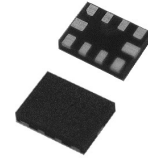


16-bit 860SPS Delta-Sigma Analog to Digital Converter IC

MM4115, MM4114, MM4113



Outline

The MM4115, MM4114, and MM4113 are high-precision, low-power, 16-bit delta sigma analog-to-digital converter ICs with I2C compatible interface. MM4115 can measure two differential inputs or four single-ended inputs by the internal input multiplexer. MM4114 and MM4115 have a build-in PGA (programmable gain amplifier), and are well suited for sensor measurement applications because having input voltage range switching function. This ADC operates in either continuous-conversion mode or single-shot conversion mode.

Applications

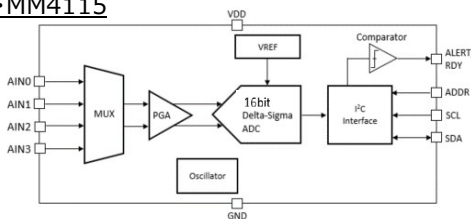
- Industrial equipment Robot control
- Temperature measurement system
- Battery Voltage and Current Monitor Portable device

Features

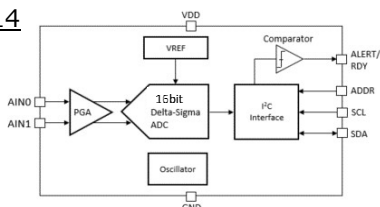
- ① Ultra Small SQFN package: 2.0(W) × 1.5(D) × 0.4(H) mm
- ② 16-Bit Resolution
- ③ Programmable Data Rate : 8 to 860 SPS
- ④ Single-Cycle Settling
- ⑤ Four Single-Ended or Two Differential Inputs (MM4115)
- ⑥ Low Current Consumption: 150 uA (Continuous-Conv. Mode)
- ⑦ Internal Low-Drift Reference Voltage Source and Internal Oscillator
- ⑧ Internal Programmable Comparator (MM4114, MM4115)

Block Diagram

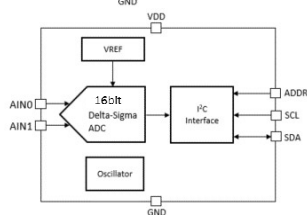
•MM4115



•MM4114



•MM4113



Specification

Item	Specification	Unit
Operation temperature	-40 to 125	°C
Power supply range	2.0 to 5.5	V
Resolution	16	bit
Data rate	8,16,32,64,128,250,475,860	SPS
Integral nonlinearity	±3.0(@DR=8sps, Ta=25°C)	LSB
Offset error	±3.0	LSB
Gain error	0.15	%
Supply current	150 (operation)	uA
	0.5 (power-down)	uA
Communication IF	I2C (max. 3.4MHz)	

Package

•SQFN-10A

