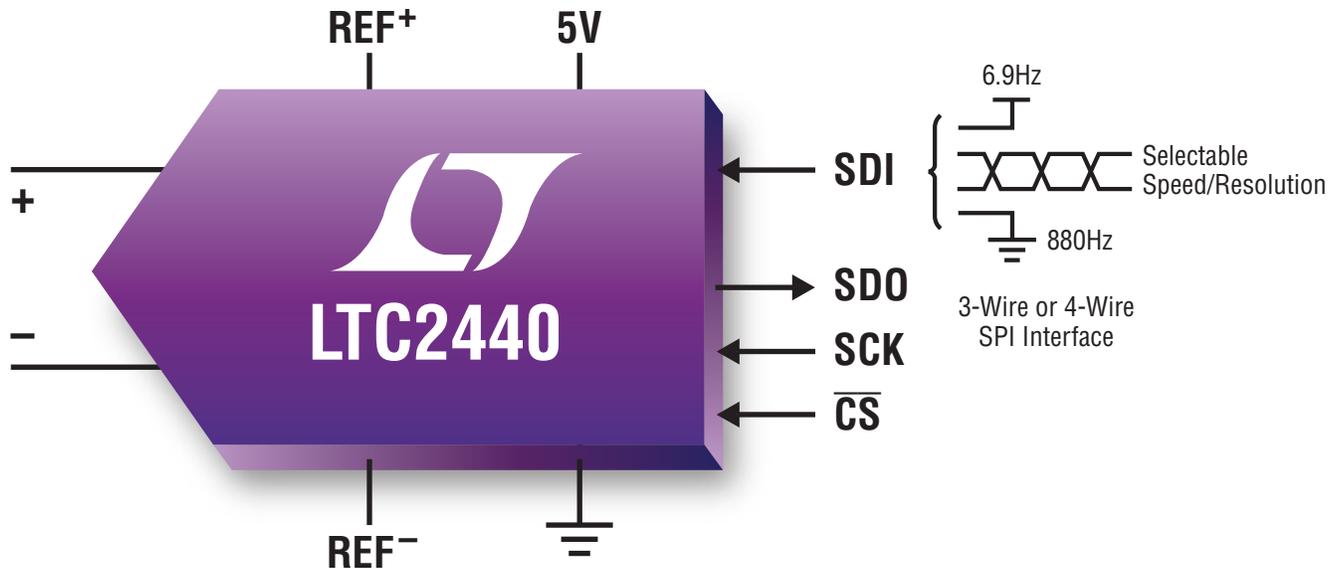


LTC2440: 24-Bit High Speed Differential $\Delta\Sigma$ ADC

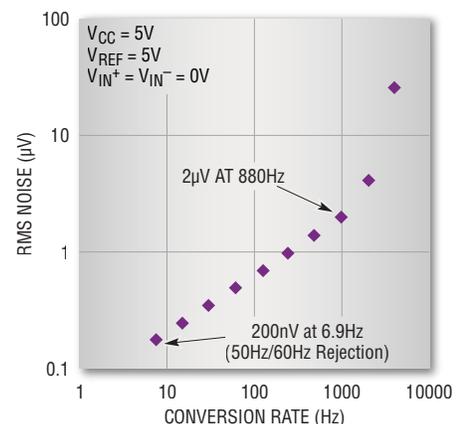


The LTC[®]2440, 24-bit, No Latency Delta-Sigma[™] ADC offers ten settings, ranging from ultralow noise to high speeds of up to 4kHz output rate. An ultralow noise 6.9Hz output rate offers simultaneous 50Hz/60Hz rejection, 25 million counts at $\pm 2.5V$ input range and 500,000 counts at $\pm 50mV$ input range, eliminating the need for complex programmable gain amplifiers (PGAs). The LTC2440 combines a programmable OSR digital filter with a high speed analog modulator to achieve high speed and accuracy, independent of output rate. The LTC2440's wide range of user-programmable speed and resolution combinations makes it flexible for a wide range of applications.

Features

- Up to 4kHz Output Rate (3.5kHz with Internal Oscillator)
- Selectable Speed/Resolution
- $2\mu V_{RMS}$ Noise at 880Hz Output Rate
- $200nV_{RMS}$ Noise at 6.9Hz Output Rate with Simultaneous 50Hz/60Hz Rejection
- 5ppm INL, No Missing Codes
- $<5\mu V$ Offset ($4.5V < V_{CC} < 5.5V$, $-40^{\circ}C$ to $85^{\circ}C$)
- No Latency, Each Conversion is Accurate Even After an Input Step
- Internal Oscillator—No External Components
- Narrow 16-Lead SSOP Package

LTC2440 Speed vs RMS Noise

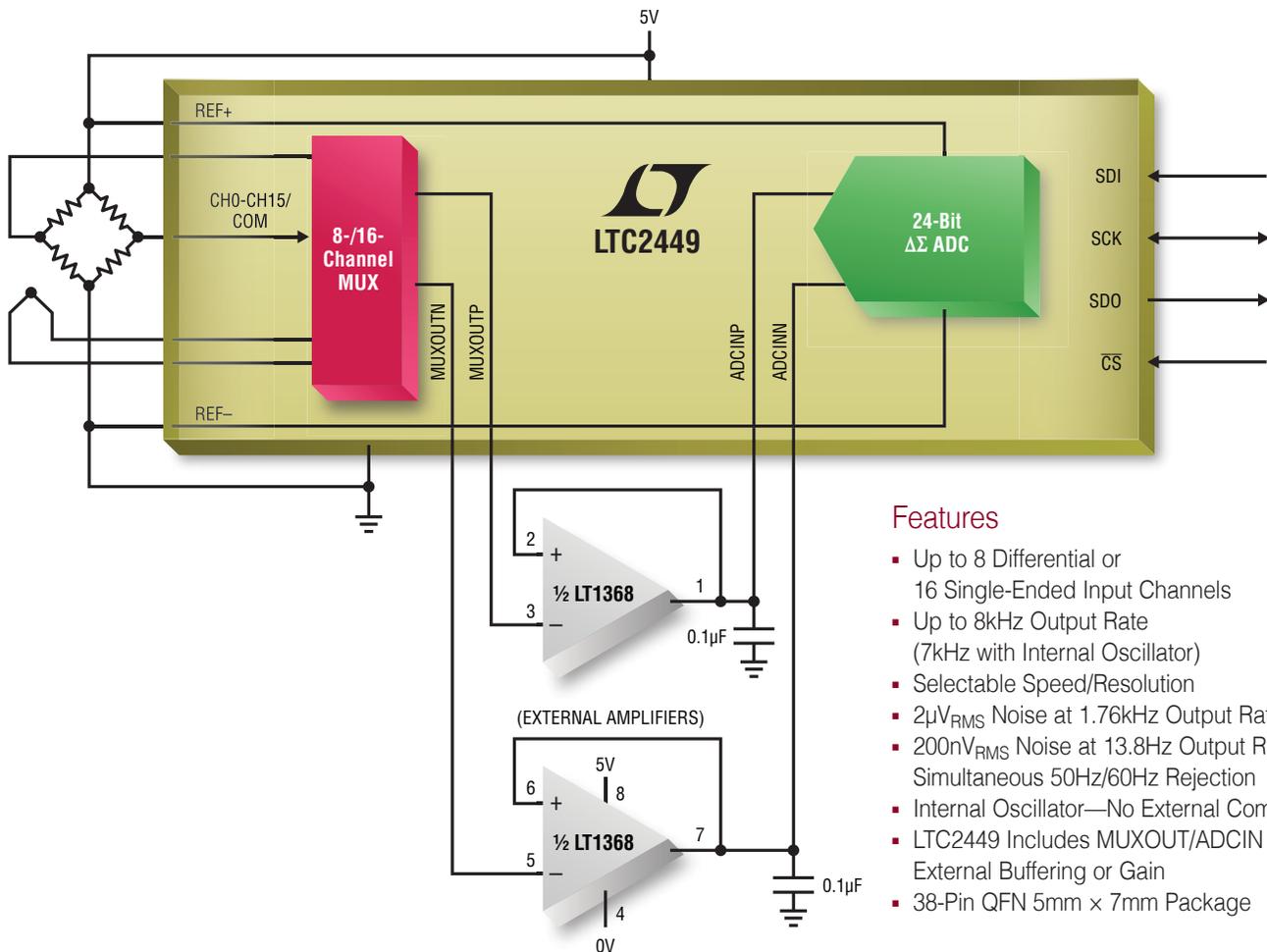


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Fast 24-Bit $\Delta\Sigma$ ADC Family

Features	Inputs			
	1 Differential	4 Single-Ended/ 2 Differential	8 Single-Ended/ 4 Differential	16 Single-Ended/ 8 Differential
No MUXOUT	2440		2444	2446
MUXOUT/ADCIN		2442	2445	2447
Special Features		Dual Internal Amplifiers		5 Differential References
Maximum Output Rate	4kHz	8kHz	8kHz	8kHz
Package	SSOP-16	SSOP-36	5mm x 7mm QFN-38	5mm x 7mm QFN-38

LTC2448/LTC2449: 24-Bit High Speed 8-Channel/16-Channel $\Delta\Sigma$ ADC



Features

- Up to 8 Differential or 16 Single-Ended Input Channels
- Up to 8kHz Output Rate (7kHz with Internal Oscillator)
- Selectable Speed/Resolution
- $2\mu\text{V}_{\text{RMS}}$ Noise at 1.76kHz Output Rate
- $200\text{nV}_{\text{RMS}}$ Noise at 13.8Hz Output Rate with Simultaneous 50Hz/60Hz Rejection
- Internal Oscillator—No External Components
- LTC2449 Includes MUXOUT/ADCIN for External Buffering or Gain
- 38-Pin QFN 5mm x 7mm Package