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## ERICSSON'S ADVANCED BUS CONVERTER MODULE RAISES THE BAR FOR HIGH POWER CONTROL AND DELIVERY

- New third-generation BMR458 quarter-brick advanced bus converter delivers up to 650W for range of Information and Communication Technologies (ICT) applications
- Tightly regulated output voltage over the full operational input range of 40V to 60V
- Designed to meet the demands of high-end and high power applications based on intermediate bus conversion (IBC) and dynamic bus voltage (DBV) architectures
- Output current monitoring of +/-1A, delivers highly accurate system monitoring capability

Ericsson Power Modules today announces the BMR458, a third-generation 3E\* quarter-brick advanced bus converter that delivers industry-leading performance to system architects developing equipment for Information and Communication Technology (ICT) applications, including datacom and server and storage systems. The module is ideal for high-power applications that are powered by multi-cell batteries or rectifiers commonly used in the ICT industry and employ intermediate bus conversion (IBC) or dynamic bus voltage (DBV) architectures.

The BMR458 represents the cutting edge of technology for advanced bus converters and comes with a host of features. These include the highest power delivery (650W) in the industry for a quarter-brick advanced bus converter, thereby reducing the number of required modules in very high power applications; and highly accurate current sharing, as well as it being the only advanced bus converter available today to offer active- or droop-current

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sharing. Other key features including dynamic load compensation, snapshot parameter capture, and a PMBus v1.3 interface.

“This is a major product introduction by Ericsson and further strengthens its position as the leader in delivering the world’s most advanced power modules, while also meeting growing industry demands for ever higher power,” said Martin Hägerdal, Head of Ericsson Power Modules. “The BMR458 is the highest power advanced bus converter available today and comes with feature-packed innovation to deliver best-in class reduction in energy consumption for today’s power system architects.”

Key electrical characteristics of the module include class-leading high efficiency of up to 96.6% at half load and 96.3% at full load; maximum current output of 54.2A; tightly regulated 12V output ( $\pm 2\text{mV}$ , typical) across the 40 to 60V input voltage range; output current monitoring of  $\pm 1\text{A}$  to enable highly accurate system monitoring capability; and a fast transient recovery time of only 1ms. Further specifications include: an MTBF of 8.2 million hours; and I/O functional isolation of 2250Vdc, which meets the latest IEC/EN/UL60905 safety standard.

The module’s dynamic bus voltage capability is important for the most advanced power systems and enables the module’s output voltage to be adjusted to suit the load, thereby maximising overall system efficiency and reducing energy consumption. The module also delivers highly accurate current sharing with both active and droop options for paralleling up to more than six modules, delivering higher reliability and greater available power.

The BMR458’s dynamic load compensation (DLC) feature adjusts the control loop to meet the capacitance load. To help engineers further, the DLC feature can also be used in conjunction with the Ericsson Power Designer software tool, which has been developed for the initial development and prototyping of digital power systems, via the module’s PMBus (revision 1.3) interface, which also enables advanced digital energy-monitoring and control functionality.

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Further important features include: the snapshot parameter capture analysis tool, which stores the last known measurement; adaptive ramp time, which modifies ramp time to suit output capacitive load; and automatic backward current protection when paralleling modules, which simplifies OR'ing circuitry.

Available in the industry-standard quarter-brick format with dimensions of 57.9 x 36.8 x 12.7mm (2.28 x 1.45 x 0.5in), the module also offers excellent performance in challenging thermal environments. Delivering higher reliability overall, it provides higher useable power in applications that have a high ambient temperature and/or limited airflow. However, the module is also available with an optional baseplate, enabling connection to a heatsink or cold plate for the most extreme environments.

The groundbreaking BMR458 has been built to the highest quality design and manufacturing standards, enabling Ericsson to deliver to customers a continued high level of confidence in its power modules.

*\* Enhanced Performance, Energy Management, and End-user Value are the key benefits delivered by Ericsson's range of 3E digitally controlled DC/DC converters.*

FOR FURTHER INFORMATION, PLEASE CONTACT

Martin Hägerdal, VP & Head of PA Power Modules, Ericsson

Phone: +46 10 714 71 84

If printing an Internet address use Ericsson Power Modules homepage and/or phone number to our International sales office:

Europe, Middle East & Africa: +46-10-716 96 20

Asia Pacific: + 86-21-5990 3258

Americas: +1-972-583 6910 or +1-972-583 5254

[www.ericsson.com/powermodules](http://www.ericsson.com/powermodules)