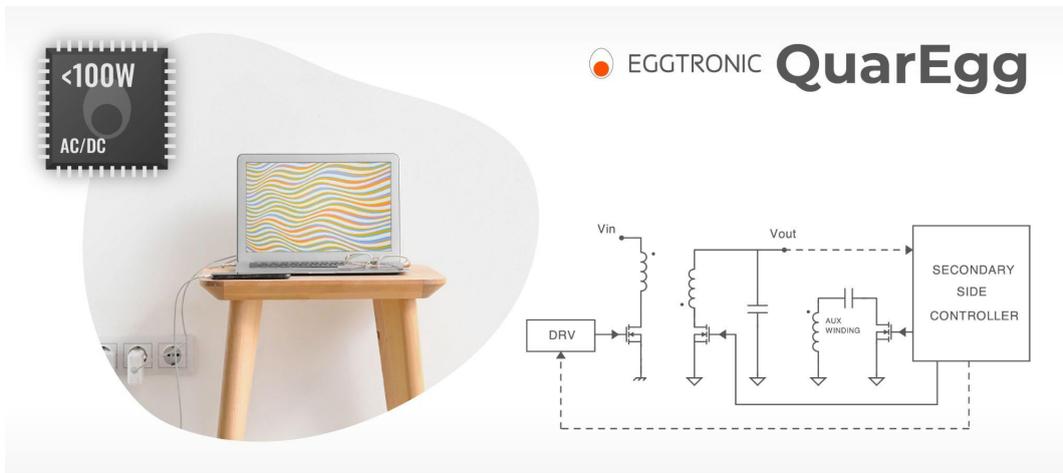


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Proprietary Power Architecture for AC/DC Converters Enables 7x Efficiency Improvement and Threefold Size Reduction

EcoVoltas® QuarEgg Alternative to QR and ACF Schemes Delivers Flat Efficiency Curves and Low Standby Power



MODENA, Italy, 6th December 2021 – Eggtronic has announced QuarEgg, an innovative, proprietary power architecture that significantly improves the efficiency and reduces the size of AC/DC converters that would traditionally have used active clamp flyback (ACF) and quasi-resonant (QR) topologies. The new architecture will maximize the performance, minimize the form factor and improve the reliability of AC/DC power schemes in applications ranging from fast chargers and adapters for mobile devices and laptops to power supplies for loudspeakers and smart home assistants.

QuarEgg is the first in a series of power conversion architectures that make up the Eggtronic EcoVoltas® family. Specifically developed to deliver smaller, higher efficiency power conversion, this family of proprietary, patented technologies will help engineers to meet performance, cost, size, weight and sustainability goals. EcoVoltas solutions boost the performance of FET switching devices, whether they are based on legacy silicon or wide bandgap (WBG) materials such as gallium nitride (GaN) and silicon carbide (SiC). They also drive down no-load 'vampire' power and reduce the overall Bill of Materials (BoM).

Because QuarEgg offers superior performance to conventional ACF and QR conversion topologies, it enables power converters that are up to seven times more efficient and three times smaller than traditional silicon converters and up to three times more efficient and twice as small as previous GaN converters.

QuarEgg operates with Zero Voltage Switching (ZVS) under all load conditions to give very flat light-load-to-full-load efficiency curves. Efficiencies are up to 95% at full load and up to 92% at light load. Power consumption is further reduced thanks to the ultra-low standby power of less than 18 mW. Elimination of a high-voltage, high-side clamping MOSFET



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minimizes component count and improves reliability, while smooth transient response reduces EMI to simplify filtering requirements.

To help speed the development of AC/DC applications built on QuarEgg technology, Eggtronic will be offering both GaN-based and silicon-based QuarEgg products with power outputs of 35 W, 45 W and 60 W. Output options include USB PD, fixed voltage and CC CV. Development boards, integrated power controllers, a range of proprietary magnetic components and comprehensive technical support will also be available.

Discussing the new architecture, Igor Spinella, Eggtronic's CEO and founder comments: "Thanks to EcoVoltas QuarEgg technology, designers of low-power AC/DC power conversion applications can now address the most stringent performance, size and cost criteria while contributing to sustainability goals by driving down power use and associated emissions."



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About Eggtronic:

[Eggtronic](https://www.eggtronic.com) has been revolutionising the world of power converters and wireless power since 2012. Based in San Francisco, Modena, Italy, Taipei, Taiwan, and Guangzhou, China, Eggtronic develops cutting-edge, environmentally-friendly and energy-efficient technologies, with more than 240 international patents granted worldwide. 2020 saw the launch of the new ICs division that has been producing its first microchips since 2021. Whether through B2B partnerships in the consumer, automotive, or industrial fields, or for everyday consumers, Eggtronic invents revolutionary power technologies to make modern life easier, more efficient and more connected.

www.eggtronic.com

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