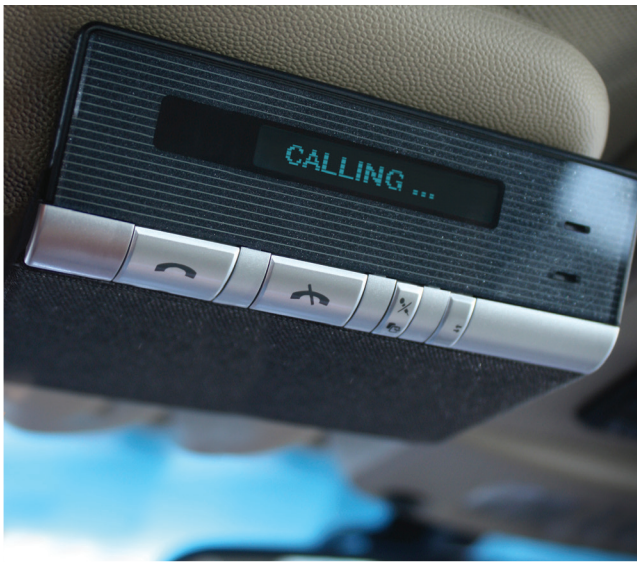
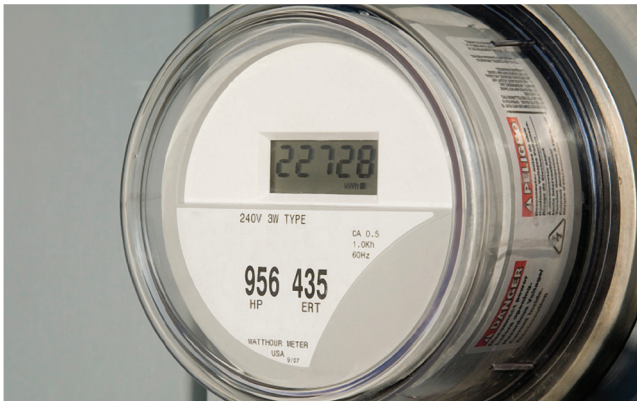


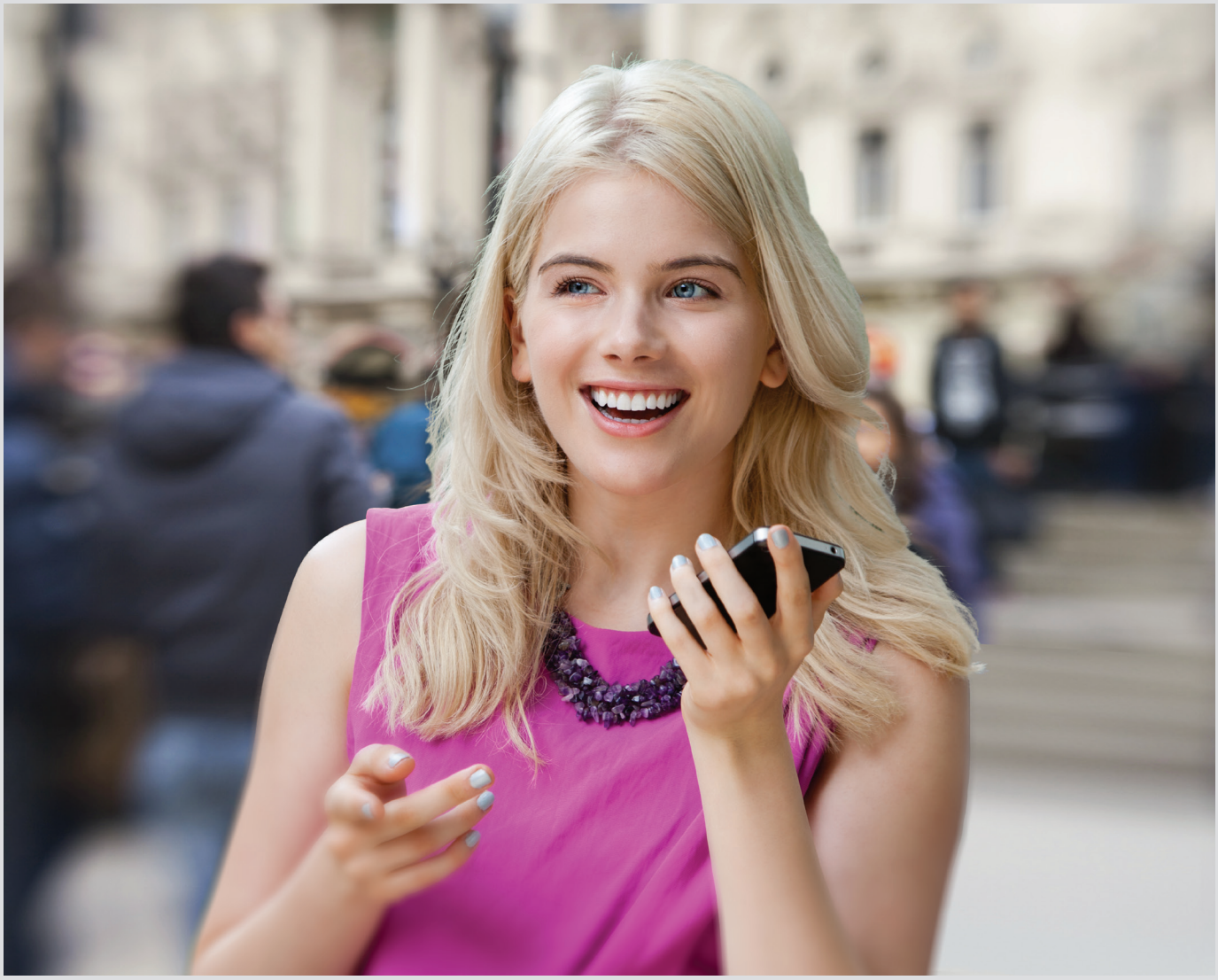


Product Summary Guide

Signal Processing Components

Cirrus Logic Product Summary Guide

First choice in signal processing components



Cirrus Logic is a premier supplier of high-precision analog and digital signal processing components and is a world leader in the design of innovative custom, semi-custom and general-market ICs for the portable audio market. The company also leverages its world-class mixed-signal technology expertise to develop high-precision ICs for industrial applications, such as seismic and digital utility meters.

CIRRUS LOGIC®

Innovation Leadership in Audio ICs

Audio Components

Cirrus Logic's analog and mixed-signal audio converter technologies and audio processors are featured in the most recognized consumer, professional and automotive entertainment applications. Cirrus Logic is a world leader in audio solutions for portable audio, offering complete end-to-end solutions from the microphone to the speaker. In consumer and automotive entertainment systems, Cirrus Logic products drive innovation in popular applications such as home theater systems, docking stations, Bluetooth speakers, headphones and gaming devices. The company's reputation for superior-fidelity audio converters has driven success in professional audio applications as well including digital mixing consoles, multitrack digital recorders and effects processors. The combination of Cirrus Logic's best-in-class audio components, along with our sophisticated SoundClear™ voice-processing technology, provides a compelling value proposition for our customers.

Audio DSPs

CS48520
CS48540
CS48560
CS495314
CS497014
CS48L10
CS48L11
WM0010
WM0011

Audio A/D Converters

CS5343
CS5344
CS5340
CS5341
CS5342
CS5346
CS5351
CS5361
CS5364
CS5366
CS5368
CS5381
CS53L21
CS53L30 NEW
WM8950
WM8952
WM8775
WM8738
WM8781
WM8782
WM8786
WM8737
WM8783
WM8953

Audio D/A Converters

CS4334/35/38/39
CS4344/45/48
CS4349
CS4350
CS4351
CS4352
CS4353
CS4354
CS4360
CS4361
CS4362A/82A
CS4364/84
CS4365/85
CS4385A
CS4392
CS4398
CS43L21
CS43L22
WM8761
WM8766
WM8768
WM1824
WM8501
WM8521
WM8523
WM8524
WM8533
WM8716
WM8718
WM8725
WM8726
WM8727
WM8728
WM8740
WM8741
WM8742
WM8762
WM8711BL
WM8711L
WM8912
WM8918
WM8955
WM8956

Smart Codecs

CS47024
CS47028
CS47048
WM5102
WM5102S NEW
WM8998 NEW

Portable Codecs

CS42L51
CS42L52
CS42L55
CS42L56
CS42L73
WM1811
WM8946
WM8948
WM8980
WM8731
WM8734
WM8750
WM8753
WM8758
WM8903
WM8904
WM8958
WM8960
WM8962
WM8962B
WM8973
WM8976
WM8978
WM8983
WM8985
WM8988
WM8993
WM8994
WM8996

Mono/ Stereo Codecs

CS4245
CS4265
CS4270
CS4271
CS4272
WM8569
WM8776
WM8778
WM8510
WM8940
WM8974

Multichannel Codecs

CS42416/26
CS42418/28
CS42432
CS42435
CS42436/38
CS4244
CS4234
CS42448
CS42516/26
CS42518/28
CS42888
WM8580
WM8581
WM8594
WM8595
WM8770

AC '97 and HD Audio Codecs

CS4202
CS4205
CS4299
CS4207
WM9707
WM9714
WM8850
WM8860

Voice Processors

CS48LV12 NEW
CS48LV13 NEW

Stereo Low Power Codec with Touchscreen Controller

WM9705
WM9712
WM9713
WM9715

Low Power Codec with Integrated Video Buffer

WM8941
WM8944
WM8945
WM8946
WM8948
WM8980

MEMS Microphones: Analog Silicon Microphone

WM7120
WM7121D
WM7121
WM7121E
WM7121P NEW
WM7121PE NEW
WM7133L NEW
WM7132
WM7132E
WM7132D
WM7132P NEW
WM7132PE NEW
WM7137 NEW
WM7137E NEW
WM7331 NEW
WM7331E NEW

MEMS Microphones: Digital Silicon Microphone

WM7210
WM7210E
WM7211
WM7211E
WM7220
WM7220E
WM7230
WM7230E
WM7231
WM7231E
WM7236 NEW
WM7236E NEW
WM7216 NEW
WM7216E NEW

Audio Amplifiers

CS35L00
CS35L01
CS35L03
CS35L32 NEW
WM9010
WM9081
WM9082
WM9094

Ambient Noise Cancelation

WM2000
WM2002
WM2200

Volume Control

CS3308
CS3310
CS3318

Interfaces and Sample Rate Converters

CS8406
CS8416
CS8420
CS8421
CS8422
CS8427
WM8804
WM8805

Clock Generation and Jitter Reduction

CS2000
CS2100
CS2200
CS2300

Imaging A/D Converters

WM8152
WM8196
WM8199
WM8213
WM8214
WM8215
WM8224
WM8232
WM8233
WM8234
WM8235
WM8253
WM8255
WM8259

CobraNet® Transport and Audio Network Processor ICs

CS1810xx
CS4961xx

Audio DSPs

Part Number	Processor	Key Features & Firmware	DSP Core Speed	Operating Range	Package
CS485xx	**High performance, cost-effective 32-bit Audio DSP for consumer and automotive multichannel decoding and post processing applications.**				
CS48520	Single 32-bit	4-channel audio PP1	150 MHz (300 M MAC/Sec)	0 to 70 °C	48 QFP
CS48540	Single 32-bit	8-channel audio PP1	150 MHz (600 M MAC/Sec)	0 to 70 °C	48 QFP
			150 MHz (300 M MAC/Sec)	–40 to 85 °C	
CS48560	Single 32-bit	8-channel audio PP1	150 MHz (300 M MAC/Sec)	0 to 70 °C	48 QFP
			150 MHz (300 M MAC/Sec)	–40 to 85 °C	
CS4953xx	**Single chip multistandard surround sound decoder targeted for playback from analog & S/PDIF sources.**				
CS495314	Dual 32-bit	(DD, DDEX, DTS, DTSES, DTS96, AAC) + PP2	150 MHz (600 M MAC/Sec)	0 to 70 °C	128 LQFP
			131 MHz (600 M MAC/Sec)	–40 to 85 °C	
CS4970xx	**Single chip multistandard surround sound decoder targeted for playback from HD DVD™, Blu-ray Disc® players, and all analog, S/PDIF and HDMI® sources.**				
CS497014	Dual 32-bit	(DD+, DTHD, DD, DDEX, AAC) + PP2	150 MHz (600 M MAC/Sec)	0 to 70 °C	128 LQFP
			131 MHz (600 M MAC/Sec)	–40 to 85 °C	
CS497024	Dual 32-bit	(DTS, DTS-ES, DTS96/24, DTS-HD, DD+, DTHD, DD, DDEX, AAC) + PP2	150 MHz (600 M MAC/Sec)	0 to 70 °C	128 LQFP
			131 MHz (600 M MAC/Sec)	–40 to 85 °C	
CS48Lxx	**Ultra low power voice and Audio DSP subsystem.**				
CS48L10	Single 32-bit	MP3, WMA, AAC	1.0 V 80 MHz	0 to 70 °C	24 QFN 20 WLCSP
			1.2 V 130 MHz	0 to 70 °C	
			1.0 V 80 MHz	–40 to 85 °C	
			1.2 V 130 MHz	–40 to 85 °C	
			1.0 V 80 MHz	–40 to 105 °C	
			1.2 V 130 MHz	–40 to 105 °C	
CS48L11	Single 32-bit	MP3, WMA, AAC, AC3, OH, PL2	1.0 V 80 MHz	0 to 70 °C	24 QFN
			1.2 V 150 MHz		
			1.0 V 80 MHz	–40 to 85 °C	
			1.2 V 150 MHz		
			1.0 V 80 MHz	–40 to 105 °C	
			1.2 V 150 MHz		
WM00xx	**Ultra low power voice and Audio DSP subsystem targeted for: mini-systems, DVD receivers, soundbars, car audio, DTVs.**				
WM0010	Tensilica HiFi 2	Embedded system software with RTOS	208 MHz	–40 to 85 °C	42 WLCSP
WM0011	Tensilica HiFi EP	Embedded system software with RTOS	260 MHz	–40 to 85 °C	49 WLCSP

Audio A/D Converters

Part Number	Channels	Resolution (bits)	Dynamic Range (dB)	THD+N (dB)	Sample Rate (kHz)	Analog Inputs	Power Supply (V)	Comments	Package
CS5340	2	24	101	–94	192	Single-ended	VA = 3.3 or 5 VD = 3.3 or 5 VL = 1.8 to 5	Pin compatible with CS5341	16 TSSOP
CS5341	2	24	105	–98	192	Single-ended	VA = 3.3 or 5 VD = 3.3 or 5 VL = 1.8 to 5	Pin compatible with CS5340	16 TSSOP
CS5342	2	24	105	–98	192	Single-ended	VA = 3.3 or 5 VD = 3.3 or 5 VL = 2.5 to 5	384*Fs MCLK	16 TSSOP
CS5343	2	24	98	–92	96	Single-ended	VA = 3.3 or 5	I^2S	10 TSSOP
CS5344	2	24	98	–92	96	Single-ended	VA = 3.3 or 5	LJ	10 TSSOP
CS5346	6	24	103	–95	192	Single-ended	VA = 5 VD = 3.3 VL = 3.3 to 5	6:1 input MUX, PGA, MIC pre-amp, high input impedance	48 LQFP
CS5351	2	24	108	–98	192	Single-ended	VA = 5 VD = 3.3 or 5 VL = 2.5 to 5	Functionally compatible with CS5361	24 SOIC 24 TSSOP
CS5361	2	24	114	–105	192	Differential	VA = 5 VD = 3.3 or 5 VL = 2.5 to 5	Pin compatible with CS5381	24 SOIC 24 TSSOP
CS5364	4	24	114	–105	192	Differential	VA = 5 VD = 3.3 or 5 VLS/VLC = 1.8 to 5	TDM interface, on-chip oscillator	48 LQFP
CS5366	6	24	114	–105	192	Differential	VA = 5 VD = 3.3 or 5 VLS/VLC = 1.8 to 5	TDM interface, on-chip oscillator	48 LQFP
CS5368	8	24	114	–105	192	Differential	VA = 5 VD = 3.3 or 5 VLS/VLC = 1.8 to 5	TDM interface, on-chip oscillator	48 LQFP
CS5381	2	24	120	–110	192	Differential	VA = 5 VD = 3.3 or 5 VL = 2.5 to 5	Flagship performance	24 SOIC 24 TSSOP
CS53L21	2	24	98	–88	96	Single-ended	VA = 1.8 to 2.5 VD = 1.8 to 2.5 VL = 1.8 to 3.3	ADC MUX, PGA, MIC pre-amp	32 QFN
NEW CS53L30	4	24	91	–84	8 – 48	Single-ended Differential	VP = 3 to 5 VA = 1.8	TDM interface, <2.5 mW, mono analog MIC record, 4x MIC-bias	30 WLCSP 32 QFN
WM8950	1	24	90	–80	8 – 48	Single-ended Differential	VA = 2.7 to 3.6 VD = 1.7 to 3.6	EQ, DSP filters, PGA, Master/Slave, PLL	24 QFN
WM8952	1	24	94	–80	8 – 48	Single-ended Differential	VA = 2.5 to 3.6 VD = 1.71 to 3.6	HPF, DSP filters, PGA, Master/Slave, PLL	28 WLCSP
WM8775	8	24	102	–90	32 – 96	Differential	VA = 2.7 to 5.5 VD = 2.7 to 3.6	ALC 2.0 V_{RMS} inputs, 2/3-wire SW control	28 SSOP
WM8738	2	24	90	–87	96	Single-ended	VA = 3 to 5.5 VD = 3 to 3.6	Master/Slave, HW control	14 SOIC
WM8781	2	24	102	–90	192	Single-ended	VA = 2.7 to 5.5 VD = 2.7 to 3.6	Master/Slave, HW control	20 SSOP
WM8782	2	24	102	–90	192	Single-ended	VA = 2.7 to 5.5 VD = 2.7 to 3.6	Master/Slave, HW control	20 SSOP
WM8786	2	24	111	–102	192	Differential	VA = 4.5 to 5.5 VD = 2.7 to 3.6	Master/Slave, HW control	20 SSOP
WM8737	2	24	97	–86	16 – 96	Single-ended	VA = 1.8 to 3.6 VD = 1.42 to 3.6	ALC, PGA, Master/Slave	32 QFN
WM8783	2	24	95	–83	8 – 96	Single-ended	VA = 3 to 3.6 VD = 3 to 3.6	PGA	8 SOIC
WM8953	2	24	94	–82	8 – 48	Differential	VA = 2.7 to 3.6 VD = 1.71 to 3.6	Boost stages for each PGA, TDM interface, Master/Slave, PLL	42 WLCSP

Voice Processors

Part Number	Processor	Voice Bands	Speech Algorithms	Playback Algorithms	Speed (MIPS)	Operating Range	I/O Voltage	Package
NEW CS48LV12	32-Bit Dual MAC	Narrow, HD Voice/Wide	None	Cirrus Logic (included)	130	0 to 70 °C –40 to 105 °C	1.8 – 3.3 V	20 WLCSP 24 QFN
CS48LV13	32-Bit Dual MAC	Narrow, HD Voice/Wide	ASR Enhanced (included), VAD (included), TrulyHandsfree (optional)	Cirrus Logic (included). Dolby (optional), DTS (optional)	130	0 to 70 °C –40 to 155 °C	1.8 – 3.3 V	20 WLCSP 24 QFN

Audio D/A Converters

Part Number	Channels	Resolution (bits)	Dynamic Range (dB)	THD+N (dB)	Sample Rate (kHz)	Analog Outputs	Power Supply (V)	Output Level (V_{RMS})	Comments	Package
CS4334/35/38/39	2	24	96	–88	96	Single-ended	VA = 5	1.2	Entry-level stereo DAC	8 SOIC
CS4344/45/48	2	24	105	–90	192	Single-ended	VA = 3.3 or 5	1.1	Upgrade for CS4340 and CS4340A	10 TSSOP
CS4349	2	24	101	–91	192	Single-ended	VA = 3.3 or 5	1	Volume control	24 TSSOP
CS4350	2	24	109	–91	192	Single-ended Differential	VA = 3.3 or 5 VLC = 3.3 to 5 VLS = 1.5 to 5	2	Integrated PLL, TDM interface	24 TSSOP
CS4351	2	24	112	–100	192	Single-ended	VA = 9 or 12 VD = 3.3 VL = 1.8 to 3	2	Line-level driver	20 TSSOP
CS4352	2	24	106	–93	192	Single-ended	VA = 9 or 12 VD = 3.3 VL = 1.5 to 5	2	Line-level driver	20 TSSOP
CS4353	2	24	106	–93	192	Single-ended	VA = 3.3 VCP = 3.3 VL = 0.9 to 3.3	2	Ground-centered line-level outputs	24 QFN
CS4354	2	24	101	–86	192	Single-ended	VA/VD = 5.0 VL = 1.5 to 5.0	2	Line-level driver	14 SOIC
CS4360	6	24	102	–91	192	Single-ended	VA = 3.3 or 5 VD = 3.3 or 5 VL = 1.8 to 5	1.1	Entry-level DAC	28 TSSOP
CS4361	6	24	105	–95	192	Single-ended	VA = 5 VL = 1.8 to 5	1.1	Entry-level DAC	20 TSSOP
CS4362A/82A	6/8	24	114	–100	192	Differential	VA = 5 VD = 2.5 VL = 1.8 to 5	2.3	DSD	48 LQFP
CS4364/84	6/8	24	103	–88	192	Single-ended	VA = 5 VD = 2.5 VL = 1.8 to 5	1.1	DSD, footprint compatible with CS4365/85	48 LQFP
CS4365/85	6/8	24	114	–100	192	Differential	VA = 5 VD = 2.5 VL = 1.8 to 5	2.5	DSD, TDM interface	48 LQFP
CS4385A	8	24	114	–100	192	Differential	VA = 5 VD = 2.5 VL = 1.8 to 5	2.3	DSD, TDM interface. Access to TDM through hardware mode with a wider range of TDM timings.	48 LQFP
CS4392	2	24	114	–100	192	Differential	VA = 5 VL = 1.8 to 5	1.7	DSD, selectable digital filters, pin compatible with CS4391A	20 TSSOP
CS4398	2	24	120	–107	192	Differential	VA = 5 VD = 3.3 or 5 VL = 1.8 to 5	2.3	Flagship DAC, DSD processor, selectable D-filter	28 TSSOP
CS43L21	2	24	98	–86	96	Single-ended	VA = 1.8 to 2.5 VD = 1.8 to 2.5 VL = 1.8 to 3.3	1.3	HP amp, volume control	32 QFN
CS43L22	2	24	98	–88	96	Single-ended	VA = 1.65 to 2.83 VD = 1.65 to 2.83 VP = 2.37 to 5.35 VL = 1.8 to 3.3	1.3	HP amp, Class-D speaker amp	40 QFN

Audio D/A Converters *(continued)*

Part Number	Channels	Resolution (bits)	Dynamic Range (dB)	THD+N (dB)	Sample Rate (kHz)	Analog Outputs	Power Supply (V)	Output Level (V_{RMS})	Comments	Package
WM8761	2	24	100	–90	192	Single-ended	VA = 2.7 to 5.5 VD = 2.7 to 5.5	1	HW control	14 SOIC
WM8766	6	24	103	–90	192	Single-ended	VA = 2.7 to 5.5 VD = 2.7 to 3.6	1	Digital volume control, HW and 3-wire SW control	28 SSOP
WM8768	8	24	103	–90	192	Single-ended	VA = 2.7 to 5.5 VD = 2.7 to 3.6	1	Digital volume control, HW and 3-wire SW control	28 SSOP
WM1824	2	24	106	–88	192	Single-ended	VA = 2.97 to 3.63 VD = 1.62 to 3.63	2.1	HW control	24 QFN
WM8501	2	24	100	–88	192	Single-ended	VA = 4.5 to 5.5 VD = 2.7 to 5.5	1.7	HW control	14 SOIC
WM8521	2	24	98	–81	192	Single-ended	VA = 8.2 to 13.2 VD = 2.7 to 3.6	2	HW control	14 SOIC
WM8523	2	24	106	–93	192	Single-ended	VA = 3 to 3.6 VD = 3 to 3.6	2	Digital volume control, HW and 2/3-wire SW control	20 TSSOP
WM8524	2	24	106	–93	192	Single-ended	VA = 3 to 3.6 VD = 3 to 3.6	2.1	HW control	16 TSSOP
WM8533	2	24	106	–89	192	Single-ended	VA = 2.97 to 3.63 (Typ 3.3) VD = 1.62 to 3.63 (Typ 1.8)	2.1	HW and 2/3-wire SW control	20 WLCSP
WM8716	2	24	112	–97	192	Single-ended	VA = 3 to 5.5 VD = 3 to 5.5	1.1	Selectable digital filter response, HW and 3-wire SW control	28 SSOP
WM8718	2	24	111	–100	192	Differential	VA = 3 to 5.5 VD = 3 to 5.5	2	Digital volume control, 3-wire SW control	20 SSOP
WM8725	2	24	99	–80	8 – 96	Single-ended	VA = 2.7 to 5.5 VD = 2.7 to 5.5	1	HW control	14 SOIC
WM8726	2	24	100	–88	192	Single-ended	VA = 2.7 to 5.5 VD = 2.7 to 5.5	1.1	HW control	14 SOIC
WM8727	2	24	98	–84	192	Single-ended	VA = 2.7 to 5.5 VD = 2.7 to 5.5	1.2	HW control	8 SOIC
WM8728	2	24	106	–97	192	Single-ended	VA = 3 to 5.5 VD = 3 to 5.5	1.1	Digital volume control, HW and 2/3-wire SW control	20 SSOP
WM8740	2	24	120	–104	192	Differential	VA = 3 to 5.5 VD = 3 to 5.5	2	Selectable digital filter response, HW and 3-wire SW control	28 SSOP
WM8741	2	24	128	–100	192	Differential	VA = 4.5 to 5.5 VD = 3 to 3.6	2	Selectable advanced digital filter responses, HW and 2/3-wire SW control	28 SSOP
WM8742	2	24	126	–100	192	Differential	VA = 4.5 to 5.5 VD = 3 to 3.6	2	Selectable advanced digital filter responses, HW and 2/3-wire SW control	28 SSOP
WM8762	2	24	98	–84	192	Single-ended	VA = 2.7 to 5.5 VD = 2.7 to 5.5	1.2	HW control	8 SOIC
WM8711BL	2	24	90	–86	8 – 96	Single-ended	VA = 1.8 to 3.6 VD = 1.42 to 3.6	1	Output volume and mute control, HP driver, Line-in to mixer, OSC	24 QFN
WM8711L	2	24	90	–86	8 – 96	Single-ended	VA = 1.8 to 3.6 VD = 1.42 to 3.6	1	Output volume and mute control, HP driver, Line-in to mixer, OSC	28 SSOP 28 QFN
WM8912	2	24	96	–86	8 – 96	Single-ended	VA = 1.7 to 2 VD = 1 to 3.6	1	DRC, ReTune™ Mobile, control write sequencer, HP driver, FLL	32 QFN
WM8918	2	24	96	–86	8 – 96	Single-ended	VA = 1.71 to 2.0 VD = 1.42 to 3.6	1	5 band EQ, DRC, digital MIC interface, HP driver, FLL	32 QFN
WM8955	2	24	98	–86	8 – 96	Single-ended	VA = 1.8 to 3.6 VD = 1.42 to 3.6	1	Tone control and bass boost, HP driver, Line-in to mixer, PLL	28 QFN 32 QFN
WM8956	2	24	99	–84	8 – 96	Single-ended	VA = 2.7 to 5.5 VD = 1.71 to 3.6	1	Direct battery connection, HP driver, Speaker driver, Line-in to mixer, PLL	32 QFN

Smart Codecs

Part Number	DACs / ADCs	DAC Dynamic Range (dB)	DAC THD+N (dB)	ADC Dynamic Range (dB)	ADC THD+N (dB)	Sample Rate (kHz)	Analog I/O	Power Supply (V)	DSP and Other Features	Package
CS47024	4 / 2	108	–98	105	–98	96	Differential	VA = 3.3 VD = 1.8	Single 32-bit DSP core, 150 MIPS, 5:1 MUX on ADC, clock PLL, 2ch hardware SRC, S/PDIF Tx	100 LQFP
CS47028	8 / 2	108	–98	105	–98	96	Differential	VA = 3.3 VD = 1.8	Single 32-bit DSP core, 150 MIPS, 5:1 MUX on ADC, clock PLL, 8ch hardware SRC, S/PDIF Rx/Tx	100 LQFP
CS47048	8 / 4	108	–98	105	–98	96	Differential	VA = 3.3 VD = 1.8	Single 32-bit DSP core, 150 MIPS, 5:1 MUX on one 2ch ADC, clock PLL, 8ch hardware SRC, S/PDIF Rx/Tx	100 LQFP
WM5102	7 / 6	112	–89	96	–88	192	Single-ended Differential	VA = 1.7 to 5.5 VD = 1.14 to 1.9	Tx noise reduction, AEC, Rx speech clarity, Dynamic range control, parametric EQ, DSP filters, ASRC, haptic control signal generator, SLIMbus interface, 3x digital audio interface, HP/speaker amps, dual FLL	137 WLCSP
NEW WM5102S	7 / 6	120	–89	96	–88	192	Single-ended Differential	VA = 1.7 to 5.5 VD = 1.14 to 1.9	Master Hi-Fi, Dynamic range control, parametric EQ, DSP filters, ASRC, haptic control signal generator, SLIMbus interface, 3x digital audio interface, HP/speaker amps, dual FLL	137 WLCSP
WM8998	7 / 3	122	–89	96	–88	192	Single-ended Differential	VA = 1.7 to 5.5 VD = 1.14 to 3.74	Wind noise reduction, Dynamic range control, Parametric EQ, DSP filters, ASRC, SLIMbus interface, 3x digital audio interface, dual FLL	117 WLCSP

Portable Codecs

Part Number	DACs / ADCs	DAC Dynamic Range (dB)	DAC THD+N (dB)	ADC Dynamic Range (dB)	ADC THD+N (dB)	Sample Rate (kHz)	Analog I/O	Power Supply (V)	Comments	Package
CS42L51	2 / 2	98	–86	96	–88	96	Single-ended	VA = 1.8 to 2.5 VD = 1.8 to 2.5 VL = 1.8 to 3.3	3:1 MUX, PGA, MIC pre-amp, HP amp	32 QFN
CS42L52	2 / 2	98	–86	98	–88	96	Single-ended	VA = 1.65 to 2.83 VD = 1.65 to 2.83 VP = 2.37 to 5.35 VL = 1.8 to 3.3	4:1 MUX, PGA, MIC, pre-amp, HP/speaker amps	40 QFN
CS42L55	2 / 2	99	–86	95	–87	48	Pseudo-Differential	VA = 1.65 to 2.71 VD = 1.65 to 2.71 VCP = 1.65 to 2.73 VL = 1.65 to 3.47	2:1 MUX, PGA, Class-H HP amp	36 QFN
CS42L56	2 / 2	99	–86	95	–87	48	Pseudo-Differential	VA = 1.62 to 2.75 VD = 1.62 to 2.75 VCP = 1.62 to 2.75 VL = 1.62 to 3.63	2:1 MUX, PGA, Class-H HP amp	40 QFN
CS42L73	4 / 2	97	–85	91	–85	48	Pseudo-Differential	VA = 1.66 to 1.94 VD = 0.85 to 1.40 VP = 3.0 to 5.25 VCP = 1.66 to 1.94 VL = 1.66 to 1.94	Class-H HP amp, Class A/B speaker amp, 3x asynchronous serial ports	60 WLCSP 65 BGA
WM1811	2 / 2	100	–83	94	–84	96	Single-ended Differential	VA = 1.71 to 5.5 VD = 1.0 to 3.6	ReTune™ parametric EQ, dynamic range controller, digital noise gate, ASRC, 2x DMIC interface, HP/speaker amps, dual FLL	80 WLCSP
WM8946	2 / 2	98	–83	94	–83		Single-ended Differential	VA = 2.4 to 3.6 VD = 1.71 to 3.6	ReTune™, EQ, DSP filters, 3D, Video buffer, HP/speaker amps, FLL	36 WLCSP
WM8948	2 / 2	98	–83	94	–83	48	Single-ended Differential	VA = 2.4 to 3.6 VD = 1.71 to 3.6	ReTune™, EQ, DSP filters, 3D, Video buffer, HP/speaker amps, FLL	36 WLCSP
WM8980	2 / 2	98	–84	90	–80	48	Differential	VA = 2.5 to 3.6 VD = 1.71 to 3.6	EQ, 3D, DSP filters, Video buffer, HP/speaker amps, FLL	40 QFN
WM8731	2 / 2	100	–86	90	–84	96	Single-ended	VA = 1.8 to 3.6 VD = 1.42 to 3.6	High pass filters, MIC input, HP amp, OSC	28 QFN
WM8734	2 / 2	100	–86	90	–84	96	Single-ended	VA = 2.7 to 3.6 VD = 2.7 to 3.6	High pass filters	20 SSOP

Portable Codecs *(continued)*

Part Number	DACs / ADCs	DAC Dynamic Range (dB)	DAC THD+N (dB)	ADC Dynamic Range (dB)	ADC THD+N (dB)	Sample Rate (kHz)	Analog I/O	Power Supply (V)	Comments	Package
WM8750	2 / 2	98	–84	95	–82	96	Single-ended Differential	VA = 1.8 to 3.6 VD = 1.42 to 3.6	EQ, 3D, MIC interface ALC, HP/speaker amps	32 QFN
WM8753	3 / 2	98	–84	95	–82	96	Single-ended Differential	VA = 1.8 to 3.6 VD = 1.4 to 3.6	Differential MIC inputs, HP/speaker amps, PLL	48 QFN 55 BGA
WM8758	2 / 2	100	–86	92.5	–75	48	Differential	VA = 2.5 to 3.6 VD = 1.71 to 3.6	3D, EQ, DSP filters, HP amp, PLL	32 QFN
WM8903	2 / 2	96	–86	93	–80	48	Single-ended Pseudo-Differential	VA = 1.71 to 2 VD = 1.14 to 1.89	Dynamic range control, digital sidetone, Digital microphone interface, HP amp	40 QFN
WM8904	2 / 2	96	–86	92	–80	96	Single-ended Differential	VA = 1.71 to 2 VD = 0.95 to 3.6	ReTune™ Mobile parametric EQ, dynamic range controller, DMIC interface, HP amp, FLL	32 QFN 36 WLCSP
WM8958	4 / 2	100	–83	94	–84	96	Single-ended Differential	VA = 1.71 to 5.5 VD = 1.0 to 3.6	ReTune™ Mobile, MBC, parametric EQ, dynamic range controller, ASRC, 4x DMIC interface, HP/speaker amps, dual FLL	72 WLCSP
WM8960	2 / 2	98	–84	95	–82	48	Single-ended	VA = 2.5 to 3.6 VD = 1.71 to 3.6	3D, MIC interface ALC, HP/speaker amps, PLL	32 QFN
WM8962	2 / 2	98	–79	94	–86	96	Single-ended	VA = 1.7 to 2.0 VD = 1.62 to 2.0	VSS, HD Bass, ReTune™, 3D, EQ, DRC, DMIC interface, programmable ALC & noise gate, HP/speaker amps, PLL, FLL	49 WLCSP
WM8962B	2 / 2	98	–79	94	–86	96	Single-ended	VA = 1.7 to 2.0 VD = 1.62 to 2.0	VSS, HD Bass, ReTune™, 3D, EQ, DRC, DMIC interface, programmable ALC & noise gate, HP/speaker amps, PLL, FLL	49 WLCSP
WM8973	2 / 2	98	–84	95	–82	96	Single-ended	VA = 1.8 to 3.6 VD = 1.4 to 3.6	EQ, 3D, MIC interface ALC, HP/speaker amps	32 QFN
WM8976	2 / 1	98	–84	95	–84	48	Differential	VA = 2.5 to 5.5 VD = 1.7 to 3.6	EQ, 3D, DSP filters, MIC interface ALC, HP/ speaker amps, PLL	32 QFN
WM8978	2 / 2	98	–84	95	–84	48	Differential	VA = 2.5 to 5.5 VD = 1.7 to 3.6	EQ, 3D, DSP filters, MIC interface ALC, HP/ speaker amps, PLL	32 QFN
WM8983	2 / 2	98	–84	95	–84	48	Differential	VA = 2.5 to 5.5 VD = 1.7 to 3.6	EQ, 3D, DSP filters, MIC interface ALC, HP/ speaker amps, PLL	32 QFN
WM8985	2 / 2	98	–86	92.5	–75	48	Differential	VA = 2.5 to 3.6 VD = 1.71 to 3.6	EQ, 3D, DSP filters, MIC interface ALC, HP amp, PLL	32 QFN
WM8988	2 / 2	100	–90	93	–81	96	Differential	VA = 1.8 to 3.6 VD = 1.42 to 3.6	EQ, 3D, bass boost, MIC interface ALC, HP amp	28 COL
WM8993	2 / 2	100	–86	94	–87	48	Single-ended Differential	VA = 2.2 to 3.3 VD = 1.1 to 2.0	ReTune™, parametric EQ, dynamic range controller, Active noise reduction, HP/speaker amps, FLL	48 WLCSP
WM8994	4 / 2	100	–83	94	–84	96	Single-ended Differential	VA = 1.7 to 5.5 VD = 1.0 to 3.6	ReTune™ Mobile, Parametric EQ, dynamic range controller, ASRC, HP/speaker amps, dual FLL	72 WLCSP
WM8996	4 / 2	99	–81	94	–81	48	Differential	VA = 1.71 to 3.6 VD = 0.95 to 2.0	ReTune™, parametric EQ, dynamic range controller, ISRC, 4x DMIC interface, 2x PDM speaker amp interface, HP amp, FLL	54 WLCSP

Mono/Stereo Codecs

Part Number	Channels	DAC Dynamic Range (dB)	DAC THD+N (dB)	ADC Dynamic Range (dB)	ADC THD+N (dB)	Sample Rate (kHz)	Analog I/O	Power Supply (V)	Comments	Package
CS4245	6 in, 2 out	104	–90	104	–95	192	Single-ended	VA = 3.3 or 5 VD = 3.3 or 5 VL = 1.8 to 5	6:1 input MUX, MIC pre-amp, PGA	48 LQFP
CS4265	2 in, 2 out	104	–90	104	–95	192	Single-ended	VA = 3.3 or 5 VD = 3.3 or 5 VL = 1.8 to 5	2:1 input MUX, MIC pre-amp, PGA, S/PDIF out	32 QFN
CS4270	2 in, 2 out	105	–95	105	–95	192	Single-ended	VA = 3.3 or 5 VD = 3.3 or 5 VL = 1.8 to 5	Volume control, passive filters, 3.3 V operation	24 TSSOP
CS4271	2 in, 2 out	114	–100	108	–98	192	Single-ended ADC Differential DAC	VA = 5 VD = 3.3 or 5 VL = 2.5 to 5	Volume control, on-chip oscillator	28 TSSOP
CS4272	2 in, 2 out	114	–100	114	–100	192	Differential	VA = 5 VD = 3.3 or 5	Volume control, on-chip oscillator	28 TSSOP
WM8569	2 in, 2 out	103	–95	100	–80	192	Single-ended	VA = 2.7 to 5.5 VD = 2.7 to 3.6	ALC volume control, 3-wire SW control	28 SSOP
WM8776	10 in, 2 out	108	–97	102	–95	192	Differential	VA = 2.7 to 5.5 VD = 2.7 to 3.6	H/P amplifier ALC, 2/3-wire SW control	48 TQFP
WM8778	2 in, 2 out	108	–97	102	–95	192	Differential	VA = 2.7 to 5.5 VD = 2.7 to 3.6	ALC volume control, 2/3-wire SW control	28 SSOP
WM8510	1 in, 1 out	93	–84	90	–80	48	Differential ADC Single-ended DAC	VA = 2.5 to 5.5 VD = 1.71 to 3.6	ALC volume control, DSP filters, 2/3-wire SW control	28 SSOP
WM8940	1 in, 1 out	98	–84	94	–80	48	Differential ADC Single-ended DAC	VA = 2.5 to 5.5 VD = 1.71 to 3.6	ALC volume control, filters, Headphone driver, PLL	24 QFN
WM8974	1 in, 1 out	98	–84	94	–83	48	Differential ADC Single-ended DAC	VA = 2.5 to 5.5 VD = 1.71 to 3.6	ALC volume control, DSP filters, EQ, PLL	24 QFN

Multichannel Codecs

Part Number	Channels	DAC Dynamic Range (dB)	DAC THD+N (dB)	ADC Dynamic Range (dB)	ADC THD+N (dB)	Sample Rate (kHz)	Analog I/O	Power Supply (V)	Comments	Package
CS42416/26	2 in, 6 out	110 / 114	–100	114	–100	192	Differential DACs Single-ended or Differential ADCs	VA = 5 VD = 3.3 or 5 VL = 1.8 to 5	Digital volume control	64 LQFP
CS42418/28	2 in, 8 out	110 / 114	–100	114	–100	192	Differential	VA = 5 VD = 3.3 or 5 VL = 1.8 to 5	Digital volume control, PLL	64 LQFP
CS42432	4 in, 6 out	108	–98	105	–98	192	Single-ended or Differential	VA = 3.3 or 5 VD = 3.3 VL = 1.8 to 5	TDM interface	52 MQFP
CS42435	6 in, 8 out	108	–98	105	–98	192	Single-ended or Differential	VA = 3.3 or 5 VD = 3.3 VL = 1.8 to 5	TDM interface	52 MQFP
CS42436/38	6 in, 6/8 out	105 / 108	–95 / –98	102 / 105	–95 / –98	192	Single-ended or Differential	VA = 3.3 or 5 VD = 3.3 VL = 1.8 to 5	TDM interface	52 MQFP
CS4244	4 in, 4 out	108	–90	105	–95	192	Single-ended or Differential	VA = 3.3 or 5 VL = 1.8 to 5	PCM and TDM interfaces	40 QFN
CS4234	4 in, 5 out	108	–90	105	–95	192	Single-ended or Differential	VA = 3.3 or 5 VL = 1.8 to 5	PCM and TDM interfaces	40 QFN
CS42448	6 in, 8 out	108	–98	105	–98	192	Single-ended or Differential	VA = 3.3 or 5 VD = 3.3 to 5 VL = 1.8 to 5	PCM and TDM interfaces	64 LQFP
CS42516/26	2 in, 6 out	110 / 114	–100	114	–100	192	Differential	VA = 5 VD = 3.3 or 5 VL = 1.8 to 5	S/PDIF Rx, digital volume control	64 LQFP
CS42518/28	2 in, 8 out	110 / 114	–100	114	–100	192	Differential	VA = 5 VD = 3.3 or 5 VL = 1.8 to 5	S/PDIF Rx, digital volume control	64 LQFP
CS42888	4 in, 8 out	108	–98	105	–98	192	Single-ended or Differential	VA = 3.3 or 5 VD = 3.3 or 5 VL = 1.8 to 5	PCM and TDM interfaces	64 LQFP
WM8580	2 in, 6 out	103	–90	100	–87	192	Single-ended	VA = 2.7 to 5.5 VD = 2.7 to 3.6	Two audio interfaces, HW and 2/3-wire SW control, PLLs	48 TQFP
WM8581	2 in, 8 out	103	–90	100	–90	192	Single-ended	VA = 2.7 to 5.5 VD = 2.7 to 3.6	Two independent audio interfaces, HW and 2/3-wire SW control, PLLs	48 TQFP
WM8594	10 in, 6 out	100	–87	96	–80	192	Single-ended	VA = 8.1 to 9.9 VD = 2.7 to 3.6	2 V_{RMS} line drivers, headphone driver, 2/3-wire SW control	48 TQFP
WM8595	12 in, 4 out	100	–87	96	–80	192	Single-ended	VA = 8.1 to 9.9 VD = 2.7 to 3.63	2 V_{RMS} line-level drivers, digital multiplexer, 2/3-wire SW control	48 QFN
WM8770	16 in, 8 out	106	–96	102	–94	192	Single-ended	VA = 2.7 to 5.5 VD = 2.7 to 3.6	Analog and digital volume control, 3-wire SW control	64 TQFP

AC ’97 and HD Audio Codecs

Part Number	Bus Interface	DAC SNR/THD+N (dB)	ADC SNR/THD+N (dB)	Feature	Converters	Package
CS4202	AC ’97	90 / –87	90 / –84	S/PDIF transmitter, Headphone amplifier	20-bit stereo DAC 18-bit stereo ADC	48 TQFP
CS4205	AC ’97	90 / –87	90 / –84	S/PDIF transmitter, Sample-rate converter	20-bit stereo DAC 18-bit stereo ADC	48 TQFP
CS4299	AC ’97	90 / –91	90 / –88	S/PDIF transmitter, Sample-rate converter	20-bit stereo DAC 18-bit stereo ADC	48 TQFP
CS4207	HD-Audio	110 / –94	105 / –88	S/PDIF receiver with SRC, 2 S/PDIF transmitters, MIC pre-amp, HP amp, 2 DMIC inputs	Six 192 kHz DACs Four 96 kHz ADCs	48 QFN
WM9707	AC ’97	95 / –90	90 / –85	S/PDIF transmitter	18-bit stereo DAC 18-bit stereo ADC	48 TQFP
WM9714	AC ’97	94 / –85	87 / –86	S/PDIF transmitter	18-bit stereo DAC 18-bit stereo ADC	48 QFN
WM8850	HD-Audio	108 / –96	105 / –95	S/PDIF transceiver	Six 192 kHz DACs Four 96 kHz ADCs	48 QFN
WM8860	HD-Audio	108 / –96	105 / –95	S/PDIF transmitter	Four 192 kHz DACs Four 96 kHz ADCs	48 QFN

Stereo Low Power Codecs with Touchscreen Controller

Part Number	DACs / ADCs	Headphone driver	BTL speaker out	Control + data interface	Power Supply (V)	Features	Package
WM9705	2 / 2	Yes	No	AC '97	VA = 3.0 to 5.0 VD = 3.0 to 5.0	AUX ADC, battery monitor	48 QFN 48 TQFP
WM9712	3 / 3	Yes, 45 mW into 16 ohms	Yes, 400 mW	AC '97	VA = 1.8 to 3.6 VD = 1.5 to 3.6	AUX ADC, battery monitor	48 QFN
WM9713	4 / 3	Yes, 45 mW into 16 ohms	Yes, 400 mW	AC '97 PCM, I2S	VA = 1.8 to 3.6 VD = 1.8 to 3.6	AUX ADC, battery monitor	48 QFN
WM9715	3 / 3	Yes, 45 mW into 16 ohms	Yes, 400 mW	AC '97	VA = 1.8 to 3.6 VD = 1.5 to 3.6	AUX, ADC, battery monitor	48 QFN

Low Power Codecs with Integrated Video Buffer

Part Number	DACs / ADCs	DAC SNR/THD+N (dB)	ADC SNR/THD+N (dB)	Headphone driver	Power Supply (V)	Features	Package
WM8941	1 / 1	98 / –80	91 / –83	Yes, 40 mW into 16 ohms	VA = 2.5 to 3.6 VD = 1.7 to 3.6	AUX ADC, battery monitor	48 QFN 48 TQFP
WM8944	1 / 1	96 / –80	94 / –83	Yes	VA = 2.4 to 3.6 VD = 1.7 to 3.6	AUX ADC, battery monitor	48 QFN
WM8945	1 / 1	98 / –80	94 / –83	Yes	VA = 2.4 to 3.6 VD = 1.7 to 3.6	AUX ADC, battery monitor	48 QFN
WM8946	2 / 2	98 / –80	94 / –83	Yes	VA = 2.4 to 3.6 VD = 1.7 to 3.6	AUX, ADC, battery monitor	48 QFN
WM8948	2 / 2	98 / –80	94 / –83	Yes	VA = 2.4 to 3.6 VD = 1.7 to 3.6	ReTune™, EQ, DSP filters, 3D	36 WLCSP
WM8980	2 / 2	98 / –84	95 / –80	Yes, 40 mW into 16 ohms	VA = 2.5 to 5.5 VD = 1.7 to 3.6	EQ, 3D, DSP filters, HPF	40 QFN

MEMS Microphones: Analog Silicon Microphone

	Part	Description	SNR (dB)	AOP at 10% THD (dB SPL)	Sensitivity (dbv/pa)	Sensitivity tolerance (dB)	Supply (V)	Supply Current VA	Package
	WM7120	Top Port Analog Silicon Microphone	59	130	–42	±3	1.5 to 3.7	160	3.76 x 2.95 x 1.10 mm
	WM7121D	Top Port Analog Silicon Microphone	62	130	–42	±3	1.5 to 3.7	190	3.76 x 2.95 x 1.10 mm
	WM7121	Top Port Analog Silicon Microphone	65	127	–38	±3	1.5 to 3.7	190	3.76 x 2.95 x 1.10 mm
	WM7121E	Top Port Analog Silicon Microphone	65	127	–38	±1	1.5 to 3.7	190	3.76 x 2.95 x 1.10 mm
NEW	WM7121P	Top Port Analog Silicon Microphone	65	127	–38	±3	1.5 to 3.7	190	3.76 x 2.95 x 1.10 mm
NEW	WM7121PE	Top Port Analog Silicon Microphone	65	127	–38	±1	1.5 to 3.7	190	3.76 x 2.95 x 1.10 mm
NEW	WM7133L	Bottom Port Analog Silicon Microphone	64.5	126	–38	±3	1.5 to 3.7	190	3.35 x 2.50 x 0.98 mm
	WM7132	Bottom Port Analog Silicon Microphone	65	127	–38	±3	1.5 to 3.7	190	3.76 x 3.00 x 1.10 mm
	WM7132E	Bottom Port Analog Silicon Microphone	65	127	–38	±1	1.5 to 3.7	190	3.76 x 3.00 x 1.10 mm
	WM7132D	Bottom Port Analog Silicon Microphone	62	120	–42	±3	1.5 to 3.7	190	3.76 x 3.00 x 1.10 mm
NEW	WM7132P	Bottom Port Analog Silicon Microphone	65	127	–38	±3	1.5 to 3.7	190	3.76 x 3.00 x 1.10 mm
NEW	WM7132PE	Bottom Port Analog Silicon Microphone	65	127	–38	±1	1.5 to 3.7	190	3.76 x 3.00 x 1.10 mm
NEW	WM7137	Bottom Port Analog Silicon Microphone	62	127	–38	±3	1.5 to 3.7	190	3.76 x 3.00 x 1.10 mm
NEW	WM7137E	Bottom Port Analog Silicon Microphone	62	127	–38	±1	1.5 to 3.7	190	3.76 x 3.00 x 1.10 mm
NEW	WM7331	Bottom Port Analog Silicon Microphone	63	124	–38	±3	1.5 to 3.7	60	2.5 x 1.6 x 0.9 mm
NEW	WM7331E	Bottom Port Analog Silicon Microphone	63	124	–38	±1	1.5 to 3.7	60	2.5 x 1.6 x 0.9 mm

MEMS Microphones: Digital Silicon Microphone

Part	Description	SNR (dB)	AOP at 10% THD (dB SPL)	Sensitivity (dbv/pa)	Sensitivity tolerance (dB)	Supply (V)	Supply Current VA	Package
WM7210	Top Port Digital Silicon Microphone	58	120	-26	±3	1.64 to 3.7	735	4.0 x 3.0 x 1.0 mm
WM7210E	Top Port Digital Silicon Microphone	58	120	-26	±1	1.64 to 3.7	735	4.0 x 3.0 x 1.0 mm
WM7211	Top Port Digital Silicon Microphone	61	120	-26	±3	1.64 to 3.7	735	4.0 x 3.0 x 1.0 mm
WM7211E	Top Port Digital Silicon Microphone	61	120	-26	±1	1.64 to 3.7	735	4.0 x 3.0 x 1.0 mm
WM7220	Top Port Digital Silicon Microphone	58	120	-26	±3	1.64 to 3.7	700	4.72 x 3.76 x 1.22 mm
WM7220E	Top Port Digital Silicon Microphone	58	120	-26	±1	1.64 to 3.7	700	4.72 x 3.76 x 1.22 mm
WM7230	Bottom Port Digital Silicon Microphone	61	120	-26	±3	1.64 to 3.7	735	4.0 x 3.0 x 1.0 mm
WM7230E	Bottom Port Digital Silicon Microphone	61	120	-26	±1	1.64 to 3.7	735	4.0 x 3.0 x 1.0 mm
WM7231	Bottom Port Digital Silicon Microphone	60	120	-26	±3	1.62 to 3.7	735	4.0 x 3.0 x 1.0 mm
WM7231E	Bottom Port Digital Silicon Microphone	60	120	-26	±1	1.62 to 3.7	735	4.0 x 3.0 x 1.0 mm
NEW WM7236	Bottom Port Digital Silicon Microphone	60 (Voice Mode) 63 (Record Mode)	120	-26	±3	1.62 to 3.7	300 (Voice Mode) 950 (Record Mode)	4.0 x 3.0 x 1.0 mm
WM7236E	Bottom Port Digital Silicon Microphone	60 (Voice Mode) 63 (Record Mode)	120	-26	±1	1.62 to 3.7	300 (Voice Mode) 950 (Record Mode)	4.0 x 3.0 x 1.0 mm
WM7216	Top Port Digital Silicon Microphone	60 (Voice Mode) 63 (Record Mode)	120	-26	±3	1.62 to 3.7	300 (Voice Mode) 950 (Record Mode)	4.0 x 3.0 x 1.0 mm
WM7216E	Top Port Digital Silicon Microphone	60 (Voice Mode) 63 (Record Mode)	120	-26	±1	1.62 to 3.7	300 (Voice Mode) 950 (Record Mode)	4.0 x 3.0 x 1.0 mm

Audio Amplifiers

Part	Input	Channels	Output Power (W)	SNR (dB)	THD+N @ 1W	Power Supply (V)	Comments	Package
CS35L00	Analog	1 x Mono Hybrid Class-D Speaker Driver	2.8 W into 4 ohm	98	0.02	2.5 to 5.5	Selectable +6/+12 dB gain, <1 mA quiescent current	10 DFN
CS35L01	Analog	1 x Mono Hybrid Class-D Speaker Driver	3 W into 4 ohm	98	0.02	2.5 to 5.5	+6 dB gain, <1 mA quiescent current	9 WLCSP
CS35L03	Analog	1 x Mono Hybrid Class-D Speaker Driver	3 W into 4 ohm	98	0.02	2.5 to 5.5	+12 dB gain, <1 mA quiescent current	9 WLCSP
NEW CS35L32	Analog	1 x Boosted Mono Class-D Speaker Driver	1.7 W into 8 ohm	102	0.02	VP = 3.0 to 5.25 VA = 1.71 to 1.89	5 V boost controller, Speaker current and voltage monitoring, I²S and I²C interfaces	30 WLCSP
WM9010	Analog	1 x Stereo Class-G Headphone Driver	34 mW into 16 ohm	104	—	1.71 to 2.0	—	12 WLCSP
WM9081	Analog, I2S	1 x Mono Class-AB/D Speaker Driver 1 x Line Out	2.6 W into 4 ohm	92	0.03	VP = 2.7 to 5.5 VA = 2.7 to 3.6 VD = 1.71 to 3.6	EQ, Dynamic range control, FLL	28 COL
WM9082	PDM	1 x Mono Class-D Speaker Driver	3 W into 4 ohm	92	0.03	VP = 3.2 to 5.5 VD = 1.35 to 2.0	48 kHz sample rate	9 WLCSP
WM9094	Analog	1 x Mono Class-D Speaker Driver 1 x Stereo Class-AB Headphone Driver	2 W into 4 ohm Speaker 34 mW into 16 ohm Headphone	92	0.02	VP = 2.7 to 5.5 VD = 1.71 to 2.0	Single-ended or differential stereo inputs, AGC, Mixer, Voice bypass	20 WLCSP

Ambient Noise Cancelation

Part	Output Channels	Output Power	SNR/THD+N	Power Supply (V)	Ambient noise reduction (dB)	Noise cancellation bandwidth (Hz)	Input	Comments	Package
WM2000	1 x mono differential	80 mW, 16 ohm BTL	94 / –70 (ANC Off) 87 / –67 (ANC On)	Speaker: 2.7 to 3.6 Digital: 1.71 to 1.89	up to 20	300 to 2500	Single-ended/ Differential	Handset receiver speaker driver with ambient noise cancelation	25 WLCSP
WM2002	Stereo, single-ended or differential	45 mW per channel into a 16 ohm load 22 mW per channel into a 32 ohm load	92 / –80 (ANC Off) 83 / –81 (ANC On)	1.5 V AAA battery using internal boost: 0.9 to 1.6 2.5 V direct supply: 2.0 to 3.3	up to 30	40 to 4000	Single-ended/ Differential	Low power, stereo headphone driver with ambient noise cancelation	48 QFN
WM2200	2 x differential, 1 x PDM	60 mW, 16 ohm BTL	100 / –71 (ANC Off) 100 / –71 (ANC On)	Analog: 1.71 to 1.89 Digital: 0.95 to 3.6	Receive path: up to 20	300 to 3500	Analog MIC - singled-ended or differential, digital MIC, line input	Handset earpiece driver with ambient noise / transmit path noise / acoustic echo cancelation	110 WLCSP

Volume Control

Part	Channel	Dynamic Range (dB)	THD+N (dB)	Analog I/O	Power Supply (V)	Comments	Package
CS3308	8	123	–112	Single-ended	VA = ±5 VD = 3.3	+22 dB gain / –96 dB attenuation, 0.25 dB step	48 LQFP
CS3310	2	116	–100	Single-ended	VA = ±5 VD = 5	+31.5 dB gain / –95.5 dB attenuation, 0.5 dB step	16 SOIC
CS3318	8	127	–112	Single-ended	VA = ±8 to ±9 VD = 3.3	+22 dB gain / –96 dB attenuation, 0.25 dB step	48 LQFP

Interfaces and Sample-Rate Converters

Part Number	Sample Rate (kHz)	S/PDIF, IEC-60958 Transmitter	S/PDIF, IEC-60958 Receiver	AES/EBU	EIAJ CP1201	Host Interface	SRC	Power Supply (V)	Package
CS8406	192	1	—	✓	✓	✓	—	VD = 3.3 or 5 VL = 3.3 or 5	28 SOIC 28 TSSOP
CS8416	192	—	1	✓	✓	✓	—	VA = 3.3 VD = 3.3 VL = 3.3 or 5	28 SOIC 28 TSSOP 28 QFN
CS8420	96	1	1	✓	✓	✓	✓	VA = 5 VD = 5	28 SOIC
CS8421	192	—	—	—	—	—	✓	VD = 2.5 VL = 3.3 or 5	20 TSSOP 20 QFN
CS8422	192	—	1	✓	✓	✓	✓	VA = 3.3 VL = 1.8 to 5	32 QFN
CS8427	96	1	1	✓	✓	✓	—	VA = 5 VL = 3.3 or 5	28 SOIC 28 TSSOP
WM8804	192	1	1	✓	—	✓	—	VD = 2.7 to 3.6	20 SSOP
WM8805	192	1	8	✓	—	✓	—	VD = 2.7 to 3.6	28 SSOP

Clock Generation and Jitter Reduction

Part Number	One-Time Programmable	Frequency Synth / Clock Generator	Clock Multiplier / Jitter Remover	Power Supply (V)	Input Frequency Range	Reference Frequency Range	Output Frequency Range	Package
CS2000	CS2000-OTP	✓	✓	3.3	50 Hz to 30 MHz	8 to 75 MHz	6 to 75 MHz	10 MSOP
CS2100	CS2100-OTP	—	✓	3.3	50 Hz to 30 MHz	8 to 75 MHz	6 to 75 MHz	10 MSOP
CS2200	CS2200-OTP	✓	—	3.3	—	8 to 75 MHz	6 to 75 MHz	10 MSOP
CS2300	CS2300-OTP	—	✓	3.3	50 Hz to 30 MHz	Internally generated	6 to 75 MHz	10 MSOP

Imaging A/D Converters

Part	Resolution (bits)	Speed (MSPS)	Input PGA	Offset (bits)	Output format	Control interface	Supply	Power (mW)	Description	Package
WM8152	16	12	8	8	CMOS: 4x4	Serial	4.8 to 5.2	225	Single channel CCD/CIS ADC	20 SSOP
WM8196	16	12	8	8	CMOS: 8+8 4x4	Serial	4.8 to 5.2	300	3-channel CCD/CIS ADC	28 SSOP
WM8199	16	20	8	8	CMOS: 8+8 4x4	Serial	4.8 to 5.2	360	3-channel high speed CCD/ CIS ADC	28 SSOP
WM8213	16	24	9	8	CMOS: 8+8 4x4	Serial	3.0 to 3.6	350	3-channel CCD/CIS ADC	28 SSOP
WM8214	16	40	9	8	CMOS: 8+8 4x4	Serial	3.0 to 3.6	390	3-channel high speed CCD/ CIS ADC	28 SSOP
WM8215	10	60	9	8	CMOS: 10-bit	Serial	3.0 to 3.6	360	3-channel high speed CCD/ CIS ADC	32 QFN
WM8224	10 & 16	40 & 60	9	8	CMOS 10 (10-bit), 8+8 (16-bit)	Serial	3.0 to 3.6	360	3-channel high speed CCD/ CIS ADC - Multiple Device Operation and automatic black level calibration	32 QFN
WM8232	16	70	12-bit	8	LVDS 10-bit 5 pair LVDS 16-bit 5 pair CMOS 10-bit	Serial	3.3 V		3-channel high speed CCD/ CIS ADC	56 QFN package 8 mm x 8 mm
WM8233	16	70	12-bit	8	LVDS 10-bit 5 pair LVDS 16-bit 5 pair CMOS 10-bit	Serial	3.3 V		6-channel high speed CCD/ CIS ADC	56 QFN package 8 mm x 8 mm
WM8234	16	70	12-bit	8	LVDS 10-bit 5 pair LVDS 16-bit 5 pair CMOS 10-bit	Serial	3.3 V		6-channel high speed CCD/ CIS ADC	56 QFN package 7 mm x 7 mm
WM8235	16	70	12-bit	8	LVDS 10-bit 5 pair LVDS 16-bit 5 pair CMOS 10-bit	Serial	3.3 V		9-channel high speed CCD/ CIS ADC	56 QFN package 7 mm x 7 mm
WM8253	16	6	8	8	CMOS: 4x4	Serial	3.0 to 3.6	132	Single channel CCD/CIS ADC	20 SSOP
WM8255	16	12	8	8	CMOS: 4x4, 2x8	Serial	3.3 to 3.75	250	Single channel CCD/CIS ADC	28 QFN
WM8259	16	3	8	8	CMOS: 4x4	Serial	2.97 to 3.63	132	Single channel CCD/CIS ADC	20 SSOP

CobraNet® Transport and Audio Network Processor ICs

Family	Description	CobraNet® Part Numbers	Audio Channels over Ethernet	Serial Input/Serial Output Ports	Ethernet Interface	IC Package
CS1810xx CS4961xx*	**The CS1810xx Family contains CobraNet networked digital audio interface ICs. The CS4961xx Family provides digital audio signal processing along with the network interface function.**	CS181002 CS496102*	2	One synchronous, capable of supplying up to 2 full-duplex channels at 48 and/or up to 96 kHz sample rates.	**Supports 100BASE-Tx, 100 Mbps, full duplex Ethernet, fully compliant with IEEE 802.3u.**	**144 LQFP**
		CS181012 CS496112*	8	Quad synchronous, capable of supplying up to 8 full-duplex channels at 48 and/or up to 96 kHz sample rates.		
		CS181022 CS496122*	16	Quad synchronous, capable of supplying up to 16 full-duplex channels at 48 kHz,		

*The CS4961xx series includes a 32-bit, 120 MIPS digital signal processor for audio processing of any or all channels.

Energy Measurement and Power Management

Energy Solutions

For over a decade, Cirrus Logic has been a proven leader in the energy metering and monitoring market. Combining advanced Delta-Sigma technology with expert digital signal processing, Cirrus Logic offers a broad product family with superior performance to support a wide variety of application requirements.

The CS1501 and CS1601 series of digital PFC controllers intelligently solve power management challenges, allowing for smaller total solution size and better efficiency and THD across load conditions. Ideal for power supplies up to 300 W, applications include commercial lighting, digital TV, notebook adapters, desktops and servers.

Cirrus Logic has set the standard for seismic ICs — including complete data acquisition system solutions of best-in-class single-sensor and multi-sensor chipsets. Cirrus Logic's products for energy exploration applications include hydrophone and geophone amplifiers, high-fidelity Delta-Sigma modulators, and seismic digital filters plus test DAC.

Solving the challenge of dimmer compatibility in the LED lighting market is the newest conquest in energy products from Cirrus Logic. Using a unique set of digital algorithms, Cirrus Logic's product family of LED controllers have been tested to provide near 100 percent dimming compatibility with a wide variety of dimmers representing the vast majority of the installed base. Our LED controller products also help LED manufacturers improve LED color temperature quality and focus on system cost reduction

Energy Measurement

CS5451A
CS5463
CS5464
CS5467
CS5480
CS5484
CS5490

Digital Power Factor Correction

CS1501
CS1601
CS1601H

Geophysical/Seismic

CS3301A
CS3302A
CS4373A
CS5374
CS5371A
CS5372A
CS5373A
CS5376A
CS5378

LED Controllers

CS1610
CS1610A NEW
CS1611
CS1611A NEW
CS1612
CS1612A NEW
CS1613
CS1613A NEW
CS1630
CS1631
CS1615 NEW
CS1615A NEW
CS1616 NEW
CS1616A NEW

Energy Measurement

Part	ADC Converters	Current Sensor Options	Active Energy Accuracy	Reactive Energy Accuracy	I_{RMS} Accuracy	SNR (dB)	Serial Comm	Digital Outputs	V_{REF} Drift (ppm/°C)	Input Voltage (V)	Power Cons. (mW)	Package
CS5480	3	Shunt / CT / Rogowski	0.1% over 4000:1 dynamic range	0.1% over 4000:1 dynamic range	0.1% over 1000:1 dynamic range	80	UART	3x Configurable Outputs	25	3.3	13	24 QFN
CS5484	4	Shunt / CT / Rogowski	0.1% over 4000:1 dynamic range	0.1% over 4000:1 dynamic range	0.1% over 1000:1 dynamic range	80	SPI / UART	4x Configurable Outputs	25	3.3	13	28 QFN
CS5490	2	Shunt / CT / Rogowski	0.1% over 4000:1 dynamic range	0.1% over 4000:1 dynamic range	0.1% over 1000:1 dynamic range	80	SPI / UART	Single Configurable Output	25	3.3	13	16 SOIC
CS5451A	6	Shunt / CT	—	—	—	77	SPI	—	25	3 Analog; 3 Digital	23	28 SSOP
CS5463	2	Shunt / CT	0.1% over 1000:1 dynamic range	0.2% over 1000:1 dynamic range	0.2% over 1000:1 dynamic range	78	SPI	Energy Pulses	40	5 Analog; 3.3 / 5 Digital	21	24 SSOP
CS5464	3	Shunt / CT	0.1% over 1000:1 dynamic range	0.2% over 1000:1 dynamic range	0.2% over 1000:1 dynamic range	78	SPI	Energy Pulses	40	5 Analog; 3.3 / 5 Digital	25	28 SSOP
CS5467	4	Shunt / CT	0.1% over 1000:1 dynamic range	0.2% over 1000:1 dynamic range	0.2% over 1000:1 dynamic range	78	SPI	Energy Pulses	40	5 Analog; 3.3 / 5 Digital	25	28 SSOP

Digital Power Factor Correction

Part	Max f_{SW} [kHz]	Valley Switching	Over-current Protection	IC Supply Current [mA]	Input Voltage Range (Vac)	Target Applications	Package
CS1501	70	✓	✓	1.5	90 to 265	DTV, Consumer Electronics, Server/Telecom	8 SOIC
CS1601	70	✓	✓	1.5	90 to 265 or 108 to 305	LED, HID, Fluorescent Lighting Ballasts	8 SOIC
CS1601H	100	✓	✓	1.7	90 to 265 or 108 to 305	DTV, LED/HID/Fluorescent Lighting Ballasts, Consumer Electronics	8 SOIC

Geophysical/Seismic: Single Channel

Part	Description	Resolution (bits)	Dynamic Range (dB)	THD (dB)	Power Consumption Per Channel (mW)	Signal Range (V)	Package
CS3301A	Geophone amplifier	—	—	–121	27.5	5 V_{p-p} diff	24 SSOP
CS3302A	Hydrophone amplifier	—	—	–118	25	5 V_{p-p} diff	24 SSOP
CS5373A	DS modulator	24	124	–118	25	5 V_{p-p} diff	28 SSOP
	D/A converter	24	114	–116	40	5 V_{p-p} diff	
CS5378	Filter with PLL	—	—	—	16	—	28 SSOP

Geophysical/Seismic: Multichannel

Part	Description	Resolution (bits)	Dynamic Range (dB)	THD (dB)	Power Consumption Per Channel (mW)	Signal Range (V)	Package
CS3301A	Geophone amplifier	—	—	–121	27.5	5 V_{p-p} diff	24 SSOP
CS3302A	Hydrophone amplifier	—	—	–118	25	5 V_{p-p} diff	24 SSOP
CS4373A	D/A converter	24	114	–116	10	5 V_{p-p} diff	28 SSOP
CS5371A	Single DS modulator	24	124	–118	25	5 V_{p-p} diff	24 SSOP
CS5372A	Dual DS modulator	24	124	–118	25	5 V_{p-p} diff	24 SSOP
CS5374	Dual hydrophone amplifier & DS modulator	24	124	–118	32.5	5 V_{p-p} diff	48 QFN
CS5376A	Quad filter	—	—	—	< 10	—	64 TQFP

LED Controllers

	Part	TRIAC Dimmable	Output Stage Topology	Input Voltage Range	Maximum Output Power	LED Output Channels	Power Factor	Output Current Reg.	Min. Dimming Level	External Over Temp Protect	Package
	CS1610	✓	Flyback; Buck-boost	100 – 120 V	< 25 W	1	> 0.9	< 5%	0%	✓	16eSOIC
NEW	CS1610A	✓	Flyback; Buck-boost	100 – 120 V	< 25 W	1	> 0.9	< 5%	0%	✓	16eSOIC
	CS1611	✓	Flyback; Buck-boost	220 – 240 V	< 25 W	1	> 0.9	< 5%	0%	✓	16eSOIC
NEW	CS1611A	✓	Flyback; Buck-boost	220 – 240 V	< 25 W	1	> 0.9	< 5%	0%	✓	16eSOIC
	CS1612	✓	Buck; Tapped-buck	100 – 120 V	< 25 W	1	> 0.9	< 5%	0%	✓	16eSOIC
NEW	CS1612A	✓	Buck; Tapped-buck	100 – 120 V	< 25 W	1	> 0.9	< 5%	0%	✓	16eSOIC
	CS1613	✓	Buck; Tapped-buck	220 – 240 V	< 25 W	1	> 0.9	< 5%	0%	✓	16eSOIC
NEW	CS1613A	✓	Buck; Tapped-buck	220 – 240 V	< 25 W	1	> 0.9	< 5%	0%	✓	16eSOIC
	CS1630	✓	Flyback; Buck-boost; Buck; Tapped-buck	100 – 120 V	< 25 W	2	> 0.9	< 5%	0%	✓	16eSOIC
	CS1631	✓	Flyback; Buck-boost; Buck; Tapped-buck	220 – 240 V	< 25 W	2	> 0.9	< 5%	0%	✓	16eSOIC
NEW	CS1615	✓	Flyback; Buck-boost	100 – 120 V	< 25 W	1	> 0.9	< 5%	0%	✓	16eSOIC
NEW	CS1615A	✓	Flyback; Buck-boost	100 – 120 V	< 12 W	1	> 0.9	< 5%	0%	✓	16eSOIC
NEW	CS1616	✓	Flyback; Buck-boost	220 – 240 V	< 25 W	1	> 0.9	< 5%	0%	✓	16eSOIC
NEW	CS1616A	✓	Flyback; Buck-boost	220 – 240 V	< 12 W	1	> 0.9	< 5%	0%	✓	16eSOIC

Industrial and Communication Components

Cirrus Logic continues to maintain a design legacy for high-precision analog and mixed-signal processing ICs for industrial measurement applications — such as industrial process control, analytical instruments, and consumer utility. This design expertise is based on an advanced proprietary Delta-Sigma technology that is featured across a core group of product families including analog-to-digital converters, digital-to-analog converters, modulator and amplifier ICs, and ARM 9-based system-on-chip processors. As a pioneer in the development of world-class telecommunication ICs, Cirrus Logic also continues a lengthy tenure of providing customers with cost effective signal processing solutions.

Amplifiers

CS3002
CS3003
CS3004
CS3013
CS3014

Embedded Processors

ARM 9 EMBEDDED PROCESSORS

EP9301
EP9302
EP9307
EP9312
EP9315

NETWORKED ATTACHED STORAGE (NAS) REFERENCE DESIGN

NAS ARM 9

Delta-Sigma A/D Converters

CS5505
CS5506
CS5507
CS5508
CS5509
CS5510
CS5511
CS5512
CS5513
CS5529

Delta-Sigma A/D Converters with Integrated Amplifiers

CS5521
CS5522
CS5523
CS5524
CS5525
CS5526
CS5528
CS5530
CS5531
CS5532
CS5533
CS5534
CS5550

High Throughput Delta-Sigma A/D Converters

CS5560
CS5566
CS5571
CS5581

T1/E1/J1 LIUs

SHORT HAUL MULTIPORT LINE INTERFACE UNITS

CS61584A
CS61880
CS61884

Echo Canceler

CS6422

Ethernet

CS8900A
CS8952

Amplifiers

Part Number	Device	Supply Voltage (V)	Supply Current (mA)	V_{OS} (µV) Max	V_{OS} Drift (µV/°C)	e_{NOISE} (nV/ √Hz)	A_{OL} min (dB)	Package
CS3002	Dual	2.7 to 6.7	3.6	10	0.05	6	200	8 SOIC
CS3003	Single	2.7 to 5.25	1.0	10	0.05	17	150	8 SOIC
CS3004	Dual	2.7 to 5.25	2.0	10	0.05	17	150	8 SOIC
CS3013	Single	2.7 to 5.25	0.5	10	0.05	22	135	8 SOIC
CS3014	Dual	2.7 to 5.25	1.0	10	0.05	22	135	8 SOIC

ARM 9 Embedded Processors

Part	Processor Speed (MHz)	Cache Data/ Code (K)	Ethernet MAC	PCMCIA Device	IDE/IF	USB Hosts	Display I/F	Graphics Engine	Math Crunch Engine	Touch/ ADC	Package
EP9301	166	16/16	✓	—	—	2	—	—	—	5 ADC	208 TQFP
EP9302	200	16/16	✓	—	—	2	—	—	✓	5 ADC	208 LQFP
EP9307	200	16/16	✓	—	—	3	✓	✓	✓	8-wire	272 TFBGA
EP9312	200	16/16	✓	—	2	3	✓	—	✓	8-wire	352 PBGA
EP9315	200	16/16	✓	✓	2	3	✓	✓	✓	8-wire	352 PBGA

Networked Attached Storage (NAS) Reference Design

Reference Design	Target Device	Development Platform	Operating System	Key Software Features
NAS ARM 9	EP9312 and EP9315	EDB9315A	Linux®	Auto-detect for easy customer set-up, network file server, print server, group and user level security and customizable user interface

Delta-Sigma A/D Converters

Part Number	Resolution (bits)	Throughput (Sps)	Integral Linearity (%FS)	Differential Linearity (±LSB)	Number of Channels	Power Consumption (mW)	Package
CS5505	16	20 – 100	0.0015%	0.25	4	3.2	24 SOIC
CS5506	20	20 – 100	7.0E-4%	NMC	4	3.2	24 SOIC
CS5507	16	20 – 100	0.0015%	0.25	1	3.2	20 SOIC
CS5508	20	20 – 100	7.0E-4%	NMC	1	3.2	20 SOIC
CS5509	16	20 – 200	0.0015%	0.25	1	1.7	16 SOIC
CS5510	16	53 – 212	0.0015%	NMC	1	1.4	8 SOIC
CS5511	16	100 (typical)	0.0015%	NMC	1	1.5	8 SOIC
CS5512	20	53 – 326	7.0E-4%	NMC	1	1.8	8 SOIC
CS5513	20	100 (typical)	7.0E-4%	NMC	1	1.9	8 SOIC
CS5529	16	1 – 303	0.0015%	NMC	1	2.6	20 SOIC

Delta-Sigma A/D Converters with Integrated Amplifiers

Part	Resolution (bits)	Throughput (Sps)	Integral Linearity (%FS)	Differential Linearity (±LSB)	Number of Channels	Power Consumption (mW)	Package
CS5521	16	1 – 400	0.0015%	NMC	2	6	20 SSOP
CS5522	24	1 – 606	7.0E-4%	NMC	2	9	20 SSOP
CS5523	16	1 – 400	0.0015%	NMC	4	6	24 SSOP
CS5524	24	1 – 606	7.0E-4%	NMC	4	9	24 SSOP
CS5525	16	3 – 606	0.0015%	NMC	1	9.4	20 SSOP
CS5526	20	3 – 606	7.0E-4%	NMC	1	9.4	20 SSOP
CS5528	24	1 – 606	7.0E-4%	NMC	8	9	24 SSOP
CS5530	24	7 – 3840	±0.0015%	NMC	1	35	20 SSOP
CS5531	16	7 – 3840	±0.0015%	NMC	2	35	20 SSOP
CS5532	24	7 – 3840	±0.0015%	NMC	2	35	20 SSOP
CS5533	16	7 – 3840	±0.0015%	NMC	4	35	24 SSOP
CS5534	24	7 – 3840	±0.0015%	NMC	4	35	24 SSOP
CS5550	24	2440 – 4000	0.01%	NMC	2	21	24 SSOP

High Throughput Delta-Sigma A/D Converters

Part	Resolution (bits)	Throughput (kSPS)	Integral Linearity (%FS)	Differential Linearity (±LSB)	Number of Channels	Power Consumption (mW)	Package
CS5560	24	50	±5 ppm	0.1	1, Differential	90	24 SSOP
CS5566	24	5	±5 ppm	0.1	1, Differential	20	24 SSOP
CS5571	16	100	±8 ppm	0.1	1, Single-ended	85	24 SSOP
CS5581	16	200	±8 ppm	0.1	1, Single-ended	85	24 SSOP

Short Haul Multiport Line Interface Units

Part	Power Supply (V)	Control Modes	Line Coders	Number of Channels	TBR-12 Compliant	Impedance Matching Line Driver	Arbitrary Waveform Option	Package
CS61584A	3.3 or 5	Host & H/W	AMI, B8ZS & HDB3	2	3	3	3	64 TQFP
CS61880	3.3	Host & H/W	AMI & HDB3	8	3	3	3	144 LQFP
CS61884	3.3	Host & H/W	AMI, HDB3 & B8ZS	8	3	3	3	144 LQFP

Echo Canceler

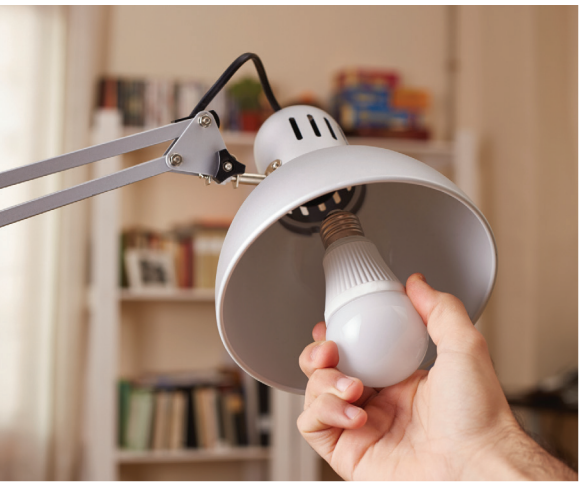
Part	Media Supported	Digital Interface	Number of Channels	Power Supply (V)	Package
CS6422	Analog audio (MIC and telephone)	Acoustic interface and network interface (both analog)	2 – Full Duplex	5	20 SOIC

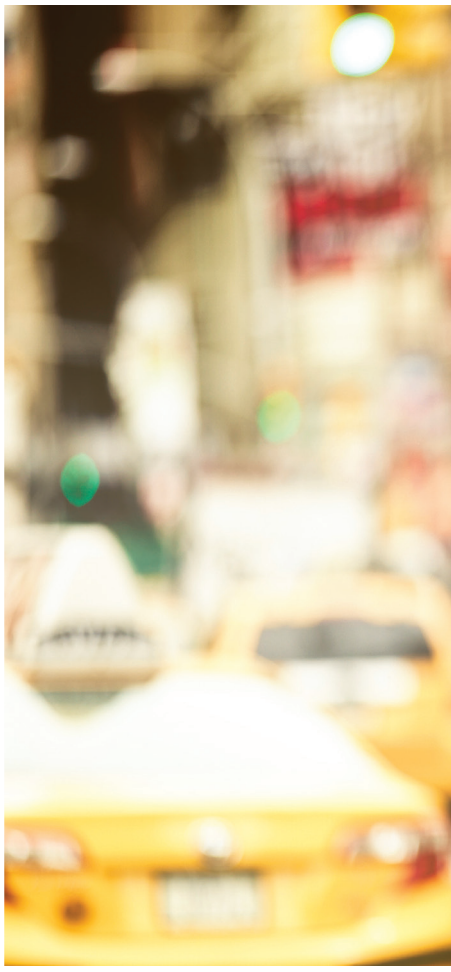
Ethernet

Part	Media Supported	Digital Interface	Number of Channels	Power Supply	Package
CS8900A	10BASE-T	ISA and general purpose parallel	1	5 V, 3.3 V	100 LQFP
CS8952	10BASE-T, 100BASE-X and NRZ (optical)	MII	1	5 V with support of 3.3 V digital I/O	100 TQFP

Product Number Index

Product Number Index





CIRRUS LOGIC®

CORPORATE HEADQUARTERS
800 West Sixth Street
Austin, Texas 78701
United States

T +1 512-851-4000
Fax +1 512-851-4977
Toll Free +1 800-888-5016

www.cirrus.com

AUG2014-CORP

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Cirrus Logic:

WM7137IMSE/RV WM7137IMS/RV

Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001
Адрес: 105318, г.Москва, ул.Щербаковская д.3, офис 1107

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

http://moschip.ru/get-element

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:
moschip.ru
moschip.ru_4
moschip.ru_6
moschip.ru_9