Owl Miniaturized Perimeter Defense Solution

In order to meet the increasing demand for secure serial communications, Owl has adapted its single-board computed data diode technology to support RS-232 communication lines. Many industrial environments have existing RS-232 infrastructure that can benefit from Owl’s data diode technology.

Owl has miniaturized its proprietary data diode technology in a miniature, RS-232 platform to deliver a reliable, cost-effective product with the bandwidth and speed required for deployment.

The Owl Solution

This product provides security to a RS-232 communication link by utilizing Owl’s patented data diode technology to provide a reliable One-Way transfer over an industrial optical isolator. The MPDS securely isolates all RS-232 pins with a hardware enforced circuit. From low to high, one-way security policy absolutely assures the confidentiality of the destination high security domain.

From high to low, one-way security policy prevents penetration of the source high-security domain, assuring that data transfer can only be initiated from the high side.

RS-232 COMMUNICATION DETAILS

As with the higher end Owl Perimeter Defense Systems the MPDS RS-232 maintains power separation between the source and destination side of the device circuitry. In this case the MPDS provides USB Type A plug on the source and destination side for power input. The MPDS is not a USB device and the USB connection is only used to supply power. The MPDS device requires less than 100mA, which is a normal unit load in the USB 2.0 specification.

The MPDS will assume the role of data terminal equipment (DTE) and wired to be connected to data communication equipment (DCE). Industry standard DB-9 cables can be used to extend the cable length. Specifically a DTE to DCE straight cable which has a one to one mapping of the pins is used.

The default configuration of the MPDS is 9600 baud, 8 bits, and no parity. It also uses a 5 wire RS-232 connection consisting only of transmit data, receive data, request to send, clear to send, and ground. Hardware flow control RTS/CTS is supported and only required in custom configurations that enable data filtering or have higher baud rates. If a different configuration is required, please call for more information.
Data Diode Technology

Owl’s data diode technology is built around patented circuitry which only allows data to physically flow in one direction thereby preventing all network based cyber attacks. All attempts to access the source network from the outside world are blocked, providing absolute, unhackable security and preventing any probing of the network. DIN rail compatible and rack-mounted appliances with greater processing, protocol support, and throughput capabilities are also available.

Specifications

STANDARDS
• RS-232 (EIA232)
• 9600 baud, 8 data bits, no parity

CONNECTORS
• USB Type A connectors for 5V DC power
• DB9-Female connectors for RS-232
• Connections: 10” (25.4cm) Cable length

INPUT POWER
• 5V USB-host power
• Operational: Max 47mA on Source and Destination

DIMENSIONS
• Enclosure 4.41”X 2.38”X 1.22”; (11.2cm X 6.04cm X 3.09cm)
• Aluminum enclosure;
• Black powder-coated finish

WEIGHT
• 8oz.

OPERATING TEMPERATURE
• -40 to 70°C

OPERATING HUMIDITY:
• Max 95% non-condensing

For more information on Owl, or to schedule a demo, visit www.owlcyberdefense.com