

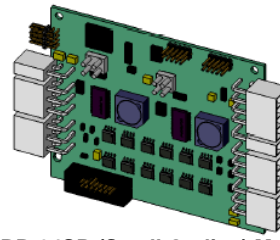


## Intelligent Battery and Power System (IBPS)™

### BB-04SR/FR Battery Management Module

#### Data Sheet

The BB-04SR/FR gives equipment manufacturers a fully engineered, drop-in RoHS solution for adding autonomous battery-based power to new or existing designs. For size and weight sensitive applications, the BB-04xx battery packs, based on Lithium-Ion chemistry, provide up to five times the power, at one-quarter of the weight, of comparable lead-acid battery systems. The BB-04xx is a cost effective way to add up to 380 Whrs of rechargeable Lithium Ion battery power to a variety of devices. The BB-04xx is ideal for low current devices and comes in two sizes.



BB-04SR (Small Outline) Model



Extended PCB

BB-04FR (Full Size) Model

#### Basic Data for BB-04SR/FR

- > Module Sizes BB-04FR 3.8" x 3.6" and BB-04SR 2.9" x 3.6"
- > Max Power Limits: Current 12 Amps; Power 160 Watts
- > Charge Current (Per Battery 4 Amps; Per Module 8 Amps)
- > Charge DC Voltage 18-24 Volts; Charging Simultaneously Level III
- > Battery Packs Supported 1-4 Smart Packs (Standard Packs 14.4V 95 Watt hour Pack)
- > Standard Packs are 14.4V Nominal (Discharge Range 16.8 - 12 Volts)
- > Controller Supports Both MiniBats and FullBats Monitoring Software
- > RoHS Compliant; Visit OceanServer Download Page for Drawings and 3D Models

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

- > DC123SR 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)

#### BB-04xx Kit Ordering Options

- > EK-04 Unregulated Power Kit - Includes BB-04FR, power supply, cables and software
- > EK-05 Regulated Power Kit - Includes BB-04FR, DC123SR, power supply, cables and software

Note: The BB-04SR and BB-04FR are functionally identical

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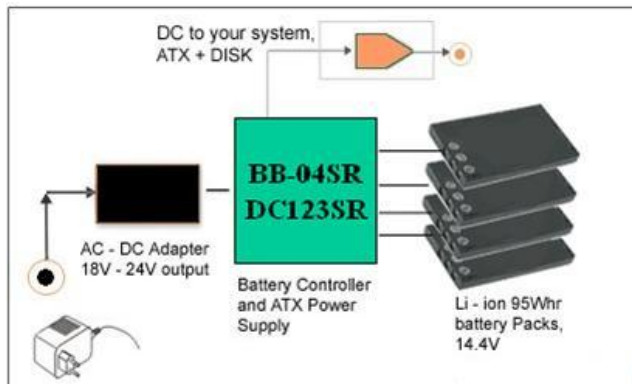
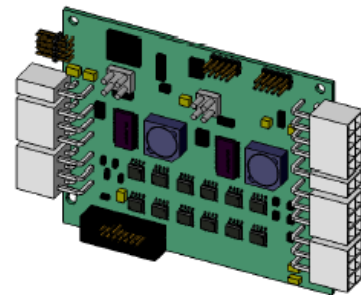
# BB Series Applications

The BB-04SR/FR modules can power a range of systems requiring up to 160 Watts of continuous power. The BB 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 embedded devices or computer systems. The BB-04xx 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

OceanServer offers both a regulated (EK-05) and unregulated (EK-04) evaluation kit for users to evaluate the BB-04xx unit. Evaluation kits included everything required to add a complete battery system to your device. In addition, OceanServer offers a variety of 95 Watt Hour Lithium Ion Rechargeable battery packs to integrated into your system (sold separately). Evaluation kits can be purchased on OceanServer's online store: <http://www.oceanserver-store.com/evaluation-kits.html>

.....Make Any Device  
Battery Powered



Example configuration powering a Mini ITX embedded system with a BB-04SR, DC123SR (ATX Converter) and 380 Watt Hours of Lithium Ion Rechargeable battery power



MiniBats Software

[www.ocean-server.com](http://www.ocean-server.com)

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