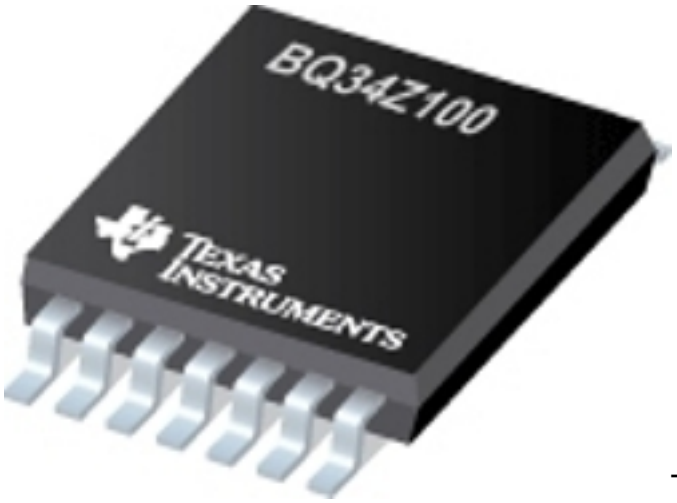
# First Multi-Cell, Multi-Chemistry Battery Gas Gauge for Lithium Batteries




Texas Instruments Incorporated (TI) today introduced the first in a family of multi-chemistry, multi-cell battery management gas gauge circuits with TI's proprietary Impedance Track™ capacity measurement technology. The bq34z100 power management chip is the first gas gauge in the industry to support a wide range of lithium-ion and lithium iron phosphate chemistries in 2- to 16-cell battery packs, extending battery run-time in applications like medical instruments, power tools, e-bikes and uninterruptible power supplies (UPS). TI also plans to introduce new gauges this year to support lead acid, nickel cadmium and nickel metal hydride chemistries. For more information, samples and evaluation module, visit: www.ti.com/bq34z100-pr [1].

**Highest degree of capacity measurement**

Today's multi-cell lithium battery designs in portable industrial and medical equipment need a more accurate way to measure remaining battery capacity. The bq34z100 battery gauge leverages Impedance Track technology, which uses charge voltage measurements, battery characteristics and properties to determine a battery's state-of-health and maintain up to a 94-percent accurate capacity measurement for the entire life of the battery. The circuit also works independently of series-cell configuration, and can reduce power consumption through an external voltage translation circuit.

**Key features and benefits of the bq34z100**:

• First multi-cell gauge to support Li-Ion and LiFePO4 battery chemistries, with future versions supporting lead acid, NiCd and NiMH.

• Highly accurate battery capacity measurement with TI's Impedance Track proprietary algorithm.

• Tools to speed the design include bq34z100EVM evaluation module [2], software [2]and MathCAD chemistry selection tool [2].

www.ti.com [3]

Posted by Sara Cohen, Editorial Intern

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**Links:**
[1] http://www.ti.com/product/bq34z100?DCMP=analog_power_mr&HQS=bq34z100-pr
[2] http://www.ti.com/tool/bq34z100evm
[3] http://www.ti.com/