海芯科技 AVIA
AVIA Semiconductor

Dual Channel 24-Bit Analog-to-Digital Converter (ADC) with PGA

DESCRIPTION

Based on Avia Semiconductor's patented technology, HX717 is a precision 24-bit analog-to-digital converter (ADC) with very low noise input PGA, designed for weigh scales and industrial control measurement applications to interface directly with small output signal sensors. HX717 is almost pin compatible to HX711, with on chip regulator.

The input multiplexer selects either Channel A or B differential input to the low-noise programmable gain amplifier (PGA). Channel A can be programmed with a gain of 128, or 64, corresponding to a full-scale differential input voltage of ±20mV, or ±40mV respectively, when a 5V supply is connected to VREF pin. Channel B has a selectable gain of 64 or 8. On-chip power supply regulator eliminates the need for an external supply regulator to provide analog power for the ADC and the sensor.

There is no programming needed for the internal registers. All controls to the HX717 are through the pins.

FEATURES

- **Two selectable differential input channels**
- **On-chip active low noise PGA with selectable gain of 8, 64 and 128**
- **On-chip power supply regulator for load-cell**
- **On-chip oscillator requiring no external component with optional external clock input**
- **On-chip power-on-reset**
- **Simple digital control and serial interface: pin-driven controls, no programming needed**
- **Selectable 10, 20, 80 or 320SPS output data rate**
- **Simultaneous 50 and 60Hz supply rejection**
- **Current consumption including on-chip analog power supply regulator:**
  normal operation : 1.6mA, power down: <1uA
- **Operation supply voltage range: 2.7 ~ 5.5V**
- **Operation temperature range: -40 ~ +85℃**
- **16 pin SOP-16 package**

APPLICATIONS

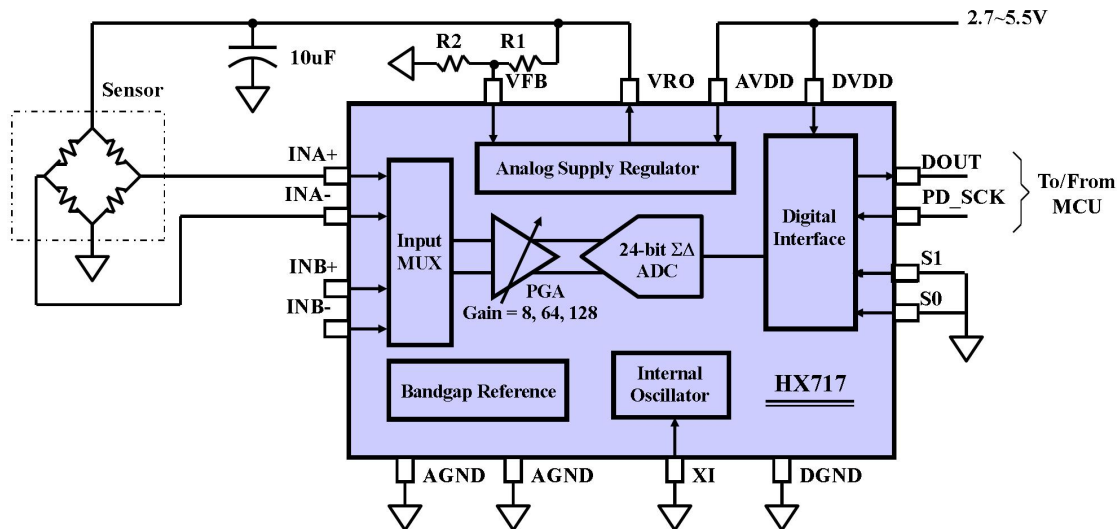- **Weigh Scales**
- **Industrial Process Control and Measurements**

Fig. 1 HX717 Typical application block diagram

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