

Ericsson launches 3E digital power solution to reduce power consumption while making systems more flexible

Ericsson Power Modules has announced its 3E concept focused on optimizing performance, flexibility and value for the end-user. 3E stands for Enhanced Performance, Energy Management, and End-user Value, the main benefits of the solution.

With its 3E power solution, Ericsson becomes the first company to offer a complete range of board-mounted-products based on digital control and monitoring, and in doing so, contribute to reduce energy consumption, and CO₂ emissions.

Containing unique concepts spanning several disciplines in circuit and system design, the first 3E DC/DC converter product introduced is the BMR453 series. Since its introduction in 2008, the converters have already collected an impressive number of awards in the electronics press.

The BMR453 is an isolated DC/DC converter capable of 400W or 33A of output in a quarter brick form factor. Unlike quarter brick analogue converters, the BMR453 achieves this power density while providing a very tight output voltage regulation over an input voltage range of 36 to 75V at efficiency levels in excess of 96 percent. It is the first DC/DC converter to offer this combination of performance and power density, making it a logical choice for high performance systems operating with 48/60 V battery backup power architectures. Including a bidirectional serial multi-node interface, PMBus, BMR453 offers an unprecedented level of communication between the power module and the system energy management controller, making it possible to monitor and control energy down to single board level.

The second series of 3E products, named BMR450 and BMR451, comprise of digital POL (point-of-load) regulators establishing an innovative approach to reach the goals of end-user value, flexibility and system performance.

The internal design of the 3E POL regulators uses digital power control techniques, and some of the optional user implementations of these products can benefit from utilization of system level digital power and energy management approaches. While these products can be successfully applied using the same techniques as with conventional fully analog POL regulators, it is beneficial for the customer to have access, through a PMBus interface, to critical information such as load condition, temperature, voltage and current delivered, and other parameters, making it possible to monitor the distributed energy down to processor level.

The BMR450 features a wide input voltage range, making it easier to operate under most of the common intermediate bus voltages i.e. 5V, 8V, and 12V. The output voltage range is adjustable, with an output current of 20A providing up to 100W of power. Offering high efficiency - typically 96.8% at half load, the BMR450 has a very small package size of 25.65 x 12.9 x 8.2mm (1.01 x 0.51 x 0.323in), and a high current density of 7.38A/cm³ (120A/in³). For a similar in/out performance, an analogue voltage regulator would offer a much-reduced figure of 2.37A/cm³ (43A/in³).

The BMR451 is a digitally controlled, non-isolated voltage regulator rated at 40A. Featuring a high current density of 7.90A/cm³ (129A/in³), it measures just 30.85 x 20 x 8.2mm (1.215 x 0.787 x 0.323in), offers a 4.5V to 14V input voltage range, a 0.6V to 3.6V output voltage range and an MTBF figure of 2.6 million hours.

“The efficiency of DC/DC converters and POL regulators has always been a key performance criterion. It is receiving even more attention in recent years as more emphasis is placed on energy

consumption and the environmental impacts of large scale data processing and telecom installations,” said Patrick Le Fèvre Marketing and Communication Director at Power Modules. “We are proud, with our 3E power solution, to be the first company to offer a complete range of board-mounted-products based on digital control and monitoring, and in doing so, contribute to reduce energy consumption, and CO₂ emissions.”

To complement these products, Ericsson Power Modules provides an evaluation kit for the 3E DC/DC converter and voltage regulators that contains extensive Configuration Monitoring and Management (CMM) software on CD, USB Cables and instruction manuals.

Notes to editors:

Ericsson’s standard multimedia content is available at the broadcast room:

www.ericsson.com/broadcast_room

Ericsson is the world's leading provider of technology and services to telecom operators. The market leader in 2G and 3G mobile technologies, Ericsson supplies communications services and manages networks that serve more than 250 million subscribers. The company's portfolio comprises mobile and fixed network infrastructure, and broadband and multimedia solutions for operators, enterprises and developers. The Sony Ericsson joint venture provides consumers with feature-rich personal mobile devices.

Ericsson is advancing its vision of 'communication for all' through innovation, technology, and sustainable business solutions. Working in 175 countries, more than 70,000 employees generated revenue of USD 27 billion (SEK 209 billion) in 2008. Founded in 1876 and headquartered in Stockholm, Sweden, Ericsson is listed on OMX Nordic Exchange Stockholm and NASDAQ

For more information, visit <http://www.ericsson.com> or www.ericsson.mobi.

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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.