



New Product Announcement

Now at Mouser: Analog Devices Power by Linear 72V LTC7821 Hybrid Buck Controllers Reduce Solution Size by 50%

May 14, 2018 – [Mouser Electronics](#), Inc., the industry's leading New Product Introduction (NPI) distributor with the widest selection of semiconductors and electronic components, is now stocking the Power by Linear™ [LTC7821](#) hybrid step-down synchronous controllers from [Analog Devices](#). The LTC7821 devices are the industry's first to merge a switched capacitor circuit with a synchronous step-down controller, enabling up to a 50-percent reduction in DC/DC converter solution size compared to traditional step-down solutions.

The [Analog Devices LTC7821](#) step-down controllers, available from Mouser Electronics, operate over a wide input voltage range of 10 V to 72 V and can produce an output voltage from 0.9 V to 33.5 V. In a typical 48 V – 12 V, 20 A application, engineers can attain an efficiency of 97 percent with the LTC7821 switching at 500 kHz—three times higher switching frequency than traditional step-down solutions.

The devices' higher switching frequencies enable the use of smaller inductances, leading to faster transient response and smaller solution size, while the soft-switched front end delivers low EMI and reduced MOSFET stress. Boasting extensive protection features, the LTC7821 controllers pre-balance capacitors during startup to prevent the inrush current associated with traditional switched capacitor circuits. The controllers' sense resistor offers overcurrent protection, while system voltage, current and temperature are monitored for faults.

Featuring a proprietary architecture that combines a soft-switching charge pump topology with a synchronous step-down converter, the LTC7821 controllers provide superior electromagnetic interference (EMI) performance and efficiency when compared with traditional switching architectures. Operable over an input voltage range of 10 V to 72 V, the LTC7821 controllers can generate an output voltage range of 0.9 V to 33.5 V with ± 1 percent accuracy.

The LTC7821 controllers' powerful 1-Ohm N-channel MOSFET gate drivers maximize efficiency and can drive multiple MOSFETs in parallel for higher power applications. With its current mode control architecture, multiple LTC7821 devices can be operated in a parallel, multiphase configuration with excellent current sharing to enable much higher power applications. The LTC7821 step-down controllers are suitable for next-generation non-isolated intermediate bus applications in [datacom](#) and telecom. The controllers are also ideal for high current distributed power systems and emerging 48 V [automotive](#) systems.

To learn more, visit www.mouser.com/adi-ltc7821-hybrid-controllers.

With its broad product line and unsurpassed customer service, Mouser strives to empower innovation among design engineers and buyers by delivering advanced technologies. Mouser stocks the world's widest selection of the latest semiconductors and electronic components for the newest design projects. Mouser Electronics' website is continually updated and offers advanced search methods to help customers quickly locate inventory. Mouser.com also houses data sheets, supplier-specific reference designs, application notes, technical design information, and engineering tools.

About Mouser Electronics

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About Analog Devices, Inc.

Analog Devices 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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