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## Press Release

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# Analog Devices' High-Power $\mu$ Module Regulator Eases Data Center Cooling Requirements

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Analog Devices, Inc. (ADI) today expanded its suite of Power by Linear™  $\mu$ Module® regulators with the LTM4700 step-down DC/DC power regulator, which combines the highest power in its class with the energy efficient performance needed to reduce data center infrastructure cooling requirements. Configured as dual 50A or single 100A configuration, the new power  $\mu$ Module's innovative package technology enables an increasing server density and boosts data center throughput and computational power with minimal impact on system size and cooling costs. The LTM4700  $\mu$ Module's highly integrated, component-on-package design includes onboard memory, data conversion circuitry and digital interface, reducing it to nearly half the size of competing devices. Applications include cloud computing, high-speed computing and optical networking systems, communication infrastructure, and PCIe boards, as well as medical, industrial, and test and measurement equipment.



- Learn more about ADI's  $\mu$ Module regulators:  
<https://www.analog.com/en/products/power-management/switching-regulators/umodule-regulators.html>
- View the LTM4700 product page, download the data sheet, order samples and evaluation boards: <https://www.analog.com/LTM4700>
- Watch a video about the LTM4700  $\mu$ Module regulator:  
<https://www.analog.com/en/education/education-library/videos/5838133750001.html>

"Efficient cooling is a crucial issue affecting data centers globally," said Chris Mann, VP of Power Products, Analog Devices. "Growing demand for higher-throughput, cloud-based computing services is placing a strain on current data center infrastructures and requires a new approach to thermal dissipation. The LTM4700 effectively addresses this issue, allowing data center operators to increase the density – and performance – of their servers."

The LTM4700 operates at 73°C using innovative heatsink packaging technology, compared to modular solutions from competitors which typically run at 90°C. The LTM4700 can deliver full 100A at 12V<sub>IN</sub> to 0.8V<sub>OUT</sub> with 200 LFM air flow up to 70°C ambient temperature. Peak conversion efficiency at 12V<sub>IN</sub> to 0.8V<sub>OUT</sub> reaches 90%. The  $\mu$ Module's architecture also enables system designers to combine up to eight

devices, delivering up to 800A of load current to meet the higher power needs of data center processors, including FPGAs, ASICs, GPUs and microcontrollers.

The LTM4700 operates from a 4.5V to 16V input range, with output voltages digitally controlled from 0.5V to 1.8V. Integrated A/D converters, D/A converters and EEPROM enable users to digitally monitor, record and control power parameters using an I<sup>2</sup>C PMBus interface. Switching frequency is synchronized to an external clock from 200kHz to 1MHz for noise-sensitive applications. The LTM4700 also has self- and load-protection features against fault conditions such as over- and undervoltage, overcurrent and overtemperature.

μModule Regulators Designed to Meet Industry Power Challenges

Analog Devices' μModule regulators address industry challenges associated with limited power supply design industry expertise, reduced PCB area, thermal design constraints, and increased time-to-market pressures. The ADI μModule regulators are complete component-in-package power management solutions with integrated DC/DC controllers, power transistors, input and output capacitors, compensation components, and inductors within a compact, surface-mount BGA or LGA package. μModule power products support functions such as step-down (buck), step-down and step-up (buck-boost), battery charger, isolated converter, and LED driver. For more information, visit [www.analog.com/LTM4700](http://www.analog.com/LTM4700).

Summary of Features: LTM4700

- Dual 50A or Single 100A Digitally Adjustable Outputs with Digital Interface for Control, Compensation and Monitoring
- Wide Input Voltage: 4.5V to 16V
- Output Voltage Range: 0.5V to 1.8V
- ~90% Full Load Efficiency from 12V<sub>IN</sub> to 1V<sub>OUT</sub> at 100A
- ±0.5% Maximum DC Output Error Over Temperature

Pricing & Availability

Product	Production Availability	Price Each per 1,000	Package
LTM4700	Now	Starts at \$97.26	15mm x 22mm x 7.87mm BGA Package

About Analog Devices

Analog Devices (Nasdaq: ADI) is a 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>

Read and subscribe to Analog Dialogue, ADI's monthly technical journal, at: <http://www.analog.com/analog-dialogue>

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