



NEWS RELEASE

SMART Modular Announces the SMART Kestral PCIe Optane Memory Add-in-Card to Enable Memory Expansion and Acceleration

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Targeted for hyperscalers and data centers running large databases on AMD, ARM, and Intel CPU-based systems

NEWARK, Calif., April 12, 2022 — **SMART Modular Technologies**, Inc. (“SMART”), a division of **SGH** (Nasdaq: **SGH**) and a global leader in memory solutions, solid-state drives, and hybrid storage products announces its new SMART Kestral™ PCIe Optane™ Memory Add-in-Card (AIC) which is able to add up to 2TB of Optane Memory expansion on a PCIe-Gen4-x16 or PCIe-Gen3-x16 interface independent of the motherboard CPU. SMART’s Kestral AICs accelerate selected algorithms by offloading software-defined storage functions from the host CPU to the Intel FPGA on the AIC.

SMART’s Kestral memory AICs are ideal for hyperscale, data center, and other similar environments that run large memory applications and would benefit from memory acceleration or system acceleration through computational storage.

“With the advancement of new interconnect standards such as CXL and OpenCAPI, SMART’s new family of SMART Kestral AICs addresses the industry’s need for a variety of new memory module form factors and interfaces for memory expansion and acceleration,” stated Mike Rubino, SMART Modular’s vice president of engineering. “SMART is able to leverage our many years of experience in developing and productizing controller-based memory solutions to meet today’s emerging and continually evolving memory add-on needs of server and storage system customers.”

Key benefits:

- More memory per server at lower cost per gigabyte



- Field upgrades for new algorithms and protocols
- Seamless upgrades for existing servers with custom memory solutions
- Support for multiple memory technologies and protocols, including Intel Optane DIMMs, DDR4 RDIMMs, and LRDIMMs

Technical specifications:

- Full-Height, Half-Length (FHHL), dual slot form factor
- Less than 150W Thermal Design Power (TDP) using a passive heatsink
- Intel Stratix® 10 DX FPGA enabled with multiple IP support for defining custom solutions
- Quad Core ARM A53 with dedicated on-board 2GB DDR4 memory and 8GB storage acceleration
- Four DIMM slots with two independent channels, which can be populated with four Optane DIMMs up to 512GB each or two DDR4 RDIMMs up to 256GB each

Future AICs from SMART will be capable of supporting 4TB of Optane Memory in persistent App Direct Mode via normal load/store semantics for all CPU architectures -- freeing up precious, direct-attached DDR DIMM slots. SMART Kestral memory cards are ideal for Artificial Intelligence (AI) and Machine Learning (ML) training servers, permitting large algorithms to be developed quickly and without risk of failure during a power loss event.

For more information on SMART Kestral Memory AIC, visit the [product page](#) and [technical brief](#) or contact sales team at info@smartm.com.

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About SMART Modular Technologies, Inc.

For more than 30 years, **SMART Modular Technologies** has been helping customers around the world enable high performance computing through the design, development and advanced packaging of specialty memory solutions. Our robust portfolio ranges from today's leading edge technologies to standard and legacy DRAM and Flash storage products. We provide standard, ruggedized and custom memory and storage solutions that meet the needs of diverse applications in high-growth markets.

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