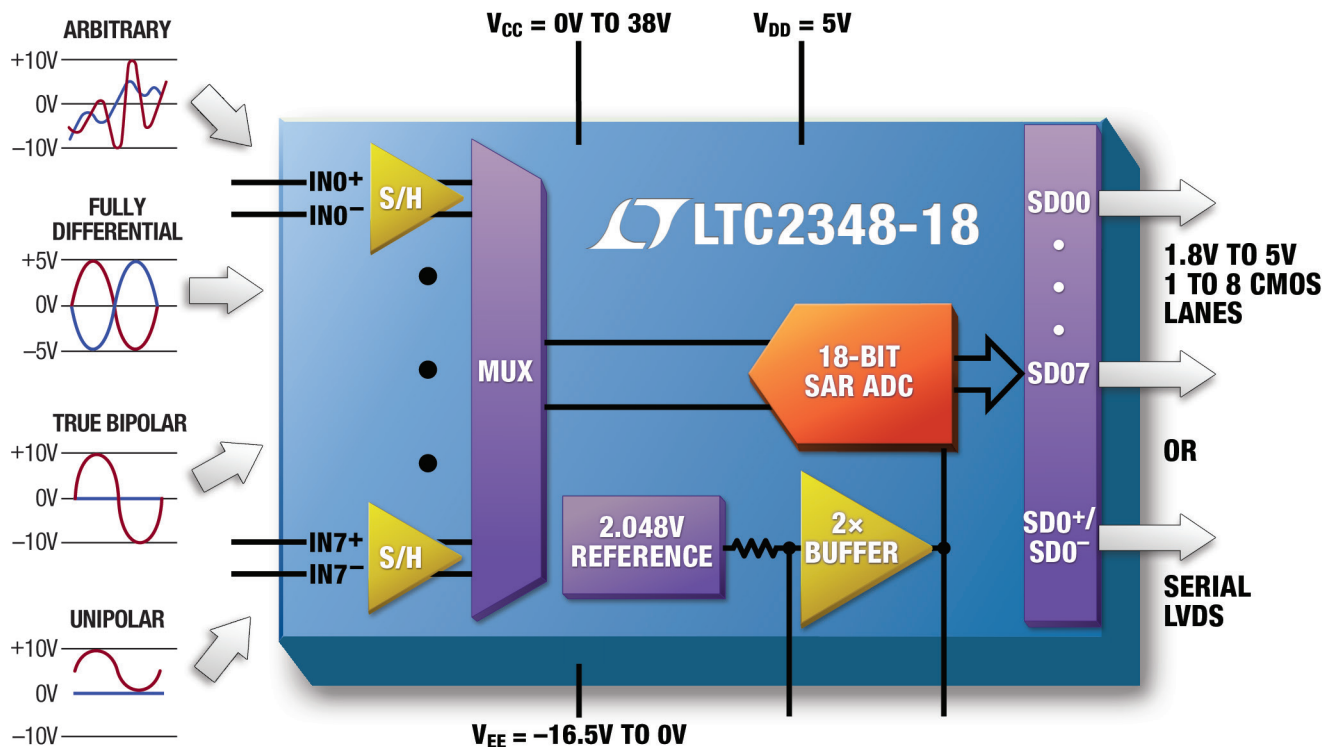


18-Bit Simultaneous Sampling ADC with $\pm 10.24\text{V}$ SoftSpan Inputs



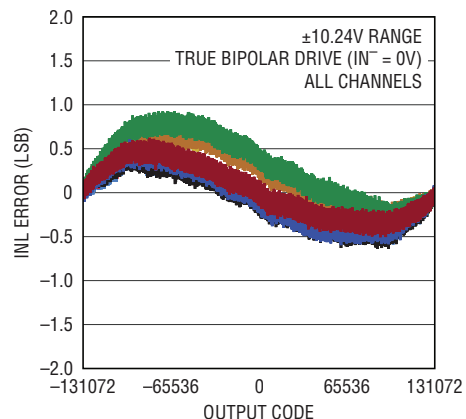
Octal ADC Offers Unprecedented Performance and Flexibility

The LTC[®]2348-18 offers the ultimate blend of high performance and flexibility. Eight differential SoftSpan[™] input channels are independently configurable on a conversion-by-conversion basis to accept different voltage ranges and input types, over a wide input common range from -16.5V to 34V. Furthermore, the high voltage supplies can be individually biased anywhere within the specified operating range to enable application-specific common mode input ranges for maximum design flexibility.

Features

- 200ksps per Channel Throughput
- Eight Simultaneous Sampling Channels
- $\pm 3\text{LSB}$ INL Maximum
- Guaranteed 18-Bit, No Missing Codes
- Differential, Wide Common Mode Range Inputs
- Per-Channel SoftSpan Input Ranges:
 - $\pm 10.24\text{V}$, 0V to 10.24V , $\pm 5.12\text{V}$, 0V to 5.12V
- 96.7dB Single-Conversion SNR
- -109dB THD and Crosstalk, 118dB CMRR
- Integrated Reference and Buffer
- SPI CMOS (1.8V to 5V) and LVDS Serial I/O
- 140mW Power Dissipation (Typical)
- 48-Lead (7mm x 7mm) LQFP Package

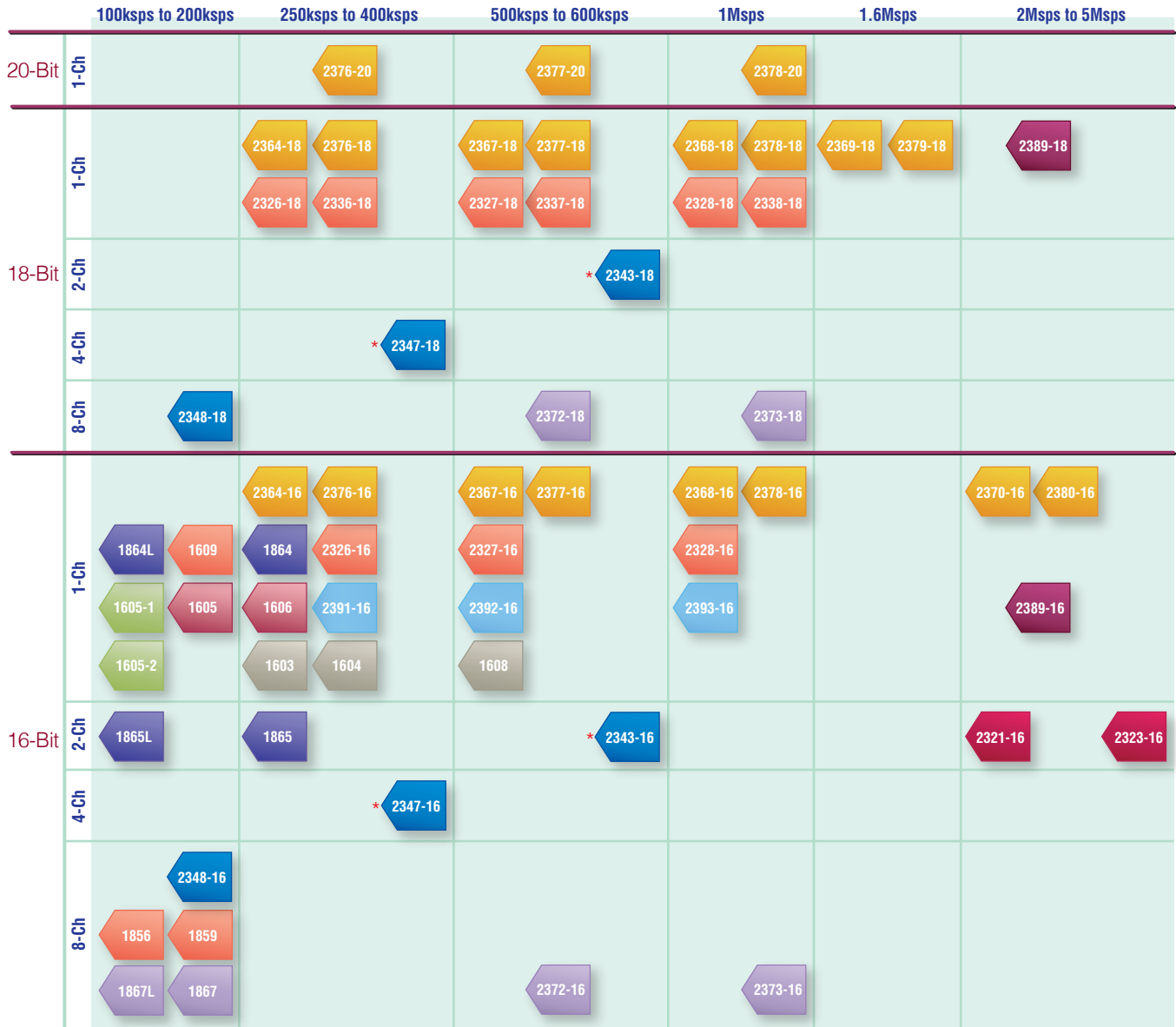
Integral Nonlinearity vs Output Code and Channel









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High Precision SAR ADCs

16-Bit to 20-Bit Resolution, 100ksps Up to 5Msps






Serial

-  Pseudo- or Fully Differential Pin-Compatible ADCs
-  ±10V True Bipolar Inputs
-  8-Channel MUX'd Input ADCs
-  3V/5V Supply μPower ADCs
-  3.3V/5V Supply Simultaneous Sampling ADCs
-  ±10V SoftSpan Simultaneous Sampling ADCs

Serial/Parallel

-  Pseudo- or Fully Differential Pin-Compatible ADCs
-  Fully Differential Pin-Compatible ADCs

Parallel

-  ±10V True Bipolar Inputs
-  0V to 4V, ±4V Unipolar/True Bipolar Inputs
-  ±2.5V True Bipolar Inputs

*Future Product