HighSecLabs
Highest Security Solutions

SECURE RUGGED 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.

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

The SC42PHU-4TR is part of HSL's rugged product family that is compatible with **NIAP PP4.0 for PSD, MIL-STD-810, MIL-STD-461 and MIL-STD-1275**. HSL's rugged product family is designed to be deployed on military vehicles, marine vessels and airborne platforms.

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-810 environmental conditions including temperature, solar radiation, humidity, shock and altitude. The product is compliant with IP67.

Versatile Interfaces

HSL's rugged Combiner can receive both DP or HDMI video sources simultaneously in resolutions of up to 4K 30HZ, allowing for high quality display and interaction by the user.

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.

Flexible Work Environment

HSL's rugged Combiner switch enables the user to view all computers on one or two displays. The Combiner functions as a KVM switch, a scaler, and a multi-viewer – all in one. Switch the mouse and keyboard control freely between all computers. Create custom view modes and quickly switch between them for easy interaction with the environment.

Protected Power Input

The Combiner is powered directly from the 18-36VDC vehicle power bus and is fully compliant with MIL-STD-1275. 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
MAIN FEATURES	
Dimensions	433.8 (W) x 215 (D) x 65.85 (H) mm [17.07 x 8.46 x 2.6 Inch]
Weight	4.536 Kg [10 lbs]
Host Input Ports	4 x HDMI or DP and two USB 2.0 interfaces based on a single female TVP00ZNCI17-35P.
Console ports	HDMI or DP, 3 USB devices and optional remote control via a single male TVP00ZNCI17-35S.
Channel Switching	• IP 67 compliant green LED illuminated front panel push buttons (NVG and dimming options available) • Remote control connected via console port
Supported Video Modes	• HDMI/DP supported up to 4K@30Hz or 2600x1600@60Hz • Support for other video formats available.
ENVIRONMENTAL (PARTIAL LIST)	
Shock	MIL-STD-810G, Method 516.7 Procedure I with a peak amplitude of 40 ± 4.0g
Vibration	MIL-STD-810G, Method 514.7 Procedure I for operational use on a Category 20 wheeled Ground Vehicles
Humidity	MIL-STD-810G, Method 507.6, Procedure I based upon Table 507.6-I
Temperature	Operating - 46°C to 52°C (-51°F to 125°F); Storage -51°C to 71°C (-60°F to 160°F)
Altitude	MIL-STD-810G, Method 500.6 Procedure I
Immersion	MIL-STD-810G, Method 512.6 Procedure I to a depth of 3 meters in fresh water
Salt Fog	MIL-STD-810G, Method 509.6.
Blowing Sand	MIL-STD-810G, Method 510.6 Procedure II with 10.6 to 17.7 grams per cubic meter (g/m3)
Blowing Dust	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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POWER	
DC Input	Nominal Power Input 28VDC (18V-36V)
Power Compliance	MIL-STD-1275E Compliant Designed to operate with a steady-state supply voltage per fault free conditions as specified in MIL STD-1275E
Power Requirements	Max power consumption 40W
REGULATORY COMPLIANCE	
Safety	MIL-STD-882
EMI/EMC	MIL-STD-461
Tests	CE102, CS101, CS114, CS115, CS116, RE102, RE103, CE101
Security	• Compliant with NIAP PP4.0 for PSD (Peripheral Sharing Device)
RELIABILITY	
Standard	MIL-HDBK-216
MTBF	65,000 hours of operation at 40°C
HOW TO ORDER	
Product Model #	SC42PHU-4TR
Cables KIT Model #	Host SH HDMI: KC82HH-4TRKIT Host SH DP: KC82PH-4TRKIT

HSL Secure 4-Port Rugged Combiner System Diagram