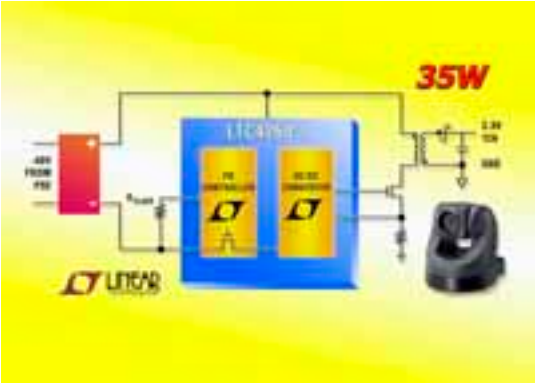
35W Power over Ethernet PD Controller



Linear Technology introduces the LTC4268-1, a Power over Ethernet (PoE) interface controller with a synchronous, current mode, switching regulator for delivering precise regulation and high efficiency to power-hungry Powered Devices (PDs). The device provides up to 35W for 2-pair systems and as much as 70W for 4-pair systems. The IC features a high-performance switching regulator optimized for isolated PoE applications, and it incorporates the company's NoOpto feedback topology to provide full IEEE 802.3 isolation without the need for optoisolator circuitry. A feedback amplifier senses the output voltage through the transformer winding during the flyback period and uses this voltage to tightly regulate the output. The transformer isolates the load from the input supply and provides feedback, improving output transient response and overall reliability. The synchronous flyback converter provides a low part count design with the advantage that additional outputs can be obtained by simply adding windings. Synchronous rectification offers the benefit of higher output power, increased conversion efficiency and improved cross regulation in applications with multiple outputs. The device offers the flexibility of programmable switching frequency from 50 kHz to 250 kHz for optimized power supply design. In low-noise system designs, the controller can be synchronized to an external oscillator. It includes a field-proven PD controller front end for worry-free use in hostile PoE environments. It is capable of handling 750 mA with the lowest on-resistance (0.55? typ) Hot Swap MOSFET on the market. The ultra-low FET on-resistance minimizes device heating and improves overall efficiency. For even higher output power, the normal current limit can be disabled, allowing implementation of proprietary, ultra high-power designs. Pricing begins at $2.40 each in 1,000 piece quantities.
Linear Technology
408-432-1900, www.linear.com [1]

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