



## Case Study: Data Center Servers Efficiency throughout the system

### Background

The constant increase in compute power per server and the associated scaling of memory alongside compute power drives excess heat dissipation beyond the current cooling capacity of industry standard servers. Endura has been engaged by many of the leading server component suppliers to design a solution that would enable compute and memory capacity per server to continue to scale without the need for a complete overhaul in a server's cooling system.

### Endura Solution

Endura's eVR families of PMICs, produced on the 22nm processing node, are drop-in replacements for current PMIC solutions on both the processor card and DDR5 module. Endura's iVR product families can be integrated directly to the power block creating a unified solution that uses close to no passive components and consumes less than 1mm<sup>2</sup> of total surface area. Endura's high efficiency Modular Digital Voltage Regulator Architecture boosts overall efficiency and reduces the amount of wasted power that dissipates into heat. Endura's technology is highly scalable and maintains its high efficiency over the full spectrum of amp loads.

### Benefits

Endura's high efficiency voltage conversion technology drives over a 9% increase in overall server efficiency relative to current solutions on the market. For the average high-performance server (16 DIMMs), Endura's solution reduces total system heat dissipation and electricity consumption by approximately 49 watts. This increase in efficiency results in significant operational cost savings for the datacenter operator. Just on direct system power consumption alone, there is an annual electricity cost savings of approximately \$72 per server per year.

