



Eight-Channel Configurable 1A Buck DC/DCs Offer Flexibility, Up to 94% Efficiency & $\pm 1\%$ Accuracy for Multi-Rail Systems

MILPITAS, CA – August 10, 2016 – Linear Technology Corporation announces the [LTC3374A](#), a highly integrated general-purpose power management solution for systems requiring multiple low voltage power supplies. The device can be configured to provide 2 to 8 independent regulated outputs with 15 possible output current configurations. Such flexibility makes the LTC3374A ideally suited for a wide variety of multichannel applications, including industrial, automotive and communications systems. The LTC3374A has a peak efficiency of 94%, one output with $\pm 1\%$ voltage accuracy and up to seven additional outputs with $\pm 2\%$ accuracy. A power good function indicates that the output is in regulation with $\pm 1\%$ accuracy and provides overvoltage indication. A temperature monitor with $\pm 3^\circ\text{C}$ accuracy is also included.

The LTC3374A features eight independent 1A channels with flexible sequencing and fault monitoring. Each channel is a high efficiency synchronous step-down regulator with its own independent 2.25V to 5.5V input supply and an output voltage range of 0.8V to V_{IN} . Up to 4 adjacent buck regulators can be combined in parallel to provide up to 4A of output current with a single shared inductor by connecting their V_{IN} pins together, their SW pins together, and by connecting the slave bucks' FB pin(s) to the input supply. In this way, 15 different output configurations are possible.

The LTC3374A's switching regulators operate in one of two modes: Burst Mode[®] operation (power-up default mode) for higher efficiency at light loads, and forced continuous pulse width modulation (PWM) mode for lower noise at light loads. All of the switching regulators are internally compensated and need only external feedback resistors to set the output voltage. The bucks have input current limiting, soft-start to limit inrush current during start-up, and short-circuit protection. The device has a programmable and synchronizable 1MHz to 3MHz oscillator with a 2MHz default switching frequency. The quiescent current with all DC/DCs off is zero. Other features include a die temperature monitor output (readable via an analog voltage

on the TEMP pin) which indicates internal die temperature, and an over-temperature (OT) function, which disables the bucks at high die temperatures.

The LTC3374A is available in a thermally enhanced, low profile (0.75mm), 38-pin TSSOP and 5mm x 7mm QFN packages. E-and I- grades are specified over an operating junction temperature range of -40°C to 125°C , and the H-grade features operation from -40°C to 150°C . Devices are in stock, and 1000-piece pricing starts at \$4.65 each for the E-grade. For more information, visit www.linear.com/product/LTC3374A.


Summary of Features: LTC3374A

- 8-Channel 1A Independent Step-Down DC/DCs
- Master-Slave Configurable for up to 4A of Output Current with a Single Inductor
- Independent V_{IN} Supplies for Each DC/DC (2.25V to 5.5V)
- All DC/DCs Have 0.8V to V_{IN} Output Range
- $\pm 1\%$ V_{FB} Accuracy, $\pm 1\%$ PGOOD Accuracy (98% Threshold) for Buck 1 (1A to 4A)
- Precision Enable Pin Thresholds for Autonomous Sequencing
- 1MHz to 3MHz Programmable/Synchronizable Oscillator Frequency (2MHz Default)
- Die Temperature Monitor Output
- Thermally Enhanced 38-Lead QFN 5mm \times 7mm & TSSOP Packages
- Pin-Compatible with LTC3374

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

About Linear Technology

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for over three decades. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear Technology produces power management, data conversion, signal conditioning, RF and interface ICs, μ Module[®] subsystems, and wireless sensor network products. For more information, visit www.linear.com

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