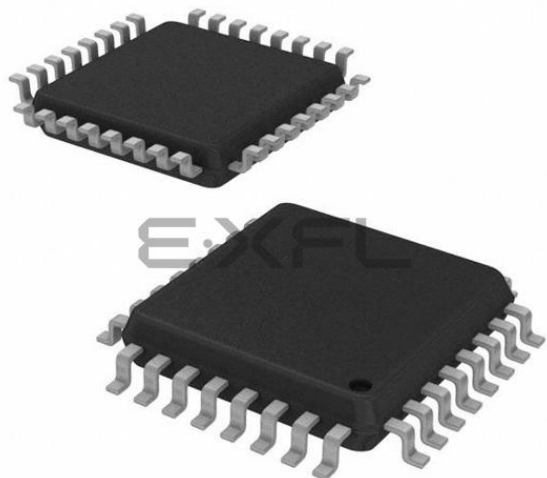




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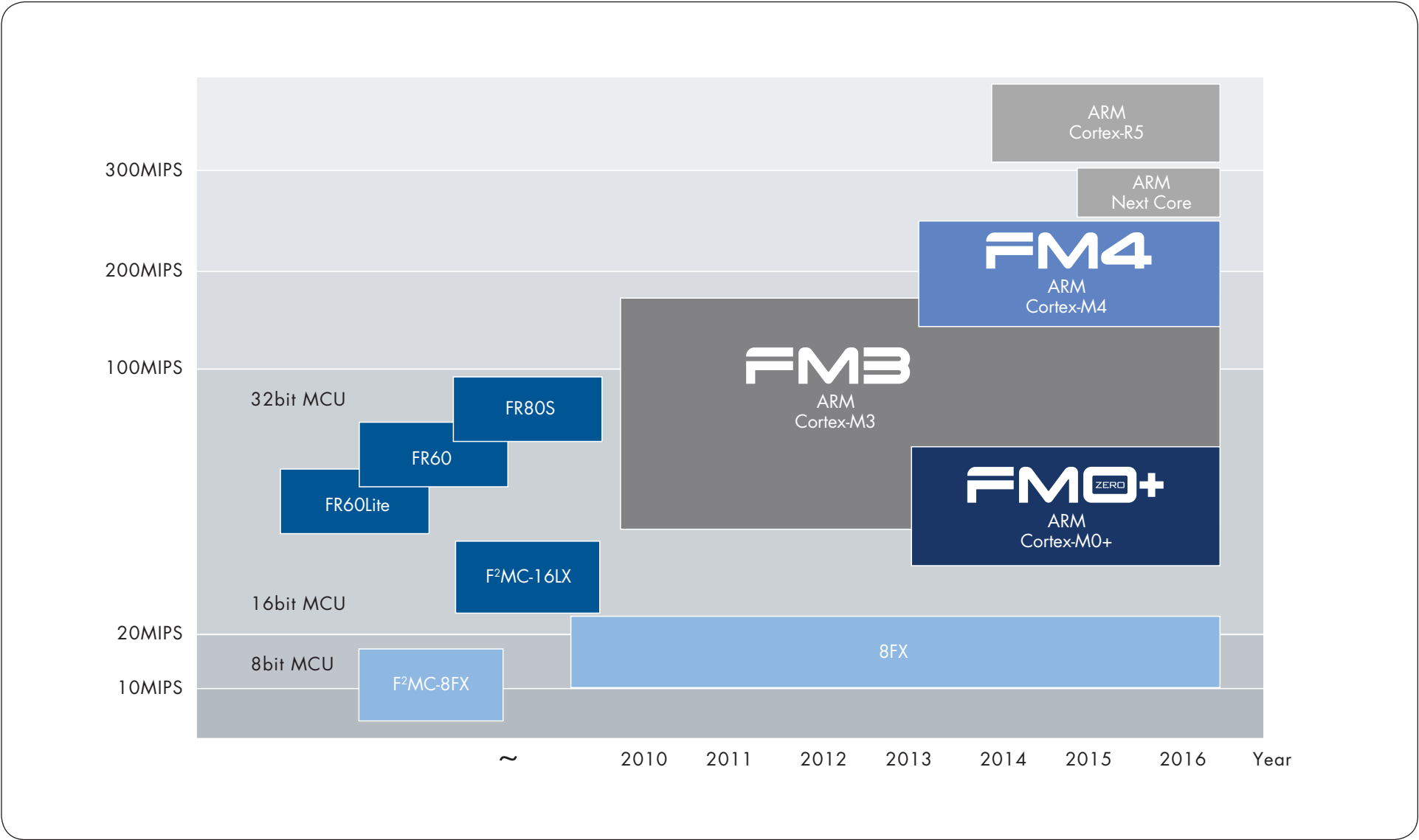
"[Embedded - Microcontrollers](#)" refer to small, integrated circuits designed to perform specific tasks within larger systems. These microcontrollers are essentially compact computers on a single chip, containing a processor core, memory, and programmable input/output peripherals. They are called "embedded" 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](#)"

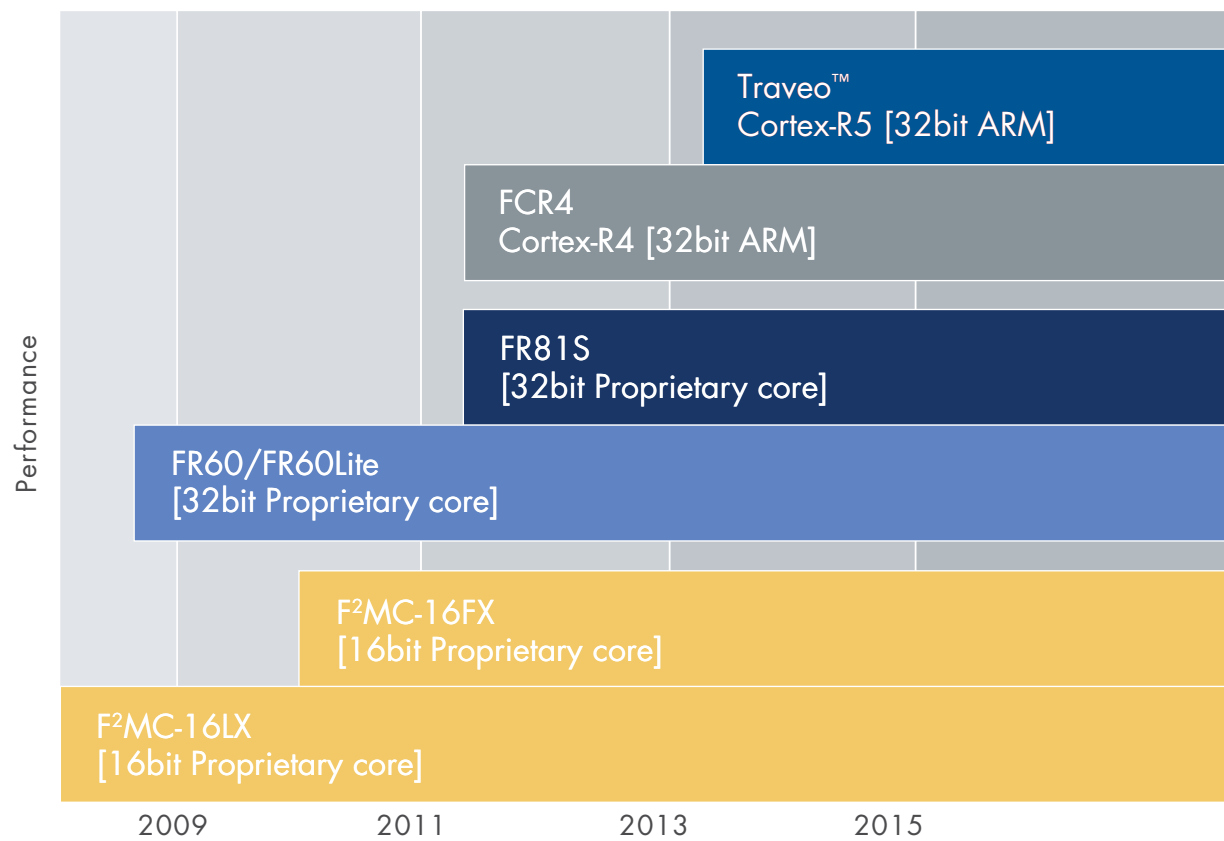
Details

Product Status	Obsolete
Core Processor	F ² MC-8FX
Core Size	8-Bit
Speed	16MHz
Connectivity	I ² C, LINbus, SIO, UART/USART
Peripherals	POR, PWM, WDT
Number of I/O	28
Program Memory Size	12KB (12K x 8)
Program Memory Type	FLASH
EEPROM Size	-
RAM Size	512 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/mb95f633hnpmc-g-sne2

Consumer and Industrial MCU Core Roadmap



Automotive MCU Core Roadmap



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]		
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)																	
	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)																	
	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	128K	152	32 (3)																	
	S6E2C59L0A		LQFP-216				190	24 (3)																									
	S6E2C58H0A		LQFP-144				120	24 (3)																									
	S6E2C58J0A		LQFP-176 BGA-192				152	32 (3)																									
S6E2C58L0A	LQFP-216	190	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 [ct/unit]	12bit AD Converter [ct/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/ISI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]	USB-Host [ch]		
S6E2C4	S6E2C4AH0A	200	LQFP-144	2.7 to 5.5	✓	Main Flash +Main Flash	2M	256K	-	8	32	✓	120	-	24 (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)	-	-	✓	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)						
	S6E2C4AJ0A		LQFP-176 BGA-192																									152	32 (3)				
	S6E2C4AL0A		LQFP-216																											190	24 (3)		
	S6E2C49H0A		LQFP-144																													120	32 (3)
	S6E2C49J0A		LQFP-176 BGA-192				152	32 (3)																									
	S6E2C49L0A		LQFP-216										190	24 (3)																			
	S6E2C48H0A		LQFP-144												120													32 (3)					
	S6E2C48J0A		LQFP-176 BGA-192																										152	32 (3)			
S6E2C48L0A	LQFP-216	190	32 (3)																														
S6E2C3	S6E2C3AH0A			LQFP-144	2.7 to 5.5	✓	Main Flash +Main Flash	2M	256K	-	8	32	✓	120		-	24 (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)	-	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)	
	S6E2C3AJ0A			LQFP-176 BGA-192											152													32 (3)					
	S6E2C3AL0A			LQFP-216																									190	24 (3)			
	S6E2C39H0A	LQFP-144	120	32 (3)																													
	S6E2C39J0A	LQFP-176 BGA-192						152	32 (3)																								
	S6E2C39L0A	LQFP-216												190	24 (3)																		
	S6E2C38H0A	LQFP-144														120	32 (3)																
	S6E2C38J0A	LQFP-176 BGA-192	152	32 (3)																													
S6E2C38L0A	LQFP-216	190			32 (3)																												
S6E2C2 w/ Security	S6E2C2AH0A					LQFP-144	2.7 to 5.5	✓	Main Flash +Main Flash	2M	256K	-	8	32	✓			120	-	24 (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)	-	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)	
	S6E2C2AJ0A					LQFP-176 BGA-192										152	32 (3)																
	S6E2C2AL0A		LQFP-216	190		24 (3)																											
	S6E2C29H0A	LQFP-144	120		32 (3)																												
	S6E2C29J0A	LQFP-176 BGA-192								152	32 (3)																						
	S6E2C29L0A	LQFP-216														190	24 (3)																
	S6E2C28H0A	LQFP-144		120		32 (3)																											
	S6E2C28J0A	LQFP-176 BGA-192	152		32 (3)																												
S6E2C28L0A	LQFP-216	190					32 (3)																										
S6E2C2	S6E2C2AH0A							LQFP-144	2.7 to 5.5	✓	Main Flash +Main Flash	2M	256K	-	8	32	✓	120	-	24 (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)	-	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)	
	S6E2C2AJ0A			LQFP-176 BGA-192		152		32 (3)																									
	S6E2C2AL0A		LQFP-216	190	24 (3)																												
	S6E2C29H0A	LQFP-144	120				32 (3)																										
	S6E2C29J0A	LQFP-176 BGA-192										152	32 (3)																				
	S6E2C29L0A	LQFP-216				190		24 (3)																									
	S6E2C28H0A	LQFP-144		120	32 (3)																												
	S6E2C28J0A	LQFP-176 BGA-192	152				32 (3)																										
S6E2C28L0A	LQFP-216	190							32 (3)																								
S6E2C1	S6E2C1AH0A					LQFP-144		2.7 to 5.5		✓	Main Flash +Main Flash	2M	256K	-	8	32	✓	120	-	24 (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)	-	-	-	✓	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)	
	S6E2C1AJ0A			LQFP-176 BGA-192	152	32 (3)																											
	S6E2C1AL0A		LQFP-216	190			24 (3)																										
	S6E2C19H0A	LQFP-144	120						32 (3)																								
	S6E2C19J0A	LQFP-176 BGA-192										152	32 (3)																				
	S6E2C19L0A	LQFP-216			190	24 (3)																											
	S6E2C18H0A	LQFP-144		120			24 (3)																										
	S6E2C18J0A	LQFP-176 BGA-192	152						32 (3)																								
S6E2C18L0A	LQFP-216	190						32 (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]	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]			
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, Chipser	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	16(3)														
	MB9BF567N		LQFP-100 QFP-100 BGA-112				80	24(3)					100	16(3)																		
	MB9BF567R		LQFP-120 BGA-144				100	16(3)																								
	MB9BF568M		LQFP-80				63	16(3)																								
	MB9BF568N		LQFP-100 QFP-100 BGA-112				80	24(3)																								
	MB9BF568R		LQFP-120 BGA-144				100	16(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	24(3)																								
	MB9BF467N	LQFP-100 QFP-100 BGA-112	80	24(3)	100	16(3)																										
	MB9BF467R	LQFP-120 BGA-144	100	16(3)																												
	MB9BF468M	LQFP-80	63	16(3)	80	24(3)	100	16(3)																								
	MB9BF468N	LQFP-100 QFP-100 BGA-112	80	24(3)	100	16(3)																										
	MB9BF468R	LQFP-120 BGA-144	100	16(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	16(3)														
	MB9BF367N		LQFP-100 QFP-100 BGA-112				80	24(3)					100	16(3)																		
	MB9BF367R		LQFP-120 BGA-144				100	16(3)																								
	MB9BF368M		LQFP-80				63	16(3)																								
	MB9BF368N		LQFP-100 QFP-100 BGA-112				80	24(3)																								
	MB9BF368R		LQFP-120 BGA-144				100	16(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]				
MB9B160R	MB9BF166M	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)	-	-	-	-	✓	Dual Timer, Real Time Clock, DSTC x 128ch, Unique ID, SD Card I/F	On-chip Debug (SWJ-DP/ETM)								
	MB9BF166N		LQFP-100 QFP-100 BGA-112										80	24(3)																					
	MB9BF166R		LQFP-120 BGA-144										100	16(3)																					
	MB9BF167M		LQFP-80				768K +32K	96K					63	16(3)																					
	MB9BF167N		LQFP-100 QFP-100 BGA-112										80	24(3)																					
	MB9BF167R		LQFP-120 BGA-144										100	16(3)																					
	MB9BF168M		LQFP-80				1024K +32K	128K					63	16(3)																					
	MB9BF168N		LQFP-100 QFP-100 BGA-112										80	24(3)																					
	MB9BF168R		LQFP-120 BGA-144										100	24(3)																					
MB9B560L	MB9BF564K	160	LQFP-48 QFN-48	2.7 to 5.5	✓	Main Flash +Work Flash	256K +32K	32K	-	8	15	33	8(2)	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/I ² C/LIN Selectable)	1	1ch (USB-Host/ USB-Function Selectable)	-	✓	CAN: 32Msg-buffer, Dual Timer, Real Time Clock, Unique ID, DSTC x 128ch	On-chip Debug (SWJ-DP)										
	MB9BF564L		LQFP-64 QFN-64																																
	MB9BF565K		LQFP-48 QFN-48				384K +32K	48K			15	33	8(2)																						
	MB9BF565L		LQFP-64 QFN-64								16	48	15(2)																						
	MB9BF566K	160	LQFP-48 QFN-48	2.7 to 5.5	✓	Main Flash +Work Flash	512K +32K	64K	-	8	15	33	8(2)	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/I ² C/LIN Selectable)	1	1ch (USB-Host/ USB-Function Selectable)	-	✓	CAN: 32Msg-buffer, Dual Timer, Real Time Clock, Unique ID, DSTC x 128ch	On-chip Debug (SWJ-DP)										
	MB9BF566L		LQFP-64 QFN-64										16													48	15(2)								

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	8(2)	12 x 2	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				384K +32K	48K																				-	8	-	-	15	33	8(2)	12 x 2	8(2)	12 x 2	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)																					
	MB9BF465L		LQFP-64 QFN-64																																																																		
	MB9BF466K		LQFP-48 QFN-48				512K +32K	64K																																									-	8	-	-	15	33	8(2)	12 x 2	8(2)	12 x 2	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)
	MB9BF466L		LQFP-64 QFN-64																																																																		
MB9BF466L	LQFP-64 QFN-64	512K +32K	64K	-	8	-	-	16	48	15(2)	12 x 2	15(2)	12 x 2	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)																																													
MB9BF466L	LQFP-64 QFN-64																																																																				

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]																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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	-	-	-	-	8(2)	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)	Multi-Function Timer x 2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable)	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable)	Multi-Function Timer x 2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable)	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable)	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 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)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

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 [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]	LIN/UART/SIO [bit]	CAN [bit]	USB-Host [bit]				
HIGH-PERFORMANCE GROUP																																			
MB9BD10T	MB9BFD16T	144	LQFP-176 BGA-192	2.7 to 5.5	✓	FLASH	512K	64K	-	8	32	✓	-	-	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 Debug (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	✓	-	-	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 Debug (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	✓	-	-	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 Debug (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	✓	-	-	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 Debug (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	✓	-	-	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 Debug (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	✓	-	-	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 Debug (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	✓	-	-	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 Debug (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/SI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]	USB-Host [ch]				
HIGH-PERFORMANCE GROUP																																			
MB9B510R	MB9BF512N	144	QFP-100 LQFP-100 BGA-112	2.7 to 5.5	✓	Main Flash +Work Flash	128K +32K	16K	-	8	16	✓	-	16(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 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	2	1ch (USB-Host/ USB-Function Selectable)	-	✓	CAN: 32Msg-buffer, Dual Timer	On-chip Debug (SWJ-DP/ETM)									
	MB9BF512R		LQFP-120																																
	MB9BF514N		QFP-100 LQFP-100 BGA-112				256K +32K	32K																											
	MB9BF514R		LQFP-120																																
	MB9BF515N		QFP-100 LQFP-100 BGA-112				384K +32K	48K																											
	MB9BF515R		LQFP-120																																
	MB9BF516N		QFP-100 LQFP-100 BGA-112				512K +32K	64K																											
	MB9BF516R		LQFP-120																																
MB9B410R	MB9BF412N	144	QFP-100 LQFP-100 BGA-112	2.7 to 5.5	✓	Main Flash +Work Flash	128K +32K	16K	-	8	16	✓	-	16(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 8ch (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 Debug (SWJ-DP/ETM)								
	MB9BF412R		LQFP-120																																
	MB9BF414N		QFP-100 LQFP-100 BGA-112				256K +32K	32K																											
	MB9BF414R		LQFP-120																																
	MB9BF415N		QFP-100 LQFP-100 BGA-112				384K +32K	48K																											
	MB9BF415R		LQFP-120																																
	MB9BF416N		QFP-100 LQFP-100 BGA-112				512K +32K	64K																											
	MB9BF416R		LQFP-120																																
MB9B310R	MB9BF312N	144	QFP-100 LQFP-100 BGA-112	2.7 to 5.5	✓	Main Flash +Work Flash	128K +32K	16K	-	8	16	✓	-	16(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 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer	On-chip Debug (SWJ-DP/ETM)									
	MB9BF312R		LQFP-120																																
	MB9BF314N		QFP-100 LQFP-100 BGA-112				256K +32K	32K																											
	MB9BF314R		LQFP-120																																
	MB9BF315N		QFP-100 LQFP-100 BGA-112				384K +32K	48K																											
	MB9BF315R		LQFP-120																																
	MB9BF316N		QFP-100 LQFP-100 BGA-112				512K +32K	64K																											
	MB9BF316R		LQFP-120																																
MB9B110R	MB9BF112N	144	QFP-100 LQFP-100 BGA-112	2.7 to 5.5	✓	Main Flash +Work Flash	128K +32K	16K	-	8	16	✓	-	16(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 8ch (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 Debug (SWJ-DP/ETM)								
	MB9BF112R		LQFP-120																																
	MB9BF114N		QFP-100 LQFP-100 BGA-112				256K +32K	32K																											
	MB9BF114R		LQFP-120																																
	MB9BF115N		QFP-100 LQFP-100 BGA-112				384K +32K	48K																											
	MB9BF115R		LQFP-120																																
	MB9BF116N		QFP-100 LQFP-100 BGA-112				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 [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]				
BASIC GROUP																																			
MB9B320T	MB9BF328S*	60	LQFP-144	2.7 to 5.5	✓	Dual Op. Flash (Main area + Work area)	1M +64K	160K	-	8	32	✓	-	24(2)	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 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 1 QPRC x 2 QPRC x 1 QPRC x 2	1	Multi Function Serial x 16ch (UART/CSIO/I2C/LIN 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)							
	MB9BF328T*		LQFP-176 BGA-192				1.5M +64K	192K																											
	MB9BF329S*		LQFP-144																																
	MB9BF329T*		LQFP-176 BGA-192																																
MB9B120T	MB9BF128S*	60	LQFP-144	2.7 to 5.5	✓	Dual Op. Flash (Main area + Work area)	1M +64K	160K	-	8	32	✓	-	24(2)	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 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 1 QPRC x 2 QPRC x 1 QPRC x 2	1	Multi Function Serial x 16ch (UART/CSIO/I2C/LIN Selectable)	-	-	-	-	✓	Dual Timer, HDMI-CEC/Remote Control Reception x 2, Real Time Clock, Unique ID	On-chip Debug (SWJ-DP/ETM)							
	MB9BF128T*		LQFP-176 BGA-192				1.5M +64K	192K																											
	MB9BF129S*		LQFP-144																																
	MB9BF129T*		LQFP-176 BGA-192																																
MB9A420L	MB9AF421K	40	LQFP-48 LQFP-52 QFN-48	2.7 to 5.5	✓	FLASH	64K	4K	-	-	14	-	-	8(1)	10bit x 1		Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 3ch/PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	-	1	Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)	1	-	-	-	✓	CAN: 32Msg-buffer, Dual Timer, Real Time Clock, Unique ID	On-chip Debug (SWJ-DP)							
	MB9AF421L		LQFP-64 QFN-64				19	51																											
MB9A120L	MB9AF121K	40	LQFP-48 LQFP-52 QFN-48	2.7 to 5.5	✓	FLASH	64K	4K	-	-	14	-	-	8(1)	10bit x 1		Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 3ch/PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	-	1	Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)	-	-	-	-	✓	Dual Timer, Real Time Clock, Unique ID	On-chip Debug (SWJ-DP)							
	MB9AF121L		LQFP-64 QFN-64				19	51																											

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																																																			
MB9A310A	MB9AF311LA	40	LQFP-64 QFN-64	2.7 to 5.5	✓	FLASH	64K	16K	-	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)			-	1ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer	On-chip Debug (SWJ-DP)															
	MB9AF311MA		LQFP-80								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)															
	MB9AF311NA		LQFP-100 QFP-100 BGA-112								✓	83					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)															
	MB9AF312LA		LQFP-64 QFN-64								128K						8	-	51	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)													
	MB9AF312MA		LQFP-80														11		66	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)													
	MB9AF312NA		LQFP-100 QFP-100 BGA-112								256K						16	✓	83	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)													
	MB9AF314LA		LQFP-64 QFN-64														7	-	51	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)													
	MB9AF314MA		LQFP-80														11		66	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)													
	MB9AF314NA		LQFP-100 QFP-100 BGA-112														16		83																			On-chip Debug (SWJ-DP)													
	MB9AF315MA		LQFP-80								384K						11		66																			On-chip Debug (SWJ-DP)													
	MB9AF315NA		LQFP-100 QFP-100 BGA-112**														16	✓	83																			On-chip Debug (SWJ-DP/ETM)													
	MB9AF316MA		LQFP-80								512K						11		66																			On-chip Debug (SWJ-DP)													
	MB9AF316NA		LQFP-100 QFP-100 BGA-112**														16		83																			On-chip Debug (SWJ-DP/ETM)													

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]				
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)	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)	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 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)	-	1ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Time Clock	On-chip Debug (SWJ-DP)							
	MB9AF312K		128K +32K																															
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)	-	-	-	-	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)																																														
MB9A140NA	MB9AF141LB	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													8																		-	51	12(2)																																								
	MB9AF142MB	LQFP-80 BGA-96													128K +32K														16K	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)	-	-	-	-	-	-	-	-	-	-	-	-	Dual Timer, HDMI-CEC/Remote Control Reception x 2, Real Time Clock, Unique ID	On-chip Debug (SWJ-DP/ETM)																		
	MB9AF142NB	LQFP-100 QFP-100 BGA-112																												16			✓	83	24(2)																																								
	MB9AF144LB	LQFP-64 QFN-64																												8			-	51	12(2)																																								
	MB9AF144MB	LQFP-80 BGA-96				11	-	66	17(2)																																																																		
MB9AF144NB	LQFP-100 QFP-100 BGA-112	16	✓	83	24(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)																																															

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]	16bit 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/S [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]				
LCD CONTROLLERS																																		
MB95610H	MB95F613H	16	LQFP-80	2.4 to 5.5	✓	Dual Op. Flash	12K	512	-	-	8	-	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							Low-voltage Detection Reset, Clock Supervisor																										
	MB95F614H							Clock Supervisor																										
	MB95F614K							Low-voltage Detection Reset, Clock Supervisor																										
	MB95F616H							Clock Supervisor																										
MB95616K	MB95F616H	16	LQFP-80	1.8 to 5.5	✓	Dual Op. Flash	20K	512	-	-	8	-	75	-	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	-	Clock Supervisor		On-chip Debug		
	MB95F714J							Low-voltage Detection Reset, Clock Supervisor																										
	MB95F714M							Clock Supervisor																										
	MB95F716J							Low-voltage Detection Reset, Clock Supervisor																										
	MB95F716M							Clock Supervisor																										
MB95770M	MB95F718J	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	-	Clock Supervisor		On-chip Debug		
	MB95F774M							Low-voltage Detection Reset, Clock Supervisor																										
	MB95F776J							Clock Supervisor																										
	MB95F776M							Low-voltage Detection Reset, Clock Supervisor																										
	MB95F778J							Clock Supervisor																										
MB95778M	MB95F778M	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	-	Clock Supervisor		On-chip Debug		
	MB95F774M							Low-voltage Detection Reset, Clock Supervisor																										
	MB95F776J							Clock Supervisor																										
	MB95F776M							Low-voltage Detection Reset, Clock Supervisor																										
	MB95F778J							Clock Supervisor																										
MB95630H	MB95F632H	16	LQFP-32 SH-DIP-32 QFN-32	2.4 to 5.5	✓	Dual Op. Flash	8K	256	-	-	10	-	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																																	
	MB95F633H																																	
	MB95F633K																																	
	MB95F634H																																	
	MB95F634K																																	
	MB95F636H																																	
MB95690K	MB95F694K	16	LQFP-44 LQFP-48 LQFP-52 QFN-48	2.88 to 5.5	✓	Dual Op. Flash	20K	512	-	-	8	-	45 LQFP44 only: 41	12(1) LQFP44 only: 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	
	MB95F696K																																	
	MB95F698K																																	
STANDARD																																		
MB95560H	MB95F562H	16	SOP-20 TSSOP-20 QFN-32	2.4 to 5.5	✓	Dual Op. Flash	8K	240	-	-	6	-	16	6(1)	-	-	-	8/16bit Compound Timer x 2ch (Interval Timer/PWM/PWC/ Input Capture Selectable)	-	-	-	-	-	-	1	-	-	-	-	-	-	Clock Supervisor		On-chip Debug
	MB95F562K							Low-voltage Detection Reset, Clock Supervisor																										
	MB95F563H							Clock Supervisor																										
	MB95F563K							Low-voltage Detection Reset, Clock Supervisor																										
	MB95F564H							Clock Supervisor																										
MB95570H	MB95F564K	16	SOP-8	2.4 to 5.5	✓	Dual Op. Flash	12K	496	-	-	2	-	4																					

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	On-chip Debug
	MB95F652L							20																											
	MB95F653E							21																											
	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-Host [ch]
CAN/AUTOMOTIVE																																		
S6J3120	S6J3128HA	112	TEQFP -144	4.5 to 5.25	-	Main Flash +Work Flash	576K + 48K	TC-RAM: 32KB System - RAM: 16KB Backup - RAM: 8KB	Instruction: 16 Data: 16	16	16	A24/D16	112	50(2)	-	-	12	6	12	16bit Base Timer x 30ch (PWM/PPG/Reload/PWC Selectable)	2	RTC x 1ch	Multi Function Serial x 10ch (LIN/UART/SIO Selectable)	CAN-FD x 3ch	-	-	32 x 4	-	ARM Cortex-R5, SHE(Secure Hardware Extension), SMC x 4ch, Sound generator x 3ch	On-Chip Debug				
	S6J3129HA						832K + 48K	TC-RAM: 48KB System - RAM: 16KB Backup - RAM: 8KB																										
	S6J312AHA						1088K +112K	TC-RAM: 64KB System - RAM: 16KB Backup - RAM: 8KB																										
S6J3200	S6J32AAKS	160	TEQFP -208	1.1 to 1.3 3.0 to 3.6 4.5 to 5.5	✓	Main Flash +Work Flash	1088K + 112K	TC-RAM: 64KB System - RAM: 128KB Backup - RAM: 16KB VRAM: 1024KB	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, SHE(Secure Hardware Extension), SMC x 6ch, Sound generator x 4ch, 2D Graphic Engine, Display Output x 1ch	On-Chip Debug				
	S6J32AAKU		TEQFP -216 (0.4mm pitch)										128	50(1)													32 x 4							
	S6J32AALS												120	46(1)													30 x 4							
	S6J32AALU		TEQFP -208										TEQFP -216 (0.4mm pitch)	128													50(1)				32 x 4			
	S6J32BAKS		TEQFP -208											120													46(1)				30 x 4			
	S6J32BAKU		TEQFP -216 (0.4mm pitch)										128	50(1)													32 x 4							
	S6J32BALS												TEQFP -208	120													46(1)				30 x 4			
	S6J32BALU		TEQFP -208										120	46(1)													30 x 4							
	S6J32CAKS		TEQFP -208										120	46(1)													30 x 4							
	S6J32CAKU		TEQFP -216 (0.4mm pitch)										128	50(1)													32 x 4							
	S6J32CALS		TEQFP -208										120	46(1)													30 x 4							
	S6J32CALU		TEQFP -216 (0.4mm pitch)										128	50(1)													32 x 4							
	S6J32DAKS		TEQFP -208										120	46(1)													30 x 4							
	S6J32DAKU		TEQFP -216 (0.4mm pitch)										128	50(1)													32 x 4							
	S6J32DALS		TEQFP -208										120	46(1)													30 x 4							
S6J32DALU	TEQFP -216 (0.4mm pitch)	128	50(1)	32 x 4																														

FCR4 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]	I2C [ch]	UART/SPI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]	USB-Host [ch]					USB-Function [ch]
HYBRID AUTOMOTIVE INSTRUMENTS CLUSTER																																				
MB9DF125	MB9DF125PMC	128	LQFP-176	1.1 to 1.3 3.0 to 5.5	✓	FLASH	1088	128	8	8	32	-	123	50(1)	-	-	8	8	8	10	-	-	24	2	-	1	2	3	2	2	-	-	-	ARM Cortex R4, SHE (Secure Hardware Extension), Real Time Clock, Stepper Motor Controller (SMC): 4 ch, Data Flash: 48KB, Windows Watchdog, Clock supervisor, Sound Generator, I2S: 2 ch, Quad SPI Flash Interface: 1 ch, NMI (intern/extern): 32/1 ch, CRC Hardware Module: 1 ch, Protection Unit: MPU, PPU, TPU, various Power Down modes	On-chip Debug	
	MB9DF125EPMC																																ARM Cortex R4, SHE (Secure Hardware Extension), Real Time Clock, Stepper Motor Controller (SMC): 6 ch, Data Flash: 48KB, Windows Watchdog, Clock supervisor, Sound Generator, I2S: 2 ch, Quad SPI Flash Interface: 1 ch, NMI (intern/extern): 32/1 ch, CRC Hardware Module: 1 ch, Protection Unit: MPU, PPU, TPU, various Power Down modes	On-chip Debug		
MB9DF126	MB9DF126BPMC	128	LQFP-176	1.1 to 1.3 3.0 to 5.5	✓	FLASH	2176	208	16	8	32	-	110	50(1)	-	-	8	8	8	10	-	-	24	2	-	1	2	3	2	3	-	-	-	ARM Cortex R4, APIX Remote handler with 2 ch AIC (APIX Inter Connect), APIX1 Phy: 1 ch, Real Time Clock, Stepper Motor Controller (SMC): 6 ch, Data Flash: 64KB, Windows Watchdog, Clock supervisor, Sound Generator, I2S: 2 ch, Quad SPI Flash Interface: 1 ch, NMI (intern/extern): 32/1 ch, CRC Hardware Module: 1 ch, Protection Unit: MPU, PPU, TPU, various Power Down modes	On-chip Debug	
MB9EF226	MB9EF226PMC	128	LQFP-176	1.1 to 1.3 3.0 to 5.5	✓	FLASH	2176	128	16	8	32	-	117	50(1)	-	-	8	8	8	10	-	-	24	2	-	1	2	3	2	2	-	-	-	-	ARM Cortex R4, 2D Graphics Engine: scaler, color palette, gamma correction, blending, raster operation, various alpha blending modes, run-length decoding, hor/ver flip and rotation, affine transformations, Embedded Video-RAM: 1MB, TFT Output Interface: RGB888/RSDS Output, SHE (Secure Hardware Extension), Real Time Clock, Stepper Motor Controller (SMC): 4 ch, Data Flash: 48KB, Windows Watchdog, Clock supervisor, Sound Generator, I2S: 2 ch, Quad SPI Flash Interface: 2 ch(1 ch for MCU and 1 ch for Graphic), NMI (intern/extern): 32/1 ch, MediaLB (3 wire): 1 ch, CRC Hardware Module: 1 ch, Protection Unit: MPU, PPU, TPU, various Power Down modes	On-chip Debug
	MB9EF226EPMC																																			

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* In development; **Planning

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]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]	USB-Host [ch]	USB-Function [ch]																																						
AUTOMOTIVE																																																																						
MB96610	MB96F612A	32	LQFP-48	2.7 to 5.5	✓	Dual Op. Flash	32.5K +32K	4K	-	2	11	-	37 (Single clock) 35 (Dual clock)	16(1)	-	-	5	4	4 +3 (Dedicated for LIN)	2 +1 (Dedicated for PPG)	-	-	8bit x 16 16bit x 8	-	QPRC x 2	-	-	-	3	-	-	-	-	-	Option without CAN	On-chip Debug																																		
	MB96F612R						64.5K +32K	10K																						-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	MB96F613A																																																																					
	MB96F615A																																																																					
	MB96F615R																																																																					
MB96620	MB96F622A	32	LQFP-64	2.7 to 5.5	✓	Dual Op. Flash	32.5K +32K	4K	-	2	13	-	52 (Single clock) 50 (Dual clock)	21(1)	-	-	6	4	6 +2 (Dedicated for LIN)	2 +1 (Dedicated for PPG)	-	-	8bit x 16 16bit x 8	-	QPRC x 2	1	-	-	3	-	-	-	-	-	Option without CAN	On-chip Debug																																		
	MB96F622R						64.5K +32K	10K																						-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	MB96F623A																																																																					
	MB96F623R																																																																					
	MB96F625A																																																																					
MB96630	MB96F625R	32	LQFP-80	2.7 to 5.5	✓	Dual Op. Flash	128.5K +32K	4K	-	4	15	-	64 (Single clock) 66 (Dual clock)	21(1)	-	-	7	3	6 +1 (Dedicated for LIN)	3	-	-	8bit x 20 16bit x 15	-	QPRC x 2	2	-	-	5	-	-	-	-	-	Option without CAN	On-chip Debug																																		
	MB96F633A						64.5K +32K	10K																						-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	MB96F633R																																																																					
	MB96F635A																																																																					
	MB96F635R																																																																					
MB96640	MB96F636R	32	LQFP-100	2.7 to 5.5	✓	Dual Op. Flash	256.5K +32K	24K	-	4	16	-	81 (Single clock) 79 (Dual clock)	24(1)	-	-	7	3	6 +1 (Dedicated for LIN)	5	-	-	8bit x 24 16bit x 16	-	QPRC x 2	2	-	-	6	-	-	-	-	-	Option without CAN	On-chip Debug																																		
	MB96F637R						64.5K +32K	10K																						-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	MB96F643A																																																																					
	MB96F643R																																																																					
	MB96F645R																																																																					
MB96650	MB96F646R	32	LQFP-100	2.7 to 5.5	✓	Dual Op. Flash	256.5K +32K	24K	-	4	16	-	81 (Single clock) 79 (Dual clock)	24(1)	-	-	7	3	6 +1 (Dedicated for LIN)	5	-	-	8bit x 24 16bit x 16	-	QPRC x 2	2	-	-	6	-	-	-	-	-	Option without CAN	On-chip Debug																																		
	MB96F647R						64.5K +32K	10K																						-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								