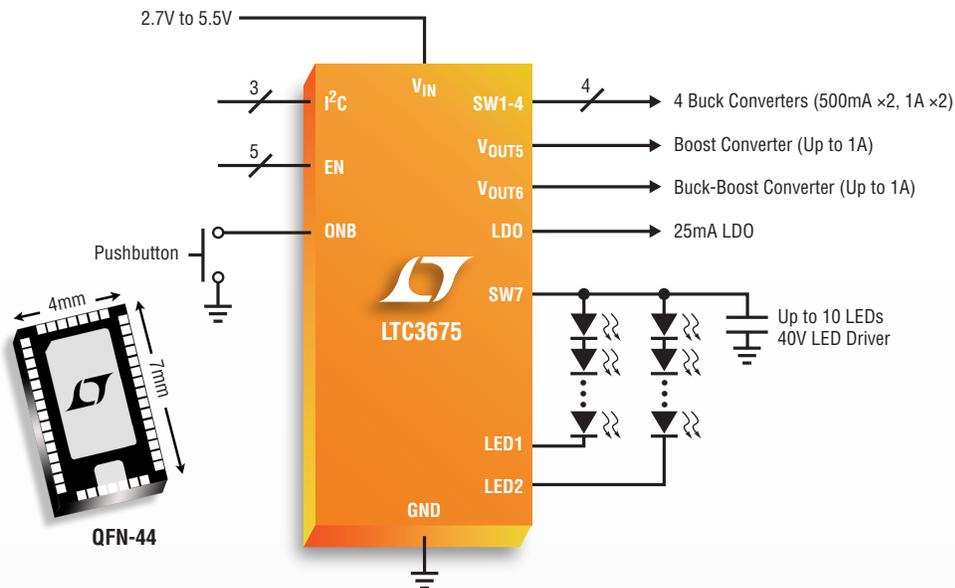


Configurable 7-Channel High Power PMIC



4 Parallelable Bucks + Buck-Boost + Boost + LDO + LED Driver
+ I²C Control + Pushbutton Control = Complete, High Power and Flexible Power Management Solution

The LTC[®]3675 is a highly integrated general-purpose power management solution for high power single cell Lithium-Ion/Polymer systems. The device features seven independent rails plus LED driver, with I²C control, flexible sequencing and fault monitoring in a compact 28mm² QFN package. The device's seven channels include four high current, high efficiency step-down regulators, a high current/high efficiency buck-boost regulator, a high current/high efficiency boost regulator and one always-on 25mA LDO.

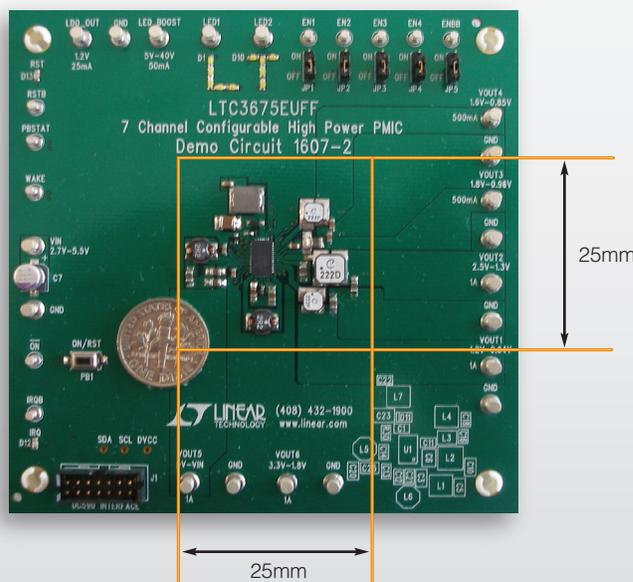
Features

- Four Monolithic Synchronous Buck DC/DCs (1A/1A/500mA/500mA)
- Adjacent Buck DC/DCs Can Be Paralleled to Deliver Up to 2x Current with a Single Inductor
- Independent 1A Buck-Boost and 1A Boost DC/DCs
- Dual String I²C-Controlled LED Driver
- Always-On 25mA LDO
- I²C Programmable Output Voltage, Operating Mode and Switch Node Slew Rate for All DC/DCs
- I²C Read Back of DC/DC, LED Driver, Fault Status
- I²C Programmable V_{IN} and Die Temperature Warnings
- Maskable Interrupts to Report DC/DC Errors, Input Undervoltage and Die Temperature Warnings
- Pushbutton ON/OFF/RESET
- Low Quiescent Current: 16μA (All DC/DCs Off)
- Thermally Enhanced, 4mm x 7mm x 0.75mm 44-Lead QFN Package

Applications

- High Power (5W to 10W) Single Cell Li-Ion/Polymer Applications
- Portable Industrial Applications, Handy Terminals, Portable Instruments
- Multioutput Low Voltage Power Supplies

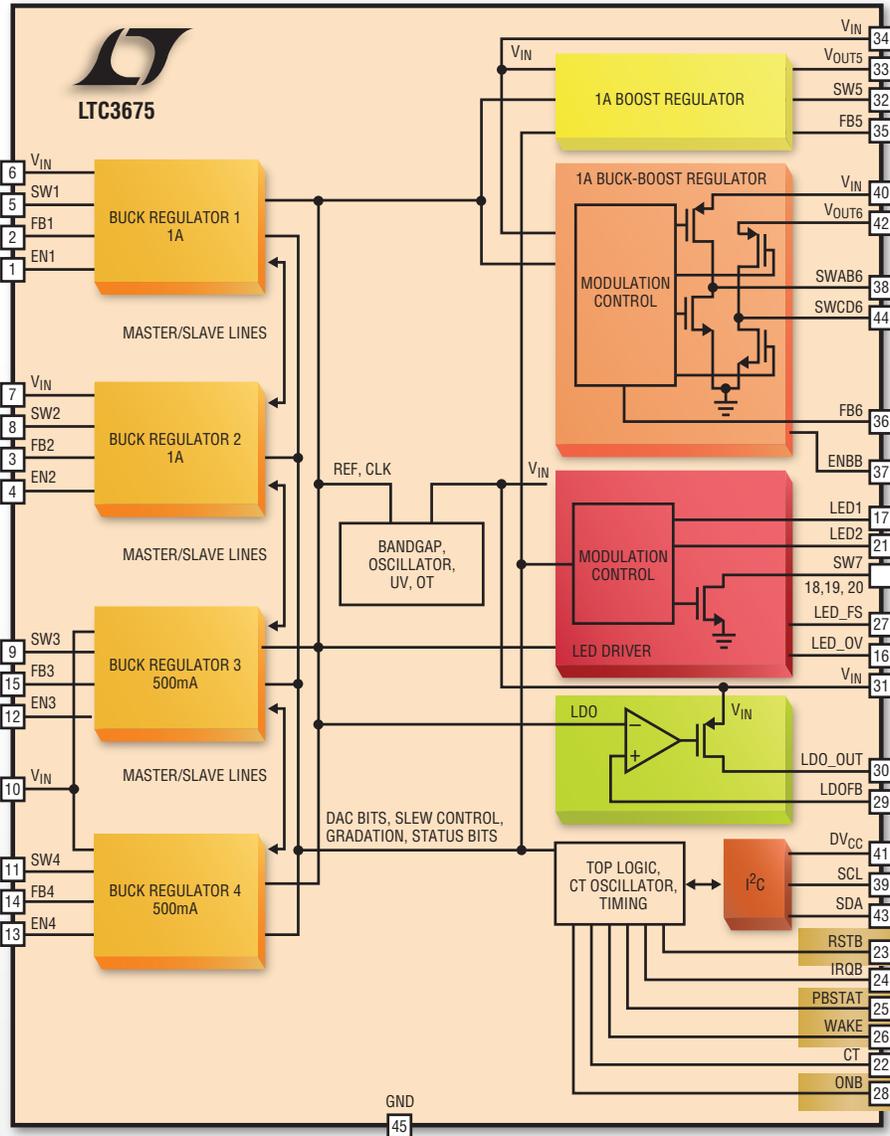
LTC3675 Demo Board



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4 Configurable Sync Buck Regulators

Adjacent Bucks Can Be Paralleled to Deliver Up to 2x Current with a Single Inductor.



1A Sync Boost Regulator
For High Efficiency 5V I/O Rails.

1A Sync Buck-Boost Regulator
Typically For High Efficiency 3.3V Rails.

40V Dual String LED Driver
Can Regulate Up to 25mA of Current Through Two LED Strings with Up to 10 LEDs Each. Also Configurable as a High Voltage Boost Converter Up to 40V Output.

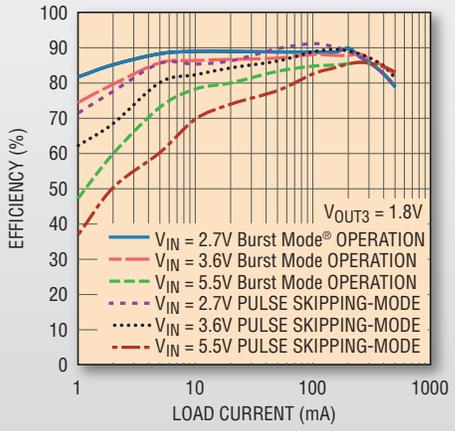
Always-On LDO
For Keep-Alive or RTC Rails.

Pushbutton Control
ON/OFF/RESET Control and a Power-On Reset Output Provide Flexible and Reliable Power-Up Sequencing.

I²C Control
Programmable DC/DC Enables, Output Voltages, Switch Slew Rates, Operating Modes, Alarm Levels for Low V_{IN} and High Die Temperature, Plus LED Driver's LED Enable, 60dB Brightness Control and Up/Down Gradation.

Switching Regulator Slew Rate Control
Reduces Radiated EMI and Conducted Supply Noise While Maintaining High Efficiency.

500mA Buck Regulators, Efficiency vs Load



High Voltage Boost Regulator, Efficiency vs Load

