



Dual 13A μ Module Regulator with Digital Interface for Remote Monitoring & Control of Power

MILPITAS, CA – September 23, 2013 – Linear Technology Corporation announces the [LTM4676](#), a dual 13A or single 26A μ Module[®] (micromodule) step-down DC/DC regulator with a serial digital interface. The interface enables system designers and remote operators to command and supervise a system's power condition and consumption. The ability to digitally change power supply parameters reduces time-to-market and down time by eliminating what would have historically required physical hardware, circuit, and/or system bill-of-material modifications. The LTM4676 simplifies system characterization, optimization and data mining during prototyping, deployment and field operation.

Target applications include optical transport systems, datacom and telecom switches and routers, industrial test equipment, robotics, RAID and enterprise systems where the cost of electrical utilities, cooling and maintenance are critical.

In addition to delivering power to a point-of-load, the LTM4676 features configurability and telemetry-monitoring of power and power management parameters over PMBus— an open standard I²C-based digital serial interface protocol. The LTM4676's 2-wire serial interface allows outputs to be margined, tuned and ramped up and down at programmable slew rates with sequencing delay times. Input and output currents and voltages, output power, temperature, uptime and peak values are readable. The device is comprised of fast, dual analog control loops, precision mixed-signal circuitry, EEPROM, power MOSFETs, inductors and supporting components housed in a 16 x 16 x 5.01mm BGA (ball grid array) package.

To evaluate the performance of the LTM4676, the [LTpowerPlay™](#) GUI (graphic user interface, free to download), USB-to-PMBus converter and [demo kits](#) are available.

With +/-1% maximum DC output error over temperature, +/-2.5% current read back accuracy, integrated 16-bit delta-sigma ADC and EEPROM, the LTM4676 combines best-in-class analog switching regulator performance with precision mixed signal data acquisition. The

LTM4676 operates from a 4.5V to 26.5V input supply and steps down V_{IN} to two outputs ranging from 0.5V up to 5.4V. Two channels can current share to provide up to 26A (i.e., 13A+13A as one output). As many as four LTM4676 devices can be multiphased to share current up to 100A output. At start-up, output voltages, switching frequency and channel phase angle assignments can be set by pin-strapping resistors.

The LTM4676 internal operating temperature range is from -40°C to 125°C. 1,000-piece price is \$33.55 each. For more information, visit www.linear.com/product/LTM4676

Photo Caption: Dual 13A μ Module[®] Regulator with Digital Serial Interface

Summary of Features: LTM4676

- Dual 13A or Single 26A μ Module Regulator with Fast Analog Control Loops & Digital Interface for Remote Power System Management
- +/-2.5% Current Read Back Accuracy, +/-1% Maximum DC Output Voltage Error Over Temperature
- 16 x 16 x 5.01mm BGA Package, Includes Inductors, Power MOSFETs, DC/DC Converter, Data Acquisition System & EEPROM

Readable Data:

- o Temperature Input & Output Voltages, Input & Output Currents
- o Peak Values, Faults & Warnings
- o Fault Log Record Report

Writable Data:

- o Output Voltage, Voltage Sequencing & Margining
- o Digital Soft-Start/Stop Ramp
- o Overvoltage, Undervoltage, Overtemperature, Warning & Fault Limits, Switching Frequency & Phasing

Hyperlinks:

Demo kit:


http://www.linear.com/demo?demo_board=&part_number=LTM4676

LTpowerPlay:

<http://www.linear.com/designtools/software/#LTPowerPlay>

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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