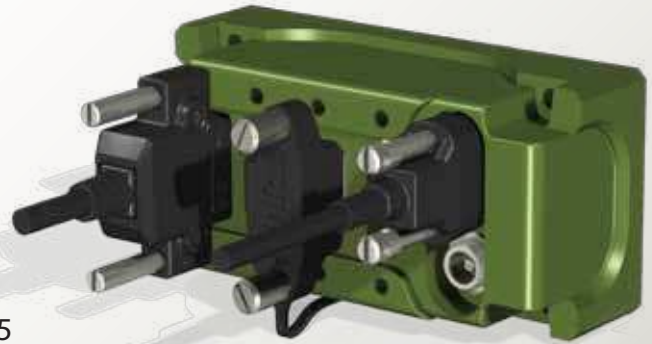


InTalTech's **MILCOMM™** USB2-4H is a compact, rugged, military grade 4-port USB HUB unit. The USB2-4H is a USB 2.0 HUB that expands 1 USB port into 4 USB ports. The unit is designed to provide USB 2.0 Hi-Speed 480 Mbps data transmission through each port. The USB2-4H is externally powered enabling the unit to supply 500 mA of power on each port, guaranteeing broadest compatibility with USB devices. The unit is an easy to install 2U<sup>2</sup>™ module fitting into a standard 19" 1U height rack. It is also suitable for direct mounting on vehicle or vessel. The product is designed for airborne, naval and ground mobile applications, while providing high levels of performance and reliability in the harshest environments.



## Product Highlights

- 4-port externally powered USB HUB
- High performance USB HUB complying with MIL-STD-810F, MIL-STD-461F, MIL-STD-1275B
- Sealed casing and connectors, complying with IP65
- Rugged USB connectors
- Operating temperature range of -35 to 70°C

## USB Performance

- Plug-n-Play operation
- Hi-Speed USB 2.0 for up to 480 Mbps
- Up to 500 mA of power on each port

## Flexible Mounting

- 2U<sup>2</sup>™ Direct mounting on vehicle or vessel
- 2U<sup>2</sup>™ Fitting into standard 19" 1U height

## Rugged Military Solution

- Compact, tough, corrosion proof Aluminum casing
- Conductively cooled unit – no moving parts
- Olive drab epoxy painting per MIL-C-22750F

## Product Customization

- The product is open for customization, based on project volume

## Technical Specification

USB Interface	
Description	4-port externally powered USB HUB
Speed	Hi-Speed USB 2.0 up to 480 Mbps and full speed USB up to 12Mbps
Standard Compliance	USB 1.1/2.0 compliant
Plug-n-Play	Supported
Supply Current	500 mA max. per port when external power connected

Connectors	
Power Conn.	DC Power Jack – Switchcraft model PCL712L
Upstream Conn.	Vertical Female Mini USB B Connector
Downstream Conn.	Vertical Female USB A Connector

Electrical (USB Downstream Bus power)	
Input Voltage	5 VDC
Input Power	2.5 W

Electrical (External power)	
Input Voltage	10 – 36 VDC
Input Power	12.5 W Max.
Input Power Protection	Reverse Polarity Protection

Mechanical	
Weight	~180 gram
Length	88.1 mm
Width	43.6 mm
Height	36.5 mm
Case Cooling	No moving parts, Passive Conductively cooled unit
Case Material	Corrosion proof Aluminum casing
Case Sealing	IP65 dust, oil, and water sealing
Case Painting	Olive drab epoxy painting per MIL-C-22750F

Accessories (Not supplied with the product)	
Mech. Accessories	for fitting into a 19" rack (see accessories Data Sheet)

## Mating Connectors (Not supplied with the product)

Description	P/N
Power Conn.	DC Power Plug w/Lock Ring Switchcraft 761K
Upstream Conn.	Male Mini USB B on cable*
Downstream Conn.	Male USB A on cable*

(\*) For ITT Rugged connection solutions see accessories data sheet

## Ordering Information

Model	Description
USB2-4H	Rugged USB connectors

Note 1: **Preliminary version**, Specification subject to change without notice

Note 2: Images are for illustration purposes only

Note 3: 1U means 1U width x 1U height; 10U fully fits 19" 1U slot

## EMC (Designed to Meet)

MIL-STD-461F	Description	Freq. Range
Method CE102	Conducted Emission, Power lines (army)	10 KHz – 10 MHz
Method CS101	Conducted Susceptibility, Power lines (curve #2)	30 Hz – 150 KHz
Method CS114	Conducted Susceptibility, Bulk cable Inj. (curve #4)	10 KHz – 30 MHz
Method CS115	Conducted Susceptibility, Bulk cab. Inj.+ Imp. Exc.	
Method CS116	Conducted Susceptibility, Damped Sin. Transients	10 KHz – 100 MHz
Method RE102	Radiated Emission, Electric field (army & navy)	2 MHz – 18 GHz
Method RS103	Radiated Susceptibility, Electric field	2 MHz – 18 GHz

MIL-STD-1275B	Description
Paragraph 5.1.2.1, 5.1.3.1, 5.2.1	Steady-state DC voltage
Paragraph 4.4	Polarity reversal
Paragraph 5.1.2.3, 5.1.3.3, 5.2.3, 5.4.2.4, figure 4, 6	Voltage surges
Paragraph 5.1.2.2, 5.1.3.2, 5.2.2, figure 2	Voltage ripple
Paragraph 5.1.2.4, 5.1.3.4, 5.2.4, 5.4.2.3, figure 5, 7	Spikes imported
Paragraph 5.4.2.2	Spikes exported
Paragraph 3.1.7, 5.1.3.5, figure 3	Starting disturbances test

## Environmental (Designed to Meet)

MIL-STD-810F	Operating	Storage
<b>Temperature</b> Method 501.4&502.4 Proc. I & II	-35 to 70°C	-40 to 71°C
<b>Temperature Shock</b> Method 503.4, Proc. I		-40 to 71°C
<b>Altitude</b> Methode 500.4, Proc. I & II	15000 ft for 1h min.	40000 ft for 1h min.
<b>Solar Radiation</b> Methode 505.4, Proc. I cat. A1	3 cycles of 24h on each angle	
<b>Rain</b> Methode 506.4, Proc. I	Rain rate 1.7lit/m <sup>2</sup> /min. Wind velocity 64km/h For 30 min.	
<b>Humidity</b> Method 507.4,	30°C to 60°C 85% to 95% rel. humidity 10 cycles of 24h	
<b>Dust &amp; Sand</b> Method 510.4, Proc. I		
<b>Salt Atmosphere</b> Method 509.4,	2 Cycles of 48 hours	
<b>Fungus</b> Method 508.5,		
<b>Vibration</b> Method 514.5, Proc. I cat. 20	Tracked & wheeled vehicles	
<b>Loose cargo</b> Method 514.5, Proc. II Cat. 5	Test period – 3 hours	
<b>Functional shock</b> Method 516.5 Proc. I	40g, 11msec. Saw tooth peak pulse	