



## Intelligent Battery and Power System (IBPS)™

### MP-08SR/FR Battery Management Module

#### Data Sheet

The IBPS MP-08SR/FR gives equipment manufacturers a very small, drop-in solution for adding autonomous battery-based power to new or existing designs. For size and weight sensitive applications, the MP-08xx battery packs, based on Lithium-Ion chemistry, provides up to five times the power, at one-quarter of the weight, of comparable lead-acid battery systems. The MP-08S can be used to create very large battery systems by clustering modules together. A single stack can support up to 760 Watt Hours of rechargeable Lithium Ion battery power.

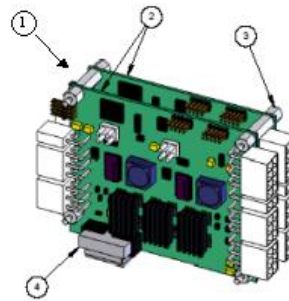


Image Shows MP-08SR:

1. Standoffs .25x.60 Hex Standoff
2. Two Module Stack
3. .25x.25 Hex Standoff
4. Module Interconnect Cable

#### Basic Data for MP-08SR/FR

- > Module Sizes MP-08FR 3.8" x 3.6" and MP-08SR 2.9" x 3.6"
- > Max Power Limits: Current 40 Amps; Power 480 Watts
- > Charge Current (Per Battery 4 Amps; Two Module Stack 16 Amps)
- > Charge DC Voltage 18-24 Volts; Charging Simultaneously Level III
- > Battery Packs Supported 1-8 Smart Packs (Standard Packs 14.4V 95 Whr Pack)
- > Standard Packs are 14.4V Nominal (Discharge Range 16.8 - 12 Volts)
- > Controller Supports Both Mini Bats and Full Bats Monitoring Software
- > RoHS Compliant; Visit OceanServer Download Page for Drawings and 3D Models

#### Optional DC-DC Converter Modules (Regulated Outputs)

- > DC-123SR provides ATX Voltages 3.3V @10A Max, 5V @10A Max, 12V @ 12A Max (-12V standard)
- > DC2U-1VR provides Regulated 19V, 24V, 28V or 48V (Jumper Selectable; 240 Watts Max)
- > DC1U-1V provides Regulated 24V or 28V (Factory Set; 75 Watts Max)

#### Additional Information

- > Supports the use of a LCD for visual verification of charge/load state

Note: The MP-08SR and MP-08FR are functionally identical

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# MP Series Applications

The MP-08SR/FR modules can output up to 480 Watts of continuous power when used with eight OceanServer 95 Watt Hour battery packs. The MP series modules offer a complete set of electronics that provide battery management and charging and optional high efficiency ATX Power supplies, DC-DC converters and Li-ion battery packs to power small portable devices or larger equipment. The MP-08xx modules are offered in two different sizes to fit virtually any mechanical design.

All of the OceanServer Battery Management modules have an RS232 communication port that provides complete power system information about all of the battery packs connected. This information includes, fuel gauge, current, voltage, amp-hours, run time to empty, time to full charge, and 20 other critical battery parameters on a pack by pack basis

Multiple MP-08xx modules can be combined into battery clusters providing plug-n-play modular building blocks that let you build very large battery power systems using small safe Li-ion battery packs. These systems are ideal for powering robots, medical equipment, portable equipment, homeland security or military devices or just about anything that needs power.



**LCD Display - A very low-power 16x2 character LCD display is available to allow for visual monitoring of IBPS and battery status in applications when a serial console is not available. User defined fields are selected from a configurable menu.**

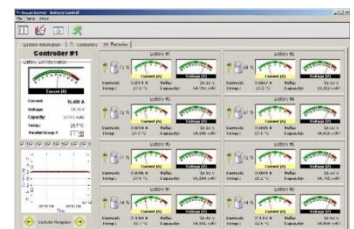
.....**Make Any Device Battery Powered**

## Battery Monitoring Software – MS Windows™

In addition to the IBPS internal operating system firmware, the base controllers ship with two programs to assist the developer and end user in monitoring and managing the IBPS sub-system.



MiniBats Software



FullBats Software

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