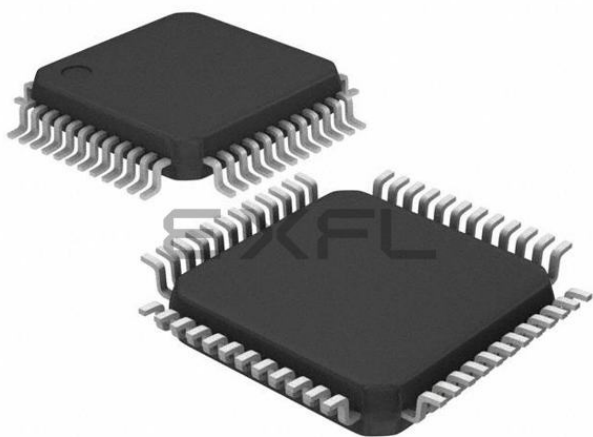




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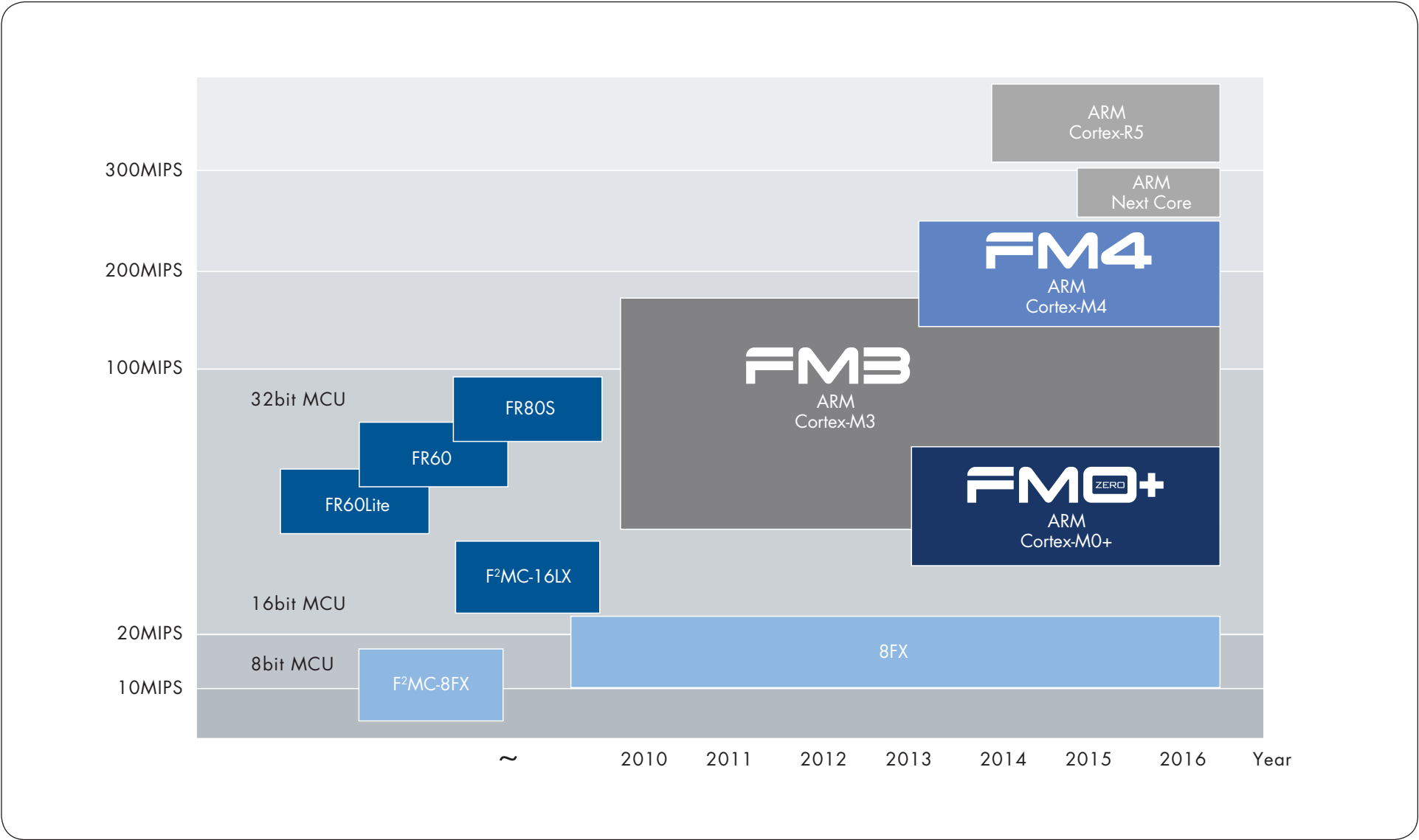
"[Embedded - Microcontrollers](#)" refer to small, integrated circuits designed to perform specific tasks within larger systems. These microcontrollers are essentially compact computers on a single chip, containing a processor core, memory, and programmable input/output peripherals. They are called "embedded"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

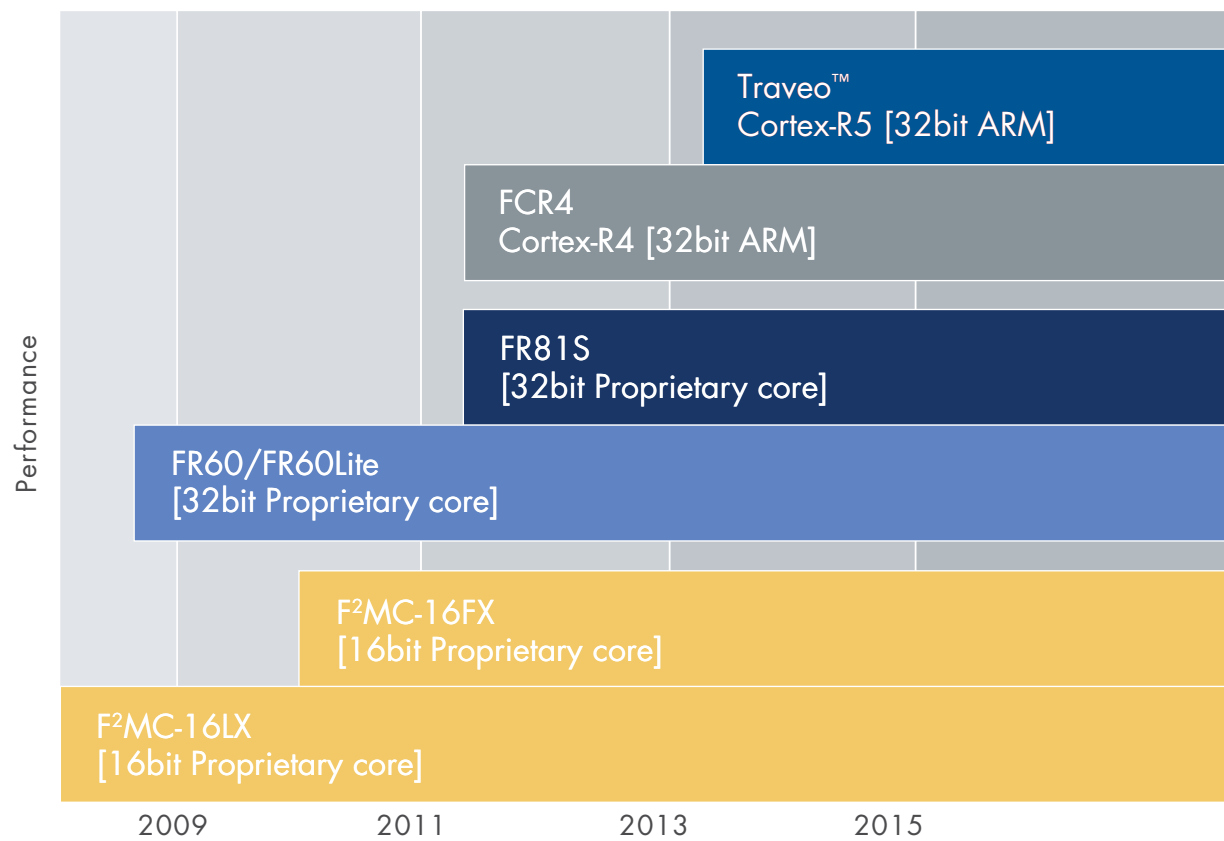
Details

Product Status	Obsolete
Core Processor	F ² MC-8FX
Core Size	8-Bit
Speed	16MHz
Connectivity	I ² C, LINbus, SIO, UART/USART
Peripherals	LVD, POR, PWM, WDT
Number of I/O	45
Program Memory Size	36KB (36K x 8)
Program Memory Type	FLASH
EEPROM Size	-
RAM Size	1K x 8
Voltage - Supply (Vcc/Vdd)	2.88V ~ 5.5V
Data Converters	A/D 12x8/10b
Oscillator Type	External
Operating Temperature	-40°C ~ 85°C (TA)
Mounting Type	Surface Mount
Package / Case	48-LQFP
Supplier Device Package	48-LQFP (7x7)
Purchase URL	https://www.e-xfl.com/product-detail/infineon-technologies/mb95f696knpmc-g-102-sne2

Consumer and Industrial MCU Core Roadmap



Automotive MCU Core Roadmap



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]					
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 x 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)														
	S6E2CC8JGA		1M				128K																																		
	S6E2CCAJFA		2M				256K																																		
	S6E2CC8JFA		1M				128K																																		
S6E2CC w/ Security	S6E2CAHHA	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)	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)														
	S6E2CAJHA		LQFP-176 BGA-192										152																												
	S6E2CCALHA		LQFP-216										190																												
	S6E2CC9HHA		LQFP-144										120																												
	S6E2CC9JHA		LQFP-176 BGA-192				1.5M	192K					152																												
	S6E2CC9LHA		LQFP-216				190																																		
	S6E2CC8HHA		LQFP-144				120																																		
	S6E2CC8JHA		LQFP-176 BGA-192				1M	128K					152																												
S6E2CC8LHA	LQFP-216	190																																							
S6E2CC	S6E2CAH0A	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)	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)
	S6E2CAJ0A		LQFP-176 BGA-192										152																												
	S6E2CCAL0A		LQFP-216										190																												
	S6E2CC9H0A		LQFP-144										120																												
	S6E2CC9J0A		LQFP-176 BGA-192				1.5M	196K					152																												
	S6E2CC9L0A		LQFP-216				190																																		
	S6E2CC8H0A		LQFP-144				120																																		
	S6E2CC8J0A		LQFP-176 BGA-192				1M	128K					152																												
S6E2CC8L0A	LQFP-216	190																																							
S6E2C5	S6E2C5AH0A	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)	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																												
	S6E2C5AL0A		LQFP-216										190																												
	S6E2C59H0A		LQFP-144										120																												
	S6E2C59J0A		LQFP-176 BGA-192				1.5M	192K					152																												
	S6E2C59L0A		LQFP-216				190																																		
	S6E2C58H0A		LQFP-144				120																																		
	S6E2C58J0A		LQFP-176 BGA-192				1M	128K					152																												
	S6E2C58L0A		LQFP-216				190																																		

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			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]		
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)						
	LQFP-176 BGA-192																															
	LQFP-216																															
	LQFP-144																															
	S6E2C4A9J0A		LQFP-176 BGA-192				1M	128K					LQFP-176 BGA-192																			
	LQFP-216																															
	LQFP-144																															
	LQFP-176 BGA-192																															
S6E2C48H0A	LQFP-144																															
S6E2C48J0A	LQFP-176 BGA-192																															
S6E2C48L0A	LQFP-216																															
S6E2C3	S6E2C3AH0A	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)	-	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)						
	LQFP-176 BGA-192																															
	LQFP-216																															
	LQFP-144																															
	S6E2C39J0A		LQFP-176 BGA-192				1M	128K					LQFP-176 BGA-192																			
	LQFP-216																															
	LQFP-144																															
	LQFP-176 BGA-192																															
S6E2C38H0A	LQFP-144																															
S6E2C38J0A	LQFP-176 BGA-192																															
S6E2C38L0A	LQFP-216																															
S6E2C2 w/ Security	S6E2C2AHHA	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)	-	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)						
	LQFP-176 BGA-192																															
	LQFP-216																															
	LQFP-144																															
	S6E2C29JHA		LQFP-176 BGA-192				1M	128K					LQFP-176 BGA-192																			
	LQFP-216																															
	LQFP-144																															
	LQFP-176 BGA-192																															
S6E2C28HHA	LQFP-144																															
S6E2C28JHA	LQFP-176 BGA-192																															
S6E2C28LHA	LQFP-216																															
S6E2C2	S6E2C2AH0A	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)	-	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)						
	LQFP-176 BGA-192																															
	LQFP-216																															
	LQFP-144																															
	S6E2C29J0A		LQFP-176 BGA-192				1M	128K					LQFP-176 BGA-192																			
	LQFP-216																															
	LQFP-144																															
	LQFP-176 BGA-192																															
S6E2C28H0A	LQFP-144																															
S6E2C28J0A	LQFP-176 BGA-192																															
S6E2C28L0A	LQFP-216																															
S6E2C1	S6E2C1AH0A	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)	-	-	-	✓	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)						
	LQFP-176 BGA-192																															
	LQFP-216																															
	LQFP-144																															
	S6E2C19J0A		LQFP-176 BGA-192				1M	128K					LQFP-176 BGA-192																			
	LQFP-216																															
	LQFP-144																															
	LQFP-176 BGA-192																															
S6E2C18H0A	LQFP-144																															
S6E2C18J0A	LQFP-176 BGA-192																															
S6E2C18L0A	LQFP-216																															

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/ISI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]	USB-Host [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, Chipper	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	✓	80	-	24(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																																
	MB9BF566R		LQFP-120 BGA-144																																
	MB9BF567M		LQFP-80																																
	MB9BF567N		LQFP-100 QFP-100 BGA-112				768K +32K	128K					80	24(3)																					
	MB9BF567R		LQFP-120 BGA-144																																
	MB9BF568M		LQFP-80																																
	MB9BF568N		LQFP-100 QFP-100 BGA-112																																
	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																																
	MB9BF466R		LQFP-120 BGA-144																																
	MB9BF467M		LQFP-80																																
	MB9BF467N	LQFP-100 QFP-100 BGA-112	768K +32K	96K	80	24(3)																													
	MB9BF467R	LQFP-120 BGA-144																																	
	MB9BF468M	LQFP-80																																	
	MB9BF468N	LQFP-100 QFP-100 BGA-112																																	
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, DSTC x 128ch, Unique ID, SD Card I/F	On-chip Debug (SWJ-DP/ETM)								
	MB9BF366N		LQFP-100 QFP-100 BGA-112																																
	MB9BF366R		LQFP-120 BGA-144																																
	MB9BF367M		LQFP-80																																
	MB9BF367N		LQFP-100 QFP-100 BGA-112				768K +32K	128K					80	24(3)																					
	MB9BF367R		LQFP-120 BGA-144																																
	MB9BF368M		LQFP-80																																
	MB9BF368N		LQFP-100 QFP-100 BGA-112																																
	MB9BF368R		LQFP-120 BGA-144																																

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]				
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)						
	80		24(3)																															
	100																																	
	MB9BF166R		LQFP-120 BGA-144				63	16(3)																										
	MB9BF167M		LQFP-80				80	24(3)																										
	MB9BF167N		LQFP-100 QFP-100 BGA-112				100																											
	MB9BF167R		LQFP-120 BGA-144				63	16(3)																										
	MB9BF168M		LQFP-80				80	24(3)																										
	MB9BF168N		LQFP-100 QFP-100 BGA-112				100																											
MB9BF168R	LQFP-120 BGA-144																																	
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)							
	48		15(2)																															
	MB9BF564L		LQFP-64 QFN-64				16	48																										
	MB9BF565K		LQFP-48 QFN-48				15	33																										
	MB9BF565L	LQFP-64 QFN-64	384K +32K	48K	16	48	15(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)																										
	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)	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		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				384K +32K	48K																					-	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)	-	-	-	-	✓	Dual Timer, Real Time Clock, Unique ID, DSTC x 128ch	On-chip Debug (SWJ-DP)																			
	MB9BF165L		LQFP-64 QFN-64																																																															
	MB9BF166K		LQFP-48 QFN-48				512K +32K	64K																																								-	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)	-	-	-	-	✓	Dual Timer, Real Time Clock, Unique ID, DSTC x 128ch	On-chip Debug (SWJ-DP)
	MB9BF166L		LQFP-64 QFN-64																																																															

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			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/ISI [bit]	SIO [bit]	LIN/UART/SIO [bit]	CAN [bit]		
HIGH-PERFORMANCE GROUP																																
MB9B500B	MB9BF504NB	80	LQFP-100 BGA-112	2.7 to 5.5	✓	FLASH	256K	32K	-	8	16	✓	80	-	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				100																									
	MB9BF505NB		LQFP-100 BGA-112				80																									
	MB9BF505RB		LQFP-120				100																									
	MB9BF506NB		LQFP-100 BGA-112				80																									
	MB9BF506RB		LQFP-120				100																									
MB9B400A	MB9BF404NA	80	LQFP-100 BGA-112	2.7 to 5.5	✓	FLASH	256K	32K	-	8	16	✓	80	-	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				100																									
	MB9BF405NA		LQFP-100 BGA-112				80																									
	MB9BF405RA		LQFP-120				100																									
	MB9BF406NA		LQFP-100 BGA-112				80																									
	MB9BF406RA		LQFP-120				100																									
MB9B300B	MB9BF304NB	80	LQFP-100 BGA-112	2.7 to 5.5	✓	FLASH	256K	32K	-	8	16	✓	80	-	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				100																									
	MB9BF305NB		LQFP-100 BGA-112				80																									
	MB9BF305RB		LQFP-120				100																									
	MB9BF306NB		LQFP-100 BGA-112				80																									
	MB9BF306RB		LQFP-120				100																									
MB9B100A	MB9BF102NA	80	LQFP-100 BGA-112	2.7 to 5.5	✓	FLASH	128K	16K	-	8	16	✓	80	-	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				100																									
	MB9BF104NA		LQFP-100 BGA-112				80																									
	MB9BF104RA		LQFP-120				100																									
	MB9BF105NA		LQFP-100 BGA-112				80																									
	MB9BF105RA		LQFP-120				100																									
	MB9BF106NA		LQFP-100 BGA-112				80																									
	MB9BF106RA		LQFP-120				100																									
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	-	-	14	-	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)							QPRC x 2	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)				
	MB9BF521M		LQFP-80 BGA-96										23					65		26(2)							QPRC x 1	Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)				
	MB9BF522K		LQFP-48 QFN-48										14					35		14(2)							QPRC x 2	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)				
	MB9BF522L		LQFP-64 QFN-64				19	50					23(2)					QPRC x 1		Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)												
	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)																			

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]	Three-phase Inverter	
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 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)	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	QPRC x 2	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)							
	MB9BF322L		LQFP-64 QFN-64																										QPRC x 2	Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)							
	MB9BF322M		LQFP-80 BGA-96																										QPRC x 1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)							
	MB9BF324K		LQFP-48 QFN-48				256K +32K	32K																					14	35	14(2)	QPRC x 1	QPRC x 2	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 4ch (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 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)	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					QPRC x 2	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)									
	MB9BF122L		LQFP-64 QFN-64																								QPRC x 2	Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)									
	MB9BF122M		LQFP-80 BGA-96																								QPRC x 1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)									
	MB9BF124K		LQFP-48 QFN-48				256K +32K	32K																			14	35	14(2)	QPRC x 1	QPRC x 2	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 4ch (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 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)					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	-	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)					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	QPRC x 1	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	-	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)			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	QPRC x 1		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																																																									
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								On-chip Debug (SWJ-DP/ETM)																																														
	MB9AF311NA		LQFP-100 QFP-100 BGA-112								✓					On-chip Debug (SWJ-DP/ETM)																																									
	MB9AF312LA		LQFP-64 QFN-64								128K					-	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													On-chip Debug (SWJ-DP/ETM)																																									
	MB9AF312NA		LQFP-100 QFP-100 BGA-112								256K					✓	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)																					
	MB9AF314LA		LQFP-64 QFN-64				32K				-					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								On-chip Debug (SWJ-DP/ETM)																																														
	MB9AF314NA		LQFP-100 QFP-100 BGA-112								On-chip Debug (SWJ-DP)																																														
	MB9AF315MA		LQFP-80								384K											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)																
	MB9AF315NA		LQFP-100 QFP-100 BGA-112**								✓					On-chip Debug (SWJ-DP/ETM)																																									
	MB9AF316MA		LQFP-80								512K																													On-chip Debug (SWJ-DP)																	
	MB9AF316NA		LQFP-100 QFP-100 BGA-112**																																					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]					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)		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 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)																			
	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 [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 37 x 4 or 33 x 8 44 x 4 or 40 x 8 24 x 4 or 20 x 8 37 x 4 or 33 x 8 44 x 4 or 40 x 8	✓	HDMI-CEC/Remote Control Reception x 2, Real Time Clock	On-chip Debug (SWJ-DP)					
	MB9AFAA1M		LQFP-80																										11	67	12(1)		
	MB9AFAA1N		LQFP-100 QFP-100																										16	84	16(1)		
	MB9AFAA2L		LQFP-64 QFN-64				8	52					9(1)																				
	MB9AFAA2M		LQFP-80				11	67					12(1)																				
	MB9AFAA2N		LQFP-100 QFP-100				16	84					16(1)																				
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			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]
S6E1C3	S6E1C32D0A	40	LQFP-64	1.65 to 3.6	✓	Main Flash	128K	16K	-	-	12	-	54	-	8	-	-	-	1	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	-	Multi Function Serial x 6ch (UART/CSIO/I2C Selectable)	-	1ch (USB-Host/USB-Function Selectable)	-	-	Dual Timer, Real Timer Clock, Unique ID, DSTC x 64ch, Tiny I2S, Wakeup I2C, HDMI-CEC 2ch, CRC, Smart Card I/F	On-Chip Debug (SWJ-DP)						
	64K						12K																											
	S6E1C32C0A		LQFP-48				128K	16K																					9	38	4	6	Base Timer x 5ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 4ch (UART/CSIO/I2C Selectable)
	S6E1C31C0A						64K	12K																					5	20				
	S6E1C32B0A		WLCSP-26				128K	16K																					7	24	Base Timer x 3ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 2ch (UART/CSIO/I2C Selectable)		
	S6E1C31B0A		64K				12K	12																					54					
	S6E1C32D0A		QFN-64				128K	16K																					9	38	8	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 6ch (UART/CSIO/I2C Selectable)	
	S6E1C31D0A						64K	12K																										
	S6E1C32C0A		QFN-48				128K	16K																					7	24	Base Timer x 5ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 4ch (UART/CSIO/I2C Selectable)		
	S6E1C31C0A						64K	12K																										
S6E1C32B0A	QFN-32	128K	16K	-	-	12	54	8	Base Timer x 3ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 6ch (UART/CSIO/I2C Selectable)																								
S6E1C31B0A		64K	12K																															
S6E1C1	S6E1C12D0A	40	LQFP-64	1.65 to 3.6	✓	Main Flash	128K	16K	-	-	12	-	54	-	8	-	-	1	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	-	Multi Function Serial x 6ch (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)							
	S6E1C11D0A						64K	12K																				9	38					
	S6E1C12C0A		LQFP-48				128K	16K																				7	24	Base Timer x 5ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 4ch (UART/CSIO/I2C Selectable)			
	S6E1C11C0A						64K	12K																								12	54	
	S6E1C12B0A		QFN-64				128K	16K																				9	38	8	Base Timer x 3ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 6ch (UART/CSIO/I2C Selectable)		
	S6E1C11B0A						64K	12K																									7	24
	S6E1C12D0A		QFN-48				128K	16K																				-	-	12	54	8	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 6ch (UART/CSIO/I2C Selectable)
	S6E1C11D0A						64K	12K																										
	S6E1C12C0A		QFN-32				128K	16K																				7	24	Base Timer x 5ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 4ch (UART/CSIO/I2C Selectable)			
	S6E1C11C0A						64K	12K																								12	54	
	S6E1C12B0A		QFN-32				128K	16K																				-	-	12	54	8	Base Timer x 3ch (Reload/PPG/PWM/PWC Selectable)	Multi Function Serial x 6ch (UART/CSIO/I2C Selectable)
	S6E1C11B0A						64K	12K																										

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(unif)]	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 [ph]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [cht]	PWC Timer [cht]	PPG Timer [cht]	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 CONTROLLERS																																				
MB95610H	MB95F613H	16	LQFP-80	2.4 to 5.5	☒	Dual Op. Flash	12K	512	-	-	8	-	-	4(1)	-	-	-	+ Reload Timer x 1ch + 8/16bit Compound Timer x 2ch (Interval Timer/PWM/PW/C/ Input Capture Selectable)	2	-	-	1	2	-	-	-	-	-	52 x 4 or 48 x 8	-	Clock Supervisor Low-voltage Detection Reset, Clock Supervisor	On-chip Debug				
	MB95F613K						20K	1024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	
	MB95F614H						36K	1024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	
	MB95F616H						40K	1024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	
	MB95F616K						41K	1024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-
MB95710M	MB95F714J	16	LQFP-80	1.8 to 5.5	☒	Dual Op. Flash	20K	512	-	-	8	-	-	-	8(1)	-	-	+ Reload Timer x 1ch + 8/16bit Compound Timer x 2ch (Interval Timer/PWM/PW/C/ Input Capture Selectable)	2	-	-	1	3	-	-	-	-	-	40 x 4 or 36 x 8	-	Clock Supervisor Low-voltage Detection Reset, Clock Supervisor	On-chip Debug				
	MB95F714M						36K	1K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	
	MB95F716J						60K	2K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	
	MB95F716M						75K	2K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	
	MB95F718J						74K	2K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-
MB95770M	MB95F774J	16	LQFP-64	1.8 to 5.5	☒	Dual Op. Flash	20K	512	-	-	8	-	-	-	8(1)	-	-	+ Reload Timer x 1ch + 8/16bit Compound Timer x 2ch (Interval Timer/PWM/PW/C/ Input Capture Selectable)	2	-	-	1	3	-	-	-	-	-	32 x 4 or 28 x 8	-	Clock Supervisor Low-voltage Detection Reset, Clock Supervisor	On-chip Debug				
	MB95F774M						36K	1K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	
	MB95F776J						60K	2K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	
	MB95F776M						58K	2K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	
	MB95F778J						59K	2K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-
	MB95F778M																																			
INVERTER																																				
MB95630H	MB95F63																																			

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 [ch]	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/SIO [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]	USB-Host [ch]				USB-Function [ch]	LCD Controller [seg x com]		
CAN/AUTOMOTIVE																																						
MB9D560	MB9DF564MA	200	TEQFP -208	1.1 to 1.3 4.5 to 5.5	-	Main Flash +Work Flash	(640K +64K) x2	64K x2	-	16	8	-	125	32(1)	8(2)	10bit x 2	32bitFree-Run Timer x 5ch 32bitInput Capture x 3unit 6ch 16bitFree-Run Timer x 20ch 16bit Input Capture x 8unit 15ch 16bitOutput Compare x 12unit 24ch Waveform Generator x 4unit 24ch					16bit Base Timer x 12ch (PWM/PPG/Reload/PWC Selectable)					Multi Function Serial x 5ch (LIN/UART/SIO Selectable)					3	-	-	-	✓	ARM Cortex-R5 CAN: 64msb, RDC x 2unit, Motor vector accelaretor x 2unit Models with A suffix on part number have no built-in FlexRay. Models with G suffix on part number have built-in FlexRay.	On-Chip Debug
	MB9DF564MG						(896K +64K) x2	96K x2																														
	MB9DF565MA						(1152K +64K) x2	128K x2																														
	MB9DF565MG						(640K +64K) x 2	64K x 2																														
	MB9DF566MA						(896K +64K) x 2	96K x 2																														
	MB9DF566MG						(1152K +64K) x 2	128K x 2																														
	MB9DF564ML						(640K +64K) x 2	64K x 2																														
	MB9DF564MQ						(896K +64K) x 2	96K x 2																														
	MB9DF565ML						(1152K +64K) x 2	128K x 2																														
	MB9DF565MQ						(640K +64K) x 2	64K x 2																														
	MB9DF566ML						(896K +64K) x 2	96K x 2																														
	MB9DF566MQ						(1152K +64K) x 2	128K x 2																														
	MB9DF564LA		TEQFP -176				(640K +64K) x 2	64K x 2																														
	MB9DF564LG						(896K +64K) x 2	96K x 2																														
	MB9DF565LA						(1152K +64K) x 2	128K x 2																														
	MB9DF565LG						(640K +64K) x 2	64K x 2																														
	MB9DF566LA						(896K +64K) x 2	96K x 2																														
	MB9DF566LG						(1152K +64K) x 2	128K x 2																														
	MB9DF564LL						(640K +64K) x 2	64K x 2																														
	MB9DF564LQ						(896K +64K) x 2	96K x 2																														
	MB9DF565LL						(1152K +64K) x 2	128K x 2																														
	MB9DF565LQ						(640K +64K) x 2	64K x 2																														
	MB9DF566LL						(896K +64K) x 2	96K x 2																														
	MB9DF566LQ						(1152K +64K) x 2	128K x 2																														

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			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/SI [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [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/PPC/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		TEQFP -216 (0.4mm pitch)																											32 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,			
	S6J323CLS		TEQFP -208																											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,			
	S6J323CLU		TEQFP -216 (0.4mm pitch)																											32 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,			
	S6J324CKS		TEQFP -208																											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,			
	S6J324CKU		TEQFP -208																											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,			
	S6J324CLS		TEQFP -216 (0.4mm pitch)																											32 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,			
	S6J325CKS		TEQFP -208																											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,			
	S6J325CKU		TEQFP -208																											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,			
	S6J325CLS		TEQFP -216 (0.4mm pitch)																											32 x 4	ARM Cortex-R5, Ethernet AVB, Media-LB, SHE(Secure Hardware Extension), SMC x 6ch, Sound generator x 4ch, 2D+3D Graphic Engine, Display Output x 2ch,			
	S6J325CLU		TEQFP -216 (0.4mm pitch)																											32 x 4	ARM Cortex-R5, Ethernet AVB, Media-LB, SHE(Secure Hardware Extension), SMC x 6ch, Sound generator x 4ch, 2D+3D Graphic Engine, Display Output x 2ch,			
	S6J326CKS		TEQFP -208																											30 x 4	ARM Cortex-R5, Ethernet AVB, Media-LB, SHE(Secure Hardware Extension), SMC x 6ch, Sound generator x 4ch, 2D+3D Graphic Engine, Display Output x 2ch, FPD-Link, Sound system,			
	S6J326CKU		TEQFP -208																											30 x 4	ARM Cortex-R5, Ethernet AVB, Media-LB, SHE(Secure Hardware Extension), SMC x 6ch, Sound generator x 4ch, 2D+3D Graphic Engine, Display Output x 2ch, FPD-Link, Sound system,			
	S6J326CLS		TEQFP -216 (0.4mm pitch)																											32 x 4	ARM Cortex-R5, Ethernet AVB, Media-LB, SHE(Secure Hardware Extension), SMC x 6ch, Sound generator x 4ch, 2D+3D Graphic Engine, Display Output x 2ch, FPD-Link, Sound system,			
	S6J326CLU		TEQFP -216 (0.4mm pitch)																											32 x 4	ARM Cortex-R5, Ethernet AVB, Media-LB, SHE(Secure Hardware Extension), SMC x 6ch, Sound generator x 4ch, 2D+3D Graphic Engine, Display Output x 2ch, FPD-Link, Sound system,			
	S6J327CKS		TEQFP -208																											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			
S6J327CKU	TEQFP -208	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																															
S6J327CLS	TEQFP -216 (0.4mm pitch)	32 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																															
S6J327CLU	TEQFP -216 (0.4mm pitch)	32 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																															
S6J328CKS	TEQFP -208	30 x 4	ARM Cortex-R5, Ethernet AVB, Media-LB, SHE(Secure Hardware Extension), SMC x 6ch, Sound generator x 4ch, 2D+3D Graphic Engine, Display Output x 2ch, FPD-Link, Sound system																															
S6J328CKU	TEQFP -208	30 x 4	ARM Cortex-R5, Ethernet AVB, Media-LB, SHE(Secure Hardware Extension), SMC x 6ch, Sound generator x 4ch, 2D+3D Graphic Engine, Display Output x 2ch, FPD-Link, Sound system																															
S6J328CLS	TEQFP -216 (0.4mm pitch)	32 x 4	ARM Cortex-R5, Ethernet AVB, Media-LB, SHE(Secure Hardware Extension), SMC x 6ch, Sound generator x 4ch, 2D+3D Graphic Engine, Display Output x 2ch, FPD-Link, Sound system																															
S6J328CLU	TEQFP -216 (0.4mm pitch)	32 x 4	ARM Cortex-R5, Ethernet AVB, Media-LB, SHE(Secure Hardware Extension), SMC x 6ch, Sound generator x 4ch, 2D+3D Graphic Engine, Display Output x 2ch, FPD-Link, Sound system																															

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	-	16	16	-	44	13(1) 13(1)	8bit x 1	16bit x 6 32bit x 4	16bit x 4 32bit x 5	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	On-chip Debug																								
	MB91F523B																								320K+64K	56K																						
	MB91F524B																								448K+64K	72K																						
	MB91F525B																								832K+64K	104K																						
	MB91F526B																								1088K+64K	136K																						
	MB91F522D																								320K+64K	56K																						
	MB91F523D																								448K+64K	72K																						
	MB91F524D																								576K+64K	104K																						
	MB91F525D																								832K+64K	136K																						
	MB91F526D																								1088K+64K	160K																						
	MB91F522F	320K+64K																							56K																							
	MB91F523F	448K+64K																							72K																							
	MB91F524F	576K+64K																							104K																							
	MB91F525F	832K+64K																							136K																							
	MB91F526F	1088K+64K																							160K																							
	MB91F522J	320K+64K																							56K																							
	MB91F523J	448K+64K																							72K																							
	MB91F524J	576K+64K																							104K																							
	MB91F525J	832K+64K																							136K																							
	MB91F526J	1088K+64K																							160K																							
	MB91F522K	320K+64K																							56K																							
	MB91F523K	448K+64K																							72K																							
	MB91F524K	576K+64K																							104K																							
	MB91F525K	832K+64K																							136K																							
	MB91F526K	1088K+64K																							160K																							
	MB91F527R	1600K+64K																							192+16K	Main Flash +Work Flash	-	16	✓	-	8bit x 2	16bit x 6 32bit x 6	16bit x 3 32bit x 3	16bit x 4 32bit x 6	2	-	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)	6	-	-	-	✓	Details of part number suffix					
	MB91F528R	2112K+64K																							320K+16K																							
	MB91F522L	320K+64K																							56K																							
MB91F523L	448K+64K	72K																																														
MB91F524L	576K+64K	104K																																														
MB91F525L	832K+64K	136K																																														
MB91F526L	1088K+64K	160K																																														
MB91F527U	1600K+64K	192+16K																																														
MB91F528U	2112K+64K	320K+16K																																														
MB91F527M	1600K+64K	192+16K																																														
MB91F528M	2112K+64K	320K+16K																																														
MB91F527Y	1600K+64K	192+16K																																														
MB91F528Y	2112K+64K	320K+16K																																														
MB91550	MB91F552	LQFP-64	80	4.5 to 5.5	Main Flash +Work Flash	-	-	-	-	8	4	-	30	-	8(1) 4ch S/H(1)	-	-	1	1	Reload Timer x5ch + PWM Timer x6ch(2chx3 pairs) + PWC Timer x2ch + Base Timer x4ch (Reload/PPG/PWM/PWC Selectable)	-	-	Multi Function Serialx3ch (UART/SIO/LIN Selectable)	1	-																			-	-	-	Comparator: 3ch, Slope Compensation: 1ch	On-Chip Debug

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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																																					
MB96340	MB96345RS	56	LQFP-100	3.0 to 5.5	-	MASK	160K	8K						24(1)	-	-	8	2	8	4+1 (Dedicated for PPG)	-	16	-	-	-	2	-	-	7	2				Option without CAN	MB96V300C		
	✓				288K		16K	80																													
	-							80																													
	✓							80																													
	MB96F345DS	40			-	160K +64K	8K	80																													
	✓						80																														
	-						80																														
	✓						80																														
	MB96F346AS	56			-	288K	16K	80																													
	✓																													80							
	-																													80							
	✓																													80							
	MB96F346AW				-																															80	
	✓																													80							
	MB96F346RS				-																															80	
	✓																													80							
	MB96F346RW				-			80																													
	✓						80																														
	MB96F347AS				-			80																													
	✓						80																														
MB96F347AW	-				80																																
✓				80																																	
MB96F347RS	-				80																																
✓				80																																	
MB96F347RW	-			80																																	
✓			80																																		
MB96F348AS	-			80																																	
✓			80																																		
MB96F348AW	-			80																																	
✓			80																																		
MB96F348RS	-			80																																	
✓			80																																		
MB96F348RW	-			80																																	
✓			80																																		
MB96F348HS	-			80																																	
✓			80																																		
MB96F348HW	-			80																																	
✓			80																																		
MB96350	MB96F353AS	56	LQFP-64	3.0 to 5.5	-	FLASH	96K	8K	-	4	13	✓	15(1)	-	-	4	4	6+3 (Dedicated for LIN)	4+1 (Dedicated for PPG)	-	-	20	-	-	1	-	-	4	1	-	-	-	-	Option without CAN	MB96V300C		
	✓																																			49	
	-																																			51	
	✓																																			49	
	MB96F353RS				-																																51
	✓																																			49	
	MB96F353RW				-																																51
	✓																																			49	
	MB96F355AS				-																																51
	✓																																			49	
	MB96F355AW				-																																51
	✓																																			49	
	MB96F355RS				-																																51
	✓																																			49	
MB96F356AS	-			51																																	
✓			49																																		
MB96F356AW	-			51																																	
✓			49																																		
MB96F356RS	-			51																																	
✓			49																																		
MB96F356RW	-			51																																	
✓			49																																		
MB96370	MB96F378HS	40	LQFP-144	3.0 to 5.5	-	FLASH	544K +32K	28K	-	7	8	✓	22(1)	-	-	6	2	8	4+1 (Dedicated for PPG)	-	-	12	-	-	2	-	-	6	2	-	-	72 x 4	-	SMC x 6ch Sound generator x 2ch	MB96V300C		
	✓							118																													
	MB96F378HW				-																															120	
	✓							118																													
	MB96F379RS				-																															120	
✓			118																																		
MB96F379RW	-			118																																	
✓			118																																		
MB96380	MB96384RS	56	LQFP-120	3.0 to 5.5	-	MASK	128K	6K						16(1)	-	-	4	2	8	4+1 (Dedicated for PPG)	5	-	8	-	-	1	-	-	5	1				SMC x 5ch Sound generator x 2ch	MB96V300C		
	✓							96																													
	MB96384RW				-																															94	
	✓							96																													
	MB96385RS	-					96																														
	✓					94																															
	MB96385RW	-					96																														
	✓					94																															
	MB96F385RS	-					96																														
	✓					94																															
	MB96F385RW	-					96																														
	✓					94																															
	MB96F386RS	-					96																														
	✓					94																															
	MB96F386RW	-					96																														
	✓					94																															
MB96F387RS	-			96																																	
✓			94																																		
MB96F387RW	-			96																																	
✓			94																																		
MB96F388HS	-			96																																	
✓			94																																		
MB96F388HW	-			96																																	
✓			94																																		
MB96F389RS	-			96																																	
✓			94																																		
MB96F389RW	-			94																																	
✓			94																																		
MB96390	MB96393RS	40	LQFP-100	3.0 to 5.5	-	MASK	96K	5K						11(1)	-	-	4	2	4	4+1 (Dedicated for PPG)	4	-	4	-	-	1	-	-	3	1	-	-	49 x 4	-	SMC x 4ch Sound generator x 1ch	MB96V300C	
	✓							76																													
	MB96393RW				-																																74
	✓							76																													
	MB96395RS	-					76																														
	✓					74																															
	MB96395RW	-					76																														
✓			74																																		

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