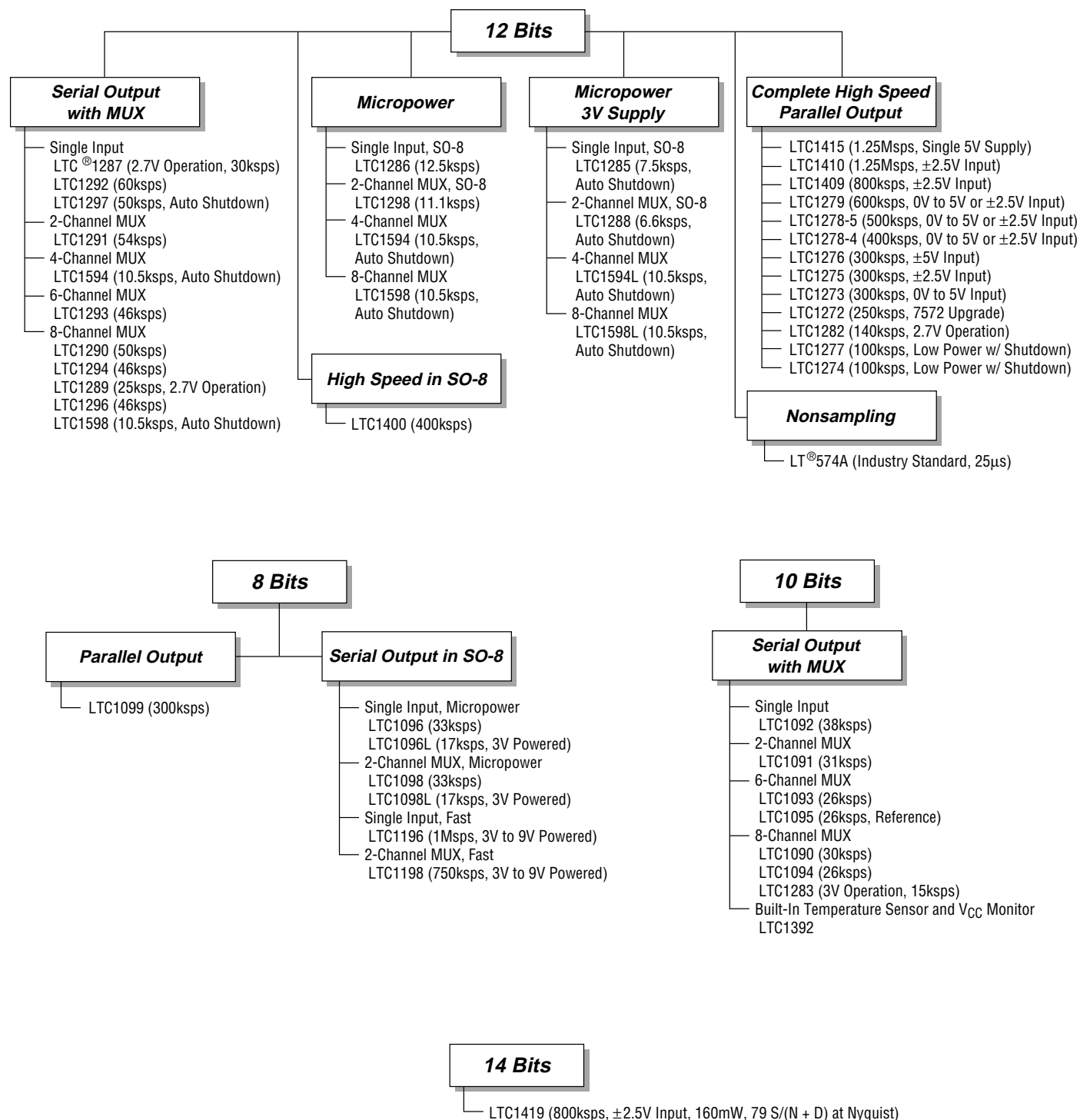


Analog-to-Digital Converters



Complete Linear Technology 12-Bit A/D Feature Matrix

	SAMPLE RATE (ksps)	CONVERSION TIME (μ s)	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 PROGRAMMABLE	ONBOARD REFERENCE	MIN SPAN. (V)	SHUTDOWN	PACKAGES	NUMBER OF PINS	SINAD AT NYQUIST (dB)	DATABOOK PAGE
LTC1415	1250	0.75	20														S0	28	70	DS**
LTC1410	1250	0.75	12-20											± 2.5			G, S0	28	71	95DB 13-97
LTC1409	800	1.1	6-10											± 2.5			S0	28	71	DS**
LTC1279	600	1.4	12											5/ ± 2.5			SW	24	70	95DB 6-8
LTC1278-5	500	1.6	15											5/ ± 2.5			SW	24	70	94DB 6-80
LTC1278-4	400	2	15											5/ ± 2.5			N, SW	24	70	94DB 6-80
LTC1400	400	2.1	15											4.1			S8	8	70	95DB 13-86
LTC1273	300	2.7	15											5			N, SW	24	70	94DB 6-58
LTC1275	300	2.7	15											± 2.5			N, SW	24	70	94DB 6-58
LTC1276	300	2.7	15											± 5			N, SW	24	70	94DB 6-58
LTC1272-3	250	3	15											NA			N, SW	24	65	92DB 6-6
LTC1282	140	5	4											2.5/ ± 1.25			N, SW	24	68	94DB 6-95
LTC1272-8	110	8	15											NA			N, SW	24		92DB 6-6
LTC1274	100	8	2											4			SW	24	73	95DB 13-22
LTC1277	100	8	2											4			SW	24	73	95DB 13-22
LTC1292	60	12	6											1.2			N8	8		94DB 6-182
LTC1291	54	12	6				2							NA			N8	8		94DB 6-163
LTC1290	50	13	6				8							1.2			N, SW	20		92DB 6-67
LTC1297	50	12	6											1.2			N8	8		94DB 6-182
LTC1293	46	12	6				6							1.2			N, SW	16		92DB 6-113
LTC1294	46	12	6				8							1.2			N	20		92DB 6-113
LTC1296	46	12	6				8							1.2			N	20		92DB 6-113
LTC1287	30	24	1.5											1.2			N8	8		92DB 6-25
LTC1289	25	26	1.5				8							1.2			N, SW	20		92DB 6-40
LTC1286	12.5	80	0.250*											1.2			N8, S8	8		94DB 6-140
LTC1298	11.1	90	0.340*				2							4.5			N8, S8	8		94DB 6-140
LTC1594	10.5	60	0.160*				4							1.2			S0	16		DS**
LTC1594L	10.5	60	0.160*				4							1.2			S0	16		DS**
LTC1598	10.5	60	0.160*				8							1.2			G	24		DS**
LTC1598L	10.5	60	0.160*				8							1.2			G	24		DS**
LTC1285	7.5	125	0.160*											1.2			N8, S8	8		95DB 6-24
LTC1288	6.6	141	0.210*				2							2.7			N8, S8	8		95DB 6-24
LT574A	—	25	40-25											10			N	28		95DB 6-48

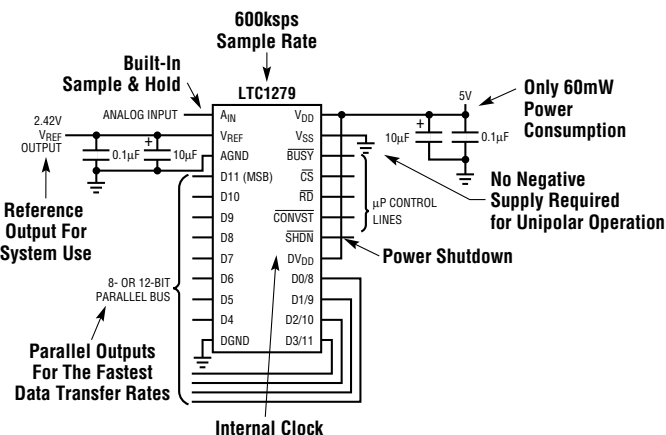
*Average supply current drops with sample rate. Supply current listed is a $I_{SAMP}(MAX)$

**DS = Data sheet

High Speed 12-Bit A/D Converters—World's Best Power/Speed Ratio

- Up to 1.25Msps (LTC1410)
- $\pm 5V$ or 5V Supply Operation*
- High Bandwidth Sample-and-Hold (LTC1410: 20MHz)
- Excellent SINAD at Nyquist ($\geq 70dB$)
- Surface Mount Packages
- Nap and Sleep Modes for Instant Wakeup*
- Internal Reference
- Internal Synchronized Clock*

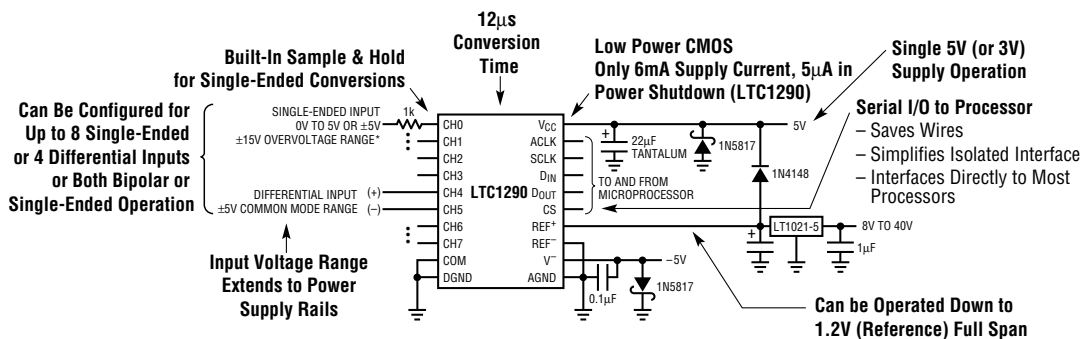
*See the A/D Feature Matrix for Devices Which Contain This Feature



■ LTC1279: 600ksps with Shutdown

Serial I/O 12-Bit A/D Converters

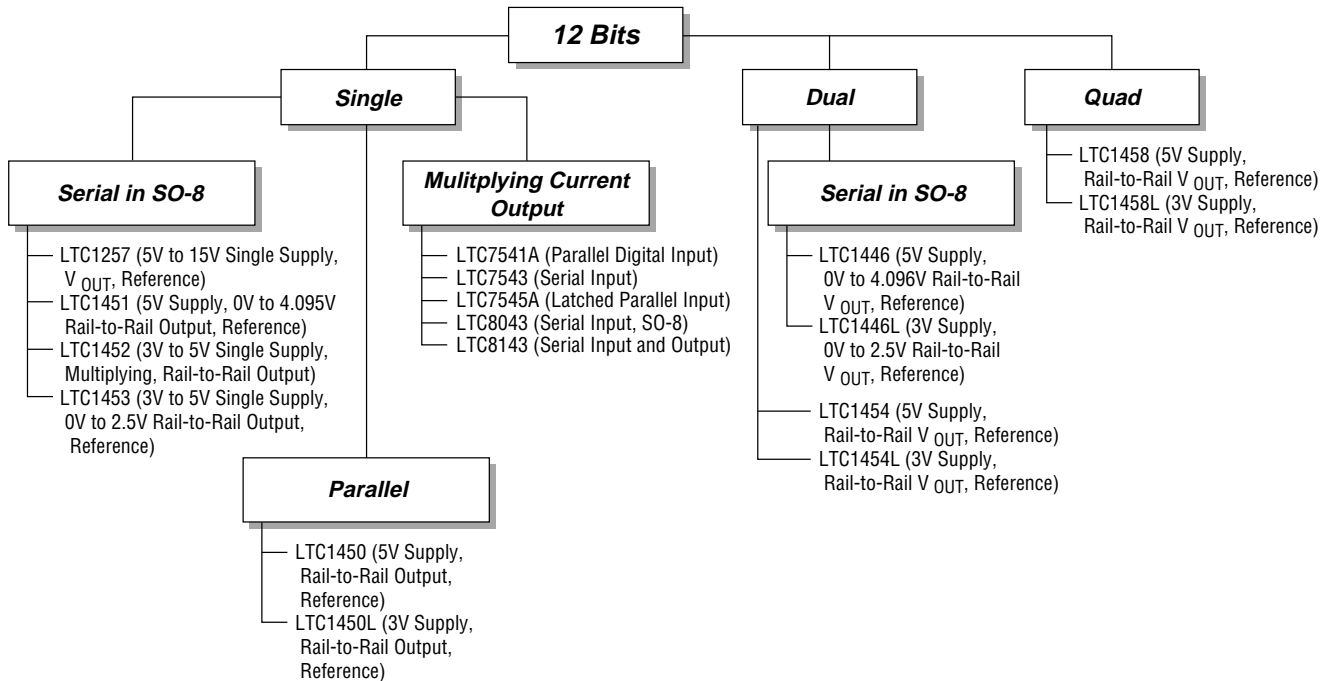
12-Bit Serial Interface A/D Converter Systems



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
LTC1285	1	3	7.5	8	Half	X
LTC1286	1	3	12.5	8	Half	X
LTC1287	1	3	30	8	Half	
LTC1288	2	5	6.6	8	Half	X
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	
LTC1297	1	5	50	8	Half	X
LTC1298	2	5	11.1	8	Half	X
LTC1594	4	5	16.8	16	Half	X
LTC1594L	4	3	10.5	16	Half	X
LTC1598	8	5	16.8	24	Half	X
LTC1598L	8	3	10.5	24	Half	X

Digital-to-Analog Converters



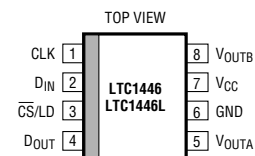
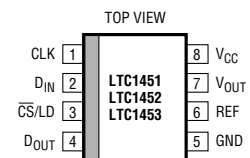
Complete V_{OUT} DACs

12-Bit

	I/O	REF	V_{OUT}	DAISY CHAIN	V_{CC}	P_{DIS} (mW)	PINS	PACKAGES	POWER-ON RESET
Single									
LTC1257	Serial	✓	0V to 2.048V	✓	4.5V to 15V	1.7	8	PDIP/SO	
LTC1451	Serial	✓	0V to 4.096V	✓	4.5V to 6.5V	2.0	8	PDIP/SO	✓
LTC1452	Serial		0V to 2(V_{REF})	✓	2.7V to 6.5V	1.1	8	PDIP/SO	✓
LTC1453	Serial	✓	0V to 2.5V	✓	2.7V to 3.5V	0.75	8	PDIP/SO	✓
LTC1450	Parallel	✓	0V to 4.096V/ Ext V_{REF}		4.5V to 5.5V	2.0	24	PDIP/SSOP	✓
LTC1450L	Parallel	✓	0V to 2.5V/ Ext V_{REF}		2.7V to 3.5V	0.75	24	PDIP/SSOP	✓
Dual									
LTC1446	Serial	✓	0V to 4.096V	✓	4.5V to 5.5V	2.25	8	SO/PDIP	✓
LTC1446L	Serial	✓	0V to 2.5V	✓	2.7V to 3.5V	1.35	8	SO/PDIP	✓
LTC1454	Serial	✓	Variable	✓	4.5V to 5.5V	2.25	16	SO	✓
LTC1454L	Serial	✓	Variable	✓	2.7V to 3.5V	1.35	16	SO	✓
Quad									
LTC1458	Serial	✓	0V to 4.096V	✓	4.5V to 5.5V	6.5	28	SO/SSOP	✓
LTC1458L	Serial	✓	0V to 2.5V	✓	2.7V to 3.5V	2.7	28	SO/SSOP	✓

Multiplying Current Output

	RESOLUTION (BITS)	I/O	V_{CC}	COMMENTS
LTC7541A	12	Parallel	5V	
LTC7543	12	Serial	5V	
LTC7545	12	Parallel	5V	Microprocessor Compatible
LTC8043	12	Serial	5V	SO-8
LTC8143	12	Serial	5V	Daisy-Chain Serial Data Output



Complete 12-Bit Single and Dual DACs in SO-8 Packages!!