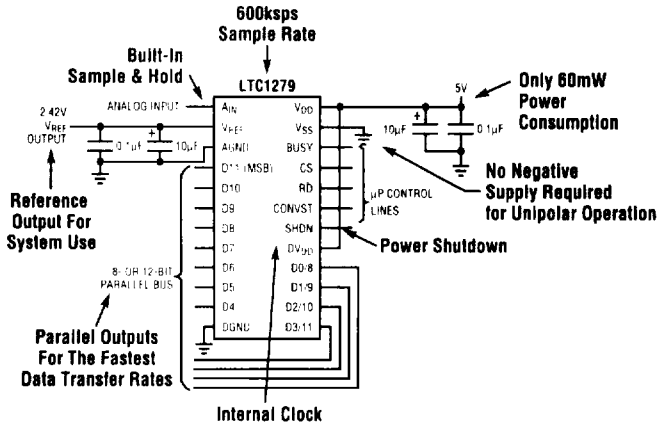
Complete Linear Technology 12-Bit A/D Feature Matrix

	SAMPLE RATE (ksps)	CONVERSION TIME (µs)	SUPPLY CURRENT (mA)	MICROPOWER	3V SINGLE SUPPLY OPERATION	5V SINGLE SUPPLY OPERATION	NUMBER OF INPUT CHANNELS	DIFFERENTIAL INPUT	BIPOLAR INPUT CAPABILITY	HALF-DUPLEX SERIAL I/O	FULL-DUPLEX SERIAL I/O	PARALLEL I/O	SOFTWARE CONFIGURE	ONBOARD REFERENCE	MIN SPAN, (V)	SHUTDOWN	SYSTEM SHUTDOWN OUTPUT	PACKAGES	NUMBER OF PINS
LTC1272-3	250	3	15			☑						☑		☑	N/A			J, N, SW	24
LTC1272-8	110	8	15			☑						☑		☑	N/A			J, N, SW	24
LTC1273	300	2.7	15			☑						☑		☑	5			J, N, SW	24
LTC1274	100	8	2.0			☑			☑			☑		☑	4	☑		SW	24
LTC1275	300	2.7	15						☑			☑		☑	±2.5			J, N, SW	24
LTC1276	300	2.7	15						☑			☑		☑	±5			J, N, SW	24
LTC1277	100	8	2			☑		☑	☑			☑		☑	4	☑		SW	24
LTC1278-4	400	2	15			☑			☑			☑		☑	5 ±2.5	☑		N, SW	24
LTC1278-5	500	1.6	15			☑			☑			☑		☑	5 ±2.5	☑		N, SW	24
LTC1279	600	1.4	12			☑			☑			☑		☑	5 ±2.5	☑		N, SW	24
LTC1282	140	5	4.0		☑				☑			☑		☑	2.5 ±1.25			J, N, SW	24
LTC1285	7.5	125	0.160*	☑	☑			☑		☑					1	☑		N, SO	8
LTC1286	12.5	80	0.250*	☑		☑		☑		☑					1	☑		N, SO	8
LTC1287	30	24	1.5		☑			☑		☑					1.2			J, N	8
LTC1288	6.6	141	0.210*	☑	☑		2	☑		☑			☑		2.7	☑		N, SO	8
LTC1289	25	26	1.5		☑		8	☑	☑		☑		☑		1.2	☑		J, N, SW	20
LTC1290	50	13	6			☑	8	☑	☑		☑		☑		1.2	☑		J, N, SW	20
LTC1291	54	12	6			☑	2	☑		☑			☑		N/A	☑		J, N	8
LTC1292	60	12	6			☑		☑		☑					1.2			J, N	8
LTC1293	46	12	6			☑	6	☑	☑	☑			☑		1.2	☑		J, N, SW	16
LTC1294	46	12	6			☑	8	☑	☑	☑			☑		1.2	☑		J, N	20
LTC1296	46	12	6			☑	8	☑	☑	☑			☑		1.2	☑	☑	J, N	20
LTC1297	50	12	6			☑		☑		☑					1.2	☑		J, N	8
LTC1298	11.1	90	0.340*	☑		☑	2	☑		☑			☑		2.7	☑		N, SO	8
LTC1400	400	2.1	15			☑			☑	☑				☑	4.1	☑		N8, S8	8
LTC1410	1250	0.75	12 −20					☑	☑			☑		☑	±2.5	☑		N, SO	28
LTC1522	10.5	60	0.16	☑	☑	☑	4			☑			☑		1.5			SO	16
LT574A	–	25	40 −25							☑		☑		☑	10			N	28

*Average supply current drops with sample rate. Supply current listed is at $f_{SAMPLE(MAX)}$

High Speed 12-Bit A/D Converters



- LTC1400: 400ksps in SO-8 Package!!

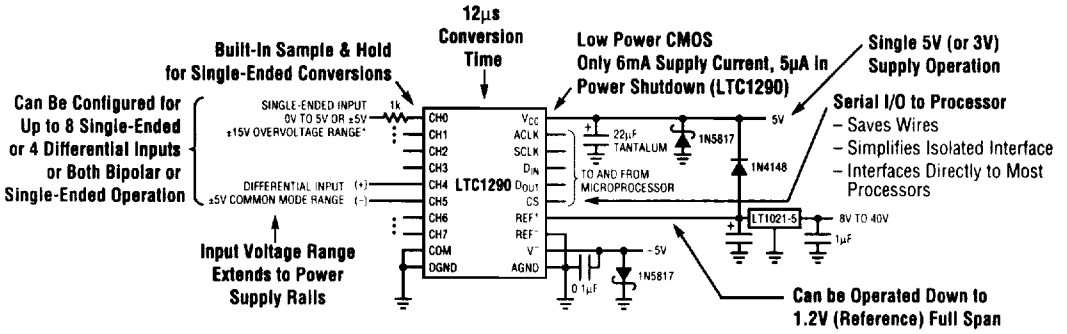
Comparison of Specs and Features

DEVICE TYPE	SAMPLING FREQ	S/(N + D) AT NYQUIST	INPUT RANGE	POWER SUPPLY	POWER DISSIPATION
LTC1272	250ksps	65dB	0V-5V	5V	75mW
LTC1273	300ksps	70dB	0V-5V	5V	75mW
LTC1274	100ksps	73dB	0V-4.096V or ±2.048	5V or ±5V	10mW 5µW (Shutdown)
LTC1275	300ksps	70dB	±2.5V	±5V	75mW
LTC1276	300ksps	70dB	±5V	±5V	75mW
LTC1277	100ksps	73dB	0V-4.096V or ±2.048	5V or ±5V	10mW 0.8mW*
LTC1278-4	400ksps	70dB	0V-5V or ±2.5V	5V or ±5V	75mW 5mW*
LTC1278-5	500ksps	70dB	0V-5V or ±2.5V	5V or ±5V	75mW 5mW*
LTC1279	600ksps	70dB	0V-5V or ±2.5V	5V or ±5V	60mW 7.5mW*
LTC1282	140ksps	68dB	0V-2.5V or ±1.25V	3V or ±3V	12mW
LTC1400	400ksps	70dB	0V-4.096V or ±2.048V	5V or ±5V	75mW
LTC1410	1.25Msps	71dB	±2.5	±5V	160mW/7mW*

*Low power shutdown with instant wake up

Serial I/O 12-Bit A/D Converters

12-Bit Serial Interface A/D Converter Systems



Comparison of Specs and Features

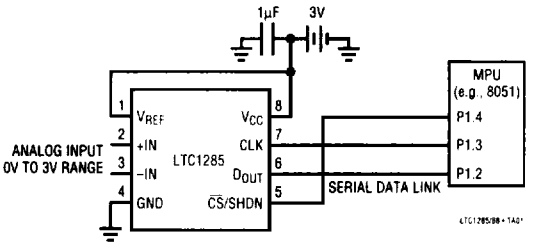
Device Type	Analog Input Channels	Supply Voltage (V)	Sample Rate (ksps)	Number of Pins	Full/Half Duplex I/O	Auto Shutdown	Shutdown Status Pin
LTC1287	1	3	30	8	Half		
LTC1289	8	3/±3	25	20	Full		
LTC1290	8	5/±5	50	20	Full		
LTC1291	2	5	54	8	Half		
LTC1292	1	5	60	8	Half		
LTC1293	6	5/±5	46	16	Half		
LTC1294	8	5/±5	46	20	Half		
LTC1296	8	5/±5	46	20	Half		X
LTC1297	1	5	50	8	Half	X	
LTC1522	4	3	10.5	16	Half	X	

Micropower 12-Bit A/D Converters in SO-8 Packages

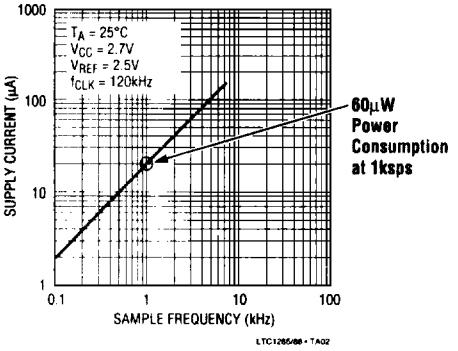
World's Lowest Power 12-Bit ADCs

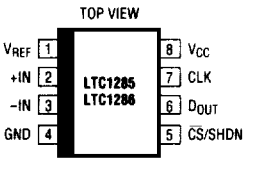
- 12-Bit Resolution
- 8-Pin SO Plastic Package
- Low Cost
- Low Supply Current: 160µA Typ (LTC1285)
- Guaranteed ±3/4LSB Max DNL
- Auto-Shutdown to 1nA Typ
- Single Supply 3V to 6V Operation (LTC1285/88) or 5V to 9V (LTC1286/98)
- On-Chip Sample-and-Hold
- 100µs Conversion Time
- Sampling Rates: 12.5ksps (LTC1286) 11.1ksps (LTC1298)
- I/O Compatible with SPI, Microwire, etc.
- Differential Inputs (LTC1285, LTC1286)
- 2-Channel MUX (LTC1288, LTC1298)

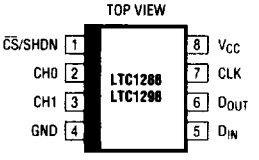
12µW, SO-8 Package, 12-Bit ADC Samples at 200Hz and Runs Off a 3V Battery



Supply Current vs Sample Rate (LTC1285)







S8 Package 8-Lead Plastic SO