



## Product Highlights

- **Virtual Display Technology** • allows the K304 to switch automatically between computers once mouse cursor crosses display borders.
- **Highest security by design** • Designed by agency to support isolation between national security networks. Common-Criteria EAL 4+ approved (pending). Derivative of a TEMPEST product used in NATO nuclear submarines.
- **Support for multiple head** • Product can be easily configured to support dual, triple and up to 16 head computers through signed software driver. Single head installation does not need any software installation.
- **Unidirectional optical data diodes** • Assuring USB peripherals isolation. Data can flow from devices to computer only. No reverse data flow possible by optical diodes.
- **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.
- **Extensive administrator setup options** • Administrator mode provides many customized settings from display arrangement, size to cursor speed and acceleration.
- **Independent audio switching** • Audio output can be configured to follow the cursor or can be set by the user to any channel.
- **Anti tampering** • Always on active anti-tampering with 10 years battery. Special holographic tampering evident labels.

## What is a KM Switch?

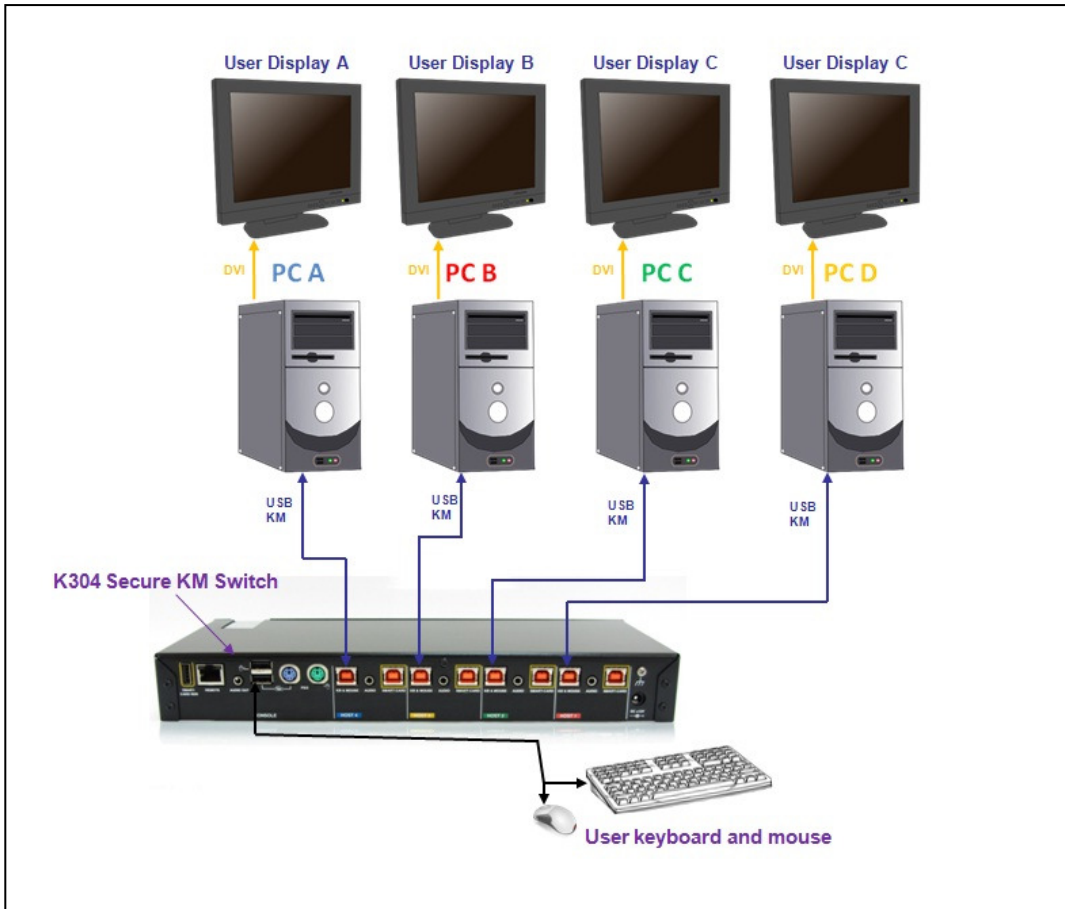
There are many cases where one computer user needs to work simultaneously with few computers. In some cases users are having multiple displays attached to these multiple computers. The challenge is how a single user can interact with multiple computers having multiple displays. KVMs would not do a good job for these users as they were designed to switch displays as well. KM switch is a device that switches a single set of keyboard and mouse between multiple computers. KM switch is essentially a KVM switch without the video switching - all displays are continuously connected to their computers.

## What is a Secure KM Switch?

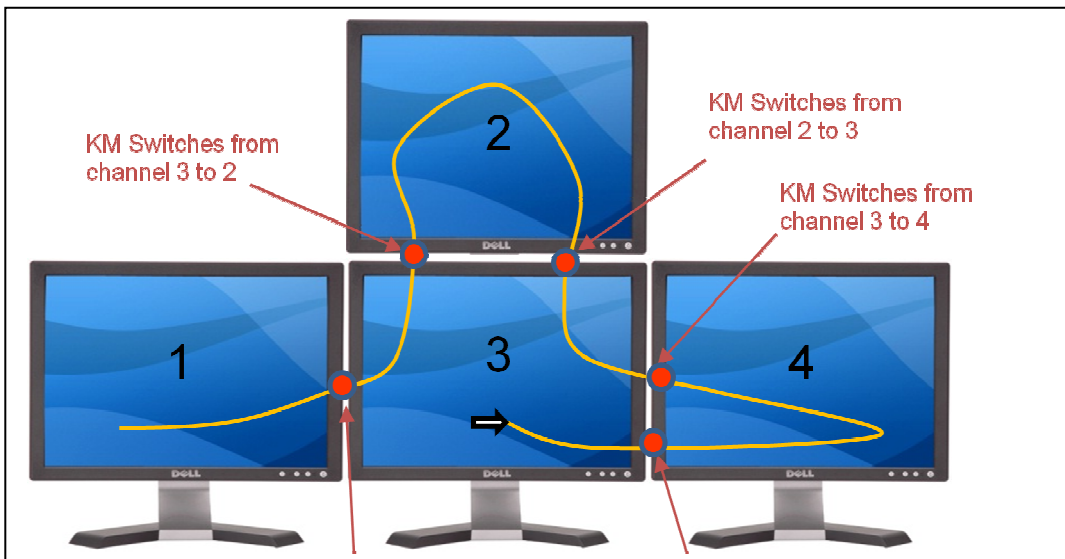
Secure KM switch is a KM switch device that specifically designed to enable isolation between coupled computers. Computers are typically connected to different networks and isolation between these networks must be assured to prevent data leakages and intrusions across networks. Secure KM switch relies on physics (optical diodes) to prevent data leakages between coupled networks. Secure KM switch does not require any cables between computers any shared bus or network or any installed software.

## What is Virtual Display Technology?

Virtual Display Technology (VDT) is implemented in HSL K304 Secure KM switches to enable seamless cursor and keyboard switching between multiple displays. VDT allows administrators to configure any desired displays configuration with same or different size and resolution. User simply moves mouse cursor across neighbouring displays to switch between connected computers.



Typical system diagram

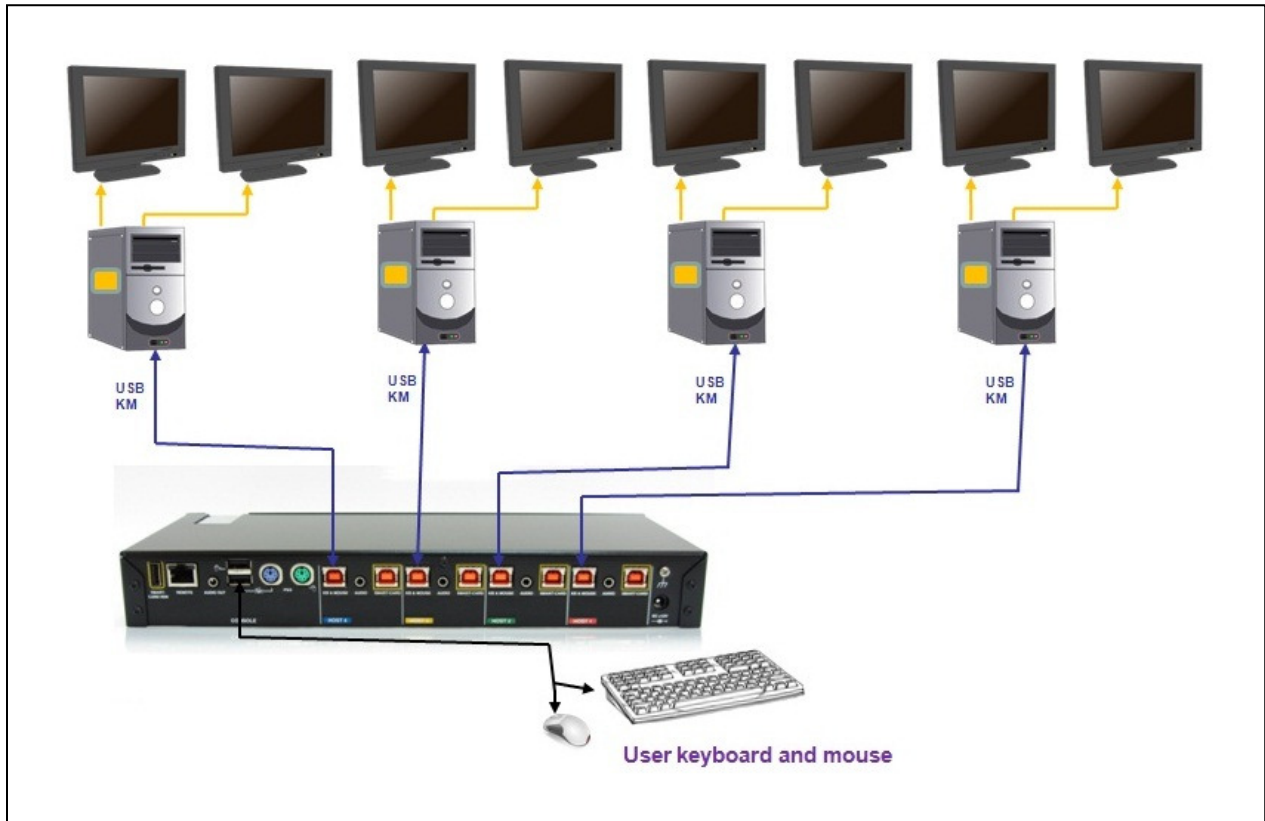


Virtual Desktop Technology (VDT) - Channel selection follows pointing device cursor

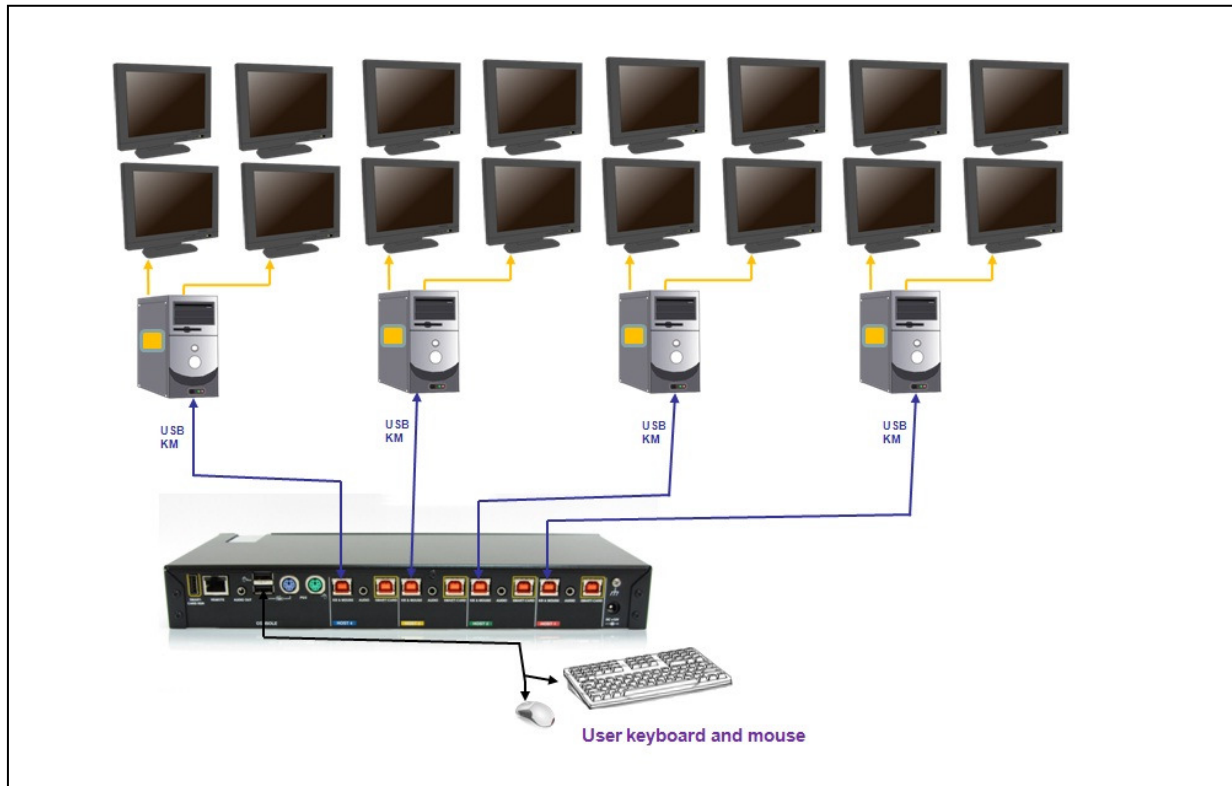
K304/E Product Specification	
<b>Host Input Ports</b>	<ul style="list-style-type: none"> <li>▪ 4 x isolated input ports to connect computers, each having:               <ul style="list-style-type: none"> <li>- 1 x USB Type-B connector for keyboard and mouse</li> <li>- 1 x USB Type-B connector for user authentication device (K304E only)</li> <li>- 1 x Audio out 3.5 mm stereo jack</li> </ul> </li> <li>▪ Cables must be ordered separately (not included)</li> <li>▪ 4 x isolated keyboard device emulators</li> <li>▪ 4 x isolated mouse device emulators</li> </ul>
<b>Console Ports</b>	<ul style="list-style-type: none"> <li>▪ One set of user console ports having:               <ul style="list-style-type: none"> <li>- USB Type-A jack for keyboard</li> <li>- USB Type-A jack for mouse</li> <li>- USB Type-A jack for User authentication device (K304E only)</li> <li>- PS/2 legacy keyboard connector (Mini DIN-5)</li> <li>- PS/2 legacy mouse connector (Mini DIN-5)</li> </ul> </li> <li>▪ RDC (Remote Desktop Controller) port (RJ-45 Jack)</li> <li>▪ Channels isolation – optical data-diode and two separate host emulators</li> </ul>
<b>User Control</b>	<ul style="list-style-type: none"> <li>▪ User may switch between channels using Virtual Desktop Technology (VDT) – keyboard and mouse will switch to current cursor location</li> <li>▪ User may switch between channels using keyboard hotkeys to enable manual channel selection</li> <li>▪ User may switch between channels using mouse wheel rotation (cycling)</li> <li>▪ Status LED's in front panel to indicate current selected channel</li> <li>▪ User may set mouse speed, acceleration other cursor behaviours</li> </ul>
<b>Configuration and management</b>	<ul style="list-style-type: none"> <li>▪ Configuration mode can be accessed by keyboard codes or using mass-storage device with pre-loaded configuration file.</li> <li>▪ The following display characteristics can be set: number of displays, arrangement, size, aspect ratio, resolution, dual-display (primary and secondary displays).</li> <li>▪ The following pointing device characteristics can be set: mouse speed, mouse acceleration, auto center enable / disable, auto center idle time.</li> </ul>
<b>Power</b>	<ul style="list-style-type: none"> <li>▪ DC input 12V / 1.0A maximum</li> <li>▪ Wall-mounted power supply included. power input 90-240V AC</li> </ul>
<b>Security functions</b>	<ul style="list-style-type: none"> <li>▪ USB ports supporting only keyboard and mouse through host emulation</li> <li>▪ Optical Data Diode assures unidirectional flow from devices to computers</li> <li>▪ Firmware change can not cause leakage between channels or data export</li> <li>▪ Isolated power supplies for each device emulator</li> <li>▪ Firmware on ROM</li> <li>▪ Battery powered anti-tampering system</li> <li>▪ Special holographic Temper Evident Labels</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>▪ Temperature range: Operating - 0°C to 40°C (32°F to 104°F); Storage - -20°C to 60°C (-4°F to 140°F). Extended operating temperature model available.</li> <li>▪ Humidity: Operating - 20 to 80% non condensing; Storage – 10 to 90% non condensing</li> <li>▪ Altitude: 0 to 40,000 ft</li> </ul>
<b>Regulatory Compliance</b>	<ul style="list-style-type: none"> <li>▪ Safety: UL/cUL60950,EN60 950</li> <li>▪ EMI/EMC: FCC Class B, CE Mark, EN55022B, VCCI</li> </ul>

<b>Security Accreditations</b>	<ul style="list-style-type: none"> <li>Designed for Common Criteria EAL-5</li> <li>Common Criteria EAL 4+ ALC_FLR.3 (pending).</li> <li>Complies with NIAP Peripheral Sharing Switch (PSS) For Human Interface Devices Ver 2.1</li> </ul>
<b>Physical Characteristics</b>	<ul style="list-style-type: none"> <li>Dimensions: 320 x 130 x 50 mm</li> <li>Device weight: 1.2 Kg</li> <li>Shipping Weight: 1.8 Kg</li> </ul>
<b>Supported Operating Systems</b>	<ul style="list-style-type: none"> <li>Windows OS: NT, 95, CE, Vista, 2007, Server 2008</li> <li>Linux, UNIX</li> <li>Sun Solaris</li> <li>Bloomberg appliance</li> <li>Mac OS</li> </ul>
<b>Warranty</b>	<ul style="list-style-type: none"> <li>2 years limited warranty. This limited warranty covers 100% of parts and workmanship on any required repairs. For details see HSL web-site: <a href="http://www.highseclabs.com/warranty/">www.highseclabs.com/warranty/</a></li> <li>Optional extended warranty for up to 5 additional years</li> <li>Product design life-cycle 10 years per MIL-HDBK-217E</li> </ul>

- Specifications are subjected to change without prior notice
- Multiple patents pending



K304E with four dual-head computers



K304E with four quad-head computers

## How to Order

### KM Models

Description	Part Number
K304 - 4 Ports High Security KM Switch, USB PS/2 keyboard and mouse, Active anti-tampering, Front panel push buttons	CPN05446 [Europe, Israel] CPN05448 [UK] CPN05450 [US, Canada]
K304E - 4 Ports High Security KM Switch, USB PS/2 keyboard and mouse, USB user authentication port, Audio out, Active anti-tampering, Front panel push buttons	CPN05447 [Europe, Israel] CPN05449 [UK] CPN05451 [US, Canada]

### Cables

Description	Part Number
KVM Cable short (1.8 m), USB Type-A to USB Type-B, Black	CPN05493
KVM Cable short (1.8 m), CAC, Audio Out, Black	CPN05490

**Accessories and spare parts**

Description	Part Number
RDC440 Remote Desktop Controller, 2-16-port	CPN06125
SCM Smart-card reader, USB, SCR-3311	CPN05498
Power supply, wall-mounted, 12V, 1.0A, US	CPN06174
Power supply, wall-mounted, 12V, 1.0A, EU	CPN06175
Power supply, wall-mounted, 12V, 1.0A, UK	CPN06176

**Services**

Description	Part Number
K3xx One year Standard warranty and support extension (3rd to 7th year) per S/N	CSV05975
K3xx One year Premium warranty and 24/7 support per S/N	CSV05976



HSL RDC440 Remote Desktop Controller