



## Digital Signal Processors

ADI's embedded architectures feature simple yet powerful programming models and are supported by high quality development tools.

### TigerSHARC® Processors



This family offers the industry's highest performance per watt and per square inch of board space for the most demanding signal and image processing applications. The TigerSHARC's patented link port technology allows glueless interprocessor communication with arrays of two or more TigerSHARC Processors.

MMACs	On-Chip Memory (M-Bit)	External Memory (M-Bit)	Parallel Bus	Core Voltage / IO (V)	Clock Speed (MHz)	Package	Digi-Key Part No.	Price Each			Evaluation Platform	Development Software
								1	25	100		
2000	6	32/64	Yes	1.2/3.3	300	625-BGA	ADSP-TS101SAB1000-ND	365.96	341.56	317.16	ADDS-TS101S-EZLITE	VDSP-TS-PC-FULL

### SHARC® DSPs



Using ADI's "Super" Harvard architecture, the SHARC family is optimized to enable a variety of real-time embedded signal processing applications and is known as a leader in premium audio applications.

MMACs	MFLOPs	On-Chip SRAM (M-Bit)	On-Chip ROM (M-Bit)	Serial Ports	Link Ports	Core Voltage (V)	Clock Speed (MHz)	Package	Digi-Key Part No.	Price Each			Evaluation Platform	Development Software
										1	25	100		
40	120	2	0	2	6	3.3	40	225-BGA	ADSP-21062LKB-160-ND	290.66	271.29	251.91	ADDS-21262-EZLITE	VDSP-SHARC-PC-FULL
66	180	0.5	0	2	0	3.3	66	208-MQFP	ADSP-21065LKSZ-240-ND	42.01	39.22	36.42	ADDS-21065L-EZLITE	VDSP-SHARC-PC-FULL
400	1200	2	4	6	0	1.2	200	136-CSPBGA	ADSP21262SKBCZ200-ND	28.87	26.95	25.02	ADDS-21262-EZLITE	VDSP-SHARC-PC-FULL
400	1200	2	4	6	0	1.2	200	144-LQFP	ADSP-21262SKSTZ200-ND	30.32	28.30	26.28	ADDS-21262-EZLITE	VDSP-SHARC-PC-FULL
666	2700	3	4	6	4	1.2	333	144-LQFP	ADSP-21363KSWZ-1AA-ND	40.86	38.13	35.41	—	—
800	2400	2	6	8	4	1.3	400	256-SBGA	ADSP-213698BPZ-2A-ND	55.23	51.55	47.87	ADZS-21369-EZLITE	VDSP-SHARC-PC-FULL
800	2400	2	6	8	4	1.3	400	256-SBGA	ADSP-21369KBPZ-2A-ND	44.19	41.24	38.30	ADZS-21369-EZLITE	VDSP-SHARC-PC-FULL
800	2400	2	6	8	4	1.3	400	256-SBGA	ADSP-21369KBPZ-3A-ND	55.23	51.55	47.87	ADZS-21369-EZLITE	VDSP-SHARC-PC-FULL
800	2400	2	6	8	0	1.3	400	208-LQFP	ADSP-21369KSWZ-5A-ND <b>NEW!</b>	49.72	46.41	43.10	ADDS-21369-EZLITE	VDSP-SHARC-PC-FULL
532	1596	1	4	8	0	1.2	266	208-LQFP	ADSP-21371BSWZ-2B-ND	28.37	26.48	24.59	—	—
532	1596	1	4	8	0	1.2	266	208-LQFP	ADSP-21371KSWZ-2B-ND	23.63	22.06	20.49	—	—

◆ RoHS Compliant

### ADSP-21xx/2199x and Mixed-Signal DSPs



The ADSP-21xx family architecture is built around a common instruction set architecture. All family members are code-compatible, fixed-point 16-bit DSPs. In addition, the ADSP-2199x family of mixed-signal DSPs provides a single-chip solution with signal processing and 14-bit ADC mixed signal integration.

Program RAM Words (KWords)	Data RAM Words (KWords)	External Memory Bus (Bits)	Host Port	SPORT	SPI / UART	Timers	Core Voltage (V)	ADC	Clock Speed (MHz)	Package	Digi-Key Part No.	Price Each			Evaluation Platform	Development Software
												1	25	100		
2	1	16	No	2	No	1	5	—	25	68-PLCC	ADSP-2101BPZ-100-ND	58.03	54.16	50.29	—	VDSP-21XX-PC-FULL
1	0.5	24	No	1	No	1	5	—	20	68-PLCC	ADSP-2105BPZ-80-ND	26.55	24.78	23.01	—	VDSP-21XX-PC-FULL
1	0.5	24	No	2	No	1	5	—	25	68-PLCC	ADSP-2115BPZ-100-ND	37.00	34.54	32.07	—	VDSP-21XX-PC-FULL
16	16	24	No	2	No	1	5	—	33.3	128-PDIP	ADSP-2181BSZ-133-ND	43.39	40.51	37.61	—	VDSP-21XX-PC-FULL
4	4	24	No	2	No	1	5	—	40	100-LQFP	ADSP-2184BSTZ-160-ND	17.63	16.45	15.28	ADDS-2189M-EZLITE	VDSP-21XX-PC-FULL
16	16	24	No	2	No	1	5	—	33.3	100-LQFP	ADSP-2185BSTZ-133-ND	47.73	44.54	41.36	ADDS-2189M-EZLITE	VDSP-21XX-PC-FULL
16	16	24	Yes	2	No	1	1.8	—	80	100-LQFP	ADSP-2185NSTZ-320-ND	19.85	18.53	17.20	ADDS-2189M-EZLITE	VDSP-21XX-PC-FULL
32	48	24	Yes	2	No	1	1.8	—	80	100-LQFP	ADSP-2189NSTZ-320-ND	44.10	41.17	38.23	ADDS-2189M-EZLITE	VDSP-21XX-PC-FULL
32	32	16	Yes	3	Yes	3	2.5	—	160	144-LQFP	ADSP-2191MKSZT-160-ND	32.69	30.51	28.34	ADDS-2191-EZLITE	VDSP-21XX-PC-FULL
32	16	24	Yes	1	Yes	3	2.5	Dual Ch., 14-Bit 20 MSPS	160	176-LQFP	ADSP-21992BSTZ-ND	49.61	46.30	43.00	ADDS-21992-EZLITE	VDSP-21XX-PC-FULL

### Blackfin® Processors



A new breed of embedded media processor designed specifically to meet the computational demands and power constraints of today's embedded audio, video and communications applications. Blackfin Processors combine a 32-bit RISC-like instruction set and dual 16-bit Multiply Accumulate signal processing functionality with the ease-of-use attributes found in general purpose microcontrollers.

MMACs Max.	Memory (kBytes)	External Memory Bus	PCI	USB Device	UARTs Timers	Watchdog Timer/RTC	Core Voltage (V) Max.	Clock Speed (MHz)	Package	Digi-Key Part No.	Price Each			Evaluation Platform	Development Software
											1	25	100		
1200	132	16-Bit	No	Yes	Yes	Yes	1.26	600	208-CSPBGA	ADSP-BF523BKCZ-5A-ND <b>NEW!</b>	22.66	21.15	19.64	ADZS-BF527-EZLITE	VDSP-BLKFN-PC-FULL
1200	132	16-Bit	No	Yes	Yes	Yes	1.26	600	289-CSPBGA	ADSP-BF523KBKZ-5C2-ND <b>NEW!</b>	26.31	24.56	22.81	ADZS-BF527-EZLITE	VDSP-BLKFN-PC-FULL
1200	132	16-Bit	No	Yes	Yes	Yes	1.26	600	208-CSPBGA	ADSP-BF525KBKZ-6A-ND <b>NEW!</b>	31.50	29.40	27.30	ADZS-BF527-EZLITE	VDSP-BLKFN-PC-FULL
1200	132	16-Bit	No	Yes	Yes	Yes	1.26	600	289-CSPBGA	ADSP-BF525KBKZ-6C2-ND <b>NEW!</b>	35.35	33.00	30.64	ADZS-BF527-EZLITE	VDSP-BLKFN-PC-FULL
1200	132	16-Bit	No	Yes	Yes	Yes	1.26	600	208-CSPBGA	ADSP-BF527BKCZ-5A-ND <b>NEW!</b>	28.60	26.70	24.79	ADZS-BF527-EZLITE	VDSP-BLKFN-PC-FULL
1200	132	16-Bit	No	Yes	Yes	Yes	1.26	600	289-CSPBGA	ADSP-BF527KBKZ-5C2-ND <b>NEW!</b>	32.39	30.23	28.07	ADZS-BF527-EZLITE	VDSP-BLKFN-PC-FULL
1200	132	16-Bit	No	Yes	Yes	Yes	1.26	600	208-CSPBGA	ADSP-BF527KBKZ-6A-ND <b>NEW!</b>	34.61	32.31	30.00	ADZS-BF527-EZLITE	VDSP-BLKFN-PC-FULL
1200	132	16-Bit	No	Yes	Yes	Yes	1.26	600	289-CSPBGA	ADSP-BF527KBKZ-6C2-ND <b>NEW!</b>	38.53	35.97	33.40	ADZS-BF527-EZLITE	VDSP-BLKFN-PC-FULL
800	52	16-Bit	No	No	Yes	Yes	1.2	400	160-CSPBGA	ADSP-BF531SBKZ400-ND	18.11	16.32	14.47	ADZS-BF533-EZLITE	VDSP-BLKFN-PC-FULL
800	52	16-Bit	No	No	Yes	Yes	1.2	400	176-LQFP	ADSP-BF531SBSTZ400-ND	16.64	14.99	13.29	ADZS-BF533-EZLITE	VDSP-BLKFN-PC-FULL
800	84	16-Bit	No	No	Yes	Yes	1.2	400	160-MBGA	ADSP-BF532SBKZ400-ND	18.47	17.24	16.01	ADZS-BF533-EZLITE	VDSP-BLKFN-PC-FULL
800	84	16-Bit	No	No	Yes	Yes	1.2	400	176-LQFP	ADSP-BF532SBSTZ400-ND	17.44	15.71	13.93	ADZS-BF533-EZLITE	VDSP-BLKFN-PC-FULL
1500	148	16-Bit	No	No	Yes	Yes	1.3	400	160-CSPBGA	ADSP-BF533SBKZ400-ND	21.07	19.67	18.27	ADZS-BF533-EZLITE	VDSP-BLKFN-PC-FULL
1500	148	16-Bit	No	No	Yes	Yes	1.4	500	169-BGA	ADSP-BF533SBKZ500-ND	29.79	27.81	25.83	ADZS-BF533-EZLITE	VDSP-BLKFN-PC-FULL
1500	148	16-Bit	No	No	Yes	Yes	1.4	500	160-MBGA	ADSP-BF533SBKZ500-ND	25.81	24.09	22.37	ADZS-BF533-EZLITE	VDSP-BLKFN-PC-FULL
1500	148	16-Bit	No	No	Yes	Yes	1.3	600	160-MBGA	ADSP-BF533KBKZ-6V-ND	33.99	31.72	29.46	ADZS-BF533-EZLITE	VDSP-BLKFN-PC-FULL
800	132	16-Bit	No	No	Yes	Yes	1.2	400	182-CSPBGA	ADSP-BF534BKCZ-4A-ND	20.87	19.49	18.09	ADZS-BF537-EZLITE	VDSP-BLKFN-PC-FULL
1000	132	16-Bit	No	No	Yes	Yes	1.2	500	182-CSPBGA	ADSP-BF534BKCZ-5A-ND	25.91	24.18	22.46	ADZS-BF537-EZLITE	VDSP-BLKFN-PC-FULL
700	308	32-Bit	Yes	Yes	Yes	Yes	1.6	300	260-BGA	ADSP-BF535PKBZ-300-ND	57.90	54.05	50.19	ADDS-BF535-EZLITE	VDSP-BLKFN-PC-FULL
800	100	16-Bit	No	No	Yes	Yes	1.2	400	182-CSPBGA	ADSP-BF536BKCZ-4A-ND	22.07	20.60	19.13	ADZS-BF537-EZLITE	VDSP-BLKFN-PC-FULL
1000	132	16-Bit	No	No	Yes	Yes	1.2	500	182-CSPBGA	ADSP-BF537BKCZ-5AV-ND	32.14	30.00	27.85	ADZS-BF537-EZLITE	VDSP-BLKFN-PC-FULL
1200	132	16-Bit	No	No	Yes	Yes	1.2	600	182-CSPBGA	ADSP-BF537KBKZ-6AV-ND	35.68	33.31	30.93	ADZS-BF537-EZLITE	VDSP-BLKFN-PC-FULL
1000	148	16-Bit	No	No	Yes	Yes	1.2	400	316-CSPBGA	ADSP-BF538BKCZ-4F8-ND	34.10	31.83	29.56	ADZS-BF538-EZLITE	VDSP-BLKFN-PC-FULL
1000	148	16-Bit	No	No	Yes	Yes	1.2	500	316-CSPBGA	ADSP-BF538BKCZ-5A-ND	27.40	25.58	23.75	ADZS-BF538-EZLITE	VDSP-BLKFN-PC-FULL
1000	148	16-Bit	No	No	Yes	Yes	1.2	500	316-CSPBGA	ADSP-BF538BKCZ-5F8-ND	34.80	32.48	30.16	ADZS-BF538-EZLITE	VDSP-BLKFN-PC-FULL
1200	132	16-Bit	No	Yes	Yes	Yes	1.43	600	400-CSBGA	ADSP-BF542BKCZ-5A-ND	29.29	27.34	25.39	ADZS-BF548-EZLITE	VDSP-BLKFN-PC-FULL
1200	260	16-Bit	No	Yes	Yes	Yes	1.43	600	400-CSBGA	ADSP-BF547BKCZ-5A-ND	33.86	31.60	29.34	ADZS-BF548-EZLITE	VDSP-BLKFN-PC-FULL
1200	324	16-Bit	Yes	Yes	Yes	Yes	1.43	600	400-CBGA	ADSP-BF547MBKZ-5M-ND	33.86	31.60	29.34	ADZS-BF548-EZLITE	VDSP-BLKFN-PC-FULL
1066	260	16-Bit	No	Yes	Yes	Yes	1.43	533	400-CSBGA	ADSP-BF548BKCZ-5A-ND	34.87	32.54	30.22	ADZS-BF548-EZLITE	VDSP-BLKFN-PC-FULL
2400	328	32-Bit	No	No	Yes	Yes/No	1.2	500	297-PBGA	ADSP-BF561SBKZ500-ND	46.93	43.80	40.68	ADZS-BF561-EZLITE	VDSP-BLKFN-PC-FULL
2400	328	32-Bit	No	No	Yes	Yes/No	1.2	600	297-PBGA	ADSP-BF561SBKZ600-ND	54.71	51.06	47.42	ADZS-BF561-EZLITE	VDSP-BLKFN-PC-FULL
2400	328	32-Bit	No	No	Yes	Yes/No	1.2	600	ADSP-BF561SKBZ600-ND	50.25	46.90	43.55	ADZS-BF561-EZLITE	VDSP-BLKFN-PC-FULL	
2400	328	32-Bit	No	No	Yes	Yes/No	1.2	500	256-CPBGA	ADSP-BF561SBKZ-5A-ND	35.64	33.26	30.89	ADZS-BF561-EZLITE	VDSP-BLKFN-PC-FULL
2400	328	32-Bit	No	No	Yes	Yes/No	1.2	600	256-CPBGA	ADSP-BF561SKBKCZ-6A-ND	49.04	45.77	42.50	ADZS-BF561-EZLITE	VDSP-BLKFN-PC-FULL
2400	328	32-Bit	No	No	Yes	Yes/No	1.2	500	256-CSPBGA	ADSP-BF561SKBKCZ-5V-ND	46.63	43.52	40.41	ADZS-BF561-EZLITE	VDSP-BLKFN-PC-FULL
2400	328	32-Bit	No	No	Yes	Yes/No	1.2	600	256-CSPBGA	ADSP-BF561SKBKCZ-6V-ND	51.66	48.22	44.78	ADZS-BF561-EZLITE	VDSP-BLKFN-PC-FULL