

24-Bit ADC with Built-in Temperature Sensor (HX710A)

24-Bit ADC with (DVDD-AVDD) Voltage Difference Detection (HX710B)

DESCRIPTION

Based on Avia Semiconductor's patented technology, HX710(A/B) is a precision 24-bit analog-to-digital converter (ADC) with built-in temperature sensor (HX710A) or DVDD, AVDD voltage difference detection (HX710B). It's designed for weigh scales and industrial control applications to interface directly with a bridge sensor.

The input low-noise amplifier (PGA) has a fixed gain of 128, corresponding to a full-scale differential input voltage of $\pm 20\text{mV}$, when a 5V reference voltage is connected to the VREF pin. On chip oscillator provides the system clock without any external component. On-chip power-on-reset circuitry simplifies digital interface initialization. There is no programming needed for the internal registers. All controls to the HX710 are through the pins.

FEATURES

- On-chip temperature measurement (HX701A)
- DVDD and AVDD supply voltage difference measurement (HX701B)
- On-chip low noise amplifier with a gain of 128
- On-chip oscillator requiring no external component
- On-chip power-on-reset
- Simple digital control and serial interface: pin-driven controls, no programming needed
- Selectable 10SPS or 40SPS output data rate
- Simultaneous 50 and 60Hz supply rejection
- Current consumption:
 - normal operation < 1.2mA, power down < 1uA
- Operation supply voltage range: 2.6 ~ 5.5V
- Operation temperature range: -40 ~ +85°C
- 8 pin SOP-8 package

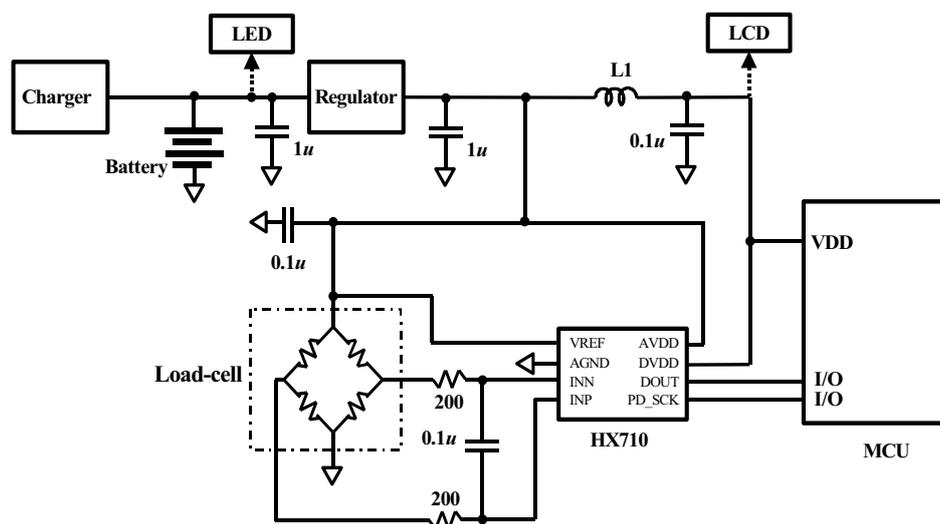


Fig. 1 Typical weigh scale application block diagram