

# MERLIN-2™

## RADIO POWER ADAPTER

- **Augmented power solution for the following radio system:**
  - AN/PRC-117F                      - AN/PRC-138
  - AN/PSC-5D                      - AN/PRC-150



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

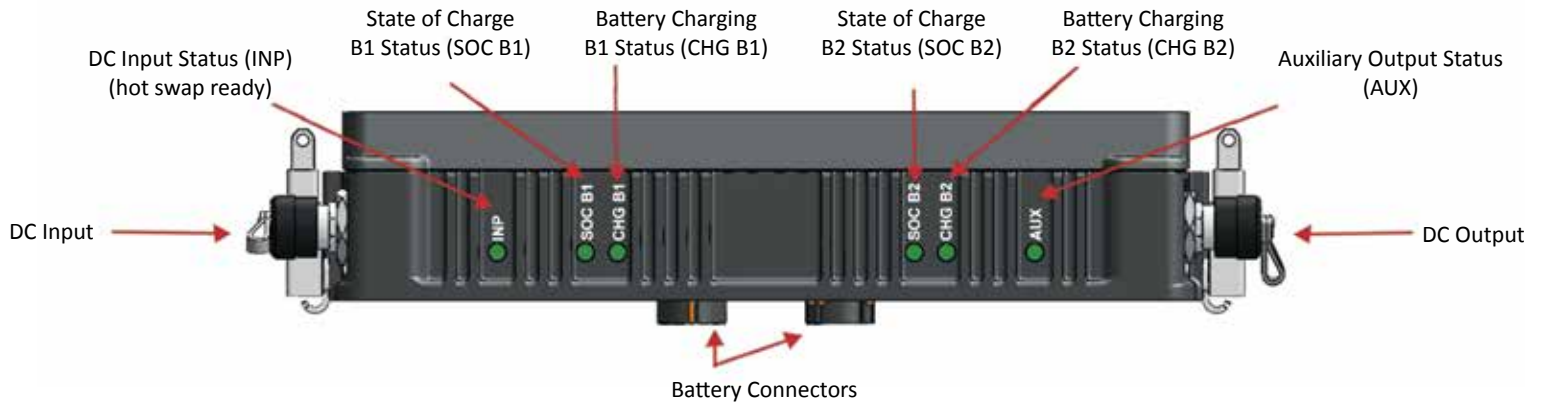
The Merlin-2™ receives input from a variety of AC and DC power sources. Its primary function is to power the radio system. The Merlin-2™ also exports significant power to run laptops, auxiliary speakers and other ancillary equipment. Additionally, it integrates with BX-XX90 batteries contained within the radio battery box, and provides efficient battery charging. In all cases when a rechargeable 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. Dedicated 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 batteries for power storage.

The Merlin-2™ is compact and rugged, allowing the radio to be used in all environmental conditions. It 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-2™ RPA keeps your radio powered, where you need it, when you need it. No excuses.

FEATURES	BENEFITS
Uses two standard, full size rechargeable batteries	<ul style="list-style-type: none"> <li>No reduction in runtime when powered from batteries</li> <li>Uses BB-2590/U (preferred) or BB-390B/U (alternate) batteries</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>
Also compatible with AN/PRC-138, AN/PRC-150 and AN/PSC-5D radios	<ul style="list-style-type: none"> <li>Multi-Band Multi-Mission Radio (MBMMR) Systems</li> <li>Only need one system for UPS capability</li> </ul>

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The Merlin-2™ 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	2.26 lbs (1.03 kg)
Size	11.17" L x 2.39" W x 3.26" H 283.7 mm x 60.7 mm x 82.8 mm
Input Connector	MS3114-E8-4P
Output Connector	MS3114-E8-4S
Radio Connector	SC-C-179492
Environmental	MIL-STD-810, MIL-STD-461
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 VDC @ 3.5 ADC nominal (100 W max)
Output Voltage	12 or 24 VDC @ 5 Watts for Powered Speakers 12–32 VDC @ 4 ADC for Aux Outputs (100 W max)
Efficiency	97%
Li Ion Battery Charge Time	3 hours typical

### COMPONENTS

IRIS PART NUMBER	PART DESCRIPTION
78535-101296	Merlin-2™ RPA Kit
78535-104901	Merlin-2™ RPA Power Module*
78535-102040	Input, Converter, AC/DC 220W*
78535-102018	Cable, Input, NATO*
78535-102203	IEC-320 Power Cord*
78535-101616	Case, Hard*
78535-102017	Cable, Input, AUTO
78535-102019	Cable, Input, SAEP
78535-102020	Cable, Input, EXTN
78535-102021	Cable, Input, ZINC
78535-102022	Cable, Input, CLMP
78535-102024	Cable, Output, EXTN
78535-102025	Cable, Output, AUTO
78535-102026	Cable, Output, PANA
78535-102028	Cable, Output, SPKR
78535-102049	Solar Panel, 62W
78535-102030	Cable, Input, Splitter

\* included in Merlin-2™ Kit

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### IRIS TECHNOLOGY

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