

# MERLIN-3™

## TACTICAL POWER MANAGER

- Rugged and compact
- Uninterruptible DC Power Supply for wide range of equipment



### GIVING YOU POWER MANAGEMENT WHERE YOU NEED IT, WHEN YOU NEED IT. NO EXCUSES.

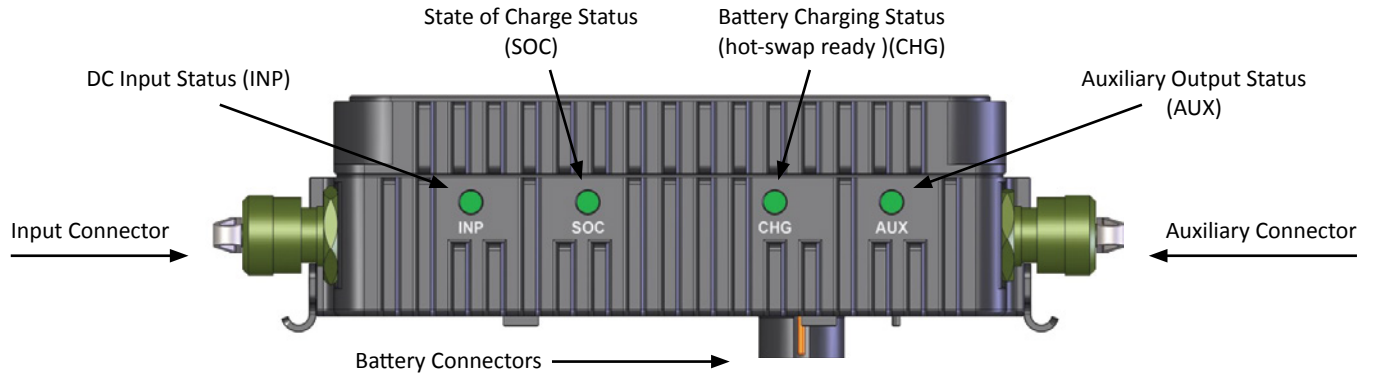
The Merlin-3™ SBC is an Uninterruptible Power Source (UPS) system for a wide variety of fielded equipment. It can receive input from an extensive range of DC and AC power sources. Its primary function is to export significant power, to run application-specific equipment, laptops and other accessories. The Merlin-3™ SBC also integrates with a BB-XX90 battery contained within the battery box and provides efficient battery charging. In all cases when a battery is available, it serves as a UPS for the attached load. It also manages power for the output when the input is connected and the battery is unavailable.

The hot-swap feature allows battery change-out and maintenance without load interruption. LED indicators display the status of input power, state of charge, battery charging, battery health and output power availability. Peak Power Tracking algorithms efficiently convert power from solar panels to support the load and/or charge the battery for power storage.

The Merlin-3™ SBC latches to battery boxes without any additional tools or modifications. It is compact and rugged, allowing the system to be used in all conditions and environments. The Merlin-3™ SBC does not compromise the environmental integrity of the battery or attached loads.

FEATURES	BENEFITS
Uses standard, full size rechargeable battery	<ul style="list-style-type: none"> <li>• Keeps connected equipment powered regardless of input power interruptions</li> <li>• Uses BB-2590/U (preferred) or BB-390B/U (alternate) battery</li> <li>• Programmable charging algorithms ensure future battery chemistry adoption</li> </ul>
Interfaces with battery box	<ul style="list-style-type: none"> <li>• No tools required for installation or use</li> <li>• Keeps battery enclosed and environmentally protected</li> </ul>
Battery Hot Swap	<ul style="list-style-type: none"> <li>• Able to change out battery for recharge without load interruption (when powered externally)</li> </ul>
Compact size and weight	<ul style="list-style-type: none"> <li>• Light weight and easy to transport</li> </ul>
Functions with a variety of input and output accessories	<ul style="list-style-type: none"> <li>• Operates using a wide range of input sources; Solar, NATO, AC/DC converter, Zinc-Air batteries, BB-2590, fuel cell and vehicle power</li> <li>• Outputs power to a variety of accessories including speakers, laptop computers and small personal electronics</li> </ul>

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The Merlin-3™ SBC monitors and displays the status of the battery, input and output power availability via dedicated LED lights.

### PHYSICAL AND ELECTRICAL PROPERTIES

PARAMETER	CHARACTERISTIC
Weight	1.8 lbs (829 g)
Size	7.6" L x 3.5" W x 1.9" H 193 mm x 89 mm x 48 mm
Input Connector	MS3114-E8-4P
Output Connector	MS3114-E8-4S
Applicable Standards	MIL-STD-810G, MIL-STD-461F
Operating Temperature Range	-40° to +131°F (-40° to +55°C)
Storage Temperature Range	-59° to +160°F (-50° to +71°C)
Input Voltage	10–42 VDC @ 14.5 ADC (max)
Input Power	250 W
Output Voltage	12-32 VDC @ 4 ADC (100 W max)
Efficiency	97%
Li Ion Battery Charge Time	3 hours typical

### COMPONENTS

IRIS PART NUMBER	PART DESCRIPTION
78535-102501	Merlin-3™ SBC Kit
78535-102049	Solar Panel, 62W
78535-102091	Cable, SAEP, EXTN
78535-102040	Input, Converter, AC/DC 220W
78535-102292	Input, Converter, AC/DC 120W
78535-102203	IEC-320 Power Cord, 6'
78535-102017	Cable, Input, AUTO
78535-102022	Cable, Input, CLMP
78535-102426	Cable, Input, NATO
78535-102019	Cable, Input, SAEP
78535-102030	Cable, Input, Splitter
78535-102020	Cable, Input, EXTN
78535-102024	Cable, Output, EXTN
78535-102025	Cable, Output, AUTO
78535-102026	Cable, Output, PANA
78535-104450	Single Battery Box
78535-101607	Case, Hard
78535-102597	Doc, Manual
78535-102598	Doc, QuickCard

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### IRIS TECHNOLOGY

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