

InTalTech's **MILCOMM™** USB2-4S is a compact, rugged, military grade 4-port USB-to-SERIAL converter unit. The USB2-4S is a USB 2.0 to SERIAL (RS232, RS422, RS485 user selected) converter that expands 1 USB port into 4 Independent Serial ports. The USB2-4S is externally powered by the host computer through the USB bus connector. The unit is an easy to install 3U²™ 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

- Military grade 4-port USB-to-SERIAL converter
- Expands 1 USB 2.0 port into 4 Independent Serial ports
- Each serial port is user selected (RS232, RS422, RS485)
- High performance USB to SERIAL converter complying with MIL-STD-810F, MIL-STD-461F
- Sealed casing and connectors, complying with IP65
- Rugged USB & RJ45 connectors
- Operating temperature range of -35 to 70°C

USB & SERIAL Performance

- Plug-n-Play operation
- Hi-Speed USB 2.0 for up to 480 Mbps
- Serial Speed for up to 12 Mbps

Flexible Mounting

- 3U²™ Direct mounting on vehicle or vessel
- 3U²™ 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

General	
Description	USB-to-SERIAL converter
USB Interface	
Description	1-Port Upstream USB from Host Computer
Speed	Hi-Speed USB 2.0 up to 480 Mbps and full speed USB up to 12Mbps
Standards	USB 1.1/2.0 compliant
Plug-n-Play	Supported
Serial Interface	
Description	4-Serial channels of user selected RS232 or RS422 or RS485
Speed	Serial Speed for up to 12 Mbps
Full Duplex Mode	RS232/RS422/4-wire RS485
Half Duplex Mode	2-wire RS485
Standards	EIA RS-232-C / EIA RS-422-B / EIA RS-485
Connectors	
Upstream Conn.	Vertical Female Mini USB B Connector
Serial Conn.	Vertical Female RJ45 Connector
Electrical <small>(USB Upstream Bus power)</small>	
Input Voltage <small>(ITC8 Upstream Bus power)</small>	5 VDC
Input Power	2.5 W
Mechanical	
Weight	~180 gram
Length	132.5 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 <small>(Not supplied with the product)</small>	
Mech. Accessories	for fitting into a 19" rack (see Accessories Data Sheet)

Mating Connectors (Not supplied with the product)

Description	P/N
Upstream Conn.	Male Mini USB B Connector on cable*
Serial Conn.	Male RJ45 Connector on cable*

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

Ordering Information

Model	Description
USB2-4S	Rugged USB/SERIAL connectors

Note1: Preliminary version, specification subject to change without notice
 Note2: Images are for illustration purposes only
 Note3: 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

Environmental (Designed to Meet)

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