



„EMPOWER your high-end FPGA- and Processor Design“

Dear Mr. Martin,

TRS-STAR in partnership with Dimac Red Spa is proud to present the manufacturer EMPOWER Semiconductor, the established leader in power management innovation and performance.



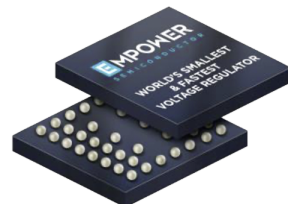
EMPOWER is a fabless semiconductor company headquartered in San Jose, California and consists of a team of skilled Silicon Valley founders and executives. The patented IVR technology allows to significantly reduce discrete components for less complex designs with higher power density on less board space.

Empower Integrated Voltage Regulators (IVR)

Empower by Dimacred is one of the leading manufacturers of highly integrated voltage regulators and E-caps for applications demanding highest power density and reliability. The Empower voltage regulators (IVR) are providing up to four independent user-programmable voltage rails from 0.5V to 2.5V with up to 12A output current in a small IC (5.0 x 7.0 x 0.7mm) offering full protection (OVLO, UVLO, OVP, OCP, SC) and onboard diagnostic functions like voltage/current reporting and die temperature monitoring via I2C interface.

Additionally the advanced IC features enabling the user to individually set power-up and power-down sequences or user-configurable logic levels and GPIOs to allow a high level of customized system functionality.

The Empower integrated power solutions are offering:



- Single IC Chip solution in a FcCSP package (5.0 x 7.0 x 0.7mm) -> 1/3 PCB real estate compared to a discrete solution
- Higher Reliability due to less external components
- Ultra-low ESL for high frequency decoupling
- Power and signal integrity Silicon Capacitors
- Up to 1000x faster power delivery

For more product details and information please download:



[IVR Series Product Portfolios](#)

Empower E-Cap Technology

The Empower High-Density E-Cap™ technology integrates several discrete capacitors in a monolithic component by one single semiconductor process. Compared to conventional sinter-based manufacturing processes of standard MLCCs this technology gives the opportunity to manufacture significantly smaller structures and a significant increase in performance can be achieved.

Empower offers a standard portfolio of e-caps for a wide range of applications as well as customized e-capacitors with various form factors suitable for applications with different performance requirements. Unfavorable factors on ceramic capacitors like DC and AC bias effects, derating or aging are also eliminated by E-Cap™ technology and offers the developer a significant flexibility in circuit design.



- 5x greater density
- No AC/DC, temperature or aging derating effects over lifetime
- Ultra-Low ESL (15pH)
- Ultra-wide bandwidth
- 50µm or lower thickness possible
- No noise effects

For more product information and information please download



[ECAP Standard Parts Portfolio](#)

Learn more about these exciting products and join our webinar

How to power digital multi-domain system with Empower Integrated Voltage Regulators

February, 5th 2025

Learn more about designing your power system with unprecedented simplicity, speed, accuracy and no discrete components!

Meet the experts and register here!

[Register](#)

For more details please download the agenda:



[Webinar Agenda](#)

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