MAX71334L

ZON P3/P3L Polyphase Electricity Meter SoC

Best-in-Class Metrology Performance and Custom Peripherals

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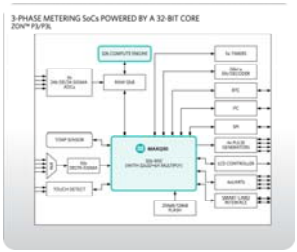
Active: In Production.

OVERVIEW

Description

The ZON™ P3L/P3 (MAX71334L/MAX71335L) metering SoC (systems on chip) integrates dual 32-bit processors for polyphase metering applications. It contains 256KB flash (ZON P3) or 128KB flash (ZON P3L), 12KB RAM and a single-cycle 32 x 32 + 64 multiplier. The application processor (CPU) is a 32-bit MAXQ®30 core. The metrology processor is a proprietary compute engine (CE), a 32-bit RISC processor dedicated to computing the metering parameters from voltage and current samples.

MAX71334L, MAX71335L: Diagram



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Key Features

- Dual-Core Architecture for Improved System Performance and Flexibility
  - Dedicated 32-Bit DSP Compute Engine for Metrology Processing
  - MAXQ30 32-Bit RISC MPU Core, Up to 10 MIPS (at 10MHz), with 256kB Flash or 128kB Flash, and 12kB data RAM

Applications/Uses

- Polyphase electricity meters
- Polyphase energy monitoring
- Smart Meters

        - Advanced AFE with High Accuracy and Temperature Stability
        - Four Independent ADCs Measuring Four Current Channels and Three Voltage Channels
        - 0.1% Wh Accuracy over 2000:1 Current Range
        - Digital Temperature Compensation for Metrology and RTC
        - 40Hz–70Hz Line Frequency Range, Phase Compensation (±10°)
        - Low-Power 5ksps Auxiliary ADC for Environmental Monitoring
        - On-Chip Digital Temperature Sensor
    - Highly Integrated Product Features and Flexible Peripherals Support Broad Application Needs
        - LCD Controller Supporting Up to Eight Common Planes
        - Two PWM Control Channels with Programmable Frequency, Duty Cycle, Ramp Time
        - Two Touch Switch Inputs
        - Oscillator Based on 32kHz Watch Crystal with Internal 24MHz Backup R/C Oscillator
        - SPI (Master and Slave), Master I^2C

- Four UARTs (Configurable Pins), Smart Card Interface, 38kHz IR Decoder
- 100-Pin LQFP