



Automotive Microcontrollers and Microprocessors

8-, 16- and 32-bit devices

Automotive 8-bit S08 Microcontrollers

Device	Bus Frequency	Flash	RAM	EE-PROM	CAN	UART	SPI	IC	SLIC	Analog (ADC)	Timer	Clock	Additional Features	Operating Voltage	Temp. Range	Package Options	In Production
S08DZ128	20 MHz	128 KB	8 KB	Up to 2 KB	1	2 x SCI	2	2		24-ch., 12-bit, 2 comparators	Up to 12-ch.	MCG (PLL, FLL, OSC)	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	48 LQFP, 64 LQFP, 100 LQFP	✓
S08DZ96	20 MHz	96 KB	6 KB	Up to 2 KB	1	2 x SCI	2	2		24-ch., 12-bit, 2 comparators	Up to 12-ch.	MCG (PLL, FLL, OSC)	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	48 LQFP, 64 LQFP, 100 LQFP	✓
S08DZ60	20 MHz	60 KB	4 KB	Up to 2 KB	1	2 x SCI	1	1		Up to 24-ch., 12-bit, 2 comparators	Up to 6-ch. + 2-ch.	MCG (PLL, FLL, OSC)	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	32 LQFP, 48 LQFP, 64 LQFP	✓
S08DZ48	20 MHz	48 KB	3 KB	Up to 1.5 KB	1	2 x SCI	1	1		Up to 24-ch., 12-bit, 2 comparators	Up to 6-ch. + 2-ch.	MCG (PLL, FLL, OSC)	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	32 LQFP, 48 LQFP, 64 LQFP	✓
S08DZ32	20 MHz	32 KB	2 KB	Up to 1 KB	1	2 x SCI	1	1		Up to 24-ch., 12-bit, 2 comparators	Up to 6-ch. + 2-ch.	MCG (PLL, FLL, OSC)	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	32 LQFP, 48 LQFP, 64 LQFP	✓
S08DZ16	20 MHz	16 KB	1 KB	Up to 512B	1	2 x SCI	1	1		Up to 16-ch., 12-bit, 2 comparators	Up to 6-ch. + 2-ch.	MCG (PLL, FLL, OSC)	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	32 LQFP, 48 LQFP	✓
S08DV128	20 MHz	128 KB	6 KB		1	2 x SCI	2	2		24-ch., 12-bit, 2 comparators	Up to 12-ch.	MCG (PLL, FLL, OSC)	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	48 LQFP, 64 LQFP, 100 LQFP	✓
S08DV96	20 MHz	96 KB	4 KB		1	2 x SCI	2	2		24-ch., 12-bit, 2 comparators	Up to 12-ch.	MCG (PLL, FLL, OSC)	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	48 LQFP, 64 LQFP, 100 LQFP	✓
S08DV60	20 MHz	60 KB	3 KB		1	2 x SCI	1	1		Up to 16-ch., 12-bit, 2 comparators	Up to 6-ch. + 2-ch.	MCG (PLL, FLL, OSC)	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	32 LQFP, 48 LQFP, 64 LQFP	✓
S08DV48	20 MHz	48 KB	2 KB		1	2 x SCI	1	1		Up to 16-ch., 12-bit, 2 comparators	Up to 6-ch. + 2-ch.	MCG (PLL, FLL, OSC)	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	32 LQFP, 48 LQFP, 64 LQFP	✓
S08DV32	20 MHz	32 KB	2 KB		1	2 x SCI	1	1		Up to 16-ch., 12-bit, 2 comparators	Up to 6-ch. + 2-ch.	MCG (PLL, FLL, OSC)	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	32 LQFP, 48 LQFP, 64 LQFP	✓
S08DV16	20 MHz	16 KB	1 KB		1	1 x SCI	1	1		Up to 16-ch., 12-bit, 2 comparators	Up to 6-ch. + 2-ch.	MCG (PLL, FLL, OSC)	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	32 LQFP, 48 LQFP	✓
S08DN60	20 MHz	60 KB	2 KB	Up to 2 KB		1 x SCI	1	1		Up to 16-ch., 12-bit, 2 comparators	Up to 6-ch. + 2-ch.	MCG (PLL, FLL, OSC)	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	32 LQFP, 48 LQFP, 64 LQFP	✓
S08DN48	20 MHz	48 KB	2 KB	Up to 1.5 KB		1 x SCI	1	1		Up to 16-ch., 12-bit, 2 comparators	Up to 6-ch. + 2-ch.	MCG (PLL, FLL, OSC)	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	32 LQFP, 48 LQFP, 64 LQFP	✓
S08DN32	20 MHz	32 KB	1 KB	Up to 1 KB		1 x SCI	1	1		Up to 16-ch., 12-bit, 2 comparators	Up to 6-ch. + 2-ch.	MCG (PLL, FLL, OSC)	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	32 LQFP, 48 LQFP, 64 LQFP	✓
S08DN16	20 MHz	16 KB	512B	Up to 512B		1 x SCI	1	1		Up to 16-ch., 12-bit, 2 comparators	Up to 6-ch. + 2-ch.	MCG (PLL, FLL, OSC)	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	32 LQFP, 48 LQFP	✓
S08AW60	20 MHz	60 KB	2 KB			2 x SCI	1	1		Up to 16-ch., 10-bit	Up to 6-ch. + 2-ch.	ICG	40 MHz CPU, KBI, ICE, BDM, Temp Sensor	2.7 to 5.5	C, V, M	64 QFP, 64 LQFP, 48 QFN, 44 LQFP	✓
S08AW48	20 MHz	48 KB	2 KB			2 x SCI	1	1		Up to 16-ch., 10-bit	Up to 6-ch. + 2-ch.	ICG	40 MHz CPU, KBI, ICE, BDM, Temp Sensor	2.7 to 5.5	C, V, M	64 QFP, 64 LQFP, 48 QFN, 44 LQFP	✓
S08AW32	20 MHz	32 KB	2 KB			2 x SCI	1	1		Up to 16-ch., 10-bit	Up to 6-ch. + 2-ch.	ICG	40 MHz CPU, KBI, ICE, BDM, Temp Sensor	2.7 to 5.5	C, V, M	64 QFP, 64 LQFP, 48 QFN, 44 LQFP	✓
S08AW16A	20 MHz	16 KB	1 KB			2 x SCI	1	1		Up to 8-ch., 10-bit	Up to 4-ch. + 2-ch.	ICG	40 MHz CPU, KBI, ICE, BDM, Temp Sensor	2.7 to 5.5	C, V, M	48 QFN, 44 QFP, 32 LQFP	✓
S08EL32	20 MHz	32 KB	1 KB	Up to 512B		1 x SCI	1	1	1	Up to 16-ch., 10-bit, 2 comparators	4-ch. + 2-ch.	ICS	LIN Auto-Baud/Synch, 40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	28 TSSOP, 20 TSSOP	✓
S08EL16	20 MHz	16 KB	1 KB	Up to 512B		1 x SCI	1	1	1	Up to 16-ch., 10-bit, 2 comparators	4-ch. + 2-ch.	ICS	LIN Auto-Baud/Synch, 40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	28 TSSOP, 20 TSSOP	✓
S08SL16	20 MHz	16 KB	512B	Up to 256B		1 x SCI	1	1	1	Up to 16-ch., 10-bit, 1 comparator	2-ch. + 2-ch.	ICS	LIN Auto-Baud/Synch, 40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	28 TSSOP, 20 TSSOP	✓
S08SL8	20 MHz	8 KB	512B	Up to 256B		1 x SCI	1	1	1	Up to 16-ch., 10-bit, 1 comparator	2-ch. + 2-ch.	ICS	LIN Auto-Baud/Synch, 40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	28 TSSOP, 20 TSSOP	✓
S08SG32	20 MHz	32 KB	1 KB			1 x SCI	1	1		Up to 16-ch., 10-bit, 1 comparator	2-ch. + 2-ch.	ICS	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M, J, W	28 TSSOP, 20 TSSOP, 16 TSSOP	✓
S08SG16	20 MHz	16 KB	1 KB			1 x SCI	1	1		Up to 16-ch., 10-bit, 1 comparator	2-ch. + 2-ch.	ICS	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M, J, W	28 TSSOP, 20 TSSOP, 16 TSSOP	✓
S08SG8	20 MHz	8 KB	512B			1 x SCI	1	1		Up to 12-ch., 10-bit, 1 comparator	Up to 2-ch. + 2-ch.	ICS	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	20 TSSOP, 16 TSSOP, 8 SOIC	✓
S08SG4	20 MHz	4 KB	256B			1 x SCI	1	1		Up to 12-ch., 10-bit, 1 comparator	Up to 2-ch. + 2-ch.	ICS	40 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	20 TSSOP, 16 TSSOP, 8 SOIC	✓
S08LG32	20 MHz	32 KB	2 KB			2 x SCI	1	1		Up to 16-ch., 12-bit	Up to 2-ch. + 6-ch.	ICS	40 MHz CPU, Up to 37x8/41x4 LCD Driver, Watchdog OSC/Timer, RTC, KBI, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V	80 LQFP, 64 LQFP, 48 LQFP	✓
S08LG16	20 MHz	18 KB	2 KB			2 x SCI	1	1		Up to 16-ch., 12-bit	Up to 2-ch. + 6-ch.	ICS	40 MHz CPU, Up to 29x8/33x4 LCD Driver, Watchdog OSC/Timer, RTC, KBI, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V	64 LQFP, 48 LQFP	✓
S08MP16	20 MHz	16 KB	1 KB			1 x SCI	1	1		13-ch., 12-bit, 3 comparators	6-ch. + 2 ch., 16-bit FlexTimer with PWM functions	ICS	40 MHz CPU, PGA, PDB (x2), MTIM, RTC, POR, KBI, COP, CRC, ICE, BDM, 5-bit DAC (3x), Temp Sensor	2.7 to 5.5	C, V, M	48 LQFP	✓
S08QD4	8 MHz	4 KB	256B							4-ch., 10-bit	2-ch. + 1-ch.	ICS	16 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	8 SOIC	✓
S08QD2	8 MHz	2 KB	128B							4-ch., 10-bit	2-ch. + 1-ch.	ICS	16 MHz CPU, Watchdog OSC/Timer, COP, LVI, ICE, BDM, POR, KBI, Temp Sensor	2.7 to 5.5	C, V, M	8 SOIC	✓

Automotive 16-bit S12(X) Microcontrollers

Device	Bus Frequency	Flash	RAM	Data Flash	EE-PROM	XGATE	MPU	ECC	FlexRay	CAN	SCI	SPI	IC	Analog (ADC)	PWM	Motor	SSD	ECT	Timer	PIT	LCD	KWU	EBI	Operating Voltage	Temp. Range	Package Options	In Production
S12XEP100	50 MHz	1 MB	64 KB		4 KB	✓	✓	✓		5	8	3	2	2 x 16-ch., 12-bit	8-ch., 8-bit			8-ch., 16-bit	8-ch., 16-bit	8-ch.		25	✓	3.13 to 5.5	C, V, M	112 LQFP, 144 LQFP, 208 MAPBGA	✓
S12XEP768	50 MHz	768 KB	48 KB		4 KB	✓	✓	✓		5	8	3	2	2 x 16-ch., 12-bit	8-ch., 8-bit			8-ch., 16-bit	8-ch., 16-bit	8-ch.		25	✓	3.13 to 5.5	C, V, M	112 LQFP, 144 LQFP, 208 MAPBGA	✓
S12XEQ512	50 MHz	512 KB	32 KB		4 KB	✓	✓	✓		4	6	3	2	2 x 12-ch., 12-bit	8-ch., 8-bit			8-ch., 16-bit	8-ch.			25	✓	3.13 to 5.5	C, V, M	80 QFP, 112 LQFP, 144 LQFP	✓
S12XEQ384	50 MHz	384 KB	24 KB		4 KB	✓	✓	✓		4	4	3	2	2 x 12-ch., 12-bit	8-ch., 8-bit			8-ch., 16-bit	8-ch.			25	✓	3.13 to 5.5	C, V, M	80 QFP, 112 LQFP, 144 LQFP	✓
S12XET256	50 MHz	256 KB	16 KB		4 KB	✓	✓	✓		3	4	3	1	2 x 12-ch., 12-bit	8-ch., 8-bit			8-ch., 16-bit	4-ch.			25	✓	3.13 to 5.5	C, V, M	80 QFP, 112 LQFP, 144 LQFP	✓
S12XS256	40 MHz	256 KB	12 KB	8 KB		✓	✓	✓		1	2	1		16-ch., 12-bit	8-ch., 8-bit			8-ch., 16-bit	4-ch.			18	✓	3.13 to 5.5	C, V, M	64 LQFP, 80 QFP, 112 LQFP, KGD	✓
S12XS128	40 MHz	128 KB	8 KB	8 KB		✓	✓	✓		1	2	1		16-ch., 12-bit	8-ch., 8-bit			8-ch., 16-bit	4-ch.			18	✓	3.13 to 5.5	C, V, M	64 LQFP, 80 QFP, 112 LQFP, KGD	✓
S12XS64	40 MHz	64 KB	4 KB	4 KB		✓	✓	✓		1	2	1		16-ch., 12-bit	8-ch., 8-bit			8-ch., 16-bit	4-ch.			18	✓	3.13 to 5.5	C, V, M	64 LQFP, 80 QFP, 112 LQFP, KGD	✓
S12XF512	50 MHz	512 KB	32 KB		4 KB	✓	✓	✓	✓	1	2	2		16-ch., 12-bit	6-ch., 15-bit			8-ch., 16-bit	4-ch.			11	✓	3.13 to 5.5	C, V, M	112 LQFP, 64 LQFP	✓
S12XF384	50 MHz	384 KB	24 KB		4 KB	✓	✓	✓	✓	1	2	2		16-ch., 12-bit	6-ch., 15-bit			8-ch., 16-bit	4-ch.			11	✓	3.13 to 5.5	C, V, M	112 LQFP, 64 LQFP	✓
S12XF256	50 MHz	256 KB	20 KB		2 KB	✓	✓	✓	✓	1	2	2		16-ch., 12-bit	6-ch., 15-bit			8-ch., 16-bit	4-ch.			11	✓	3.13 to 5.5	C, V, M	112 LQFP, 64 LQFP	✓
S12XF128	50 MHz	128 KB	16 KB		2 KB	✓	✓	✓	✓	1	2	2		16-ch., 12-bit	6-ch., 15-bit			8-ch., 16-bit	4-ch.			11	✓	3.13 to 5.5	C, V, M	112 LQFP, 64 LQFP	✓
S12XH2512	40 MHz	512 KB	32 KB		4 KB	✓	✓	✓		2	2	1	2	16-ch., 10-bit	8-ch., 8-bit	24/6	6	8-ch., 16-bit	4-ch.	32 x 4	8	✓	4.5 to 5.5	C, V, M	112 LQFP, 144 LQFP	✓	
S12XH2384	40 MHz	384 KB	28 KB		4 KB	✓	✓	✓		2	2	1	2	16-ch., 10-bit	8-ch., 8-bit	24/6	6	8-ch., 16-bit	4-ch.	32 x 4	8	✓	4.5 to 5.5	C, V, M	112 LQFP, 144 LQFP	✓	
S12XH2256	40 MHz	256 KB	16 KB		4 KB	✓	✓	✓		2	2	1	2	16-ch., 10-bit	8-ch., 8-bit	24/6	6	8-ch., 16-bit	4-ch.	32 x 4	8	✓	4.5 to 5.5	C, V, M	112 LQFP, 144 LQFP	✓	
S12XDP512	40 MHz	512 KB	32 KB		4 KB	✓				5	6	3	2	8-ch. + 16-ch., 10-bit	8-ch., 8-bit			8-ch., 16-bit	4-ch.			24	✓	3.15 to 5.5	C, V, M	112 LQFP, 144 LQFP	✓
S12XDT512	40 MHz	512 KB	20 KB		4 KB	✓				3	6	3	1	8-ch. + 16-ch., 10-bit	8-ch., 8-bit			8-ch., 16-bit	4-ch.			24	✓	3.15 to 5.5	C, V,		

Automotive 32-bit MPC56xx Microcontrollers Built on Power Architecture® Technology

Device	Core Platform	Bus Frequency	Program Flash	SRAM	DMA	EEPROM	MPU/MMU	CTU	SCI (LINFlex)	DSPICAN	IC	FlexRay™	Ethernet (100BaseT)	MLB	eTPU	eMIOS	Motor Control Timers	PIT	Analog (ADC)	Operating Voltage	Temp. Range	Debug	Package Options	In Production
MPC5674F	e200z7	150, 200, 264 MHz	4 MB	256 KB	64-ch. + 32-ch.	Emulated in Program Flash	✓	✓	3	4 (MSB)	4	✓			2 x 32-ch.	32-ch.			Quad 64-ch. + 8 DECFIL	3.3V, 5V	M	Nexus 3+	324 BGA, 416 BGA, 516 BGA	✓
MPC5673F	e200z7	150, 200, 264 MHz	3 MB	192 KB	64-ch. + 32-ch.	Emulated in Program Flash	✓	✓	3	4 (MSB)	4	✓			2 x 32-ch.	32-ch.			Quad 64-ch. + 8 DECFIL	3.3V, 5V	M	Nexus 3+	324 BGA, 416 BGA, 516 BGA	✓
MPC5668G	e200z6 + e200z0	128 MHz	2 MB	592 KB	16-ch.	Emulated in Program Flash			6	4	6	4	✓	✓		16-ch., 24-bit		8-ch.	36-ch., 10-bit	3.3V, 5V	V	Nexus3 on z6 and Nexus 2+	208 MAPBGA	✓
MPC5634M	e200z3	60, 80 MHz	1.5 MB	94 KB	32-ch.	Emulated in Program Flash	8 Entry		2	2	2					32-ch.		5-ch.	Dual 34-ch., 12-bit	5V	M	Nexus 2+ Wide Trace Port in Vertical Calibration System	144 LQFP, 176 LQFP, 208 MAPBGA	✓
MPC5633M	e200z3	40, 60, 80 MHz	1 MB	64 KB	32-ch.	Emulated in Program Flash	8 Entry		2	2	2					32-ch.		5-ch.	Dual 34-ch., 12-bit	5V	M	Nexus 2+ Wide Trace Port in Vertical Calibration System	100 LQFP, 144 LQFP, 176 LQFP, 208 MAPBGA	✓
MPC5632M	e200z3	40, 60 MHz	768 KB	48 KB	32-ch.	Emulated in Program Flash	8 Entry		2	2	2					32-ch.		5-ch.	Dual 32-ch., 12-bit	5V	M	Nexus 2+ Wide Trace Port in Vertical Calibration System	100 LQFP, 144 LQFP	✓
MPC5643L	e200z4 x 2	80/120 MHz	1 MB	128 KB	16-ch.	64 KB Data Flash	16 Entry	✓	2	3	2	✓						4-ch.	Dual 16-ch., 12-bit	3.3V	M	Nexus 3+	144 LQFP, 257 MAPBGA	✓
MPC5607B	e200z0	64 MHz	1.5 MB	96 KB	16-ch.	64 KB Data Flash	8 Entry	✓	Up to 10	6	6	1				64-ch., 16-bit			16-ch., 10/12-bit + 32-ch., 10-bit	3.3V, 5V	C, V, M	Nexus 2+ (208MAPBGA Emulation Only Package) JTAG	176 LQFP	✓
MPC5606B	e200z0	64 MHz	1 MB	80 KB	16-ch.	64 KB Data Flash	8 Entry	✓	Up to 8	Up to 6	6	1				64-ch., 16-bit			16-ch., 10/12-bit + up to 32-ch., 10-bit	3.3V, 5V	C, V, M	Nexus 2+ (208MAPBGA Emulation Only Package) JTAG	144 LQFP, 176 LQFP	✓
MPC5605B	e200z0	64 MHz	768 KB	64 KB	16-ch.	64 KB Data Flash	8 Entry	✓	Up to 8	Up to 6	6	1				64-ch., 16-bit			16-ch., 10/12-bit + up to 32-ch., 10-bit	3.3V, 5V	C, V, M	Nexus 2+ (208MAPBGA Emulation Only Package) JTAG	100 LQFP, 144 LQFP, 176 LQFP	✓
MPC5604B	e200z0	64 MHz	512 KB	32 KB		64 KB Data Flash	8 Entry	✓	4	3	3	1				56-ch., 16-bit		Up to 6-ch.	Up to 36-ch., 10-bit	3.3V, 5V	C, V, M	Nexus 2+ (208MAPBGA Emulation Only Package) JTAG	100 LQFP, 144 LQFP	✓
MPC5603B	e200z0	64 MHz	384 KB	28 KB		64 KB Data Flash	8 Entry	✓	4	3	3	1				56-ch., 16-bit		Up to 6-ch.	Up to 36-ch., 10-bit	3.3V, 5V	C, V, M	Nexus 2+ (208MAPBGA Emulation Only Package) JTAG	100 LQFP, 144 LQFP	✓
MPC5602B	e200z0	64 MHz	256 KB	24 KB		64 KB Data Flash	8 Entry	✓	3	3	2	1				56-ch., 16-bit		Up to 6-ch.	Up to 36-ch., 10-bit	3.3V, 5V	C, V, M	Nexus 2+ (208MAPBGA Emulation Only Package) JTAG	100 LQFP, 144 LQFP	✓
MPC5604C	e200z0	64 MHz	512 KB	48 KB		64 KB Data Flash	8 Entry	✓	4	3	6	1				28-ch., 16-bit		3-ch.	28-ch., 10-bit	3.3V, 5V	C, V, M	Nexus 2+ (208MAPBGA Emulation Only Package) JTAG	100 LQFP	✓
MPC5603C	e200z0	64 MHz	384 KB	40 KB		64 KB Data Flash	8 Entry	✓	4	3	6	1				28-ch., 16-bit		3-ch.	28-ch., 10-bit	3.3V, 5V	C, V, M	Nexus 2+ (208MAPBGA Emulation Only Package) JTAG	100 LQFP	✓
MPC5602C	e200z0	64 MHz	256 KB	32 KB		64 KB Data Flash	8 Entry	✓	4	3	6	1				28-ch., 16-bit		3-ch.	28-ch., 10-bit	3.3V, 5V	C, V, M	Nexus 2+ (208MAPBGA Emulation Only Package) JTAG	100 LQFP	✓
MPC5604P	e200z0	40/64 MHz	512 KB	40 KB	16-ch.	64 KB Data Flash		✓	2	4	2	✓						20-ch. eTimer/PWM	4-ch. Dual 13-ch., 10-bit	3.3V, 5V	M	Nexus 2+	100 LQFP, 144 LQFP	✓
MPC5603P	e200z0	40/64 MHz	384 KB	36 KB	16-ch.	64 KB Data Flash		✓	2	4	2	✓						20-ch. eTimer/PWM	4-ch. Dual 13-ch., 10-bit	3.3V, 5V	M	Nexus 2+	100 LQFP, 144 LQFP	✓
MPC5602P	e200z0	40/64 MHz	256 KB	20 KB	16-ch.	64 KB Data Flash		✓	2	3	2							14-ch. eTimer/PWM	4-ch. 16-ch., 10-bit	3.3V, 5V	M	Nexus 1 (Emulation with MPC5604P)	64 LQFP, 100 LQFP	✓
MPC5601P	e200z0	40/64 MHz	192 KB	12 KB	16-ch.	64 KB Data Flash			1	1	1							6-ch. eTimer	4-ch. 11-ch., 10-bit	3.3V, 5V	M	Nexus 1 (Emulation with MPC5604P)	64 LQFP, 100 LQFP	✓

Device	Core Platform	Bus Frequency	Program Flash	SRAM	eDMA	Emulated EEPROM	TFT Drive	Stepper Drive	SCI (LINFlex)	DSPICAN	IC	LCD	Sound Generator	Memory Expansion	MPU	eMIOS	Timers	Analog (ADC)	Operating Voltage	Temp. Range	Debug	Package Options	In Production	
MPC5606S	e200z0h	64 MHz	1 MB	48 KB + 160 KB Graphics RAM	16-ch.	4 x 16 KB	DCU with PDI	6 gauges with SSD	2	3	2	4	40 x 4	Yes (using eMIOS)	QuadSPI	12 entry	2-ch.	RTC, API, 4-ch. 32-bit PIT and S/W watchdog timer	16-ch., 10-bit	3.3V, 5V	C, V, M	Nexus 2+	144 LQFP, 176 LQFP	✓
MPC5604S	e200z0h	64 MHz	512 KB	48 KB	16-ch.	4 x 16 KB	No	6 gauges with SSD	2	2	2	2	64 x 6	✓	12 entry	2-ch.	RTC, API, 4-ch. 32-bit PIT and S/W watchdog timer	16-ch., 10-bit	3.3V, 5V	C, V, M	Nexus 1	100 LQFP, 144 LQFP	✓	
MPC5602S	e200z0h	64 MHz	256 KB	24 KB	16-ch.	4 x 16 KB	No	6 gauges with SSD	2	3	1	2	64 x 6	✓	12 entry	2-ch.	RTC, API, 4-ch. 32-bit PIT and S/W watchdog timer	16-ch., 10-bit	3.3V, 5V	C, V, M	Nexus 1	100 LQFP, 144 LQFP	✓	

Automotive 32-bit MPC55xx Microprocessors Built on Power Architecture® Technology

Device	Core Platform	Bus Frequency	Program Flash	SRAM	DMA	EEPROM	eSCI	DSPICAN	IC	FlexRay	Ethernet (100BaseT)	MLB	External Bus	Debug	eTPU	eMIOS	PIT	Analog (ADC)	Operating Voltage	Temp. Range	Package Options	In Production
MPC5533	e200z3	40, 66, 80 MHz	768 KB	48 KB	32-ch.	Emulated in program Flash	1	2	2				✓	Nexus 3	32-ch.			40-ch., 12-bit	3.3V, 5V	M	208 MAPBGA, 324 PBGA	✓
MPC5534	e200z3	40, 66, 80 MHz	1 MB	64 KB	32-ch.	Emulated in program Flash	2	3	2				✓	Nexus 3	32-ch.	24-ch., 24-bit		40-ch., 12-bit	3.3V, 5V	M	208 MAPBGA, 324 PBGA	✓
MPC5553	e200z6	80, 112, 132 MHz	1.5 MB	64 KB	32-ch.	Emulated in program Flash	2	3	2		✓		✓	Nexus 3	32-ch.	24-ch., 24-bit		40-ch., 12-bit	3.3V, 5V	M	208 MAPBGA, 324 PBGA	✓
MPC5554	e200z6	80, 112, 132 MHz	2 MB	64 KB	64-ch.	Emulated in program Flash	2	4	3				✓	Nexus 3	2 x 32-ch.	24-ch., 24-bit		40-ch., 12-bit	3.3V, 5V	M	416 PBGA	✓
MPC5561	e200z6	80, 112, 132 MHz	1 MB	192 KB	32-ch.	Emulated in program Flash	4	2	2	✓			✓	Nexus 3		24-ch., 24-bit		40-ch., 12-bit	3.3V, 5V	C, M	324 PBGA	✓
MPC5565	e200z6	80, 112, 132 MHz	2 MB	80 KB	32-ch.	Emulated in program Flash	2	3	3				✓	Nexus 3	32-ch.	24-ch., 24-bit		40-ch., 12-bit	3.3V, 5V	M	324 PBGA	✓
MPC5566	e200z6	80, 112, 132, 144 MHz	3 MB	128 KB	64-ch.	Emulated in program Flash	2	4	4		✓		✓	Nexus 3	2 x 32-ch.	24-ch., 24-bit		40-ch., 12-bit	3.3V, 5V	C, M	416 PBGA	✓
MPC5567	e200z6	80, 112, 132 MHz	2MB	80 KB	32-ch.	Emulated in program Flash	2	3	5	✓	✓		Emulated via eTPU	Nexus 3	32-ch.	24-ch., 24-bit		40-ch., 12-bit	3.3V, 5V	C, M	324 PBGA, 416 PBGA	✓
MPC551x	e200z1 + optional e200z0	48-80 MHz	512 KB-1.5 MB	32-80 KB	16-ch.	Emulated in program Flash	6	3-4	5-6	1	Optional		Emulated via z0	Nexus 2+		24-ch., 16-bit		8-ch. 40-ch., 12-bit	5V	C, V, M	144 LQFP, 176 LQFP, 208 MAPBGA	✓

Automotive 32-bit MPC51xx and MPC52xx Microprocessors Built on Power Architecture® Technology

Device	Core Platform	Core Frequency	Cache	Audio Acceleration	DRAM Bandwidth	Bus System	Graphics Acceleration	Display Controller	Memory Interface	External Memory Bus	PSC	IC	CAN	USB 2.0	Secure Digital	Ethernet	Temp	Package	In Production
MPC5200B	e300	400 MHz, 760 MIPS	16K I/D	None	300 MBs	Single port	None	None	16/32-bit DDR-I	NOR Flash	6	2	2	2 (USB 1.1)		✓	C	272 TE-PBGA	✓
MPC5121e	e300	400 MHz, 800 MIPS	32K I/D	AXE, 200 MHz, 32-bit RISC	1100 MBs	5-port 64-bit @200 MHz	OpenGL-ES 1.1 OpenVG 1.0	1280 x 720 24-bit 3-plane blend	16/32-bit DDR-I/I and MobileDDR-I controller	8/16-bit NAND flash controller	12	3	4	2	MMCSDB	✓	C	516 PBGA	✓
MPC5123	e300	400 MHz, 800 MIPS	32K I/D	AXE, 200 MHz, 32-bit RISC	1100 MBs	5-port 64-bit @200 MHz	None	1280 x 720 24-bit 3-plane blend	16/32-bit DDR-I/I and MobileDDR-I controller	8/16-bit NAND flash controller	12	3	4	2	MMCSDB	✓	C	516 PBGA	✓

Automotive 32-bit i.MX ARM® Microprocessors

Device	Core Platform	Core Frequency	Cache	SRAM	DMA	Video Accelerator	Graphics Accelerator	Image Processor	Camera Input	Display Interface	DRAM Support	Flash Support	USB (2.0)	CAN	MLB	SD/MMC/SDIO	IC	SPI	UART	Ethernet (100 BaseT)	HDD Interface	SSI/I ² S	Sample Rate Converter	SP-DIF I/O	PIT	3.3V GPIO	Voltage	Temp. Range	Package Options	In Production
i.MX251	ARM926™	400 MHz	L1: 16 KB/16 KB I/D	128 KB	32 -ch.						SDRAM, mDDR, DDR2	NOR, SLC NAND MLC NAND	HS OTG+HS Phy HS Host+FS Phy or ext. HS Phy	2		2	3	3	5	✓	ATA-6	2+ ESAI		4	✓	1.38V to 1.52V	C	400 MAPBGA	✓	
i.MX255	ARM926	400 MHz	L1: 16 KB/16 KB I/D	128 KB	32 -ch.				CCIR656	TFT up to SVGA	SDRAM, mDDR, DDR2	NOR, SLC NAND MLC NAND	HS OTG+HS Phy HS Host+FS Phy or ext. HS Phy	2		2	3	3	5	✓	ATA-6	2+ ESAI		4	✓	1.38V to 1.52V	C	400 MAPBGA	✓	
i.MX351	ARM1136™ with Vector Floating Point	532 MHz	L1: 16 KB/16 KB I/D, L2: 128 KB Unified	128 KB	32 -ch.						SDRAM, mDDR, DDR2	NOR, SLC NAND MLC NAND	HS OTG+HS Phy HS Host+FS Phy or ext. HS Phy	2	✓	3	3	2	3	✓	ATA-6	2+ ESAI	Yes, asynchronous	Yes	3	✓	1.22V to 1.47V	C	400 MAPBGA	✓
i.MX355	ARM1136 with Vector Floating Point	532 MHz	L1: 16 KB/16 KB I/D, L2: 128 KB Unified	128 KB	32 -ch.			✓	CCIR656	TFT up to SVGA	SDRAM, mDDR, DDR2	NOR, SLC NAND MLC NAND	HS OTG+HS Phy HS Host+FS Phy or ext. HS Phy	2	✓	3	3	2	3	✓	ATA-6	2+ ESAI	Yes, asynchronous	Yes	3	✓	1.22V to 1.47V	C	400 MAPBGA	✓
i.MX356	ARM1136 with Vector Floating Point	532 MHz	L1: 16 KB/16 KB I/D, L2: 128 KB Unified	128 KB	32 -ch.			✓	CCIR656	TFT up to SVGA	SDRAM, mDDR, DDR2	NOR, SLC NAND MLC NAND	HS OTG+HS Phy HS Host+FS Phy or ext. HS Phy	2	✓	3	3	2	3	✓	ATA-6	2+ ESAI	Yes, asynchronous	Yes	3	✓	1.22V to 1.47V	C	400 MAPBGA	✓
i.MX514	ARM Cortex™-A8 with VPU and NEON	600 MHz	L1: 32 KB/32 KB I/D, L2: 256 KB Unified	96 KB	32 -ch.			✓	CCIR656	WXGA, Dual TFT	mDDR, DDR2	NOR, SLC NAND MLC NAND	HS OTG+HS Phy and 3x HS Host	4	3	2	3	3	✓	ATA-6	3		Yes (Tx)	3	✓	0.95V to 1.10V	C	529 MAPBGA	✓	
i.MX516	ARM Cortex A8 with VPU and NEON	600 MHz	L1: 32 KB/32 KB I/D, L2: 256 KB Unified	96 KB	32 -ch.	D1 encode, HD720 decode		✓	CCIR656	WXGA, Dual TFT	mDDR, DDR2	NOR, SLC NAND MLC NAND	HS OTG+HS Phy and 3x HS Host	4	3	2	3	3	✓	ATA-6	3		Yes (Tx)	3	✓	0.95V to 1.10V	C	529 MAPBGA	✓	

Acronym Legend

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