

## **Analog front end combines a typical signal-to-noise and distortion of 91 dB**

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 analog-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.

Key features include:

- Six simultaneously sampled 24-bit delta-sigma A/D converters
- 91 dB SINAD, -104 dBc THD, 102 dB SFDR
- Programmable data rate up to 64 ksps
- Internal voltage reference with low drift of 5 ppm/°C
- Internal PGAs on each channel with gain of 32 V/V
- Extended Temperature Range: -40°C to +125°C

Applications:

- Energy metering
- Power monitoring
- Servers
- Power distribution units
- Data acquisition systems

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