

# MERLIN-3™

## RADIO POWER ADAPTER

- Augmented power solution for the AN/PRC-117G radio system



### ENABLING COMMUNICATIONS WHERE YOU NEED IT, WHEN YOU NEED IT. NO EXCUSES.

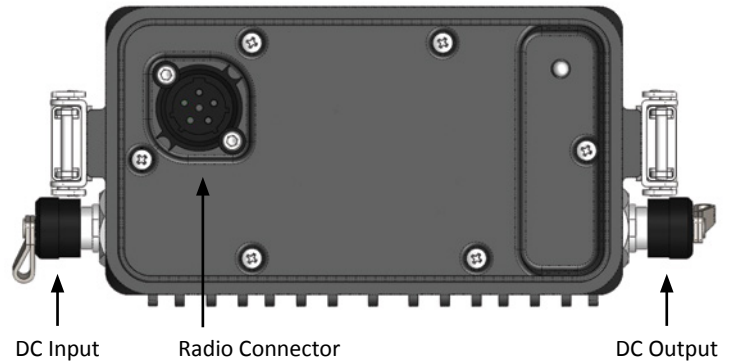
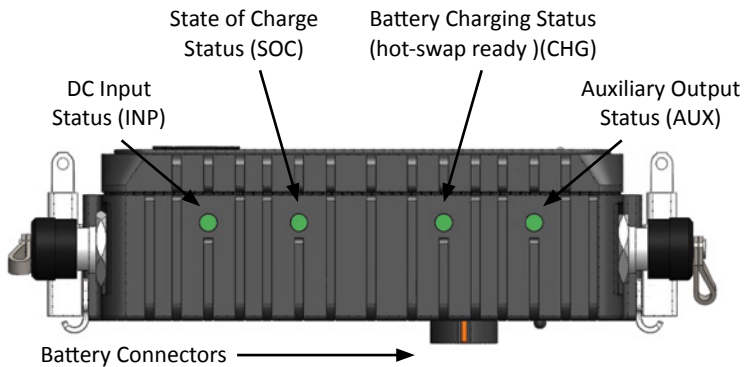
The Merlin-3™ is an alternate power source for the AN/PRC-117G radio system. It receives input from a wide variety of AC and DC power sources. Its primary function is to power the radio system. The Merlin-3™ exports significant power to run laptops, auxiliary speakers and other ancillary equipment. It also integrates with BX-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 radio.

The hot-swap feature allows battery change-out and maintenance without radio interruption or crypto-fill loss. It configures automatically and requires no controls. LED indicators display the status of input power, radio power, battery health and output power availability. Peak Power Tracking algorithms efficiently manage power from solar panels to support the radio and DC output, and/or charge the battery for power storage.

The Merlin-3™ is compact and rugged, allowing the radio to be used in all environmental conditions and does not compromise the signal integrity of the radio. The unit interfaces seamlessly with the radio and the battery box through the existing latch system without any tools. The Merlin-3™ RPA keeps your radio powered, where you need it, when you need it. No excuses.

FEATURES	BENEFITS
Uses standard, full size rechargeable battery	<ul style="list-style-type: none"> <li>• No reduction in runtime when powered from battery</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>
Uses existing battery box	<ul style="list-style-type: none"> <li>• No tools required for installation or use</li> <li>• Keeps system environmentally sealed</li> </ul>
Battery Hot Swap	<ul style="list-style-type: none"> <li>• Able to change-out battery and recharge extra batteries without power interruption to the radio or crypto-fill loss (when powered externally)</li> </ul>
Compact size and weight	<ul style="list-style-type: none"> <li>• Lightweight and easy to transport</li> <li>• Slice design enables compact integration between the radio and battery box</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 including: Solar, NATO, AC/DC, Zinc-Air batteries, BB-XX90, fuel cell and vehicle power</li> <li>• Outputs power to a variety of accessories including speakers, laptop computer and small personal electronics</li> </ul>

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The Merlin-3™ RPA monitors and displays the status of the radio, 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
Radio Connector	SC-C-179492
Environmental	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
Radio Power	26.5 VDC nominal @ 3.5 ADC (100 W max)
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
78535-100699	Merlin-3™ RPA Kit
78535-100601	Merlin-3™ RPA Power Module*
78535-102292	Input, Converter, AC/DC 120W*
78535-102203	IEC-320 Power Cord*
78535-102019	Cable, Input, SAEP*
78535-102021	Cable, Input, ZINC*
78535-101604	Case, Hard*
78535-102040	Input, Converter, AC/DC 220W
78535-102017	Cable, Input, AUTO
78535-102018	Cable, Input, NATO
78535-102020	Cable, Input, EXTN
78535-102022	Cable, Input, CLMP
78535-102024	Cable, Output, EXTN
78535-102025	Cable, Output, AUTO
78535-102026	Cable, Output, PANA
78535-102049	Solar Panel, 62 W
78535-102030	Cable, Input, Splitter

\* included in Merlin-3™ Kit

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### IRIS TECHNOLOGY

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