MILTECH™ 16SER

A Truly IP68 Military Cyber Proof Serial over USB

PRODUCT DESCRIPTION

Techaya's MILTECH™ 16SER is a MIL-STD rugged, military-grade Serial over USB unit, offering 16 Serial ports over USB. The Portable Rugged Serial unit was developed specifically for the new cyber threats available in today's networks, providing new security features and capabilities for protecting critical systems. Developed for portable military and harsh environment applications, the MILTECH 16SER features mechanical packaging enhancements designed for MIL-STD-810F airborne and ground environmental compliance and high reliability. The unit has been especially hardened to improve ingress, impact, and shock/vibration protection, as well as eliminate all moving parts through passive cooling. Interface through sealed MIL-STD circular connectors, with a 24VDC power makes it instantly compatible with network device and power systems. Compact in size, the MILTECH 16SER is particularly useful for expanding Serial port density in space-constrained airborne and ground vehicle environments while providing new security layer for serial interfaces.

The MILTECH 16SER serves as a robust commercial off-the-shelf (COTS) solution for rugged Serial connectivity, which can be used in a wide range of military and commercial applications, including:

- UAVs
- Land autonomous vehicles (UGVs)
- Robots
- Mobile equipment fielded in harsh environments

Modern platforms contain dozens of legacy serial devices that must be interconnected to the new computerized network. The MILTECH 16SER is an ideal solution for secure mobile Serial-equipped platforms. With the best combination of size, weight, power and cost (SWaP-C) in the industry, it saves valuable real estate for computers, sensors, targeting systems, and other devices that make mobile platforms highly effective.

SPECIFICATIONS

PHYSICAL PORTS	• 8 x RS232 interfaces over USB (J1-J8) • 8 x RS485/422 interfaces over USB (J1-J8) • Ports J4 & J5 includes also 2 X USB2 Expansion ports • Uplink: includes USB2 upstream, I2C and Power In
CYBER FEATURES	• Internal DIP switches for hardware Enable/Disable TX/RX for each Serial port • Remote software based control for TX/RX Enable/Disable via I²C • Cascading up to 5 devices, providing 80 Serial interfaces over a single USB port
CONNECTORS	• J1 - J8: SCE2-B-76A07-14SN • Uplink: SCE2-B-76A07-10ASN

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PRODUCT DATASHEET rev. 2

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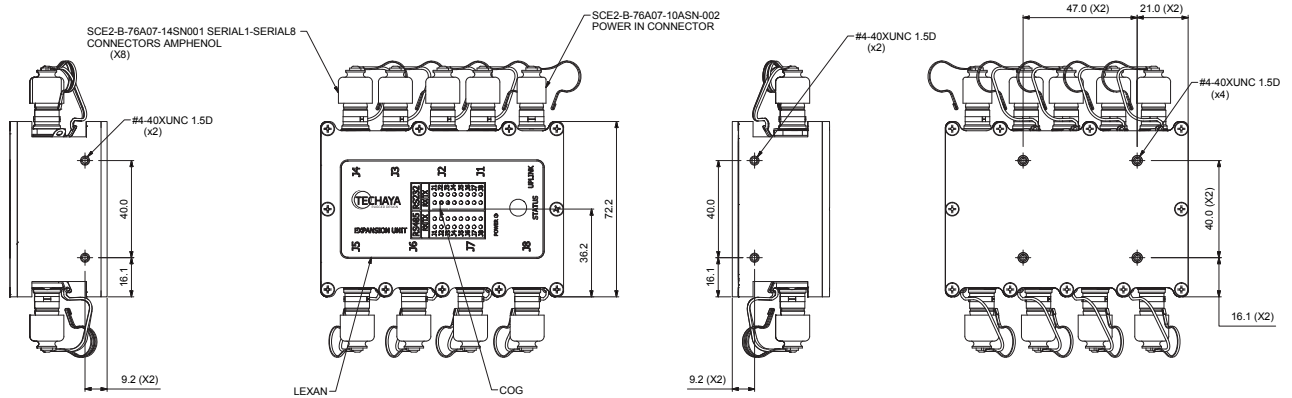
SPECIFICATIONS

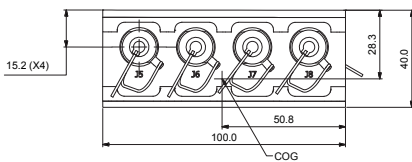|	
CHASSIS	• Low profile rugged machined aluminum • Conductively cooled • Ingress protection against sand, dust and moisture • Anodize Coating, MIL-A-8625, Type II, Class 2
STANDARDS	• MIL-STD-461E, MIL-STD-810F/G/GM, MIL-STD-1275, MIL-STD-704, IP68
PERFORMANCE	• 1 upstream USB 2.0 • Up to five cascaded units • Maximum cable length for cascading over USB: 2m • Up to 80 serial devices • Per port LED indications: RS232/422/485 - TX, RX
STANDARDS COMPLIANCE	• USB specification version 2.01 (data rates of up to 480 Mbps) • USB specification version 1.1 (data rates of up to 12 Mbps) • OHCI, UHIC, VEHCI
POWER	• Power Input: 24VDC Nominal (16-36V), LED Indication • Power Consumption: 4W Max • Chassis grounding • MILSTD-1275, MILSTD-704
ELECTROMAGNETIC	• Exceed MIL-STD-461E Electromagnetic compatibility • ELECTROMAGNETIC: CE-102, CS-114, CS-115, CS-116, RE-102, RS-103

ENVIRONMENTAL	• MILSTD-810F/G/GM:
	  • Random vibration (514.5I), Bench Handling (516.6VI)
	  • Air Pressure (500.5I,II), Blowing Rain (506.5I), Immersion (512.5I)
	  • High Temp.(501.5I,II), Low Temp.(502.5I), Humidity (507.5II),
	  • Salt Atmosphere (509.5I), Blowing Dust (510.5I), Loose Cargo Vibration (514.6II)
	  • Wind Analysis
	  • IP68

PHYSICAL	• Dimensions: 100mm (L) x 88.9(W) x 40(H), including connectors • Dimentions: 3.94''(L) x 3.5''(W) x 1.57''(H), including connectors • Weight: 390g
INSTALLATION	• Set of four 4-40 threads for mounting to any flat surface.
COOLING	• No Moving Parts. Passive Cooling.
TEMPERATURE	• Operational: -45ºC to +85ºC (-49ºF to +185ºF) Cold Start • Storage: -45ºC to +85ºC (-49ºF to +185ºF)

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A

B

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
1-16SER-000	Military Grade16 Serial Ports Over USB
2-CBLACE918	Main Ethernet Cable
2-CBLACESEXPANT	Serial Cable
2-CBLACEUPLINKP	UPLINK+Power Cable