High Performance Analog

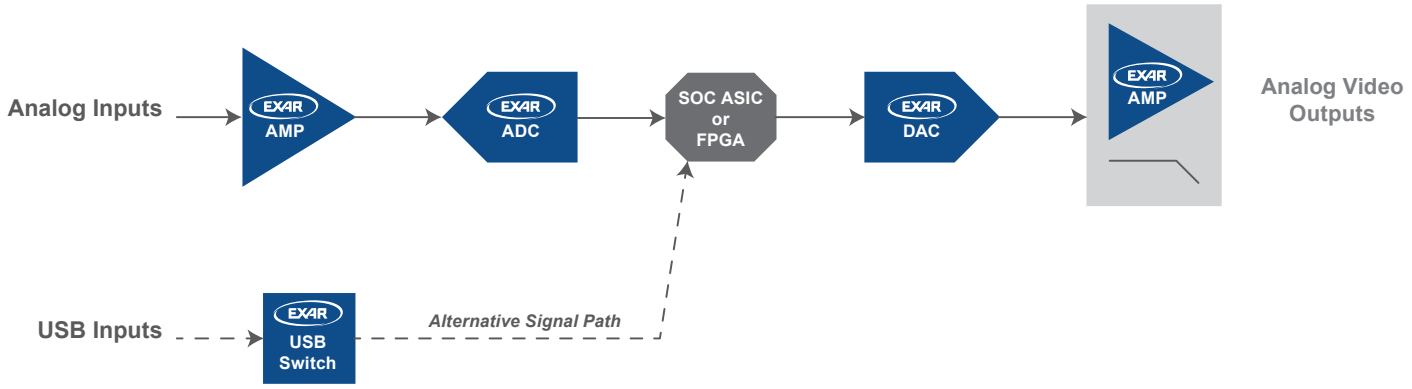
A New Direction in Mixed-Signal

HPA PRODUCTS FOR VIDEO APPLICATIONS

Example End Systems and Applications

- Security and surveillance
- Car Infotainment
- Video distribution
- Home gateway
- CCTV multi circuit UTP transmission

Video Signal Path Block Diagram



Video Surveillance and Distribution over UTP

Video Distribution Over CAT5 Reference Designs

Exar provides a variety of reference designs:

- Composite Video (CVBS) Transmitter (Tx) and Receiver (Rx) from 300m to **1800m**
- SDVGA Video Transmitter and Receiver for 300m
- HDVGA Extender including audio and separate video sync in a single cable
- Advanced Composite Video Interface (aCVi) solutions for SD and HD video

CVBS Tx/Rx Reference Design

Video Amplifiers

Name	# of Ch	Rail-to-Rail	Input Includes -Vs	G=2 BW (MHz)	0.1dB BW (MHz)	DG (%)	DP (°)	Is per Ch (mA)	Iout (mA)	Cross-talk (dB)	Min Vs (V)	Max Vs (V)
CLC1004	1	No	No	750	200	0.02	0.01	12	100	N/A	4.5	12
CLC1005	1	Out	Yes	90	9.5	0.06	0.07	4.2	55	N/A	2.5	5.5
CLC1006	1	No	No	500	50	0.02	0.05	5.5	100	N/A	4.5	12
CLC1007	1	Out	Yes	85	22	0.03	0.03	2.6	100	N/A	2.7	12.6
CLC1008	1	Out	Yes	35	NS	NS	NS	0.505	15	N/A	2.5	5.5
CLC1014	1	No	No	750	200	0.02	0.01	12	100	N/A	4.5	12
CLC1603	1	No	No	200	30	0.01	0.03	1.1	100	N/A	4.5	12
CLC1605	1	No	No	1200	120	0.01	0.01	12	120	N/A	4.5	12
CLC1606	1	No	No	1200	150	0.01	0.01	7.5	120	N/A	4.5	12
XR8051	1	Out	Yes	65	20	0.03	0.03	2.6	100	N/A	2.7	12.6
CLC2000	2	No	No	250	32	0.009	0.06	7	200	62	5	13
CLC2005	2	Out	Yes	90	9.5	0.06	0.07	4.2	55	62	2.5	5.5
CLC2007	2	Out	Yes	85	22	0.03	0.03	2.6	100	58	2.7	12.6
CLC2008	2	Out	Yes	35	NS	NS	NS	0.505	15	NS	2.5	5.5
CLC2600	2	No	No	230	95	0.03	0.04	3.3	50	56	8	12
CLC2601	2	No	No	335	120	0.01	0.06	5.2	52	56	8	12
XR8052	2	Out	Yes	65	20	0.03	0.03	2.6	100	58	2.7	12.6
CLC3600	3	No	No	230	95	0.03	0.04	3.3	50	56	8	12
CLC3601	3	No	No	335	120	0.01	0.06	5.2	52	56	8	12
CLC3603	3	No	No	200	30	0.01	0.03	1.1	100	56	4.5	12
CLC3613	3	No	No	200	30	0.01	0.03	1.1	100	56	4.5	12
CLC3004	3	No	No	750	200	0.02	0.01	12	100	70	4.5	12
CLC3605	3	No	No	1200	120	0.01	0.01	12	120	60	4.5	12
CLC4000	4	No	No	250	32	0.009	0.06	7	200	62	5	13
CLC4007	4	Out	Yes	85	22	0.03	0.03	2.6	100	58	2.7	12.6
CLC4600	4	No	No	230	95	0.03	0.04	3.3	50	56	8	12
CLC4601	4	No	No	335	120	0.01	0.06	5.2	52	56	8	12
XR8054	4	Out	Yes	65	20	0.03	0.03	2.6	100	58	2.7	12.6

Triple Video DACs

Name	# of Ch	Resolution (bits)	Conversion Rate (MWPS)	DLE (%/FS)	ILE (%/FS)	Power Dissipation (mW)	Min Vs (V)	Max Vs (V)
CDK3400	3	10	100	±0.1	±0.1	655	4.75	5.25
CDK3401	3	10	150	±0.1	±0.1	655	4.75	5.25
CDK3402	3	8	100	±0.2	±0.2	655	4.75	5.25
CDK3403	3	8	150	±0.2	±0.2	655	4.75	5.25
CDK3404	3	8	180	±0.5 max (LSB)	±0.5 max (LSB)	300	3.0	3.6
CDK3405	3	8	180	±0.5 max (LSB)	±0.5 max (LSB)	300	3.0	3.6

Video Filter Driver

Name	# of Ch	Gain (dB)	-3dB Filter Cuttoff (MHz)	Stopband Atten. (dB)	Is per Ch (mA)	Input	Output	Min Vs (V)	Max Vs (V)
CLC3800	3-ch SD	6	8	55	2.9	DC-Coupled	AC- or DC-Coupled	3	7

USB 2.0 Analog Switches

Name	# of Ch	Switch Configuration	Max Ron (Ω)	Con (pF)	Coff (pF)	BW (MHz)	Is per Ch (mA)	ESD (kV)	Min Vs (V)	Max Vs (V)	Package
CLCUSB42	1	DPDT	6.5	7	3.5	720	1	8	3	4.3	QFN-10
CLCUSB30	1	DPDT	6.5	7	3.5	720	1	8	3	4.3	MSOP

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