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Microchip Technology Expands Processing Portfolio to Include Multi-Core 64-Bit Microprocessors

PIC64GX MPU is the first of several product lines planned for Microchip's PIC64 portfolio

CHANDLER, Ariz., July 09, 2024 (GLOBE NEWSWIRE) -- Real-time, compute intensive applications such as smart embedded vision and Machine Learning (ML) are pushing the boundaries of embedded processing requirements, demanding more power-efficiency, hardware-level security and high reliability at the edge. With the launch of its PIC64 portfolio, Microchip Technology **(Nasdaq: MCHP)** is expanding its computing range to meet the rising demands of today's embedded designs. Making Microchip a single-vendor solution provider for MPUs, the PIC64 family will be designed to support a broad range of markets that require both real-time and application class processing. **PIC64GX MPUs**, the first of the new product line to be released, enable intelligent edge designs for the industrial, automotive, communications, IoT, aerospace and defense segments.

"Microchip is a leader in 8- 16- and 32-bit embedded solutions and, as the market evolves, so must our product lines. The addition of our 64-bit MPU portfolio allows us to offer low-, mid- and high-range compute processing solutions," said Ganesh Moorthy, CEO and President of Microchip Technology. "The PIC64GX MPU is the first of several 64-bit MPUs designed to support the intelligent edge and address a broad range of performance requirements across all market segments."

The intelligent edge often requires 64-bit heterogenous compute solutions with asymmetric processing to run Linux®, real-time operating systems and bare metal in a single processor cluster with secure boot capabilities. Microchip's PIC64GX family manages mid-range intelligent edge compute requirements using a 64-bit RISC-V® quad-core processor with Asymmetric Multiprocessing (AMP) and deterministic latencies. The PIC64GX MPU is the first RISC-V® multi-core solution that is AMP capable for mixed-criticality systems. It is designed with a quad-core, Linux-capable Central Processing Unit (CPU) cluster, fifth microcontroller class monitor and 2 MB flexible L2 Cache running at 625 MHz.

The PIC64GX family boasts pin-compatibility with Microchip's PolarFire® SoC FPGA devices, offering a large amount of flexibility in the development of embedded solutions. Additionally, the 64-bit portfolio will leverage Microchip's easy-to-use ecosystem of tools and supporting software, including a host of powerful processes to help configure, develop, debug and qualify embedded designs.

The PIC64 High-Performance Spaceflight Computing (**PIC64-HPSC**) family is also being launched as part of Microchip's first wave of 64-bit offerings. The space-grade, 64-bit multi-core RISC-V MPUs are designed to increase compute performance by more than 100 times

while delivering unprecedented radiation and fault tolerance for aerospace and defense applications. NASA's Jet Propulsion Laboratory (NASA-JPL) announced in August 2022 that it had selected Microchip to develop an HPSC processor as part of its ongoing commercial partnership efforts. The PIC64-HPSC family represents a new era of autonomous space computing for NASA-JPL and the broader defense and commercial aerospace industry.

With the introduction of its PIC64 portfolio, Microchip has become the only embedded solutions provider actively developing a full spectrum of 8-, 16-, 32- and 64-bit microcontrollers (MCUs) and microprocessors (MPUs). Future PIC64 families will include devices based on RISC-V or Arm® architectures and embedded designers will be able to take advantage of Microchip's end-to-end solutions—from silicon to embedded ecosystems—for faster design, debug and verification and a reduced time to market. To learn more, visit the Microchip **64-bit web page**.

Development Tools
The PIC64GX family is supported by the PIC64GX Curiosity Evaluation Kit and will feature integration with Microchip's MPLAB® Extensions for VS Code®. The PIC64 MPUs are also supported by Linux4Microchip resources and Linux distributors such as Canonical® Ubuntu® OS, the Yocto Project® and Buildroot with support for Zephyr® RTOS and associated software stacks.

Pricing and Availability
The PIC64GX Curiosity Kit is now available for designers to get started with evaluation— for additional information and to purchase, contact a Microchip sales representative, authorized worldwide distributor or visit Microchip's Purchasing and Client Services website, **www.microchipdirect.com.**

Resources
High-res images available through Flickr or editorial contact (feel free to publish):
·Application image:
https://www.flickr.com/photos/microchiptechnology/53817580969/sizes/l/

About Microchip Technology:
Microchip Technology Inc. is a leading provider of smart, connected and secure embedded control and processing solutions. Its easy-to-use development tools and comprehensive product portfolio enable customers to create optimal designs which reduce risk while lowering total system cost and time to market. The company's solutions serve approximately 123,000 customers across the industrial, automotive, consumer, aerospace and defense, communications and computing markets. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality. For more information, visit the Microchip website at **www.microchip.com**.

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