

High Speed Data Converters

Non-Interpolating DACs

1-channel

8-bits

100MSPS THS5641A

165MSPS DAC908

10-bits

125MSPS THS5651A

165MSPS DAC900

12-bits

125MSPS THS5661A

165MSPS DAC902

14-bits

125MSPS THS5671A

165MSPS DAC904

400MSPS DAC5675A

16-bits

1GSPS DAC5681

2-channel

10-bits

275MSPS DAC5652A

500MSPS DAC3152

12-bits

40MSPS DAC2932

275MSPS DAC5662A

500MSPS DAC3162

14-bits

275MSPS DAC5672A

3-channel

10-bits

180MSPS THS8136

240MSPS THS8135

Interpolating DACs

1-channel

14-bits

400MSPS DAC5674

16-bits

1GSPS DAC5681Z

2-channel

16-bits

500MSPS DAC5686

500MSPS DAC5687

625MSPS DAC3282

800MSPS DAC3283

800MSPS DAC5688

1.25GSPS DAC3482

3-channel

11-bits

205MSPS THS8200

4-channel

16-bits

1.25GSPS DAC3484

1.25GSPS DAC34H84

ADC 40-250MSPS

1-channel

9-bits

250MSPS ADS58B19

11-bits

200MSPS ADS58B18

12-bits

65MSPS ADS4122

80MSPS ADS6123

105MSPS ADS6124

125MSPS ADS4125

160MSPS ADS4126

210MSPS ADS6128

250MSPS, ADS4129, ADS41B29

14-bits

65MSPS ADS4142

80MSPS ADS6143

105MSPS ADS6144

125MSPS ADS4145

160MSPS ADS4146

210MSPS ADS6148

250MSPS ADS4149, ADS41B49

16-bits

40MSPS ADS5560

80MSPS ADS5562

80MSPS ADS5481

105MSPS ADS5482

130MSPS ADS5493

135MSPS ADS5483

170MSPS ADS5484

200MSPS ADS5485

ADC 400M-1GSPS

1-channel

ADS5474

400MSPS, 14-bits

ADS5463

500MSPS, 12-bits

ADS54RF63

550MSPS, 12-bits

ADS5400

1GSPS, 12-bits

Analog Front Ends

CCD/CMOS Imaging

12-bits

36MSPS VSP2582

14-bits

50MSPS VSP8133

16-bits

50MSPS VSP7500, VSP7502

Video Decoders

27MSPS TVP5158

30MSPS TVP5151

30MSPS TVP5147M1

54MSPS TVP5160

Medical Imaging

8-channel, 12-bit

50MSPS AFE5804/05

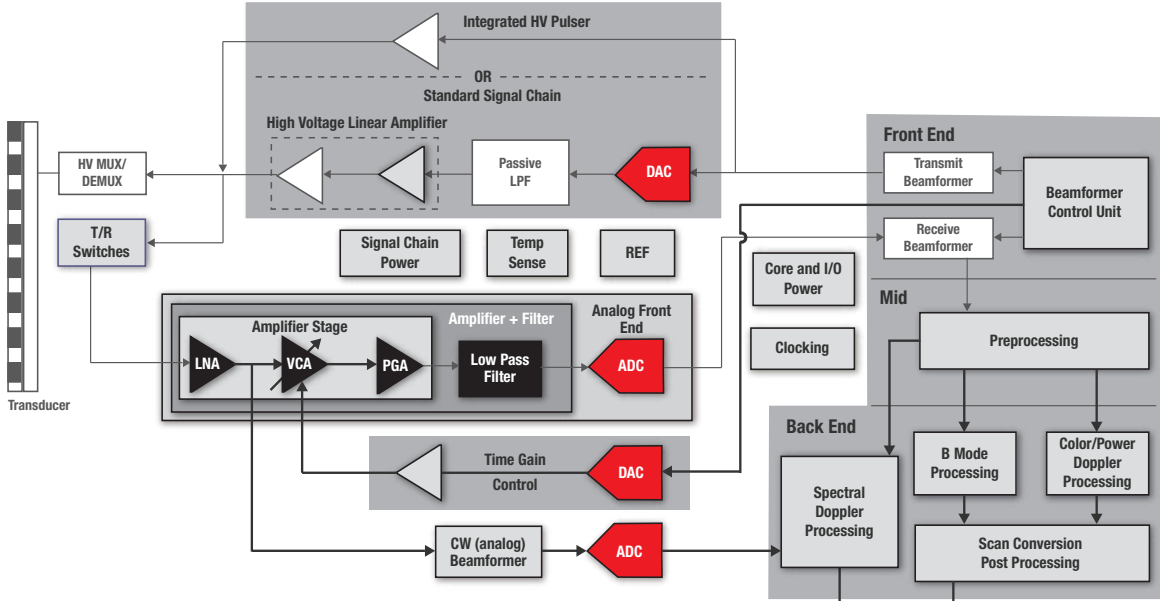
65MSPS AFE5807/01

8-channel, 14-bit

65MSPS AFE5808

16-channel, 12-bit

65MSPS AFE5851



Ultrasound Analog Front Ends									
Part Number	Sample Rate (MSPS)	Bits	Input Channels	Power/Ch (mW)	Input Voltage Noise (nV/√Hz)	Input Range (mVpp)	Gain Control Range (dB)	HD2 (dB)	Comments
AFE5801	65	12	8	58	5.5	2000	36	−75	8-channel VGA, LPF, ADC
AFE5804	50	12	8	101	1.23	280	46	−70	8-channel LNA, VCA, PGA, LPF, ADC
AFE5805	50	12	8	122	0.85	250	46	−70	8-channel LNA, VCA, PGA, LPF, ADC
AFE5807	65	12	8	88	1.1	1000	40	−60	8-channel LNA, VCA, PGA, LPF, ADC, CW mixer
AFE5808	65	14	8	153	0.75	1000	40	−60	8-channel LNA, VCA, PGA, LPF, ADC, CW mixer
AFE5851	32.5	12	16	39	5.5	1000	36	−65	16-channel VGA, LPF, ADC

MRI ADCs									
Part Number	Sample Rate (MSPS)	Bits	Ch.	SFDR (dBc)	SNR (dBFS)	IMD3 (dBFS)	Input Buffer	Power/Ch (mW)	Comments
ADS5263	100	14/16	4	80	85	92	No	195-338	9x9mm package, 14- and 16-bit modes, serial LVDS outputs
ADS5562	80	16	1	85	84	100	No	865	7x7mm package, pin-compatible to 14-bit 210MSPS
ADS5483	135	16	1	97	79	100	Yes	2200	9x9mm package
ADS5485	200	16	1	93	75.8	95	Yes	2100	9x9mm package

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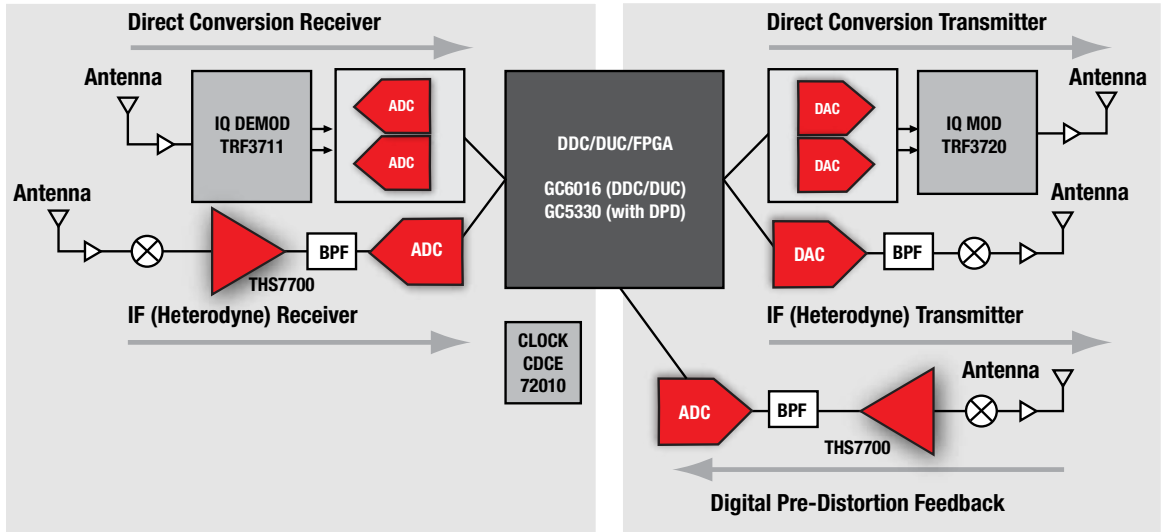
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High Speed Data Converters



➔ Wireless Communications

Common Rx/Tx Types

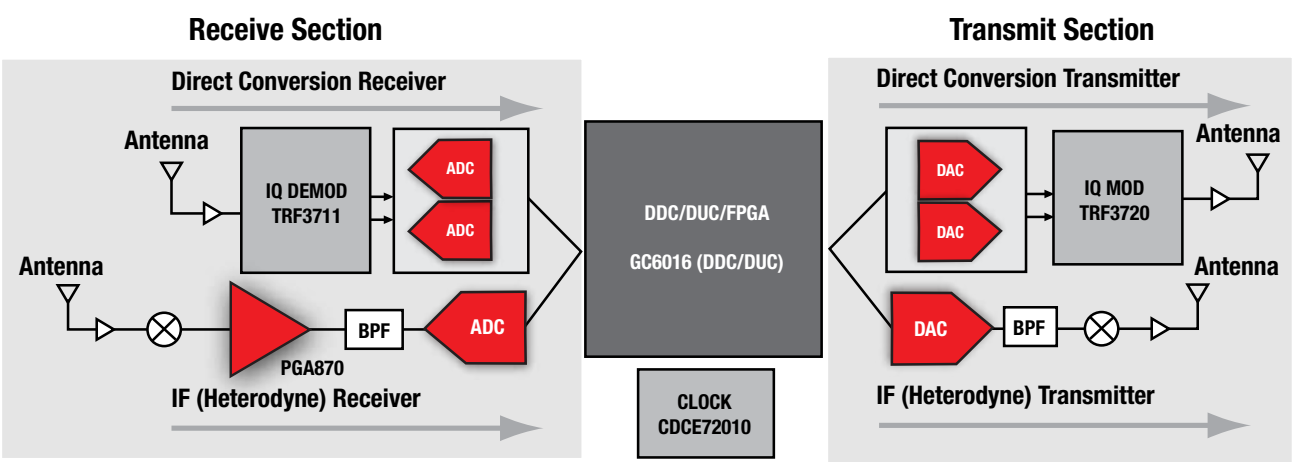


Receive ADCs									
Part Number	Sample Rate (MSPS)	Bits	Ch.	SFDR (dBc)	SNR (dBFS)	IMD3 (dBFS)	Input Buffer	Power/Ch (mW)	Comments
ADS58C28, ADS58C48	200	11	2, 4	80-84	66-77	80-84	No	235-355	65MHz signal bandwidth with SNRBoost
ADS62P22-ADS62P49	65-250	12-14	2	89-94	72-73	84-92	No	275-625	—
ADS4222-ADS4249	65-250	12-14	2	86-92	71-73	84-98	No	105-250	60% lower power than ADS62PXX family
ADS6222-ADS6245	65-125	12-14	2	78-93	71-74.5	82-100	No	315-500	Serial LVDS outputs
ADS6422-ADS6445	65-125	12-14	4	81-93	71-74.5	88-100	No	250-400	Serial LVDS outputs
ADS5493	130	16	1	90-100	75-76	97-110	Yes	1750	Multi-carrier GSM, 4-lane LVDS outputs
Digital Pre-Distortion Feedback ADCs									
ADS5400	1000	12	1	66-75	57.5-58.5	70-80	Yes	2150	2.1GHz 3dB bandwidth
ADS54RF63	550	12	1	75-85	63-65	84-90	Yes	2250	2.3GHz 3dB bandwidth
ADS5474	400	14	1	71-88	67-70	83-95	Yes	2500	1.4GHz 3dB bandwidth
ADS4249	250	14	2	82-87	71-73	84-96	No	250	Dual for IQ feedback, lower power replacement for ADS62P49
ADS62P49	250	14	2	75-89	72-73	84-92	No	625	Dual for IQ feedback
ADS41B49	250	14	1	82-89	69-70	86	Yes	388	Lower power replacement for ADS61B49
ADS41B25	125	12	1	81-86	69-71	87.5	Yes	225	—
ADS61B23	80	12	1	71-82	69.5-70	85	Yes	350	—
Transmit DACs									
Part Number	Sample Rate (MSPS)	Bits	Ch.	Interface	Input Rate per DAC (MSPS)	Interp. (max)	IQ Corr.	Mixer	Comments
DAC3484	1250	16	4	16 LVDS	312.5	16x	Yes	NCO, Coarse	250mW, drive two IQ modulators
DAC34H84	1250	16	4	32 LVDS	625	16x	Yes	NCO, Coarse	High input rate, 275mW, BGA
DAC3482	1250	16	2	16 LVDS	625	16x	Yes	NCO, Coarse	High input rate, low power, QFN
DAC5681Z	1000	16	1	16 LVDS	1000	4x	Yes	High/Low Pass	Up to 1GSPS input rate
DAC3283	800	16	2	8 LVDS	312.5	4x	Yes	Coarse	81dB ACLR WCDMA 153MHz, 7x7mm
DAC5688	800	16	2	32 CMOS	250	8x	Yes	NCO	—
DAC3282	625	16	2	8 LVDS	312.5	2x	Yes	Coarse	7x7mm
DAC3162	500	12	2	12 LVDS	500	None	None	None	135mW, 7x7mm, 1.5 cycles latency
DAC5672A	275	14	2	14-28 CMOS	275	None	None	None	165mW
DAC904	165	14	1	14 CMOS	165	None	None	None	170mW

Preview products are listed in **bold blue** – production 2011

➔ Defense and Software Defined Radio, Common Rx/Tx Types

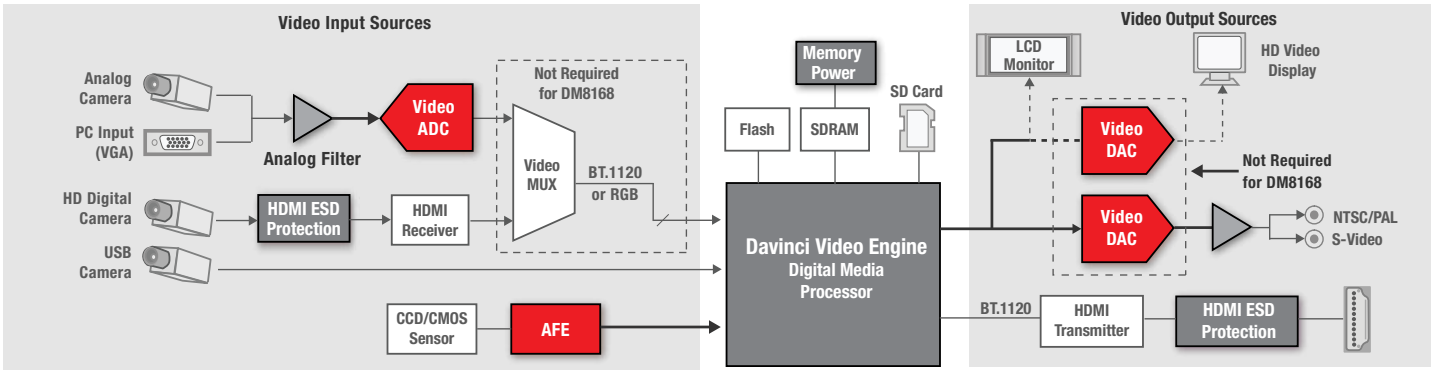
Common Rx/Tx Types



Portable, Low-Power Receivers									
Part Number	Sample Rate (MSPS)	Bits	Ch.	SFDR (dBc)	SNR (dBFS)	IMD3 (dBFS)	Input Buffer	Power/Ch (mW)	Comments
ADS62P22-ADS62P49	65-250	12-14	2	89-94	72-73	84-92	No	275-625	—
ADS4222-ADS4249	65-250	12-14	2	86-92	71-73	84-98	No	105-265	Lower power replacement for ADS62Pxx
ADS4122-ADS4149	65-250	12-14	1	80-87	69-73.7	86-88	No	105-265	Lower power replacement for ADS61xx
ADS6222-ADS6245	65-125	12-14	2	78-93	71-74.5	82-100	No	315-500	Serial LVDS outputs
ADS6422-ADS6445	65-125	12-14	4	81-93	71-74.5	88-100	No	250-400	Serial LVDS outputs
ADS5237, ADS5232/31	40-65	10-12	2	83-86	61-70.7	91	No	185	—
Portable, Low-Power Transmitters									
Part Number	Sample Rate (MSPS)	Bits	Ch.	Interface	SNR (dBc)	Power/Ch (mW)	Comments		
DAC3152/3162	500	10-12	2	12 LVDS	76-78	135	7x7mm, 1.5 cycles latency		
DAC5652A/62A/72A	275	10-14	2	14-28 CMOS	80-84	165	Optional interleaved input on 1 bus		
DAC908/900/902/904	165	8-14	1	14 CMOS	70-79	170	—		
DAC2932	40	12	2	12 CMOS	75	15	Plus 4 auxiliary voltage-out DACs		
High Performance Receivers									
Part Number	Sample Rate (MSPS)	Bits	Ch.	SFDR (dBc)	SNR (dBFS)	IMD3 (dBFS)	Input Buffer	Power/Ch (mW)	Comments
ADS5400	1000	12	1	66-75	57.5-58.5	70-80	Yes	2150	2.1GHz 3dB bandwidth
ADS54RF63	550	12	1	75-85	63-65	84-90	Yes	2250	2.3GHz 3dB bandwidth
ADS5474	400	14	1	71-88	67-70	83-95	Yes	2500	1.4GHz 3dB bandwidth
ADS41B49	250	14	1	82-89	69-70	86	Yes	388	Lower power replacement for ADS61B49
ADS4249	250	14	2	82-87	71-73	84-96	No	250	Lower power replacement for ADS62P49
ADS62P49	250	14	2	75-89	72-73	84-92	No	625	—
ADS5493	130	16	1	90-100	75-76	97-110	Yes	1750	Multi-carrier GSM, 4-lane LVDS outputs
Transmit and Signal Generation DACs									
Part Number	Sample Rate (MSPS)	Bits	Ch.	Interface	Input Rate per DAC (MSPS)	Interp. (max)	IQ Corr.	Mixer	Comments
DAC3484	1250	16	4	16 LVDS	312.5	16x	Yes	NCO, Coarse	250mW, drive two IQ modulators
DAC34H84	1250	16	4	32 LVDS	625	16x	Yes	NCO, Coarse	High input rate, 275mW, BGA
DAC3482	1250	16	2	16 LVDS	625	16x	Yes	NCO, Coarse	High input rate, low power, QFN
DAC5681Z	1000	16	1	16 LVDS	1000	4x	—	High/Low Pass	Up to 1GSPS input rate
DAC3283	800	16	2	8 LVDS	312.5	4x	Yes	Coarse	81dB ACLR WCDMA 153MHz, 7x7mm
DAC5688	800	16	2	32 CMOS	250	8x	Yes	NCO	—
DAC3282	625	16	2	8 LVDS	312.5	2x	Yes	Coarse	7x7mm

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➔ Video



Video DACs											
Part Number	Input Format	Output Format	Bits	Sample Rate (MSPS)	Number of DACs	Output Standards	Sync	Multiplexed Input Mode	Comments		
THS8135	3x10-bit 4:4:4, 2x10-bit 4:2:2 or 1x10-bit 4:2:2 YCbCr/RGB	Analog RGB/YPbPr, Generic DAC	10	240	3	YPbPr or RGB SDTV/HDTV (I/P), bi- or tri-level sync, VESA PC 1920x1440 at 60Hz	Bi/Tri-Level	Yes	Generic triple DAC mode for non-video applications		
THS8136	3x10-bit 4:4:4	Analog RGB/YPbPr, Generic DAC	10	180	3	YPbPr or RGB SDTV (I/P), bi-level sync, VESA PC 1600x1200 at 60Hz	Bi-Level	—	Generic triple DAC mode for non-video applications, automotive qualified		
THS8200	1, 2x8-/10-bit 4:2:2, 3x8-/10-bit 4:4:4 YCbCr/RGB, 15-/16-bit RGB	Analog RGB/YPbPr	11	205	3	YPbPr SDTV/HDTV (I/P), VESA, ITU-RBT.656		Yes	Triple 10-bit all format video DAC		
Video ADC											
Part Number	Bits	Sample Rate (MSPS)	Analog Inputs	Power (mW)	DNL (±LSB)	INL (±LSB)	Digital Clamp	PGA	PLL	Video Formatter	Comments
TVP7002	10, 8	110/165	3	1112	1	4	Yes	Yes	Yes	Yes	Triple 8-/10-bit, 165/110-MSPS video ADC
Video Decoders											
Part Number	Input Format	Output Format	Analog Inputs	ADC	Input Standard	Output Standard	Comments				
TVP5151	CVBS, S-Video	8-bit 4:2:2 ITU656	2	9-bit 30MSPS	NTSC/PAL/SECAM	ITU656	Ultra-low power NTSC/PAL/SECAM video decoder w/robust sync detector				
TVP5147M1	CVBS, S-Video, YPbPr	20-bit 4:2:2 YCbCr, 10-bit ITU-R BT.656	10	2x10-bit 30MSPS	NTSC/PAL/SECAM	ITU 601, ITU656	10-bit high-quality single-chip digital video decoder that digitizes and decodes NTSC/PAL/SECAM				
TVP5160	CVBS, S-Video, YPbPr, SCART	10-bit ITU-R BT.656 4:2:2 YCbCr	12	2x-10-bit 54MSPS	NTSC/PAL/SECAM	—	NTSC/PAL/SECAM/component 10-bit digital video decoder with Macrovision detection, 3-D-YC/5-line com				
TVP5158	CVBS	8-bit 4:2:2 or 16-bit 4:2:2 YCbCr with embedded syncs	4	10-bit, 27MSPS	NTSC/PAL	ITU656	4-channel NTSC/PAL video decoder with independent scalers, noise reduction, auto contrast				
CCD/CMOS Imaging Analog Front Ends											
Part Number	Sample Rate (MSPS)	Bits	Gain, dB (min)	Gain, dB (max)	Power (mW)	Output Data Format	Supply Voltages (V)	Pin, Package	Comments		
HD Surveillance (Security Camera)											
VSP8133	50	14	−9	44	140	CMOS Parallel	2.7-3.3	64 QFN	High image quality, flexible CCD support		
HD and SD Machine Vision											
VSP7500, VSP7502	50	16	0	47	120	Sub LVDS	1.8	159 NFBGA	High dynamic range, frame rate		
Inspection											
VSP2582	36	12	−9	35	85	CMOS Parallel	2.7-3.3	36 VQFN	Cost effective		

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