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Microchip's First Six-Channel Analog Front End for Three-Phase Energy Metering Offers Industry-Leading Accuracy

Device Includes Six 16-/24-bit ADCs, Integrated PGAs, Low-Drift Voltage Reference, Phase-Delay Compensation and Modulator Output Block

CHANDLER, Ariz.--(BUSINESS WIRE)-- Microchip Technology Inc. (NASDAQ: MCHP), a leading provider of microcontroller, analog and Flash-IP solutions, today announced its first high-accuracy, stand-alone six-channel analog front end (AFE) for three-phase energy metering. The [MCP3903 AFE](#) includes six 16-/24-bit Delta-Sigma analog-to-digital converters (ADCs) and offers industry-leading accuracy, with a signal-to-noise and distortion (SINAD) of 89 dB (typical) and total harmonic distortion (THD) of -99 dB (typical). Additional integrated features include programmable gain amplifiers (PGAs), a low-drift voltage reference and phase-delay compensation, for a reduced external component count that increases design flexibility and lowers costs. The [MCP3903 AFE](#) is ideal for the utility and industrial markets, such as in [utility meters](#), power-monitoring devices and instrumentation devices.

Government regulations and trends in smart metering, along with the Advanced Metering Infrastructure, have dramatically increased the need for products that offer precise measurements in multi-phase metering, while simplifying designs and reducing costs. The MCP3903 delivers this functionality by providing a highly accurate solution with integrated features that enable design flexibility. The MCP3903's six 16-/24-bit Delta-Sigma ADCs enable the simultaneous sampling of six inputs, making it ideal for three-phase power monitoring and metering, while its industry-leading accuracy allows for higher-accuracy products.

"The MCP3903 AFE provides engineers with a highly accurate solution for the growing smart-metering and power-monitoring market," said Bryan J. Liddiard, vice president of marketing with Microchip's Analog and Interface Products Division. "This device's integrated features enable more precise measurements than competitive solutions, with reduced design time and lower cost."

Packaging, Pricing and Availability

The [MCP3903](#) is available in a 28-pin SSOP package for \$3.14 each, in 10,000-unit quantities. [Samples](#) are available today, at <http://www.microchip.com/get/SLAF>. Volume-production quantities can be ordered today at <http://www.microchip.com/get/3N16>. For additional information, contact any Microchip sales representative or authorized worldwide distributor, or visit Microchip's website at <http://www.microchip.com/get/1NKJ>. To purchase products mentioned in this press release, go to [microchipDIRECT](#) or contact one of Microchip's authorized distribution partners.

About Microchip Technology

Microchip Technology Inc. (NASDAQ: MCHP) is a leading provider of microcontroller, analog and Flash-IP solutions, providing low-risk product development, lower total system cost and faster time to market for thousands of diverse customer applications worldwide. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality. For more information, visit the Microchip website at <http://www.microchip.com/get/C0QT>.

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Tags / Keywords: [Analog Front End](#), [AFE](#), [three-phase energy metering](#), [utility meter](#), [smart meter](#), [power monitoring](#), [six channel](#), [16-/24-bit Delta-Sigma](#), [ADC](#), [high accuracy](#), [SINAD](#), [THD](#), [integrated](#), [programmable gain amplifiers](#), [PGAs](#), [low-drift voltage reference](#), [phase-delay compensation](#), [modulator output block](#)

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