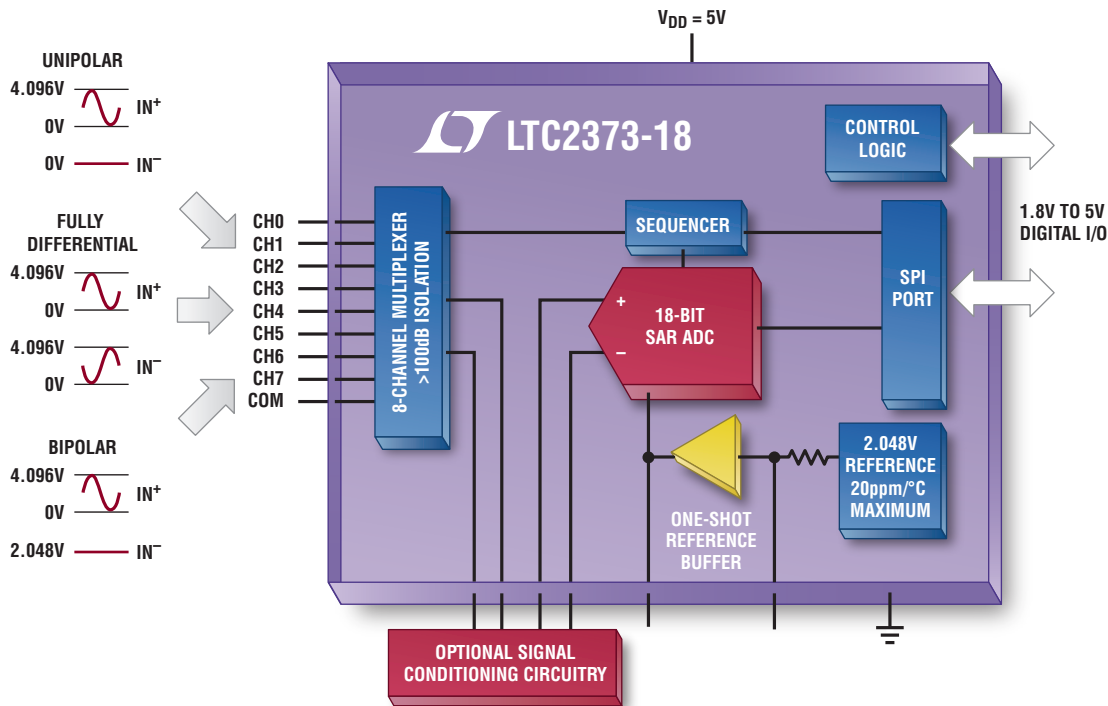


# 18-Bit 1Msps 8-Channel SAR ADC



## Integrated Sequencer Combines Performance and Configurability

The LTC<sup>®</sup>2373-18 is equipped with a programmable sequencer that can store up to 16 control words for configuring the multiplexer (MUX) and input range. This provides the ability to easily mix and match fully differential and pseudo-differential input ranges with a variety of MUX channel configurations. Single-ended input signals can be converted to the fully differential input range of the ADC core using a single external driver circuit between the MUXOUT/ADCIN pins available on the device. This enables the user to achieve the full 100dB SNR performance of the ADC on eight single-ended inputs.

### Features

- 1Msps No Latency Throughput Rate
- 18-Bit Resolution with No Missing Codes
- 8-Channel Multiplexer with Selectable Input Range:
  - Fully Differential ( $\pm 4.096\text{V}$ )
  - Pseudo-Differential Unipolar (0V to 4.096V)
  - Pseudo-Differential Bipolar ( $\pm 2.048\text{V}$ )
- SNR: 100dB (Fully Differential) / 95dB (Pseudo-Differential) at  $f_{\text{IN}} = 1\text{kHz}$
- THD:  $-110\text{dB}$  at  $f_{\text{IN}} = 1\text{kHz}$
- Programmable Sequencer
- Selectable Digital Gain Compression
- Single 5V Supply with 1.8V to 5V I/O Voltages
- SPI-Compatible Serial I/O
- Onboard 2.048V Reference and Reference Buffer
- Guaranteed Operation to 125°C
- 32-Lead 5mm  $\times$  5mm QFN Package

### Pin-Compatible SAR ADC Family

	500ksps	1Msps	1.6Msps
18-Bit 100dB SNR	2372-18	2373-18	
16-Bit 96dB SNR	2372-16	2373-16	2374-16
Power	27mW	40mW	55mW














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# High Precision SAR ADCs



16-Bit to 32-Bit Resolution, 100ksps Up to 15Msps

		100ksps to 200ksps	250ksps to 400ksps	500ksps to 600ksps	1Msps	1.6Msps	2Msps to 5Msps	10Msps	15Msps				
32-Bit	1-Ch				2508-32	2500-32							
24-Bit	1-Ch					2368-24	2512-24	2380-24					
20-Bit	1-Ch		2376-20	2377-20	2378-20								
18-Bit	1-Ch	2336-18	2376-18	2337-18	2377-18	2338-18	2378-18	2379-18	2385-18	2386-18	2387-18		
		2326-18	2364-18	2327-18	2367-18	2328-18	2368-18	2369-18	2389-18				
	2-Ch				2341-18								
	4-Ch		2344-18										
	8-Ch	2345-18	2358-18		2372-18	2373-18	2335-18						
16-Bit	1-Ch	1864L	1609	2326-16	2376-16	2327-16	2377-16	2328-16	2378-16	2380-16	2385-16	2386-16	2387-16
		1605-1	1605	1864	2364-16		2367-16		2368-16	2370-16			
		1605-2	1606	1606	2391-16	2392-16		2393-16		2389-16	2310-16	2311-16	
	2-Ch	1865L	1865							2321-16	2323-16		
	4-Ch			2344-16						2324-16	2325-16		
	8-Ch	2345-16	2358-16					2320-16					
		1856	1859										
		1867L	1867		2372-16	2373-16	2335-16	2374-16					




## Serial

-  Pseudo- or Fully Differential  $\pm 5V$  Input ADCs
-  High Speed, Wideband ADCs
-   $\pm 4.096V$  SoftSpan™ Simultaneous Sampling ADCs
-   $\pm 10V$  True Bipolar Inputs
-  3V/5V Supply  $\mu$ Power ADCs
-   $\pm 10V$  Buffered True Bipolar Simultaneous Sampling ADCs
-  8-Channel MUX'd Input ADCs
-  Wide Input Common Mode ADCs
-  24-Bit ADCs with Digital Averaging Filter
-   $\pm 10V$  True Bipolar MUX'd Input ADCs
-  Oversampling ADCs with Configurable Digital Filter

## Serial/Parallel

-  Pseudo- or Fully Differential  $\pm 4.096V$  Input ADCs
-  Fully Differential  $\pm 4.096V$  Input ADCs

## Parallel

-   $\pm 10V$  True Bipolar Inputs
-  0V to 4V,  $\pm 4V$  Unipolar/True Bipolar Inputs
-   $\pm 2.5V$  True Bipolar Inputs