

Energy-Measurement Analog Front Ends Offer High Accuracy and Integration for Single-Phase Smart Meters and Power Monitoring

Two New AFEs Complete Microchip's MCP391X Family, Which Spans 1 to 8-Channel Members for Single-Phase and Poly-Phase Energy Measurement

CHANDLER, Ariz.--(BUSINESS WIRE)-- Microchip Technology Inc. (NASDAQ: MCHP), a leading provider of microcontroller, mixed-signal, analog and Flash-IP solutions, today announced the completion of its high-accuracy, 1-8 channel, single and poly-phase MCP391X energy-measurement [Analog Front End \(AFE\) family](#). The new [MCP3919](#) and [MCP3912](#) members integrate three and four channels of 24-bit, delta-sigma Analog-to-Digital Conversion (ADC), respectively, with industry-leading accuracy of 93.5 dB SINAD, -107 dB THD and 112 dB SFDR for precise signal acquisition and higher-performing end products. These are the optimal numbers of channels for single-phase energy meters with neutral monitoring (3-channel); or single-phase, three-wire energy meters (4-channel). The high level of integration on the new AFEs also includes a low-drift voltage reference, programmable gain amplifiers, phase-delay compensation and cyclic redundancy check (CRC).

As the energy-metering infrastructure is being upgraded worldwide, designers are demanding increased AFE accuracy and integration to develop the latest generation of smart meters. These features are also required by the designers of advanced power-monitoring systems for applications such as server power supplies and power distribution units, electronic circuit breakers, smart power strips and other data-acquisition products in the industrial, commercial and consumer markets. Microchip's newest AFEs improve application performance with their industry-leading accuracy, high integration and optimal number of channels for single-phase energy measurement. Additionally, the high AFE accuracy facilitates energy-meter calibration, which reduces production costs.

"These new energy-measurement AFEs complete our high-accuracy family," said Bryan J. Liddiard, marketing vice president of Microchip's Analog and Interface Products Division. "Now designers have a single source for any single-phase or poly-phase application."

Development Support

Microchip also announced two new tools to aid in the development of energy systems using these latest AFEs. The [MCP3912 Evaluation Board](#) (part # ADM00499) and [MCP3919 Evaluation Board](#) (part # ADM00573) can each be purchased today for \$129.99.

Pricing and Availability

The **MCP3912** and **MCP3919** AFEs are both available today for sampling and volume production, with prices starting at \$1.84 each in 5,000-unit quantities. Both AFEs are offered in 28-pin QFN and SSOP packages.

For additional information, contact any Microchip sales representative or authorized worldwide distributor, or visit Microchip's Web site at <http://www.microchip.com/AFE-Page-102114a>. To purchase products mentioned in this press release, go to [microchipDIRECT](http://www.microchip.com/microchipDIRECT) (<http://www.microchip.com/microchipDIRECT-AFE-Search-102114a>) or contact one of Microchip's authorized distribution partners.

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- Block Diagram: <http://www.microchip.com/Block-Diagram-102114a>
- MCP3912 Evaluation Board Photo: <http://www.microchip.com/MCP3912-Evaluation-Board-Photo-102114a>

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About Microchip Technology

Microchip Technology Inc. (NASDAQ: MCHP) is a leading provider of microcontroller, mixed-signal, 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/Homepage-102114a>.

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