



## SECURE MIL-STD 4-PORT DP/HDMI KVM COMBINER

HSL's 4 port DP/HDMI rugged secure KVM Combiner improves situational awareness and workflow while eliminating the threat of data leaks through shared peripherals, under the most challenging of environmental conditions. The product combines the functionality of a multi-view, a KVM and a video scaler in a single product.

The SC42PHU-4TR is the only KVM Combiner in the world that is **NIAP PP 4.0 certified**. It is designed to be installed on military vehicles, marine vessels and airborne platforms.

For easier installation and operation, the Combiner is optionally equipped with a remote control that can be mounted on the operator's dashboard.



### Highly Rugged

The Combiner is designed to MIL-STD harsh environmental requirements. It features a robust sealed aluminum enclosure, all metallic MIL-DTL-38999 connectors and sealed illuminated front panel push-buttons. The KVM Combiner meets harsh MIL-STD environmental conditions including temperature, solar radiation, humidity, shock and altitude. The product is compliant with IP 67.

### Versatile Interfaces

The product supports 4 computers/video sources with HDMI or DP interfaces. Video sources ranging from 480p legacy to 1920x1200@60Hz, 2560x1600@60Hz and 3840x2160@30HZ (4K30) resolutions are supported.

### Unidirectional Optical Data Diodes

HSL products are renowned for providing the highest level of isolation between connected computers or sources. The KVM Combiner is equipped with patented unidirectional optical data diodes to prevent potential cyber-attacks and data leaks on the KVM, the host and from connected peripherals. No reverse data flow is possible, by design. The Combiner is ideal for preventing data leaks and insertion of malicious code between networks of different classification levels.

### Hardware Based Peripheral Protection/Isolation

The SC42PHU-4TR security functions are hardware implemented, with absolutely no dependency on firmware or software. All firmware is in protected ROM (Read Only Memory). No keyboard buffering or memory is retained. Peripheral devices can be authorized or rejected through configurable white and black lists.

### Display Plug & Play (DDC) Protection

HSL's patented EDID protection is the most secure video protection method in the market today, employing emulation technology for leakage protection. Signaling attacks are prevented by design.

### Protected Power Input

The Combiner is powered directly from the 18-36VDC power vehicle bus and is fully compliant with MIL STD-1275E. High radiation nuclear event protection is optional.

### Extensive BIT (Built-In-Test) Functionality

Receive the unit's operational readiness status and diagnostics via RS232. BIT results are reported upon startup, on demand and continuously every 5 minutes.



SC42PHU-4TR Rear View

## SPECIFICATION

MODEL NUMBER	SC42PHU-4TR
<b>MAIN FEATURES</b>	
<b>Dimensions</b>	433.8 (W) x 215 (D) x 65.85 (H) mm [17.07 x 8.46 x 2.6 Inch]
<b>Weight</b>	4.536 Kg [10 lbs]
<b>Host Input Ports</b>	4 x HDMI or DP and two USB 2.0 interfaces based on a single female TVP00ZNCI17-35P.
<b>Console ports</b>	HDMI or DP, 3 USB devices and optional remote control via a single male TVP00ZNCI17-35S.
<b>Channel Switching</b>	<ul style="list-style-type: none"> <li>IP 67 compliant green LED illuminated front panel push buttons (NVG and dimming options available)</li> <li>Remote control connected via console port</li> </ul>
<b>Supported Video Modes</b>	<ul style="list-style-type: none"> <li>HDMI/DP supported up to 4K@30Hz or 2600x1600@60Hz</li> <li>Support for other video formats available.</li> </ul>
<b>ENVIRONMENTAL</b>	
<b>Shock</b>	MIL-STD-810G, Method 516.7 Procedure I with a peak amplitude of 40 ± 4.0g
<b>Vibration</b>	MIL-STD-810G, Method 514.7 Procedure I for operational use on a Category 20 wheeled Ground Vehicles
<b>Humidity</b>	MIL-STD-810G, Method 507.6, Procedure I based upon Table 507.6-1
<b>Temperature</b>	Operating - 46°C to 52°C (-51°F to 125°F); Storage -51°C to 71°C (-60°F to 160°F)
<b>Altitude</b>	MIL-STD-810G, Method 500.6 Procedure I
<b>Immersion</b>	MIL-STD-810G, Method 512.6 Procedure I to a depth of 3 meters in fresh water
<b>Salt Fog</b>	MIL-STD-810G, Method 509.6.
<b>Blowing Sand</b>	MIL-STD-810G, Method 510.6 Procedure II with 10.6 to 17.7 grams per cubic meter (g/m3)
<b>Blowing Dust</b>	MIL-STD-810G, Method 510.6 Procedure I with 0.006 g/m3 silica flour dust from 0.0001mm to 0.01mm in diameter blowing at a velocity of 1.5 ±0.2 m/s

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<b>POWER</b>	
<b>DC Input</b>	Nominal Power Input 28VDC (18V-36V)
<b>Power Compliance</b>	MIL-STD-1275E Compliant Designed to operate with a steady-state supply voltage per fault free conditions as specified in MIL STD-1275E
<b>Power Requirements</b>	Max power consumption 40W
<b>REGULATORY COMPLIANCE</b>	
<b>Safety</b>	UL/CUL60950, EN60 950
<b>EMI/EMC</b>	FCC Class B, CE Mark, EN55022B, VCCI
<b>Tests</b>	CE102, CS101, CS114, CS115, CS116, RE102, RE103, CE101
<b>Security</b>	<ul style="list-style-type: none"> <li>Compliant with NIAP PP4.0 for PSD (Peripheral Sharing Device)</li> <li>Design to be Tempest Level 1 compliant</li> </ul>
<b>RELIABILITY</b>	
<b>Standard</b>	MIL-HDBK-216.
<b>MTBF</b>	65,000 hours of operation in 40 degrees.
<b>HOW TO ORDER</b>	
<b>Product P/N</b>	CPN29363
<b>Cables KIT P/N</b>	CPN20162

HSL Secure 4-Port Rugged Combiner System Diagram

