

Ericsson power block provides flexible, highly efficient power solution for processors

Addressing the emerging technology in power distribution and management called Centralized Control Architecture (CCA), Ericsson Power Modules has introduced a 30A Power Block. Specially designed to meet the demanding requirements of multiple power rails applications where cost, efficiency and flexibility are mandatory, the ROA1283003 is the perfect solution to power FPGA, and other processors.

CCA is based on a centralized power management controller driving single or multiple switching termination modules known as 'power blocks'. Providing 'design for versatility' in many applications, the ROA1283003 Power Block can easily be inserted as a power stage controlled by a single, or multiple-phase PWM.

The ROA1283003 complements Ericsson Power Modules' wide range of isolated and non-isolated products that address distributed power architectures, and simplifies power management in modern Information and Communication Technology (ICT) applications. Internet switching routers, computer servers, and telecommunications switches and equipment are the prime users of CCAs requiring power blocks.

The ROA1283003 accepts input voltages of 7 to 13.2V, and provides an output of 0.8 to 3.3V. Very efficient (typical efficiency 94% at full load, 3.3Vout), the power block is based on the latest technology available on the market combined with Ericsson Power Modules' renowned in-house expertise in layout optimization and in reducing power losses to an absolute minimum. In high-efficiency power switching topologies, the Ericsson Power Block contributes to reduce overall power consumption, lower the heat generated by power terminations, and its 4.89 million hours MTBF will contribute to systems' reliability.

When powering high-current applications and when considering active load management, transient response is crucial. Accordingly, combined with an external controller the ROA1283003 provides downstream protection of critical and expensive components in such conditions, delivering the required current under any load conditions. Meeting the flexibility required by systems architects, the Power Block is designed for paralleling operation, allowing scalability, in order to deliver higher currents on demand. ROA1283003 has a built in temperature sensor device and a DCR sense pin.

"Because ICT high board density applications are requiring flexibility, quick time to market, and high performance while reducing energy consumption and cost, systems architects are requiring suppliers to offers a wide range of power solutions that starts from traditional analogue point of load (POL) to very advanced products including a communications interface." said Patrick Le Fèvre, Marketing and Communications Director at Ericsson Power Modules. "Centralized control architecture is a natural evolution of the intermediate bus architecture, and Ericsson's 30A ROA1283003 power block offers additional flexibility to systems' designers when selecting the most efficient on-board power solution."

Utilizing a digital interface such as I²C or PMBus, CCA makes it possible for systems architects to optimize the active power delivered to a specific load, and to parallel multiple rails when higher power levels are needed, alternatively to order some of the rails to turn off when loads are in sleep-mode.

On a typical application board there are restrictions in power design when it comes to copper layer thickness, vias density, number of available layers, space, etc. The use of power blocks offers the

application board designer the opportunity to achieve world-class efficiency in spite of these restrictions.

The ROA1283003 matches the first generation of power blocks' footprint and lead-free surface mount assembling requirements. So it can easily upgrade existing boards in order to benefit from its high efficiency and low profile (11.4 mm/0.45 in. max). So for customers wanting to reduce power losses, the ROA1283003 is the first choice when considering centralized control architecture.

Delivered in an antistatic tape complying with the EIA 481 standard and dry-pack complying with the IPC/JEDEC standard J-STD-033, the ROA1283003 eases board assembly processes.

Notes to editors:

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About Ericsson Power Modules

Ericsson Power Modules is a supplier of world-class DC/DC power modules for distributed power architectures. With its global design, development, manufacturing and sales network Ericsson Power Modules is a leading supplier of power solutions to meet the customer demand for high performance.

For additional technical information and specification see:

<http://www.ericsson.com/solutions/page.asp?ArticleId=2DDC9BD0-CF6C-483B-A54C-68FAECD4867A>