

18-Cell Battery Monitor with Daisy Chain Interface

Manufacturers	Analog Devices, Inc
Package/Case	64-Lead LQFP (10mm x 10mm w/ EP)
Product Type	Power Management ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for LTC6813HLWE-1#3ZZTRPBF or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com). We will contact you in 12 hours.

[RFQ](#)

General Description

The LTC6813-1 is a multicell battery stack monitor that measures up to 18 series connected battery cells with a total measurement error of less than 2.2mV. The cell measurement range of 0V to 5V makes the LTC6813-1 suitable for most battery chemistries. All 18 cells can be measured in 290µs, and lower data acquisition rates can be selected for high noise reduction.

Multiple LTC6813-1 devices can be connected in series, permitting simultaneous cell monitoring of long, high voltage battery strings. Each LTC6813-1 has an isoSPI interface for high speed, RF immune, long distance communications. Multiple devices are connected in a daisy chain with one host processor connection for all devices. This daisy chain can be operated bidirectionally, ensuring communication integrity, even in the event of a fault along the communication path.

The LTC6813-1 can be powered directly from the battery stack or from an isolated supply. The LTC6813-1 includes passive balancing for each cell, with individual PWM duty cycle control for each cell. Other features include an onboard 5V regulator, nine general purpose I/O lines and a sleep mode, where current consumption is reduced to 6µA.

Features

AEC-Q100 Qualified for Automotive Applications

Measures Up to 18 Battery Cells in Series

2.2mV Maximum Total Measurement Error

Stackable Architecture for High Voltage Systems

Built-In isoSPI™ Interface

1Mb Isolated Serial Communications

Uses a Single Twisted Pair, Up to 100 Meters

Low EMI Susceptibility and Emissions

Bidirectional for Broken Wire Protection

290µs to Measure All Cells in a System

Synchronized Voltage and Current Measurement

16-Bit Delta-Sigma ADC with Programmable 3rd Order Noise Filter

Engineered for ISO 26262-Compliant Systems

Passive Cell Balancing Up to 200mA (Max) with Programmable Pulse-Width Modulation

9 General Purpose Digital I/O or Analog Inputs

Temperature or Other Sensor Inputs

Configurable as an I2C or SPI Master

6µA Sleep Mode Supply Current

64-Lead eLQFP Package

Application

Electric and Hybrid Electric Vehicles

Backup Battery Systems

Grid Energy Storage

High Power Portable Equipment

Related Products



[LT3763EFE](#)

Analog Devices, Inc
TSSOP28



[LT1038CK](#)

Analog Devices, Inc
TO-3



[LTC4417IUF](#)

Analog Devices, Inc
QFN-24



[LTC3440EMS](#)

Analog Devices, Inc
MSOP10



[LTC1966CMS8#PBF](#)

Analog Devices, Inc
MSOP-8P



[LTC2990IMS#PBF](#)

Analog Devices, Inc
10MSOP



[LTM8045EY#PBF](#)

Analog Devices, Inc
BGA40



[LT4295IUFD#PBF](#)

Analog Devices, Inc
28-WFQFN