

MERLIN-3™

RADIO POWER ADAPTER

- Augmented power solution for the AN/PRC-117G, PRC-158, and PRC-150 radio systems



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, PRC-158, and PRC-150 radio systems. 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.

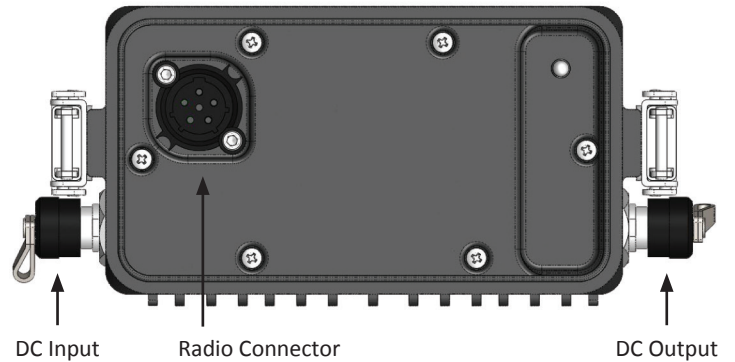
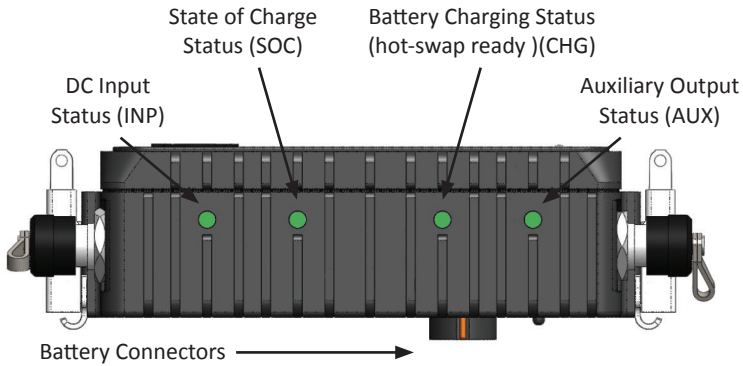
The hot-swap feature allows battery change-out and maintenance without radio interruption or crypto-fill loss. It configures automatically and requires no controls. LED indicators display the status of input power, radio power, battery health and output power availability. Peak Power Tracking algorithms 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"> • No reduction in runtime when powered from battery • Uses BB-2590/U (preferred) or BB-390B/U (alternate) battery • Programmable charging algorithms ensure future battery chemistry adoption
Uses existing battery box	<ul style="list-style-type: none"> • No tools required for installation or use • Keeps system environmentally sealed
Battery Hot Swap	<ul style="list-style-type: none"> • Able to change-out battery and recharge extra batteries without power interruption to the radio or crypto-fill loss (when powered externally)
Compact size and weight	<ul style="list-style-type: none"> • Lightweight and easy to transport • Slice design enables compact integration between the radio and battery box
Functions with a variety of input and output accessories	<ul style="list-style-type: none"> • Operates using a wide range of input sources including: Solar, NATO, AC/DC, Zinc-Air batteries, BB-XX90, fuel cell and vehicle power • Outputs power to a variety of accessories including speakers, laptop computer and small personal electronics • SMART and custom cabling options / customized kit configurations available

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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 2.1" H 193 mm x 89 mm x 54 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	9–42 VDC @ 14.5 ADC (max)
Input Power (typical)	250 W @ 24 VDC
Radio Power	26.5 VDC nominal @ 3.5 ADC (100 W max)
Output Voltage	12–28 VDC @ 4 ADC for Auxilliary Outputs 12 or 24 VDC @ 5 Watts for Powered Speakers
Efficiency	97%
Li Ion Battery Charge Time	3 hours typical

COMPONENTS

IRIS PART NUMBER	PART DESCRIPTION
107799-1	Merlin-3 Radio Power Adapter Kit
107701-1	Merlin-3 Radio Power Module*
102292	AC DC 120W Power Brick*
102203	Universal IEC AC Power Cord*
101627	Dual USB Charger*
102019	Cable, Input, SAEP*
102021	Cable, Input, ZINC*
102025-02	Output, AUTO - Cigarette Barrel (Femal socket)*
107790-1	Transport Hard Case 13.5 x 9.5 x 6.5 in*
102040	Input, Converter, AC/DC 220W
102017	Cable, Input, AUTO
102018	Cable, Input, NATO
102020	Cable, Input, EXTN
102022	Cable, Input, CLMP
102024	Cable, Output, EXTN
102025	Cable, Output, AUTO
102026	Cable, Output, PANA
102696	Solar Panel, 125W 12V Multicam
102030	Cable, Input, Splitter

* included in Merlin-3 Kit

CONTACT A SALE REP TO DISCUSS KIT, ACCESSORY, AND CUSTOM CABLING OPTIONS.

IRIS TECHNOLOGY

CAGE 78535
PO Box 15115, Irvine, CA 92623-5115
Tel 949-975-8410 Fax 949-975-8498 Toll free 866-240-9540
www.iristechnology.com

