

## 24-Bit ADC with On-chip 3.3V Output Regulator

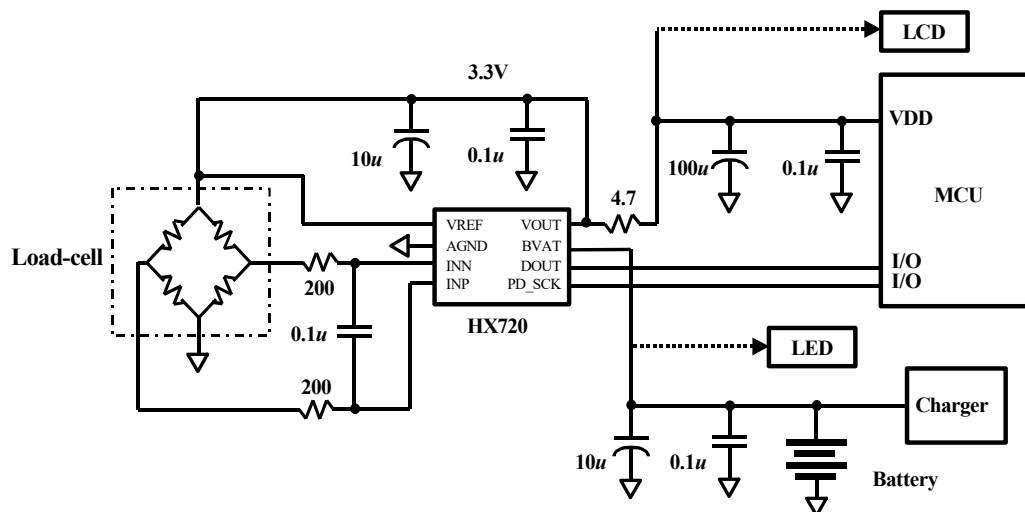
## DESCRIPTION

Based on Avia Semiconductor's patented technology, HX720 is a precision 24-bit analog-to-digital converter (ADC) with on-chip 3.3V output power supply regulator that can be used directly as the power supply for the ADC and MCU simultaneously. 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. When the on-chip 3.3V output regulator is used, the corresponding full-scale differential input voltage is  $\pm 12\text{mV}$ . 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 HX720 are through the pins.

## FEATURES

- **On-chip low noise 3.3V output regulator**
- **On-chip battery voltage measurement**
- **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 (using external regulator)**
- **Operation temperature range: -40 ~ +85°C**
- **8 pin SOP-8 package**



### Fig. 1 Typical Weigh Scale Application Using HX720