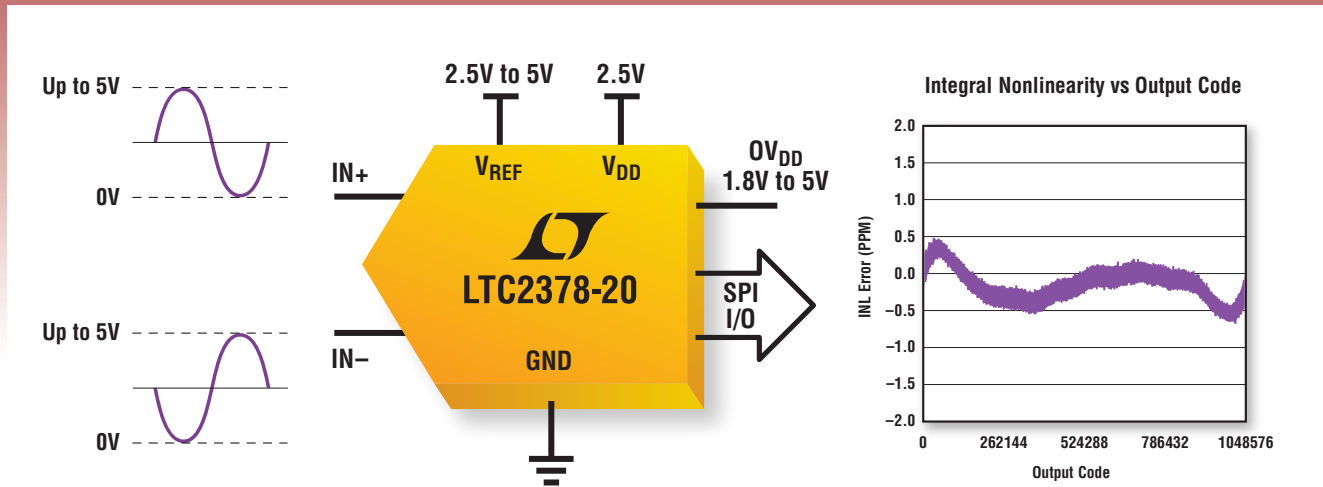


20-Bit 1Msps SAR ADC

0.5ppm INL



No Latency SAR ADC Achieves 104dB SNR

The LTC[®]2378-20 SAR ADC achieves 20 bits of resolution with outstanding 0.5ppm INL and 104dB SNR performance with no cycle latency and sample rates up to 1Msps. It offers uncompromised performance, low power dissipation and excellent temperature stability for high precision signal chains. The LTC2378-20 family includes pin-compatible 20-/18-/16-bit SAR ADCs from 250ksps up to 2Msps with serial SPI interface and explicit Busy and Chain pins that simplify digital timing.

Features

- 1Msps Throughput Rate
- $\pm 0.5\text{ppm INL (Typ)}$, $\pm 2\text{ppm INL (Max)}$
- 104dB SNR (Typ) at $f_{\text{IN}} = 2\text{kHz}$
- -125dB THD (Typ) at $f_{\text{IN}} = 2\text{kHz}$
- Low Power: 21mW at 1Msps, 21 μ W at 1ksps
- Fully Differential Input Range $\pm V_{\text{REF}}$
- V_{REF} Input Range from 2.5V to 5.1V
- Digital Gain Compression Eliminates Need for Negative Rails
- -40°C to +85°C Guaranteed Temperature Range
- 16-pin MSOP and 4mm x 3mm DFN Packages

Complete 20-/18-/16-Bit Pin-Compatible SAR ADC Family

	250ksps	500ksps	1Msps	1.6Msps	2Msps
20-Bit 104dB SNR	2376-20	2377-20	2378-20		
18-Bit 101dB SNR	2376-18	2377-18	2378-18	2379-18	
16-Bit 96dB SNR	2376-16	2377-16	2378-16		2380-16

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Info & Free Samples
1-800-4-LINEAR
www.linear.com/LTC2378-20

