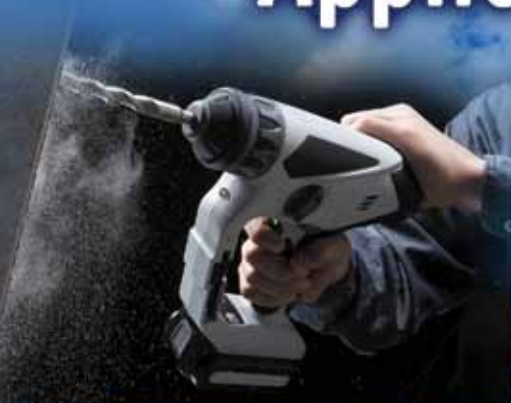


INTELLIGENT **POWER²**[®]

for

Industrial/Automotive Applications



O₂Micro
Breaking Life into Mobility

Industrial/Automotive Product Guide

Part Number	Description	Cell(s)	Package(s) Available (Lead-free)	Page No.
Analog Front End (AFE)				
OZ9350	AFE with Cell Balance and I ² C Interface	4-7 Cells	16 QFN, SOP	5
Battery Management Units (BMUs) and Gauges (with cell balance)				
OZ890	High Power BMU	5-13 Cells	64 LQFP	6
OZ8920	High Power BMU	5-8 Cells	48 LQFP	7
OZ8930	High Power BMU	3-6 Cells	24 QFN, TSSOP	8
OZ8940	High Power BMU	6-12 Cells	32 LQFP	9
OZ9310	SBS Battery Gauge and Protection	3-4 Cells	40 QFN, 38 TSSOP	10
OZ9320/ OZ9324	SBS Battery Gauge and Protection	2 Cells	24 TSSOP/ 30 TSSOP	11
OZ9313	Battery Gauge for High Power BMU	Any Cells	30 TSSOP	12
Cell Monitors, BMUs and Gauges (without cell balance)				
OZ8800	Monitor and Secondary Protection	3-7 Cells	10 DFN	13
OZ8806	Monitor + High Accuracy Coulomb Counter	1-2 Cells	10 QFN	14
OZ8952	Low Cost Li-Ion BMU	3-4 Cells	16 SOP, SSOP	15
OZ8953	Low Cost Li-Ion BMU	5 Cells	16 SOP, SSOP	16
OZ8955	Low Cost Li-Ion BMU	3-5 Cells	16 SOP, SSOP	17
Hybrid Electric Vehicle (HEV)/Electric Vehicle (EV)				
OZ8902	Stackable High Power BMU with Cell Balance	12 Cells	48 LQFP	18
DC/DC Converter Controllers				
OZ8033	3A Low Dropout Linear Regulator		8 E-SOP	19
OZ8116/ OZ8138	Single/Dual Ultra High Efficiency DC/DC		16 QFN/ 24 QFN	20

Industrial/Automotive Applications

Mission Statement

Lead the industry as the supplier of highly integrated and efficient Industrial and Automotive solutions for battery and power management in electronic products for the Computer, Consumer, Industrial, Automotive, and Communications markets worldwide.

PRODUCTS

O₂Micro's *Intelligent Power for Industrial and Automotive Application* products cross three IC categories – **Battery**, **Power Management**, and **Lighting**.



Battery Management Unit (BMU) products are highly integrated, mixed signal ICs designed with **Cool Battery Technology**[®]. BMUs provide next generation, safe battery management.

DC/DC Controllers are **Power Management** ICs. Equipped with **Constant-Ripple-Current**[®] technology, they are specially developed to design high efficiency power supplies.

Lighting LED Drivers, part of the *Intelligent Lighting* family of ICs, include patented **Free Dimming**[™] technology for step dimming and continuous dimming control.



OZ8940

FEATURES

- High power BMU
- Highly integrated battery pack monitor and protection
 - Li-Ion and Li-Polymer (Co, Mn and FeP chemistries), NiMH and Fuel cells
 - 6-12 cells standalone
 - 6-12 voltage channels, 2 external temperature channels
 - Fully programmable battery protection parameters
 - Built-in protection includes: over-voltage, under-voltage, over-current, short circuit, over-temperature, under-temperature, cell unbalance, and permanent failure
- Internal cell balancing
- Low power consumption

GENERAL DESCRIPTION

OZ8940 is a highly integrated IC for battery pack protection and monitoring, used to manage Li-Ion and Li-Polymer packs with 6-12 series cells.

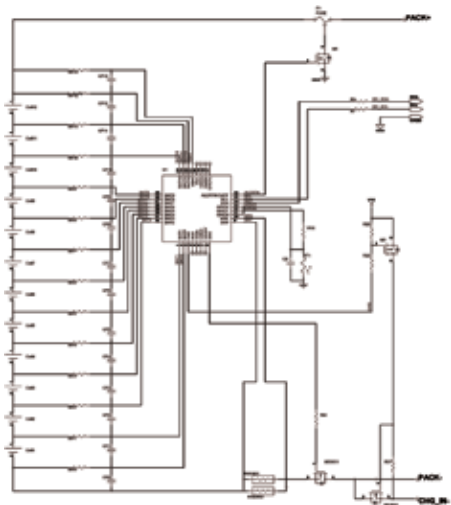
With an integrated multi-channel 12-bit ADC, OZ8940 continuously monitors each cell voltage and pack temperature to provide maximum battery safety. It also provides a Permanent Failure function that will automatically assert a signal to blow an external fuse to open the power line or to signal an alarm to the user.

OZ8940 may be configured to work in standalone “hardware” mode or with a microcontroller in “software” mode by configuring the EEPROM.

APPLICATIONS

- Electric Bicycle
- Electric Motorcycle
- Power Tool
- UPS Backup Battery
- Electric Vehicle (EV/HEV/PHEV)
- Fuel Cell

APPLICATION DIAGRAM



U.S. Patent #'s 6,744,394; 7,081,737; 7,161,520; 7,196,652; 7,352,155; 7,466,104; 7,629,771; 7,642,750; 7,696,725; 7,701,177; 7,821,229; 8,004,246; and more patents pending.