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Microchip Expands RT PolarFire® FPGA Portfolio with New Spaceflight Qualifications

Qualification milestones expand device options for mission-critical space applications

CHANDLER, Ariz., Nov. 19, 2026 (GLOBE NEWSWIRE) -- Microchip Technology **(Nasdaq: MCHP)** is strengthening its portfolio of high-reliability aerospace and defense solutions with new spaceflight qualifications for its radiation-tolerant (RT) PolarFire® FPGA and SoC families. The RT PolarFire FPGA RTPF500ZT has achieved Defense Logistics Agency (DLA) Qualified Manufacturers List (QML) Class V qualification, the highest qualification standard for space microelectronics. Additionally, the RT PolarFire SoC FPGA RTPFS460ZT has completed QML Class Q and MIL-STD-883 Class B qualifications. These milestones provide developers with flight-ready components for systems with stringent reliability requirements.

“As space applications demand greater onboard processing capability within increasingly constrained SWaP budgets, developers need technologies that maximize performance without increasing power consumption or thermal complexity,” said Shakeel Peera, corporate vice president of Microchip’s FPGA business unit. “Our RT PolarFire portfolio combines a power-efficient, radiation-tolerant architecture designed to be immune to radiation-induced upsets and defense-grade security to help developers reduce system power, simplify thermal management and build highly integrated, mission-critical space systems.”

The majority of SRAM-based FPGAs typically require configuration scrubbing to correct radiation-induced upsets which can remain undetected between scrubbing cycles and increase power consumption. RT PolarFire devices use configuration technology designed to eliminate configuration Single-Event Upset (SEU) concerns. The devices’ power-efficient operation helps address the thermal limits of space platforms, and defense-grade security helps protect mission-critical systems while reducing system complexity**.** With high reliability and radiation tolerance, RT PolarFire devices are designed for aerospace and defense applications, from satellite payloads and constellations to human-rated spacecraft and deep-space missions.

The flight proven QML-V qualified RTPF500ZT PolarFire FPGA features Single-Event Latch-Up (SEL) radiation performance and in-flight programmability for mission-critical space applications requiring high reliability for demanding missions. The RTPFS460ZT PolarFire SoC FPGA combines programmable logic with an integrated Microprocessor Subsystem (MSS) featuring 64-bit RISC-V® processor cores and is qualified to MIL-STD-883 Class B and QML Class Q. Available development kits, together with a common RT PolarFire

architecture and tool flow help streamline evaluation, prototyping and flight-system development.

MIL-STD-883 and QML qualification establish testing, manufacturing and quality requirements for microelectronic devices used in high-reliability aerospace and defense applications. MIL-STD-883 defines uniform environmental, mechanical and electrical test methods, while QML Class V under MIL-PRF-38535 establishes space-level quality and reliability assurance requirements. Together, these requirements help customers address stringent reliability and mission assurance needs for critical space applications. Visit the website to learn more about Microchip's full portfolio of radiation-tolerant FPGAs.

Development Tools
The RTPFS460ZT development kit enables evaluation and prototyping of the RT PolarFire SoC FPGA, and both devices are supported by Microchip's Libero® SoC Design Suite for overall design and development and the Mi-V® ecosystem for RISC-V development. Together, these resources provide a cohesive environment to evaluate the architecture, validate designs and reuse engineering work as programs progress toward flight hardware.

Pricing and Availability
For pricing and more information, contact a Microchip **sales representative or authorized worldwide distributor**.

Resources
High-res images available through Flickr or editorial contact (feel free to publish):

- Application image: **https://www.flickr.com/gp/microchiptechnology/18zPDoaWvF**

About Microchip Technology:
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