

Development Systems

Family	Process Technology	Non-RoHS Part No.	RoHS Part No.	DISTY 5/18	Description
MPC83xx	MPC83xx Family	MPC8250/7075-516 PBGA	PQ2FADS-VR	\$2,995	MPC8250/80 Family Application Development System
		MPC8272 Family	MPC8272ADS	\$2,995	MPC8272 Family Application Development System
		All 8xxx	MPC8260ADS-TCOM	\$2,995	MPC8260 TVT3 Communication Companion Board for ADS
MPC83xx	MPC83xx Family	MPC8323E-MDS-PB	MPC8323E-MDS-PB	\$1,800	MPC8323E Processor Board (stand alone)
		MPC834x Family	MPC834EA-MDS-PB	\$1,845	MPC834EA Processor Board (can be stand alone)
		MPC834x Family	MPC834EA-MDS	\$4,199	MPC834EA Modular Development Kit
		MPC836x Family	MPC836EA-MDS-PB	\$1,400	MPC836EA Processor Board for Rev 2.x Silicon (can be stand alone)
		MPC836x Family	PQ-MDS-PBE	\$2,499	MPC836x/MPC85xx Platform I/O Board
		MPC836x Family	PQ-MDS-USB	\$349	MPC836x/MPC85xx USB FMC Card
		MPC836x Family	PQ-MDS-PCXPIC1	\$349	MPC836x Adaptor for PC Express
		MPC836x Family	PQ-MDS-T1E	\$1,995	MPC836x/MPC85xx SLIC SLAC T1E1 Card
MPC83xx/MPC85xx Family	MPC83xx/MPC85xx Family	PQ-MDS-QOC3	PQ-MDS-QOC3	\$1,495	MPC83xx/MPC85xx Quad OC-3 ATM Card
		MPC837x Family	MPC837x-MDS-PB	\$2,550	MPC837x Processor Board
MPC85xx	MPC85xx Family	MPC8536E	MPC8536E	\$3,395	PowerQUICC III MPC8536E Development System
		MPC8536E	MPC8536E-RDK	\$995	MPC8536E Reference Design Kit (carrier board and MPC8536E COM module)
		MPC8540	MPC8540ADS-BGAC	\$4,995	PowerQUICC III MPC8540 Application Development System
		MPC8544	MPC8544DS	\$3,395	PowerQUICC III MPC8544 Development System
		MPC8550	MPC8550ADS-BGAE	\$4,995	PowerQUICC III MPC8550 Application Development System
		MPC8555	MPC8555CDS	\$4,995	PowerQUICC III MPC8555 Configurable Development System Supports MPC8555 and MPC8541
		MPC8548, MPC8547, MPC8545, MPC8543	MPC8548CDS	\$5,499	PowerQUICC III MPC8548 Configurable Development System Supports MPC8548, MPC8547, MPC8545 and MPC8543
		MPC8568	MPC8568E-MDS-PB	\$2,495	MPC8568 Processor Board
		MPC8568E	PQ-MDS-T1E	\$1,395	MPC8568/MPC85xx SLIC SLAC T1E1 Card
		MPC8568E	PQ-MDS-QOC3	\$1,495	MPC8568/MPC85xx Quad OC-3 ATM Card
MPC85xx	MPC85xx Family	MPC8569E	MPC8569E-MDS-PB	\$2,995	PowerQUICC III MPC8569E Modular Development System
		MPC8572 (dual core)	MPC8572DS	\$3,995	ATX High-Performance Platform
MPC86xx	MPC86xx Family	MPC8610	MCEVALHPCD-8610E	\$3,075	Micro ATX Performance Platform
		MPC8641D, MPC8640D (dual core)	MCEVALHPCD-8641D	\$3,999	ATX Performance Platform
QorIQ P2 and P1 Families	QorIQ P2 and P1 Families	P2020/P2010	P2020DS-PC	\$3,500	QorIQ P2020/P2010 Development System
		P1021/P1012	P1021-MDS-PB	\$3,000	QorIQ P1021 Modular Development System
		P2020/P2010	P2020-CMUE-DS-PB	\$1,499	QorIQ P2020 Development System (COM Express board on carrier card)
		P1020/P1014	P1020-RDB	\$499	Low Cost mITX Reference Design
		P1020/P1013	P1020DS-PA	\$3,395	QorIQ P1022 Development System
QorIQ P4 Family	QorIQ P4 Family	P4080/P4040	P4080DS-PB	\$4,000	QorIQ P4080 Development System
		P4080/P4040	P4080C0ME-DS-PB	\$1,499	QorIQ P4080 Development System (COM Express board on carrier card)
MPC82xx	MPC82xx Family	All MPC82xx	MPC8260ADS-FLASH	\$150	Flash Chip for MPC8260ADS
		All MPC82xx	MPC82COOP-3V	\$500	COP Interface
MPC83xx	MPC83xx Family	MPC8306	MPC8306-KIT	\$759	Carrier+SDM
		MPC8308	MPC8308-PDB	\$299	PowerQUICC II Pro Reference Platform
		MPC8309	MPC8309-KIT	\$779	Carrier+SDM
		MPC8313	MPC8313E-RD8C	\$299	PowerQUICC II Pro Reference Platform
		MPC8321, MPC8323	MPC8323E-RDB	\$399	PowerQUICC II Pro Reference Platform
		MPC8343, MPC8347, MPC8349	MPC8346E-mITAE	\$699	PowerQUICC II Pro Reference Platform
		MPC8315E-RDBA	MPC8315E-RDBA	\$499	Cost-Effective Reference Design Board
		MPC7448	MCEVALHPC2-7448E	\$2,772	Evaluation Board for MPC7448
QorIQ P2 and P1 Families	QorIQ P2 and P1 Families	P2020/P2010	P2020RDB-PC	\$595	QorIQ P2020/P2010 Reference Design Board
		P2020/P2010	P2020AMC-SA	\$8000	QorIQ P2020/P2010 AMC Form Factor by GDA
		P1020/P1011	P1020RDB-PA	\$499	QorIQ P1020/P1011 Reference Design Board
QUICCstart Boards	QUICCstart Boards	MPC8343	CWH-PPC-8343N-VX	\$978	MPC8343 QUICCstart Board
		MPC8555	CWH-PPC-8555N-VX	\$1,594	MPC8555 QUICCstart Board
		MPC885	CWH-PPC-885XN-VX	\$798	MPC885 QUICCstart Board



Innovation. Connectivity. Freedom.

PowerQUICC and QorIQ Processor Selector Guide



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Technical Device Matrix

PowerQUICC I

Part Number	Ethernet	E1/T1	UTOPIA	Multi-Channel HDLC	HW Encryption	Package
MPC870	2 x 10/100 Mbps	-	-	-	-	256-pin PBGA
MPC875	1 x 10, 2 x 10/100 Mbps	1	-	32	Y	256-pin PBGA
MPC880	2 x 10, 2 x 10/100 Mbps	2	Y	64	Y	357-pin PBGA
MPC885	3 x 10, 2 x 10/100 Mbps	2	Y	64	Y	357-pin PBGA

- Constant Features**
- Speed MHz: 66-133 MHz
 - ID cache memory: 8/8 KB
 - Memory: DRAM
 - SPI: 1
 - PCI: 1
 - GPIO: 18
 - USB: Full/Low speed
 - Typical power: 0.31W
- Note: For information on the MPC865x and MPC866x, visit freescale.com.

PowerQUICC II

Part Number	Speed (MHz)	Ethernet	E1/T1	E3/T3	UTOPIA	Multi-Channel HDLC	GPIO	Local Bus	USB	HW Encryption	Package
MPC844	166-266	-	-	-	-	-	-	-	-	-	357-pin PBGA
MPC845	266-400	-	-	-	-	-	-	-	-	-	352-pin TBGA
MPC847	266-400	3 x 10, 2 x 10/100 Mbps	2	-	-	64	82	-	2.0 Full/Low	-	516-pin PBGA
MPC848	266-400	3 x 10, 2 x 10/100 Mbps	2	-	-	64	82	-	2.0 Full/Low	Y	516-pin PBGA
MPC870	266-450	4 x 10, 3 x 10/100 Mbps	4	1	-	128	120	Y	2.0 Full/Low	-	516-pin PBGA/ 480-pin TBGA
MPC871	266-400	3 x 10, 2 x 10/100 Mbps	2	-	1	64	82	-	2.0 Full/Low	-	516-pin PBGA
MPC872	266-400	3 x 10, 2 x 10/100 Mbps	2	-	1	64	82	-	2.0 Full/Low	Y	516-pin PBGA
MPC875	266	4 x 10, 3 x 10/100 Mbps	4	1	2	128	120	Y	2.0 Full/Low	-	516-pin PBGA
MPC880	333-450	4 x 10, 3 x 10/100 Mbps	8	2	2	256	120	Y	2.0 Full/Low	-	480-pin TBGA

- Constant Features**
- ID cache memory: 16/16 KB
 - Floating point unit: Double precision
 - SPI: 1 (except MPC8241 and MPC8245)
 - PCI: 1 (except MPC8241 and MPC8245)
 - PCI: 32-64
 - Memory: SDRAM
 - Typical power: 0.8-1.1W

PowerQUICC II Pro

Part Number	Typical Power	Speed (MHz)	10/100/1000 Ethernet	10/100 Ethernet	E1/T1	E3/T3	UTOPIA	HDLC	GPIO	PCI	USB	DDR1/2 Memory	Other	Package
MPC8306	1.15W	133-266	-	3	2	-	-	128	56	-	2.0	16-bit DDR2	4 x CAN, TDM	369-pin MAPBGA
MPC8306S	1.15W	133-266	-	3	2	-	-	128	56	-	2.0	16-bit DDR2	TDM	369-pin MAPBGA
MPC8309	1.56W	266-417	-	3	2	-	-	128	64	1 x 32-bit	2.0	16/32-bit DDR2	4 x CAN, TDM, eSDHC, USB 2.0	489-pin MAPBGA
MPC8308	1.23W	266-400	2	-	-	-	-	24	-	2.0	16/32-bit DDR2	1 x PCI Express, eSDHC, USB 2.0	473-pin MAPBGA	
MPC8313	0.82W	266-400	2	-	-	-	-	32	1 x 32-bit	2.0	16/32-bit	2 x PCI Express, TDM	516-pin PBGA	
MPC8314	1.11W	266-400	2	-	-	-	-	32	1 x 32-bit	2.0	16/32-bit	2 x PCI Express, TDM	620-pin PBGA	
MPC8315	1.11W	266-400	2	-	-	-	-	32	1 x 32-bit	2.0	16/32-bit	2 x SATA, 2 x PCI Express, TDM	620-pin PBGA	
MPC8321/23	1W	266-333	-	3	4	4	1	64	128	1 x 32-bit	2.0 Full/Low	32-bit	TDM	516-pin PBGA
MPC8343	2.0W	266-400	2	-	-	-	-	39	1 x 32-bit	2.0	32-bit	-	-	620-pin PBGA
MPC8347	2.0W	266-667	2	-	-	-	-	52	1 x 32-bit	2.0	32/64-bit	-	-	620-pin PBGA, 672-pin TBGA
MPC8349	2.0W	400-667	2	-	-	-	-	64	1 x 64-bit or 2 x 32-bit	2 x 2.0	32/64-bit	-	-	672-pin TBGA
MPC8358	3.0W	266-400	2	6	8	2	1	128	212	1 x 32-bit	2.0 Full/Low	1 x 64-bit or 2 x 32-bit	TDM	740-pin TBGA, 689-pin PBGA
MPC8380	5.0W	400-667	2	8	4	1	2	256	212	1 x 32-bit	2.0 Full/Low	1 x 64-bit or 2 x 32-bit	TDM	740-pin TBGA
MPC8377	4.0W	400-800	2	-	-	-	-	52	1 x 32-bit	2 x 2.0	32/64-bit	2 x SATA, 2 x PCI Express	689-pin PBGA	
MPC8378	4.0W	400-800	2	-	-	-	-	52	1 x 32-bit	2.0	32/64-bit	2 x PCI Express	689-pin PBGA	
MPC8379	4.0W	400-800	2	-	-	-	-	52	1 x 32-bit	2.0	32/64-bit	4 x SATA	689-pin PBGA	

- Constant Features**
- ID cache memory: 16/16 KB on MPC8306, MPC8313 and MPC832x; 32/32 KB on all others
 - Floating point unit: Double precision (No FPU in MPC8321/2)
 - SPI: 1 on all except MPC832x and MPC8358/80 which have 2
 - PCI: 2, except MPC8314, MPC8315 and MPC832x which have 1
 - DUART: 1, except MPC8306, MPC8306S and MPC8309 which have 2
 - Local bus: Y
 - HW encryption: E version except MPC8308, MPC8308S, MPC8306S and MPC8309

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PowerQUICC III

Part Number	Speed (MHz)	Typical Power	L2 Cache	10/100/1000 Ethernet	10/100 Ethernet	E1/T1	E3/T3	UTOPIA	HDLC	GPIO	High-Speed Interfaces	USB	Memory
MPC8535	600-1250	3.0W	512 KB	2	-	-	-	-	-	16	1 x PCI, 2 x PCIe, 1 x SATA	2 x 2.0 Full/Low	DDR2/3
MPC8536	600-1500	3.0W	512 KB	2	-	-	-	-	-	16	1 x PCI, 3 x PCIe, 2 x SATA	3 x 2.0 Full/Low	DDR2/3
MPC8540	667-1000	4.9W	256 KB	2	3	-	-	-	-	***	1 x PCI/PCI-X, 1 x sRIO	-	DDR1
MPC8541	533-1000	4.4W	256 KB	2	2	-	-	2	-	32	2 x PCI	-	DDR1
MPC8543	800-1000	6.1W	256 KB	2	-	-	-	-	-	***	1 x PCI, 1 x PCIe, 1 x sRIO	-	DDR1/2
MPC8544	667-1067	2.6W	256 KB	2	-	-	-	-	-	16	1 x PCI, 3 x PCIe	-	DDR1/2
MPC8545	800-1200	6.1W	512 KB	2	-	-	-	-	-	***	2 x PCI, 1 x PCIe	-	DDR1/2
MPC8547	1000-1333	6.5W	512 KB	4	-	-	-	-	-	***	1 x PCI/PCI-X, 1 x PCIe	-	DDR1/2
MPC8548	1000-1500	6.5W	512 KB	4	-	-	-	-	-	***	2 x PCI/PCI-X, 1 x PCIe, 1 x sRIO	-	DDR1/2
MPC8555	667-1000	4.9W	256 KB	2	2	2	-	2	64	32	2 x PCI	1.1 Full/Low	DDR1
MPC8560	667-1000	5.1W	256 KB	2	3	8	2	2	256	32	1 x PCI/PCI-X, 1 x sRIO	-	DDR1
MPC8567	800-1200	8.7W	512 KB	3	8	8	2	2	256	188	1 x PCI, 1 x PCIe, 1 x sRIO	-	DDR1/2
MPC8568	800-1333	8.7W	512 KB	5	10	8	2	2	256	188	1 x PCI, 1 x PCIe, 1 x sRIO	-	DDR1/2
MPC8569	800-1333	3.3W	512 KB	4	8	16	16	1	256	183	1 x PCIe, 2 x sRIO	2.0 Full/Low	DDR2/3
MPC8572	2 x 1067-1500	12W	1 MB	4	1	-	-	-	-	8	3 x PCIe, 1 x sRIO	-	DDR2/3

- Constant Features**
- ID cache memory: 32/32 KB
 - Floating point unit: Double precision on all devices except MPC8540/41/55/60
 - SPI: 1 on MPC8535/36/41/55/60, 2 on MPC8567/68/69
 - PCI: 2, except MPC8540/41/55/60 which have 1
 - Encryption: E version, except MPC8540/60
 - Package: 783-pin FCBGA, except MPC8567/68/72: 1023-pin FCBGA

QorIQ

Part Number	Speed (MHz)	Cores	L2 Cache	L3 Cache	10/100/1000 Ethernet	Data Path	PCIe	USB sRIO	GPIO	DDR2/3 Memory	Other	Package		
P1010	533-800	1	256 KB	-	3	Software	2	1	-	32	16/32-bit DDR3/3L	TDM, 2 x FlexCAN, Trust Arch., 2 x SATA	425-pin PBGA	
P1014	533-800	1	256 KB	-	2	Software	2	1	-	32	16-bit DDR3/3L	TDM, 2 x SATA	425-pin PBGA	
P1011	533-800	1	256 KB	-	3	Software	2	2	-	16	32-bit	TDM	689-pin PBGA	
P1015	400-867	1	256 KB	-	3	Software	2	2	-	16	32-bit DDR3	TDM	561-pin PBGA	
P1020	533-800	2	256 KB	-	3	Software	2	2	-	16	32-bit	TDM	689-pin PBGA	
P1024	400-533	2	256 KB	-	3	Software	2	2	-	16	32-bit DDR3	TDM	561-pin PBGA	
P1012	533-800	1	256 KB	-	3	Software	2	1	-	16	32-bit	QUICC Engine	689-pin PBGA	
P1016	400-867	1	256 KB	-	3	Software	2	1	-	16	32-bit DDR3	QUICC Engine	561-pin PBGA	
P1021	533-800	2	256 KB	-	3	Software	2	1	-	16	32-bit	QUICC Engine	689-pin PBGA	
P1025	400-533	2	256 KB	-	3	Software	2	1	-	16	32-bit DDR3	QUICC Engine	561-pin PBGA	
P1013	667-1067	1	256 KB	-	2	Software	3	1	-	87	32/64-bit	LCD Controller, 2 x SATA, Advanced Power Mgmt.	689-pin PBGA	
P1022	667-1067	2	256 KB	-	2	Software	3	1	-	87	32/64-bit	LCD Controller, 2 x SATA, Advanced Power Mgmt.	689-pin PBGA	
P1017	400-800	1	256 KB	-	2	Hardware	3	1	-	16	32-bit DDR3/3L	-	457-pin PBGA	
P1023	400-600	2	256 KB	-	2	Hardware	3	1	-	16	32-bit DDR3/3L	-	457-pin PBGA	
P2010	800-1200	1	512 KB	-	3	Software	3	1	2	16	32/64-bit	-	689-pin PBGA	
P5020	800-1200	2	512 KB	-	3	Software	3	1	2	16	32/64-bit	-	689-pin PBGA	
P2040	800-1200	4	-	1 MB	5	Hardware	3	gen 2.0	2	32	1 x 32/64-bit DDR3/3L	Trust Arch., 2 x SATA	783-pin PBGA	
P9041	1200-1500	4	128 KB/core	1 MB	5 x 1 x 10G	Hardware	4	gen 2.0	2	32	1 x 32/64-bit DDR3/3L	Trust Arch., 2 x SATA	1295-pin PBGA	
P4040	1200-1500	4	128 KB/core	2 MB	8 x 2 x 10G	Hardware	3	gen 2.0	1	2	32	2 x 32/64-bit	Trust Arch.	1295-pin PBGA
P4080	1200-1500	8	128 KB/core	2 MB	8 x 2 x 10G	Hardware	3	gen 2.0	1	2	32	2 x 32/64-bit	Trust Arch.	1295-pin PBGA
P5010	1600-2000	1	512 KB/core	1 MB	5 x 1 x 10G	Hardware	4	gen 2.0	2	32	1 x 32/64-bit DDR3/3L	Trust Arch., 2 x SATA	1295-pin PBGA	
P5020	1600-2000	2	512 KB/core	2 MB	5 x 1 x 10G	Hardware	4	gen 2.0	2	32	2 x 32/64-bit DDR3/3L	Trust Arch., 2 x SATA	1295-pin PBGA	

- Constant Features**
- ID cache memory: 32/32 KB
 - SPI: 1
 - 1 x DUART except P1010 and P1014 which have 2x DUART
 - PCI: P1 and P2 have 2 ports, P3, P4, P5 and P2040 have 4 ports
 - High-Speed USB 2.0
 - Local bus, HW encryption versions
 - P1021 and P1012 include QUICC Engine technology (UTOPIA, 2 x 10/100 Ethernet, TDM)
 - eSDHC except P1010, P1014, P1017, P1022, P2020, P2010

Host

Part Number	Speed (MHz)	L2 Cache	10/100/1000 Ethernet	PCIe	sRIO	Memory	Package
MPC8610	667-1333	256 KB	-	2	-	DDR1/2	783-pin FCBGA
MPC8641	1000-1500	1 MB	4	2	1	2 x DDR2	1023-pin FCBGA
MPC8641D	1000-1500	1 MB/core	4	2	1	2 x DDR2	1023-pin FCBGA
MPC8640	1000-1250	1 MB	4	2	1	2 x DDR2	1023-pin FCBGA
MPC8640D	1000-1250	1 MB/core	4	2	1	2 x DDR2	1023-pin FCBGA

- Constant Features**
- ID cache memory: 32/32 KB
 - SPI (MPC8610 only)
 - DUART
 - PCI
 - GPIO: 32
 - Local bus
 - Altivec technology
 - MPC8610 contains LCD controller and SSI audio

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