DOSA-based POL Converters Come in Digital and Analog Versions

Lineage Power, [1] a Gores Group company , announced its new standards-based [2] DLynx [3] family of non-isolated Point of Load (POL) DC-DC board-mounted power modules. The DLynx portfolio, available in DOSA [4]-based digital and analog versions, efficiently powers silicon devices such as processors and memory devices on circuit boards. An industry-standard PMBus interface and space-saving Tunable Loop [5]technology deliver industry-leading current density of 8.1A/cm^2 in a full range module.

“Digital DC-DC technology adoption has been challenged by intellectual property, standardization and cost issues,” said Linnea Brush, senior research analyst, Darnell Group. “Digital power products designed to be backwards-compatible, standards-based and cost-effective will have a competitive advantage through better performance and features for power design engineering, and multi-sourcing options for supply chain efficiency.”

DLynx offers power design engineers the flexibility to use the new products in existing Lineage Power TLynx [6] layouts, or alternatively use TLynx products in the new DLynx footprints. As part of the Lineage Power Total Efficiency [7] architecture, the new DLynx modules deliver efficiency of 96 percent and are priced lower than the current TLynx POLs to encourage rapid adoption in new product designs.

“The DLynx series gives OEM power design engineers the benefits of digital technology cost-effectively, with the safety of full analog backwards compatibility,” said Niklas Fallgren, vice president and general manager of Lineage Power’s

Embedded OEM division. “Each member of the DLynx portfolio conserves space, lowers cost, reduces development time and avoids risk while delivering proven reliability and innovative Tunable Loop technology.”

The first members of the DLynx family are the 12A analog PicoDLynx (PVX012) and 12A digital PicoDLynx (PDT012) in the standard Pico (12mmx12mm) format. The wide range of input voltage (V_{IN} = 3Vdc-14.4Vdc) with precisely regulated output voltage from 0.6Vdc to 5.5Vdc enables a single module to be used across multiple industry applications. Exceptional current de-rating over temperature enables the modules to achieve 10.4A at +85?C without any air flow ($12V_{IN}$ – $1.2V_{OUT}$). With as little as 100LFM airflow, the DLynx delivers 12A full capacity at 85?C.

New synchronization features and differential remote sense are combined with a digital PMBus interface that supports a wide range of commands to both control and monitor the module with a full range of protections and warnings, digital on/off, trim, margin, power good, rise time adjustment, and input under voltage lockout.

All modules include the Tunable Loop [5] technology that allows the user to optimize the dynamic response of the converter to match the load with reduced amount of output capacitance. The result is up to 70 percent capacitor space reduction at 50 percent lower cost. DLynx leverages Power-One’s digital power technology (DPT) patents licensed to Lineage Power in February 2010.

Pricing and Availability

Available within 90 days worldwide, the 12A DLynx product pricing starts under $7 per unit for OEM quantities. For more information please visit www.dlynx.info [3] or call 888-LINEAGE or +1 972 244 WATT.

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