MILTECH™ 477 USB Hub Over IP

Military-grade, rugged, remote 5-ports USB Hub over IP Network

The MILTECH 477 is a rugged, military-grade device, that allows users to share USB2.0 devices among several PC and operating systems over an IP network.

Driven by rapid advancement and lower costs, both Ethernet and USB are becoming the standard communication medium for a wide range of military and commercial applications.

The USB hub is equipped with 5x USB 2.0 ports and a built-in server, allowing clients across the network to access each hub port individually or as a whole. This connection can be permanent or temporary, manual, or programmatic. If more than five USB 2.0 ports are needed, it is possible to connect multiple MILTECH 477 to the same network and share multiple ports on multiple MILTECH 477 units to a single client. The communication with the IP network is being done by a dedicated 10/100/1000Mb Ethernet port for fast communication. End to end encryption is also supported by using SSL certifications on both sides (MILTECH47 and PCs).
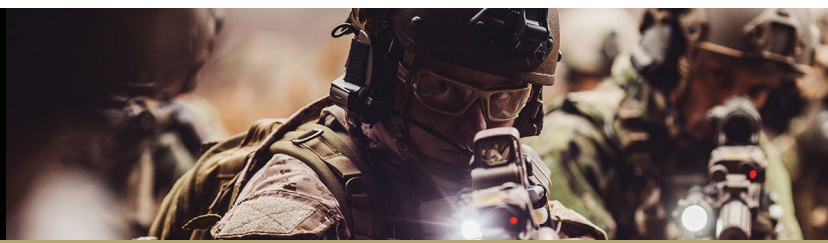
To allow for simple configuration, monitoring, and usage, a desktop client (Windows, OSX, and Linux) is provided with all the necessary functionalities, from one-time operation to automatic recognition and mounting.

The use of military-grade D38999/24WD35SN allows for 5 USB connections combined into a single connector to save space.
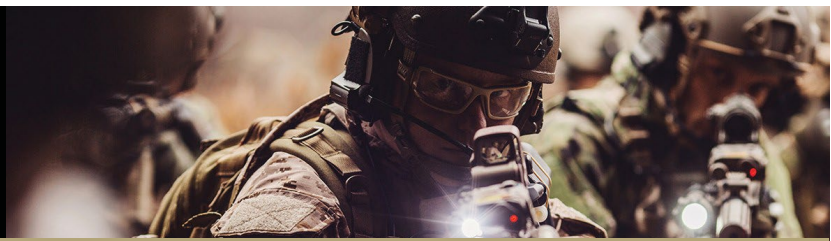
Enercon's proven wide-range DC-DC (M7029, 18V-48V) is integrated within the MILTECH 477 unit, allowing it to operate from various external DC sources with all the required input protections while operating five shareable USB2.0 devices in parallel. The power supply module is fully compliant with MIL-STD-704 and 1275.

The unit has been specially hardened to improve ingress, impact, and shock/vibration protection, as well as eliminate all moving parts through the use of passive cooling. Its rugged design is built to meet MIL-STD-810H standards and other harsh conditions.
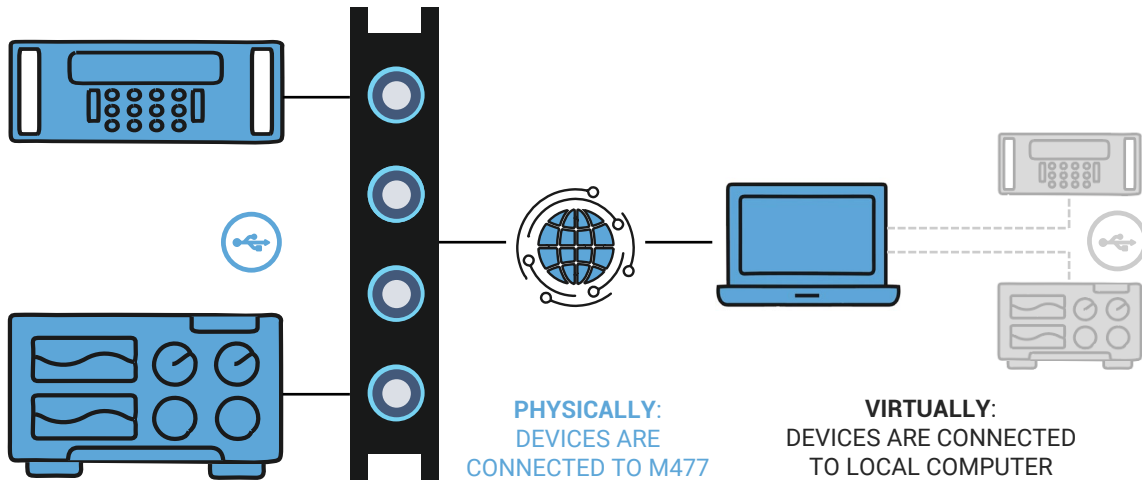
SPECIFICATIONS

COMMUNICATION PORT:	• 5x USB 2.0 ports, combined to a single connector (J2) • 1x Gb Ethernet port in a dedicated port (J3)
CONNECTORS:	• J1 (Power): D38999/24WB98PN Shell Size 11 • J2 (USB): D38999/24WD35SN Shell Size 15 • J3 (Ethernet): D38999/24WC35SN Shell Size 13 • J4 (Service): D38999/24WB35SN Shell Size 11
POWER:	• Voltage Input: 24Vdc Nominal (18-48v) • Based on integrated Enercon M7029 Module • Chassis grounding • Power consumption – 5.4W

MANAGEMENT:	• Control configuration by:
	  -CLI (Service port)
	  -SSH (Ethernet port)
	  -Desktop client (windows/Linux)
	• Configure Ethernet parameters (IP/DHCP)
	• SSL encrypted communication between unit and Pcs
	• Shared USB ports access control
	• Auto/manual mounting to PCs

CHASSIS:	• Rugged machined aluminum • Conductively cooled w/custom internal heat-sinks • Ingress protection against sand, dust and moisture • Chemical Conversion, MIL-DTL-5541, Type II, Class 1A Clear • Anodize Coating, MIL-A-8625, Type II, Class 2
LED INDICATIONS:	• 1x Power: Solid Green when unit is properly powered on. • 1x Ethernet: Solid Green when Ethernet link is active. • 5x USB: Solid Green when USB device is properly connected and recognized by USB hub
PHYSICAL:	• 270.4mm(L) x 176.8mm(W) x 57.2mm(H) • 10.65" (L) x 6.96" (W) x 2.25" (H) • Weight: 2130 g
INSTALLATION:	• Mount using 4 x #10-32UNC Screws. Installation on any flat surface
COOLING:	• No Moving Parts. Passive Cooling.
OPERATING TEMP:	• -45ºC to +85ºC (-49ºF to +185ºF) Cold Start-Up
STORAGE TEMP:	• -45ºC to +85ºC (-49ºF to +185ºF)
ELECTROMAGNETIC:	• Designed to meet MIL-STD-461E, CE101, CE102, CS101, CS114, CS115, CS116, RE101, RE102, RS101, RS103
ENVIRONMENTAL:	• Designed to meet IP67, MIL-STD-810H, MIL-STD-704B-F

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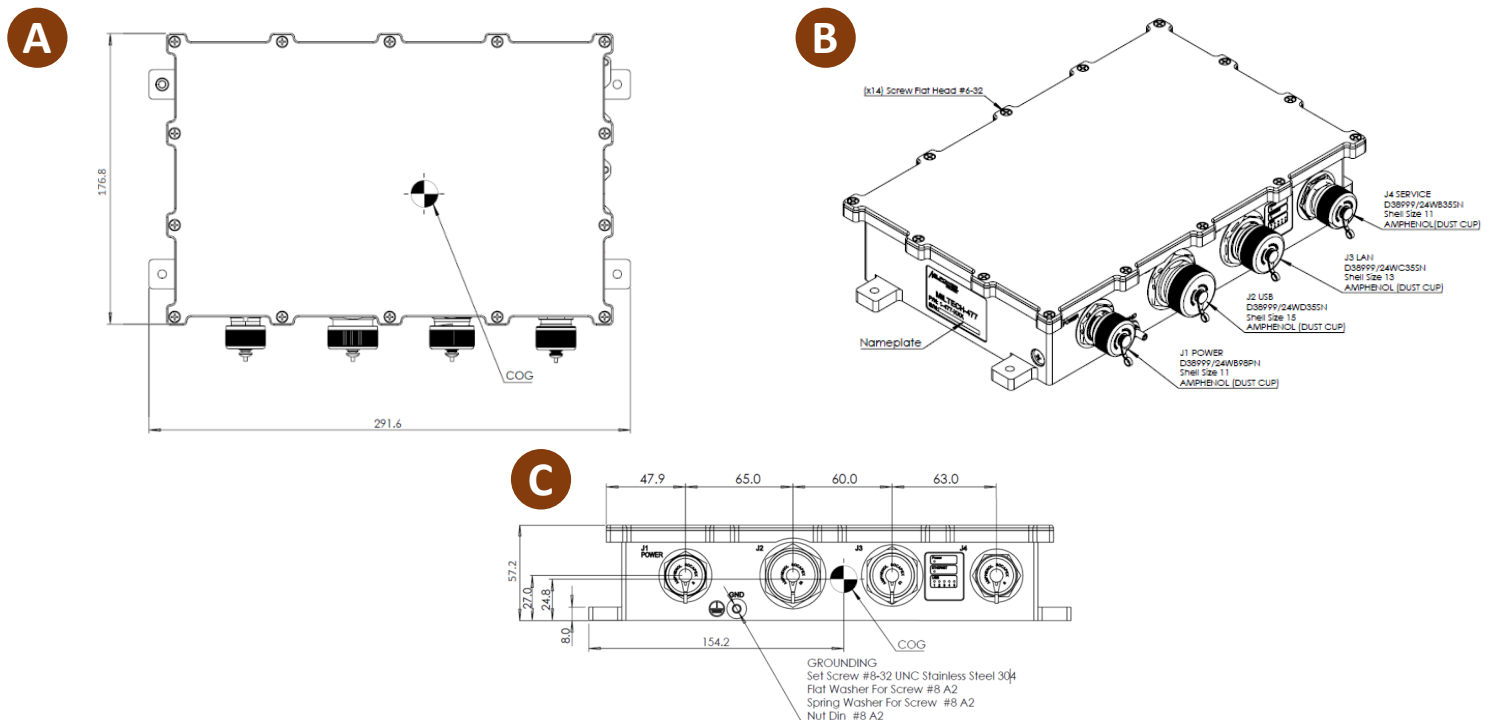
USAGE EXAMPLE

This is a demonstration of USB devices sharing over the network: Two USB devices (radio and oscilloscope) are physically connected to MILTECH 477 in a remote location. A PC with ethernet access to MILTECH477 communicates with those USB devices virtually over the network. As a result, any software running on the PC will see the USB devices as any other locally connected USB device.

THE UNIT MILTECH 477

PHYSICALLY:
DEVICES ARE
CONNECTED TO M477

VIRTUALLY:
DEVICES ARE CONNECTED
TO LOCAL COMPUTER

PHYSICAL DIMENSIONS AND CONNECTORS

A

176.8

291.6

COG

B

(x14) Screw Flat Head #6-32

J4 SERVICE
D38999/24WB35SN
Shell Size 11
AMPHENOL (DUST CUP)

J3 LAN
D38999/24WC35SN
Shell Size 13
AMPHENOL (DUST CUP)

J2 USB
D38999/24WD35SN
Shell Size 15
AMPHENOL (DUST CUP)

J1 POWER
D38999/24WB9SPN
Shell Size 11
AMPHENOL (DUST CUP)

Nameplate

C

47.9   65.0   60.0   63.0

J1
POWER   J2   J3

57.2
27.0
24.8
8.0

GND

COG

154.2

GROUNDING
Set Screw #8-32 UNC Stainless Steel 304
Flat Washer For Screw #8 A2
Spring Washer For Screw #8 A2
Nut Din #8 A2

CONNECTORS

CONNECTOR #	USAGE	TYPE
J1	Power connector	D38999/24WB98PN Shell Size 11
J2	USB connector	D38999/24WD35SN Shell Size 15
J3	Ethernet connector	D38999/24WC35SN Shell Size 13
J4	Service connector	D38999/24WB35SN Shell Size 11

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
1-477-001	Military-Grade, 5-Ports USB2.0 Hub over IP Network
2-CBL477LAN	J3 Ethernet Harness for MILTECH 477
2-CBL470pwr3m	Front Panel Con. J1 Power Harness for MILTECH 470
2-CBL470USB2M	Front Panel Con. J2 USB Harness for MILTECH 470
2-CBL470MNG	Front Panel Con. J4 Service Harness for MILTECH 470