

Multicell Battery Balancer Li-Ion/Li-FePO4 10mA 48Pin LQFP EP

Manufacturers	Analog Devices, Inc
Package/Case	QFP48
Product Type	Power Management ICs
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for LTC3300ILXE-1#PBF or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The LTC3300-1 is a fault-protected controller IC for transformer-based bidirectional active balancing of multicell battery stacks. All associated gate drive circuitry, precision current sensing, fault detection circuitry and a robust serial interface with built-in watchdog timer are integrated.

Each LTC3300-1 can balance up to 6 series-connected battery cells with an input common mode voltage up to 36V. Charge from any selected cell can be transferred at high efficiency to or from 12 or more adjacent cells. A unique level-shifting SPI-compatible serial interface enables multiple LTC3300-1 devices to be connected in series, without opto-couplers or isolators, allowing for balancing of every cell in a long string of series-connected batteries.

When multiple LTC3300-1 devices are connected in series they can operate simultaneously, permitting all cells in the stack to be balanced concurrently and independently. Fault protection features include readback capability, cyclic redundancy check (CRC) error detection, maximum on-time volt-second clamps, and overvoltage shutoffs.

Features
 LTC3300-1 SPI-compatible serial interface in which each chip in the stack communicates bidirectionally to the chips of the same type above and below it via currents. There is no limit to the stack height. Large common mode voltage differences are handled by each LTC3300-1. The microprocessor in the BMS system communicates ONLY with the bottom chip in the stack and subsequently all of the chips use the same fixed internal address.
 LTC3300-2 SPI-compatible serial interface in which each chip has a unique 5-bit pin-strapped address. The microprocessor in the BMS system communicates directly with every chip in the stack with common mode voltage differences handled by digital isolators or opto-couplers. Because of the 5-bit address, the stack height is limited to 32 LTC3300-2 ICs or 192 cells (~800V). There are 5 pins which have a different assignment, all of them serial interface related.

Features

Bidirectional Synchronous Flyback Balancing of Up to 6 Li-Ion or LiFePO4 Cells in Series

Up to 10A Balancing Current (Set by Externals)

Integrates Seamlessly with the LTC680x Family of Multicell Battery Stack Monitors

Bidirectional Architecture Minimizes Balancing Time and Power Dissipation

Up to 92% Charge Transfer Efficiency

Stackable Architecture Enables >1000V Systems

Uses Simple 2-Winding Transformers

1MHz Daisy-Chainable Serial Interface with 4-Bit CRC Packet Error Checking

High Noise Margin Serial Communication

Numerous Fault Protection Features

48-Lead Exposed Pad QFN and LQFP Packages

AEC-Q100 Qualified for Automotive Applications

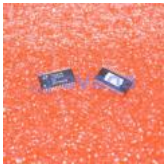
Application

Electric Vehicles/Plug-in HEVs

High Power UPS/Grid Energy Storage Systems

General Purpose Multicell Battery Stacks

Related Products



[LT3763EFE](#)

Analog Devices, Inc
TSSOP28



[LT1038CK](#)

Analog Devices, Inc
TO-3



[LTC4417IUF](#)

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QFN-24



[LTC3440EMS](#)

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MSOP10



[LTC1966CMS8#PBF](#)

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28-WFQFN