

Ferric, Inc.



New York, NY

www.ferric.com

917-261-4387

SINCE ITS FOUNDING IN

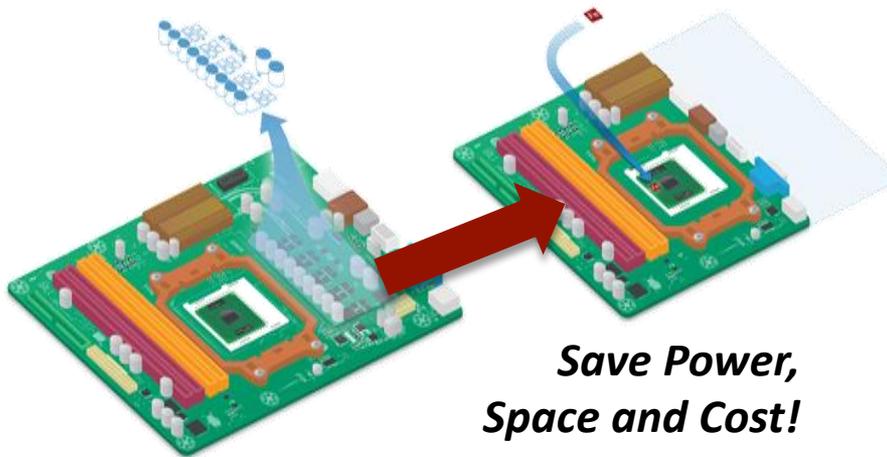
2011

4 SBIR Awards

20+ Employees

N/A Socioeconomic Categories

35+ Patents issued & pending



**Save Power,
Space and Cost!**

Integrated DC-DC Converters Using Thin-Film Magnetic Power Inductors

Modern electronic systems require significantly improved power density and efficiency of voltage regulators. Miniaturization and integration of power systems is also key to the advancement of high-value electronics including datacenters, RF systems, mobile consumer electronics and the microprocessors, systems-on-chip and systems-in-package that are utilized within.

Ferric developed an approach to power management based on proprietary ferromagnetic composite inductors that are closely coupled with advanced semiconductor technology. Partnering with Tier-1 fabless semiconductor design firms, Ferric owns and develops Complementary metal-oxide-semiconductor (CMOS) compatible thin-film fabrication processes and designs, along with complementary devices and systems for integrated power conversion and management.

IMPACT TO MISSION

Ferric's thin-film magnetic power inductors enable a 100x reduction in power converter volume and a 100x increase in power converter regulation bandwidth. This results in substantial Size, Weight and Power (SWaP) advantages for next generation microelectronics including RF systems-in-package and high performance digital processors. Computing systems that use Ferric's thin-film power inductors achieve a 10%-50% improvement in energy efficiency with 20%-50% reduction in solution footprint and bill-of-materials cost.

BEYOND PHASE II

To date Ferric has raised \$9.5M in venture capital to support manufacturing and production ramp-up; received ~\$8M in sales, license fees, non-recurring engineering tasking and ~\$4M from other R&D contracts from DOE and DARPA. This technology is licensed to the Taiwan Semiconductor Manufacturing Company Ltd. (TSMC) who has over 65% of the CMOS foundry market share and will begin receiving royalty fees in 2021. Ferric also has production design-wins for miniaturized voltage regulator products with leading microelectronics systems companies that is expected to generate >\$100M in recurring revenue by 2022.

Solicitation:

Advanced Manufacturing

DARPA SBIR Sponsor

DE-FOA-0000715 Topic Number

Usability, Improved Performance Primary Innovation

Adaptability, Cost Savings Secondary Innovation

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