



SAR ADC Companion Devices Selection Guide

SAR ADC	ADC Input Driver				ADC Reference Driver				
	Amplifier	Signal chain specifications	Signal chain performance	Reference designs & support	Voltage reference	Reference specifications	Buffer amplifier	Reference driver performance	Reference designs & support
Resolution: 18 Bit									
ADS9110 2 MSPS, 1 channel, fully differential	OPA2625	1) 2-MSPS throughput 2) Fully differential input 3) 5-V single supply	Optimized for linearity: +/-0.5 LSB INL (TYP), +/-1.5 LSB INL (MAX)	ADS9110EVM-PDK	REF5045	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA625, OPA378	Composite zero-offset reference buffer	TIPD115 (SLAU515)
ADS8881 1 MSPS, 1 channel, ±5 input range, fully differential	OPA350	1) 1-MSPS throughput 2) Transient step input 3) 5-V single supply	18-bit, full-scale, step settling at 1-MSPS throughput: Settling time <500 ns, INL ±1.5 LSB, power < 70 mW	TIPD112 (TIDU012)	REF5045	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C View more recommended reference ICs	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 µV/°C, wide BW, low output impedance	TIPD112 (TIDU012)
	OPA320	1) 1-MSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Optimized for lowest power: P<35 mW, SNR >98 dB, THD <-105 dB	TIPD113 (SLAU513)	REF5045	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C View more recommended reference ICs	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 µV/°C, wide BW, low output impedance	TIPD113 (SLAU513)
	THS4521		Optimized for lowest distortion and noise: THD <-110dB, SNR >98 dB, P=<40 mW	TIPD115 (SLAU515)	REF5045	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C View more recommended reference ICs	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 µV/°C, wide BW, low output impedance	TIPD115 (SLAU515)
	OPA333	1) 10-kSPS throughput 2) 200-Hz input (ECG signals) 3) 3.3-V single supply	ECG signals, ultra low power: Input noise=48 µVRMS, SNR >90 dB, P=<1 mW	TIPD116 (SLAU516)	REF3030	V _{REF} =3.0-V, 0.2% init. accuracy, 50 ppm/°C (0 to +70°C) View more recommended reference ICs	OPA313	Micro power, low drift 2 µV/°C Data rate=10-kSPS	TIPD116 (SLAU516)
	OPA333	1) 10-kSPS throughput 2) DC signals 3) 3.3-V single supply	DC signals, ultra low power: System noise=37.56 µVRMS, effective resolution >17.0-bit, P=<1 mW	TIPD114 (SLAU514)	REF3325	V _{REF} =2.5-V, 0.15% init. accuracy, 30 ppm/°C (-40 to +125°C) View more recommended reference ICs	OPA313	Micro power, low drift 2 µV/°C Data rate=10-kSPS	TIPD114 (SLAU514)
ADS8883 680 kSPS, 1 channel, ±5 input range, fully differential	OPA350	1) 680-kSPS throughput 2) Transient step input 3) 5-V single supply	18-bit full scale step settling at 680-kSPS throughput: Settling time <1500ns, INL ±1.5LSB, power < 70 mW	TIPD112 (TIDU012)	REF5045	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C View more recommended reference ICs	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 µV/°C, wide BW, low output impedance	TIPD112 (TIDU012)
	OPA320	1) 680-kSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Optimized for lowest power: P<35 mW, SNR >98 dB, THD <-105 dB	TIPD113 (SLAU513)	REF5045	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C View more recommended reference ICs	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 µV/°C, wide BW, low output impedance	TIPD113 (SLAU513)
	THS4521		Optimized for lowest distortion and noise: THD <-110 dB, SNR >98dB, P=<40 mW	TIPD115 (SLAU515)	REF5045	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C View more recommended reference ICs	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 µV/°C, wide BW, low output impedance	TIPD115 (SLAU515)
	OPA333	1) 10-kSPS throughput 2) 200-Hz input (ECG signals) 3) 3.3-V single supply	ECG signals, ultra low power: Input noise=48 µVRMS, SNR >90 dB, P=<1 mW	TIPD116 (SLAU516)	REF3030	V _{REF} =3.0-V, 0.2% init. accuracy, 50 ppm/°C (0 to +70°C) View more recommended reference ICs	OPA313	Micro power, low drift 2 µV/°C Data rate=10-kSPS	TIPD116 (SLAU516)
	OPA333	1) 10-kSPS throughput 2) DC signals 3) 3.3-V single supply	DC signals, ultra low power: System noise=37.56 µVRMS, effective resolution >17.0-bit, P=<1 mW	TIPD114 (SLAU514)	REF3325	V _{REF} =2.5-V, 0.15% init. accuracy, 30 ppm/°C (-40 to +125°C) View more recommended reference ICs	OPA313	Micro power, low drift 2 µV/°C Data rate=10-kSPS	TIPD114 (SLAU514)

	ADC Input Driver				ADC Reference Driver				
SAR ADC	Amplifier	Signal chain specifications	Signal chain performance	Reference designs & support	Voltage reference	Reference specifications	Buffer amplifier	Reference driver performance	Reference designs & support
Resolution: 18 Bit									
ADS8885 1 channel, ±5 input range, fully differential	OPA350	1) 400-kSPS throughput 2) Transient step input 3) 5-V single supply	18-bit full scale step settling at 400-kSPS throughput: Settling time <2500 ns, INL ±1.5 LSB, Power < 70 mW	TIPD112 (TIDU012)	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA3333+THS4281	Low offset , low offset drift 0.05µV/°C, wide BW, low output impedance	TIPD112 (TIDU012)
	OPA320	1) 400-kSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Optimized for lowest power: P<35 mW, SNR >98 dB, THD <-105 dB	TIPD113 (SLAU513)	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset , low offset drift 0.05µV/°C, wide BW, low output impedance	TIPD113 (SLAU513)
	THS4521		Optimized for lowest distortion and noise: THD <-110 dB, SNR >98 dB, P=<40 mW	TIPD115 (SLAU515)	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset , low offset drift 0.05µV/°C, wide BW, low output impedance	TIPD115 (SLAU515)
	OPA333	1) 10-kSPS throughput 2) 200-Hz input (ECG signals) 3) 3.3-V single supply	ECG signals, ultra low power: Input noise=48 µVRMS, SNR >98 dB, P=<1 mW	TIPD116 (SLAU516)	REF3030	V _{REF} =3.0-V, 0.2% init. accuracy, 50 ppm/°C (0 to +70°C)	OPA313	Micro power, low drift 2µV/°C Data rate=10-kSPS	TIPD116 (SLAU516)
	OPA333	1) 10-kSPS throughput 2) DC signals 3) 3.3-V single supply	DC signals, ultra low power: Syst noise=37.56 µVRMS, effective res >17.0-bit, P=<1 mW	TIPD114 (SLAU514)	REF3325	V _{REF} =2.5-V, 0.15% init. accuracy, 30 ppm/°C (-40 to +125°C)	OPA313	Micro power, low drift 2µV/°C Data rate=10-kSPS	TIPD114 (SLAU514)
ADS8887 100 kSPS, 1 channel, ±5 input range, fully differential	OPA363	1) 1-MSPS throughput 2) Transient step input 3) 5-V single supply	18-bit full scale step settling at 100-kSPS throughput: Settling time <10µs	TIPD112 (TIDU012)	REF5045 View more recommended reference ICs	V _{REF} =4.5 V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA3333+THS4281	Low offset , low offset drift 0.05µV/°C, wide BW, low output impedance	TIPD112 (TIDU012)
	OPA313	1) 100-kSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Optimized for lowest power: P<35mW, SNR >98 dB, THD <-105 dB	TIPD113 (SLAU513)	REF5045 View more recommended reference ICs	V _{REF} =4.5 V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA3333+THS4281	Low offset , low offset drift 0.05µV/°C, wide BW, low output impedance	TIPD113 (SLAU513)
	THS4521		Optimized for lowest distortion and noise: THD <-110 dB, SNR >98 dB, P=<40 mW	TIPD115 (SLAU515)	REF5045 View more recommended reference ICs	V _{REF} =4.5 V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA3333+THS4281	Low offset , low offset drift 0.05µV/°C, wide BW, low output impedance	TIPD115 (SLAU515)
	OPA333	1) 10-kSPS throughput 2) 200-Hz input (ECG signals) 3) 3.3-V single supply	ECG signals, ultra low power: Input noise=48 µVRMS, SNR >90 dB, P=<1 mW	TIPD116 (SLAU516)	REF3030	V _{REF} =3.0 V, 0.2% init. accuracy, 50 ppm/°C (0 to +70°C)	OPA313	Micro power, low drift 2µV/°C Data rate=10-kSPS	TIPD116 (SLAU516)
	OPA333	1) 10-kSPS throughput 2) DC signals 3) 3.3-V single supply	DC signals, ultra low power: Syst noise=37.56 µVRMS, effective res >17.0-bit, P=<1 mW	TIPD114 (SLAU514)	REF3325	V _{REF} =2.5 V, 0.15% init. accuracy, 30 ppm/°C (-40 to +125°C)	OPA313	Micro power, low drift 2µV/°C Data rate=10-kSPS	TIPD114 (SLAU514)
ADS8380 600 kSPS, 1 channel, 0 - 4.096 input range, single ended	THS4031	1) Max throughput 2) AC input specified on the datasheet 3) ±15V dual supply	Optimized for dynamic performance: refer to datasheet for performance spec	ADS8380EVM	1) Internal Reference can be used 2) External Reference Mode: Recommended reference ICs		Int Ref Buffer		
ADS8381 580 kSPS, 1 channel, 0 - 4.096 input range, single ended	THS4031	1) Max throughput 2) AC input specified on the datasheet 3) ±15V dual supply	Optimized for dynamic performance: refer to datasheet for performance spec	ADS8381EVM	1) Internal Reference can be used 2) External Reference Mode: Recommended reference ICs		Int Ref Buffer		
ADS8382 600 kSPS, 1 channel, ±4.096 input range, fully differential	THS4131	1) Max throughput 2) AC input specified on the datasheet 3) ±15V dual supply	Optimized for dynamic performance: refer to datasheet for performance spec	ADS8382EVM	1) Internal Reference can be used 2) External Reference Mode: Recommended reference ICs		Int Ref Buffer		
ADS8383 500 kSPS, 1 channel, 0 - 4.096 input range, single ended	THS4031	1) Max throughput 2) AC input specified on the datasheet 3) ±15V dual supply	Optimized for dynamic performance: refer to datasheet for performance spec	ADS8383EVM	1) Internal Reference can be used 2) External Reference Mode: Recommended reference ICs		Int Ref Buffer		

	ADC Input Driver				ADC Reference Driver				
SAR ADC	Amplifier	Signal chain specifications	Signal chain performance	Reference designs & support	Voltage reference	Reference specifications	Buffer amplifier	Reference driver performance	Reference designs & support
Resolution: 18 Bit									
ADS8481 1 MSPS, 1 channel, 0 - 4.096 input range, single ended	THS4031, THS4032	1) Max throughput 2) AC input specified on the datasheet 3) ±15V dual supply	Optimized for dynamic performance: refer to datasheet for performance spec	ADS8481EVM	1) Internal Reference can be used 2) External Reference Mode: Recommended reference ICs			Int Ref Buffer	
ADS8482 1 MSPS, 1 channel, ±4.096 input range, fully differential	THS4031, THS4032	1) Max throughput 2) AC input specified on the datasheet 3) ±15V dual supply	Optimized for dynamic performance: refer to datasheet for performance spec	ADS8482EVM	1) Internal Reference can be used 2) External Reference Mode: Recommended reference ICs			Int Ref Buffer	
ADS8484 1.25 MSPS, 1 channel, ±4.096 input range, fully differential	THS4031, THS4032	1) Max throughput 2) AC input specified on the datasheet 3) ±15V dual supply	Optimized for dynamic performance: refer to datasheet for performance spec	ADS8484EVM	1) Internal Reference can be used 2) External Reference Mode: Recommended reference ICs			Int Ref Buffer	
Resolution: 16 Bit									
ADS8861 1 MSPS, 1 channel, ±12V input range, bipolar & unipolar	Integrated Front End	1) Throughput of 1-MSPS 2) AC input specified on the datasheet 3) 5-V single supply	16-bit 1-MSPS data acquisition reference design, isolated for high-voltage common-mode rejection	TIDA106 (TIDUBJ1)	Internal Reference			Int Ref Buffer	Low output impedance, drift 4ppm/°C TIDA106 (TIDUBJ1)
ADS8861 1 MSPS, 1 channel, ±5 input range, fully differential	OPA350	1) 1-MSPS throughput 2) Transient step input 3) 5-V single supply	16-bit full scale step settling at 1-MSPS throughput: Settling time <500ns, power < 70 mW	TIPD112 (TIDU012)	REF5045	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C View more recommended reference ICs	Composite amplifier: OPA333, THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD112 (TIDU012)
	OPA320	1) 1-MSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Optimized for lowest power: P<35 mW, SNR> 96 dB, THD <-105 dB	TIPD113 (SLAU513)	REF5045	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C View more recommended reference ICs	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD113 (SLAU513)
	THS4521		Optimized for lowest distortion and noise: THD <-110 dB, SNR >96 dB, P=<40 mW	TIPD115 (SLAU515)	REF5045	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C View more recommended reference ICs	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD115 (SLAU515)
	OPA333	1) 10-kSPS throughput 2) 200-Hz input (ECG signals) 3) 3.3-V single supply	ECG signals, ultra low power: P=<1 mW	TIPD116 (SLAU516)	REF3030	V _{REF} =3.0-V, 0.2% init. accuracy, 50 ppm/°C (0 to +70°C) View more recommended reference ICs	OPA313	Micro power, low drift 2 μV/°C Data rate=10-kSPS	TIPD116 (SLAU516)
	OPA333	1) 10-kSPS throughput 2) DC signals 3) 3.3-V single supply	DC Signals, ultra low power: P=<1 mW	TIPD114 (SLAU514)	REF3325	V _{REF} =2.5-V, 0.15% init. accuracy, 30 ppm/°C (-40 to +125°C) View more recommended reference ICs	OPA313	Micro power, low drift 2 μV/°C Data rate=10-kSPS	TIPD114 (SLAU514)
	THS4031	1) 1-MSPS throughput 2) 10-kHz AC input 3) ±15V dual supply	Optimized for low distortion: 100 kHz signal: THD <-110 dB	Contact E2E	REF5040	V _{REF} =4.0-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA188+THS4031	Low offset, low offset drift 0.03 μV/°C, wide BW, low output impedance	Contact E2E
ADS8863 680 kSPS, 1 channel, ±5 input range, fully differential	OPA350	1) 680-kSPS throughput 2) Transient step input 3) 5-V single supply	16-bit full scale step settling at 680-kSPS throughput: Settling time <1500ns, power < 70 mW	TIPD112 (TIDU012)	REF5045	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333, THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD112 (TIDU012)
	OPA320	1) 10-kSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Optimized for lowest power: P<35 mW, SNR>96 dB, THD <-105 dB	TIPD113 (SLAU513)	REF5045	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333, THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD113 (SLAU513)
	THS4521		Optimized for lowest distortion and noise: THD <-110 dB, SNR >96 dB, P=<40 mW	TIPD115 (SLAU515)	REF5045	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C View more recommended reference ICs	Composite amplifier: OPA333, THS4281	Low offset, low offset drift 0.05μV/°C, wide BW, low output impedance	TIPD115 (SLAU515)
	OPA333	1) 10-kSPS throughput 2) 200-Hz input (ECG signals) 3) 3.3-V single supply	ECG signals, ultra low power: P=<1 mW	TIPD116 (SLAU516)	REF3030	V _{REF} =3.0-V, 0.2% init. accuracy, 50 ppm/°C (0 to +70°C) View more recommended reference ICs	OPA313	Micro power, low drift 2 μV/°C . Data rate=10-kSPS	TIPD116 (SLAU516)
	OPA333	1) 10-kSPS throughput 2) DC signals 3) 3.3-V single supply	DC signals, ultra low power: P=<1 mW	TIPD114 (SLAU514)	REF3325	V _{REF} =2.5-V, 0.15% init. accuracy, 30 ppm/°C (-40 to +125°C) View more recommended reference ICs	OPA313	Micro power, low drift 2 μV/°C . Data rate=10-kSPS	TIPD114 (SLAU514)

SAR ADC	ADC Input Driver				ADC Reference Driver				
	Amplifier	Signal chain specifications	Signal chain performance	Reference designs & support	Voltage reference	Reference specifications	Buffer amplifier	Reference driver performance	Reference designs & support
Resolution: 16 Bit									
ADS8865 400 kSPS, 1 channel, ±5 input range, fully differential	OPA350	1) 400-kSPS throughput 2) Transient step input 3) 5-V single supply	16-bit full scale step settling at 400-kSPS throughput: Settling time <2500 ns, power < 70 mW	TIPD112 (TIDU012)	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD112 (TIDU012)
	OPA320	1) 400-kSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Optimized for lowest power: P<35 mW, SNR>98 dB, THD <-105 dB	TIPD113 (SLAU513)	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD113 (SLAU513)
	THS4521	1) 400-kSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Optimized for lowest distortion and noise: THD <-110 dB, SNR >98 dB, P=<40 mW	TIPD115 (SLAU515)	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD115 (SLAU515)
	OPA333	1) 10-kSPS throughput 2) 200-Hz input (ECG signals) 3) 3.3-V single supply	ECG signals, ultra low power: P=<1 mW	TIPD116 (SLAU516)	REF3030	V _{REF} =3.0-V, 0.2% init. accuracy, 50 ppm/°C (0 to +70°C)	OPA313	Micro power, low drift 2 μV/°C Data rate=10 kSPS	TIPD116 (SLAU516)
	OPA333	1) 10-kSPS throughput 2) DC signals 3) 3.3-V single supply	DC signals, ultra low power: P=<1 mW	TIPD114 (SLAU514)	REF3325	V _{REF} =2.5-V, 0.15% init. accuracy, 30 ppm/°C (-40 to +125°C)	OPA313	Micro power, low drift 2 μV/°C Data rate=10 kSPS	TIPD114 (SLAU514)
ADS8867 100 kSPS, 1 channel, ±5 input range, fully differential	OPA363	1) 100-kSPS throughput 2) Transient step input 3) 5-V single supply	16-bit full scale step settling at 680-kSPS throughput: Settling time <10 us	TIPD112 (TIDU012)	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD112 (TIDU012)
	OPA313	1) 100-kSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Optimized for lowest power: P<35 mW, SNR>96 dB, THD <-105 dB	TIPD113 (SLAU513)	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD113 (SLAU513)
	THS4521	1) 100-kSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Optimized for lowest distortion and noise: THD <-110 dB, SNR >96 dB, P=<40 mW	TIPD115 (SLAU515)	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD115 (SLAU515)
	OPA333	1) 10-kSPS throughput 2) 200-Hz input (ECG signals) 3) 3.3-V single supply	ECG signals, ultra low power: P=<1 mW	TIPD116 (SLAU516)	REF3030	V _{REF} =3.0-V, 0.2% init. accuracy, 50 ppm/°C (0 to +70°C)	OPA313	Micro power, low drift 2 μV/°C Data rate=10-kSPS	TIPD116 (SLAU516)
	OPA333	1) 10-kSPS throughput 2) DC signals 3) 3.3-V single supply	DC signals, ultra low power: P=<1 mW	TIPD114 (SLAU514)	REF3325	V _{REF} =2.5-V, 0.15% init. accuracy, 30 ppm/°C (-40 to +125°C)	OPA313	Micro power, low drift 2 μV/°C Data rate=10-kSPS	TIPD114 (SLAU514)
ADS8860 1 MSPS, 1 channel, 0 -5 input range, pseudo differential	OPA836	1) 1-MSPS throughput 2) 10-kHz sine wave input 3) 5-V single supply	Optimized for lowest distortion and noise: SNR>91 dB, THD < -108 dB, P=30.75 mW	TIDU014	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIDU014
	OPA320	1) 1-MSPS throughput 2) Transient step input 3) 5-V single supply	16-bit full scale step settling at 1 MSPS throughput: Settling time <900 ns, INL ±0.5 LSB, power < 25 mW	TIPD173 (TIDU504)	REF5040 View more recommended reference ICs	V _{REF} =4.096-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD173 (TIDU504)
	OPA625	1) 1-MSPS throughput 2) DC input 3) 5-V single supply	16-bit, muxed CH Settling time <500 ns	TIPD169 (TIDUAD9)	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°Cv	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD169 (TIDUAD9)
	OPA333	1) 10-kSPS throughput 2) DC signals 3) 3.3-V single supply	DC signals, ultra low power: P<300 uW	ADS8860 datasheet	REF3330	Low power, 0.15% init. accuracy, 30 ppm/°C @3.9uA (-40C to +125°C)	OPA333	Micro power, low drift 2 μV/°C Data rate=10 kSPS	ADS8860 datasheet

	ADC Input Driver				ADC Reference Driver				
SAR ADC	Amplifier	Signal chain specifications	Signal chain performance	Reference designs & support	Voltage reference	Reference specifications	Buffer amplifier	Reference driver performance	Reference designs & support
Resolution: 16 Bit									
ADS8862 680 kSPS, 1 channel, 0-5 input range, pseudo differential	OPA836	1) 680-kSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Optimized for lowest distortion and noise: SNR>91 dB, THD=-110 dB, P=30.75 mW	TIDU014	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIDU014
	OPA320	1) 680-kSPS throughput 2) Transient step input 3) 5-V single supply	16-bit full scale step settling at 1-MSPS throughput: Settling time <1500 ns, INL ±0.5LSB, power < 25 mW	TIPD173 (TIDU504)	REF5040 View more recommended reference ICs	V _{REF} =4.096-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD173 (TIDU504)
	OPA625	1) 680-kSPS throughput 2) DC input 3) 5-V single supply	16-bit, muxed CH Settling time <1500 ns	TIPD169 (TIDUAD9)	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD169 (TIDUAD9)
	OPA333	1) 10-kSPS throughput 2) DC signals 3) 3.3-V single supply	DC signals, ultra low power: P<300 uW	ADS8860 datasheet	REF3330	Low power, 0.15% init. accuracy, 30 ppm/°C @3.9μA (-40C to +125°C)	OPA333	Micro power, low drift 2 μV/°C Data rate=10 kSPS	ADS8860 datasheet
ADS8864 400 kSPS, 1 channel, 0-5 input range, pseudo differential	OPA836	1) 400-kSPS throughput 2) 10-kHz sine wave input 3) 5-V single supply	Optimized for lowest distortion and noise: SNR>91 dB, THD=-110 dB, P=30.75 mW	TIDU014	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIDU014
	OPA320	1) 400-kSPS throughput 2) Transient step input 3) 5-V single supply	16-bit full scale step settling at 1-MSPS throughput: Settling time <2500 ns, INL ±0.5LSB, power < 25 mW	TIPD173 (TIDU504)	REF5040 View more recommended reference ICs	V _{REF} =4.096-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD173 (TIDU504)
	OPA625	1) 400-kSPS throughput 2) DC signals 3) 5-V single supply	16-bit, muxed CH Settling time <2500 ns	TIPD169 (TIDUAD9)	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD169 (TIDUAD9)
	OPA333	1) 10-kSPS throughput 2) DC signals 3) 3.3-V single supply	DC signals, ultra low power: P<300 uW	ADS8860 datasheet	REF3330	Low power, 0.15% init. accuracy, 30 ppm/°C @3.9μA (-40C to +125°C)	OPA333	Micro power, low drift 2 μV/°C Data rate=10-kSPS	ADS8860 datasheet
	OPA192, OPA140	1) 400-kSPS throughput 2) 10-kHz AC input 3) ±15V dual supply	16-bit,4-CH muxed for high voltage diff inputs: P<1 mW	TIPD151 (TIDU181)	REF3240	V _{REF} =4.096-V, 0.05% init. accuracy, low drift 3 ppm/°C	OPA350	Wide BW, low output impedance, drift 4uV/°C	TIPD151 (TIDU181)
ADS8866 100 kSPS, 1 channel, 0-5 input range, pseudo differential	OPA836	1) 100-kSPS throughput 2) 10-kHz sine wave input 3) 5-V single supply	Optimized for lowest distortion and noise: SNR>91 dB, THD=-110 dB, P=30.75 mW	TIDU014	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIDU014
	OPA364	1) 100-kSPS throughput 2) Transient step input 3) 5-V single supply	16-bit full scale step settling at 100-kSPS throughput: Settling time <10 us, INL ±0.5LSB, power < 25 mW	TIPD173 (TIDU504)	REF5040 View more recommended reference ICs	V _{REF} =4.096-V, 0.05% init. accuracy, low drift 3 ppm/°C	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD173 (TIDU504)
	OPA625	1) 100-kSPS throughput 2) DC signals 3) 5-V single supply	16-bit, muxed CH Settling time <10 us	TIPD169 (TIDUAD9)	REF5045 View more recommended reference ICs	V _{REF} =4.5-V, 0.05% init. accuracy, low drift 3 ppm/°Cv	Composite amplifier: OPA333+THS4281	Low offset, low offset drift 0.05 μV/°C, wide BW, low output impedance	TIPD169 (TIDUAD9)
	OPA333	1) 10-kSPS throughput 2) DC signals 3) 3.3-V single supply	DC signals, ultra low power: P<300 uW	ADS8860 datasheet	REF3330	Low power, 0.15% init. accuracy, 30 ppm/°C @3.9μA (-40C to +125°C)	OPA333	Micro power, low drift 2 μV/°C Data rate=10 kSPS	ADS8860 datasheet
ADS8350 750 kSPS, 2 channels, 0-5 input range, pseudo differential	OPA836	1) 750-kSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Dual-channel, simultaneous sampling: SNR>85 dB@10kHz, THD<-94 dB@10 kHz	ADS8350EVM-PDK	REF5025	REF5025: 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA2350	Dual op-amp wide BW, low output impedance, drift 4ppm/°C	ADS8350EVM-PDK
	THS4032	1) 750-kSPS throughput 2) 100-kHz AC input 3) ±15V dual supply	Dual-channel, simultaneous sampling: SNR>85 dB@100kHz, THD<-91 dB@100 kHz	ADS8350 datasheet	REF5025	REF5025: 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA2350	Dual op-amp wide BW, low output impedance, drift 4ppm/°C	ADS8350 datasheet

	ADC Input Driver				ADC Reference Driver				
SAR ADC	Amplifier	Signal chain specifications	Signal chain performance	Reference designs & support	Voltage reference	Reference specifications	Buffer amplifier	Reference driver performance	Reference designs & support
Resolution: 16 Bit									
ADS8353 600 kSPS, 2 channels, 0 - 5 input range, single ended pseudo differential	OPA836	1) 600-kSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Dual-channel, simultaneous sampling: SNR>83 dB@100 kHz, THD<-95 dB@100 kHz	ADS8353EVM-PDK	REF5025	REF5025: 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA2350	Dual op-amp wide BW, low output impedance, drift 4ppm/°C	ADS8353EVM-PDK
	THS4032	1) 600-kSPS throughput 2) 100-kHz AC input 3) ±15V dual supply	Dual-channel, simultaneous sampling: SNR>83 dB@10 kHz, THD<-100 dB@10 kHz	ADS8353 datasheet	REF5025	REF5025: 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA2350	Dual op-amp wide BW, low output impedance, drift 4ppm/°C	ADS8353 datasheet
ADS8354 700 kSPS, 2 channels, ±5 input range, fully differential	THS4521	1) 700-kSPS throughput 2) 100-kHz AC input 3) 5-V single supply	Dual-channel, simultaneous sampling: SNR>88 dB@10 kHz, THD<-100 dB@10 kHz	ADS8354EVM-PDK	REF5025	REF5025: 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA2350	Dual op-amp wide BW, low output impedance, drift 4ppm/°C	TIDA-00499 (TIDUAT7)
	THS4531A	1) 700-kSPS throughput 2) 100-kHz AC input 3) 5-V single supply	Interface to sin/cos encoders with high-resolution position interpolation	TIDA00176 (TIDUA05A)	Int Ref / Ext Ref REF2033	REF2033: 2 Outputs, VREF and VREF / 2, 8 ppm/°C drift from -40°C to 125°C	OPA2365	Low-noise single-supply rail-to-rail operational amplifier	TIDA00176 (TIDUA05A)
	THS4531A	1) 700-kSPS throughput 2) 100-kHz AC input 3) 5-V single supply	Interface to sin/cos encoder with Sitara AM437x	TIDA-00178 (TIDUS77A)	Int Ref / Ext Ref REF2025	REF2025 low-drift, low-power, dual-output VREF and VREF/2 voltage reference	Internal Buffer	Internal Buffer	TIDA-00178 (TIDUS77A)
ADS8331 500 kSPS, 4 channels, 0 - 4.096 input range, single ended	OPA211	1) Max throughput 2) AC input specified on datasheet 3) ±15-V dual supply	Optimized for dynamic performance: Refer to datasheet for performance spec	ADS8331EVM	REF5040	$V_{REF}=4.096\text{-V}$, 0.05% init. accuracy, low drift 3 ppm/°C	OPA350	Wide BW, low output impedance, drift 4ppm/°C	ADS8331EVM
ADS8332 500 kSPS, 8 channels, 0 - 4.096 input range, single ended				ADS8332EVM					ADS8332EVM
ADS8339 250 kSPS, 1 channel, 0 - 5 input range, single ended	OPA836	1) Max throughput 2) AC input specified on datasheet 3) 5-V single supply	Optimized for dynamic performance: Refer to datasheet for performance spec	ADS8339EVM-PDK	REF5045	$V_{REF}=4.5\text{-V}$, 0.05% init. accuracy, low drift 3 ppm/°C	OPA333+THS4281	Low offset, low offset drift 4 μV/°C, wide BW, low output impedance	ADS8339EVM-PDK
ADS8342 250 kSPS, 4 channels, ±2.5 input range, single ended bipolar	OPA725 OPA726	1) Max throughput 2) AC input specified on datasheet 3) ±5-V dual supply	Optimized for dynamic performance: Refer to datasheet for performance spec	ADS8342EVM	REF5025	$V_{REF}=2.5\text{-V}$, 0.05% init. accuracy, low drift 3 ppm/°C	Int Ref Buffer		ADS8342EVM
ADS8344 100 kSPS, 8 channels, 0 - 5 input range, single ended	OPA132	1) Max throughput 2) AC input specified on datasheet 3) ±15-V dual supply	Optimized for dynamic performance: Refer to datasheet for performance spec	ADS8344EVM	REF3240	$V_{REF}=4.096\text{-V}$, 0.2% init. accuracy, low drift 4 ppm/°C	OPA364	Wider BW, low offset, low drift 3 μV/°C	ADS8344EVM
ADS8345 100 kSPS, 8 channels, ±2.5 input range, fully differential				ADS8345EVM					ADS8345EVM

	ADC Input Driver				ADC Reference Driver				
SAR ADC	Amplifier	Signal chain specifications	Signal chain performance	Reference designs & support	Voltage reference	Reference specifications	Buffer amplifier	Reference driver performance	Reference designs & support
Resolution: 16 Bit									
ADS8422 4 MSPS, 1 channel, ±4.096 input range, fully differential	THS4131 THS4031 THS4032	1) Max throughput 2) AC input specified on datasheet 3) ±15-V dual supply	Optimized for dynamic performance: Refer to datasheet for performance spec	Contact E2E	Int Ref	Int Ref 4.096-V with low drift 6ppm/°C		Int Ref Buffer	Contact E2E
ADS8684 500 kSPS, 4 channels, single ended	OPA2209	Amplifier only for driving aux channel integrated AFE for input channels 1) Max specified throughput 2) AC input specified on datasheet 3) ±15-V dual supply	Optimized for dynamic performance: Refer to datasheet for performance spec	ADS8688EVM-PDK	REF5040	1) Internal Ref: 4.096V, drift 10ppm/°C max. 2) External Ref: REF5040 4.096-V, 0.05% init. accuracy, low drift 3ppm/°C		Int Ref Buffer	ADS8688EVM-PDK
ADS8688 500 kSPS, 8 channels, single ended input ranges: ±10.24 ±5.12 ±2.56 0 - 10.24 0 - 5.12									
ADS8684A 500 kSPS, 4 channels, single ended	OPA2209	Amplifier only for driving aux channel integrated AFE for input channels 1) Max specified throughput 2) AC input specified on datasheet 3) ±15-V dual supply	Optimized for dynamic performance: Refer to datasheet for performance spec	ADS8688AEVM-PDK	REF5040	1) Internal Ref: 4.096V, drift 10ppm/°C max. 2) External Ref: REF5040 4.096-V, 0.05% init. accuracy, low drift 3ppm/°C		Int Ref Buffer	ADS8688AEVM-PDK
ADS8688A 500 kSPS, 8 channels, single ended input ranges: ±10.24 ±5.12 ±2.56 0 - 10.24 0 - 5.12 0 - 2.56 0 - 1.28									
ADS8317 250 kSPS, 1 channel, ±2.5 input range, fully differential	OPA2376	1) Max throughput 2) 10-kHz sine wave input 3) 5-V single supply	Optimized for dynamic performance: ENOB=14.5	Contact E2E	Ref 5025	V _{REF} =2.5-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA376	Low power, low drift 0.26 µV/°C @750 µA	Contact E2E
View more recommended reference ICs									

	ADC Input Driver				ADC Reference Driver				
SAR ADC	Amplifier	Signal chain specifications	Signal chain performance	Reference designs & support	Voltage reference	Reference specifications	Buffer amplifier	Reference driver performance	Reference designs & support
Resolution: 16 Bit									
ADS8505 250 kSPS, 1 channel, ±10 input range, single ended	OPA140	1) Max throughput 2) 10-kHz sine wave input 3) ±15-V dual supply	Optimized for dynamic performance: ENOB=14.5	ADS8505EVM	REF5025	1) Internal Ref: 2.5-V, drift 8ppm/°C typ 2) External Ref: REF5025 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C		Int Ref Buffer	ADS8505EVM
Resolution: 14 Bit									
ADS7853 1 MSPS, 2 channels, 0 - 5 input range, single ended/pseudo differential	OPA836	1) 1-MSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Dual-channel, simultaneous sampling: SNR>81 dB@10 kHz, THD<-95 dB@10 kHz	ADS7853EVM-PDK	REF5025	REF5025: 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA2350	Dual op-amp wide BW, low output impedance, drift 4 μV/°C	ADS7853EVM-PDK
	THS4032	1) 1-MSPS throughput 2) 100-kHz AC input 3) ±15-V dual supply	Dual-channel, simultaneous sampling: SNR>78.5 dB@100 kHz, THD<-88 dB@100 kHz	ADS7853 datasheet	REF5025	REF5025: 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA2350	Dual op-amp wide BW, low output impedance, drift 4 μV/°C	TIDA-00208 (TIDU583)
ADS7854 1 MSPS, 2 channels, ±5 input range, fully differential	THS4521	1) 1-MSPS throughput 2) 100-kHz AC input 3) 5-V single supply	Dual-channel, simultaneous sampling: SNR>81.5 dB@10 kHz, THD<-90 dB@10 kHz	ADS7854EVM-PDK	REF5025	REF5025: 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA2350	Dual op-amp wide BW, low output impedance, drift 4 μV/°C	TIDA-00201 (TIDU569)
	THS4531	1) 1-MSPS throughput 2) 20-kHz AC input 3) 5-V single supply	Dual-channel, simultaneous sampling for optical encoders: SNR>83.3 dB@2 kHz, THD<-88 dB@2 kHz	TIPD117 (SLAU517)	Int Ref	Int V _{REF} =2.5-V, ± 10ppm/°C	N/A	N/A	TIPD117 (SLAU517)
ADS7850 750 kSPS, 2 channels, 0 - 5 input range, pseudo differential	OPA836	1) 750 kSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Dual-channel, simultaneous sampling: SNR>81.5 dB@10 kHz, THD<-90 dB@10 kHz	ADS8350EVM-PDK	REF5025	REF5025: 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA2350	Dual op-amp wide BW, low output impedance, drift 4ppm/°C	ADS8350EVM-PDK
	THS4032	1) 750 kSPS throughput 2) 100-kHz AC input 3) ±15-V dual supply	Dual-channel, simultaneous sampling: SNR>81.5 dB@100 kHz, THD<-90 dB@100 kHz	ADS8350 datasheet	REF5025	REF5025: 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA2350	Dual op-amp wide BW, low output impedance, drift 4ppm/°C	ADS8350 datasheet
ADS7851 1.5 MSPS, 2 channels, ±5 input range, fully differential	THS4521	1) 1-MSPS throughput 2) 100-kHz AC input 3) 5-V single supply	Dual-channel, simultaneous sampling: SNR>82.3 dB@100 kHz, THD<-93 dB@100 kHz	ADS7851EVM-PDK	Int Ref	Int V _{REF} =2.5-V, ± 10ppm/°C		Int Ref Buffer	ADS7851EVM-PDK
			Dual-channel, simultaneous sampling for optical encoders	TIPD117 (SLAU517)	Int Ref	Int V _{REF} =2.5-V, ± 10ppm/°C		Int Ref Buffer	TIPD117 (SLAU517)
ADS7945 2 MSPS, 2 channels, ±5 input range, fully differential	OPA836	1) Max throughput 2) AC input specified on datasheet 3) 5-V single supply	microPower, differential SAR ADC: Refer to datasheet for performance spec	ADS7945EVM-PDK	REF5040	REF5040: 4.096-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA350	Wide BW, low output impedance, drift 4 μV/°C	ADS7945EVM-PDK
ADS7946 2 MSPS, 2 channels, 0 - 5 input range, single ended	OPA836	1) Max throughput 2) AC input specified on datasheet 3) 5-V single supply	microPower, single-ended SAR ADC: Refer to datasheet for performance spec	ADS7946EVM-PDK	REF5040	REF5040: 4.0-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA350	Wide BW, low output impedance, drift 4 μV/°C	ADS7946EVM-PDK
					View more recommended reference ICs				
ADS7891 3 MSPS, 1 channel, 0 - 2.5 input range, single ended	THS4031	1) Max throughput 2) AC input specified on datasheet 3) ±15-V dual supply	Single-ended SAR ADC: Refer to datasheet for performance spec	ADS7891EVM	REF5025	REF5025: 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C		Int Ref Buffer	ADS7891EVM
					View more recommended reference ICs				

	ADC Input Driver				ADC Reference Driver				
SAR ADC	Amplifier	Signal chain specifications	Signal chain performance	Reference designs & support	Voltage reference	Reference specifications	Buffer amplifier	Reference driver performance	Reference designs & support
Resolution: 14 Bit									
ADS8674 500 kSPS, 4 channels, single ended	OPA2209	Amplifier only for driving aux channel integrated AFE for input channels 1) Max specified throughput 2) AC input specified on datasheet 3) ±15-V dual supply	Optimized for dynamic performance: Refer to datasheet for performance spec	ADS8678EVM-PDK	REF5040	1) Internal Ref: 4.096V, drift 10ppm/°C max. 2) External Ref: REF5040 4.096-V, 0.05% init. accuracy, low drift 3ppm/°C	Int Ref Buffer		ADS8678EVM-PDK
ADS8678 500 kSPS, 8 channels, single ended input ranges: ±10.24 ±5.12 ±2.56 0 - 10.24 0 - 5.12 0 - 2.56 0 - 1.28									
Resolution: 12Bit									
ADS7042 1 MSPS, 1 channel, 0 - 3.6 input range, single ended	OPA314	1) 100 to 500 kSPS throughput 2) 10-kHz AC input 3) 3.3-V single supply	Low power, ultra-small, optimized for 500 kSPS: SNR>70 dB@10 kHz, THD <-75 dB@10kHz, P=1 mW	TIPD168 (TIDU390)	AVDD Supply	N/A	N/A	N/A	TIPD168 (TIDU390)
	OPA835	1) 500 to 1 MSPS throughput 2) 100-kHz AC input 3) -0.7/4.7-V dual supply	Low power, ultra-small, optimized for 1 MSPS: SNR>70 dB@100 kHz, THD<-80 dB@100kHz, P=2.5 mW	TIPD168 (TIDU390)	AVDD Supply	N/A	N/A	N/A	TIPD168 (TIDU390)
	No driver!	1) Throughput <10kSPS 2) 100-Hz AC input	Ultra-Low power, ultra-small, optimized for <1kSPS: SNR>70 dB@100 Hz, THD<-80 dB@100 kHz, P<1 uW	TIPD168 (TIDU390)	AVDD Supply	N/A	N/A	N/A	TIPD168 (TIDU390)
ADS7043 1 MSPS, 1 channel, 0 - 3.6 input range, pseudo differential	OPA316	1) 100 to 1 MSPS throughput 2) 2-kHz AC input 3) 3.3-V single supply	Low power, ultra-small, optimized for 1 MSPS: SNR>69 dB@2 kHz, THD <-80 dB@2 kHz	ADS7043 datasheet	AVDD Supply	N/A	N/A	N/A	ADS7043 datasheet
	OPA835	1) 500 to 1 MSPS throughput 2) 100-kHz AC input 3) -0.7/4.7-V dual supply	Low power, ultra-small, optimized for 1 MSPS: SNR>69 dB@100 kHz, THD<-80 dB@100 kHz, P=2.5 mW	ADS7043 datasheet	AVDD Supply	N/A	N/A	N/A	ADS7043 datasheet
	No driver!	1) Throughput <10kSPS 2) 100-Hz AC input	Ultra-Low power, ultra-small, optimized for <1kSPS: SNR>70 dB@100 Hz, THD<-80 dB@100 kHz, P<1 uW	TIPD168 (TIDU390)	AVDD Supply	N/A	N/A	N/A	TIPD168 (TIDU390)
ADS7044 1 MSPS, 1 channel, ±3.6 input range, fully differential	OPA316	1) 100 to 1 MSPS throughput 2) 5-kHz AC input 3) 3.3-V single supply	Low power, ultra-small, optimized for 1 MSPS: SNR>71 dB@5 kHz, THD <-85 dB@5 kHz	ADS7044 datasheet	AVDD Supply	N/A	N/A	N/A	ADS7044 datasheet
	THS4531	1) 500 to 1 MSPS throughput 2) 25-kHz AC input 3) 3.3-V single supply	Low power, ultra-small, high CMRR: SNR=71.6 dB@25 kHz, THD<-85 dB@25 kHz	ADS7044 datasheet	AVDD Supply	N/A	N/A	N/A	ADS7044 datasheet
	No driver!	1) Throughput <10kSPS 2) 100-Hz AC input	Ultra-Low power, ultra-small, optimized for <1 kSPS	TIPD168 (TIDU390)	AVDD Supply	N/A	N/A	N/A	TIPD168 (TIDU390)

SAR ADC	ADC Input Driver				ADC Reference Driver				
	Amplifier	Signal chain specifications	Signal chain performance	Reference designs & support	Voltage reference	Reference specifications	Buffer amplifier	Reference driver performance	Reference designs & support
Resolution: 12Bit									
ADS7250 750 kSPS, 2 channels, 0 - 5 input range, pseudo differential	OPA836	1) 750 kSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Dual-channel, simultaneous sampling: SNR=73 dB@10 kHz, THD<-90 dB@10 kHz	ADS8350EVM-PDK	REF5025	REF5025: 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA2350	Dual op-amp wide BW, low output impedance, drift 4ppm/°C	ADS8350EVM-PDK
	THS4032	1) 750 kSPS throughput 2) 100-kHz AC input 3) ±15-V dual supply	Dual-channel, simultaneous sampling: SNR=73 dB@100 kHz, THD<-90 dB@100 kHz	ADS8350 datasheet	REF5025	REF5025: 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA2350	Dual op-amp wide BW, low output impedance, drift 4ppm/°C	ADS8350 datasheet
ADS7251 2 MSPS, 2 channels, ±5 input range, fully differential	THS4521	1) 1.5 MSPS throughput 2) 100-kHz AC input 3) 5-V single supply	Dual-channel, simultaneous sampling: SNR>73 dB@100 kHz, THD<-90 dB@100 kHz	ADS7851EVM-PDK	Int Ref	Int V_{REF} =2.5-V, ± 10ppm/°C	Int Ref Buffer		ADS7851EVM-PDK
			Dual-channel, simultaneous sampling for optical encoders	TIPD117 (SLAU517)					TIPD117 (SLAU517)
ADS7253 1 MSPS, 2 channels, 0 - 5 input range, single ended/ pseudo differential	OPA836	1) 1 MSPS throughput 2) 10-kHz AC input 3) 5-V single supply	Dual-channel, simultaneous sampling: SNR>71.5 dB@10 kHz, THD<-88 dB@10 kHz	ADS7853EVM-PDK	REF5025	REF5025: 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA2350	Dual op-amp wide BW, low output impedance, drift 4 μV/°C	ADS7853EVM-PDK
	THS4032	1) 1 MSPS throughput 2) 100-kHz AC input 3) ±15-V dual supply	Dual-channel, simultaneous sampling: SNR>71.5 dB@100 kHz, THD<-84 dB@100 kHz	ADS7253 datasheet	REF5025	REF5025: 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA2350	Dual op-amp wide BW, low output impedance, drift 4 μV/°C	ADS7253 datasheet
ADS7254 1 MSPS, 2 channels, ±5 input range, fully differential	THS4521	1) 1 MSPS throughput 2) 100-kHz AC input	Dual-channel, simultaneous sampling: SNR>72.5 dB@100 kHz, THD<-88 dB@100 kHz	ADS7854EVM-PDK	REF5025	REF5025: 2.5-V, 0.05% init. accuracy, low drift 3ppm/°C	OPA2350	Dual op-amp wide BW, low output impedance, drift 4 μV/°C	ADS7854EVM-PDK
	THS4531	1) 1 MSPS throughput 2) 20-kHz AC input 3) 5-V single supply	Dual-channel, simultaneous sampling for optical encoders: SNR>73.7 dB@2 kHz, THD <-88.3 dB@2 kHz	TIPD117 (SLAU517)	Int Ref	Int V_{REF} =2.5-V, ± 10ppm/°C	Int Ref Buffer		TIPD117 (SLAU517)
	THS4531	1) 1 MSPS throughput 2) 20-kHz AC input 3) 5-V single supply	Dual-channel, simultaneous sampling for HIPERFACE position encoder	TIDA-00202 (TIDUB64A)	Int Ref	N/A	N/A	N/A	TIDA-00202 (TIDUB64A)
ADS8638 1 MSPS, 8 channels, ±10 input range, single ended bipolar	OPA4140	1) <1 MSPS throughput 2) 2-kHz AC input 3) ±15-V dual supply	4/8ch integrated analog inputs for PLC: SNR>72 dB, THD<-76 dB	TIDA-00119 (TIDU192)	REF3330	V_{REF} =3.3V, 0.15% init. accuracy, 30ppm/°C	N/A	N/A	TIDA-00119 (TIDU192)
TLV2553 200 kSPS, 11 channels, 0 - 5 input range, single ended	OPA4140	1) Max throughput 2) 10-kHz sine wave input 3) 5-V single supply	Optimized for dynamic performance: THD = 82 dB, SNR = 72 dB, ENOB = 11.5	TLV2553EVM-PDK	REF3240	(4.096V ± 0.2% (max) initial accuracy, low 20 ppm/°C (max) drift over -40°C to 125°C)	OPA320	Wideband 20MHz, low Vos drift @ 5 μV/°C (max), low b'band noise (4.5nV/rt_Hz), RRIO swing on 0-5Vsup	TLV2553EVM-PDK

	ADC Input Driver				ADC Reference Driver				
SAR ADC	Amplifier	Signal chain specifications	Signal chain performance	Reference designs & support	Voltage reference	Reference specifications	Buffer amplifier	Reference driver performance	Reference designs & support
Resolution: 12Bit									
ADS7953 1 MSPS, 16 channels, 0 - 5 input range, single ended ADS7952 1 MSPS, 12 channels, 0 - 5 input range, single ended ADS7951 1 MSPS, 8 channels, 0 - 5 input range, single ended ADS7950 1 MSPS, 4 channels, 0 - 5 input range, single ended	OPA314	ADS7953: 1) Low power consumption 2) <1-kHz AC or DC inputs when all 16 channels scanned sequentially 3) 5-V single supply	Low power MUX application: total power < 35 mW	Contact E2E	REF5025	2.5V, 0.05% init. accuracy, low drift 3ppm/C	N/A	N/A	N/A
	OPA 192	1) Buffered multiplexer output (MXO) 2) Max throughput 3) 5-V single supply	Buffered multiplexer output (MXO): 12-bit settling at 1 MSPS w 1x/2xREF range $R(SOURCE) \leq 10k\Omega$	ADS7953 datasheet					
	No Driver!	1) 1 MSPS throughput 2) $Rsource \leq 100\Omega$ for 1xREF Range, 12-bit settling 3) $Rsource \leq 250\Omega$ for 2xREF Range 12-bit settling	Performance specified on datasheet						

SAR Analog-to-Digital Converter

Reference ICs

Reference IC Family	Initial Accuracy	Temp Drift (Max)
REF50xx	0.05%	3ppm/C
REF33xx	0.15%	30ppm/C
REF20xx	0.05%	8ppm/C
REF19xx	0.10%	25ppm/C

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