电子元器件系列(中国.厦门)

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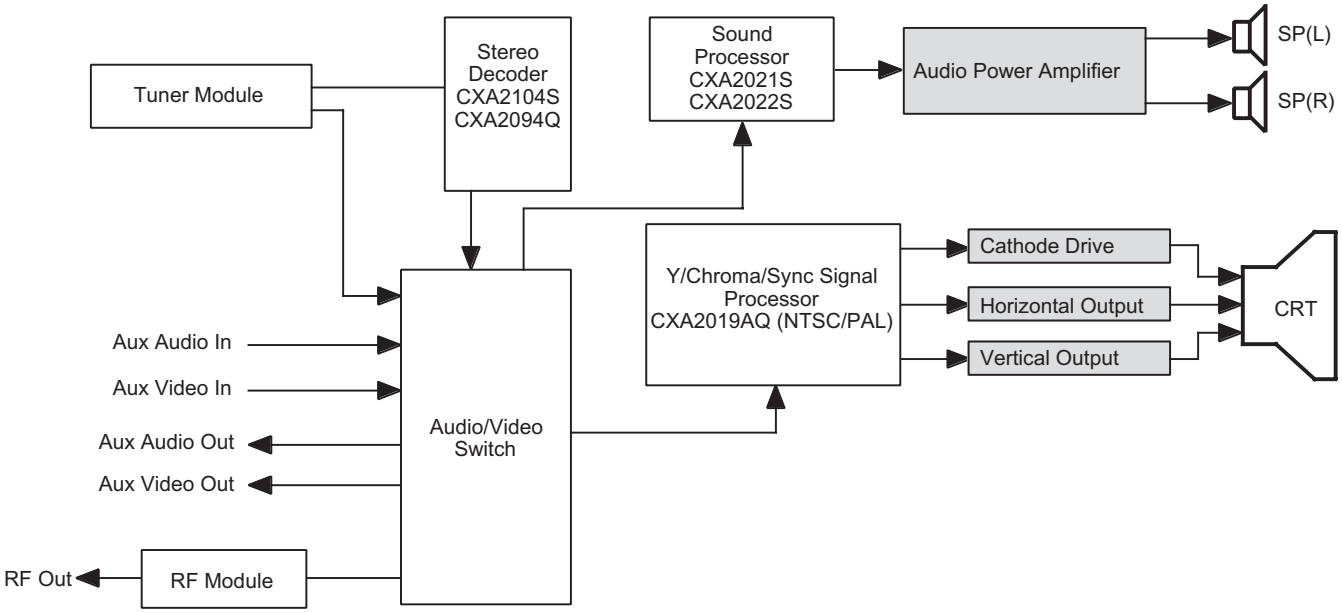
CAVD Multimedia Products

TV ICs

Part Number	Package	Function	Voltage
CXA2104S	SDIP	US TV Stereo & SAP Decoder, dbx-TV Noise Reduction Decoder, I^2C Bus	9
CXA2094Q	QFP		
CXA2021S	SDIP	Sound Processor, I^2C Bus, Volume, Bass, Treble, Surround, AGC	12
CXA2022S		Sound Processor, I2C Bus, Volume, Bass, Treble, 3-mode Surround, AGC	

TV System Block Diagram



Laser Diode

Red Laser Diode

Part Number	Applications	Features	Typ. Wavelength (nm)	Max. Optical Power Output (mW)	Package	Pins
SLD1132VS	Laser pointer	Short wavelength	635	5	ø5.6mm	3
SLD1133VL	Bar code reader	Index guided, small astigmatism	650	7		
SLD1137VS	Bar code reader	Index guided, small astigmatism, low power	650	7		

Super High Power Laser Diode(1)

Part Number	Typ. Wavelength (nm)	Max. Optical Power Output (mW)	Packages Available(3)
SLD301	770 to 840	100	V, XT
SLD322	790 to 840	550	V, XT
SLD323	790 to 840	1100	V
SLD326	795 to 840	4400	YT
SLD327(2)	795 to 840	3300	YT

NOTES:
1. Contact Sony for wavelength selection.
2. Under development.
3. Package Types:
   V = 9mm diameter package, flat glass cap
   VL = 5.6mm diameter package, flat glass cap
   VS = 5.6mm diameter package, flat glass cap
   XT = Flat package with built-in TE cooler
   YT = Flat package with built-in TE cooler

Memory

Ultra-High-Speed Synchronous SRAM

Density	Part Number	Configuration	Features	Cycle Time (ns)	Vdd (V)	Vddq (V)	Pins	Package
8Mb	CXK77P36R80GB	256K x 36	• Common I/O • Pipelined Read (R-R) • Late Write • Single Data Rate • HSTL I/O	3.3/3.7/4	3.3	1.9 - 1.5	119	BGA
	CXK77P36L80GB	256K x 36	• Common I/O • FlowThrough Read (R-L) • Late Write • Single Data Rate • HSTL I/O	4/4.2/4.3/4.4	3.3	1.9	119	BGA
	CXK77Q36B80AGB	256K x 36	• Common I/O • Pipelined Read (R-R) w/ optional Late Select • Late Write • Single Data Rate • HSTL I/O	2.8/3.3/3.7/4	3.3/2.5	1.8 - 1.5	119	BGA
	CXK77Q18B80AGB	512K x 18						
	CXK77P36L80AGB	256K x 36	• Common I/O • FlowThrough Read (R-L) • Late Write • Single Data Rate • HSTL I/O	4/4.2/4.3/4.4	3.3	1.5	119	BGA
	CXK77P18L80AGB	512K x 18						
16Mb	CXK77N36R160GB	512K x 36	• Common I/O • Pipelined Read (R-R) • Late Write • Single Data Rate • HSTL I/O	3/3.3/4	2.5/1.8	1.8 - 1.5	119	BGA
	CXK77N18R160GB	1M x 18						
	CXK77N36B160GB	512K x 36	• Common I/O • Pipelined Read (R-R) w/ optional Late Select • Late Write • Single Data Rate • HSTL I/O	3/3.3/4	2.5	1.8 - 1.5	119	BGA
	CXK77N18B160GB	1M x 18						
	CXK77L18162GB	1M x 18	• Common I/O • Pipelined Read (R-R) • Late Write • Double Data Rate or Single Data Rate • HSTL I/O	2.5/2.7/3	1.8	1.8 - 1.5	153	BGA
	CXK77Q36162AGB	512K x 36	• Common I/O • Pipelined Read (R-R) • Late Write • Double Data Rate or Single Data Rate • HSTL I/O	2.5/2.7/3	2.5	1.6 - 1.5	153	BGA
	CXK77Q18162AGB	1M x 18						
	CXK77L18162AGB	1M x 18	• Common I/O • Pipelined Read (R-R) • Late Write • Double Data Rate or Single Data Rate • HSTL I/O	2.5/2.7/3	1.8	1.8 - 1.5	153	BGA

Memory (continued)

SigmaRAM™ Networking High-Speed Synchronous SRAM

Density	Part Number	Configuration	Features	Cycle Time (ns)	V_{dd} (V)	V_{ddq} (V)	Pins	Package
16Mb	CXK79M72C160GB	256K x 72	• Common I/O • Pipelined Read • Late Write • Single Data Rate • HSTL I/O	3.3/4/5	1.8	1.8/1.5	209	BGA
	CXK79M36C160GB	512K x 36						
	CXK79M72C161GB	256K x 72	• Common I/O • Pipelined Read • Late Write • Single Data Rate • LVCMOS I/O	3.3/4/5	1.8	1.8/1.5	209	BGA
	CXK79M36C161GB	512K x 36						
	CXK79M72C164GB	256K x 72	• Common I/O • Pipelined Read • Double Late Write • Single Data Rate • HSTL I/O	3.3/4/5	1.8	1.8/1.5	209	BGA
	CXK79M36C164GB	512K x 36						
	CXK79M72C165GB	256K x 72	• Common I/O • Pipelined Read • Double Late Write • Single Data Rate • LVCMOS I/O	3.3/4/5	1.8	1.8/1.5	209	BGA
	CXK79M36C165GB	512K x 36						
	CXK79M36C162GB	512K x 36	• Common I/O • Pipelined Read • Late Write • Double Data Rate • HSTL I/O	3.3/4/5	1.8	1.8/1.5	209	BGA
	CXK79M36C163GB	512K x 36	• Common I/O • Pipelined Read • Late Write • Double Data Rate • LVCMOS I/O	3.3/4/5	1.8	1.8/1.5	209	BGA

NOTE:
SigmaRAM is a trademark of the SigmaRAM Consortium.

Mixed Signal Systems (continued)

• A/D Converter Lineup

Product Name	Bits	Rate (MSPS)	PD (mW)	Features	Supply Voltage (V)	Package	Pins
CXA3246Q	8	120	500	1 : 2 De-Multiplex TTL Output	4.75 to 5.25 or ±4.75 to ±5.25	QFP	48
CXA3256R	8	120	500	1 : 2 De-Multiplex TTL Output	4.75 to 5.25 or ±4.75 to ±5.25	LQFP	48
CXA3276Q	8	160	550	1 : 2 De-Multiplex TTL Output	4.75 to 5.25 or ±4.75 to ±5.25	QFP	48
CXA3286R	8	160	550	1 : 2 De-Multiplex TTL Output	4.75 to 5.25 or ±4.75 to ±5.25	LQFP	48
CXD1175AM	8	20	60	2Step, CMOS, SampleHold/ Clamp installed	4.75 to 5.25	SOP	24
CXD1179Q	8	35	80	3Step, CMOS, SampleHold/ Clamp installed	4.75 to 5.25	QFP	32
CXD2302Q	8	50	125	4Step, CMOS, SampleHold/ Clamp installed	Analog: 4.75 to 5.25 Digital: 3.0 to 5.5	QFP	32
CXD2303AQ	8	50	400	5Step, CMOS, SampleHold/ Clamp installed	Analog: 4.75 to 5.25 Digital: 3.0 to 5.5	QFP	80

• D/A Converter Lineup

Product Name	Bits	Rate (MSPS)	PD (mW)	Features	Supply Voltage (V)	Package	Pins
CXA3197R	10	125	480	2 : 1 Multiplex TTL Input	4.75 to 5.25 or ±4.75 to ±5.25	LQFP	48
CXD1171M	8	40	80	CMOS, 3ch, Current Output System	4.75 to 5.25	SOP	24
CXD1178Q	8	40	240	CMOS, 4ch, Current Output System	4.75 to 5.25	QFP	48

• PLL Lineup

Product Name	Sync Input (kHz)	Clock Output (MHz)	PD (mW)	Resolution	Supply Voltage (V)	Package	Pins
CXA3106Q	10 to 100	10 to 120	335	XGA or below	4.75 to 5.25	QFP	48
CXA3106AQ		10 to 160	350	SXGA or below			
CXA3266Q		10 to 203	350	UXGA or below			

• ADC (3ch) / AMP / PLL

Product Name	Bits	Rate	PD (W)	SyncInput (kHz)	Supply Voltage (V)	Package	Pins
CXA3506R	8	120	4	10 to 130	4.75 to 5.25	LQFP	144
CXA3516R(1)		165					

Note:
1. ES status

Optical Communications

• Transmitter ICs

Part Number	Function	Data Rate (typ.)	Power Consumption (mW) (typ.)	Supply Voltage (V)	Package[2]	Pins
CXB1549Q[3]	Laser Diode Driver (with built-in Op Amp)	1.25Gbps (min.)	195	3.3	QFP	40
CXB1818Q	Laser Diode Driver with D-FF	622MHz	195	3.3	QFP	40
CXB1828ER	Laser Diode Driver	2.5Gbps (max.)	204	3.3	VQFN	32
CXA3351H[1,4]	Transimpedance Amp	2.5Gbps	120	3.3, 5	Wafer only	—

• Receiver ICs

Part Number	Function	Data Rate (typ.)	Power Consumption (mW) (typ.)	Supply Voltage (V)	Package[2]	Pins
CXB1572Q	Post Amp (2R IC)	125/200/155/ 265Mbps	—	3.3	QFP	32
CXB1573R[3]	Post Amp (2R IC)	531/622/ 1,062Mbps/ 1.25Gbps	165	3.3	LQFP	32
CXB1577Q[3]	Post Amp (2R IC)	531/622/ 1,062Mbps/ 1.25Gbps	165, 250	3.3, 5.0	QFP	40
CXB1577R[3]	Post Amp (2R IC)	551/622/ 1,062Mbps/ 1.25Gbps	250	5.0	LQFP	32
CXB1805AQ	Post Amp + CDR (3R IC)	155/622Mbps	231	3.3	QFP	46
CXB1810FN[3]	Post Amp (2R IC)	2.5Gbps	132, 400	3.3, 5	HSOP	16
CXB1820ER[3]	Post Amp (2R IC)	2.5Gbps	132, 400	3.3, 5	VQFN	24

NOTES:

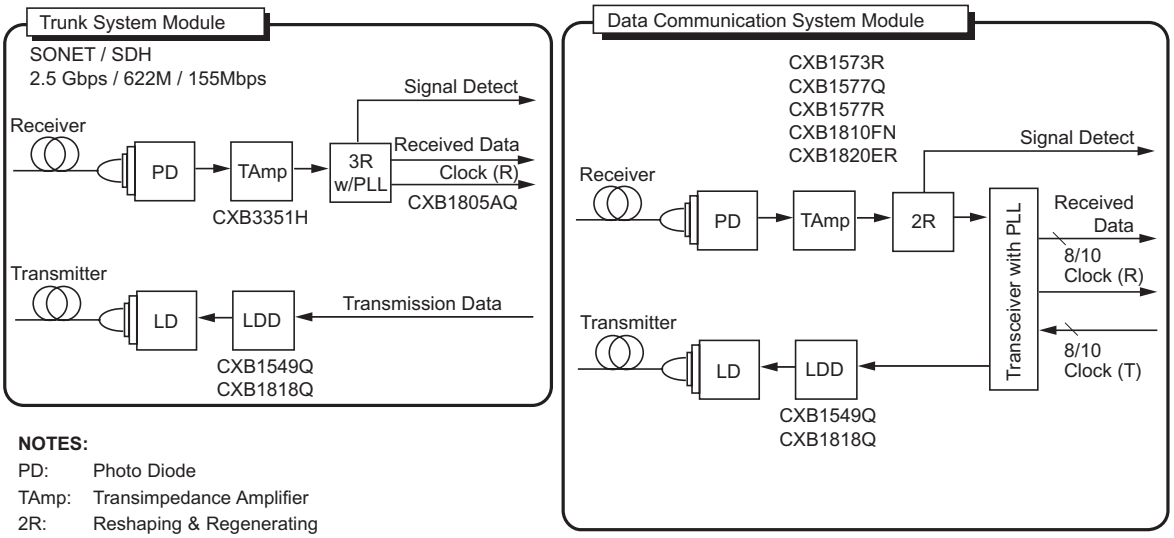
1. Under development.
2. QFP = Quad Plastic Flat Package
   LQFP = Low Profile Quad Flat Package
   HSOP = Heat Sink Small Outline Package
   VQFN = Very Thin Quad Flat Non-leaded Package
3. Requires minimum order of 10,000 pieces per year.
4. Requires minimum order of 50,000 pieces per year.

Optical Communications (continued)

• Applications

Application	Data Rate	LDD	TAmp.	2R IC	3R IC
SDH	155Mbps		—	CXB1572Q	CXB1805AQ
(SONET)	622Mbps		—	CXB1577Q	CXB1805AQ
	2.5Gbps		CXA3351H	CXB1810FN CXB1820ER	—
FDDI	125Mbps		—	CXB1572Q	—
Fibre	133Mbps	CXB1549Q	—	CXB1572Q	—
Channel	266Mbps	CXB1818Q	—		—
	531Mbps		—	CXB1573R	—
	1.06Gbps		—	CXB1577R CXB1577Q	—
ATM	622Mbps		—	—	—
Gigabit Ethernet	1.25Gbps		—	CXB1573R CXB1577R CXB1577Q	—

• Transmission System



NOTES:

PD: Photo Diode
TAmp: Transimpedance Amplifier
2R: Reshaping & Regenerating
3R: Reshaping, Regenerating & Retiming
LD: Laser Diode/LED
LDD: Laser Diode Driver/LED Driver
PLL: Phase-Locked Loop

Wireless Communications

GaAs MMIC (Microwave Monolithic IC)

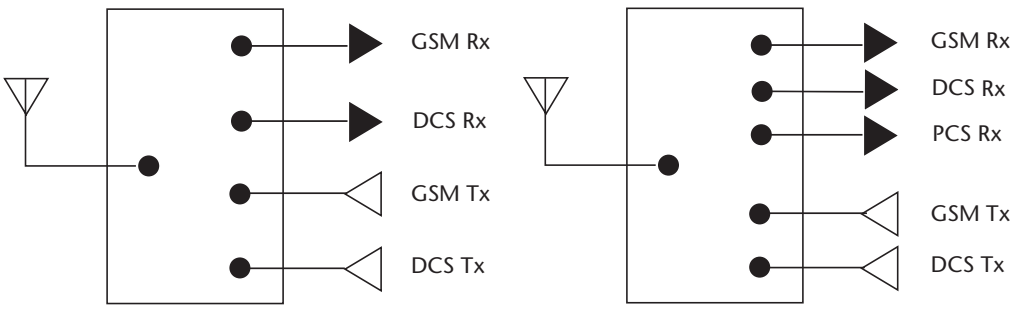
— Switch IC

Part Number	Functions	Insertion Loss (dB)	Isolation (dB)	@ Frequency (GHz)	Control Voltage (V)	VDD (V)	Package	CDMA	TDMA	GSM
CXG1077TN –T2, 1K/reel	SPDT	0.35 0.5	22 17	0.9 1.8	3 3	N/A	TSSOP-10	X	X	
CXG1104TN –T2, 1K/reel	SPDT w/Logic	0.3 0.4	23 16.5	0.9 1.9	3 3	3 3	TSSOP-10	X		
CXG1134EN(1) –T9, 3K/reel	SPDT w/Logic	0.25 0.35	30 25	0.9 1.9	3.3	3.3	VSON-16	X		
CXG1100TN –T2, 1K/reel	DPDT w/Logic	0.35	22	0.9	3	3.2	TSSOP-10	X		
CXG1009TN –T2, 1K/reel	SPDT	0.7 0.8	56 44	1.0 2.0	3 3	N/A	TSSOP-10	X	X	X
CXG1039TN –T2, 1K/reel	SPDT w/Logic	0.8	50	2.0	3	3	TSSOP-10	X	X	X
CXG1126EN –T9, 3K/reel	DP3T w/GPS	0.25 0.35	25 19	0.9 3	3	3	VSON-10	X		
CXG1121TN –T2, 1K/reel	SP4T w/Logic	0.5(900MHz) 0.6(1800MHz)	25(900MHz) 25(1800MHz)	900MHz(GSM) 1800MHz(DCS)	3	5(2)	TSSOP-16			X
CXG1151EN	SP4T w/Logic	0.5(900MHz) 0.65(1800MHz)	(Tx-Rx) 30(900MHz) 30 (1800MHz)	900MHz(GSM) 1800MHz(DCS)	3.3	3.3	VSON-16			X
CXG1122EN –T2, 2K/reel	SP5T w/Logic	0.5(900MHz) 0.8(1800MHz) 0.9(1900MHz)	20(900MHz) 17(1800MHz) 17(1900MHz)	900MHz(GSM) 1800MHz(DCS) 1900MHz(PCS)	3	3(2)	VSON-16			X
CXG1114EN	SPDT + SP3T w/Logic	0.5(900MHz) 0.8(1800MHz) 0.8(2000MHz)	20(900MHz) 17(1800MHz) 17(2000MHz)	900MHz(GSM) 1800MHz(DCS) 2000MHz (WCDMA)	3	5(2)	VSON-16			X

NOTES:

1. Operates for PDC, CDMA, W-CDMA.
2. Can be operated at 3V using a few external chip components. See data sheet for more details.

CXG1121/1122/1151 — Antenna Switch

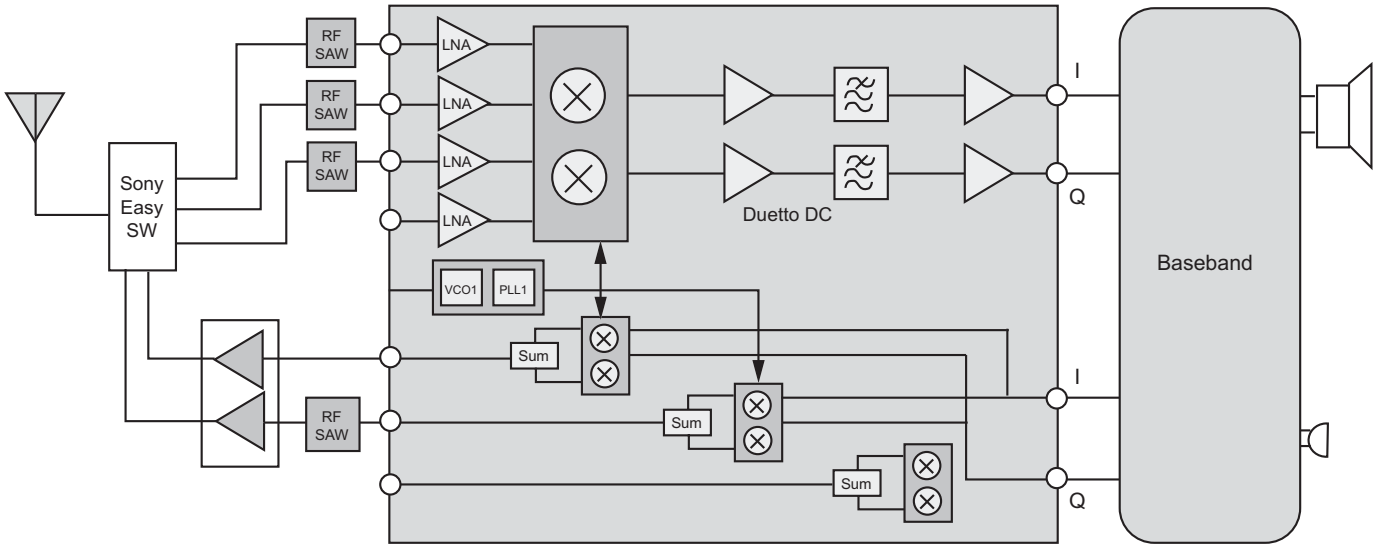


Wireless Communications (continued)

GSM IC + Module

Part Number	Functions, Features	Supply Voltage (V)	Package	Pins
CXM3000GA	GSM900/1800 Dual Band, RF Front End, PLL Module	2.7 to 3.3	LFLGA	60
CXA3345GL	GSM/GPRS Triple-band RF Solution	2.7 to 3.3	VFLGA	84

CXA3345GL — RF Transceiver



CDMA Cellular/CDMA PCS IC

— Gain Control Amplifier (AGC Amp)

	Part Number	Package	Input Port	fopr (MHz)	Vcc (V)	Gain Range (dB)	IIP3 (dBm)	NF (dB)
RX IF	CXA3201AN –T4, 1K/reel	SSOP-16	Dual	50 to 300	2.7 to 3.8	–45 to +45	–38@G=40dB f=210.38MHz	5@G=40dB f=210.38MHz
	CXA3221AN –T4, 1K/reel	SSOP-8	Single	50 to 300	2.7 to 3.8	–45 to +45	–38@G=40dB f-210.38MHz	5@G=40dB f=210.38MHz
TX IF	CXA3202AN –T4, 1K/reel	SSOP-16	Single	50 to 300	2.7 to 3.8	–60 to 20	–5@G=15dB f=130.38MHz	25@G=15dB f=130.38MHz
	CXA3222AN –T4, 1K/reel	SSOP-8	Single	50 to 300	2.7 to 3.8	–60 to 20	–5@G=15dB f=130.38MHz	25@G=15dB f=130.38MHz

W-CDMA/UMTS Cellular/PCS IC

— Power Amplifier

Part Number	@Frequency (GHz)	Output Voltage (dBm)	Gain (dB)	Efficiency (%)	ACPR (+/–900kHz)	Supply Voltage (V)	Package	Pins
CXG1103K	1.82 ~ 1.98 1.92 ~ 1.98	26.5	22	42	–39	V_{DD} = 3.50 V_{GG} = 2.85	LCC	14

Wireless Communications (continued)

W-CDMA Cellular/W-CDMA PCS IC

— Gain Control Amplifier (AGC Amp)

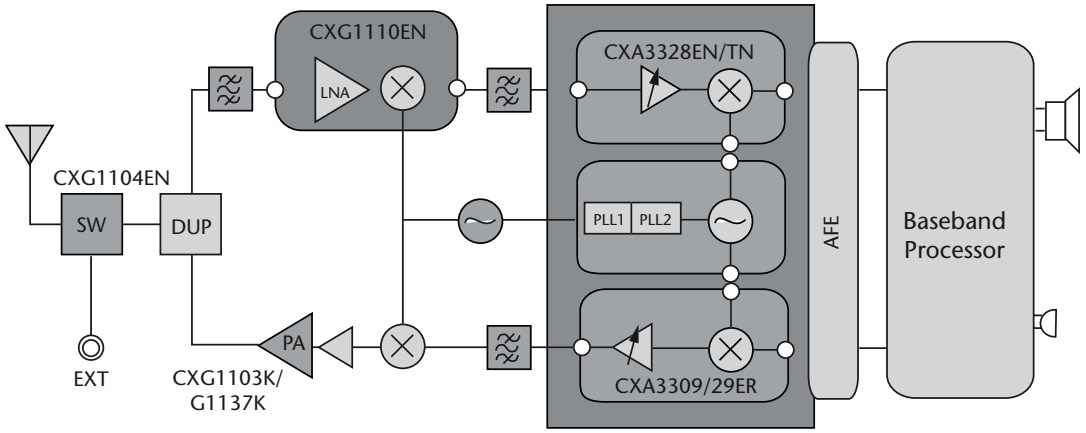
	Part Number	Supply Voltage (V)	Package	Pins
RX IF	CXA3328EN/TN	2.7 to 3.3	TSSOP/VSON	16
TX IF	CXA3329ER	2.7 to 3.3	VQFN	24
	CXA3309ER	2.7 to 3.3	VQFN	24

W-CDMA Cellular/W-CDMA PCS Module

— IF Module (Tx/Rx/PLL/VCO Module)

Part Number	Functions	Supply Voltage (V)	Module Size
CXM4001GA	CXA3328EN/TN 380MHz + CXA3309ER 570MHz	2.7 to 3.3	8.0mm x 8.0mm
CXM4002GA	CXA3328EN/TN 190MHz + CXA3329ER 380MHz	2.7 to 3.3	8.0mm x 8.0mm

CXM4001GA/4002GA (IF Module)



Analog Cellular IC

— IF Amplifier IC

Part Number	Functions, Features	Supply Voltage (V)	Package	Pins
CXA1742Q –T4, 1K/reel	FM IF amplifier with filter for AMPS	2.7 to 3.6	QFP	40

Wireless Communications (continued)

GPS IC

Part Number	Functions, Features	Supply Voltage (V)	Package	Pins
CXA1951AQ –T4, 1K/reel	Receive down converter, LNA, mixer, IF amplifier, PLL, oscillator	2.7 to 5.5	QFP	40
CXA3336ER	Receive down converter	2.7 to 5.3	VQFN	32
CXD2931R-9 –TL, 500/reel	16-channel GPS signal processing IC, built-in 32-bit RISC CPU, 36Kbyte SRAM and 2Mbit MASK ROM WGS-84	3.0 to 3.6	LQFP	144
CXD2932AR/AGA	Parallel 16 + 1(WAAS)ch, dead reckoning, USB, 2ch UART, 1PPS	3.1 to 3.6	R: LQFP GA: LFLGA	144

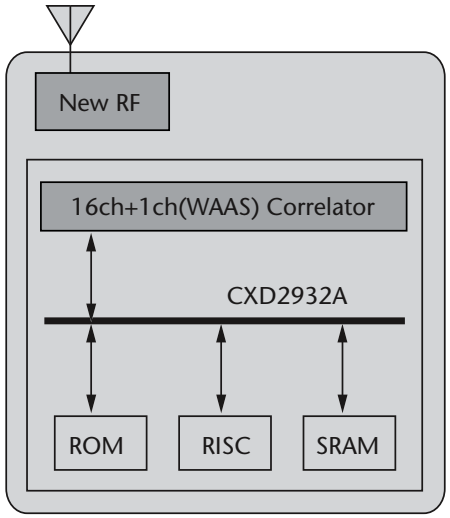
GPS Receiver Module

Part Number	Functions	Supply Voltage (V)	Module Size	Weight
GXB2100	CXD2931R-9 + VS7001(1) GPS Module	3.0 to 3.6	36.5mm x 25.0mm	5.7g
GXB3000	CXA3336ER + CXD2932A GPS Module	3.1 to 3.6	TBD	TBD
GXB3100	VS7001(1) + CXD2932A GPS Module	3.1 to 3.6	TBD	TBD

NOTE:

1. VS7001 is a CMOS RF converter designed by Valence Semiconductor. For more information, call them at 949/655-4100 or visit their web site at www.valencese-mi.com.

GXB3000/3100 (GPS Module)



Index of Device Numbers

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