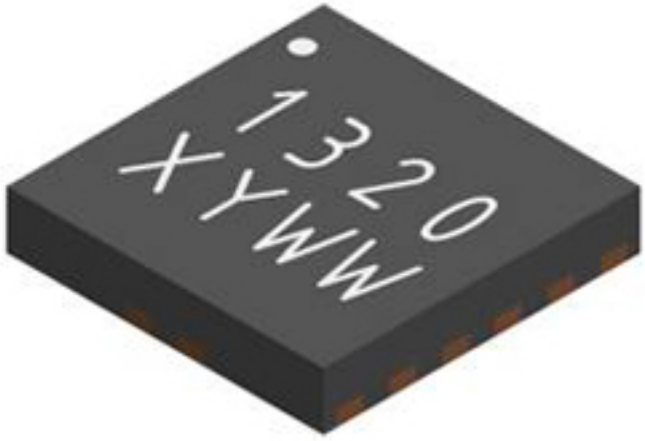
VTT Converter Rivals Traditional DDR Power Solutions



Enpirion announced a new member of its power IC portfolio targeted at DDR memory termination power. The Enpirion EV1320 is a 2-A sink/source DDR termination converter that offers a peak efficiency of 96 percent – a 1.4 Watt power savings over a traditional LDO (low drop out) regulator-based solution at a comparable low cost and small solution footprint, according to the company. Applications include ultrabooks, servers, Solid State Drives (SSDs) and embedded computing modules. The EV1320 VTT converter accepts an input voltage of 1.2 V to 1.8 V. The device is available in a 3 mm x 3 mm x 0.55 mm tall QFN package and requires only 80 mm2 printed circuit board (PCB) area for the total solution. Multiple devices can also be operated in parallel for applications that use large complements of DDR memory.

EV1320 is a purpose-built VTT converter solution that complies with JEDEC specifications for supporting DDR2/DDR3/QDR and low-power DDR3/DDR4 VTT applications. The following is a summary of specific challenges faced by designers implementing DDR termination power solutions and how the EV1320 can help them address these challenges:

Reduced Energy Consumption ? High Efficiency
The EV1320 achieves up to 96 percent peak efficiency.

Increasing Features/Functionality and Memory Capacity ? Highest Power Density

The market pressure to add more value and functionality to end products compresses available PCB space. The EV1320 and Enpirion’s entire PowerSoC portfolio provides the industry’s highest-density power solutions – greatly

minimizing the amount of space needed for power management. The EV1320's low profile enables mounting on the backside of PCBs, freeing up precious top-side board space.

Higher-Quality End Products ? 8x Higher Reliability

Enpirion power management solutions achieve 21,800 years mean time between failure (MTBF). Enpirion high-efficiency devices are truly industrial graded and do not require load de-rating at 85 °C ambient temperature. PowerSoCs are specified, simulated, characterized, validated and manufacturing-tested as a complete power system – which, when coupled with tightly controlled IC manufacturing processes and fewer total components, yields unsurpassed reliability.

Time to Market, More Projects Commercialized ? Simplified Design Flow

The EV1320, like all Enpirion PowerSoCs, requires fewer design steps with significantly less exposure to design cycle iteration vs. discrete switching regulators. Fully validated and proven PCB layout and design files are provided, enabling customers nearly 100 percent first-pass reported success.

Enpirion
908-894-6000, www.enpirion.com [1]

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