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Highly Integrated 36V Buck Battery Charger Provides Seamless Backup Power

MILPITAS, CA & NORWOOD, MA – July 18, 2017 – Analog Devices, Inc., which recently acquired Linear Technology Corporation, introduces the [LTC4091](#), a complete lithium-ion battery backup management system for 3.45V to 4.45V supply rails that must be kept active during a long duration main power failure. The LTC4091 employs a 36V monolithic buck converter with adaptive output control to provide power to a system load and enable high efficiency battery charging from the buck output. When external power is available, the device can provide up to 2.5A of total output current and up to 1.5A of charge current for single-cell 4.1V or 4.2V Li-Ion batteries. If the primary input source fails and can no longer power the load, the LTC4091 provides up to 4A to the system output load from the backup Li-Ion battery via an internal ideal diode, and unlimited current if an external ideal diode transistor is used. To protect sensitive downstream loads, the maximum output load voltage is 4.45V. The device's PowerPath™ control provides a seamless switchover between input power and backup power during a power fail event, and enables reverse blocking with a shorted input. Typical applications for the LTC4091 include fleet and asset tracking, automotive GPS data loggers and telematics systems, security systems, communications and industrial backup systems.

The LTC4091 includes 60V absolute maximum input overvoltage protection, making the IC immune to high input voltage transients. The LTC4091's battery charger provides two pin-selectable charge voltages optimized for Li-Ion battery backup applications: the standard 4.2V, and a 4.1V option that trades off battery run time for increased charge/discharge cycle life. Other features include soft start and frequency foldback to control output current during start-up and overload, as well as trickle charge, automatic recharge, low battery precharge, charge timer termination, thermal regulation and a thermistor pin for temperature-qualified charging.

The LTC4091 is housed in a low profile (0.75mm) 22-pin 3mm x 6mm DFN package with a backside metal pad for excellent thermal performance. The device operates from –40°C to

125°C in both E and I grades. 1,000-piece pricing starts at \$3.25 each for the E grade and devices are in stock. For more information, visit www.linear.com/product/LTC4091.

Photo Caption: 36V Power Backup Manager and Li-Ion Battery Charger

Summary of Features: LTC4091

- Seamless Transition Between Primary Power Source & Li-Ion Battery
- 2A High Voltage Step-Down Regulator with Adaptive Output Control
- Internal 75mΩ Ideal Diode Plus Optional External Ideal Diode Controller Provides Low Loss PowerPath™ When Primary Supply Not Present
- Wide Input Voltage Range: 6V to 36V (60V Abs Max)
- 4.45V Max Output Voltage
- Full Featured Li-Ion Battery Charger
- Pin-Selectable 4.1V & 4.2V Charge Voltage Options
- Thermally Enhanced, Low Profile (0.75mm) 3mm × 6mm 22-Pin DFN Package

Pricing shown is for budgetary use only and may differ due to local duties, taxes, fees and exchange rates.

Analog Devices just got more Powerful. On March 10, Analog Devices acquired Linear Technology, creating the premier high-performance analog company. More info at <http://lt.linear.com/07c>

About Analog Devices

Analog Devices (NASDAQ: ADI) is the leading global high-performance analog technology company dedicated to solving the toughest engineering challenges. We enable our customers to interpret the world around us by intelligently bridging the physical and digital with unmatched technologies that sense, measure, power, connect and interpret. Visit <http://www.analog.com>

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