

Because of an order from the United States International Trade Commission, BGA-packaged product lines and part numbers indicated here currently are not available from Freescale for import or sale in the United States prior to September 2010: MSC7116, MSC7118, MSC7119, DSP56311, DSP56321, DSP563xxEVM, MSC711xEVM, and MSC711xADS

Evaluation Boards and Development Kits			
	Description	Price	Location
DSP563xxEVM	Evaluation System for DSP563xx Family	\$400	www.freescale.com
MSC711xEVM	Evaluation System for MSC711x Family	\$349.40	www.freescale.com
MSC711xADS	Application Development System for MSC711x Family and MPC8272	\$2,494	www.freescale.com
MSC8122ADSE	Application Development System for MSC8122	\$3,994	www.freescale.com
MSC8126ADSE	Application Development System for MSC8126	\$3,994	www.freescale.com
MSC8144ADS	Application Development System for MSC8144	\$3,900	www.freescale.com
MSC8154ADS	Application Development System for MSC8154	\$3,900	www.freescale.com
MSC8156ADS	Application Development System for MSC8156	\$3,900	www.freescale.com

Reference Designs			
	Description	Price	Location
MSC8144AMC-SA	MSC8144 Advanced Mezzanine Card for AdvancedTCA® System Expansion	Consult partner	www.freescale.com
ATCA-9100	8144 AdvancedTCA Compute Processing Module	Consult partner	www.radisys.com

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DSP Product Summary



DSP Parametric Table

Device	Core Performance (16-bit MMACS)	Core Speed (MHz)	DSP Cores	I-Cache (per core) (KB)	D-Cache (per core) (KB)	L2 I-Cache (KB)	Boot ROM (KB)	M1 Memory (per core) (KB)	Shared M2 Memory (KB)	Shared M3 Memory (MB)	External Memory Interface	DMA Channels	CPM/QUICC Engine™	10/100 BT	Gigabit Ethernet (RGMII, SGMII)	I ² C	UART	Utopia L2	PCI	sRIO	SPI	TDM	GPIO	Timers	Max Frequency (MHz)	Bus Width (internal) (bit)	Bus Width (external) (bit)	Core Voltage (V)	I/O Voltage (V)	Host Port Interface (bit)	Low-Power Modes	Accelerators	Package	100 units S/R Lowest Speed and Package
StarCore® Multicore																																		
MSC8112	2,400	300	2	16	-	-	4	224	476	-	SIU/60x- Compatible System Bus	16	-	1	-	Yes	Yes	-	-	-	-	4	32	32	100	64, 128	32, 64	1.1	3.3	32, 64	Stop, wait	-	431-pin FC-PBGA	\$63.59
MSC8113	3,600 4,800	300 400	3	16	-	-	4	224	476	-	SIU/60x- Compatible System Bus	16	-	1	-	Yes	Yes	-	-	-	-	4	32	32	133	64, 128	32, 64	1.1	3.3	32, 64	Stop, wait	-	431-pin FC-PBGA	\$86.21
MSC8122	4,800 6,400 8,000	300 400 500	4	16	-	-	4	224	476	-	SIU/60x- Compatible System Bus	16	-	1	-	Yes	Yes	-	-	-	-	4	32	32	166	64, 128	32, 64	1.1, 1.2	3.3	32, 64	Stop, wait	-	431-pin FC-PBGA	\$105.72
MSC8126	6,400 8,000	400 500	4	16	-	-	4	224	476	-	SIU/60x- Compatible System Bus	16	-	1	-	Yes	Yes	-	-	-	-	4	32	32	166	64, 128	32, 64	1.2	3.3	32, 64	Stop, wait	TCOP, VCOP	431-pin FC-PBGA	\$122.02
MSC8144/ MSC8144E	12,800 16,000	800 1,000	4	16	32	128	96	-	512	10	DDR/DDR2 400 MHz	32	Dual RISC Cores	2	2	Yes	Yes	Yes	Yes	4x/1x	Yes	8	32	24	400	64, 128	16, 32	1	1.8/2.5/3.3	PCI 2.2	Stop, wait	-	783-pin FC-PBGA	\$139.51
MSC8154/ MSC8154E	32,000	1,000	4	32	32	512 (per core)	96	-	512 (per core)	1	DDR2/DDR3 800 MHz	16	Dual RISC Cores	2	2	Yes	Yes	-	Yes	2-4x/1x	Yes	Yes	32	16	400	64, 128	2-64, 128	1	1.0/1.5/1.8/2.5/3.3	PCI Express®	Stop, wait, power down	MAPLE-B, Turbo/Viterbi, FFT/iFFT, DFT/iDFT	783-pin FCPBGA	See Representative
MSC8156/ MSC8156E	48,000	1,000	6	32	32	512 (per core)	96	-	512 (per core)	1	DDR2/DDR3 800 MHz	16	Dual RISC Cores	2	2	Yes	Yes	-	Yes	2-4x/1x	Yes	Yes	32	16	400	64, 128	2-64, 128	1	1.0/1.5/1.8/2.5/3.3	PCI Express	Stop, wait, power down	MAPLE-B, Turbo/Viterbi, FFT/iFFT, DFT/iDFT	783-pin FCPBGA	See Representative

StarCore Low Cost																																		
MSC7116	1,000	266	1	16	-	-	8	192	-	-	DDR	32	-	1	-	Yes	Yes	-	-	-	software	2	46	8	133	128	16, 32	1.2	3.3	8, 16	Stop, wait	-	400-ball MAPBGA	\$40.85
MSC7119	1,200	300	1	16	-	-	8	256	-	-	DDR	32	-	1	-	Yes	Yes	-	-	-	software	2	46	8	150	128	16, 32	1.2	3.3	8, 16	Stop, wait	-	400-ball MAPBGA	\$47.52

Device	Core Performance (24-bit MMACS)	Core Speed (MHz)	DSP Cores	I-Cache (KB)	D-Cache	Total On-Chip SRAM (KB)	On-Chip SRAM (KB)	M2 Memory	External Memory Interface	DMA Channels	ESSI	SCI 1	GPIO	Timers	Bus Frequency (MHz)	Bus Width (internal) (bit)	Bus Width (external) (bit)	Core Voltage (V)	I/O Voltage (V)	Host Port Interface (bit)	Low-Power Modes	Accelerators	Package	100 units S/R Lowest Speed and Package	
24-bit																									
DSP56311	300 w/EFCOP	150	1	1	-	384	128K x 24	-	DRAM, SRAM	6	2	1	34	3	150	24	24	1.8	3.3	8	Stop	EFCOP	196-ball MAPBGA	\$26.84	
DSP56321	550 w/EFCOP	200, 220, 240, 275	1	1	-	576	196K x 24	-	SRAM	6	2	1	34	3	200, 220, 240, 275	24	24	1.6	3.3	8	Stop	EFCOP	196-ball MAPBGA	\$39.53	

Ecosystem Partners

Tools				
Freescale Semiconductor www.freescale.com/codewarrior	Lauterbach www.lauterbach.com	Tasking www.tasking.com		
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ArrayComm www.arraycomm.com	Encore Software www.ncoretch.com	Global IP Sound Inc. www.globalipsound.com	Ittiam www.ittiam.com	Vianix www.vianix.com
Libraries				
Freescale Semiconductor www.freescale.com/codewarrior				

Training			
Arnewsh Inc. www.arnewsh.com	Global IP Sound Inc. www.globalipsound.com	Ittiam www.ittiam.com	Multi Video Designs www.mvd-fpga.com
Design Services			
4Real AB www.4real.se	Celestica www.celestica.com	Mindteck UK. Ltd. www.mindteck.com	PA Consulting www.paconsulting.com
Allgo Embedded Systems www.allgosystems.com	GDA Technologies, Inc. www.gdatech.com	North Shore Circuit Design www.nshore.com	Phybit www.phybit.com
Arcent www.arcent.com	KTEC www.ktec.co.il	Nuvation Engineering www.nuvation.com	Solec www.solec.net
ASTC Design to Order www.astc-design.com			Spectrum Design Solutions Inc. www.spectrumdsi.com
			Time Domain Systems Inc. www.tdsysi.com
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Audio/Video Applications			
On2 Technologies Inc. www.on2.com			

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