



# MILTECH™ 16SER

## A Truly IP68 Military Cyber Proof Serial over USB

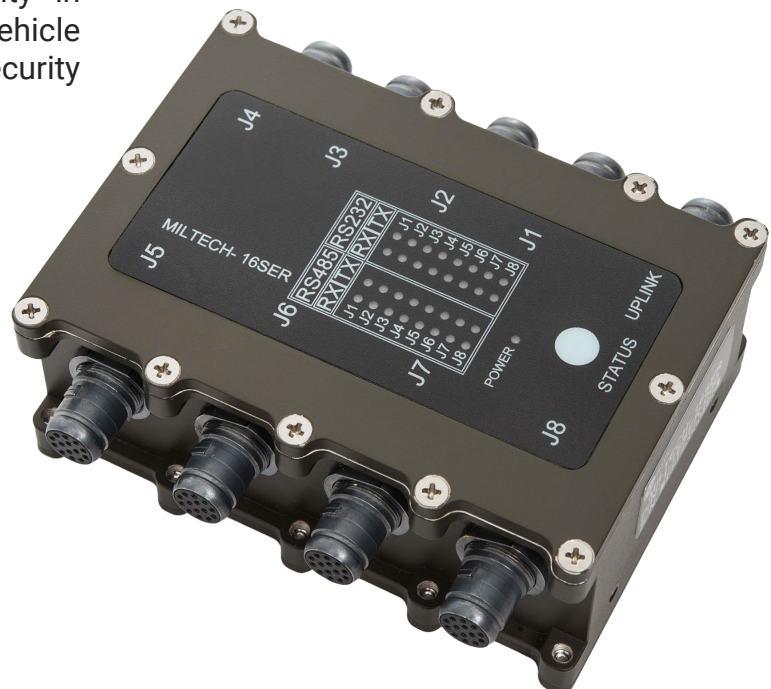
The MILTECH™ 16SER is a MIL-STD rugged, military-grade Serial over USB unit, offering 16 Serial ports over USB. The Portable Rugged Serial unit was developed specifically for the new cyber threats available in today's networks, providing new security features and capabilities for protecting critical systems.

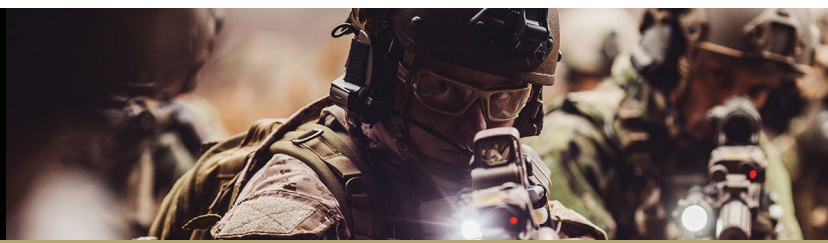
Developed for portable military and harsh environment applications, the MILTECH 16SER features mechanical packaging enhancements designed for MIL-STD-810F airborne and ground environmental compliance and high reliability. The unit has been specially hardened to improve ingress, impact, and shock/vibration protection, as well as eliminate all moving parts through passive cooling. Interface through sealed MIL-STD circular connectors, with 24VDC input power, makes it instantly compatible with network devices 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 a 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

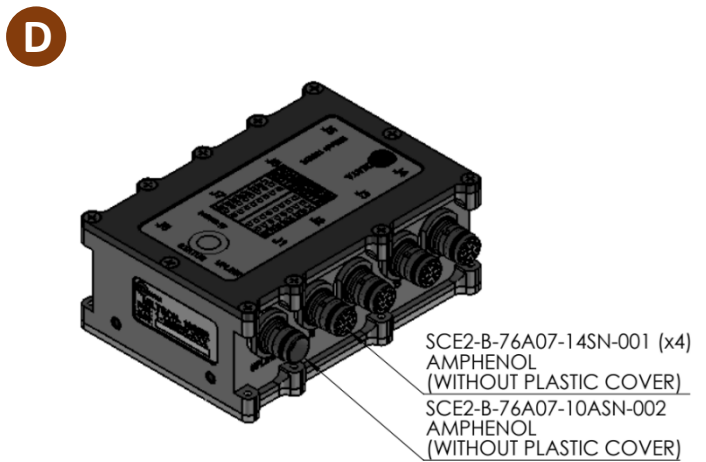
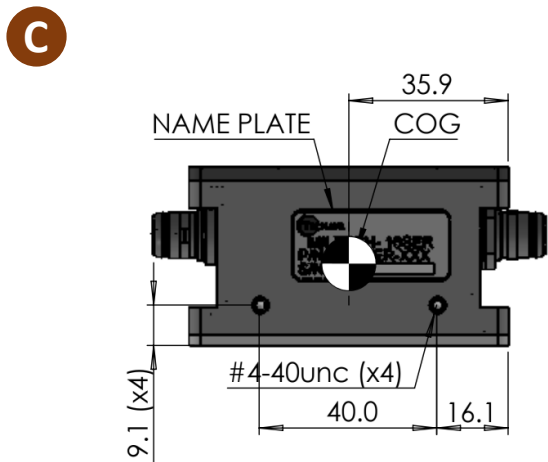
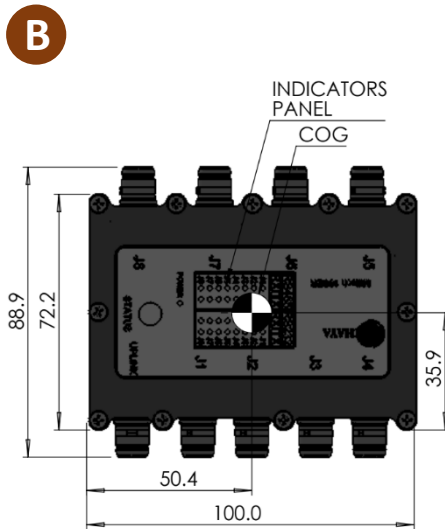
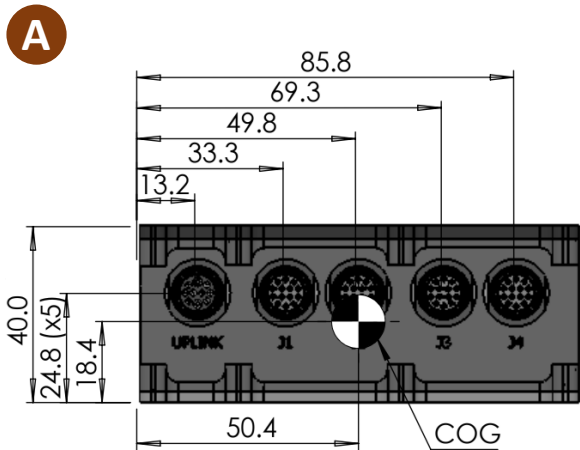
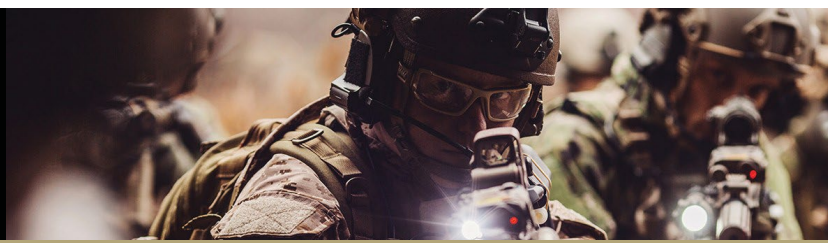
Modern platforms contain dozens of legacy serial devices that must be interconnected to the new computerized network. The MILTECH 16SER is an ideal solution for secure mobile Serial-equipped platforms. With the best combination of size, weight, power, and cost (SWaP-C) in the industry, it saves valuable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





## SPECIFICATIONS

PHYSICAL PORTS:	<ul style="list-style-type: none"> <li>8 x RS232 interfaces over USB (J1-J8)</li> <li>8 x RS485 Half Duplex or 422 Full Duplex interfaces over USB (J1-J8)</li> <li>Ports J4 &amp; J5 includes also 2 X USB2 downstream ports</li> <li>USB2 Host upstream with external DC in (Self Powered USB device)</li> </ul>
CYBER FEATURES:	<ul style="list-style-type: none"> <li>Internal DIP switches for hardware Enable/Disable TX/RX for each Serial port</li> <li>Cascading up to 5 devices, providing 80 Serial interfaces over a single USB port</li> </ul>
CONNECTORS:	<ul style="list-style-type: none"> <li>J1 - J8: SCE2-B-76A07-14SN</li> <li>Upstream: SCE2-B-76A07-10ASN</li> </ul>
CHASSIS:	<ul style="list-style-type: none"> <li>Low profile rugged machined aluminum</li> <li>Conductively cooled</li> <li>Ingress protection against sand, dust, and moisture</li> <li>Anodize Coating, MIL-A-8625, Type II, Class 2</li> </ul>
STANDARDS:	<ul style="list-style-type: none"> <li>MIL-STD-461E, MIL-STD-810F/G/GM, MIL-STD-1275, MIL-STD-704, IP68</li> </ul>
PERFORMANCE:	<ul style="list-style-type: none"> <li>1 upstream USB 2.0</li> <li>Up to five cascaded units</li> <li>Maximum cable length for cascading over USB: 2m</li> <li>Up to 80 serial devices</li> <li>Per port LED indications: RS232/422/485 - TX, RX</li> <li>Full Duplex and Half Duplex communication</li> </ul>
STANDARDS COMPLIANCE:	<ul style="list-style-type: none"> <li>USB specification version 2.01 (data rates of up to 480 Mbps)</li> <li>USB specification version 1.1 (data rates of up to 12 Mbps)</li> <li>OHCI, UHCI, VEHCI</li> </ul>
POWER:	<ul style="list-style-type: none"> <li>Power Input: 24VDC Nominal (16-36V), LED Indication</li> <li>Power Consumption: 4W Max</li> <li>Chassis grounding</li> <li>MILSTD-1275, MILSTD-704</li> </ul>
ELECTROMAGNETIC:	<ul style="list-style-type: none"> <li>Exceed MIL-STD-461E Electromagnetic compatibility</li> <li>ELECTROMAGNETIC: CE-102, CS-114, CS-115, CS-116, RE-102, RS-103</li> </ul>
ENVIRONMENTAL:	<ul style="list-style-type: none"> <li>MILSTD-810F/G/GM: <ul style="list-style-type: none"> <li>Random vibration (514.5I), Bench Handling (516.6VI)</li> <li>Air Pressure (500.5I, II), Blowing Rain (506.5I), Immersion (512.5I)</li> <li>High Temp. (501.5I, II), Low Temp.(502.5I), Humidity (507.5II),</li> <li>Salt Atmosphere (509.5I), Blowing Dust (510.5I), Loose Cargo Vibration (514.6II)</li> <li>Wind Analysis</li> <li>IP68</li> </ul> </li> </ul>
PHYSICAL:	<ul style="list-style-type: none"> <li>Dimensions: 100mm (L) x 88.9(W) x 40(H), including connectors</li> <li>Dimensions: 3.94"(L) x 3.5"(W) x 1.57"(H), including connectors</li> <li>Weight: 390g</li> </ul>
INSTALLATION:	<ul style="list-style-type: none"> <li>Set of four 4-40 threads for mounting to any flat surface.</li> </ul>
COOLING:	<ul style="list-style-type: none"> <li>No Moving Parts. Passive Cooling.</li> </ul>
TEMPERATURE:	<ul style="list-style-type: none"> <li>Operational: -45°C to +85°C (-49°F to +185°F) Cold Start</li> <li>Storage: -45°C to +85°C (-49°F to +185°F)</li> </ul>



## ORDERING INFORMATION

PART NUMBER	DESCRIPTION
1-16SER-000	Military Grade 8 * RS232 + 8 * RS422 Ports Over USB
1-16SER-001	Military Grade 8 * RS232 + 8 * RS485 (Half Duplex) Ports Over USB
1-16SER-002	1-16SER-002 Military Grade 8 * RS232 + 8 * RS422 Ports Over USB With Metal Caps
2-CBL16SERPWR	Power harness for MILTECH 16SER
2-CBL16SERINT	Interface harness for MILTECH 16SER