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What is "[Embedded - Microcontrollers](#)"?

"[Embedded - Microcontrollers](#)" refer to small, integrated circuits designed to perform specific tasks within larger systems. These microcontrollers are essentially compact computers on a single chip, containing a processor core, memory, and programmable input/output peripherals. They are called "embedded" because they are embedded within electronic devices to control various functions, rather than serving as standalone computers. Microcontrollers are crucial in modern electronics, providing the intelligence and control needed for a wide range of applications.

Applications of "[Embedded - Microcontrollers](#)"

Details

Product Status	Obsolete
Core Processor	F ² MC-8FX
Core Size	8-Bit
Speed	16MHz
Connectivity	I ² C, LINbus, SIO, UART/USART
Peripherals	LVD, POR, PWM, WDT
Number of I/O	29
Program Memory Size	20KB (20K x 8)
Program Memory Type	FLASH
EEPROM Size	-
RAM Size	1K x 8
Voltage - Supply (Vcc/Vdd)	2.4V ~ 5.5V
Data Converters	A/D 8x8/10b
Oscillator Type	External
Operating Temperature	-40°C ~ 85°C (TA)
Mounting Type	Surface Mount
Package / Case	32-LQFP
Supplier Device Package	32-LQFP (7x7)
Purchase URL	https://www.e-xfl.com/product-detail/infineon-technologies/mb95f634kpmc-g-sn-ye2

FM4 Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	1bit AD Converter [bit(unif)]	12bit AD Converter [bit(unif)]	DA Converter [bit x ch]	Timer								Serial				Communication			LCD Controller [seg x com]	Three-phase Inverter	Note	Evaluation Device																																																																																																																																																																																																																																																																																																																																																																																																																																																
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/ISO [ch]	SIO [ch]	LIN/UART/ISO [ch]	CAN [ch]	USB-Host [ch]					USB-Function [ch]																																																																																																																																																																																																																																																																																																																																																																																																																																															
S6E2HG	S6E2HG6E0A	160	LQFP-80	2.7 to 5.5	✓	Main Flash +Work Flash	512K + 32K	64K	-	8	16	✓	63	16 (3)	24 (3)	-	Multi-Function Timer x3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 9ch	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	2	-	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch, SDC	On-Chip Debug (SWJ-DP/ ETM)																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	S6E2HG6F0A		LQFP-100										80																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
	S6E2HG6G0A		LQFP-120 BGA-121										100																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
	S6E2HG4E0A	160	LQFP-80	2.7 to 5.5	✓	Main Flash +Work Flash	256K + 32K	32K	-	8	16	✓	63	16 (3)	24 (3)	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [pin]	10bit AD Converter [ch/unit]	12bit AD Converter [ch/unit]	DA Converter [bit x ch]	Timer							Serial				Communication				Note	Evaluation Device							
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/SI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]	USB-Host [ch]			USB-Function [ch]	LCD Controller [seg x com]	Three-phase Inverter				
S6E2CC-V	S6E2CCAJGA	200	LQFP-176 BGA-192	2.7 to 5.5	✓	Main Flash +Main Flash	2M	256K	-	8	32	✓	152	-	32 (3)	12 x 2	Multi-Function Timer x3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 9ch	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 4	1	Multi Function Serial x 16ch (UART/CSIO/I2C/LIN Selectable)	3 (2 x CAN + CAN FD)	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC×256ch, SDC, I2S 1ch(without 144pin), HDMI-CEC 2ch, High Speed Quad SPI x1(without 144pin), Programmable CRC, Eth1ch, Chipher, Voice	On-Chip Debug (SWJ-DP/ETM/ HTM)													
	1M		128K																																					
	2M		256K																																					
	1M		128K																																					
S6E2CC w/ Security	S6E2CCAHHA	200	LQFP-144	2.7 to 5.5	✓	Main Flash +Main Flash	2M	256K	-	8	32	✓	152	-	32 (3)	12 x 2	Multi-Function Timer x3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 9ch	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 4	1	Multi Function Serial x 16ch (UART/CSIO/I2C/LIN Selectable)	3 (2 x CAN + CAN FD)	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch, SDC, I2S 1ch(without 144pin), HDMI-CEC 2ch, High Speed Quad SPI x1(without 144pin), Programmable CRC, Eth1ch, Chipher	On-Chip Debug (SWJ-DP/ETM/ HTM)													
	S6E2CCAJHA		LQFP-176 BGA-192																									152	32 (3)											
	S6E2CCALHA		LQFP-216																									190	24 (3)											
	S6E2CC9HHA		LQFP-144																									120	24 (3)											
	S6E2CC9JHA		LQFP-176 BGA-192				1.5M	192K					1M	128K	152	-												32 (3)	12 x 2	Multi-Function Timer x3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 9ch	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 4	1	Multi Function Serial x 16ch (UART/CSIO/I2C/LIN Selectable)	3 (2 x CAN + CAN FD)	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch, SDC, I2S 1ch(without 144pin), HDMI-CEC 2ch, High Speed Quad SPI x1(without 144pin), Programmable CRC, Eth1ch, Chipher	On-Chip Debug (SWJ-DP/ETM/ HTM)
	S6E2CC9LHA		LQFP-216				190	24 (3)																																
	S6E2CC8HHA		LQFP-144				120	24 (3)																																
	S6E2CC8JHA		LQFP-176 BGA-192				152	32 (3)																																
S6E2CC8LHA	LQFP-216	190	24 (3)																																					
S6E2CC	S6E2CCAH0A	200	LQFP-144	2.7 to 5.5	✓	Main Flash +Main Flash	2M	256K	-	8	32	✓	152	-	32 (3)	12 x 2	Multi-Function Timer x3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 9ch	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 4	1	Multi Function Serial x 16ch (UART/CSIO/I2C/LIN Selectable)	3 (2 x CAN + CAN FD)	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch, SDC, I2S 1ch(without 144pin), HDMI-CEC 2ch, High Speed Quad SPI x1(without 144pin), Programmable CRC, Eth1ch	On-Chip Debug (SWJ-DP/ETM/ HTM)													
	S6E2CCAJ0A		LQFP-176 BGA-192																									152	32 (3)											
	S6E2CCAL0A		LQFP-216																									190	24 (3)											
	S6E2CC9H0A		LQFP-144																									120	24 (3)											
	S6E2CC9J0A		LQFP-176 BGA-192				1.5M	196K					1M	128K	152	-												32 (3)	12 x 2	Multi-Function Timer x3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 9ch	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 4	1	Multi Function Serial x 16ch (UART/CSIO/I2C/LIN Selectable)	3 (2 x CAN + CAN FD)	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch, SDC, I2S 1ch(without 144pin), HDMI-CEC 2ch, High Speed Quad SPI x1(without 144pin), Programmable CRC, Eth1ch	On-Chip Debug (SWJ-DP/ETM/ HTM)
	S6E2CC9L0A		LQFP-216				190	24 (3)																																
	S6E2CC8H0A		LQFP-144				120	24 (3)																																
	S6E2CC8J0A		LQFP-176 BGA-192				152	32 (3)																																
S6E2CC8L0A	LQFP-216	190	24 (3)																																					
S6E2C5	S6E2C5AH0A	200	LQFP-144	2.7 to 5.5	✓	Main Flash +Main Flash	2M	256K	-	8	32	✓	152	-	32 (3)	12 x 2	Multi-Function Timer x3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 9ch	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 4	1	Multi Function Serial x 16ch (UART/CSIO/I2C/LIN Selectable)	3 (2 x CAN + CAN FD)	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch, SDC, I2S 1ch(without 144pin), HDMI-CEC 2ch, High Speed Quad SPI x1(without 144pin), Programmable CRC	On-Chip Debug (SWJ-DP/ETM/ HTM)													
	S6E2C5AJ0A		LQFP-176 BGA-192																									152	32 (3)											
	S6E2C5AL0A		LQFP-216																									190	24 (3)											
	S6E2C59H0A		LQFP-144																									120	24 (3)											
	S6E2C59J0A		LQFP-176 BGA-192				1.5M	192K					1M	12																										

FM4 Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	10bit AD Converter [ch/unit]	12bit AD Converter [ch/unit]	DAC Converter [bit x ch]	Timer								Serial				Communication				Three-phase Inverter	Note	Evaluation Device			
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/SI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]	USB-Host [ch]	USB-Function [ch]				LCD Controller [seg x com]		
S6E2C1-E	S6E2C10H2A	200	LQFP-144	2.7 to 5.5	✓	-	0M	256K	-	8	32	✓	120	-	152	12 x 2	Multi-Function Timer x3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 9ch	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 4	1	Multi Function Serial x 16ch (UART/CSIO/I2C/LIN Selectable)	-	-	-	✓	Dual Timer, Real Time Clock, Unique ID, DSTC x 256ch, SDC, I2S 1ch(without 144pin), HDMI-CEC 2ch, High Speed Quad SPI x1(without 144pin), Programmable CRC, Chipher	On-Chip Debug (SWJ-DP/ETM/ HTM)											
	S6E2C10J2A		LQFP-176 BGA-192																																			
	S6E2C10L2A		LQFP-216																																			
MB9B560R	MB9BF566M	160	LQFP-80	2.7 to 5.5	✓	Main Flash +Work Flash	512K +32K	64K	-	8	16	✓	63	16(3)	12 x 2	Multi-Function Timer x 2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	2	1ch (USB-Host/ USB-Function Selectable)	-	✓	CAN: 32Msg-buffer, Dual Timer, Real Time Clock, DSTC x 128ch, Unique ID, SD Card I/F	On-chip Debug (SWJ-DP/ETM)												
	MB9BF566N		LQFP-100 QFP-100 BGA-112										80	24(3)																								
	MB9BF566R		LQFP-120 BGA-144										100	16(3)																								
	MB9BF567M		LQFP-80				63	16(3)					80	24(3)													100	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	2	1ch (USB-Host/ USB-Function Selectable)	-	✓	CAN: 32Msg-buffer, Dual Timer, Real Time Clock, DSTC x 128ch, Unique ID, SD Card I/F	On-chip Debug (SWJ-DP/ETM)		
	MB9BF567N		LQFP-100 QFP-100 BGA-112				63	16(3)																														
	MB9BF567R		LQFP-120 BGA-144				100	24(3)																														
	MB9BF568M		LQFP-80				63	16(3)					80	24(3)													100	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	2	1ch (USB-Host/ USB-Function Selectable)	-	✓	CAN: 32Msg-buffer, Dual Timer, Real Time Clock, DSTC x 128ch, Unique ID, SD Card I/F	On-chip Debug (SWJ-DP/ETM)		
	MB9BF568N		LQFP-100 QFP-100 BGA-112				63	16(3)																														
	MB9BF568R		LQFP-120 BGA-144				100	24(3)																														
MB9B460R	MB9BF466M	160	LQFP-80	2.7 to 5.5	✓	Main Flash +Work Flash	512K +32K	64K	-	8	16	✓	63	16(3)	12 x 2	Multi-Function Timer x 2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	2	-	-	-	✓	CAN: 32Msg-buffer, Dual Timer, Real Time Clock, DSTC x 128ch, Unique ID, SD Card I/F	On-chip Debug (SWJ-DP/ETM)											
	MB9BF466N		LQFP-100 QFP-100 BGA-112										80	24(3)																								
	MB9BF466R		LQFP-120 BGA-144										100	16(3)																								
	MB9BF467M		LQFP-80				63	16(3)					80	24(3)														100	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	2	-	-	-	✓	CAN: 32Msg-buffer, Dual Timer, Real Time Clock, DSTC x 128ch, Unique ID, SD Card I/F	On-chip Debug (SWJ-DP/ETM)
	MB9BF467N		LQFP-100 QFP-100 BGA-112				63	16(3)																														
	MB9BF467R		LQFP-120 BGA-144				100	24(3)																														
	MB9BF468M		LQFP-80				63	16(3)					80	24(3)														100	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	2	-	-	-	✓	CAN: 32Msg-buffer, Dual Timer, Real Time Clock, DSTC x 128ch, Unique ID, SD Card I/F	On-chip Debug (SWJ-DP/ETM)
	MB9BF468N		LQFP-100 QFP-100 BGA-112				63	16(3)																														
	MB9BF468R		LQFP-120 BGA-144				100	24(3)																														
MB9B360R	MB9BF366M	160	LQFP-80	2.7 to 5.5	✓	Main Flash +Work Flash	512K +32K	64K	-	8	16	✓	63	16(3)	12 x 2	Multi-Function Timer x 2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Time Clock, Unique ID, SD Card I/F	On-chip Debug (SWJ-DP/ETM)												
	MB9BF366N		LQFP-100 QFP-100 BGA-112										80	24(3)																								
	MB9BF366R		LQFP-120 BGA-144										100	16(3)																								
	MB9BF367M		LQFP-80				63	16(3)					80	24(3)													100	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Time Clock, Unique ID, SD Card I/F	On-chip Debug (SWJ-DP/ETM)		
	MB9BF367N		LQFP-100 QFP-100 BGA-112				63	16(3)																														
	MB9BF367R		LQFP-120 BGA-144				100	24(3)																														
	MB9BF368M		LQFP-80				63	16(3)					80	24(3)													100	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Time Clock, Unique ID, SD Card I/F	On-chip Debug (SWJ-DP/ETM)		
	MB9BF368N		LQFP-100 QFP-100 BGA-112				63	16(3)																														
	MB9BF368R		LQFP-120 BGA-144				100	24(3)																														

FM4 Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	10bit AD Converter [ch(unit)]	12bit AD Converter [ch(unit)]	DA Converter [bit x ch]	Timer									Serial				Communication			LCD Controller [seg x com]	Three-phase Inverter	Note	Evaluation Device															
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/SI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]	USB-Host [ch]	USB-Function [ch]																			
MB9B460L	MB9BF464K	160	LQFP-48 QFN-48	2.7 to 5.5	✓	Main Flash +Work Flash	256K +32K	32K	-	8	-	-	-	-	12 x 2		Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 1	1	Multi Function Serial x 6ch (UART/CSIO/I2C/LIN Selectable)	1	-	-	-	✓	CAN: 32Msg-buffer, Dual Timer, Real Time Clock, Unique ID, DSTC x 128ch	On-chip Debug (SWJ-DP)																							
	MB9BF464L		LQFP-64 QFN-64																																																
	MB9BF465K		LQFP-48 QFN-48																																																
	MB9BF465L		LQFP-64 QFN-64																																																
	MB9BF466K		LQFP-48 QFN-48																																																
	MB9BF466L		LQFP-64 QFN-64				512K +32K	64K																																											

FM4 Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	10bit AD Converter [ch/unit]	12bit AD Converter [ch/unit]	DA Converter [bit x ch]	Timer								Serial				Communication			LCD Controller [seg x com]	Three-phase Inverter	Note	Evaluation Device
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/SI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]	USB-Host [ch]				
MB9B360L	MB9BF364K	160	LQFP-48 QFN-48	2.7 to 5.5 2.7 to 5.5	✓	Main Flash +Work Flash	256K +32K	32K	-	8	-	-	-	12 x 2	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable)								Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 1	1	Multi Function Serial x 6ch (UART/CSIO/I2C/LIN Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Time Clock, Unique ID, DSTC x 128ch	On-chip Debug (SWJ-DP)			
	MB9BF364L		LQFP-64 QFN-64												Multi-Function Timer x 2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable)																				
	MB9BF365K		LQFP-48 QFN-48												Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable)																				
	MB9BF365L		LQFP-64 QFN-64				384K +32K	48K							Multi-Function Timer x 2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable)																				
	MB9BF366K		LQFP-48 QFN-48												Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable)																				
	MB9BF366L		LQFP-64 QFN-64												Multi-Function Timer x 2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable)																				

FM4 Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	10bit AD Converter [ch(unit)]	12bit AD Converter [ch(unit)]	DA Converter [bit x ch]	Timer								Serial			Communication			LCD Controller [seg x com]	Three-phase Inverter	Note	Evaluation Device																	
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/SI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]					USB-Host [ch]	USB-Function [ch]															
MB9B160L	MB9BF164K	160	LQFP-48 QFN-48	2.7 to 5.5	✓	Main Flash +Work Flash	256K +32K	32K	-	8	-	-	-	-	12 x 2	12	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 1	1	Multi Function Serial x 6ch (UART/CSIO/I2C/LIN Selectable)	-	-	-	-	✓	Dual Timer, Real Time Clock, Unique ID, DSTC x 128ch	On-chip Debug (SWJ-DP)																							
	MB9BF164L		LQFP-64 QFN-64																																																
	MB9BF165K		LQFP-48 QFN-48																																																
	MB9BF165L		LQFP-64 QFN-64																																																
	MB9BF166K		LQFP-48 QFN-48																																																
	MB9BF166L		LQFP-64 QFN-64				512K +32K	64K																																											

FM3 Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [bit]	Ext. Interrupt [bit]	External Bus	Maximum I/O port [bit]	10bit AD Converter [bit/unit]	12bit AD Converter [bit/unit]	DA Converter [bit x bit]	Timer								Serial			Communication		LCD Controller [seg x com]	Three-phase Inverter	Note	Evaluation Device
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	i ² C [bit]	UART/SIO [ch]	SIO [ch]	LIN/UART/SIO [ch]				
HIGH-PERFORMANCE GROUP																																	
MB9BD10T	MB9BFD16T	144	LQFP-176 BGA-192	2.7 to 5.5	✓	FLASH	512K	64K	-	8	32	✓	154	32(3)	-	Multi-Function Timer x 3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	2	2ch (USB-Host/ USB-Function Selectable)	-	✓	CAN: 32Msg-buffer, Dual Timer, Ethernet-MAC x 2ch	On-chip Debu (SWJ-DP/ETM)							
	MB9BFD16S		LQFP-144				122	24(3)																									
	MB9BFD17T		LQFP-176 BGA-192				154	32(3)																									
	MB9BFD17S		LQFP-144				122	24(3)																									
	MB9BFD18T		LQFP-176 BGA-192				154	32(3)																									
	MB9BFD18S		LQFP-144				122	24(3)																									
MB9B610T	MB9BF616T	144	LQFP-176 BGA-192	2.7 to 5.5	✓	FLASH	512K	64K	-	8	32	✓	154	32(3)	-	Multi-Function Timer x 3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	-	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Ethernet-MAC x 2ch	On-chip Debu (SWJ-DP/ETM)							
	MB9BF616S		LQFP-144				122	24(3)																									
	MB9BF617T		LQFP-176 BGA-192				154	32(3)																									
	MB9BF617S		LQFP-144				122	24(3)																									
	MB9BF618T		LQFP-176 BGA-192				154	32(3)																									
	MB9BF618S		LQFP-144				122	24(3)																									
MB9B510T	MB9BF516T	144	LQFP-176 BGA-192	2.7 to 5.5	✓	FLASH	512K	64K	-	8	32	✓	154	32(3)	-	Multi-Function Timer x 3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	2	2ch (USB-Host/ USB-Function Selectable)	-	✓	CAN: 32Msg-buffer, Dual Timer	On-chip Debu (SWJ-DP/ETM)							
	MB9BF516S		LQFP-144				122	24(3)																									
	MB9BF517T		LQFP-176 BGA-192				154	32(3)																									
	MB9BF517S		LQFP-144				122	24(3)																									
	MB9BF518T		LQFP-176 BGA-192				154	32(3)																									
	MB9BF518S		LQFP-144				122	24(3)																									
MB9B410T	MB9BF416T	144	LQFP-176 BGA-192	2.7 to 5.5	✓	FLASH	512K	64K	-	8	32	✓	154	32(3)	-	Multi-Function Timer x 3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	2	-	-	-	✓	CAN: 32Msg-buffer, Dual Timer	On-chip Debu (SWJ-DP/ETM)						
	MB9BF416S		LQFP-144				122	24(3)																									
	MB9BF417T		LQFP-176 BGA-192				154	32(3)																									
	MB9BF417S		LQFP-144				122	24(3)																									
	MB9BF418T		LQFP-176 BGA-192				154	32(3)																									
MB9B310T	MB9BF316T	144	LQFP-176 BGA-192	2.7 to 5.5	✓	FLASH	512K	64K	-	8	32	✓	154	32(3)	-	Multi-Function Timer x 3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	-	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer	On-chip Debu (SWJ-DP/ETM)							
	MB9BF316S		LQFP-144				122	24(3)																									
	MB9BF317T		LQFP-176 BGA-192				154	32(3)																									
	MB9BF317S		LQFP-144				122	24(3)																									
	MB9BF318T		LQFP-176 BGA-192				154	32(3)																									
	MB9BF318S		LQFP-144				122	24(3)																									
MB9B210T	MB9BF216T	144	LQFP-176 BGA-192	2.7 to 5.5	✓	FLASH	512K	64K	-	8	32	✓	154	32(3)	-	Multi-Function Timer x 3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	-	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Ethernet-MAC x 1ch	On-chip Debu (SWJ-DP/ETM)							
	MB9BF216S		LQFP-144				122	24(3)																									
	MB9BF217T		LQFP-176 BGA-192				154	32(3)																									
	MB9BF217S		LQFP-144				122	24(3)																									
	MB9BF218T		LQFP-176 BGA-192				154	32(3)																									
	MB9BF218S		LQFP-144				122	24(3)																									
MB9B110T	MB9BF116T	144	LQFP-176 BGA-192	2.7 to 5.5	✓	FLASH	512K	64K	-	8	32	✓	154	32(3)	-	Multi-Function Timer x 3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	-	-	-	-	✓	Dual Timer	On-chip Debu (SWJ-DP/ETM)						
	MB9BF116S		LQFP-144				122	24(3)																									
	MB9BF117T		LQFP-176 BGA-192				154	32(3)																									
	MB9BF117S		LQFP-144				122	24(3)																									
	MB9BF118T		LQFP-176 BGA-192				154	32(3)																									
	MB9BF118S		LQFP-144				122	24(3)																									

FM3 Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	10bit AD Converter [ch/unit]	12bit AD Converter [ch/unit]	DA Converter [bit x ch]	Timer								Serial				Communication			LCD Controller [seg x com]	Three-phase Inverter	Note	Evaluation Device		
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/SIO [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]	USB-Host [ch]					USB-Function [ch]	
HIGH-PERFORMANCE GROUP																																					
MB9B500B	MB9BF504NB	80	LQFP-100 BGA-112	2.7 to 5.5	✓	FLASH	256K	32K	-	8	16	✓	-	16(3)	-	Multi-Function Timer x 2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	2	1ch (USB-Host/ USB-Function Selectable)	-	✓	CAN: 32Msg-buffer, Dual Timer	On-chip Debug (SWJ-DP/ETM)											
	MB9BF504RB		LQFP-120				384K	48K																													
	MB9BF505NB		LQFP-100 BGA-112				384K	48K																													
	MB9BF505RB		LQFP-120				384K	48K																													
	MB9BF506NB		LQFP-100 BGA-112				512K	64K																													
	MB9BF506RB		LQFP-120				512K	64K																													
MB9B400A	MB9BF404NA	80	LQFP-100 BGA-112	2.7 to 5.5	✓	FLASH	256K	32K	-	8	16	✓	-	16(3)	-	Multi-Function Timer x 2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	2	-	-	-	✓	CAN: 32Msg-buffer, Dual Timer	On-chip Debug (SWJ-DP/ETM)										
	MB9BF404RA		LQFP-120				384K	48K																													
	MB9BF405NA		LQFP-100 BGA-112				384K	48K																													
	MB9BF405RA		LQFP-120				384K	48K																													
	MB9BF406NA		LQFP-100 BGA-112				512K	64K																													
	MB9BF406RA		LQFP-120				512K	64K																													
MB9B300B	MB9BF304NB	80	LQFP-100 BGA-112	2.7 to 5.5	✓	FLASH	256K	32K	-	8	16	✓	-	16(3)	-	Multi-Function Timer x 2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer	On-chip Debug (SWJ-DP/ETM)											
	MB9BF304RB		LQFP-120				384K	48K																													
	MB9BF305NB		LQFP-100 BGA-112				384K	48K																													
	MB9BF305RB		LQFP-120				384K	48K																													
	MB9BF306NB		LQFP-100 BGA-112				512K	64K																													
	MB9BF306RB		LQFP-120				512K	64K																													
MB9B100A	MB9BF102NA	80	LQFP-100 BGA-112	2.7 to 5.5	✓	FLASH	128K	16K	-	8	16	✓	-	16(3)	-	Multi-Function Timer x 2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	-	-	-	-	✓	Dual Timer	On-chip Debug (SWJ-DP/ETM)										
	MB9BF102RA		LQFP-120				256K	32K																													
	MB9BF104NA		LQFP-100 BGA-112				384K	48K																													
	MB9BF104RA		LQFP-120				384K	48K																													
	MB9BF105NA		LQFP-100 BGA-112				512K	64K																													
	MB9BF105RA		LQFP-120				512K	64K																													
	MB9BF106NA		LQFP-100 BGA-112				512K	64K																													
	MB9BF106RA		LQFP-120				512K	64K																													
BASIC GROUP																																					
MB9B520M	MB9BF521K	72	LQFP-48 QFN-48	2.7 to 5.5	✓	Dual Op. Flash (Main area + Work area)	64K +32K	16K	-	8	-	-	-	10bit x 2	-	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 1	1	Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)	1	1ch (USB-Host/ USB-Function Selectable)	-	✓	CAN: 32Msg-buffer, Dual Timer, Unique ID, Real Time Clock	On-chip Debug (SWJ-DP)											
	MB9BF521L		LQFP-64 QFN-64																								19	50	23(2)								
	MB9BF521M		LQFP-80 BGA-96																								23	65	26(2)								
	MB9BF522K		LQFP-48 QFN-48				14	35																			14(2)										
	MB9BF522L		LQFP-64 QFN-64				19	50																			23(2)										
	MB9BF522M		LQFP-80 BGA-96				23	65																			26(2)										
	MB9BF524K		LQFP-48 QFN-48				14	35																			14(2)										
	MB9BF524L		LQFP-64 QFN-64				19	50																			23(2)										
	MB9BF524M		LQFP-80 BGA-96				23	65																			26(2)										
BASIC GROUP																																					

FM3 Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	10bit AD Converter [ch/unit]	12bit AD Converter [ch/unit]	DA Converter [bit x ch]	Timer								Serial				Communication			Note	Evaluation Device		
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/SI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]	USB-Host [ch]			USB-Function [ch]	LCD Controller [seg x com]
BASIC GROUP																																			
MB9B320M	MB9BF321K	72	LQFP-48 QFN-48	2.7 to 5.5	✓	Dual Op. Flash (Main area + Work area)	64K +32K	16K	-	8	-	14	35	14(2)	10bit x 2	Multi-Function Timer x 1 unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	1	QPRC x 1	Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Unique ID, Real Time Clock	On-chip Debug (SWJ-DP)									
	MB9BF321L		LQFP-64 QFN-64																QPRC x 2								Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)								
	MB9BF321M		LQFP-80 BGA-96																QPRC x 1								Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)								
	MB9BF322K		LQFP-48 QFN-48				128K +32K	32K											14	35							14(2)	QPRC x 1	Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)						
	MB9BF322L		LQFP-64 QFN-64																									QPRC x 2	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)						
	MB9BF322M		LQFP-80 BGA-96																									QPRC x 1	Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)						
	MB9BF324K		LQFP-48 QFN-48				256K +32K	32K																				19	50	23(2)	QPRC x 1	Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)			
	MB9BF324L		LQFP-64 QFN-64																												QPRC x 2	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)			
	MB9BF324M		LQFP-80 BGA-96																												QPRC x 2	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)			
MB9B120M	MB9BF121K	72	LQFP-48 QFN-48	2.7 to 5.5	✓	Dual Op. Flash (Main area + Work area)	64K +32K	16K	-	8	-	14	35	14(2)	10bit x 2	Multi-Function Timer x 1 unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	1			QPRC x 1	Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)	-	-	-	-					✓	Dual Timer, Unique ID, Real Time Clock	On-chip Debug (SWJ-DP)		
	MB9BF121L		LQFP-64 QFN-64																		QPRC x 2													Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	
	MB9BF121M		LQFP-80 BGA-96																		QPRC x 1													Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)	
	MB9BF122K		LQFP-48 QFN-48				128K +32K	32K											14	35	14(2)	QPRC x 1					Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)								
	MB9BF122L		LQFP-64 QFN-64																			QPRC x 2					Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)								
	MB9BF122M		LQFP-80 BGA-96																			QPRC x 1					Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)								
	MB9BF124K		LQFP-48 QFN-48				256K +32K	32K														19					50	23(2)	QPRC x 1	Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)					
	MB9BF124L		LQFP-64 QFN-64																										QPRC x 2	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)					
	MB9BF124M		LQFP-80 BGA-96																										QPRC x 2	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)					
MB9B120J	MB9BF121J	72	LQFP-32 QFN-32	2.7 to 5.5	✓	FLASH	64K	8K	-	4	7	-	23	-	8(1)	-	Multi-Function Timer x 1 unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)					1	QPRC x 1	1	Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)			-	-	-	-	✓	Dual Timer, Real Time Clock, Unique ID	On-chip Debug (SW-DP)
MB9B520T	MB9BF528S*	60	LQFP-144	2.7 to 5.5	✓	Dual Op. Flash (Main area + Work area)	1M +64K	160K	-	8	32	✓	122	154	122	154	24(2)	10bit x 2					Multi-Function Timer x 1 unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	1	QPRC x 1			Multi Function Serial x 16ch (UART/CSIO/I2C/LIN Selectable)	1	1ch (USB-Host/ USB-Function Selectable)	-	✓	CAN: 32Msg-buffer, Dual Timer, HDMI-CEC/Remote Control Reception x 2, Real Time Clock, Unique ID	On-chip Debug (SWJ-DP/ETM)
	MB9BF528T*		LQFP-176 BGA-192																							QPRC x 2									
	MB9BF529S*		LQFP-144				1.5M +64K	192K											122	154	QPRC x 1														
	MB9BF529T*		LQFP-176 BGA-192																		QPRC x 2														
MB9B420T	MB9BF428S*	60	LQFP-144	2.7 to 5.5	✓	Dual Op. Flash (Main area + Work area)	1M +64K	160K	-	8	32	✓	122	154	122	154	24(2)	10bit x 2			Multi-Function Timer x 1 unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)		Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	1	QPRC x 1	Multi Function Serial x 16ch (UART/CSIO/I2C/LIN Selectable)			1	-	-	-	✓	CAN: 32Msg-buffer, Dual Timer, HDMI-CEC/Remote Control Reception x 2, Real Time Clock, Unique ID	On-chip Debug (SWJ-DP/ETM)
	MB9BF428T*		LQFP-176 BGA-192																			QPRC x 2													
	MB9BF429S*		LQFP-144				1.5M +64K	192K											122	154		QPRC x 1													
	MB9BF429T*		LQFP-176 BGA-192																			QPRC x 2													

FM3 Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	10bit AD Converter [ch(unit)]	12bit AD Converter [ch(unit)]	DA Converter [bit x ch]	Timer								Serial			Communication			LCD Controller [seg x com]	Three-phase Inverter	Note	Evaluation Device														
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/SI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]					USB-Host [ch]	USB-Function [ch]												
BASIC GROUP																																																
MB9A110A	MB9AF111LA	40	LQFP-64 QFN-64	2.7 to 5.5	✓	FLASH	64K	16K	-	8	8	-	51	-	9(2)	-	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	-	-	-	-	✓	Dual Timer	On-chip Debug (SWJ-DP)																				
	MB9AF111MA		LQFP-80								11	66	12(3)		Multi-Function Timer x 2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)		On-chip Debug (SWJ-DP/ETM)																															
	MB9AF111NA		LQFP-100 QFP-100 BGA-112								16	✓	83		16(3)		Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)											On-chip Debug (SWJ-DP)																				
	MB9AF112LA	40	LQFP-64 QFN-64				128K	16K	-	8	8	-	51	-	9(2)	-	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)											Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	-	-	-	-	✓	Dual Timer	On-chip Debug (SWJ-DP)										
	MB9AF112MA		LQFP-80				11				66	12(3)	Multi-Function Timer x 2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)		On-chip Debug (SWJ-DP)																																	
	MB9AF112NA		LQFP-100 QFP-100 BGA-112				16				✓	83	16(3)		Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)		On-chip Debug (SWJ-DP/ETM)																															
	MB9AF114LA	40	LQFP-64 QFN-64				256K	32K	-	8	8	-	51	-	9(2)	-	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)																					Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	-	-	-	-	✓	Dual Timer	On-chip Debug (SWJ-DP)
	MB9AF114MA		LQFP-80								11	66	12(3)		Multi-Function Timer x 2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)		On-chip Debug (SWJ-DP/ETM)																															
	MB9AF114NA		LQFP-100 QFP-100 BGA-112								16	83	16(3)				On-chip Debug (SWJ-DP)																															
	MB9AF115MA		LQFP-80				11				66	12(3)	On-chip Debug (SWJ-DP)																																			
	MB9AF115NA		LQFP-100 QFP-100 BGA-112**				16				✓	83	16(3)				On-chip Debug (SWJ-DP/ETM)																															
	MB9AF116MA		LQFP-80				11				66	12(3)	On-chip Debug (SWJ-DP)																																			
	MB9AF116NA		LQFP-100 QFP-100 BGA-112**				16				83	16(3)	On-chip Debug (SWJ-DP/ETM)																																			
MB9A310K	MB9AF311K	40	LQFP-48 QFN-52 QFN-48	2.7 to 5.5	✓	Main Flash +Work Flash	64K +32K	16K	-	4	6	-	36	-	8(2)	-	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 1	1	Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Time Clock	On-chip Debug (SWJ-DP)																					
	MB9AF312K		128K +32K				6				-	36	8(2)		Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)		On-chip Debug (SWJ-DP)																															
MB9A110K	MB9AF111K	40	LQFP-48 LQFP-52 QFN-48	2.7 to 5.5	✓	Main Flash +Work Flash	64K+ 32K	16K	-	4	6	-	36	-	8(2)	-	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 1	1	Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)	-	-	-	✓	Dual Timer, Real Time Clock	On-chip Debug (SWJ-DP)																					

FM3 Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	10bit/AD Converter [ch/unit]	12bit/AD Converter [ch/unit]	DA Converter [bit x ch]	Timer								Serial			Communication			LCD Controller [seg x com]	Three-phase Inverter	Note	Evaluation Device																																									
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/SI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]					USB-Host [ch]	USB-Function [ch]																																							
LOW-POWER GROUP																																																																											
MB9A340NA	MB9AF341LB	40	LQFP-64 QFN-64	1.65 to 3.6	✓	Dual Op. Flash (Main area + Work area)	64K +32K	16K	-	8	8	-	51	-	12(2)	-	-	-	-	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	-	1	Multi Function Serial x 8ch (UART/CSIO/I ² C Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	-	-	-	-	-	-	Dual Timer, HDMI-CEC/Remote Control Reception x 2, Real Time Clock, Unique ID	On-chip Debug (SWJ-DP)																																										
	MB9AF341MB		LQFP-80 BGA-96								11	-	66		17(2)																																																												
	MB9AF341NB		LQFP-100 QFP-100 BGA-112								16	✓	83		24(2)																																																												
	MB9AF342LB		LQFP-64 QFN-64								8	-	51		12(2)																																																												
	MB9AF342MB		LQFP-80 BGA-96				128K +32K	32K			11	-	66	17(2)	-																		-	-	-	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	-	1	Multi Function Serial x 8ch (UART/CSIO/I ² C Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	-	-	-	-	-	-	-	-	-	-	Dual Timer, HDMI-CEC/Remote Control Reception x 2, Real Time Clock, Unique ID	On-chip Debug (SWJ-DP/ETM)																						
	MB9AF342NB		LQFP-100 QFP-100 BGA-112				16				✓	83	24(2)																																																														
	MB9AF344LB		LQFP-64 QFN-64				8				-	51	12(2)																																																														
	MB9AF344MB		LQFP-80 BGA-96				11				-	66	17(2)																																																														
MB9AF344NB	LQFP-100 QFP-100 BGA-112	16	✓	83	24(2)																																																																						
MB9A140NA	MB9AF141LB	40	LQFP-64 QFN-64	1.65 to 3.6	✓	Dual Op. Flash (Main area + Work area)	64K +32K	16K	-	8	8	-	51	-	12(2)	-	-	-	-	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	-	1	Multi Function Serial x 8ch (UART/CSIO/I ² C Selectable)	-	-	-	-	-	-	-	-	Dual Timer, HDMI-CEC/Remote Control Reception x 2, Real Time Clock, Unique ID	On-chip Debug (SWJ-DP)																																										
	MB9AF141MB		LQFP-80 BGA-96								11	-	66		17(2)																																																												
	MB9AF141NB		LQFP-100 QFP-100 BGA-112								16	✓	83		24(2)																																																												
	MB9AF142LB		LQFP-64 QFN-64				128K +32K	16K			8	-	51	-	12(2)																		-	-	-	-	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	-	1	Multi Function Serial x 8ch (UART/CSIO/I ² C Selectable)	-	-	-	-	-	-	-	-	-	-	-	-	Dual Timer, HDMI-CEC/Remote Control Reception x 2, Real Time Clock, Unique ID	On-chip Debug (SWJ-DP)																					
	MB9AF142MB		LQFP-80 BGA-96								11	-	66		17(2)																																																												
	MB9AF142NB		LQFP-100 QFP-100 BGA-112								16	✓	83		24(2)																																																												
	MB9AF144LB		LQFP-64 QFN-64				256K +32K	32K			8	-	51	-	12(2)																																							-	-	-	-	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	-	1	Multi Function Serial x 8ch (UART/CSIO/I ² C Selectable)	-	-	-	-	-	-	-	-	-	-	-	-	Dual Timer, HDMI-CEC/Remote Control Reception x 2, Real Time Clock, Unique ID	On-chip Debug (SWJ-DP/ETM)
	MB9AF144MB		LQFP-80 BGA-96								11	-	66		17(2)																																																												
	MB9AF144NB		LQFP-100 QFP-100 BGA-112								16	✓	83		24(2)																																																												

FM3 Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [bit]	Ext. Interrupt [bit]	External Bus	Maximum I/O port [bit]	10bit AD Converter [bit(unif)]	12bit AD Converter [bit(unif)]	DA Converter [bit x bit]	Timer							Serial			Communication			LCD Controller [seg x com]	Three-phase Inverter	Note	Evaluation Device
																	Output Compare [bit]	Free-Run Timer [bit]	Input Capture [bit]	Reload Timer [bit]	PWM Timer [bit]	PWC Timer [bit]	PPG Timer [bit]	Up/Down Counter [bit]	Other timers [bit]	i ² C [bit]	UART/S ⁱ [bit]	SIO [bit]	LIN/UART/SIO [bit]				
ULTRA LOW LEAK GROUP																																	
MB9AAA0N	MB9AFAA1L	20	LQFP-64 QFN-64	1.8 to 5.5	✓	FLASH	64K	12K	-	-	-	-	52	-	9(1)	10bit x 2	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	-	-	Multi Function Serial x 8ch (UART/CSIO/i ² C Selectable)	-	-	-	24 x 4 or 20 x 8	✓	HDMI-CEC/Remote Control Reception x 2, Real Time Clock	On-chip Debug (SWJ-DP)					
	MB9AFAA1M		LQFP-80																										37 x 4 or 33 x 8				
	MB9AFAA1N		LQFP-100 QFP-100																										44 x 4 or 40 x 8				
	MB9AFAA2L		LQFP-64 QFN-64				24 x 4 or 20 x 8																										
	MB9AFAA2M		LQFP-80				37 x 4 or 33 x 8																										
	MB9AFAA2N		LQFP-100 QFP-100				44 x 4 or 40 x 8																										
MB9A1A0N	MB9AF1A1L	20	LQFP-64 QFN-64	1.8 to 5.5	✓	FLASH	64K	12K	-	-	-	-	52	-	9(1)	10bit x 2	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	-	-	Multi Function Serial x 8ch (UART/CSIO/i ² C Selectable)	-	-	-	-	✓	HDMI-CEC/Remote Control Reception x 2, Real Time Clock	On-chip Debug (SWJ-DP)					
	MB9AF1A1M		LQFP-80																										11	67	12(1)		
	MB9AF1A1N		LQFP-100 QFP-100																										16	84	16(1)		
	MB9AF1A2L		LQFP-64 QFN-64				8	52					9(1)																				
	MB9AF1A2M		LQFP-80				11	67					12(1)																				
	MB9AF1A2N		LQFP-100 QFP-100				16	84					16(1)																				
MB9A130LA	MB9AF131LB	20	LQFP-64 QFN-64	1.8 to 5.5	✓	FLASH	64K	8K	-	-	-	-	52	37	6(1)	-	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	-	-	Multi Function Serial x 8ch (UART/CSIO/I ² C Selectable)	-	-	-	-	✓	Real Time Clock	On-chip Debug (SWJ-DP)					
	MB9AF131KB		LQFP-48 QFN-48																										6	52	8(1)		
	MB9AF132LB		LQFP-64 QFN-64																										8	52	8(1)		
	MB9AF132KB		LQFP-48 QFN-48				6	37					6(1)																				

FM0 + Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	10bit AD Converter [ch/unit]	12bit AD Converter [ch/unit]	DA Converter [bit x ch]	Timer									Serial			Communication			LCD Controller [seg x com]	Three-phase Inverter	Note	Evaluation Device
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/SI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]	USB-Host [ch]				
S6E1A	S6E1A11B0A	40	LQFP-32 QFN-32	2.7 to 5.5	✓	Flash	56K	6K	-	2	8	-	23	-	5(1)	-	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 4ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 1	1	Multi Function Serial x 3ch (UART/CSIO/I ² C/LIN Selectable)	-	-	-	✓	Dual Timer, Real Time Clock, Unique ID, Fast I/O	On-chip Debug (SW-DP/MTB)								
	S6E1A11C0A		LQFP-48 QFN-48				37						8(1)																						
	S6E1A12B0A		LQFP-32 QFN-32				23						5(1)																						
	S6E1A12C0A		LQFP-48 QFN-52 QFN-48				37						8(1)																						
S6E1B8 w/security	S6E1B86GHA	40	LQFP-120	1.65 to 3.6	✓	Main Flash +Work Flash	512K + 40K	64K	-	-	24	-	102	-	24	-	Multi-Function Timer x 1units (Free-Run 3ch/Output Compare 6ch/Input Capture 4ch /PPG3ch/Waveform Generator 3ch /AD Activation Compare 6ch Selectable), PPG3ch	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	-	1	Multi Function Serial x 8ch (UART/CSIO/I2C Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	40 SEG x 8 COM / 44 SEG x 4 COM	-	Dual Timer, Real Timer Clock, Unique ID, DSTC x 64ch, Tiny I2S, HDMI-CEC 2ch, CRC, Smart Card I/F, Chipper	On-Chip Debug (SWJ-DP/ Boundary SCAN)								
	S6E1B84GHA		256K + 40K				32K	32 SEG x 8 COM / 36 SEG x 4 COM																											
	S6E1B86FHA		512K + 40K				64K	20 SEG x 8 COM / 24 SEG x 4 COM																											
	S6E1B84FHA		256K + 40K				32K	20 SEG x 8 COM / 24 SEG x 4 COM																											
	S6E1B86EHA		BGA-96/ LQFP-80/ WLCSP-80				512K + 40K	64K					20 SEG x 8 COM / 24 SEG x 4 COM																						
	S6E1B84EHA						256K + 40K	32K					20 SEG x 8 COM / 24 SEG x 4 COM																						
S6E1B8	S6E1B86G0A	40	LQFP-120	1.65 to 3.6	✓	Main Flash +Work Flash	512K + 40K	64K	-	-	24	-	102	-	24	-	Multi-Function Timer x 1units (Free-Run 3ch/Output Compare 6ch/Input Capture 4ch /PPG3ch/Waveform Generator 3ch /AD Activation Compare 6ch Selectable), PPG3ch	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	-	1	Multi Function Serial x 8ch (UART/CSIO/I2C Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	40 SEG x 8 COM / 44 SEG x 4 COM	-	Dual Timer, Real Timer Clock, Unique ID, DSTC x 64ch, Tiny I2S, HDMI-CEC 2ch, CRC, Smart Card I/F	On-Chip Debug (SWJ-DP/ Boundary SCAN)								
	S6E1B84G0A		256K + 40K				32K	32 SEG x 8 COM / 36 SEG x 4 COM																											
	S6E1B86F0A		512K + 40K				64K	20 SEG x 8 COM / 24 SEG x 4 COM																											
	S6E1B84F0A		256K + 40K				32K	20 SEG x 8 COM / 24 SEG x 4 COM																											
	S6E1B86E0A		BGA-96/ LQFP-80/ WLCSP-80				512K + 40K	64K					20 SEG x 8 COM / 24 SEG x 4 COM																						
	S6E1B84E0A						256K + 40K	32K					20 SEG x 8 COM / 24 SEG x 4 COM																						
S6E1B3	S6E1B36G0A	40	LQFP-120	1.65 to 3.6	✓	Main Flash +Work Flash	512K + 40K	64K	-	-	24	-	102	-	24	-	Multi-Function Timer x 1units (Free-Run 3ch/Output Compare 6ch/Input Capture 4ch /PPG3ch/Waveform Generator 3ch /AD Activation Compare 6ch Selectable), PPG3ch	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	-	1	Multi Function Serial x 8ch (UART/CSIO/I2C Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	-	-	Dual Timer, Real Timer Clock, Unique ID, DSTC x 64ch, Tiny I2S, HDMI-CEC 2ch, CRC, Smart Card I/F	On-Chip Debug (SWJ-DP/ Boundary SCAN)								
	S6E1B34G0A		256K + 40K				32K	-																											
	S6E1B36F0A		512K + 40K				64K	-																											
	S6E1B34F0A		256K + 40K				32K	-																											
	S6E1B36E0A		BGA-96/ LQFP-80/ WLCSP-80				512K + 40K	64K					-																						
	S6E1B34E0A						256K + 40K	32K					-																						
S6E1B1	S6E1B16G0A	40	LQFP-120	1.65 to 3.6	✓	Main Flash +Work Flash	512K + 40K	64K	-	-	24	-	102	-	24	-	Multi-Function Timer x 1units (Free-Run 3ch/Output Compare 6ch/Input Capture 4ch /PPG3ch/Waveform Generator 3ch /AD Activation Compare 6ch Selectable), PPG3ch	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	-	1	Multi Function Serial x 8ch (UART/CSIO/I2C Selectable)	-	-	-	-	Dual Timer, Real Timer Clock, Unique ID, DSTC x 64ch, Tiny I2S, HDMI-CEC 2ch, CRC, Smart Card I/F	On-Chip Debug (SWJ-DP/ Boundary SCAN)								
	S6E1B14G0A		256K + 40K				32K	-																											
	S6E1B16F0A		512K + 40K				64K	-																											
	S6E1B14F0A		256K + 40K				32K	-																											
	S6E1B16E0A		LQFP-80				512K + 40K	64K					-																						
	S6E1B14E0A						256K + 40K	32K					-																						

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [bit]	Ext. Interrupt [bit]	External Bus	Maximum I/O port [bit]	10bit AD Converter [bit(unif)]	12bit AD Converter [bit(unif)]	DA Converter [bit x ch]	Timer					Serial			Communication			LCD Controller [seg x com]	Three-phase Inverter	Note	Evaluation Device		
																	Output Compare [bit]	Free-Run Timer [bit]	Input Capture [bit]	Reload Timer [bit]	PWM Timer [bit]	PWC Timer [bit]	PPG Timer [bit]	Up/Down Counter [bit]	Other timers [bit]	I ² C [bit]	UART/SI [bit]					SIO [bit]	LINUART/SIO [bit]
LCD CONTROLLERS																																	
MB95610H	MB95F613H	16	LQFP-80	2.4 to 5.5	✓	Dual Op. Flash	12K	512					40	4(1)	-	-	-	Reload Timer x 1ch + 8/16bit Compound Timer x 2ch (Interval Timer/PWM/PWC/ Input Capture Selectable)	2	-	-	1	2	-	-	-	-	-	-	52 x 4 or 48 x 8	-	Clock Supervisor	On-chip Debug
	MB95F613K							41	Low-voltage Detection Reset, Clock Supervisor																								
	MB95F614H							40	Clock Supervisor																								
	MB95F614K						20K	1024	41	Low-voltage Detection Reset, Clock Supervisor																							
	MB95F616H							40	Clock Supervisor																								
MB95710M	MB95F616K	16	LQFP-80	1.8 to 5.5	✓	Dual Op. Flash	36K	1024					41	-	8(1)	-	-	Reload Timer x 1ch + 8/16bit Compound Timer x 2ch (Interval Timer/PWM/PWC/ Input Capture Selectable)	2	-	-	1	3	-	-	-	-	-	40 x 4 or 36 x 8	-	Low-voltage Detection Reset, Clock Supervisor	On-chip Debug	
	MB95F616K							41	Clock Supervisor																								
	MB95F714J							75	Low-voltage Detection Reset, Clock Supervisor																								
	MB95F714M							74	Clock Supervisor																								
	MB95F716J						20K	512	75	Low-voltage Detection Reset, Clock Supervisor																							
MB95770M	MB95F716M	16	LQFP-64	1.8 to 5.5	✓	Dual Op. Flash	36K	1K	-	-	8	-	75	-	8(1)	-	-	Reload Timer x 1ch + 8/16bit Compound Timer x 2ch (Interval Timer/PWM/PWC/ Input Capture Selectable)	2	-	-	1	3	-	-	-	-	-	32 x 4 or 28 x 8	-	Low-voltage Detection Reset, Clock Supervisor	On-chip Debug	
	MB95F718J							74	Clock Supervisor																								
	MB95F718M						60K	2K	75	Low-voltage Detection Reset, Clock Supervisor																							
	MB95F774J							59	Low-voltage Detection Reset, Clock Supervisor																								
	MB95F774M							58	Clock Supervisor																								
MB95770M	MB95F776J	16	LQFP-64	1.8 to 5.5	✓	Dual Op. Flash	20K	512	-	-	8	-	59	-	8(1)	-	-	Reload Timer x 1ch + 8/16bit Compound Timer x 2ch (Interval Timer/PWM/PWC/ Input Capture Selectable)	2	-	-	1	3	-	-	-	-	-	32 x 4 or 28 x 8	-	Low-voltage Detection Reset, Clock Supervisor	On-chip Debug	
	MB95F776M							58	Clock Supervisor																								
	MB95F778J							59	Low-voltage Detection Reset, Clock Supervisor																								
	MB95F778M							58	Clock Supervisor																								
	MB95F778M						60K	2K	58	Low-voltage Detection Reset, Clock Supervisor																							
INVERTER																																	
MB95630H	MB95F632H	16	LQFP-32 SH-DIP-32 QFN-32	2.4 to 5.5	✓	Dual Op. Flash	8K	256					28	8(1)	-	-	-	Reload Timer x 1ch + 8/16bit Compound Timer x 2ch (Interval Timer/PWM/PWC/ Input Capture Selectable)	3	-	1	1	1	-	1	-	-	-	-	-	✓	Low-voltage Detection Reset, Multi-pulse Generator (Reload/PPG/Waveform Sequencer), Clock Supervisor	On-chip Debug
	MB95F632K							29																									
	MB95F633H							28																									
	MB95F633K						12K	512	29																								
	MB95F634H							28																									
	MB95F634K						20K		29																								
	MB95F636H							28																									
MB95690K	MB95F636K	16	LQFP-44 LQFP-48 LQFP-52 QFN-48	2.88 to 5.5	✓	Dual Op. Flash	20K	512					45	12(1) LQFP44 only: 41	-	-	-	Reload Timer x 1ch + 8/16bit Compound Timer x 2ch (Interval Timer/PWM/PWC/ Input Capture Selectable)	3	-	1	1	1	-	1	-	-	-	-	✓	Low-voltage Detection Reset, Multi-pulse Generator (Reload/PPG/Waveform Sequencer), Clock Supervisor	On-chip Debug	
	MB95F694K							45																									
	MB95F696K						36K	1K	45																								
	MB95F698K						60K	2K	45																								
STANDARD																																	
MB95560H	MB95F562H	16	SOP-20 TSSOP-20 QFN-32	2.4 to 5.5	✓	Dual Op. Flash	8K	240					16	6(1)	-	-	-	8/16bit Compound Timer x 2ch (Interval Timer/PWM/PWC/ Input Capture Selectable)	-	-	-	-	-	-	1	-	-	-	-	-	-	Clock Supervisor	On-chip Debug
	MB95F562K							17	Low-voltage Detection Reset, Clock Supervisor																								
	MB95F																																

8FX – 8bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	10bit AD Converter [ch/unit]	12bit AD Converter [ch/unit]	DA Converter [bit x ch]	Timer								Serial			Communication			LCD Controller [seg x com]	Three-phase Inverter	Note	Evaluation Device	
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/SI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]					USB-Host [ch]
STANDARD																																			
MB95650L	MB95F652E	16	TSSOP-24 SOP-24 QFN-32	1.8 to 5.5	✓	Dual Op. Flash	8K	256	-	-	6	-	21	-	6(1)	-	-	8/16bit Compound Timer x 2ch (Interval Timer/PWM/PWC/ Input Capture Selectable)	-	-	-	2	1	-	1	-	-	-	-	-	-	-	-	Low-voltage Detection Reset, Clock Supervisor Clock Supervisor	On-chip Debug
	MB95F652L						12K	512					20																						
	MB95F653E						1024	20																											
	MB95F653L							20																											
	MB95F654E							21																											
	MB95F654L							20																											
	MB95F656E							21																											
	MB95F656L							20																											
MB95810K	MB95F814K	16	LQFP-64	2.88 to 5.5	✓	Dual Op. Flash	20K	512	-	-	12	-	58	12(1)	-	-	-	Reload Timer x 1ch + 8/16bit Compound Timer x 2ch (Interval Timer/PWM/PWC/ Input Capture Selectable)	4	-	-	-	1	-	1	-	-	-	-	-	-	Low-voltage Detection Reset, Clock Supervisor	On-chip Debug		
	MB95F816K						36K	1K																											
	MB95F818K						60K	2K																											

Traveo Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	12bit AD Converter [ch/unit]	12bit AD Converter with 4ch sample & hold	DA Converter [bit x ch]	Timer										Serial		Communication			Three-phase Inverter	Note	Evaluation Device	
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I2C [ch]	UART/SI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]	USB-Hos [ch]				USB-Function [ch]
CAN/AUTOMOTIVE																																			
S6J3200	S6J323CKS	240	TEQFP -208	1.1 to 1.3 3.0 to 3.6 4.5 to 5.5	✓	Main Flash +Work Flash	2112K + 112K	TC-RAM: 128KB System - RAM: 128KB Backup - RAM: 16KB VRAM: 2048KB	Instruction: 16 Data: 16	16	16	-	120	46(1)	-	-	24	12	24	Reload Timer x 14ch 16bit Base Timer x 24ch (PWM/PPG/Reload/PWC Selectable)	2	RTC x 1ch	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)	CAN-FD x 4ch	-	-	30 x 4	-	ARM Cortex-R5, Ethernet AVB, Media-LB, SHE(Secure Hardware Extension), SMC x 6ch, Sound generator x 4ch, 2D Graphic Engine, Display Output x 2ch, Sound system,	On-Chip Debug					
	S6J323CKU																																		
	S6J323CLS																																		
	S6J323CLU		TEQFP -216 (0.4mm pitch)										128	50(1)																					
	S6J324CKS		TEQFP -208										120	46(1)																					
	S6J324CKU																																		
	S6J324CLS		TEQFP -216 (0.4mm pitch)										128	50(1)																					
	S6J325CKS		TEQFP -208										120	46(1)																					
	S6J325CKU																																		
	S6J325CLS		TEQFP -216 (0.4mm pitch)										128	50(1)																					
	S6J325CLU																																		
	S6J326CKS		TEQFP -208										120	46(1)																					
	S6J326CKU																																		
	S6J326CLS		TEQFP -216 (0.4mm pitch)										128	50(1)																					
	S6J326CLU																																		
	S6J327CKS		TEQFP -208										120	46(1)																					
	S6J327CKU																																		
	S6J327CLS		TEQFP -216 (0.4mm pitch)										128	50(1)																					
S6J327CLU																																			
S6J328CKS	TEQFP -208	120	46(1)																																
S6J328CKU																																			
S6J328CLS																																			
S6J328CLU	TEQFP -216 (0.4mm pitch)	128	50(1)																																

Series Name		Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub-Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	10bit AD Converter [ch/unit]	12bit AD Converter [ch/unit]	DA Converter [bit x ch]	Timer							Serial			Communication		Note	Evaluation Device																																
																		Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/S [ch]	SIO [ch]			LIN/UART/SIO [ch]	CAN [ch]	USB-Host [ch]	USB-Function [ch]	LCD Controller [seg x com]	Three-phase Inverter																										
CAN/AUTOMOTIVE																																																															
MB91520	MB91F522B	LQFP-64	80	2.7 to 5.5	Main Flash +Work Flash	320K+64K	56K	-	16	16	-	44	13(1) 13(1)	8bit x 1	16bit x 3 32bit x 1	16bit x 4 32bit x 5	Reload Timer x 7ch + PPG Timer x 21ch (Reload/PPG/PWM/PWC Selectable)	2	-	Multi Function Serial x 8ch (LIN/UART/SIO/I2C Selectable)			3	-	-	-	✓	LIN, FPU, MPU, Tuning RAM MB91520B/D/F/J/K/L series: CAN: 64Msg-buffer x 2ch, 128Msg-buffer x 1ch, MB91520R/U/M/Y series: CAN: 128Msg-buffer x 6ch, FlexRay: 1 unit Details of part number suffix <table><tr><td></td><td colspan="2">Dual clock system</td></tr><tr><td></td><td>xWC</td><td>xJC</td></tr><tr><td>CSV initial value</td><td>ON</td><td>OFF</td></tr></table> <table><tr><td></td><td colspan="2">Single clock system</td></tr><tr><td></td><td>xSC</td><td>xHC</td></tr><tr><td>CSV initial value</td><td>ON</td><td>OFF</td></tr></table>		Dual clock system			xWC	xJC	CSV initial value	ON	OFF		Single clock system			xSC	xHC	CSV initial value	ON	OFF	On-chip Debug																
						Dual clock system																																																									
						xWC	xJC																																																								
	CSV initial value					ON	OFF																																																								
						Single clock system																																																									
						xSC	xHC																																																								
	CSV initial value	ON				OFF																																																									
	MB91F523B	448K+64K				72K	16(1) 16(1)								16bit x 6 32bit x 4	16bit x 4 32bit x 5	Reload Timer x 7ch + PPG Timer x 27ch + Base Timer x 1ch (Reload/PPG/PWM/PWC Selectable)			Multi Function Serial x 9ch (LIN/UART/SIO/I2C Selectable)																																											
	MB91F524B	576K+64K				104K														Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)																																											
	MB91F525B	832K+64K				136K														Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)																																											
	MB91F526B	1088K+64K				160K														Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)																																											
	MB91F522D	320K+64K				56K														8bit x 2	16bit x 6 32bit x 6	16bit x 3 32bit x 3							16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 34ch + Base Timer x 1ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)																																
	MB91F523D	448K+64K	72K	16(1) 21(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3		16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 38ch + Base Timer x 2ch (Reloa d/PPG/PWM/ PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)																																																					
	MB91F524D	576K+64K	104K							16(1) 26(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 38ch + Base Timer x 2ch (Reloa d/PPG/PWM/ PWC Selectable)				Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)																																													
	MB91F525D	832K+64K	136K															16(1) 26(1)	16bit x 6 32bit x 6				16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 38ch + Base Timer x 2ch (Reloa d/PPG/PWM/ PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)																																					
	MB91F526D	1088K+64K	160K																							16(1) 32(1)	16bit x 6 32bit x 6				16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 44ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)																													
	MB91F522F	320K+64K	56K																															16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)																								
	MB91F523F	448K+64K	72K																																				16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)																			
	MB91F524F	576K+64K	104K																																									16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3		16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)													
	MB91F525F	832K+64K	136K				16(1) 32(1)								16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6																																	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)												
	MB91F526F	1088K+64K	160K																																																16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)							
	MB91F522J	320K+64K	56K																																																					16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)		
	MB91F523J	448K+64K	72K																																																										16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3
	MB91F524J	576K+64K	104K																	16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3							16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																																	
	MB91F525J	832K+64K	136K	16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3		16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																																																						
	MB91F526J	1088K+64K	160K							16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																																																	
	MB91F522K	320K+64K	56K															16(1) 32(1)	16bit x 6 32bit x 6				16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																																						
	MB91F523K	448K+64K	72K																							16(1) 32(1)	16bit x 6 32bit x 6				16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																														
	MB91F524K	576K+64K	104K																															16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																									
	MB91F525K	832K+64K	136K																																				16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																				
MB91F526K	1088K+64K	160K	16(1) 32(1)																									16bit x 6 32bit x 6																16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)																
MB91F527R	1600K+64K	192+16K					16(1) 32(1)								16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6																														Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)															
MB91F528R	2112K+64K	320K;16K																																														16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)										
MB91F522L	320K+64K	56K																																																			16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)					
MB91F523L	448K+64K	72K																																																								16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F524L	576K+64K	104K																		16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3							16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																																	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F525L	832K+64K	136K		16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3		16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																																																						Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F526L	1088K+64K	160K								16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																																																	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F527U	1600K+64K	192+16K																16(1) 32(1)	16bit x 6 32bit x 6				16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																																						Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F528U	2112K+64K	320K;16K																								16(1) 32(1)	16bit x 6 32bit x 6				16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																														Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F527M	1600K+64K	192+16K																																16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																									Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F528M	2112K+64K	320K;16K																																					16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																				Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F527Y	1600K+64K	192+16K	16(1) 32(1)																									16bit x 6 32bit x 6																16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F528Y	2112K+64K	320K;16K					16(1) 32(1)								16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6																														Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F527M	1600K+64K	192+16K																																														16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)											Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F528M	2112K+64K	320K;16K																																																			16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)						Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F527Y	1600K+64K	192+16K																																																								16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F528Y	2112K+64K	320K;16K																		16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3							16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																																	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F527M	1600K+64K	192+16K		16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3		16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																																																						Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F528M	2112K+64K	320K;16K								16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																																																	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F527Y	1600K+64K	192+16K																16(1) 32(1)	16bit x 6 32bit x 6				16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																																						Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F528Y	2112K+64K	320K;16K																								16(1) 32(1)	16bit x 6 32bit x 6				16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																														Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F527M	1600K+64K	192+16K																																16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																									Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F528M	2112K+64K	320K;16K																																					16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																				Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F527Y	1600K+64K	192+16K	16(1) 32(1)																									16bit x 6 32bit x 6																16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F528Y	2112K+64K	320K;16K					16(1) 32(1)								16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6																														Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F527M	1600K+64K	192+16K																																														16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)											Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F528M	2112K+64K	320K;16K																																																			16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)						Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F527Y	1600K+64K	192+16K																																																								16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F528Y	2112K+64K	320K;16K																		16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3							16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																																	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F527M	1600K+64K	192+16K		16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3		16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																																																						Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F528M	2112K+64K	320K;16K								16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																																																	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F527Y	1600K+64K	192+16K																16(1) 32(1)	16bit x 6 32bit x 6				16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																																						Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F528Y	2112K+64K	320K;16K																								16(1) 32(1)	16bit x 6 32bit x 6				16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																														Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F527M	1600K+64K	192+16K																																16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																									Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F528M	2112K+64K	320K;16K																																					16(1) 32(1)	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	Reload Timer x 8ch + PPG Timer x 48ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)																				Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)
MB91F527Y																																																															

CYPRESS SEMICONDUCTOR | MICROCONTROLLER PRODUCT SELECTOR GUIDE

* In development; **Planning

FR Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	10bit AD Converter [ch(unt)]	12bit AD Converter [ch(unt)]	DA Converter [bit x ch]	Timer								Serial			Communication			LCD Controller [seg x com]	Three-phase Inverter	Note	Evaluation Device
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/SI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]				
CAN/AUTOMOTIVE																																		
MB91590	MB91F591B	80	LQFP-208	3.0 to 3.6 4.5 to 5.5 (2 power supplies)	Main Flash +Work Flash	Dedicated for GDC External Memory	576K +64K	48K	-	16	16	32(1)	-	-	4	2	6	Reload Timer x 4ch + PPG Timer x 24ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)	-	Multi Function Serial x 2ch (LIN/UART/ SIO/I2C Selectable)	6	3	-	-	-	-	CAN: 32/64Mseg-buffer, LIN, FPU, MPU, Sound generator, SMC x 6ch, From among the RAM, 8KB can be used as BackUpRAM, Built-in 2D GDC	On-chip Debug						
	MB91F591BS																																	
	MB91F591BH																																	
	MB91F591BHS																																	
	MB91F592B																																	
	MB91F592BS																																	
	MB91F592BH																																	
	MB91F592BHS																																	
	MB91F594B	128	BGA-320				1088K +64K	72K							264K	2112K +64K	264K	4	8	12	Reload Timer x 8ch + PPG Timer x 24ch + Base Timer x 2ch (Reload/PPG/PWM/PWC Selectable)	3	Multi Function Serial x 6ch (LIN/UART SIO/I2C Selectable. However, I2C only supports ch0/ ch1)											
	MB91F594BS																																	
	MB91F594BH																																	
	MB91F594BHS																																	
	MB91F59AC																																	
	MB91F59ACS																																	
	MB91F59ACH																																	
	MB91F59ACHS																																	
MB91F59BC																																		
MB91F59BCS																																		
MB91F59BCH																																		
MB91F59BCHS																																		

F²MC-16FX – 16bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	10bit AD Converter [ch[unit]]	12bit AD Converter [ch[unit]]	DA Converter [bit x ch]	Timer								Serial			Communication			LCD Controller [seg x com]	Three-phase Inverter	Note	Evaluation Device	
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/SI [ch]	SO [ch]	LIN/UART/SIO [ch]	CAN [ch]					USB-Host [ch]
AUTOMOTIVE																																			
MB96310	MB96F313AS	56	LQFP-48	3.0 to 5.5	FLASH	96K	8K	-	4	11	-	36	12(1)	-	-	2	4	4 +3 (Dedicated for LIN)	4 +1 (Dedicated for PPG)	-	-	14	-	-	-	-	-	3	-	-	-	-	LVD, built-in CR Option without CAN	MB96V300C	
	✓																												34						1
	-																												36						-
	✓																												34						-
	MB96F313AW					✓																							36						-
	MB96F315AS					✓																							34						-
	MB96F315AW					✓																							36						-
	MB96F315RS					✓																							36						1
MB96F315RW	✓	34	-																																
MB96320	MB96F326AS	56	LQFP-80	3.0 to 5.5	FLASH	288K	12K	-	4	15	✓	66	18(1)	-	-	6	4	12	4 +1 (Dedicated for PPG)	-	-	20	-	-	1	-	-	4	-	-	-	-	LVD, built-in CR Option without CAN	MB96V300C	
	✓											64																	-						
	MB96F326AW											✓																	66						2
	MB96F326RS											✓																	64						-
	MB96F326RW											✓																	64						-
MB96330	MB96F336US	48	LQFP-144	3.0 to 5.5	FLASH	288K	24K	-	10	16	✓	124	36(1)	-	-	12	4	10	4 +1 (Dedicated for PPG)	-	-	20	-	-	2	-	-	8	1	1ch (USB-Host/ USB-Function Selectable)	-	-	LVD, built-in CR	MB96V300C	
	✓											122																	-						
	MB96F338RS					✓	124					3	1ch (USB-Host/ USB-Function Selectable)																						
	MB96F338RW					✓	122																												
	MB96F338US					✓	120																												
	MB96F338UW					✓	118					36(1)																							

