 and USB 2.0 Compatible
AUDIO	
AUDIO INPUT	(4) 3.5-mm stereo audio
AUDIO OUTPUT	(1) 3.5-mm stereo audio
CONTROL	
FRONT PANEL	Front-panel SELECT buttons
OTHER	
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 SINGLE-HEAD DVI-I KVM SWITCH DATA SHEET

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DVI-I IN	USB IN
AUDIO OUT	USB OUT
DVI-I OUT	AUDIO IN

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KVS4-1004D

DVI-I IN	USB IN
AUDIO OUT	USB OUT
DVI-I OUT	AUDIO IN

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ORDERING INFORMATION

ITEM	CODE
Secure Single-Head DVI-I KVM Switch	
2-Port	**KVS4-1002D**
4-Port	**KVS4-1004D**

ABOUT BLACK BOX

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.