

# MILTECH™ 420

## Integrated Soldier Power and Data Management System (ISPDS)

The modern digital soldier is fully equipped with advanced weapon and communication systems - outfitted with a multitude of electronic devices. These external devices, such as navigation systems, battery packs, headsets, warning sensors, video visors for weapons, night vision devices, and many more accessories, are necessary for modern warfare. The MILTECH 420 provides the required power to these devices as well as USB connectivity to external hosts.

The MILTECH 420 is a lightweight, integrated soldier power and data management system (ISPDS) combining USB and SMBUS communication along with full smart power management for infantry soldiers.

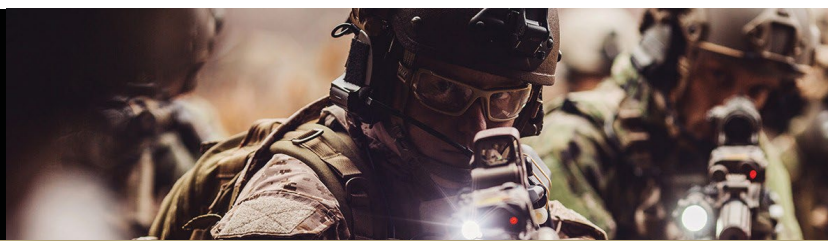
The MILTECH 420 has an internal powerful microcontroller unit for full power and data management via a dedicated tactical secured customer application.

Enercon Technologies offers a range of lightweight adaptable systems that are ideally suited for frontline forces in the most complex modern battlefield scenarios. This new and unique concept aggregates and delivers intelligence information along with all required communication in a miniature, compact package that can be carried in smart combat vest solutions.



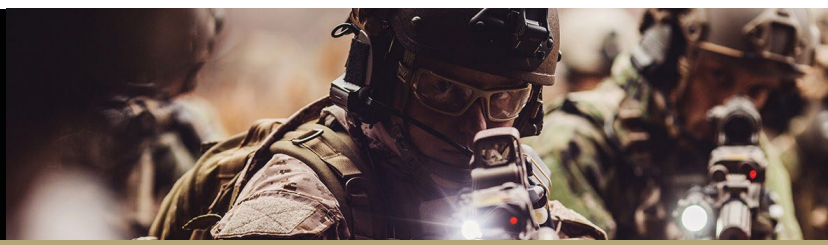
### SPECIFICATIONS

PORTS:	<ul style="list-style-type: none"> <li>• 1 x USB2 Upstream port (EUD) – J1</li> <li>• 3 x USB2 Downstream ports (PAN1-3) – J4-J6</li> <li>• 2 x Optional USB2 Downstream ports (Radio 1-2) – J2-J3</li> <li>• 2 x Power source inputs (including SMBUS V2.0) for dual battery input or external power, J2-J3 (both can be configured to either Battery/Power IN or Radio output port)</li> <li>• All ports provide USB VBUS (5V/2A) and VBAT (10-20V/5A) with overall VBAT IN current limit of 6A</li> <li>• Support in configurable external load priority-based switching by software (up to a total of 6A overall unit consumption from source)</li> </ul>
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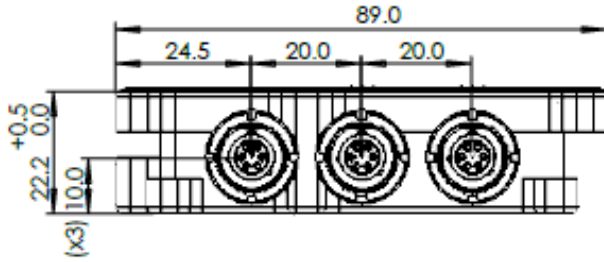


## SPECIFICATIONS

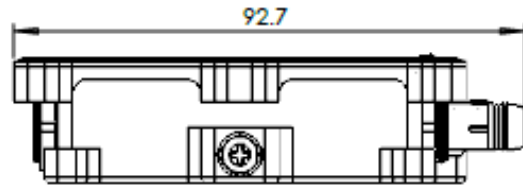
<p><b>SYSTEM OVERVIEW:</b></p>	<ul style="list-style-type: none"> <li>• Full Power management per port: Online Current/Voltage Measurement per port Instant Power ON/ Off per port Over Voltage / Under Voltage / Short Circuit / Over current protections Online Power consumption per port Online Total System Power Consumption Batteries SoC (State of Charge) and Mission total time and power remaining</li> <li>• Supported Unit Operating modes/System configurations: Standalone unit operation from single external battery/power source (10-20V, 6A max) Standalone unit operation from dual batteries with auto-switchover Cascading of two MT420 units whereas Master unit powers the slave unit Cascading of two or more MT420 units whereas Slave units are powered from external battery</li> <li>• Loads (PAN) output supply: J4-6 – VBAT/5A max and VBUS/2A</li> <li>• Loads (Radio) output supply: J2-3 – VBAT/5A max and VBUS/2A (Note: only one port can be used as Radio whereas other port is used as Batt in/external DC in) Max unit current – 7.5A, with programmable loads shutdown when thresholds reached</li> </ul> <p>Secured external host protocol aligned with DoD Software ICD for full control on all power outputs and system parameters</p>																
<p><b>CONNECTORS:</b></p>	<ul style="list-style-type: none"> <li>• 3 x PAN1-3: Nett Warrior compliant P/N - F2-790612-06K (Amphenol)</li> <li>• 3 x EUD, Radio/Batt1, Radio/Batt2: Nett Warrior compliant P/N - F2-790613-06K (Amphenol)</li> </ul>																
<p><b>CHASSIS:</b></p>	<ul style="list-style-type: none"> <li>• Conductively cooled w/custom internal heat-sinks</li> <li>• Ingress protection against sand, dust and moisture</li> <li>• Anodize Coating, MIL-A-8625, Type II, Class 2</li> </ul>																
<p><b>STANDARDS:</b></p>	<ul style="list-style-type: none"> <li>• Design to meet MIL-STD-461, Def-Stan 59-411, MIL-STD-810F, Def-Stan 00-35, IP68</li> </ul>																
<p><b>STANDARDS COMPLIANCE:</b></p>	<ul style="list-style-type: none"> <li>• USB1.1/USB 2.0</li> <li>• SMBus V2.0</li> </ul>																
<p><b>ELECTROMAGNETIC:</b></p>	<ul style="list-style-type: none"> <li>• Design to meet – Def-Stan 59-411: DCE01.B, DCE03.B, DCS01.B, DCS02.B, DCS03.B, DCS05.B, DRE01.B, DRE02.B, DRS01.B, DCS10.B</li> </ul>																
<p><b>ENVIRONMENTAL:</b></p>	<ul style="list-style-type: none"> <li>• Design to meet – Def-Stan 00-35:  <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">High temperature and low humidity</td> <td style="width: 50%;">Atmospheric pressure</td> </tr> <tr> <td>Low temperature</td> <td>Vibration</td> </tr> <tr> <td>Dust and Sand</td> <td>Bounce</td> </tr> <tr> <td>Rain</td> <td>Shock</td> </tr> <tr> <td>Immersion</td> <td>Dropping</td> </tr> <tr> <td>Solar radiation</td> <td>Fluid contamination</td> </tr> <tr> <td>Humidity</td> <td>Mold growth</td> </tr> <tr> <td>Corrosive atmosphere</td> <td>Chemical and biological contamination</td> </tr> </table> </li> </ul>	High temperature and low humidity	Atmospheric pressure	Low temperature	Vibration	Dust and Sand	Bounce	Rain	Shock	Immersion	Dropping	Solar radiation	Fluid contamination	Humidity	Mold growth	Corrosive atmosphere	Chemical and biological contamination
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<p><b>PHYSICAL:</b></p>	<ul style="list-style-type: none"> <li>• Dimensions: 89mm (W) x 82mm(L) x 22.2mm(H), excluding connectors</li> <li>• Weight: 165gr.</li> <li>• LED indication: Night Vision Power and Unit Status LED indication, including Dark mode support and flexible LED intensity control via user commands</li> </ul>																
<p><b>INSTALLATION:</b></p>	<ul style="list-style-type: none"> <li>• Set of 4 mounting slots for Mole strips</li> </ul>																
<p><b>OPERATING TEMP:</b></p>	<ul style="list-style-type: none"> <li>• -40°C to +71°C – Cold Start-Up</li> </ul>																
<p><b>STORAGE TEMP:</b></p>	<ul style="list-style-type: none"> <li>• -40°C to +85°C</li> </ul>																



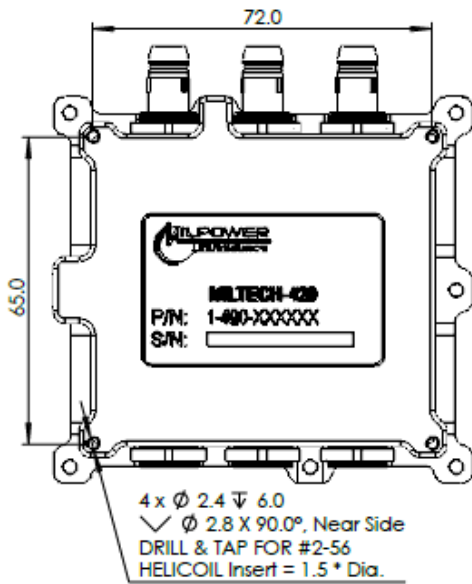
**A**



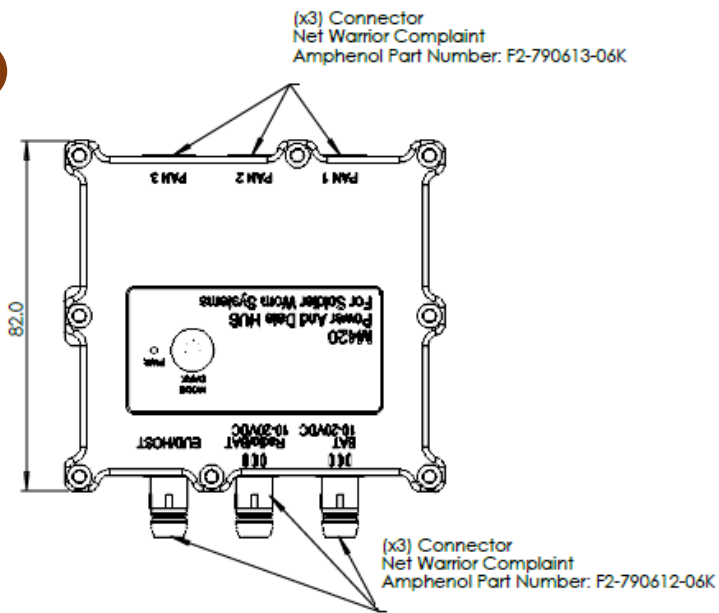
**B**



**C**



**D**



For detailed dimensions and tolerances see Drawing: 1-420-000-ICD

## ORDERING INFORMATION

PART NUMBER	DESCRIPTION
1-420-000	MILTECH 420, Integrated Soldier Power and Data Management System (ISPDS)

- Additional standard configurations available. **Contact factory for more details.**  
Note: Specifications are subject to change without prior notice by the manufacturer.