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# Microchip AVR® SD MCUs Enable Simplified Development of IEC 60730 Class C-Compliant Systems

## UL Recognition for Components independently validates the family's hardware safety architecture for functional safety applications

CHANDLER, Ariz., Nov. 23, 2026 (GLOBE NEWSWIRE) -- Microchip Technology **(Nasdaq: MCHP)** announced its **AVR® SD family of MCUs** has achieved UL Recognition for Components to the UL/CSA/IEC 60730-2-5 Class C standards for automatic electrical controls for household appliances and similar use*. This component-level recognition provides developers with an independently evaluated foundation that can help simplify end-system certification efforts when integrated into compliant product designs.

"The AVR SD family was purpose-built for functional safety applications, integrating key safety mechanisms directly into hardware so engineers can focus more on application development and less on implementing and maintaining safety functions through software," said Greg Robinson, corporate vice president of Microchip's MCU, development tools and wireless business units. "Achieving IEC 60730 Class C recognition affirms our commitment to providing developers with independently validated safety solutions that simplify compliance efforts and support the development of reliable end products."

More than 20 dedicated hardware safety features have been designed into AVR SD MCUs to reduce reliance on software-based diagnostics and safety libraries, helping minimize code and memory overhead while simplifying system design. These include a dual-core lock-step architecture for real-time fault detection, SECDED ECC-protected memories, autonomous fault monitoring and a centralized error controller capable of initiating an automatic safe-state response. Together, with peripheral redundancy, like dual onboard ADCs, these mechanisms help monitor system integrity, detect faults and support deterministic safety operation.

“The AVR SD MCUs integrate hardware-based solutions that were evaluated as safeguards against microelectronic faults and errors for IEC/UL/CSA 60730 Function Class B and C applications,” said Vladimir Ivetic, senior staff engineer of Functional Safety in the Appliances, HVAC and Lighting group at UL Solutions.

Complementing the hardware, the AVR SD Safety Framework software coordinates the device’s interconnected safety features and execution flow, including initialization, fault-injection diagnostics, watchdog supervision, error response, safe-state transitions and reset recovery. Configurable source code and extensive safety, compliance and verification collateral reduce integration efforts, supporting safety IEC 60730 Class C certification activities and helping developers focus on application-specific functionality. IEC 60730 Class C requirements apply to automatic electrical controls used in applications where unsafe

operation could create hazardous conditions, including furnaces, boilers, gas-fired appliances and other systems requiring advanced fault detection and safety monitoring.

Recognition was awarded following an evaluation by UL Solutions that assessed the AVR SD family's safety-related hardware architecture, diagnostic capabilities and fault-management mechanisms against IEC 60730-2-5 Class C requirements. AVR SD MCUs and accompanying Safety Framework software were developed using a functional safety management system certified by TÜV Rheinland and in accordance with processes aligned to ISO 26262 and IEC 61508 standards. The devices and safety framework are designed to support applications targeting Automotive Safety Integrity Level C (ASIL C) and Safety Integrity Level 2 (SIL 2) requirements.

As safety requirements continue to evolve, developers are increasingly seeking solutions that reduce compliance risk while simplifying certification readiness. Visit Microchip's website to learn more about the company's full portfolio of **functional safety** solutions.

**Resources**
High-res images available through Flickr or editorial contact (feel free to publish):
• Application image: **https://www.flickr.com/gp/microchiptechnology/41D33GcP9t**

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*UL Component Recognition applies to the evaluated MCUs within the defined scope and conditions of acceptability, it does not constitute certification of a complete appliance or end system.

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