Menlo Micro and Microchip Technology Validate the First MEMS-Based Hot-Switched Power Panel

Validation of a 0.5-MW system for the U.S. Navy proves Menlo Micro's scalable power-switching platform for defense, data center, and industrial markets

The Menlo Micro and Microchip engineering teams at the Microchip facility in Garden Grove, CA behind the world's first MEMS-based solution. From left to right: Raul Vera (Menlo), Sean Davidson (Microchip), Senior Engineer supporting system debugging, Adri

IRVINE, CA, UNITED STATES, January 5, 2026 /EINPresswire.com/ -- Menlo Microsystems, Inc. (Menlo Micro), the company setting a new standard for switches in modern electrical and electronic systems, today announced in partnership with Microchip Technology, a broadline supplier of semiconductors committed to making innovative design easier through total system solutions, that it has successfully completed the hot switching validation of a MEMS-based 1000V/500A (0.5 megawatt) relay panel that is the basis platform for future development of advanced circuit protection systems for the U.S. Navy. This accomplishment marks the first-ever validation of a MEMS-based 0.5 megawatt hot-switched relay panel for naval applications in the United States and is a critical step in the Navy's 10-megawatt Advanced Circuit Breaker program.

Menlo Micro has successfully advanced through the program's multiple phases of advancing complexity, demonstrating the performance and scalability of its Ideal Switch® technology for power applications. Validation testing of the latest phase was completed at Microchip Technology's advanced power test facilities.

"The validation of the 0.5 megawatt panel confirms the scalability and high-performance capabilities of Menlo Micro's power switching technology," said Leon Gross, corporate vice president of Microchip's aerospace and defense business unit. "This achievement marks a significant milestone for Menlo Micro's Ideal Switch platform to demonstrate that it can control significant power through its highly efficient MEMS-based micro relays, and that their switch

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> *Russ Garcia, CEO of Menlo Micro*

technology can scale to meet the growing power demands that military and commercial applications need."

"This milestone marks a first for the MEMS industry with the demonstrated switching and control of 0.5 megawatt of power. It underscores Menlo's unwavering commitment to innovation and brings Ideal Switch technology into the domain of advanced and smart power control and protection." said Russ Garcia, CEO of Menlo Micro.

In addition, Menlo Micro's power switch technology has been shown to be significantly faster, more reliable, compact and lighter compared to conventional electro-mechanical systems, and more efficient than semiconductor solutions.

Menlo Micro's Ideal Switch technology is fundamentally different from traditional semiconductor-based power switches. Rather than relying on semiconductor junctions, Menlo's solution is a materials-science-driven, full metal-to-metal switching architecture, enabling true physical conduction when closed.

This metal-to-metal conduction dramatically reduces resistive losses and heat generation, significantly reducing or eliminating the need for heat sinks or complex thermal management systems. As a result, power control, protection and distribution systems can achieve higher power density, improved efficiency, and lower overall system complexity compared to conventional mechanical and solid-state alternatives.

Menlo switches will be part of the Microchip demonstrations at CES 2026, located at the Venetian Campus, Venetian Expo, Level 3 Meeting Rooms - Murano 3202, 3203 and 3204.

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About Menlo Micro□□□
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Menlo Micro sets a new standard for switches with the Ideal Switch, a chip-scale platform that overcomes performance, efficiency, and scalability bottlenecks of electromechanical relays (EMRs) and semiconductor-based switches.□ It's the first disruptive switching technology in over 30 years and the only platform scalable across both power and frequency domains.□ The Ideal Switch enables smaller, lighter, faster, more reliable, and energy-efficient systems.□ From AI to aerospace, defense and power electronics, the Ideal Switch eliminates bottlenecks and reduces the total cost of ownership across today's most demanding applications. Menlo Micro unlocks new possibilities.□□For more information, visit www.menlomicro.com or follow the company on LinkedIn and X.□

Natasha Le Marquand
Napier Partnership Limited
+44 1243 531123
email us here
Visit us on social media:
LinkedIn
X
