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Microchip Simplifies Functional Safety Requirements with MPLAB® TÜV SÜD-certified Tools

Further help with documentation requirements aided by new MPLAB Code Coverage testing and diagnostic tool

CHANDLER, Ariz., Jan. 15, 2020 (GLOBE NEWSWIRE) -- Functional safety certifications are required in many industries, but it is often a time-consuming and expensive process. Certifications can also require extensive justification for using specific development tools, unless the tool is already certified for compliance by functional safety experts such as TÜV SÜD, a Munich-based certification organization. To this end, Microchip Technology Inc.

(Nasdaq: MCHP) announced TÜV SÜD certification of its MPLAB® XC compilers for functional safety, significantly simplifying the functional safety qualification process for Microchip's PIC®, AVR® and SAM microcontrollers (MCUs) and dsPIC® Digital Signal Controllers (DSCs). To further simplify testing and diagnostics, Microchip also introduced MPLAB Code Coverage license, which determines parts of software that have or have not been executed with minimal impact to the application.

The MPLAB XC functional compilers certified by TÜV SÜD aid in satisfying the verification and validation requirements specified in the ISO 26262 standard for automotive safety, IEC 61508 for industrial applications, IEC 62304 for medical software and IEC60730 for automatic electric controls. The MPLAB XC Compilers for Functional Safety will be packaged with additional documentation for qualification of the MPLAB X Integrated Development Environment (IDE) and MPLAB debuggers and programmers. With no annual renewal fees, the licenses are the lowest-cost solution on the market. Using Microchip's MCUs with the functional safety licenses will reduce application costs and time to market.

Ensuring high test coverage of embedded software using code coverage tools often requires a large amount of hardware modification, expensive software and significant effort searching large data files for pertinent information. The MPLAB Code Coverage product avoids this with less than one percent impact to test time. Through a patented process, code can be tested in a single pass without breaking the code into blocks. This saves time and eliminates sifting through large data files. As certified applications often require code testing data, this new code coverage license can further assist with the certification process.

"Functional safety tools for many MCU products today can be quite costly," said Rodger Richey, Microchip's senior director of development systems. "Microchip supplies our functional safety products for one-third of the price of some competitive solutions and provides unparalleled worldwide technical support to speed time to market and further simplify the development cycle."

The combination of devices designed with functional safety in mind along with MPLAB XC compilers that are certified by TÜV SÜD plus MPLAB Code Coverage simplifies functional safety certification for applications in automotive, consumer, aerospace, medical and industrial applications.

In addition to offering development tools that make it easier, faster and more affordable to comply to functional safety standards, Microchip also offers many PIC, AVR, dsPIC and SAM MCUs that are Functional Safety Ready. For all Functional Safety Ready microcontrollers, Microchip provides Failure Mode Effect and Diagnostics Analysis (FMEDA) reports and safety manuals targeting ISO 26262 up to ASIL-B safety levels, with some products achieving ASIL-D.

“As a long-term supplier into automotive applications, we understand and respond to our customers need to reduce development time and optimize cost of safety critical products,” said Steve Drehobl, senior vice president of Microchip’s 8- and 16-bit microcontroller business units. “We continue to expand our portfolio of microcontrollers targeting safety applications to offer the perfect match of features and value.”

Pricing and Availability

MPLAB X IDE version 5.25 is available for free on Microchip’s website. The MPLAB Code Coverage workstation license is available today for \$799. The MPLAB XC8, XC16 and XC32++ functional safety workstation licenses are available today for \$2,995 each.

For additional information, contact a Microchip sales representative, authorized worldwide distributor or visit Microchip’s website. To purchase products mentioned here, click to [order now](#) or contact a Microchip authorized distributor. For information about Microchip’s Functional Safety Ready PIC, AVR, dsPIC and SAM microcontrollers please visit Microchip’s [Functional Safety Design Center](#) web page.

Resources

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

- Application image: www.flickr.com/photos/microchiptechnology/48291491977/sizes/l

About Microchip Technology

Microchip Technology Inc. is a leading semiconductor provider of smart, connected and secure embedded control 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 more than 120,000 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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