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Exar's High Power COT Switching Controller Delivers 1% Output Accuracy

XRP6141 Simplifies System Designs While Increasing Design Headroom

FREMONT, Calif., Jan. 21, 2014 /PRNewswire/ -- Exar Corporation (NYSE: EXAR), a leading supplier of high performance analog mixed-signal components and data management solutions, today introduced a new high-power switching controller in its line of DC-DC power conversion products. The XRP6141 Synchronous Step Down Controller supports point-of-load (POL) supplies up to 35A and is designed to achieve excellent transient response and output accuracy using Exar's proprietary emulated current mode Constant On-Time (COT) control loop. This device delivers core voltage rails for ASICs, FPGAs, DSPs and Network Processors in communications, networking and industrial markets.

The XRP6141 is specified with a wide input voltage range of 4.5V to 22V and delivers an adjustable output voltage from 0.6V to 18V. With its exceptional 0.1% line regulation across the entire input voltage range and 1% output accuracy over full temperature range, XRP6141 provides increased headroom to engineers for easier design implementations. The emulated current mode COT control scheme has the fast transient response of conventional COT control loops without any of the compromises. Exar's COT control loop enables operation with ceramic output capacitors, eliminating loop compensation, which simplifies system design and reduces overall component count. Additionally, the XRP6141 offers a host of supervisory and protection features for proper sequencing, safe operation under abnormal operating conditions and light load operation.

"The XRP6141 has been developed in response to customer demands, particularly in telecommunications systems but also for enterprise computing, industrial and medical markets, and many other applications using high power FPGAs and DSPs," said James Loughheed, vice president, power management and AMS products, Exar. "The adoption of COT architectures in these segments provides the benefit of improved regulator transient response without the need for additional output capacitance. Hardware engineers responsible for board level power systems will appreciate Exar's unique implementation, which makes the XRP6141 easy to design with and keeps the component count low."

Product Availability and Pricing

The XRP6141 is available now in a RoHS compliant, green/halogen free space-saving 16-pin 3x3 QFN package and is priced from \$1.29 in 1000 piece quantities.

Additional Information

Additional information on the XRP6141 is also available [online](#).

Additional information on Exar's DC-DC power conversion products is also available [online](#).

About Exar

Exar Corporation designs, develops and markets high performance, analog mixed-signal integrated circuits and advanced sub-system solutions for the Networking & Storage, Industrial & Embedded Systems, and Communications Infrastructure markets. Exar's product portfolio includes power management and connectivity components, communications products, high performance analog mixed-signal products and network security and storage optimization solutions. Exar has locations worldwide providing real-time customer support. For more information about Exar, visit <http://www.exar.com>.

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