

NXP AUTOMOTIVE PROCESSORS — PRODUCT MAP



GENERAL PURPOSE MCUs BUILT ON Arm® CORTEX®-M TECHNOLOGY SUPPORTS ASIL-B/D SAFETY

Device	Core	Frequency	Flash	RAM	ECC	EEPROM	FOTA	MPU	DMA	Security	CRC	UART/LIN	SPI	CAN / ISO CAN-FD	I ² C	PC	FlexIO	Ethernet 100MBit	Serial Audio Interface (SAI)	External Memory Interface	Timer	Other	ADC 12 bit	Operating Voltage	Temp. Range	Debug	Package Options
*S32K358	M7 Lockstep + M7	240 MHz	8 MB	1152 KB	Flash + RAM	-	A/B Swap; Rollback (HW); automatic address translation	1	32-ch	HSE-B	1	16	6	8	2	1	32-ch	1	2	Quad SPI	eMIOS (3)	LCU, BCTU	3x 24ch	3.3V, 5V, or split	V,M	SWD, SWO, JTAG	172 MaxQFP, 289 MAPBGA
*S32K348	M7 Lockstep	160 MHz	8 MB	1152 KB	Flash + RAM	-	A/B Swap; Rollback (HW); automatic address translation	1	32-ch	HSE-B	1	16	6	8	2	1	32-ch	1	2	Quad SPI	eMIOS (3)	LCU, BCTU	3x 24ch	3.3V, 5V, or split	V,M	SWD, SWO, JTAG	172 MaxQFP, 289 MAPBGA
*S32K338	3x M7	240 MHz	8 MB	1152 KB	Flash + RAM	-	A/B Swap; Rollback (HW); automatic address translation	1	32-ch	HSE-B	1	16	6	8	2	1	32-ch	1	2	Quad SPI	eMIOS (3)	LCU, BCTU	3x 24ch	3.3V, 5V, or split	V,M	SWD, SWO, JTAG	172 MaxQFP, 289 MAPBGA
*S32K328	2x M7	160 MHz	8 MB	1152 KB	Flash + RAM	-	A/B Swap; Rollback (HW); automatic address translation	1	32-ch	HSE-B	1	16	6	8	2	1	32-ch	1	2	Quad SPI	eMIOS (3)	LCU, BCTU	3x 24ch	3.3V, 5V, or split	V,M	SWD, SWO, JTAG	172 MaxQFP, 289 MAPBGA
S32K344	M7 Lockstep	160 MHz	4 MB	512 KB	Flash + RAM	-	A/B Swap; Rollback (HW); automatic address translation	1	32-ch	HSE-B	1	16	6	6	2		32-ch	1	2	Quad SPI	eMIOS (3)	LCU, BCTU	3x 24ch	3.3V, 5V, or split	V,M	SWD, SWO, JTAG	172 MaxQFP, 257 MAPBGA
S32K342	M7 Lockstep	160 MHz	2 MB	256 KB	Flash + RAM	-	A/B Swap; Rollback (HW); automatic address translation	1	32-ch	HSE-B	1	4	4	4	2	1	32-ch	1	2	Quad SPI	eMIOS (2)	LCU, BCTU	2x 24ch	3.3V, 5V, or split	V,M	SWD, SWO, JTAG	100/172 MaxQFP
S32K341	M7 Lockstep	160 MHz	1 MB	256 KB	Flash + RAM	-	A/B Swap; Rollback (HW); automatic address translation	1	32-ch	HSE-B	1	16	4	4	2	1	32-ch	1	2	Quad SPI	eMIOS (3)	LCU, BCTU	3x 24ch	3.3V, 5V, or split	V,M	SWD, SWO, JTAG	100/172 MaxQFP
S32K324	2x M7	160 MHz	4 MB	512 KB	Flash + RAM	-	A/B Swap; Rollback (HW); automatic address translation	1	32-ch	HSE-B	1	16	6	6	2		32-ch	1	2	Quad SPI	eMIOS (3)	LCU, BCTU	3x 24ch	3.3V, 5V, or split	V,M	SWD, SWO, JTAG	172 MaxQFP, 257 MAPBGA
S32K322	2x M7	160 MHz	2 MB	256 KB	Flash + RAM	-	A/B Swap; Rollback (HW); automatic address translation	1	32-ch	HSE-B	1	4	4	4	2	1	32-ch	1	2	Quad SPI	eMIOS (2)	LCU, BCTU	2x 24ch	3.3V, 5V, or split	V,M	SWD, SWO, JTAG	100/172 MaxQFP
S32K314	M7	160 MHz	4 MB	512 KB	Flash + RAM	-	A/B Swap; Rollback (HW); automatic address translation	1	32-ch	HSE-B	1	16	6	6	2		32-ch	1	2	Quad SPI	eMIOS (3)	LCU, BCTU	3x 24ch	3.3V, 5V, or split	V,M	SWD, SWO, JTAG	172 MaxQFP, 257 MAPBGA
S32K312	M7	120 MHz	2 MB	192 KB	Flash + RAM	-	A/B Swap; Rollback (HW); automatic address translation	1	12-ch	HSE-B	1	8	4	6	2	1	32-ch				eMIOS (2)	LCU, BCTU	2x 24ch	3.3V, 5V, or split	V,M	SWD, SWO, JTAG	100/172 MaxQFP
S32K311	M7	120 MHz	1 MB	128 KB	Flash + RAM	-	A/B Swap; Rollback (HW); automatic address translation	1	12-ch	HSE-B	1	4	4	3	2	1	16-ch				eMIOS (2)	LCU, BCTU	2x 24ch	3.3V, 5V, or split	V,M	SWD, SWO, JTAG	48 LQFP, 100 MaxQFP
S32K148	M4F	112 MHz	2 MB	256 KB	Flash + RAM	4 KB emulated	A/B Swap** + Rollback (SW)	1	16-ch.	CSEc	1	3	3	3 / 3	2		1	1x IEEE-1588 MAC w/ Timestamping	2 modules (I ² S, TDM, AC97)	1x QuadSPI w/ HyperBus	FlexTimer (8)	PDB	2 x 32-ch.	2.7 - 5.5	V,M	SWD, SWO, JTAG	100, 144, 176 LQFP, 100 MAPBGA
S32K146	M4F	112 MHz	1 MB	128 KB	Flash + RAM	4 KB emulated	A/B Swap** + Rollback (SW)	1	16-ch.	CSEc	1	3	3	3 / 2	1		1				FlexTimer (6)	PDB	2 x 24-ch.	2.7 - 5.5	V,M	SWD, SWO, JTAG	64, 100, 144 LQFP; 100 MAPBGA
S32K144	M4F	112 MHz	512 KB	64 KB	Flash + RAM	4 KB emulated	Rollback (SW)	1	16-ch.	CSEc	1	3	3	3 / 1, *2/2	1		1				FlexTimer (4)	PDB	2 x 16-ch.	2.7 - 5.5	V,M,*W	SWD, SWO, JTAG	48, 64, 100 LQFP, 100 MAPBGA
S32K142	M4F	112 MHz	256 KB	32 KB	Flash + RAM	4 KB emulated	Rollback (SW)	1	16-ch.	CSEc	1	2	2	2 / 1, *2/2	1		1				FlexTimer (4)	PDB	2 x 16-ch.	2.7 - 5.5	V,M,*W	SWD, SWO, JTAG	48, 64, 100 LQFP
S32K118	M0+	48 MHz	256 KB	25 KB	Flash + RAM	2 KB emulated	Rollback (SW)	1	4-ch.	CSEc	1	2	2	1 / 1	1		1				FlexTimer (2)	PDB	1 x 16-ch.	2.7 - 5.5	V,M	SWD	48, 64 LQFP
S32K116	M0+	48 MHz	128 KB	17 KB	Flash + RAM	2 KB emulated	Rollback (SW)	1	4-ch.	CSEc	1	2	1	1 / 1	1		1				FlexTimer (2)	PDB	1 x 13-ch.	2.7 - 5.5	V,M	SWD	32 QFN, 48 LQFP
KEAZ128	M0+	48 MHz	128 KB	16 KB		Emulated					1	3	2	1	2							6-ch. + 2-ch. + 2-ch.	1 x 16-ch.	2.7 - 5.5	C,V,M	SWD	64 LQFP, 80 LQFP
KEAZ64	M0+	48 MHz	64 KB	8 KB		Emulated					1	3	2	1	2							6-ch. + 2-ch. + 2-ch.	1 x 16-ch.	2.7 - 5.5	C,V,M	SWD	64 LQFP, 80 LQFP
KEAZN32	M0+	40 MHz	32 KB	4 KB		256 B					1	3	2		2							6-ch. + 2-ch. + 2-ch.	1 x 16-ch.	2.7 - 5.5	C,V,M	SWD	32 LQFP, 64 LQFP
KEAZN64	M0+	40 MHz	64 KB	4 KB		256 B					1	3	2		2							6-ch. + 2-ch. + 2-ch.	1 x 16-ch.	2.7 - 5.5	C,V,M	SWD	32 LQFP, 64 LQFP
KEAZN16	M0+	40 MHz	16 KB	2 KB		256 B					1	3	2		2							6-ch. + 2-ch. + 2-ch.	1 x 16-ch.	2.7 - 5.5	C,V,M	SWD	32 LQFP, 64 LQFP
KEAZN8	M0+	48 MHz	8 KB	1 KB		Emulated					1	1	1		1							6-ch. + 2-ch.	1 x 12-ch.	2.7 - 5.5	C,V,M	SWD	16 TSSOP, 24 QFN

*Feature set under evaluation and subject to change

**Without HW swap support, code compiled as position independent code

Temperature Legend

C = -40°C TO +85°C M = -40°C TO +125°C

V = -40°C TO +105°C W = -40°C TO +150°C



MagniV® INTEGRATED SOLUTIONS — MCU + VREG. + CAN PHY / LIN PHY / GATE DRIVE UNIT SUPPORTING ASIL B SAFETY

Device	Bus Frequency	Flash	RAM	EEPROM	ECC	CAN	CAN-PHY	SCI	LIN-PHY	SPI	I ² C	Ext. Analog (ADC)	PWM	Timer	KWU	Motor	High-Voltage Input	Other Analog	Vreg	Ext. Supply	Operating Voltage	Temp Range	Packaging Options
S12ZVCA	32 MHz	64-192 KB	4-12 KB	1-2 KB	Flash+RAM	1	1	2		1-2	1	10-16-ch. 12-bit	8-ch. 8-bit or 4-ch. 16-bit	8+4-ch. 16-bit	34		2-ch. HVI, VSUPSense	2-ch. ACMP, DAC/OpAmp, 4-ch. NGPIO(5V/25mA)	2	5 V/20 mA + CAN-supply	5.5 to 18 (max 40V)	C, V, M, W	48 LQFP, 64 LQFP-EP
S12ZVC	32 MHz	64-192 KB	4-12 KB	1-2 KB	Flash+RAM	1	1	2		1-2	1	10-16-ch. 10-bit	8-ch. 8-bit or 4-ch. 16-bit	8+4-ch. 16-bit	34		2-ch. HVI, VSUPSense	4-ch. NGPIO (5V/25mA)	2	5 V/20 mA + CAN-supply	5.5 to 18 (max 40V)	C, V, M, W	48 LQFP, 64 LQFP-EP
S12ZVLA	32 MHz	64-128 KB	4-8 KB	1-2 KB	Flash+RAM	1		2	1	1	1	6-10-ch. 12-bit	8-ch. 8-bit or 8-ch. 16-bit	6+2-ch. 16-bit	23		1-ch. HVI, VSUPSense	3-ch. NGPIO (5V/25mA),1-ch. ACMP, DAC/OpAmp, PGA	1	5 V/20 mA	3.5 to 18 (max 40V)	C, V, M, W	48-LQFP,32-LQFP, 32-QFN
S12ZVL	32 MHz	8-128 KB	1-8 KB	0.1-2 KB	Flash+RAM	0-1		2	1	1	1	6-10-ch. 10 bit	8-ch. 8-bit or 4-ch. 16-bit	6+2-ch. 16-bit	23		1-ch. HVI, VSUPSense	3-ch. NGPIO (5 V/25 mA)	1	5 V/20 mA	3.5 to 18 (max 40V)	C, V, M, W	48 LQFP, 32 LQFP, 32 QFN
S12ZVLS	32 MHz	16-32 KB	1 KB	128 KB	Flash+RAM			2	1	1	1	6-ch. 10-bit	8-ch. 8-bit or 4-ch. 16-bit	6+2-ch. 16-bit	15		1-ch. HVI, VSUPSense	3-ch. NGPIO (5V/25mA)	1	5 V/20 mA	5.5 to 18 (max 40V)	C, V, M	32 QFN
S12ZVMC256	50 MHz	256KB	32kB	1KB	Flash+RAM	1	1	2				8+8-ch. 12-bit	6-ch. 15-bit, 8-ch. 8-bit or 4-ch. 16-bit	4+2-ch. 16-bit	18	PMSM/BLDC/SRM/DC	1-ch. HVI, VSUPSense	6-ch. Gate Drive Unit, 2x Current Sensing	4	5 V/20 mA + CAN-supply + 2x Ext.	3.5 to 18 (max 40V)	V, M, W	80 LQFP-EP
S12ZVML	50 MHz	32-128 KB	4-8 KB	0.1-0.5KB	Flash+RAM	0-1		1-2	1	1		4+5-ch. 12-bit	6-ch., 15-bit	4-ch. 16-bit	18	PMSM/BLDC/DC	VSUP Sense	6-ch. Gate Drive Unit, 2x Current Sensing	1	5 V/20 mA	3.5 to 18 (max 40V)	V, M, W	48 LQFP-EP, 64 LQFP-EP
S12ZVMC	50 MHz	64-128 KB	4-8 KB	512 B	Flash+RAM	1		2				4+5-ch. 12-bit	6-ch., 15-bit	4-ch. 16-bit	18	PMSM/BLDC/DC	VSUP Sense	6-ch. Gate Drive Unit, 2x Current Sensing	2	5 V/20 mA + CAN-supply	3.5 to 18 (max 40V)	V, M, W	64 LQFP-EP
S12ZVM	50 MHz	16-32 KB	2-4 KB	128 B	Flash+RAM			1-2				4+5-ch. 12-bit	6-ch., 15-bit	4-ch. 16-bit	18	PMSM/BLDC/DC	VSUP Sense	6-ch. Gate Drive Unit, 2x Current Sensing, HV-PHY (PWM)	1	5 V/20 mA	3.5 to 18 (max 40V)	V, M, W	64 LQFP-EP, 48 LQFP-EP
S12ZVMB	32 MHz	48-64 KB	4 KB	512 B	Flash+RAM			2	1	1		5-9-ch. 10-bit	6-ch., 15-bit	4+4ch. 16-bit	17	DC (bidirectional, H-Bridge)	VSUP Sense	4-ch. Gate Drive Unit, Current Sensing	1	5 V/20 mA	5.5 to 18 (max 40V)	V, M, W	64 LQFP, 48 LQFP
S12ZVMA	32 MHz	16-32 KB	1-2 KB	128 B	Flash+RAM			1	1	1		8-ch. 10-bit	6-ch., 15-bit	2+2ch. 16-bit	17	DC (unidirectional, Half-Bridge)	VSUP Sense	2-ch. Gate Drive Unit, Current Sensing, NGPIO (5V/25mA)	1	5 V/20 mA	3.5 to 18 (max 40V)	V, M, W	32 LQFP, 48 LQFP
S12VR	25 MHz	16-64 KB	2 KB	0.1-0.5 kB	Flash			1-2	1	1		2-6 ch. 10-bit	8-ch. 8-bit or 4-ch. 16-bit	4-ch. 16-bit	16	DC (bidirectional, relay)	4-ch. HVI, VBATsense, VSUP Sense	1-2ch. high-side	1	5 V/20 mA	5.5 to 18 (max 40V)	C, V, M	32 LQFP, 48 LQFP
S12VRP	25 MHz	48-64 KB	6 KB	2 - 4 KB	Flash			1-2	1			6-ch. 10-bit	8-ch. 8-bit or 4-ch. 16-bit	2+2-ch. 16-bit	16	DC (bidirectional, relay)	4-ch. HVI, VBATsense, VSUP Sense	1-ch. general low-side, 2-ch.high-side	1	5 V/20 mA	5.5 to 18 (max 40V)	C, V, M	32 LQFP, 48 LQFP
S12ZVH	32 MHz	64-128 KB	4-8 KB	4 KB	Flash+RAM	1	1	2			1	8-ch. 10-bit	8-ch. 8-bit or 4-ch. 16-bit	8+8ch. 16-bit	24	4 Stepper	VBAT Sense, VSUP Sense	40 X 4 LCD, Simple Sound Generator, RTC	2		5.5 to 18 (max 40V)	C, V	100 LQFP, 144 LQFP
S12ZVHY	32 MHz	32-64 KB	2-4 KB	2 KB	Flash+RAM	1		2			1	8-ch. 10-bit	8-ch. 8-bit or 4-ch. 16-bit	8+8ch. 16-bit	24	2 Stepper	VBAT Sense, VSUP Sense	40 X 4 LCD, Simple Sound Generator, RTC	1		5.5 to 18 (max 40V)	C, V	100 LQFP, 144 LQFP
S12ZVHL	32 MHz	64 KB	4 KB	2 KB	Flash+RAM	1		2	1	1	1	8-ch. 10-bit	8-ch. 8-bit or 4-ch. 16-bit	8+8ch. 16-bit	24	2 Stepper	VBAT Sense, VSUP Sense	40 X 4 LCD, Simple Sound Generator, RTC	1		5.5 to 18 (max 40V)	C, V	100 LQFP, 144 LQFP
S12ZVFP	32 MHz	64 KB	4 KB	2 KB	Flash+RAM	1		2	1	1	1	8-ch. 10-bit	8-ch. 8-bit or 4-ch. 16-bit	8+8ch. 16-bit	24		VBAT Sense, VSUP Sense	40 X 4 LCD, Simple Sound Generator, RTC	1		5.5 to 18 (max 40V)	C, V	100 LQFP, 144 LQFP

16-bit S12 MagniV MCUs (Integrated MCU + PHY/GDU) Supports ASIL B Safety

VISION MPUs BUILT ON Arm CORTEX-A TECHNOLOGY AND SUPPORTS ASIL B/C SAFETY

Device	Core Platform	Core Frequency	Cache	SRAM	DMA	Video Accelerator	Graphics Accelerator	Image Processor	Camera Input	Display Interface	DRAM Support	External Memory Interface	CAN	SD/MMC SDIO	I ² C	SPI	UART	Ethernet	PIT	3.3 V GPIO	Operating Voltage	Temp. Range	Package Options
S32V234	Quad Arm Cortex-A53	4 x 1 GHz	L1: 32 KB/ 32 KB I/D per core L2: 256 KB unified per cluster	4 MB	32-ch.	H.264 and MJPEG encode and decode	3DGPU w/ OpenCV	Image signal processor (ISP) + Dual APEX2-CL + eIQ Auto	MIPI-CSI, VIU-Lite	TFT, up to 150 MPixels/sec (e.g. 1920 x 1080 60 Hz)	x64 LPDDR2, DDR3 and DDR3L	PCIe, QuadSPI	2 x CAN-FD	1	3	4	2	1 GB with IEEE® 1588	2	P	1.0 ± 5% for digital core input supply voltage	V	621 Flip Chip BGA

VEHICLE NETWORK PROCESSOR — SECURE AND SAFE PROCESSING WITH ACCELERATED NETWORKING

Family Name	Family PART NUMBER	Core Type	Operating Frequency [Max] (MHz)	System RAM (MB)	Standby RAM (kB)	External RAM (bits width)	External Memory Supported	Serial Communication [Number x Type]	FlexRay	CAN/CAN FD	Ethernet MACs	Ethernet Type	PCI Express	USB	Security Modules	Hardware Isolation	Timers [Number x bits]*	PWM [Number x bits]	ADC [Number x bits]	JTAG Debug	Aurora Trace	Supply Voltage [Min to Max] (V)	Package Type	Package Pitch (mm)	Device Configuration	IC Stress Qualification Test (AECQ-100)	Shipping Method	SafeAssure Functional Safety
S32G2	S32G274A	3 x Dual-Core Lockstep Arm Cortex-M7, 4 x Arm Cortex-A53 w/ Cluster Lockstep	400, 1000	8	32	DDR3L / LPDDR4 (32)	QSPI NOR, e.MMC 5.1 NAND, SD 3.0	5 x I ² C, 10 x SPI, 7 x LIN/UART	2	20	4	MII/RMII/ RGMII/ SGMII	2x2 lanes Gen3	1x USB 2.0 OTG	HSE-H	XRDC	7x WDT x 32 8x STM x 32	6 x 32	12 x 12	Yes	Yes	0.8 to 3.45	FC-PBGA 525	0.8	A - standard, S - premium security	V - Grade 2, C - Grade 3	T - Tray, R - Tape & Reel	ISO 26262, up to ASIL D
S32G2	S32G254A	3 x Dual-Core Lockstep Arm Cortex-M7, 2 x Arm Cortex-A53	400, 1000	8	32	DDR3L / LPDDR4 (32)	QSPI NOR, e.MMC 5.1 NAND, SD 3.0	5 x I ² C, 10 x SPI, 7 x LIN/UART	2	20	4	MII/RMII/ RGMII/ SGMII	2x2 lanes Gen3	1x USB 2.0 OTG	HSE-H	XRDC	7x WDT x 32 8x STM x 32	6 x 32	12 x 12	Yes	Yes	0.8 to 3.45	FC-PBGA 525	0.8	A - standard, S - premium security	V - Grade 2, C - Grade 3	T - Tray, R - Tape & Reel	ISO 26262, up to ASIL D
S32G2	S32G233A	1 x Dual-Core Lockstep Arm Cortex-M7, 2 x Arm Cortex-A53	400, 1000	6	32	DDR3L / LPDDR4 (32)	QSPI NOR, e.MMC 5.1 NAND, SD 3.0	5 x I ² C, 10 x SPI, 7 x LIN/UART	2	20	4	MII/RMII/ RGMII/ SGMII	2x2 lanes Gen3	1x USB 2.0 OTG	HSE-H	XRDC	7x WDT x 32 8x STM x 32	6 x 32	12 x 12	Yes	Yes	0.8 to 3.45	FC-PBGA 525	0.8	A - standard, S - premium security	V - Grade 2, C - Grade 3	T - Tray, R - Tape & Reel	ISO 26262, up to ASIL D
S32G2	S32G234M	3 x Dual-Core Lockstep Arm Cortex-M7	400	8	32	-	QSPI NOR, e.MMC 5.1 NAND, SD 3.0	5 x I ² C, 10 x SPI, 7 x LIN/UART	2	20	4	MII/RMII/ RGMII/ SGMII	1x2 lanes Gen2	-	HSE-H	XRDC	7x WDT x 32 8x STM x 32	6 x 32	12 x 12	Yes	Yes	0.8 to 3.45	FC-PBGA 525	0.8	A - standard, S - premium security	V - Grade 2, C - Grade 3	T - Tray, R - Tape & Reel	ISO 26262, up to ASIL D

32-BIT MPC57xx MCUs BUILT ON POWER ARCHITECTURE TECHNOLOGY AND ASIL-B/C/D SAFETY

Device	Core Platform	Core Frequency	Program Flash	SRAM	D-Flash for Emulated EEPROM	DMA	Crypto	SCI (LINFlex)	SPI	CAN/ISO CAN-FD	I ² C	FlexRay	Ethernet	Other Peripherals	Motor Control Peripherals	PIT	Analog (ADC)	Safety Level	Operating Voltage	Temp. Range	Debug	Package Options
MPC5777M	2 x z7 w/Lockstep + 1 x z4	300 MHz, 200MHz	8 MB	596 KB	544kB	2 x 64-ch.	HSM	6	8	5/1	2	x	x	SENT, PSIS, EBI, CRC, Zipwire	248-ch. GTM	8	52-ch. 16-bit, 84ch. 12-bit	ASIL-D	3.3, 5	M	Nexus 3+, Aurora, JTAG	416, 512 TEPBGA
MPC5777C	2 x z7 w/Lockstep	264 MHz or 300 MHz	8 MB	512 KB	256kB	2 x 64-ch.	CSE	5	5	6/2			x	SENT, PSIS, EBI, CRC, Zipwire	96-ch. eTPU+ 32-ch. eMIOS	4	20-ch. 16-bit, 70ch. 12-bit	ASIL-D	3.3, 5	M	Nexus 3+, Aurora, JTAG	416, 516 MAPBGA
MPC5775E	2 x z7 w/Lockstep	264 MHz	4 MB	512 KB	256kB	2 x 64-ch.	CSE	5	5	6/2			x	SENT, EBI, CRC	96-ch. eTPU+ 32-ch. eMIOS	4	20-ch. 16-bit, 70ch. 12-bit	ASIL-D	3.3, 5	M	Nexus 3+, JTAG	416 MAPBGA
MPC5775B	2 x z7 w/Lockstep	220 MHz	4 MB	512 KB	256kB	2 x 64-ch.	CSE	5	5	6/2			x	SENT, EBI, CRC	32-ch. eMIOS	4	40ch. 12-bit	ASIL-D	3.3, 5	M	Nexus 3+, JTAG	416 MAPBGA
MPC5746R	2 x z4 w/Lockstep	200 MHz	4 MB	256 KB	256 KB	64-ch.		6	7	4			x	SENT, CRC, Zipwire	64-ch. eTPU + 32-ch.eMIOS, CTU	8	48ch. 16-bit, 96ch. 12-bit	ASIL-D	3.3, 5	M	Nexus 3+, Aurora, JTAG	176 LQFP, 252 MAPBGA
MPC5745R	2 x z4 w/Lockstep	200 MHz	3 MB	192 KB	256 KB	64-ch.		6	7	4			x	SENT, CRC, Zipwire	64-ch. eTPU + 32-ch.eMIOS, CTU	8	48ch. 16-bit, 96ch. 12-bit	ASIL-D	3.3, 5	M	Nexus 3+, Aurora, JTAG	176 LQFP, 252 MAPBGA
MPC5743R	z4 w/Lockstep	200 MHz	2 MB	128 KB	256 KB	64-ch.		5	6	4			x	SENT, CRC, Zipwire	64-ch. eTPU + 32-ch.eMIOS, CTU	8	48ch. 16-bit, 96ch. 12-bit	ASIL-D	3.3, 5	M	Nexus 3+, Aurora, JTAG	144, 176 LQFP
MPC5744P	z4 w/Lockstep	200 MHz	2.5 MB	384 KB	96 KB	32-ch.		2	4	3		x	x	SENT, CRC, Zipwire	18-ch. E-Timer, 24-ch. PWM, CTU	4	25-ch. 12-bit	ASIL-D	3.3	M, K	Nexus 3+, MDO and Aurora interface	144 LQFP, 257 MAPBGA
MPC5743P	z4 w/Lockstep	200 MHz	2 MB	256 KB	96 KB	32-ch.		2	4	3		x	x	SENT, CRC, Zipwire	18-ch. E-Timer, 24-ch. PWM, CTU	4	25-ch. 12-bit	ASIL-D	3.3	M, K	Nexus 3+, MDO and Aurora interface	144 LQFP, 257 MAPBGA
MPC5742P	z4 w/Lockstep	200 MHz	1.5 MB	192 KB	96 KB	32-ch.		2	4	3		x	x	SENT, CRC, Zipwire	18-ch. E-Timer, 24-ch. PWM, CTU	4	25-ch. 12-bit	ASIL-D	3.3	M, K	Nexus 3+, MDO and Aurora interface	144 LQFP, 257 MAPBGA
MPC5741P	z4 w/Lockstep	200 MHz	1 MB	128 KB	96 KB	32-ch.		2	4	3		x	x	SENT, CRC, Zipwire	18-ch. E-Timer, 24-ch. PWM, CTU	4	25-ch. 12-bit	ASIL-D	3.3	M, K	Nexus 3+, MDO and Aurora interface	144 LQFP, 257 MAPBGA
MPC5748G	2 x z4 + z2	160 MHz, 80 MHz	6 MB	768 KB	192kB	32-ch.	HSM Option	18	4+6	8/8	4	x	x	USB, SDHC, I ² S, CRC, MLB	96-ch. eMIOS, CTU	16	32-ch. 12-bit, 48-ch.10-bit	ASIL-B	3.3, 5	C, V, M	Nexus 3+, JTAG	176 LQFP, 256, 324 MAPBGA
MPC5747G	2 x z4 + z2	160 MHz, 80 MHz	4 MB	768 KB	192kB	32-ch.	HSM Option	18	4+6	8/8	4	x	x	USB, SDHC, I ² S, CRC, MLB	96-ch. eMIOS, CTU	16	32-ch. 12-bit, 48-ch.10-bit	ASIL-B	3.3, 5	C, V, M	Nexus 3+, JTAG	176 LQFP, 256, 324 MAPBGA
MPC5746G	2 x z4 + z2	160 MHz, 80 MHz	3 MB	768 KB	192kB	32-ch.	HSM Option	18	4+6	8/8	4	x	x	USB, SDHC, I ² S, CRC, MLB	96-ch. eMIOS, CTU	16	32-ch. 12-bit, 48-ch.10-bit	ASIL-B	3.3, 5	C, V, M	Nexus 3+, JTAG	176 LQFP, 256, 324 MAPBGA
MPC5748C	z4 + z2	160 MHz, 80 MHz	6 MB	768 KB	128kB	32-ch.	HSM Option	16	4+6	8/8	4	x	x	USB, SDHC, I ² S, CRC	96-ch. eMIOS, CTU	16	32-ch. 12-bit, 48-ch.10-bit	ASIL-B	3.3, 5	C, V, M	Nexus 3+, JTAG	176 LQFP, 256, 324 MAPBGA
MPC5747C	z4 + z2	160 MHz, 80 MHz	4 MB	512 KB	128kB	32-ch.	HSM Option	16	4+6	8/8	4	x	x	USB, SDHC, I ² S, CRC	96-ch. eMIOS, CTU	16	32-ch. 12-bit, 48-ch.10-bit	ASIL-B	3.3, 5	C, V, M	Nexus 3+, JTAG	176 LQFP, 256, 324 MAPBGA
MPC5746C	z4 + z2	160 MHz, 80 MHz	3 MB	384 KB	128kB	32-ch.	HSM Option	16	4+4	8/8	4	x	x	I ² S, CRC	64-ch. eMIOS, CTU	16	16-ch. 12-bit, 32-ch.10-bit	ASIL-B	3.3, 5	C, V, M	Nexus 3+, JTAG	176 LQFP, 100, 252 MAPBGA
MPC5745C	z4 + z2	160 MHz, 80 MHz	2 MB	256 KB	128kB	32-ch.	HSM Option	16	4+4	8/8	4	x	x	I ² S, CRC	64-ch. eMIOS, CTU	16	16-ch. 12-bit, 32-ch.10-bit	ASIL-B	3.3, 5	C, V, M	Nexus 3+, JTAG	176 LQFP, 100, 252 MAPBGA
MPC5744C	z4 + z2	160 MHz, 80 MHz	1.5 MB	192 KB	128kB	32-ch.	HSM Option	16	4+4	8/8	4	x	x	I ² S, CRC	64-ch. eMIOS, CTU	16	16-ch. 12-bit, 32-ch.10-bit	ASIL-B	3.3, 5	C, V, M	Nexus 3+, JTAG	176 LQFP, 100, 252 MAPBGA
MPC5746B	z4	160MHz	3 MB	384 KB	128kB	32-ch.	HSM Option	12	4+4	6/6	4	x	x	I ² S, CRC	64-ch. eMIOS, CTU	16	16-ch. 12-bit, 32-ch.10-bit	ASIL-B	3.3, 5	C, V, M	Nexus 3+, JTAG	176 LQFP, 100, 252 MAPBGA
MPC5745B	z4	160MHz	2 MB	256 KB	128kB	32-ch.	HSM Option	12	4+4	6/6	4	x	x	I ² S, CRC	64-ch. eMIOS, CTU	16	16-ch. 12-bit, 32-ch.10-bit	ASIL-B	3.3, 5	C, V, M	Nexus 3+, JTAG	176 LQFP, 100, 252 MAPBGA
MPC5744B	z4	160MHz	1.5 MB	192 KB	128kB	32-ch.	HSM Option	12	4+4	6/6	4	x	x	I ² S, CRC	64-ch. eMIOS, CTU	16	16-ch. 12-bit, 32-ch.10-bit	ASIL-B	3.3, 5	C, V, M	Nexus 3+, JTAG	176 LQFP, 100, 252 MAPBGA

i.MX AUTOMOTIVE PROCESSOR

Family	Device	Core Platform	Differentiator					Qualification Tier	Temperature	Package		
			DSP	GPU	VPU	LCD	USB				Ethernet	
i.MX 8QuadXPlus	MIMX8QX6AVLFZAC	4 x 1.2 GHz A35 + 1 x 264 MHz M4F	Y	Y	Y	Y	USB3, USB2	2 x 1Gb (AVB)	Automotive	105C	609 FCPBGA	
i.MX 8QuadXPlus	MIMX8QX5AVLFZAC	4 x 1.2 GHz A35 + 1 x 264 MHz M4F		Y	Y	Y	USB3, USB2	2 x 1Gb (AVB)	Automotive	105C	609 FCPBGA	
i.MX 8QuadXPlus	MIMX8QX2AVLFZAC	4 x 1.2 GHz A35 + 1 x 264 MHz M4F	Y				USB3, USB2	2 x 1Gb (AVB)	Automotive	105C	609 FCPBGA	
i.MX 8QuadXPlus	MIMX8QX1AVLFZAC	4 x 1.2 GHz A35 + 1 x 264 MHz M4F					USB3, USB2	2 x 1Gb (AVB)	Automotive	105C	609 FCPBGA	
i.MX 8QuadXPlus	MIMX8QX2AVOFZAC	4 x 1.2 GHz A35 + 1 x 264 MHz M4F	Y				USB2	2 x 1Gb (AVB)	Automotive	105C	417 FCPBGA	
i.MX 8QuadXPlus	MIMX8QX1AVOFZAC	4 x 1.2 GHz A35 + 1 x 264 MHz M4F					USB2	2 x 1Gb (AVB)	Automotive	105C	417 FCPBGA	
i.MX 8DualXPlus	MIMX8DX6AVLFZAC	2 x 1.2 GHz A35 + 1 x 264 MHz M4F	Y	Y	Y	Y	USB3, USB2	2 x 1Gb (AVB)	Automotive	105C	609 FCPBGA	
i.MX 8DualXPlus	MIMX8DX5AVLFZAC	2 x 1.2 GHz A35 + 1 x 264 MHz M4F		Y	Y	Y	USB3, USB2	2 x 1Gb (AVB)	Automotive	105C	609 FCPBGA	
i.MX 8DualXPlus	MIMX8DX2AVLFZAC	2 x 1.2 GHz A35 + 1 x 264 MHz M4F	Y				USB3, USB2	2 x 1Gb (AVB)	Automotive	105C	609 FCPBGA	
i.MX 8DualXPlus	MIMX8DX1AVLFZAC	2 x 1.2 GHz A35 + 1 x 264 MHz M4F					USB3, USB2	2 x 1Gb (AVB)	Automotive	105C	609 FCPBGA	
i.MX 8DualXPlus	MIMX8DX2AVOFZAC	2 x 1.2 GHz A35 + 1 x 264 MHz M4F	Y				USB2	2 x 1Gb (AVB)	Automotive	105C	417 FCPBGA	
i.MX 8DualXPlus	MIMX8DX1AVOFZAC	2 x 1.2 GHz A35 + 1 x 264 MHz M4F					USB2	2 x 1Gb (AVB)	Automotive	105C	417 FCPBGA	
i.MX 8DualXLite	MIMX8DL2A	2 x 1.2 GHz A35 + 1 x 264 MHz M4F				Y (Parallel)	2 x USB2	2 x 1Gb (1 x AVB + TSN)	Automotive	105C	388 BGA	
i.MX 8DualXLite	MIMX8DL1A	2 x 1.2 GHz A35 + 1 x 264 MHz M4F				Y (Parallel)	2 x USB2	2 x 1Gb (1 x AVB + TSN)	Automotive	105C	388 BGA	
i.MX 8SoloLite	MIMX8SL2A	1 x 1.2 GHz A35 + 1 x 264 MHz M4F				Y (Parallel)	2 x USB2	2 x 1Gb (1 x AVB + TSN)	Automotive	105C	388 BGA	
i.MX 8SoloLite	MIMX8SL1A	1 x 1.2 GHz A35 + 1 x 264 MHz M4F				Y (Parallel)	2 x USB2	2 x 1Gb (1 x AVB + TSN)	Automotive	105C	388 BGA	
i.MX RT1176	MIMXRT1176AVM8A	1 x 800 MHz M7 + 1 x 400 MHz M4F		Y			Y	2 x USB2	1Gb (AVB + TSN) + 10/100	Automotive	125C	289 MAPBGA
i.MX RT1175	MIMXRT1175AVM8A	1 x 800 MHz M7 + 1 x 400 MHz M4F		Y			Y	2 x USB2	1Gb (AVB) + 10/100	Automotive	125C	289 MAPBGA
i.MX RT1171	MIMXRT1171AVM8A	1 x 800 MHz M7						2 x USB2	1Gb (AVB) + 10/100	Automotive	125C	289 MAPBGA
i.MX RT1172	MIMXRT1172AVM8A	1 x 800 MHz M7		Y			Y	2 x USB2	1Gb (AVB) + 10/100	Automotive	125C	289 MAPBGA

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