

SMART Modular Gen-Z Micro Development Kit Powers Gen-Z Ecosystem

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All-in-one compact system provides for development and testing of Gen-Z in-band management and fabric manager software from any PC workstation

NEWARK, CA, September 10, 2020 — **SMART Modular Technologies, Inc.**, a subsidiary of **SMART Global Holdings, Inc.**, (NASDAQ: SGH), a global leader in memory modules, solid-state storage products and hybrid solutions, today announced its **Gen-Z™ Micro Development Kit (μDK)**, the industry's smallest and easiest to use solution for the development and testing of Gen-Z in-band management and fabric manager software.

Gen-Z is a high-speed fabric protocol which uses existing 802.3 or PCIe PHY infrastructure for accessing a disaggregated memory pool that resides on a different rack or server. SMART Modular's Gen-Z μDK is a compact standalone hardware platform designed to enable early adopters of **Gen-Z protocol** to design beyond the boundaries of software-defined or hardware-assisted acceleration framework. It also allows them to explore the full capabilities of Gen-Z protocol for Memory-Driven Computing (MDC) applications.

"The Gen-Z interconnect standard for rack-scale and hyper-scale computing systems is helping to boost performance, increase efficiency and lower costs," said Mike Rubino, vice president of worldwide engineering at SMART Modular Technologies. "Gen-Z provides for heterogeneous computing and the composability of compute and storage modules. SMART Modular's new Gen-Z μDK enables the development of Linux operating system and fabric manager software as well as memory-driven computing (MDC) load-store Gen-Z software applications — which will accelerate the adoption and implementation of Gen-Z fabric computing systems."

SMART Modular's μDK includes both hardware and software components for the Gen-Z Host and Gen-Z Device and will run end-to-end memory load-store accesses on a Gen-Z fabric out of the box. SMART Modular is offering a

limited number of the specialized Gen-Z μ DK, so orders are first come, first served.

Technical specifications

- Gen-Z Host supports four (4) high speed lanes.
- Combination of Gen-Z devices (**ZMM**) which can provide 768GB of DDR4 memory.
- Stable Linux kernel with Gen-Z sub-system framework supports bridge driver and device tree (.dts) files.
- Accessory cables, power supply and debug boards provided for application bring-up.
- Kit comes in a small chassis with cooling fans, all of which can fit on a lab bench or workstation.

Use cases

- Enables extension of Gen-Z software eco-systems, such as a Linux framework and drivers.
- Offers development of Gen-Z cable hosts with advanced protocol features like collectives, atomics, and buffer operations.
- Validates and tests memory access load/store latencies over Gen-Z fabric.
- Functions as a complete, out-of-the-box reference design for use case demo purposes.
- Enables developers to explore Gen-Z capabilities directly from their lab desk, which saves time and money by integrating components, such as boards, chassis, modules, power supplies and fans in one kit.
- SMART's Gen-Z μ DK is built using FPGA components that allow in-field upgrades of firmware and hardware as new features are released, and to add custom features and offload functions for differentiation and prototyping.

"SMART Modular's initiative in creating this dev kit demonstrates their commitment to the industry and their continued work toward furthering the Gen-Z ecosystem," said Kurtis Bowman, president of the Gen-Z Consortium. "SMART's productization of the U.2 DRAM module, the EDSFF DRAM module, and now SMART's Gen-Z μ DK enables the industry to optimize software that supports remote and tiered memory."

To learn more, a free webinar entitled, "Platform Software Development Kit for Gen-Z Enablement", is scheduled for 11:00 a.m. PDT on Tuesday, September 15. It will be co-presented by Erich Hanke, IntelliProp; Bob Frey, SMART Modular; and Ron Huizen, Bittware. Visit this [registration page](#) for additional information and to register for the webinar.

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About SMART Modular Technologies

Serving the specialty memory industry for over 30 years, SMART is a global leader in memory modules, solid-state storage products and hybrid solutions across various form factors. Critical to electronic devices, they are available in standard, custom and ruggedized versions where high performance and high capacity are critical. SMART delivers solutions to a broad customer base which includes OEMs in computing, networking, communications, storage, mobile, military, aerospace and industrial markets.

SMART collaborates closely with their global OEM customers with a strong focus on extensive customer-specific designs, technical support and value-added testing services. Throughout the design process and across multiple platforms, SMART creates solutions for demanding applications with differentiated requirements.

SMART is a pioneer in secure, ruggedized solid-state drives (SSDs). Additional attributes such as encryption, secure data elimination and write-protect features are incorporated providing highly secure storage for military, aerospace and industrial markets. SMART has developed a comprehensive lineup of ruggedized products comprised of DRAM, hybrid memory, flash and storage technologies across various form factors.

See www.smartm.com for more information.

Connect with SMART on [LinkedIn](#).

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