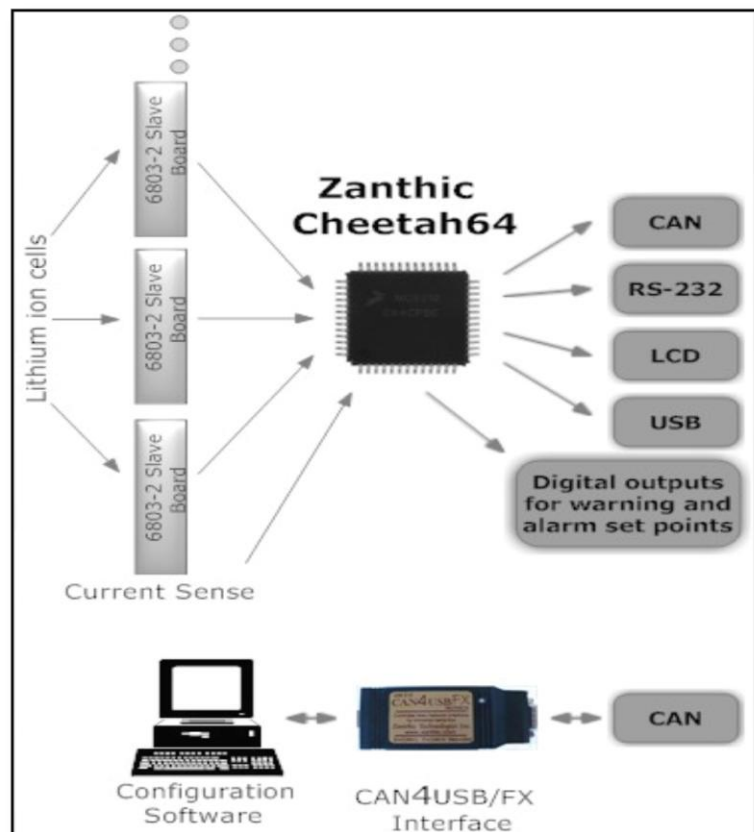


Zanthic Cheetah64 processor with 6803 BMS Firmware for Lithium Ion Battery Management

The Zanthic C64 is designed to provide a single IC solution for lithium ion cell monitoring and management by providing built in functionality with the following features:

- ✓ Data gathering functionality from Linear Technology's 6803-2 slaves with 1.5mV resolution
 - ✓ Data output through RS232, USB, LCD and CAN
 - ✓ Current sensing and coulomb counting
 - ✓ Cell balancing (top and bottom)
 - ✓ Warning and error set points
 - ✓ Up to 12 cells per 6803 slave, 16 slaves per processor and up 126 processors per CAN network
 - ✓ Configuration through easy to use Windows PC software
 - ✓ Built in Cheetah bootloader
- V 0.0.1 (preliminary)



Features

Warning and Error Monitoring:

Monitors 13 different parameters and compares to user set points to determine if there is a warning or error condition, including:

- Individual cell voltage past warning or error low or high limits
- Pack voltage past warning or error low or high limits
- Pack current charging or discharging over limits
- Over or under temperature warning or error limits
- Slave boards not responding

Warning and error conditions are reported to the configurable digital outputs, CAN bus and RS-232 data stream.

Data Output:

RS-232 output with multiple baud rates, option to convert to USB and configurable for data terminal output or 4 line by 20 character LCD display with multiple screen support.

CAN data is transmitted every second and includes all the individual cell data as well as the pack calculated data.

Current Sensing:

10 bit analog input support with configurable settings for sensor sensitivity, zero offset and pack capacity with coulomb counting algorithm and state of charge calculation.

Cell Balancing Options:

Configurable options for cell balancing that include the ability to activate passive resistor balancing at a preset voltage or when the cell voltage exceeds the pack average voltage. Also contains the ability to set the maximum number of cells to balance per slave so that only the highest are in balancing mode to reduce the amount of heat generated by the bleed off resistors. Manual control of the balancing circuitry can bleed off cell power until a configurable voltage is reached for bottom cell balancing.

Configuration Software:

Windows PC software to monitor parameters and modify all the user configuration settings.

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