

#### K524E - Front Panel

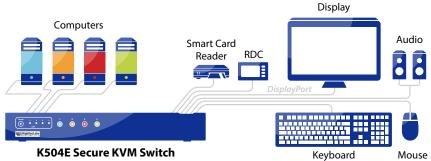
### The World's First DisplayPort Secure KVM Product - Now with Dual-head

DisplayPort is the first display interface to rely on packetized data transmission, a form of digital communication found in other technologies like Ethernet, USB, and PCI Express. Although the transition to Display Port is good news for consumers it is very challenging in terms of security. This fast bidirectional protocol is capable of sending, receiving and leaking data packets from the video port as if it was a network port.

HSL's K5xx Series DisplayPort Secure KVM is the industry's first Secure KVM switch with DisplayPort. This product offers the highest possible separation between four connected computers. The K5xx Secure KVM designed to meet the requirements of organizations that are challenged by the need to provide secret or top-secret network access

access. The K5xx series KVM uses uni-directional optical data-diodes to prevent any potential leakage between the highly-isolated peripheral channels. This KVM also features patented AUX channel firewall that designed to protect from DisplayPort internal security vulnerabilities. Product passed extensive security evaluation through all forms of known KVM attacks.

Dedicated peripheral port (DPP) allows for sharing of user authentication device such as CAC reader, smart card reader, or biometric readers (K504E/K524E only).



## **PRODUCT HIGHLIGHTS**

together with unclassified or internet

# Highest security by design Designed by an agency to support in

Designed by an agency to support isolation between national security networks. Common Criteria EAL4+ certified.

# Future-proof - supports widest variety of peripherals and computers

Supports the newest DisplayPort 1.2 video formats from 800x600 to 3840×2160. Supports latest keyboards, mice and card readers. Support all Operating systems.

# Hardware Based peripheral protection/isolation Absolutely no dependency on firmware or software. All

Absolutely no dependency on firmware or software. All firmware is in ROM (Read Only Memory). No keyboard buffering or memory.

# Unidirectional optical data diodes

assuring USB peripherals isolation. Data can flow from devices to host only. No reverse data flow possible by design.

#### User authentication device port

Special USB port that supports CAC and other user authentication devices including biometric readers. User can decouple this port from KVM switching to remain authenticated on one channel in needed (K504E and K524E only).

#### • AUX Channel protection

Leakage prevention through patented AUX channel firewall technology. Signalling attacks prevented by design. EDID is fully functional.

### Peripherals security

Full USB devices filtering to assure support for keyboard and mouse only.

### Active anti tampering

Always-on active anti-tampering with 10 years battery. Special holographic tampering evident labels.













#### **SPECIFICATION**

Console Audio Jack  Console DPP Input  N/A  N/A  N/A  USB Type A  USB Type A  USB Type A  COMPUTER PORTS  Computer Display Ports  1 x DisplayPort 1.1 and 1.2  1 x DisplayPort 1.1 and 1.2  1 x DisplayPort 1.1 and 1.2  2 x DisplayPort 1.1 and 1.2  Computer Audio Jack  3.5mm female  3.5mm female  3.5mm female  3.5mm female  USB Type B	Part Number	K502	K504	K504E	K524E	
Resolution Supported All DisplayPort 1.2 resolutions up to 3840×2160 by 30 bpp @ 60Hz. Supports 17.28 Gbps @ a 4-lane link.  CONSULE PORTS  Console Mouse and Keyboard Ports  DisplayPort 1.1 and 1.2 DisplayPort 1.1 and 1.2  Console Display Ports  DisplayPort 1.1 and 1.2 DisplayPort 1.1 and 1.2  Console Audio Jack  Console DPP Input  N/A  N/A  N/A  N/A  USB Type A  USB Type A  COMPUTER PORTS  Computer Display Ports  1 x DisplayPort 1.1 and 1.2  1 x DisplayPort 1.1 and 1.2  1 x DisplayPort 1.1 and 1.2  2 x DisplayPort 1.1 and 1.2  Computer Audio Jack  3.5mm female  3.5mm female  3.5mm female  3.5mm female  3.5mm female  3.5mm female  Computer Audio Jack  USB Type B  USB T	Numbers of Computers	2	4	4	4	
Console Mouse and Keyboard Ports  Console Mouse and Keyboard Ports  Console Display Ports  DisplayPort 1.1 and 1.2 DisplayPort 1.1 and 1.2  Console Audio Jack  3.5mm female  Console DPP Input  N/A  N/A  N/A  USB Type A  USB Type A  USB Type A  COMPUTER PORTS  Computer Display Ports  1 x DisplayPort 1.1 and 1.2  1 x DisplayPort 1.1 and 1.2  Computer Audio Jack  3.5mm female  3.5	Number of Displays	1	1	1	2	
Console Mouse and Keyboard Ports         2" USB Type-A female connector or 2" PS/2 Mini-DIN 6-pin female connector (1 port for mouse and 1 port for keyboard)           Console Display Ports         DisplayPort 1.1 and 1.2 DisplayPort 1.1 and 1.2         2 x DisplayPort 1.1 and 1.2           Console Audio Jack         3.5mm female         USB Type A         USB Type A           COMPUTER PORTS           Computer Display Ports         1 x DisplayPort 1.1 and 1.2         1 x DisplayPort 1.1 and 1.2         2 x DisplayPo	Resolution Supported	All DisplayPort 1.2 resolutions up to 3840×2160 by 30 bpp @ 60Hz. Supports 17.28 Gbps @ a 4-lane link.				
Console Mouse and Reypoard Ports  DisplayPorts DisplayPorts 1.1 and 1.2 DisplayPort 1.1 and 1.2 2 x DisplayPort 1.1 and 1.2  Console Audio Jack 3.5mm female  Console DPP Input N/A N/A U5B Type A U5B Type A  COMPUTER PORTS  Computer Display Ports 1 x DisplayPort 1.1 and 1.2 1 x DisplayPort 1.1 and 1.2 2 x DisplayPort 1.1 and 1.2 3.5mm female 3.	CONSULE PORTS					
Console Audio Jack         3.5mm female           Console DPP Input         N/A         N/A         USB Type A         USB Type A           COMPUTER PORTS         Computer Display Ports         1 x DisplayPort 1.1 and 1.2         1 x DisplayPort 1.1 and 1.2         1 x DisplayPort 1.1 and 1.2         2 x	Console Mouse and Keyboard Ports					
Console DPP Input         N/A         N/A         USB Type A         USB Type A           COMPUTER PORTS         Computer Display Ports         1 x DisplayPort 1.1 and 1.2         1 x DisplayPort 1.1 and 1.2         1 x DisplayPort 1.1 and 1.2         2 x DisplayPort 1.1 and 1.2 <th< th=""><th>Console Display Ports</th><th colspan="3">DisplayPort 1.1 and 1.2 DisplayPort 1.1 and 1.2</th><th>2 x DisplayPort 1.1 and 1.2</th></th<>	Console Display Ports	DisplayPort 1.1 and 1.2 DisplayPort 1.1 and 1.2			2 x DisplayPort 1.1 and 1.2	
COMPUTER PORTS           Computer Display Ports         1 x DisplayPort 1.1 and 1.2         1 x DisplayPort 1.1 and 1.2         2 x DisplayPort 1.1 and 1.2 <th>Console Audio Jack</th> <th colspan="3">3.5mm female</th> <th></th>	Console Audio Jack	3.5mm female				
Computer Display Ports         1 x DisplayPort 1.1 and 1.2         1 x DisplayPort 1.1 and 1.2         2 x DisplayPort 1.1 and 1.2         3.5mm female         USB Type B	Console DPP Input	N/A	N/A	USB Type A	USB Type A	
Computer Audio Jack         3.5mm female         USB Type B	COMPUTER PORTS					
Computer Keyboard/Mouse Ports         USB Type B         US DA         US DA         <	Computer Display Ports	1 x DisplayPort 1.1 and 1.2	1 x DisplayPort 1.1 and 1.2	1 x DisplayPort 1.1 and 1.2	2 x DisplayPort 1.1 and 1.2	
Computer CAC Ports         USB Type B           PHYSICAL           Dimensions         136 (W) x 61 (D) x 36 (H) mm / 5.4 (W) x 24.6 (D) x 1.46 (H) inch         320 (W) x 130 (D) x 52 (H) mm / 12.8 (W) x 5.2 (D) x 2 (H) inch         320 (W) x 130 (D) x 52 (H) mm / 12.8 (W) x 5.2 (D) x 2 (H) inch         320 (W) x 130 (D) x 52 (H) mm / 12.8 (W) x 5.2 (D) x 2 (H) inch         320 (W) x 130 (D) x 52 (H) mm / 12.8 (W) x 5.2 (D) x 2 (H) inch         320 (W) x 130 (D) x 52 (H) mm / 12.8 (W) x 5.2 (D) x 2 (H) inch         320 (W) x 130 (D) x 52 (H) mm / 12.8 (W) x 5.2 (D) x 2 (H) inch         320 (W) x 130 (D) x 52 (H) mm / 12.8 (W) x 5.2 (D) x 2 (H) inch         320 (W) x 130 (D) x 52 (H) mm / 12.8 (W) x 5.2 (D) x 2 (H) inch         320 (W) x 130 (D) x 52 (H) mm / 12.8 (W) x 5.2 (D) x 2 (H) inch         320 (W) x 130 (D) x 52 (H) mm / 12.8 (W) x 5.2 (D) x 2 (H) inch         1.47 Kg. (3.2 lbs.)         1.47 Kg. (3.2 lbs.) <t< th=""><th>Computer Audio Jack</th><th>3.5mm female</th><th>3.5mm female</th><th>3.5mm female</th><th>3.5mm female</th></t<>	Computer Audio Jack	3.5mm female	3.5mm female	3.5mm female	3.5mm female	
Dimensions	Computer Keyboard/Mouse Ports	USB Type B	USB Type B	USB Type B	USB Type B	
136 (W) x 61 (D) x 36 (H)   320 (W) x 130 (D) x 52 (H)   mm / 5.4 (W) x 24.6 (D) x   mm / 12.8 (W) x 5.2 (D) x 2   mm / 12.8 (W) x 5.2 (D) x 2   mm / 12.8 (W) x 5.2 (D) x 2   mm / 12.8 (W) x 5.2 (D) x 2   mm / 12.8 (W) x 5.2 (D) x 2   mm / 12.8 (W) x 5.2 (D) x 2   mm / 12.8 (W) x 5.2 (D) x 2   mm / 12.8 (W) x 5.2 (D) x 2   mm / 12.8 (W) x 5.2 (D) x 2   (H) inch   (H) in	Computer CAC Ports	USB Type B	USB Type B	USB Type B	USB Type B	
Dimensions         mm / 5.4 (W) x 24.6 (D) x 1.46 (H) inch         mm / 12.8 (W) x 5.2 (D) x 2 (H) inch         mm / 12.8 (W) x 5.2 (D) x 2 (H) inch         mm / 12.8 (W) x 5.2 (D) x 2 2.6 (H) inch           Weight         0.36 Kg. (0.79 lbs.)         1.47 Kg. (3.2 lbs.)         1.47 Kg. (3.2 lbs.)         1.47 Kg. (3.2 lbs.)           POWER           Power Requirements         100-240VAC, 1A Max, 50/60Hz           AC Input         100-240VAC           Power Type         External           ENVIRONMENTAL           Operating Temperture         32° to 104° F (0° to 40° C)           Storage Temperature         -4° to 140° F (-20° to 60° C)           Humidity         0-80% RH, non-condensing           CERTIFICATION           Security         Common Criteria EAL 4+ ALC_FLR.3           Safety/EMC           EN 55022, EN 55024, EN 61000-3-2, FCC Part 15           GENERAL INFORMATION	PHYSICAL					
POWER Power Requirements 100–240VAC, 1A Max, 50/60Hz  AC Input 100-240VAC  Power Type External  ENVIRONMENTAL  Operating Temperture 32° to 104° F (0° to 40° C)  Storage Temperature -4° to 140° F (-20° to 60° C)  Humidity 0-80% RH, non-condensing  CERTIFICATION  Security Common Criteria EAL 4+ ALC_FLR.3  Safety/EMC EN 55022, EN 55024, EN 61000-3-2, FCC Part 15  GENERAL INFORMATION	Dimensions	mm / 5.4 (W) x 24.6 (D) x	mm / 12.8 (W) x 5.2 (D) x 2	mm / 12.8 (W) x 5.2 (D) x 2	320 (W) x 130 (D) x 65 (H) mm / 12.8 (W) x 5.2 (D) x 2.6 (H) inch	
Power Requirements  100-240VAC, 1A Max, 50/60Hz  AC Input  100-240VAC  Power Type  External  ENVIRONMENTAL  Operating Temperture  32° to 104° F (0° to 40° C)  Storage Temperature  -4° to 140° F (-20° to 60° C)  Humidity  0-80% RH, non-condensing  CERTIFICATION  Security  Common Criteria EAL 4+ ALC_FLR.3  Safety/EMC  EN 55022, EN 55024, EN 61000-3-2, FCC Part 15  GENERAL INFORMATION	Weight	0.36 Kg. (0.79 lbs.)	1.47 Kg. (3.2 lbs.)	1.47 Kg. (3.2 lbs.)	1.47 Kg. (3.2 lbs.)	
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GENERAL INFORMATION	Security	Common Criteria EAL 4+ ALC_FLR.3				
	Safety/EMC	EN 55022, EN 55024, EN 61000-3-2, FCC Part 15				
Product Life-Cycle 10 Years	GENERAL INFORMATION					
	Product Life-Cycle	10 Years				
Warranty 2 years	Warranty	2 years				