

Precision ADCs

Precision Σ - Δ ADCs

Part Number	Resolution (Bits)	A _{IN} Channels	Min Input Range (V)	Max Input Range (V)	Peak-to-Peak (p-p) Resolution @ Max Input Range		Power Supply Current Typ (mA)	On-Chip PGA	On-Chip A _{IN} Buffer	On-Chip Current Source	Features
					Resolution (p-p) (Bits)	@ Data Rate (SPS)					
AD7170	12	1		$\pm V_{REF}$	12	125	0.11				Low power
AD7171	16	1		$\pm V_{REF}$	16	125	0.11				Low power
AD7701	16	1		$\pm V_{REF}$	16	4000	5				Update rate is 4 kHz, bandwidth is 10 Hz
AD7715	16	1	$\pm V_{REF}/128$	$\pm V_{REF}$	16	60	0.55	•	•		Low power
AD7788	16	1		$\pm V_{REF}$	16	16.6	0.07				Low power
AD7790	16	1	$\pm V_{REF}/8$	$\pm V_{REF}$	16	16.6	0.13				Low power
AD7796	16	1		$\pm V_{REF}/128$	15.5	16.6	0.25	•	•		Low power and low noise
AD7705	16	2	$\pm V_{REF}/128$	$\pm V_{REF}$	16	60	0.5	•	•		Low power
AD7706	16	3	$\pm V_{REF}/128$	$\pm V_{REF}$	16	60	0.5	•	•		Low power
AD7707	16	3	$\pm V_{REF}/128$	$\pm 4 V_{REF}$	16	60	0.5	•	•		
AD7792	16	3	$\pm V_{REF}/128$	$\pm V_{REF}$	16	16.6	0.4	•	•	•	Low power and low noise
AD7798	16	3	$\pm V_{REF}/128$	$\pm V_{REF}$	16	16.6	0.3	•	•		Low power and low noise
AD7709	16	4	$\pm 1.024 V_{REF}/128$	$\pm 1.024 V_{REF}$	16	20	1.25	•	•	•	
AD7795	16	6	$\pm V_{REF}/128$	$\pm V_{REF}$	16	16.6	0.4	•	•	•	Low power and low noise
AD7708	16	10	$\pm 1.024 V_{REF}/128$	$\pm 1.024 V_{REF}$	16	20	1.3	•	•		Low voltage and low power
AD7703	20	1		$\pm V_{REF}$	17	4000	5				Update rate is 4 kHz, bandwidth is 10 Hz
AD7785	20	3	$\pm V_{REF}/128$	$\pm V_{REF}$	18.6	16.6	0.4	•	•	•	Low power and low noise
AD7783	24	1	$\pm 1.024 V_{REF}/16$	$\pm 1.024 V_{REF}$	18.5	20	1.3	•	•	•	Read only
AD7789	24	1		$\pm V_{REF}$	19	16.6	0.07				Low power
AD7791	24	1		$\pm V_{REF}$	19	16.6	0.13		•		Low power
AD7797	24	1		$\pm V_{REF}/128$	15.5	16.6	0.25	•	•		Low power and low noise
AD7710	24	2	$\pm V_{REF}/128$	$\pm V_{REF}$	17.5	60	5	•		•	
AD7711	24	2	$\pm V_{REF}/128$	$\pm V_{REF}$	17.5	60	5	•		•	Two current sources
AD7711A	24	2	$\pm V_{REF}/128$	$\pm V_{REF}$	17.5	60	5	•		•	One current source
AD7712	24	2	$\pm V_{REF}/128$	$\pm V_{REF}$	17.5	60	5	•			
AD7730	24	2	$\pm 1.024 V_{REF}/256$	$\pm 1.024 V_{REF}/32$	17	200	13	•	•		Weigh scale
AD7730L	24	2	$\pm 1.024 V_{REF}/256$	$\pm 1.024 V_{REF}/32$	17	200	13	•	•		Weigh scale
AD7732	24	2	$\pm 2 V_{REF}$	$\pm 4 V_{REF}$	16	2000	14.5	•	•		Fast channel switching
AD7782	24	2	$\pm 1.024 V_{REF}/16$	$\pm 1.024 V_{REF}$	18.5	20	1.3	•	•		Read only
AD7787	24	2		$\pm V_{REF}$	19	16.6	0.13		•		Low power
AD7191	24	2	$\pm V_{REF}/128$	$\pm V_{REF}$	21.5	10	4.35	•	•		Pin programmable
AD7192	24	2	$\pm V_{REF}/128$	$\pm V_{REF}$	22	4.7	4.35	•	•		Low noise/4 kHz max update rate
AD7190	24	2	$\pm V_{REF}/128$	$\pm V_{REF}$	22.5	4.7	6	•	•		Low noise/4 kHz max update rate
AD7195	24	2	$\pm V_{REF}/128$	$\pm V_{REF}$	22.5	4.7	6	•	•		AC excitation
AD7713	24	3	$\pm V_{REF}/128$	$\pm V_{REF}$	16	20	1.1	•		•	
AD7793	24	3	$\pm V_{REF}/128$	$\pm V_{REF}$	18.6	16.6	0.4	•	•	•	Low power and low noise
AD7799	24	3	$\pm V_{REF}/128$	$\pm V_{REF}$	18.6	16.6	0.38	•	•		Low power and low noise
AD7734	24	4	$\pm 2 V_{REF}$	$\pm 4 V_{REF}$	16	2000	14.5		•		Fast channel switching
AD7714	24	5	$\pm V_{REF}/128$	$\pm V_{REF}$	17.5	60	0.55	•	•		
AD7719	24	5	$\pm 1.024 V_{REF}/128$	$\pm 1.024 V_{REF}$	18.5	20	1.5	•	•	•	Dual ADC
AD7731	24	5	$\pm 1.024 V_{REF}/128$	$\pm 1.024 V_{REF}/2$	17	800	13.5	•	•		
AD7193	24	4	$\pm V_{REF}/128$	$\pm V_{REF}$	22	4.7	4.65	•	•		Low noise/4 kHz max update rate
AD7794	24	6	$\pm V_{REF}/128$	$\pm V_{REF}$	18.6	16.6	0.4	•	•	•	Low power and low noise
AD7738	24	8	$\pm V_{REF}/4$	$\pm V_{REF}$	16	8500	14.5		•		Fast channel switching
AD7739	24	8	$\pm V_{REF}/4$	$\pm V_{REF}$	16	4000	14.5		•		Fast channel switching
AD7194	24	8	$\pm V_{REF}/128$	$\pm V_{REF}$	22	4.7	4.65	•	•		Low noise/4 kHz max update rate
AD7718	24	10	$\pm 1.024 V_{REF}/128$	$\pm 1.024 V_{REF}$	18.5	20	1.3	•	•		Low voltage and low power
AD7176 New	24	4		$\pm V_{REF}$	17.5	250,000	7.8				Low noise and fast settling
Isolated Σ-Δ ADCs											
AD7400	16	1	± 0.2	± 0.32	16	10,000	6				Isolated Σ - Δ , internal 10 MHz clock
AD7401	16	1	± 0.2	± 0.32	16	20,000	6				Isolated Σ - Δ , external clock
AD7400A	16	1	± 0.25	± 0.32	16	10,000	15.5				Isolated Σ - Δ , internal 10 MHz clock
AD7401A	16	1	± 0.25	± 0.32	16	20,000	17				Isolated Σ - Δ , external clock

For more information on ADI precision ADCs, visit www.analog.com/ADCs.



Wideband Precision Σ - Δ ADCs

Part Number	Resolution (Bits)	Dynamic Range (dB)	Max Data Rate/SNR Typ	Min Data Rate/SNR Typ	Programmable Oversampling Rate	INL Error Typ (ppm)	Power (mW)	Interface	Package
AD7760	24	120	2.5 MSPS/100 dB	78 kSPS/112 dB	8 \times to 256 \times	8	661	Parallel	64-lead TQFP
AD7762	24	120	625 kSPS/107 dB	78 kSPS/112 dB	32 \times to 256 \times	8	661	Parallel	64-lead TQFP
AD7763	24	120	625 kSPS/107 dB	78 kSPS/112 dB	32 \times to 256 \times	8	651	Serial	64-lead TQFP
AD7764	24	115	312 kSPS/104 dB	78 kSPS/109 dB	64 \times , 128 \times , 256 \times	14	160	Serial	28-lead TSSOP
AD7765	24	115	156 kSPS/107 dB	78 kSPS/109 dB	128 \times , 256 \times	14	160	Serial	28-lead TSSOP

Oversampling 24-Bit ADCs

Part Number	Resolution (Bits)	Dynamic Range (dB)	Max Data Rate/SNR Typ	Min Data Rate/SNR Typ	Programmable Oversampling Rate	INL Error Typ (ppm)	Power (mW)	Interface	Package
AD7766	24	109.5	128 kSPS/108.5 dB		8 \times	6	15	Serial	16-lead TSSOP
AD7766-1	24	112.5	64 kSPS/111.5 dB		16 \times	6	10.5	Serial	16-lead TSSOP
AD7766-2	24	115.5	32 kSPS/113.5 dB		32 \times	6	8.5	Serial	16-lead TSSOP
AD7767	24	109.5	128 kSPS/108.5 dB		8 \times	3	15	Serial	16-lead TSSOP
AD7767-1	24	112.5	64 kSPS/111.5 dB		16 \times	3	10.5	Serial	16-lead TSSOP
AD7767-2	24	115.5	32 kSPS/113.5 dB		32 \times	3	8.5	Serial	16-lead TSSOP

8-Bit to 14-Bit Precision ADCs

Part Number	Resolution (Bits)	Sample Rate (kSPS)	Power (mW)	Power-Down Mode	Number of Channels	Supply Range (V)	Analog Input Range (V)	Reference (V)	Data Bus Interface	Package	Features
<i>Single-Channel, True Differential, and Pseudo Differential ADCs</i>											
AD7946	14	500	3.3	•	1	5 (1.8 to 5 logic)	0 to V _{REF}	0.5 to 5 (external)	Serial	10-lead MSOP, 10-lead LFCSP	14-bit, no missing codes, ± 1 LSB INL, 85 dB SNR
AD7942	14	250	1.5	•	1	2.7 to 5 (1.8 to 5 logic)	0 to V _{REF}	0.5 to 5 (external)	Serial	10-lead MSOP, 10-lead LFCSP	14-bit, no missing codes, ± 1 LSB INL, 85 dB SNR
AD7949	14	250	15	•	8	2.7 to 5 (1.8 to 5 logic)	0 to V _{REF}	2.5/4.1	Serial	20-lead LFCSP	14-bit, no missing codes, ± 1 LSB INL, 83 dB SNR
AD7450A	12	1000	4 max	•	1	2.7 to 5.25	2 \times V _{REF}	2.5 (external)	Serial	8-lead SOT-23, 8-lead MSOP	Differential input, 1 MSPS, 12-bit ADC
AD7451	12	1000	4 max	•	1	2.7 to 5.25	V _{REF}	2.5 (external)	Serial	8-lead SOT-23, 8-lead MSOP	Pseudo differential, 1 MSPS, 12-bit ADC
AD7452	12	555	3.3 max	•	1	2.7 to 5.25	2 \times V _{REF}	2.5 (external)	Serial	8-lead SOT-23	Differential input, 555 kSPS, 12-bit ADC
AD7453	12	555	3.3 max	•	1	2.7 to 5.25	V _{REF}	2.5 (external)	Serial	8-lead SOT-23	Pseudo differential input, 555 kSPS, 12-bit ADC
AD7457	12	100	0.9 max	•	1	2.7 to 5.25	V _{REF}	2.5 (external)	Serial	8-lead SOT-23	Pseudo differential, 100 kSPS, 12-bit ADC
AD7440	10	1000	4 max	•	1	2.7 to 5.25	2 \times V _{REF}	2.5 (external)	Serial	8-lead SOT-23, 8-lead MSOP	Differential input, 1 MSPS, 10-bit ADC
<i>Single-Ended SARs</i>											
AD7485	14	1000	80 max	•	1	4.75 to 5.25	0 to 2.5	2.5 (external/internal)	Serial	48-lead LQFP	12-bit, 1 MSPS, serial ADC
AD7940	14	100	5.2 max	•	1	2.5 to 5.5	0 to V _{DD}	V _{DD}	Serial	6-lead SOT-23, 8-lead MSOP	14-bit, serial, 100 kSPS SAR ADC
AD7091 <i>New</i>	12	1000	1.1	•	1	2.09 to 5.25	0 to V _{DD}	V _{DD}	Serial	8-lead LFCSP	12-bit, serial, ultralow power SAR ADC
AD7091R <i>New</i>	12	1000	1	•	1	2.7 to 5.25 (1.65 to 5.25 logic)	0 to V _{REF}	2.5 (internal) 2.7 to V _{DD} (external)	Serial	10-lead LFCSP, 10-lead MSOP	12-bit, serial, ultralow power SAR ADC with internal V _{REF}
AD7274	12	3000	11.4	•	1	2.35 to 3.6	0 to V _{REF}	1.2 V to V _{DD} (external)	Serial	8-lead TSOT, 8-lead MSOP	12-bit, 3 MSPS SAR ADC with external V _{REF}
AD7276	12	3000	12.6	•	1	2.35 to 3.6	0 to V _{DD}	V _{DD}	Serial	6-lead TSOT, 8-lead MSOP	12-bit, 3 MSPS SAR ADC
AD7472	12	1500	4.5 max	•	1	2.7 to 5.25	0 to V _{REFIN}	2.5 (external)	Parallel	24-lead SOIC, 24-lead TSSOP	1.5 MSPS, 4.5 mW, 12-bit parallel ADC
AD7492	12	1250	13.75	•	1	2.7 to 5.25	0 to 2.5	2.5 (internal)	Parallel	24-lead TSSOP, 24-lead SOIC	1.25 MSPS, 16 mW, internal REF and CLK, 12-bit parallel ADC
AD7475	12	1000	4.5 max	•	1	2.7 to 5.25	0 to V _{REFIN}	2.5 (external)	Serial	8-lead MSOP, 8-lead SOIC	Low power, 1 MSPS, 12-bit ADC
AD7476A	12	1000	3.6	•	1	2.35 to 5.25	0 to V _{DD}	V _{DD}	Serial	6-lead SC70, 8-lead MSOP	2.35 V to 5.25 V, 1 MSPS, 12-bit ADC
AD7495	12	1000	6 max	•	1	2.7 to 5.25	0 to 2.5	2.5 (internal)	Serial	8-lead MSOP, 8-lead SOIC	Low power, 1 MSPS, 12-bit ADC with internal V _{REF}
AD7920	12	250	3.6	•	1	2.35 to 5.25	0 to V _{DD}	V _{DD}	Serial	6-lead SC70, 8-lead MSOP	Low power, 250 kSPS, 12-bit ADC
AD7466	12	200	0.3 max	•	1	1.6 to 3.6	0 to V _{DD}	V _{DD}	Serial	6-lead SOT-23, 8-lead MSOP	1.6 V, micropower, 12-bit ADC
AD7273	10	3000	9.6	•	1	2.35 to 3.6	0 to V _{REF}	1.2 to V _{DD} (external)	Serial	8-lead TSOT, 8-lead MSOP	10-bit, 3 MSPS SAR ADC with external V _{REF}
AD7277	10	3000	10.5	•	1	2.35 to 3.6	0 to V _{DD}	V _{DD}	Serial	6-lead TSOT, 8-lead MSOP	10-bit, 3 MSPS SAR ADC
AD7470	10	1750	4.5 max	•	1	2.7 to 5.25	0 to V _{REFIN}	2.5 (external)	Parallel	24-lead SOIC, 24-lead TSSOP	1.75 MSPS, 4.5 mW, 10-bit parallel ADC
AD7477A	10	1000	3.6	•	1	2.35 to 5.25	0 to V _{DD}	V _{DD}	Serial	6-lead SC70, 8-lead MSOP	2.35 V to 5.25 V, 1 MSPS, 10-bit ADC
AD7910	10	250	3.6	•	1	2.35 to 5.25	0 to V _{DD}	V _{DD}	Serial	6-lead SC70, 8-lead MSOP	Low power, 250 kSPS, 10-bit ADC
AD7467	10	275	0.25 max	•	1	1.6 to 3.6	0 to V _{DD}	V _{DD}	Serial	6-lead SOT-23, 8-lead MSOP	1.6 V, micropower, 10-bit ADC
AD7278	8	3000	10.5	•	1	2.35 to 3.6	0 to V _{DD}	V _{DD}	Serial	6-lead TSOT, 8-lead MSOP	8-bit, 3 MSPS SAR ADC
AD7478A	8	1200	3.6	•	1	2.35 to 5.25	0 to V _{DD}	V _{DD}	Serial	6-lead SC70, 8-lead MSOP	2.35 V to 5.25 V, 1.2 MSPS, 8-bit ADC
AD7468	8	320	0.2 max	•	1	1.6 to 3.6	0 to V _{DD}	V _{DD}	Serial	6-lead SOT-23, 8-lead MSOP	1.6 V, micropower, 8-bit ADC

8-Bit to 14-Bit Precision ADCs (continued)

Part Number	Resolution (Bits)	Sample Rate (kSPS)	Power (mW)	Power-Down Mode	Number of Channels	Supply Range (V)	Analog Input Range (V)	Reference (V)	Data Bus Interface	Package	Features
Parallel ADCs											
AD7484	14	3000	90 max	•	1	4.75 to 5.25	0 to 2.5	2.5 (external/internal)	Parallel	48-lead LQFP	14-bit, 3 MSPS parallel ADC
AD7482	12	3000	90 max	•	1	4.75 to 5.25	0 to 2.5	2.5 (external/internal)	Parallel	48-lead LQFP	12-bit, 3 MSPS parallel ADC
AD7934	12	1500	6 max	•	4	2.7 to 5.25	0 to V_{REF} , 0 to $2 \times V_{REF}$	2.5 (external/internal)	Parallel	28-lead TSSOP	4-channel, 1.5 MSPS, 12-bit parallel ADC with a sequencer
AD7938	12	1500	6 max	•	8	2.7 to 5.25	0 to V_{REF} , 0 to $2 \times V_{REF}$	2.5 (external/internal)	Parallel	32-lead TQFP, 32-lead LFCSP	8-channel, 1.5 MSPS, 12-bit parallel ADC with a sequencer
AD7934-6	12	625	3.6 max	•	4	2.7 to 5.25	0 to V_{REF} , 0 to $2 \times V_{REF}$	2.5 (external/internal)	Parallel	28-lead TSSOP	4-channel, 625 kSPS, 12-bit parallel ADC with a sequencer
AD7938-6	12	625	3.6 max	•	8	2.7 to 5.25	0 to V_{REF} , 0 to $2 \times V_{REF}$	2.5 (external/internal)	Parallel	32-lead TQFP, 32-lead LFCSP	8-channel, 625 kSPS, 12-bit parallel ADC with a sequencer
AD7933	10	1500	6 max	•	4	2.7 to 5.25	0 to V_{REF} , 0 to $2 \times V_{REF}$	2.5 (external/internal)	Parallel	28-lead TSSOP	4-channel, 1.5 MSPS, 10-bit parallel ADC with a sequencer
AD7939	10	1500	6 max	•	8	2.7 to 5.25	0 to V_{REF} , 0 to $2 \times V_{REF}$	2.5 (external/internal)	Parallel	32-lead TQFP, 32-lead LFCSP	8-channel, 1.5 MSPS, 10-bit parallel ADC with a sequencer
I²C ADCs											
AD7991	12	140	0.3 max	•	4	2.7 to 5.5	0 to V_{DD} , 0 to V_{REFIN}	1.2 to V_{DD} (external)	I ² C	8-lead SOT	4-channel, 12-bit I ² C ADC
AD7992	12	188	0.495 max	•	2	2.7 to 5.5	0 to V_{DD} , 0 to V_{REFIN}	1.2 to V_{DD} (external)	I ² C	10-lead MSOP	2-channel, 12-bit ADC with I ² C-compatible interface
AD7994	12	188	0.495 max	•	4	2.7 to 5.5	0 to V_{DD} , 0 to V_{REFIN}	1.2 to V_{DD} (external)	I ² C	16-lead TSSOP	4-channel, 12-bit ADC with I ² C-compatible interface
AD7998	12	188	0.495 max	•	8	2.7 to 5.5	0 to V_{DD} , 0 to V_{REFIN}	1.2 to V_{DD} (external)	I ² C	20-lead TSSOP	8-channel, 12-bit ADC with I ² C-compatible interface
AD7993	10	188	0.495 max	•	4	2.7 to 5.5	0 to V_{DD} , 0 to V_{REFIN}	1.2 to V_{DD} (external)	I ² C	16-lead TSSOP	4-channel, 10-bit ADC with I ² C-compatible interface
AD7995	10	140	0.3 max	•	4	2.7 to 5.5	0 to V_{DD} , 0 to V_{REFIN}	1.2 to V_{DD} (external)	I ² C	8-lead SOT	4-channel, 10-bit I ² C ADC
AD7997	10	188	0.495 max	•	8	2.7 to 5.5	0 to V_{DD} , 0 to V_{REFIN}	1.2 to V_{DD} (external)	I ² C	20-lead TSSOP	8-channel, 10-bit ADC with I ² C-compatible interface
AD7999	8	140	0.3 max	•	4	2.7 to 5.5	0 to V_{DD} , 0 to V_{REFIN}	1.2 to V_{DD} (external)	I ² C	8-lead SOT	4-channel, 8-bit I ² C ADC
AD7294	12	22	70	•	9	4.5 to 5.5	0 to V_{REF} , 0 to $2 \times V_{REF}$	2.5 (internal), 1 to $V_{DD} - 2$ (external)	I ² C	64-lead TQFP, 56-lead LFCSP	Multichannel ADC, DAC, two current sensors, and three temperature sensors
AD7291 New	12	22	7.8	•	8	2.8 to 3.6 (1.65 to 3.6 logic)	0 to V_{REF}	2.5 (internal), 1 to 2.5 (external)	I ² C	20-lead LFCSP	8-channel, 12-bit ADC with internal reference and temperature sensor
Multichannel Serial ADCs											
AD7490	12	1000	5.4 max	•	16	2.7 to 5.25	0 to REF	2.5 (external)	Serial	28-lead TSSOP, 32-lead LFCSP	16-channel, 1 MSPS, 12-bit ADC with channel sequencer
AD7922	12	1000	4.8	•	2	2.35 to 5.25	0 to V_{DD}	V_{DD}	Serial	8-lead TSOT, 8-lead MSOP	12-bit, 2-channel, 1 MSPS ADC
AD7924	12	1000	6 max	•	4	2.7 to 5.25	0 to REF _{IN}	2.5 (external)	Serial	16-lead TSSOP	4-channel, 1 MSPS, 12-bit ADC with channel sequencer
AD7928	12	1000	6 max	•	8	2.7 to 5.25	0 to REF _{IN}	2.5 (external)	Serial	20-lead TSSOP	8-channel, 1 MSPS, 12-bit ADC with channel sequencer
AD7921	12	250	4	•	2	2.35 to 5.25	0 to V_{DD}	V_{DD}	Serial	8-lead TSOT, 8-lead MSOP	12-bit, 2-channel, 250 kSPS ADC
AD7923	12	200	3.6 max	•	4	2.7 to 5.25	0 to REF _{IN}	2.5 (external)	Serial	16-lead TSSOP	4-channel, 200 kSPS, 12-bit ADC with channel sequencer
AD7927	12	200	3.6 max	•	8	2.7 to 5.25	0 to REF _{IN}	2.5 (external)	Serial	20-lead TSSOP	8-channel, 200 kSPS, 12-bit ADC with channel sequencer
AD7298 New	12	1000	17.4	•	8	2.8 to 3.6 (1.65 to 3.6 logic)	0 to REF	2.5 (internal), 1 to 2.5 (external)	Serial	20-lead LFCSP	8-channel, 1 MSPS, 12-bit ADC with internal reference and temperature sensor
AD7912	10	1000	4.8	•	2	2.35 to 5.25	0 to V_{DD}	V_{DD}	Serial	8-lead TSOT, 8-lead MSOP	10-bit, 2-channel, 1 MSPS ADC
AD7914	10	1000	6 max	•	4	2.7 to 5.25	0 to REF _{IN}	2.5 (external)	Serial	16-lead TSSOP	4-channel, 1 MSPS, 10-bit ADC with channel sequencer
AD7918	10	1000	6 max	•	8	2.7 to 5.25	0 to REF _{IN}	2.5 (external)	Serial	20-lead TSSOP	8-channel, 1 MSPS, 10-bit ADC with channel sequencer
AD7298-1 New	10	1000	17.4	•	8	2.8 to 3.6 (1.65 to 3.6 logic)	0 to REF	2.5 (internal), 1 to 2.5 (external)	Serial	20-lead LFCSP	8-channel, 1 MSPS, 10-bit ADC with internal reference
AD7911	10	250	4	•	2	2.35 to 5.25	0 to V_{DD}	V_{DD}	Serial	8-lead TSOT, 8-lead MSOP	10-bit, 2-channel, 250 kSPS ADC
AD7904	8	1000	6 max	•	4	2.7 to 5.25	0 to REF _{IN}	2.5 (external)	Serial	16-lead TSSOP	4-channel, 1 MSPS, 8-bit ADC with channel sequencer
AD7908	8	1000	6 max	•	8	2.7 to 5.25	0 to REF _{IN}	2.5 (external)	Serial	20-lead TSSOP	8-channel, 1 MSPS, 8-bit ADC with channel sequencer

8-Bit to 14-Bit Precision ADCs (continued)

Part Number	Resolution (Bits)	Sample Rate (kSPS)	Power (mW)	Power-Down Mode	Number of Channels	Supply Range (V)	Analog Input Range (V)	Reference (V)	Data Bus Interface	Package	Features
Bipolar, Serial/Parallel, and Parallel ADCs											
AD7367	14	1000	50	•	4	±12 (3, 5 logic)*	±10, ±5, 0 to 10	2.5 (external/internal)	Serial	24-lead TSSOP	iCMOS® dual, 1 μs, 2-channel, simultaneous sampling ADC
AD7951	14	1000	215	•	1	±15 (3, 5 logic)*	±10, ±5, 5, 10	5	Parallel/serial	48-lead LQFP, 48-lead LFCSP	14-bit no missing codes, ±1 LSB INL, 84.5 dB SNR
AD7952	14	1000	215	•	1	±15 (3, 5 logic)*	Differential, ±5, ±10, ±20	5	Parallel/serial	48-lead LQFP, 48-lead LFCSP	14-bit no missing codes, ±1 LSB INL, 84.5 dB SNR
AD7367-5	14	500	46	•	4	±12 (3, 5 logic)*	±10, ±5, 0 to 10	2.5 (external/internal)	Serial	24-lead TSSOP	iCMOS, dual, 1 μs, 2-channel, simultaneous sampling ADC
AD7322	13	1000	21	•	2	±12 (3, 5 logic)*	±10, ±5, ±2.5, 0 to 10	2.5 (external/internal)	Serial	14-lead TSSOP	iCMOS, 12-bit plus sign, 1 MSPS, bipolar, 8-channel ADC
AD7324	13	1000	21	•	4	±12 (3, 5 logic)*	±10, ±5, ±2.5, 0 to 10	2.5 (external/internal)	Serial	16-lead TSSOP	iCMOS, 12-bit plus sign, 1 MSPS, bipolar, 4-channel ADC
AD7328	13	1000	21	•	8	±12 (3, 5 logic)*	±10, ±5, ±2.5, 0 to 10	2.5 (external/internal)	Serial	20-lead TSSOP	iCMOS, 12-bit plus sign, 1 MSPS, bipolar, 2-channel ADC
AD7329	13	1000	21	•	8	±12 (3, 5 logic)*	±10, ±5, ±2.5, 0 to 10	2.5 (external/internal)	Serial	24-lead TSSOP	iCMOS, 12-bit plus sign, 1 MSPS, bipolar ADC with mux out
AD7321	13	500	17 max	•	2	±12 (3, 5 logic)*	±10, ±5, ±2.5, 0 to 10	2.5 (external/internal)	Serial	14-lead TSSOP	iCMOS, 12-bit plus sign, 500 kSPS, bipolar, 8-channel ADC
AD7323	13	500	17 max	•	4	±12 (3, 5 logic)*	±10, ±5, ±2.5, 0 to 10	2.5 (external/internal)	Serial	16-lead TSSOP	iCMOS, 12-bit plus sign, 500 kSPS, bipolar, 4-channel ADC
AD7327	13	500	17 max	•	8	±12 (3, 5 logic)*	±10, ±5, ±2.5, 0 to 10	2.5 (external/internal)	Serial	20-lead TSSOP	iCMOS, 12-bit plus sign, 500 kSPS, bipolar, 2-channel ADC
AD7366	12	1000	50	•	4	±12 (3, 5 logic)*	±10, ±5, 0 to 10	2.5 (external/internal)	Serial	24-lead TSSOP	iCMOS, dual, 800 ns, 2-channel, simultaneous sampling ADC
AD7366-5	12	500	46	•	4	±12 (3, 5 logic)*	±10, ±5, 0 to 10	2.5 (external/internal)	Serial	24-lead TSSOP	iCMOS, dual, 800 ns, 2-channel, simultaneous sampling ADC
Simultaneous Sampling ADCs											
AD7357	14	4250	35	•	2	2.5	±V _{REF} /2	2.5 (external)/2.048 (internal)	Serial	16-lead TSSOP	14-bit, simultaneous sampling, differential ADC
AD7264	14	1000	120	•	2	4.75 to 5.25	V _{CM} ± V _{REF} /(2 × gain)	2.5 (external/internal)	Serial	48-lead TQFP, 48-lead LFCSP	Integrated PGA
AD7657	14	250	140 max	•	6	±12 (3, 5 logic)*	±4 × V _{REF} , ±2 × V _{REF}	2.5 (external/internal)	Parallel/serial	64-lead LQFP	iCMOS, simultaneous sampling, bipolar ADC
AD7866	12	1000/666	11.4 max	•	Dual, 2-channel	2.7 to 5.5	0 to V _{REF} , 0 to 2 × V _{REF}	2.5 (external/internal)	Serial	16-lead TSSOP	Dual, 1 MSPS, 12-bit, 2-channel, SAR ADC, serial interface
AD7356	12	5000	35	•	2	2.5	±V _{REF} /2	2.5 (external)/2.048 (internal)	Serial	16-lead TSSOP	12-bit, simultaneous sampling, 5 MSPS differential ADC
AD7352	12	3000	24	•	2	2.5	±V _{REF} /2	2.5 (external)/2.048 (internal)	Serial	16-lead TSSOP	12-bit, simultaneous sampling, 3 MSPS differential ADC
AD7266	12	2000	30	•	Dual, 3-channel	2.7 to 5.25	0 to V _{REF} , 0 to 2 × V _{REF}	2.5 (external/internal)	Serial	32-lead TQFP, 32-lead LFCSP	Differential input, dual, 2 MSPS, 12-bit, 3-channel SAR ADC
AD7262	12	1000	120	•	2	4.75 to 5.25	V _{CM} ± V _{REF} /(2 × gain)	2.5 (external/internal)	Serial	48-lead TQFP, 48-lead LFCSP	Integrated PGA
AD7265	12	1000	10	•	Dual, 3-channel	2.7 to 5.25	0 to V _{REF} , 0 to 2 × V _{REF}	2.5 (external/internal)	Serial	32-lead TQFP, 32-lead LFCSP	Differential input, dual, 1 MSPS, 12-bit, 3-channel SAR ADC
AD7658	12	250	140 max	•	6	±12 (3, 5 logic)*	±4 × V _{REF} , ±2 × V _{REF}	2.5 (external/internal)	Parallel/serial	64-lead LQFP	iCMOS, simultaneous sampling, bipolar ADC

*Analog input range dependent.

16-Bit to 18-Bit Precision ADCs

Part Number	Resolution (Bits)	Sample Rate (kSPS)	INL (LSB)	DNL (LSB)	No Missing Codes (Bits)	SNR (dB)	THD (dB)	Power (mW)	Number of Channels	Supply Range (V)	Analog Input Range (V)	Reference (V)	Data Bus Interface	Package
AD7960 <i>New</i>	18	5000	±2	±0.99	18	99	-117	39	1	VDD1 = 5, VDD2 = 1.8, VIO = 1.8	Differential, ±V _{REF}	2.048, 4.096, 5	Serial LVDS	48-lead LQFP
AD7641	18	2000	±3	-1/+2	18	93	-116	68	1	2.5 (2.5 to 5 logic)	Differential, ±2.5	2.5	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7986	18	2000	±2.5	-0.95/+1.5	18	95.5	-113	16.5	1	2.5, 5	Differential, ±V _{REF}	4.096	Serial	20-lead LFCSP
AD7984	18	1333	±2.25	-1/+1.5	18	98.5	-110.5	10.5	1	2.5 (1.8 to 5 logic)	Differential, ±V _{REF}	2.5 to 5.5 (external)	Serial	10-lead MSOP, 10-lead LFCSP
AD7643	18	1250	±3	-1/+2	18	93	-116	52	1	2.5 (2.5 to 5 logic)	Differential, ±2.5	2.5	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7982	18	1000	±2	-0.85/+1.5	18	95.5	-120	7	1	2.5 (1.8 to 5 logic)	Differential, ±V _{REF}	2.5 to 5.5 (external)	Serial	10-lead MSOP, 10-lead LFCSP
AD7674	18	800	±2.5	-1/+1.75	18	101	-115	114	1	5 (3, 5 logic)	Differential, ±5	5 (external)	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7634	18	670	±2.5	-1/+2.5	18	101	-112	175	1	±15 (3, 5 logic)	Differential, ±5, ±10, ±20	5	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7679	18	570	±2.5	-1/+1.75	18	101	-115	89	1	5 (3, 5 logic)	Differential, ±5	5 (external)	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7690	18	400	±1.5	-1/+1.25	18	101	-125	17	1	5 (1.8 to 5 logic)	Differential, ±V _{REF}	0.5 to 5 (external)	Serial	10-lead MSOP, 10-lead LFCSP
AD7631	18	250	±2.5	-1/+2.5	18	101	-112	73	1	±15 (3, 5 logic)	Differential, ±5, ±10, ±20	5	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7691	18	250	±1.5	-1/+1.25	18	101	-118	5	1	2.7 to 5 (1.8 to 5 logic)	Differential, ±V _{REF}	0.5 to 5 (external)	Serial	10-lead MSOP, 10-lead LFCSP
AD7678	18	100	±2.5	-1/+1.75	18	101	-115	18	1	5 (3, 5 logic)	Differential, ±5	5 (external)	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7626	16	10,000	±1.5	±0.5	16	90	-105.5	170	1	2.5, 5	Differential, ±V _{REF}	4.096	Serial	32-lead LFCSP
AD7625	16	6000	±1	±0.5	16	92	-105.5	150	1	2.5, 5	Differential, ±V _{REF}	4.096	Serial	32-lead LFCSP
AD7961 <i>New</i>	16	5000	±0.55	±0.25	16	95.5	-116	39	1	VDD1 = 5, VDD2 = 1.8, VIO = 1.8 V	Differential, ±V _{REF}	2.048, 4.096, and 5	Serial LVDS	48-lead LQFP
AD7621	16	3000	±2	-1/+2	16	90	-102	65	1	2.5 (2.5 to 5 logic)	Differential, ±2.5	2.5	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7985	16	2500	±1.5	±0.99	16	88.5	-100	17	1	2.5, 5	0 to V _{REF}	4.096	Serial	20-lead LFCSP
AD7622	16	2000	±1.5	-1/+1.25	16	88	-100	65	1	2.5 (2.5 to 5 logic)	Differential, ±2.5	2.5	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7983	16	1333	±1.0	±0.9	16	92	-115	10.5	1	2.5 (1.8 to 5 logic)	V _{REF}	2.5 to 5.5 (external)	Serial	10-lead MSOP, 10-lead LFCSP
AD7623	16	1333	±2	-1/+2	16	90	-97	45	1	2.5 (2.5 to 5 logic)	Differential, ±2.5	2.5	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7980	16	1000	±2.5, ±1.25	-1/+2, ±0.9	16	90	-114	7	1	2.5 (1.8 to 5 logic)	V _{REF}	2.5 to 5.5 (external)	Serial	10-lead MSOP, 10-lead LFCSP
AD7653	16	1000	±6		15	86	-98	128	1	5 (3, 5 logic)	2.5	2.5	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7667	16	1000	±2.5		16	89	-104	130	1	5 (3, 5 logic)	2.5	2.5	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7671	16	1000	±2.5		16	90	-100	112	1	5 (3, 5 logic)	2.5, 5, 10, ±2.5, ±5, ±10	2.5 (external)	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7677	16	1000	±1	±1	16	94	-110	115	1	5 (3, 5 logic)	Differential, ±2.5	2.5 (external)	Parallel/serial	48-lead LQFP, 48-lead LFCSP
ADAS3022 <i>New</i> (multiplexed version)	16	1000	±2	-0.9/+1.25	16	91	-100	215	8	AVDD = +5, DVDD = +5, VDDH = +15, VSSH = -15, VIO = +1.8 to +5	Programmable unipolar/bipolar single-ended or differential ranges	4.096	Serial SPI/SPORT compatible	40-lead LFCSP
ADAS3023 <i>New</i> (sim-sampling version)	16	1000	±2.5	-0.95/+1.25	16	89	-100	240	8/6/4/2	AVDD = +5, DVDD = +5, VDDH = +15, VSSH = -15, VIO = +1.8 to +5	Programmable unipolar/bipolar single-ended ranges	4.096	Serial SPI/SPORT compatible	40-lead LFCSP
AD7612	16	750	±1.5	-1/+1.5	16	94	-107	190	1	±15 (3, 5 logic)	5, 10, ±5, ±10	5	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7650	16	570	±6		15	86	-98	115	1	5 (3, 5 logic)	2.5	2.5 (external)	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7664	16	570	±2.5	-1/+1.5	16	90	-100	115	1	5 (3, 5 logic)	2.5	2.5 (external)	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7665	16	570	±2.5		16	90	-100	107	1	5 (3, 5 logic)	2.5, 5, 10, ±2.5, ±5, ±10	2.5 (external)	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7988-5 <i>New</i>	16	500	±1.25	±0.9	16	90	-114	3.5	1	2.5 (1.8 to 5 logic)	V _{REF}	2.5 to 5.5 (external)	Serial	10-lead MSOP, 10-lead LFCSP
AD7654	16	500	±3.5		16	90	-100	120	4 (2 simultaneous sampling)	5 (3, 5 logic)	5	2.5 (external)	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7655	16	500	±6		15	86	-96	120	4 (2 simultaneous sampling)	5 (3, 5 logic)	5	2.5 (external)	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7652	16	500	±6		15	86	-98	65	1	5 (3, 5 logic)	2.5	2.5	Parallel/serial	48-lead LQFP, 48-lead LFCSP

16-Bit to 18-Bit Precision ADCs (continued)

Part Number	Resolution (Bits)	Sample Rate (kSPS)	INL (LSB)	DNL (LSB)	No Missing Codes (Bits)	SNR (dB)	THD (dB)	Power (mW)	Number of Channels	Supply Range (V)	Analog Input Range (V)	Reference (V)	Data Bus Interface	Package
AD7666	16	500	±2.5		16	89	-104	66	1	5 (3, 5 logic)	2.5	2.5	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7676	16	500	±1		16	94	-110	67	1	5 (3, 5 logic)	Differential, ±2.5	2.5 (external)	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7686	16	500	±2	-1/+1.5	16	92	-110	15	1	5 (1.8 to 5 logic)	V _{REF}	0.5 to 5 (external)	Serial	10-lead MSOP, 10-lead LFCSP
AD7688	16	500	±1.5	±1	16	95	-118	12.5	1	5 (1.8 to 5 logic)	Differential, ±V _{REF}	0.5 to 5 (external)	Serial	10-lead MSOP, 10-lead LFCSP
AD7693	16	500	±0.5	±0.5	16	96	-120	18	1	5 (1.8 to 5 logic)	Differential, ±V _{REF}	0.5 to 5 (external)	Serial	10-lead MSOP, 10-lead LFCSP
AD7699	16	500	±3	-1, +1.5	16	93	-105	30	8	5 (1.8 to 5 logic)	V _{REF}	2.5/4.1	Serial	20-lead LFCSP
AD7610	16	250	±1.5	-1/+1.5	16	94	-107	70	1	±15 (3, 5 logic)	5, 10, ±5, ±10	5	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7656	16	250	±3		15	86.5	-100	140 max	6 simultaneous sampling	±12 (3, 5 logic)	±5, ±10	2.5	Parallel/serial	64-lead LQFP
AD7606	16	200	±2	±0.99	16	88.5	-95	100	8 simultaneous sampling	5 (2.3, 5 logic)	±5, ±10	2.5	Parallel/serial	64-lead LQFP
AD7606-6	16	200	±2	±0.99	16	88.5	-95	90	6 simultaneous sampling	5 (2.3, 5 logic)	±5, ±10	2.5	Parallel/serial	64-lead LQFP
AD7606-4	16	200	±2	±0.99	16	88.5	-95	80	4 simultaneous sampling	5 (2.3, 5 logic)	±5, ±10	2.5	Parallel/serial	64-lead LQFP
AD7682	16	250	±3	-1, +1.5	16	93	-105	15	4	2.7 to 5 (1.8 to 5 logic)	V _{REF}	2.5/4.1	Serial	20-lead LFCSP
AD7689	16	250	±3	-1, +1.5	16	93	-105	15	8	2.7 to 5 (1.8 to 5 logic)	V _{REF}	2.5/4.1	Serial	20-lead LFCSP
AD7663	16	250	±3		16	90	-100	35	1	5 (3, 5 logic)	2.5, 5, 10, ±2.5, ±5, ±10	2.5 (external)	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7685	16	250	±2	-1/+1.5	16	93	-110	10	1	2.7 to 5 (1.8 to 5 logic)	V _{REF}	0.5 to 5 (external)	Serial	10-lead MSOP, 10-lead LFCSP
AD7687	16	250	±1.5	±1	16	95	-118	12.5	1	2.7 to 5 (1.8 to 5 logic)	Differential, ±V _{REF}	0.5 to 5 (external)	Serial	10-lead MSOP, 10-lead LFCSP
AD7694	16	250	±4		16	92	-106	1.5	1	2.7 to 5	V _{REF}	0.5 to 5 (external)	Serial	8-lead MSOP
AD974	16	200	±3, ±2	-2/+3, -1/+1.5	15, 16	83, 85	-90/-96	120	4	5	4, 5, ±10	2.5	Serial	28-lead SSOP
AD976A	16	200	±3, ±2, 3 typ	-2/+3, -1/+1.5, 2 typ	15, 16	83, 85	-90/-96	200	1	5	±10	2.5	Parallel	28-lead SSOP, 28-lead PDIP
AD977A	16	200	±3, ±2, 3 typ	-2/+3, -1/+1.5, 2 typ	15, 16	83, 85	-90/-96	200	1	5	4, 5, 10, ±3.3, ±5, ±10	2.5	Serial	28-lead SSOP
AD7988-1 <i>New</i>	16	100	±1.25	±0.9	16	90	-114	0.7	1	2.5 (1.8 to 5 logic)	V _{REF}	2.5 to 5.5 (external)	Serial	10-lead MSOP, 10-lead LFCSP
AD7651	16	100	±6		15	86	-98	16	1	5 (3, 5 logic)	2.5	2.5	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7660	16	100	±3	-1/+1.75	16	90	-100	21	1	5 (3, 5 logic)	2.5	2.5 (external)	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7661	16	100	±2.5		16	89	-104	15	1	5 (3, 5 logic)	2.5	2.5	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7675	16	100	±1.5		16	94	-110	15	1	5 (3, 5 logic)	Differential, ±2.5	2.5 (external)	Parallel/serial	48-lead LQFP, 48-lead LFCSP
AD7680	16	100	±4	-0.9, +2.5 @ 3 V, ±2.5 @ 5 V	15 @ 5 V, 16 @ 3 V	85 @ 3 V, 84 @ 5 V	-95	9	1	3 to 5	5	5 (external)	Serial	6-lead SOT-23
AD7683	16	100	±3		16	91	-106	1.5	1	2.7 to 5	V _{REF}	0.5 to 5 (external)	Serial	8-lead MSOP
AD7684	16	100	±3		16	91	-106	1.5	1	2.7 to 5	Differential, ±V _{REF}	0.5 to 5 (external)	Serial	8-lead MSOP

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