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PoE+ PSE Single Port Magnetic Jack from Molex

Provides an easy migration path from non-PoE to fully integrated PoE+ capability

LISLE, Ill. September 14, 2011 – Molex Incorporated has developed the first single port PoE+ Power Source Equipment (PSE), single port magnetic jack in accordance to the IEEE802.3at standard. Based on the RJ45 jack and backwards compatible with the previous PoE IEEE802.3af standard, the PoE+ PSE single port magnetic jack, series 85759, is a complete, plug-and-play module that provides engineers with a simplified design process and easy migration path from using standard power supplies to fully integrated PoE+ capability.

“Prior to the introduction of the new PoE+ PSE single port magnetic jack, implementing PoE or PoE+ for a single port application required developing a discrete solution on the customer’s board using custom controller silicon,” explains Diarmuid Cullinan, Product Manager Integrated Products, Molex. “Power must be isolated from signal and significant design effort is required to protect the customer board from electro-magnetic interference (EMI) and electro-static discharge (ESD) while achieving all IEEE802.3at requirements.”

The PSE-ICM offers the simplest solution for the design of a single port PSE. Eliminating complex design and testing provides OEMs with a faster time-to-market, reduced investment and lower direct and associated purchasing and production costs.

“Except the power supply, the 85759 series contains the entire single port PSE, integrating the RJ45 connector with two LEDs, gigabit PoE+ Ethernet magnetics, and high-power PSE controller. All that is required is a simple 51V for PoE+ or 48V for PoE to automatically manage and control power to connected Ethernet devices such as color-screen Voice over Internet Protocol (VoIP) phones, wireless access points and pan/tilt/zoom security cameras,” adds Cullinan.

The footprint of the Molex PoE+ PSE single port magnetic jack is designed to optimize the separation distance of the signal and LED pins from the PoE circuitry, significantly reducing the complexity of PCB routing. The module

has an external reset feature and capability to set maximum PoE class requirements (maximum power delivery allowed). Multiple LED configurations and colors are available, including single and bi-color.

Power over Ethernet (PoE) is a technology that defines the transmission of both data and power to networked devices over a standard Ethernet cable, eliminating the need for separate power supplies. PoE+ is the new IEEE802.3af standard. It provides the opportunity to increase port-power output to 30 watts, when set to Class 4. It supersedes the 15 watt (Class 0 to 3) IEEE802.3af standard, which was released 2004.

Additionally Molex offers the 85789 series gigabit PoE+ enabled magnetic jack. PoE or PoE+ power can be sent or received through the connector with the PoE circuitry situated on the customer board. For non-PoE gigabit applications the 85793 series is available. For more information about the PoE+ PSE single port magnetic jack, please visit [Molex](#). To receive information on other Molex products and industry solutions, please click [here](#).

About Molex Incorporated

Providing more than connectors, Molex delivers complete interconnect solutions for a number of markets including data communications, telecommunications, consumer electronics, industrial, automotive, medical, military, lighting and solar. Established in 1938, the company operates 39 manufacturing locations in 16 countries. The Molex website is www.molex.com. Follow us at www.twitter.com/molexconnectors, watch our videos at www.youtube.com/molexconnectors, connect with us at www.facebook.com/molexconnectors and read our blog at www.connector.com.

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