

Microchip's First Six-Channel AFE for Three-Phase Metering

Industry-leading accuracy from the new MCP3903 AFE

Microchip's first stand-alone 6-channel Analogue Front-End (AFE) simplifies smart metering and power monitoring of three-phase supplies or multiple loads by simultaneously sampling six inputs and delivering industry-leading accuracy.

The MCP3903 AFE combines a typical signal-to-noise and distortion (SINAD) of 91 dB and total harmonic distortion (THD) of -104 dB to give you industry-leading accuracy for smart metering and power monitoring applications.

By integrating six 16-/24-bit delta-sigma analogue-to-digital converters (ADCs), the MCP3903 lets you sample six inputs simultaneously to reduce component count and cost. The MCP3903 also packs Programmable Gain Amplifiers (PGAs), a low-drift voltage reference and phase-delay compensation into a 28-pin SSOP to give you the flexibility to streamline and add more functions your design.

Pair the MCP3903 with a PIC® microcontroller, for a complete, high-accuracy solution for utility meters, power-monitoring equipment and instrumentation.

The MCP3903 AFE is part of Microchip's comprehensive range of products which help you to meet the price and performance targets for your smart meter and power monitoring designs.



By combining Microchip's 8-, 16- or 32-bit microcontrollers and 16-bit digital signal controllers with their energy measurement chips, analogue and interface components, real-time clock/calendars, Flash memory and serial EEPROMs you can:

- Directly drive inexpensive LED and LCD displays
- Add wireless communication for automated meter reading
- Implement anti-tampering techniques
- Manage low-power design with nanoWatt XLP technology
- Integrate real-time clock for advanced billing schemes
- Simplify meter calibration
- Integrate touch-sensing with mTouch™ sensing solutions

Get Started In 3 Easy Steps

1. Order your MCP3903 AFE samples today at www.microchip.com/EUAFE
2. Combine the MCP3903 with a PIC® MCU or dsPIC® DSC
2. Visit the Utility Metering Design Centre at: www.microchip.com/meter and design meters and monitors with industry-leading accuracy



MICROCHIP

Microchip Technology Incorporated

Your Complete Smart Meter and Power Monitoring Solution

Microchip has the Technologies and Support You Need to Succeed...

Design Support

Get your designs to market faster with reference designs, low-cost development boards and support from Microchip's online Utility Metering design centre at www.microchip.com/meter, reference designs and low-cost development boards.

- Start your design with the MCP3903 Evaluation Board for 16-bit MCU (ADM00310)
- Explore LCD Flash PIC® MCUs with the PICDEM™ LCD 2 demonstration board (DM163030)
- Evaluate 16- and 32-bit MCUs and dsPIC33F DSCs with the Explorer 16 development board (DM240001/2)
- Add IEEE 802.15.4™/ZigBee® and IEEE 802.11™/WiFi with the PICtail™/PICtail Plus Daughter Card (AC164134-1)



MCP3903 Evaluation Board for 16-bit MCUs (ADM00310)



Explorer 16 Development Board (DM240001/2)

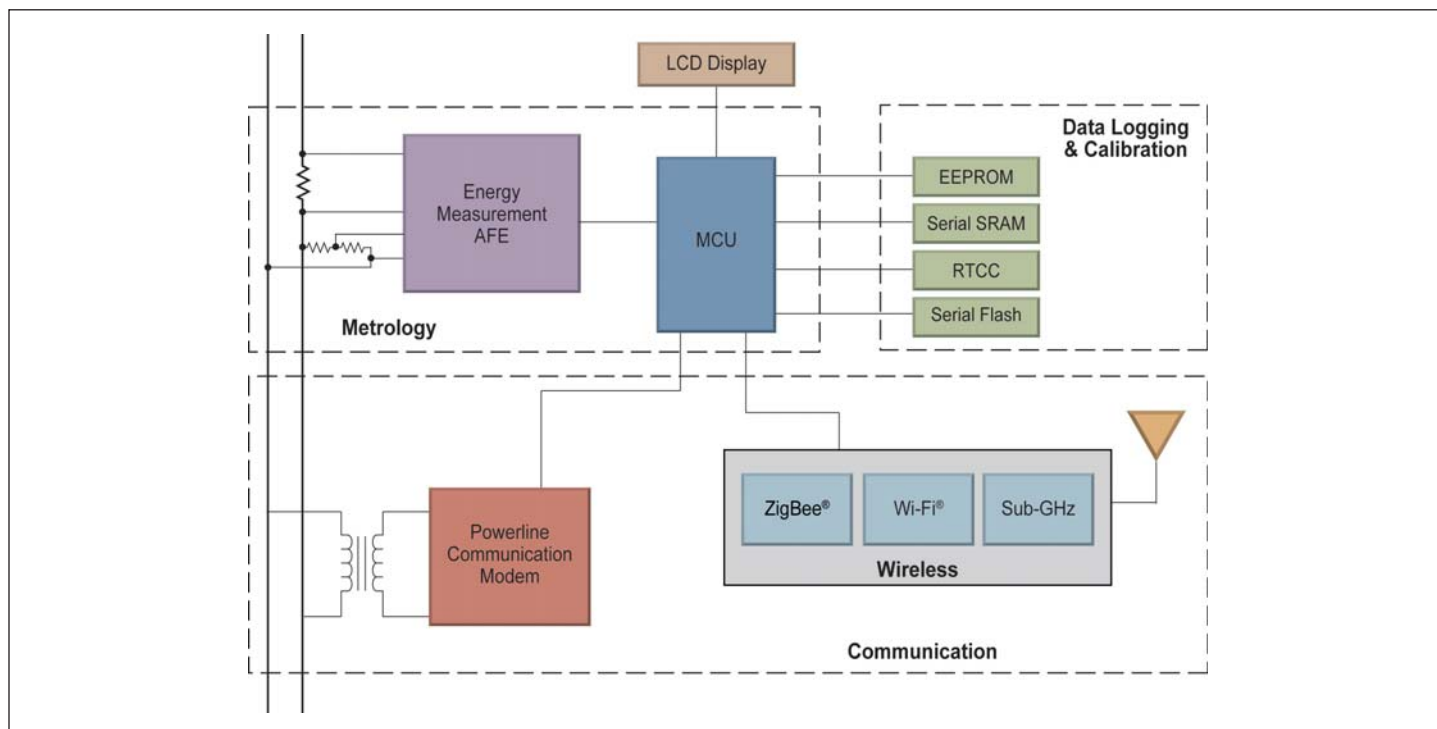


PICDEM™ LCD 2 Demonstration Board (DM163030)



PICtail™/PICtail Plus Daughter Card (AC164134-1)

Basic Smart Meter



MICROCHIP

www.microchip.com/meter

Visit our web site for additional product information and to locate your local sales office.

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