

## Market News

### Powering next generation datacenters: Infineon's 48 V high-efficiency, two-stage architecture power distribution

Munich, Germany – 29 April 2019 – Infineon Technologies AG (FSE: IFX / OTCQX: IFNNY) is introducing its zero-voltage-switching (ZSC) switched capacitor converter. It features a two-stage architecture for 48 V applications to power up CPUs, GPUs, SoCs, ASICs, and memory. Infineon's full system concept for 48 V architecture paves a way towards 99 percent of efficiency. Combining ZSC board with [CoolGaN™](#) 600 V based solutions results in an optimized power flow and unparalleled performance for the datacenters of tomorrow. The latest ZSC converter board is introduced at the PCIM 2019 tradeshow in Nuremberg, Germany.

The ZSC converter delivers the highest efficiency and power density for applications using 48 V. Through capacitive energy transfer with soft switching of the power MOSFETs, it generates an intermediate bus voltage. This enables an easy and low-risk migration path for legacy 12 V systems to a 48 V infrastructure at significantly improved total cost of ownership. Combined with Infineon's best-in-class multi-phase buck regulators, it offers overall efficiency of more than 94 percent and power density for 48 V input systems above the industry's average.

The board is featuring microcontrollers, drivers and switches from Infineon. It comprises well-matched 25 V and 40 V [OptiMOS™](#) 5 and OptiMOS 6 MOSFETs as well as [EiceDRIVER™ 2EDi](#) gate driver ICs. The [XMC™](#) family of microcontrollers is complementing the ZSC switched capacitor converter.

It is easy to implement as a voltage regulator module (VRM) or down (VRD) design depending upon system requirements and limitations. The bidirectional power transfer capability of the ZSC converter offers ultimate flexibility for designers of power architectures to implement high-efficiency and compact bus converters that can provide voltage conversion from 48 V to 12 V, or vice versa.

Additionally, the converter can be easily configured to supply different conversion ratios (2:1, 4:1, 6:1, 8:1, 10:1, 12:1) with the same set of components for best

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system-level efficiency optimization. In a 4:1 configuration, the ZSC converter can achieve peak efficiency of up to 99 percent at 600 W with a power density of 780 W/inch<sup>2</sup>. The same design can deliver up to 1 kW with excellent thermal performance due to its high power conversion efficiency. The ZSC board is available upon request. More information is available at [www.infineon.com/zsc](http://www.infineon.com/zsc).

### **Infineon at the PCIM 2019**

At the PCIM 2019 tradeshow, Infineon is presenting innovative product-to-system solutions for applications that are set to power the world and shape the future.

Infineon's demos are presented at booth #313 in hall 9 (Nuremberg, Germany, 7-9 May 2019). Information about the PCIM show highlights is available at [www.infineon.com/pcim](http://www.infineon.com/pcim).

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