

PAC1934

PAC1934 DC Power/Energy Monitor with Accumulator

General Information

The PAC1934 is a four-channel power/energy monitor with current sensor amplifier and bus voltage monitors that feed high-resolution ADCs. Digital circuitry performs power calculations and energy accumulation. The PAC1934 enables energy monitoring with integration periods from 1 ms to up to 36 hours. Bus voltage, sense resistor voltage and accumulated proportional power are stored in registers for retrieval by the system master or embedded controller.



Features

- High-side current sensor (4 channels)
- 100 mV full scale voltage sense range, 16-bit resolution
- Bidirectional or unidirectional options
- Wide bus voltage measurement range 0V to 32V, 16-bit resolution
- 1% Power measurement accuracy over a wide dynamic range
- On-chip accumulation of 28-bit power results for energy measurement
- 48-bit power accumulator register for recording data
- 24-bit accumulator count
- User programmable sampling rates of 8, 64, 256 and 1024 sps
- 36 hours of power data accumulation at 8 sps
- 2.7V to 5.5V supply operation
- Separate I/O pin for digital I/O 1.62V to 5.5V
- I²C fast mode plus (1 Mp/S) and SMBus 3.0
- WLCSP package (2.225 x 2.17 mm)

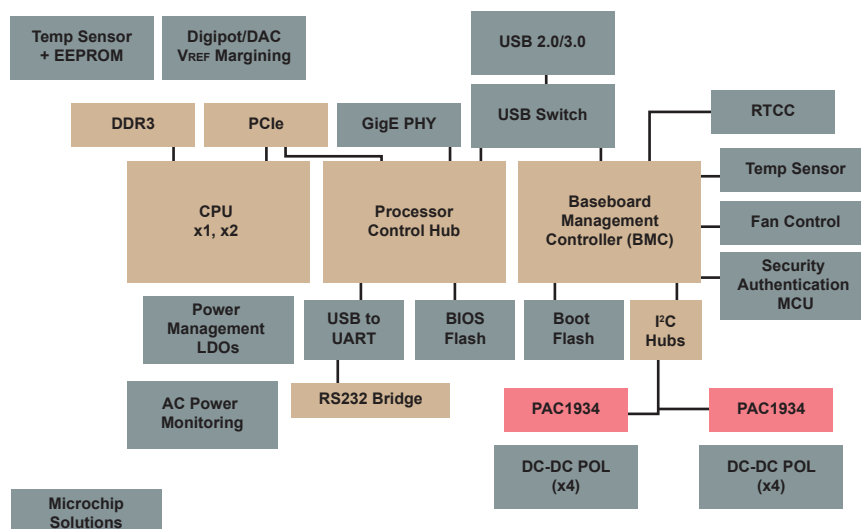
Applications

- Windows[®] 10 laptop, tablet, workstation, cell phone
- Networking
- Automotive
- Linux[®] systems
- Linux, Microsoft[®] and cloud servers
- Industrial

Benefits

- Real-time calibration minimizes offset/gain errors
- No input filters required
- Automatic sleep state between conversion cycles (5 μ A)

Typical Server Application Block Diagram



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