



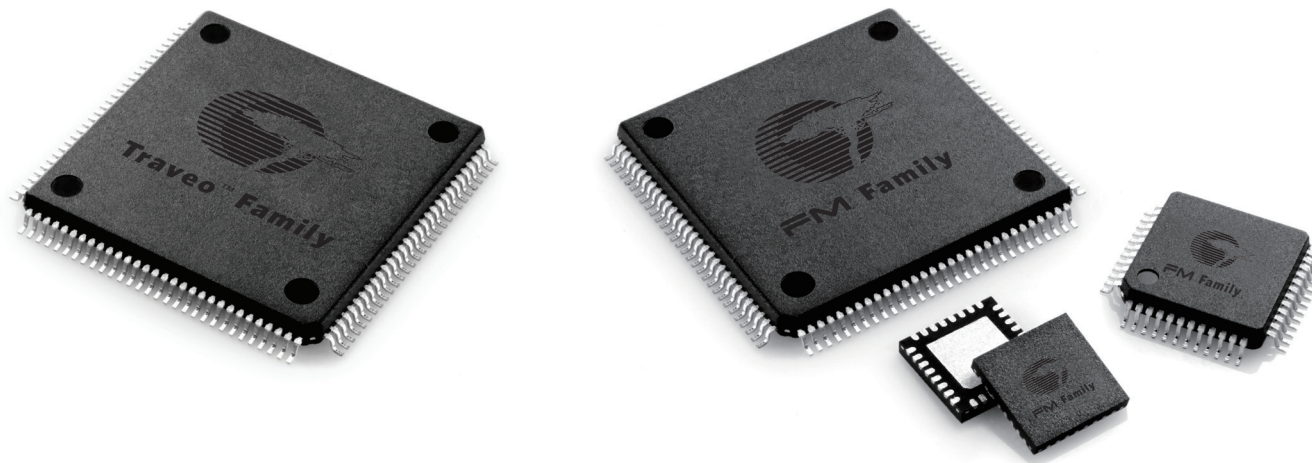
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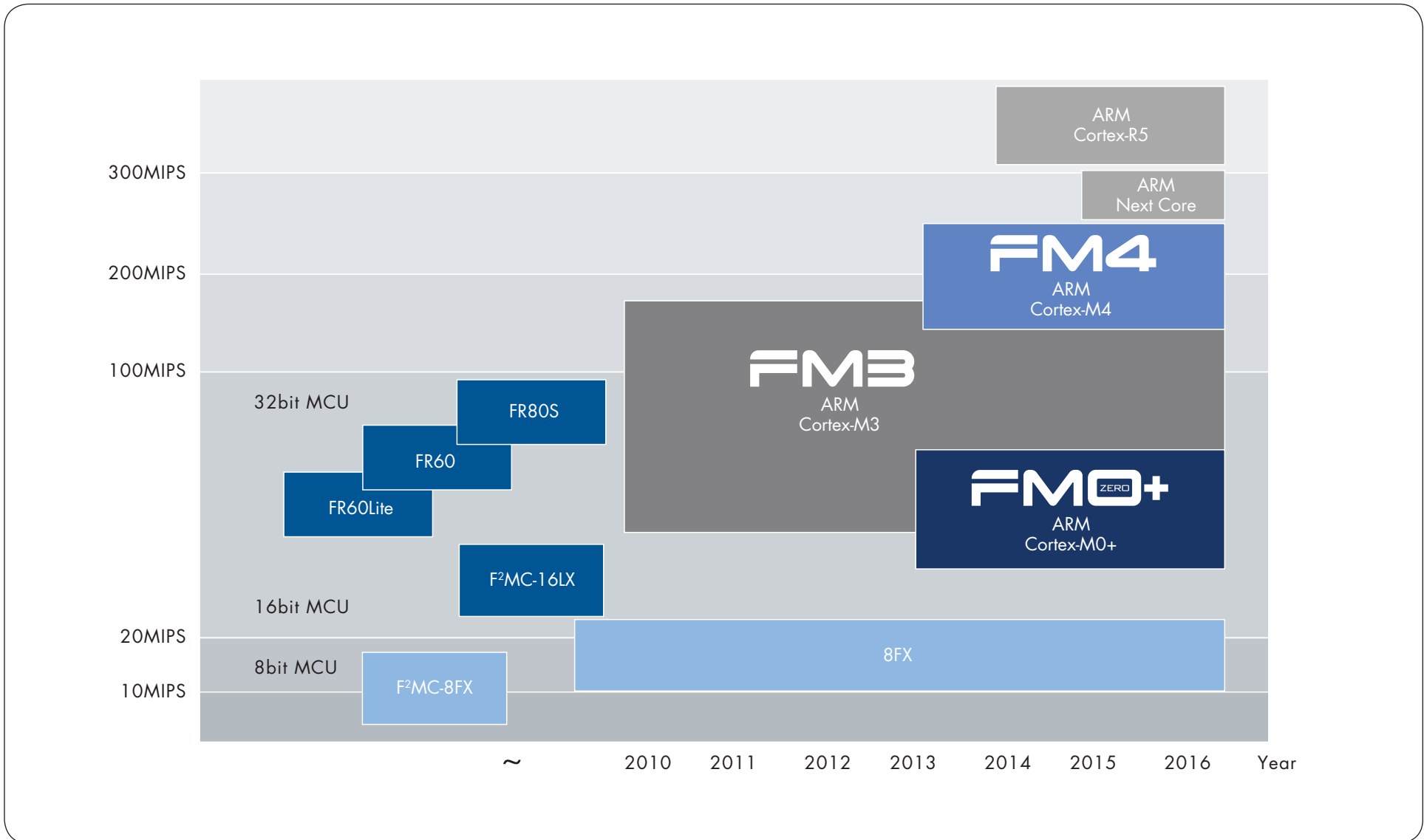


Cypress Microcontroller

PRODUCT SELECTOR GUIDE



Consumer and Industrial MCU Core Roadmap



Consumer and Industrial MCU Family



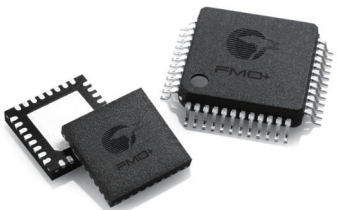
FM4 FAMILY

Cypress ARM® Cortex®-M4F microcontroller family is a high range line providing maximum CPU frequency of 200MHz, a high speed flash memory with DSP and FPU hardware instructions. Customers can select the best fitting device from a range of products, coming in packages from 48 pin to 216 pin and flash memory densities between 256KB and 2MB. The wide operation supply voltage range up to 5.5V which improves the signal to noise ratio, results in a robust design and is unique among Cortex-M4F microcontroller families. The MCUs are designed for applications that require advanced, high-speed computing performance such as general-purpose inverters, servomotors, PLCs and other industrial equipment, as well as inverter-based home appliances such as washing machines and air conditioners.



FM3 FAMILY

Cypress ARM Cortex-M3 microcontroller family is a scalable platform for many industrial applications. Customers can select the best fitting device from a range of products, coming in packages from 32 pin to 176 pin and flash memory densities between 32KB and 1MB. With a maximum CPU frequency of 144MHz and high speed flash memory, FM3 supports the fastest ARM Cortex-M3 devices on the market. The wide operation supply voltage range up to 5.5V, which improves the signal to noise ratio, results in a robust design and is quite unique among Cortex-M3 microcontroller families. The FM3 MCU family is split into four groups: high performance, basic, low power and ultra low leakage groups. The main differences between the groups are CPU operation frequency and supply voltage. All products are based on the same architecture (software compatible), use the same peripherals and are pin compatible in most cases. The ultra low leakage line products are based on an optimized low leakage process technology. Development tools and evaluation boards are offered from different vendors and Cypress.



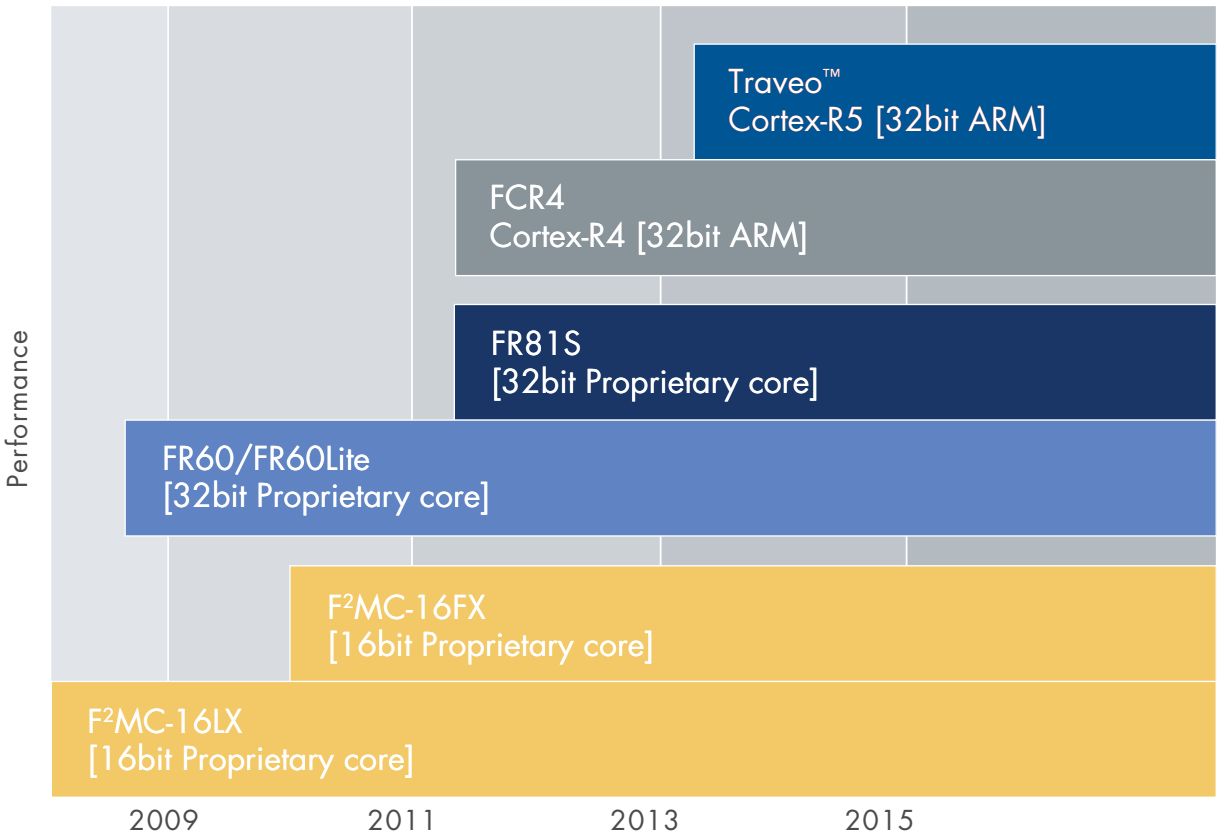
FM0+ FAMILY

The Cypress FM0+ family, which is based on the ARM Cortex-M0+ core, is designed for low power and cost-sensitive applications such as white goods, sensors, meters, HMI systems, power tools and Internet of Things (IoT) battery powered or energy harvesting wearable devices. These microcontrollers can be easily embedded into systems adopting 8-, 16- or 32-bit MCUs, accelerating product development and reducing development costs. The FM0+ family includes two groups for ultra-low-power and cost-effective applications. The devices in the ultra-low-power group have an operating voltage range of 1.65V to 3.6V, and a maximum CPU clock frequency of 40MHz, a RUN mode current of 70 $\mu\text{A}/\text{MHz}$, an RTC mode current of 0.7 μA and wake-up time of approximately 40 μs .

8FX FAMILY

Cypress 8FX MCU family is a high-performance 8-bit microcontroller utilizing a different embedded flash memory size. This series uses the F2MC-8FX CISC CPU, which offers industry leading class performance of an 8-bit microcontroller unit enabling more instructions to be executed per cycle. On top of delivering industry class performance MCUs, the 8FX family also delivers low power efficient MCU products for the customer's usage. This series also features a variety of on-chip timers, A/D converters, analog and digital peripheral and communication interfaces such as LIN-UART (Local Interconnect Network Universal Asynchronous Receiver-Transmitter), CAN (controller area network) and I2C (Inter-Integrated Circuit) interface for various application usages. For easy development, the 8FX family also employs a 1-line on-chip debug that uses only one pin on the microcontroller, thereby minimizing the number of pins used for debugging in product development. Cypress also provides easy to use and cost competitive development starter kits and development environments for this MCU series.

Automotive MCU Core Roadmap



Automotive MCU Family

TRAVEO FAMILY

The Cypress Traveo™ family expands the company's automotive application coverage, scalability and high performance into one line-up and at the same time adds new features to fulfill the latest requirements of the automotive industry. Based on the powerful ARM® Cortex®-R5 and R5F core in single and dual core operations, it offers state-of-the-art real-time performance, safety and security features.

The family supports the latest in-car networks and offers high performance graphics engines optimized for a minimum memory footprint and embeds dedicated features to increase data security in the car.

High-level Traveo Features

- ARM Cortex-R5 core
- Dual core
- Embedded twin-motor control with internal R/D converter
- Embedded 2D and 3D graphics engines
- High performance embedded flash memory
- Cypress HyperBus™: High speed serial interfaces to connect external memory
- Qualified for automotive use (AEC-Q100)
- Software support for Autosar, graphics drivers and more

FR FAMILY

Cypress 32bit MCU families have been designed in close co-operation with major automotive customers worldwide and inherit the high-performance core of Cypress's proprietary FR MCU architecture. They support communication interfaces such as CAN, FlexRay and LIN as well as up to 2MB on-chip memory capacity. The latest members (MB915xx) also include a single precision Floating Point Unit (FPU) providing additional computing power required by complex control algorithms.

This high computing performance combined with powerful peripheral functions such as on-chip graphics controller and motor control macros, offers a higher grade of flexibility and lower cost for automotive as well as industrial applications.

Many devices offer an external bus interface which can be connected to Cypress's stand alone FlexRay controller or to the latest generation of graphics controllers in order to build full-featured dashboards, driver information systems or advanced body systems.

FCR4 FAMILY

The FCR4 family has been specifically designed to offer an innovative, scalable solution for hybrid instrument clusters, which combine traditional meters and graphical displays. The devices offer a powerful architecture based on the ARM Cortex-R4 core and Cypress's 2D graphics engine.

High-level FCR4 Features

- ARM Cortex-R4 core
- Embedded 2D graphics engine
- 2MB flash, 64KB E2Flash
- Up to 208KB RAM
- Features including real-time clock/auto calibration, sound generator and I2S

F2MC-16FX FAMILY

Cypress 16-bit flexible microcontroller series offers a scalable family concept approach to a variety of automotive and industrial applications. The scalable flash/ROM/RAM sizes with different mixtures of peripherals saves development time and costs. CAN and LIN support, on-chip LCD controller, SMC (stepper motor controller), I²C bus interface, analog input channels, external bus interface, selectable port levels for CMOS, TTL and Automotive Levels are some of the enhanced features. A security feature is incorporated, preventing unauthorized reading of the contents of the flash memory.



FM4 Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	1bit AD Converter [bit(unif)]	12bit AD Converter [bit(unif)]	DA Converter [bit x ch]	Timer							Serial				Communication		LCD Controller [seg x com]	Three-phase Inverter	Note	Evaluation Device
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/ISI [ch]	SIO [ch]	LIN/UART/SIO [ch]				
S6E2HG	S6E2HG6E0A	160	LQFP-80	2.7 to 5.5	✓	Main Flash +Work Flash	512K + 32K	64K	-	8	16	✓	63	16 (3)	-	Multi-Function Timer x3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 9ch	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSI/OI2C/LIN Selectable)	2	-	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch, SDC	On-Chip Debug (SWJ-DP/ ETM)							
	S6E2HG6F0A		LQFP-100																								80	24 (3)					
	S6E2HG6G0A		LQFP-120 BGA-121																								100	16 (3)					
	S6E2HG4E0A	160	LQFP-80	2.7 to 5.5	✓	Main Flash +Work Flash	256K + 32K	32K	-	8	16	✓	63	16 (3)	-	Multi-Function Timer x3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 9ch	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSI/OI2C/LIN Selectable)	-	-	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch, SDC	On-Chip Debug (SWJ-DP/ ETM)							
	S6E2HG4F0A		LQFP-100																								80	24 (3)					
S6E2HG4G0A	LQFP-120 BGA-121		100																								16 (3)						
S6E2HE	S6E2HE6E0A	160	LQFP-80	2.7 to 5.5	✓	Main Flash +Work Flash	512K + 32K	64K	-	8	16	✓	63	16 (3)	-	Multi-Function Timer x3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 9ch	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSI/OI2C/LIN Selectable)	-	-	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch, SDC	On-Chip Debug (SWJ-DP/ ETM)							
	S6E2HE6F0A		LQFP-100																								80	24 (3)					
	S6E2HE6G0A		LQFP-120 BGA-121																								100	16 (3)					
	S6E2HE4E0A	160	LQFP-80	2.7 to 5.5	✓	Main Flash +Work Flash	256K + 32K	32K	-	8	16	✓	63	16 (3)	-	Multi-Function Timer x3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 9ch	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSI/OI2C/LIN Selectable)	-	-	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch, SDC	On-Chip Debug (SWJ-DP/ ETM)							
	S6E2HE4F0A		LQFP-100																								80	24 (3)					
S6E2HE4G0A	LQFP-120 BGA-121		100																								16 (3)						
S6E2H4	S6E2H46E0A	160	LQFP-80	2.7 to 5.5	✓	Main Flash +Work Flash	512K + 32K	64K	-	8	16	✓	63	16 (3)	-	Multi-Function Timer x3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 9ch	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSI/OI2C/LIN Selectable)	2	-	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch	On-Chip Debug (SWJ-DP/ ETM)							
	S6E2H46F0A		LQFP-100																								80	24 (3)					
	S6E2H46G0A		LQFP-120 BGA-121																								100	16 (3)					
	S6E2H44E0A	160	LQFP-80	2.7 to 5.5	✓	Main Flash +Work Flash	256K + 32K	32K	-	8	16	✓	63	16 (3)	-	Multi-Function Timer x3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 9ch	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSI/OI2C/LIN Selectable)	-	-	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch	On-Chip Debug (SWJ-DP/ ETM)							
	S6E2H44F0A		LQFP-100																								80	24 (3)					
S6E2H44G0A	LQFP-120 BGA-121		100																								16 (3)						
S6E2H1	S6E2H16E0A	160	LQFP-80	2.7 to 5.5	✓	Main Flash +Work Flash	512K + 32K	64K	-	8	16	✓	63	16 (3)	-	Multi-Function Timer x3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 9ch	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSI/OI2C/LIN Selectable)	-	-	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch	On-Chip Debug (SWJ-DP/ ETM)							
	S6E2H16F0A		LQFP-100																								80	24 (3)					
	S6E2H16G0A		LQFP-120 BGA-121																								100	16 (3)					
	S6E2H14E0A	160	LQFP-80	2.7 to 5.5	✓	Main Flash +Work Flash	256K + 32K	32K	-	8	16	✓	63	16 (3)	-	Multi-Function Timer x3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 9ch	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSI/OI2C/LIN Selectable)	-	-	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch	On-Chip Debug (SWJ-DP/ ETM)							
	S6E2H14F0A		LQFP-100																								80	24 (3)					
S6E2H14G0A	LQFP-120 BGA-121		100																								16 (3)						
S6E2GM w/security	S6E2GM8HHA	180	LQFP-144	2.7 to 5.5	✓	Main Flash	1024K	192K	-	8	32	✓	121	24 (3)	-	Multi-Function Timer x2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 6ch	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 4	-	Multi Function Serial x 10ch (UART/CSI/OI2C/LIN Selectable)	1	2ch (USB-Host/ USB-Function Selectable)	-	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch, Tiny I2S, Smart Card I/F, ETH, SDC, Chipher	On-Chip Debug (SWJ-DP/ ETM)						
	S6E2GM8JHA		LQFP-176																									153	32 (3)				
	S6E2GM6HHA		LQFP-144				121	24 (3)																									
	S6E2GM6JHA		LQFP-176				153	32 (3)																									
S6E2GM	S6E2GM8H0A	180	LQFP-144	2.7 to 5.5	✓	Main Flash	1024K	192K	-	8	32	✓	121	24 (3)	-	Multi-Function Timer x2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 6ch	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 4	-	Multi Function Serial x 10ch (UART/CSI/OI2C/LIN Selectable)	1	2ch (USB-Host/ USB-Function Selectable)	-	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch, Tiny I2S, Smart Card I/F, ETH, SDC	On-Chip Debug (SWJ-DP/ ETM)						
	S6E2GM8J0A		LQFP-176																									153	32 (3)				
	S6E2GM6H0A		LQFP-144				121	24 (3)																									
	S6E2GM6J0A		LQFP-176				153	32 (3)																									
S6E2GK w/security	S6E2GK8HHA	180	LQFP-144	2.7 to 5.5	✓	Main Flash	1024K	192K	-	8	32	✓	121	24 (3)	-	Multi-Function Timer x2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 6ch	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 4	-	Multi Function Serial x 10ch (UART/CSI/OI2C/LIN Selectable)	-	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch, Tiny I2S, Smart Card I/F, ETH, SDC, Chipher	On-Chip Debug (SWJ-DP/ ETM)							
	S6E2GK8JHA		LQFP-176																								153	32 (3)					
	S6E2GK6HHA		LQFP-144				121	24 (3)																									
	S6E2GK6JHA		LQFP-176				153	32 (3)																									
S6E2GK	S6E2GK8H0A	180	LQFP-144	2.7 to 5.5	✓	Main Flash	1024K	192K	-	8	32	✓	121	24 (3)	-	Multi-Function Timer x2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 6ch	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 4	-	Multi Function Serial x 10ch (UART/CSI/OI2C/LIN Selectable)	-	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC x 256ch, Tiny I2S, Smart Card I/F, ETH, SDC	On-Chip Debug (SWJ-DP/ ETM)							
	S6E2GK8J0A		LQFP-176																								153	32 (3)					
	S6E2GK6H0A		LQFP-144				121	24 (3)																									
	S6E2GK6J0A		LQFP-176				153	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]	1bit 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]				
S6E2GH	S6E2GH8H0A	180	LQFP-144	2.7 to 5.5	✓	Main Flash	1024K	192K	-	8	32	✓	121	24 (3)	-	Multi-Function Timer x2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 6ch	Base Timer x 16ch (Reload/PPG/PWM/PWC Selectable)	QPRC x 4	Multi Function Serial x 10ch (UART/CSIO/I2C/LIN Selectable)	1	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC×256ch, Tiny I2S, Smart Card I/F, SDC	On-Chip Debug (SWJ-DP/ ETM)								
	153		32 (3)				121	24 (3)					153	32 (3)																			
	512K		128K				121	24 (3)					153	32 (3)																			
	LQFP-176		LQFP-176																														
S6E2G3	S6E2G38H0A	180	LQFP-144	2.7 to 5.5	✓	Main Flash	1024K	192K	-	8	32	✓	121	24 (3)	-	Multi-Function Timer x2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 6ch	Base Timer x 16ch (Reload/PPG/PWM/PWC Selectable)	QPRC x 4	Multi Function Serial x 10ch (UART/CSIO/I2C/LIN Selectable)	-	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC×256ch, Tiny I2S, Smart Card I/F	On-Chip Debug (SWJ-DP/ ETM)								
	153		32 (3)				121	24 (3)					153	32 (3)																			
	512K		128K				121	24 (3)					153	32 (3)																			
	LQFP-176		LQFP-176																														
S6E2G2 w/security	S6E2G28HHA	180	LQFP-144	2.7 to 5.5	✓	Main Flash	1024K	192K	-	8	32	✓	121	24 (3)	-	Multi-Function Timer x2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 6ch	Base Timer x 16ch (Reload/PPG/PWM/PWC Selectable)	QPRC x 4	Multi Function Serial x 10ch (UART/CSIO/I2C/LIN Selectable)	-	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC×256ch, Tiny I2S, Smart Card I/F, ETH, Chipher	On-Chip Debug (SWJ-DP/ ETM)								
	153		32 (3)				121	24 (3)					153	32 (3)																			
	512K		128K				121	24 (3)					153	32 (3)																			
	LQFP-176		LQFP-176																														
S6E2G2	S6E2G28H0A	180	LQFP-144	2.7 to 5.5	✓	Main Flash	1024K	192K	-	8	32	✓	121	24 (3)	-	Multi-Function Timer x2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG 6ch	Base Timer x 16ch (Reload/PPG/PWM/PWC Selectable)	QPRC x 4	Multi Function Serial x 10ch (UART/CSIO/I2C/LIN Selectable)	-	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Timer Clock, Unique ID, DSTC×256ch, Tiny I2S, Smart Card I/F, ETH	On-Chip Debug (SWJ-DP/ ETM)								
	153		32 (3)				121	24 (3)					153	32 (3)																			
	512K		128K				121	24 (3)					153	32 (3)																			
	LQFP-176		LQFP-176																														
S6E2DH	S6E2DH5G0A	160	LQFP-120 TEQFP-120 BGA-161	2.7-3.6	✓	Main Flash	384K	36K	-	8	16	✓	98	-	24 (3)	-	Multi-Function Timer x 3units (Free-Run 3ch/Output Compare 6ch/Input Capture 4ch /Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG6ch	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	QPRC x 1	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	1	1ch (USB-Host/ USB-Function Selectable)	-	-	Dual Timer, Real Timer Clock, Unique ID, DSTC x128ch, CAN-FD 1ch, SDC, I2S 2ch, High Speed Quad SPI x1, Hyper Bus x1, GDC	On-Chip Debug (SWJ-DP/ETM)						
	90		90				154																										
	LQFP-176																																
S6E2DF	S6E2DF5G0A	160	LQFP-120 TEQFP-120 BGA-161	2.7-3.6	✓	Main Flash	384K	36K	-	8	16	✓	98	-	24 (3)	-	Multi-Function Timer x 3units (Free-Run 3ch/Output Compare 6ch/Input Capture 4ch /Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG6ch	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	QPRC x 1	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	1	1ch (USB-Host/ USB-Function Selectable)	-	-	Dual Timer, Real Timer Clock, Unique ID, DSTC x128ch, CAN-FD 1ch, I2S 2ch, High Speed Quad SPI x1, Hyper Bus x1, GDC	On-Chip Debug (SWJ-DP/ETM)						
	90		90				154																										
	LQFP-176																																
S6E2D5	S6E2D55G0A	160	LQFP-120 TEQFP-120 BGA-161	2.7-3.6	✓	Main Flash	384K	36K	-	8	16	✓	98	-	24 (3)	-	Multi-Function Timer x 3units (Free-Run 3ch/Output Compare 6ch/Input Capture 4ch /Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG6ch	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	QPRC x 1	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	-	-	Dual Timer, Real Timer Clock, Unique ID, DSTC x128ch, SDC, I2S 2ch, High Speed Quad SPI x1, Hyper Bus x1, GDC	On-Chip Debug (SWJ-DP/ETM)						
	90		90				154																										
	LQFP-176																																
S6E2D3	S6E2D35G0A	160	LQFP-120 TEQFP-120 BGA-161	2.7-3.6	✓	Main Flash	384K	36K	-	8	16	✓	98	-	24 (3)	-	Multi-Function Timer x 3units (Free-Run 3ch/Output Compare 6ch/Input Capture 4ch /Waveform Generator 3ch/ AD Activation Compare 6ch Selectable), PPG6ch	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	QPRC x 1	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	-	-	Dual Timer, Real Timer Clock, Unique ID, DSTC x128ch, I2S 2ch, High Speed Quad SPI x1, Hyper Bus x1, GDC	On-Chip Debug (SWJ-DP/ETM)						
	90		90				154																										
	LQFP-176																																

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		LDC 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]				
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, Eth 1ch, Chipher, Voice	On-Chip Debug (SWJ-DP/ETM/HTM)					
	S6E2CC8JGA		1M				128K	2M																		256K		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, Eth 1ch, Chipher, Voice				
	S6E2CCAJFA		2M				256K																									
	S6E2CC8JFA		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, Eth 1ch, Chipher	On-Chip Debug (SWJ-DP/ETM/HTM)					
	S6E2CCAJHA		152																									32 (3)				
	S6E2CCALHA		190																									24 (3)				
	S6E2CC9HHA		190																									24 (3)				
	S6E2CC9JHA		LQFP-176 BGA-192				1.5M	192K																		152	32 (3)					
	S6E2CC9LHA		LQFP-216				190	24 (3)																								
	S6E2CC8HHA		LQFP-144				120	24 (3)																								
	S6E2CC8JHA		LQFP-176 BGA-192				1M	128K																		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, Eth 1ch	On-Chip Debug (SWJ-DP/ETM/HTM)					
	S6E2CCAJ0A		152																									32 (3)				
	S6E2CCAL0A		190																									24 (3)				
	S6E2CC9H0A		190																									24 (3)				
	S6E2CC9J0A		LQFP-176 BGA-192				1.5M	196K																		152	32 (3)					
	S6E2CC9L0A		LQFP-216				190	24 (3)																								
	S6E2CC8H0A		LQFP-144				120	24 (3)																								
	S6E2CC8J0A		LQFP-176 BGA-192				1M	128K																		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		152																									32 (3)				
	S6E2C5AL0A		190																									24 (3)				
	S6E2C59H0A		190																									24 (3)				
	S6E2C59J0A		LQFP-176 BGA-192				1.5M	192K																		152	32 (3)					
	S6E2C59L0A		LQFP-216				190	24 (3)																								
	S6E2C58H0A		LQFP-144				120	24 (3)																								
	S6E2C58J0A		LQFP-176 BGA-192				1M	128K																		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 [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]
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																								1.5M	196K	152	32 (3)				
	S6E2C4AL0A		LQFP-216																												1M	128K	152	32 (3)
	S6E2C49H0A		LQFP-144																															
	S6E2C49J0A		LQFP-176 BGA-192				190	24 (3)																										
	S6E2C49L0A		LQFP-216										190	24 (3)																				
	S6E2C48H0A		LQFP-144																								190	24 (3)						
	S6E2C48J0A		LQFP-176 BGA-192																										190	24 (3)				
S6E2C48L0A	LQFP-216	190	24 (3)																															
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)		
	S6E2C3AJ0A				LQFP-176 BGA-192																						1.5M	192K					152	32 (3)
	S6E2C3AL0A				LQFP-216																								1M	128K				
	S6E2C39H0A	LQFP-144	190		24 (3)																													
	S6E2C39J0A	LQFP-176 BGA-192							190	24 (3)																								
	S6E2C39L0A	LQFP-216													190	24 (3)																		
	S6E2C38H0A	LQFP-144																									190	24 (3)						
	S6E2C38J0A	LQFP-176 BGA-192	190		24 (3)																													
S6E2C38L0A	LQFP-216	190		24 (3)																														
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)		
	S6E2C2AJHA						LQFP-176 BGA-192																				1.5M	196K					152	32 (3)
	S6E2C2ALHA		LQFP-216		1M		128K																											
	S6E2C29HHA	LQFP-144	190	24 (3)																														
	S6E2C29JHA	LQFP-176 BGA-192									190	24 (3)																						
	S6E2C29LHA	LQFP-216															190	24 (3)																
	S6E2C28HHA	LQFP-144			190		24 (3)																											
	S6E2C28JHA	LQFP-176 BGA-192	190	24 (3)																														
S6E2C28LHA	LQFP-216	190				24 (3)																												
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)		
	S6E2C2AJ0A				LQFP-176 BGA-192		1.5M		192K																								152	32 (3)
	S6E2C2AL0A		LQFP-216	1M	128K																													
	S6E2C29H0A	LQFP-144	190			24 (3)																												
	S6E2C29J0A	LQFP-176 BGA-192											190	24 (3)																				
	S6E2C29L0A	LQFP-216					190		24 (3)																									
	S6E2C28H0A	LQFP-144		190	24 (3)																													
	S6E2C28J0A	LQFP-176 BGA-192	190			24 (3)																												
S6E2C28L0A	LQFP-216	190						24 (3)																										
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)		
	S6E2C1AJ0A			LQFP-176 BGA-192	1.5M				196K																								152	32 (3)
	S6E2C1AL0A		LQFP-216	1M		128K																												
	S6E2C19H0A	LQFP-144	190					24 (3)																										
	S6E2C19J0A	LQFP-176 BGA-192											190	24 (3)																				
	S6E2C19L0A	LQFP-216			190				24 (3)																									
	S6E2C18H0A	LQFP-144		190		24 (3)																												
	S6E2C18J0A	LQFP-176 BGA-192	190					24 (3)																										
S6E2C18L0A	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]	1bit 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]				
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/CSI/OI2C/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/CSI/OI2C/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)					
	MB9BF567N		LQFP-100 QFP-100 BGA-112				80	24(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	✓	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/CSI/OI2C/LIN Selectable)	2	-	-	✓	CAN: 32Msg-buffer, Dual Timer, Real Time Clock, DSTC x 128ch, Unique ID, SD Card I/F	On-chip Debug (SWJ-DP/ETM)							
	MB9BF466N		LQFP-100 QFP-100 BGA-112																									80	24(3)					
	MB9BF466R		LQFP-120 BGA-144																									100	16(3)					
	MB9BF467M		LQFP-80																									63	16(3)					
	MB9BF467N		LQFP-100 QFP-100 BGA-112				80	24(3)																										
	MB9BF467R		LQFP-120 BGA-144				100	16(3)																										
	MB9BF468M		LQFP-80				63	16(3)																										
	MB9BF468N		LQFP-100 QFP-100 BGA-112				80	24(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	✓	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/CSI/OI2C/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																									80	24(3)					
	MB9BF366R		LQFP-120 BGA-144																									100	16(3)					
	MB9BF367M		LQFP-80																									63	16(3)					
	MB9BF367N		LQFP-100 QFP-100 BGA-112				80	24(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		LGD 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/IS ¹ [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)						
	MB9BF166N		LQFP-100 QFP-100 BGA-112																										80	24(3)				
	MB9BF166R		LQFP-120 BGA-144																										100	16(3)				
	MB9BF167M		LQFP-80				63	16(3)																										
	MB9BF167N		LQFP-100 QFP-100 BGA-112				80	24(3)																										
	MB9BF167R		LQFP-120 BGA-144				100	16(3)																										
	MB9BF168M		LQFP-80				63	16(3)																										
	MB9BF168N		LQFP-100 QFP-100 BGA-112				80	24(3)																										
	MB9BF168R		LQFP-120 BGA-144				100	16(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																									16	48	15(2)				
	MB9BF565K		LQFP-48 QFN-48				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]	IC [ch]	UART/IS [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]	USB-Host [ch]				
MB9B460L	MB9BF464K	160	LQFP-48 QFN-48	2.7 to 5.5	✓	Main Flash +Work Flash	256K +32K	32K	-	8	-	-	-	-	-	12 x 2	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 6ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPCR x 1	1	Multi Function Serial x 6ch (UART/CSI/OI2C/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																										16	48	15(2)				
	MB9BF465K		LQFP-48 QFN-48				15	33																					8(2)						
	MB9BF465L		LQFP-64 QFN-64				16	48																					15(2)						
	MB9BF466K		LQFP-48 QFN-48				15	33																					8(2)						
	MB9BF466L		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]				
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	-	-	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)	QPCR x 1	1	Multi Function Serial x 6ch (UART/CSI/OI/ZC/LIN Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Real Time Clock, Unique ID, DSTC x 128ch	On-chip Debug (SWJ-DP)					
	MB9BF364L		LQFP-64 QFN-64														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)		
	MB9BF365K		LQFP-48 QFN-48				15	33					8(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)																		
	MB9BF365L		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)																		
	MB9BF366K		LQFP-48 QFN-48				15	33					8(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)																		
	MB9BF366L		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]				
MB9B160L	MB9BF164K	160	LQFP-48 QFN-48	2.7 to 5.5	✓	Main Flash +Work Flash	256K +32K	32K		8	-	-	-	-	-	12 x 2	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	QPCR x 1	1	Multi Function Serial x 6ch (UART/CSI/OI2C/LIN Selectable)	-	-	-	-	✓	Dual Timer, Real Time Clock, Unique ID, DSTC x 128ch	On-chip Debug (SWJ-DP)							
	MB9BF164L		LQFP-64 QFN-64																									16	48	15(2)				
	MB9BF165K		LQFP-48 QFN-48				15	33																				8(2)						
	MB9BF165L		LQFP-64 QFN-64				16	48																				15(2)						
	MB9BF166K		LQFP-48 QFN-48				15	33																				8(2)						
	MB9BF166L		LQFP-64 QFN-64				16	48																				15(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]	1bit AD Converter [ch](unit)	12bit AD Converter [ch](unit)	DA Converter [bit x ch]	Timer							Serial			Communication			LCD Controller [seg x com]	Three-phase Inverter	Note	Evaluation Device
																	Output Compare [ch]	Free-Run Timer [ch]	Input Capture [ch]	Reload Timer [ch]	PWM Timer [ch]	PWC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I ² C [ch]	UART/SIO [ch]	SIO [ch]	LIN/UART/SIO [ch]				
HIGH-PERFORMANCE GROUP																																	
MB9BD10T	MB9BFD16T	144	LQFP-176 BGA-192	2.7 to 5.5	✓	FLASH	512K	64K	-	8	32	✓	-	154	32(3)	-	Multi-Function Timer x 3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	2	2ch (USB-Host/ USB-Function Selectable)	-	✓	CAN: 32Msg-buffer, Dual Timer, Ethernet-MAC x 2ch	On-chip Debug (SWJ-DP/ETM)						
	MB9BFD16S		LQFP-144				122	24(3)																									
	MB9BFD17T		LQFP-176 BGA-192				768K	96K																				154	32(3)				
	MB9BFD17S		LQFP-144				122	24(3)																									
	MB9BFD18T		LQFP-176 BGA-192				1M	128K																				154	32(3)				
	MB9BFD18S		LQFP-144				122	24(3)																									
MB9BF610T	MB9BF616T	144	LQFP-176 BGA-192	2.7 to 5.5	✓	FLASH	512K	64K	-	8	32	✓	-	154	32(3)	-	Multi-Function Timer x 3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	-	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Ethernet-MAC x 2ch	On-chip Debug (SWJ-DP/ETM)						
	MB9BF616S		LQFP-144				122	24(3)																									
	MB9BF617T		LQFP-176 BGA-192				768K	96K																				154	32(3)				
	MB9BF617S		LQFP-144				122	24(3)																									
	MB9BF618T		LQFP-176 BGA-192				1M	128K																				154	32(3)				
	MB9BF618S		LQFP-144				122	24(3)																									
MB9BF510T	MB9BF516T	144	LQFP-176 BGA-192	2.7 to 5.5	✓	FLASH	512K	64K	-	8	32	✓	-	154	32(3)	-	Multi-Function Timer x 3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	2	2ch (USB-Host/ USB-Function Selectable)	-	✓	CAN: 32Msg-buffer, Dual Timer	On-chip Debug (SWJ-DP/ETM)						
	MB9BF516S		LQFP-144				122	24(3)																									
	MB9BF517T		LQFP-176 BGA-192				768K	96K																				154	32(3)				
	MB9BF517S		LQFP-144				122	24(3)																									
	MB9BF518T		LQFP-176 BGA-192				1M	128K																				154	32(3)				
	MB9BF518S		LQFP-144				122	24(3)																									
MB9BF410T	MB9BF416T	144	LQFP-176 BGA-192	2.7 to 5.5	✓	FLASH	512K	64K	-	8	32	✓	-	154	32(3)	-	Multi-Function Timer x 3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	2	-	-	-	✓	CAN: 32Msg-buffer, Dual Timer	On-chip Debug (SWJ-DP/ETM)					
	MB9BF416S		LQFP-144				122	24(3)																									
	MB9BF417T		LQFP-176 BGA-192				768K	96K																					154	32(3)			
	MB9BF417S		LQFP-144				122	24(3)																									
	MB9BF418T		LQFP-176 BGA-192				1M	128K																					154	32(3)			
	MB9BF418S		LQFP-144				122	24(3)																									
MB9BF310T	MB9BF316T	144	LQFP-176 BGA-192	2.7 to 5.5	✓	FLASH	512K	64K	-	8	32	✓	-	154	32(3)	-	Multi-Function Timer x 3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	-	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer	On-chip Debug (SWJ-DP/ETM)						
	MB9BF316S		LQFP-144				122	24(3)																									
	MB9BF317T		LQFP-176 BGA-192				768K	96K																				154	32(3)				
	MB9BF317S		LQFP-144				122	24(3)																									
	MB9BF318T		LQFP-176 BGA-192				1M	128K																				154	32(3)				
	MB9BF318S		LQFP-144				122	24(3)																									
MB9BF210T	MB9BF216T	144	LQFP-176 BGA-192	2.7 to 5.5	✓	FLASH	512K	64K	-	8	32	✓	-	154	32(3)	-	Multi-Function Timer x 3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	-	2ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer, Ethernet-MAC x 1ch	On-chip Debug (SWJ-DP/ETM)						
	MB9BF216S		LQFP-144				122	24(3)																									
	MB9BF217T		LQFP-176 BGA-192				768K	96K																				154	32(3)				
	MB9BF217S		LQFP-144				122	24(3)																									
	MB9BF218T		LQFP-176 BGA-192				1M	128K																				154	32(3)				
	MB9BF218S		LQFP-144				122	24(3)																									
MB9BF110T	MB9BF116T	144	LQFP-176 BGA-192	2.7 to 5.5	✓	FLASH	512K	64K	-	8	32	✓	-	154	32(3)	-	Multi-Function Timer x 3units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 16ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 3	1	Multi Function Serial x 8ch (UART/CSIO/I ² C/LIN Selectable)	-	-	-	✓	Dual Timer	On-chip Debug (SWJ-DP/ETM)						
	MB9BF116S		LQFP-144				122	24(3)																									
	MB9BF117T		LQFP-176 BGA-192				768K	96K																				154	32(3)				
	MB9BF117S		LQFP-144				122	24(3)																									
	MB9BF118T		LQFP-176 BGA-192				1M	128K																				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 [bit/units]	12bit AD Converter [bit/units]	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]				
HIGH-PERFORMANCE GROUP																																		
MB9B510R	MB9BF512N	144	QFP-100 LQFP-100 BGA-112	2.7 to 5.5	✓	Main Flash +Work Flash	128K +32K	16K										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				103																											
	MB9BF514N		QFP-100 LQFP-100 BGA-112				256K +32K	32K	83																									
	MB9BF514R		LQFP-120				103																											
	MB9BF515N		QFP-100 LQFP-100 BGA-112				384K +32K	48K	83																									
	MB9BF515R		LQFP-120				103																											
	MB9BF516N		QFP-100 LQFP-100 BGA-112				512K +32K	64K	83																									
MB9BF516R	LQFP-120	103																																
MB9B410R	MB9BF412N	144	QFP-100 LQFP-100 BGA-112	2.7 to 5.5	✓	Main Flash +Work Flash	128K +32K	16K										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				103																											
	MB9BF414N		QFP-100 LQFP-100 BGA-112				256K +32K	32K	83																									
	MB9BF414R		LQFP-120				103																											
	MB9BF415N		QFP-100 LQFP-100 BGA-112				384K +32K	48K	83																									
	MB9BF415R		LQFP-120				103																											
	MB9BF416N		QFP-100 LQFP-100 BGA-112				512K +32K	64K	83																									
MB9BF416R	LQFP-120	103																																
MB9B310R	MB9BF312N	144	QFP-100 LQFP-100 BGA-112	2.7 to 5.5	✓	Main Flash +Work Flash	128K +32K	16K										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				103																											
	MB9BF314N		QFP-100 LQFP-100 BGA-112				256K +32K	32K	83																									
	MB9BF314R		LQFP-120				103																											
	MB9BF315N		QFP-100 LQFP-100 BGA-112				384K +32K	48K	83																									
	MB9BF315R		LQFP-120				103																											
	MB9BF316N		QFP-100 LQFP-100 BGA-112				512K +32K	64K	83																									
MB9BF316R	LQFP-120	103																																
MB9B110R	MB9BF112N	144	QFP-100 LQFP-100 BGA-112	2.7 to 5.5	✓	Main Flash +Work Flash	128K +32K	16K										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				103																											
	MB9BF114N		QFP-100 LQFP-100 BGA-112				256K +32K	32K	83																									
	MB9BF114R		LQFP-120				103																											
	MB9BF115N		QFP-100 LQFP-100 BGA-112				384K +32K	48K	83																									
	MB9BF115R		LQFP-120				103																											
	MB9BF116N		QFP-100 LQFP-100 BGA-112				512K +32K	64K	83																									

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/S [ch]	SIO [ch]	LIN/UART/SIO [ch]	CAN [ch]		
HIGH-PERFORMANCE GROUP																																
MB9B500B	MB9BF504NB	80	LQFP-100 BGA-112	2.7 to 5.5	✓	FLASH	256K	32K	-	8	16	✓	-	16(3)	-	Multi-Function Timer x 2units (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 2	1	Multi Function Serial x 8ch (UART/CSIO/I2C/LIN Selectable)	2	1ch (USB-Host/ USB-Function Selectable)	-	✓	CAN: 32Msg-buffer, Dual Timer	On-chip Debug (SWJ-DP/ETM)						
	MB9BF504RB		LQFP-120																								80					
	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	✓	-	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																									80				
	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	✓	-	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																								80					
	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	✓	-	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																									80				
	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	-	-	-	10bit x 2	-	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 1	1	Multi Function Serial x 4ch (UART/CSIO/I2C/LIN Selectable)	1	1ch (USB-Host/ USB-Function Selectable)	-	✓	CAN: 32Msg-buffer, Dual Timer, Unique ID, Real Time Clock	On-chip Debug (SWJ-DP)						
	MB9BF521L		LQFP-64 QFN-64																								19	50	23(2)			
	MB9BF521M		LQFP-80 BGA-96																								23	65	26(2)			
	MB9BF522K		LQFP-48 QFN-48																								14	35	14(2)			
	MB9BF522L		LQFP-64 QFN-64				19	50																			23(2)					
	MB9BF522M		LQFP-80 BGA-96				23	65																			26(2)					
	MB9BF524K		LQFP-48 QFN-48				14	35																			14(2)					
	MB9BF524L		LQFP-64 QFN-64				19	50																			23(2)					
MB9BF524M	LQFP-80 BGA-96	23	65	26(2)																												

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/IS ² [ch]	SIO [ch]	LIN/UART/SIO [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	✓	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)	QPRC x 1	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)				
	154		QPRC x 2																												
	122		QPRC x 1																												
	154		QPRC x 2																												
MB9B120T	MB9BF128S*	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)	QPRC x 1	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)				
	154		QPRC x 2																												
	122		QPRC x 1																												
	154		QPRC x 2																												
MB9A420L	MB9AF421K	40	LQFP-48 LQFP-52 QFN-48	2.7 to 5.5	✓	FLASH	64K	4K	-	-	14	-	36	-	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)			
	19		51																												
MB9A120L	MB9AF121K	40	LQFP-48 LQFP-52 QFN-48	2.7 to 5.5	✓	FLASH	64K	4K	-	-	14	-	36	-	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)			
	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			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]
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/CSIQ/I2C/LIN Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	-	✓	Dual Timer	On-chip Debug (SWJ-DP)					
	MB9AF311MA		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)	
	MB9AF311NA		LQFP-100 QFP-100 BGA-112																									16	✓	83	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)	On-chip Debug (SWJ-DP/ETM)
	MB9AF312LA		LQFP-64 QFN-64																									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)
	MB9AF312MA		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)	
	MB9AF312NA		LQFP-100 QFP-100 BGA-112																									16	✓	83	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)	On-chip Debug (SWJ-DP/ETM)
	MB9AF314LA		LQFP-64 QFN-64																									7	-	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)
	MB9AF314MA		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)	
	MB9AF314NA		LQFP-100 QFP-100 BGA-112																									16	83	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)	On-chip Debug (SWJ-DP/ETM)	
	MB9AF315MA		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)	
	MB9AF315NA		LQFP-100 QFP-100 BGA-112**																									16	✓	83	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)	On-chip Debug (SWJ-DP/ETM)
	MB9AF316MA		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)	
	MB9AF316NA		LQFP-100 QFP-100 BGA-112**																									16	83	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)	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			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		
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	-	-	-	-	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	12(2)	17(2)	24(2)	12(2)	24(2)	17(2)	24(2)	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				128K +32K	-			8	8	-														51	12(2)										
	MB9AF342MB		LQFP-80 BGA-96									11	66														17(2)											
	MB9AF342NB		LQFP-100 QFP-100 BGA-112									16	✓														83	24(2)										
	MB9AF344LB		LQFP-64 QFN-64				256K +32K	32K			-	8	8														-	51	12(2)									
	MB9AF344MB		LQFP-80 BGA-96										11														66	17(2)										
	MB9AF344NB		LQFP-100 QFP-100 BGA-112										16														✓	83	24(2)									
MB9A140NA	MB9AF141LB	40	LQFP-64 QFN-64	1.65 to 3.6	✓	Dual Op. Flash (Main area + Work area)	64K +32K	16K	-	8	8	-	51	-	-	-	-	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	12(2)	17(2)	24(2)	12(2)	17(2)	24(2)	12(2)	17(2)	24(2)	12(2)	17(2)	24(2)	On-chip Debug (SWJ-DP)
	MB9AF141MB		LQFP-80 BGA-96								11	66	17(2)																									
	MB9AF141NB		LQFP-100 QFP-100 BGA-112								16	✓	83													24(2)												
	MB9AF142LB		LQFP-64 QFN-64				128K +32K	16K			-	8	8													-	51	12(2)										
	MB9AF142MB		LQFP-80 BGA-96										11													66	17(2)											
	MB9AF142NB		LQFP-100 QFP-100 BGA-112										16													✓	83	24(2)										
	MB9AF144LB		LQFP-64 QFN-64				256K +32K	32K			-	8	8													-	51	12(2)										
	MB9AF144MB		LQFP-80 BGA-96										11													66	17(2)											
	MB9AF144NB		LQFP-100 QFP-100 BGA-112										16													✓	83	24(2)										

FM3 Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage VCC [V]	Sub Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [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]				
ULTRA LOW LEAK GROUP																																	
MB9AAA0N	MB9AFAA1L	20	LQFP-64 QFN-64	1.8 to 5.5	✓	FLASH	64K	12K	-	-	-	-	-	-	9(1)	10bit x 2	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ Waveform Generator 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 8ch (Reload/PPG/PWM/ PWC Selectable)	-	-	Multi Function Serial x 8ch (UART/CSIO/I ² C Selectable)	-	-	-	24 x 4 or 20 x 8	✓	HDMI-CEC/Remote Control Reception x 2, Real Time Clock	On-chip Debug (SWJ-DP)					
	MB9AFAA1M		LQFP-80																										11	67	12(1)	37 x 4 or 33 x 8	
	MB9AFAA1N		LQFP-100 QFP-100																										16	84	16(1)	44 x 4 or 40 x 8	
	MB9AFAA2L		LQFP-64 QFN-64				128K	16K																					8	52	9(1)	24 x 4 or 20 x 8	
	MB9AFAA2M		LQFP-80																										11	67	12(1)	37 x 4 or 33 x 8	
	MB9AFAA2N		LQFP-100 QFP-100																										16	84	16(1)	44 x 4 or 40 x 8	
MB9A1A0N	MB9AF1A1L	20	LQFP-64 QFN-64	1.8 to 5.5	✓	FLASH	64K	12K	-	-	-	-	-	-	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)	40 x 8	
	MB9AF1A1N		LQFP-100 QFP-100																										16	84	16(1)	44 x 4 or 40 x 8	
	MB9AF1A2L		LQFP-64 QFN-64				128K	16K																					8	52	9(1)	24 x 4 or 20 x 8	
	MB9AF1A2M		LQFP-80																										11	67	12(1)	37 x 4 or 33 x 8	
	MB9AF1A2N		LQFP-100 QFP-100																										16	84	16(1)	44 x 4 or 40 x 8	
MB9A130LA	MB9AF131LB	20	LQFP-64 QFN-64	1.8 to 5.5	✓	FLASH	64K	8K	-	-	-	-	-	-	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)	-	-	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	37	6(1)	Multi Function Serial x 4ch (UART/CSIO/I ² C Selectable, CSIO/I ² C up to 3ch)	
	MB9AF132LB		LQFP-64 QFN-64				8	52							8(1)														Multi Function Serial x 8ch (UART/CSIO/I ² C Selectable)				
	MB9AF132KB		LQFP-48 QFN-48				6	37							6(1)														Multi Function Serial x 4ch (UART/CSIO/I ² C Selectable, CSIO/I ² C up to 3ch)				

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/SI [ch]	SIO [ch]	LIN/UART/SIO [ch]		
S6E1A	S6E1A11B0A	40	LQFP-32 QFN-32	2.7 to 5.5	✓	Flash	56K	6K	-	2	8	-	23	-	5(1)	-	Multi-Function Timer x 1unit (Free-Run 3ch/ Output Compare 6ch/ Input Capture 4ch/ PPG 3ch/ AD Activation Compare 3ch Selectable)	Base Timer x 4ch (Reload/PPG/PWM/ PWC Selectable)	QPRC x 1	1	Multi Function Serial x 3ch (UART/CSIO/I ² C/LIN Selectable)	-	-	-	✓	Dual Timer, Real Time Clock, Unique ID, Fast I/O	On-chip Debug (SW-DP/MTB)				
	S6E1A11C0A		LQFP-48 QFN-48				37																					8(1)			
	S6E1A12B0A		LQFP-32 QFN-32				23																					5(1)			
	S6E1A12C0A		LQFP-48 QFN-48				37																					8(1)			
S6E1B8 w/security	S6E1B86GHA	40	LQFP-120	1.65 to 3.6	✓	Main Flash +Work Flash	512K + 40K	64K	-	-	24	-	82	-	23	-	Multi-Function Timer x 1units (Free-Run 3ch/Output Compare 6ch/Input Capture 4ch /PPG3ch/Waveform Generator 3ch /AD Activation Compare 6ch Selectable), PPG3ch	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	-	1	Multi Function Serial x 8ch (UART/CSIO/I ² C Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	40 SEG x 8 COM / 44 SEG x 4 COM / 32 SEG x 8 COM / 36 SEG x 4 COM	-	Dual Timer, Real Time Clock, Unique ID, DSTC x 64ch, Tiny I2S, HDMI-CEC 2ch, CRC, Smart Card I/F, Chipper	On-Chip Debug (SWJ-DP/ Boundary SCAN)				
	S6E1B84GHA						256K + 40K	32K																							
	S6E1B86FHA						512K + 40K	64K																							
	S6E1B84FHA		256K + 40K				32K																								
	S6E1B86EHA		BGA-96/ LQFP-80/ WLCSP-80				512K + 40K	64K																							
	S6E1B84EHA		256K + 40K				32K																								
S6E1B8	S6E1B86G0A	40	LQFP-120	1.65 to 3.6	✓	Main Flash +Work Flash	512K + 40K	64K	-	-	24	-	82	-	23	-	Multi-Function Timer x 1units (Free-Run 3ch/Output Compare 6ch/Input Capture 4ch /PPG3ch/Waveform Generator 3ch /AD Activation Compare 6ch Selectable), PPG3ch	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	-	1	Multi Function Serial x 8ch (UART/CSIO/I ² C Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	40 SEG x 8 COM / 44 SEG x 4 COM / 32 SEG x 8 COM / 36 SEG x 4 COM	-	Dual Timer, Real Time Clock, Unique ID, DSTC x 64ch, Tiny I2S, HDMI-CEC 2ch, CRC, Smart Card I/F	On-Chip Debug (SWJ-DP/ Boundary SCAN)				
	S6E1B84G0A						256K + 40K	32K																							
	S6E1B86F0A						512K + 40K	64K																							
	S6E1B84F0A		256K + 40K				32K																								
	S6E1B86E0A		BGA-96/ LQFP-80/ WLCSP-80				512K + 40K	64K																							
	S6E1B84E0A		256K + 40K				32K																								
S6E1B3	S6E1B36G0A	40	LQFP-120	1.65 to 3.6	✓	Main Flash +Work Flash	512K + 40K	64K	-	-	24	-	82	-	23	-	Multi-Function Timer x 1units (Free-Run 3ch/Output Compare 6ch/Input Capture 4ch /PPG3ch/Waveform Generator 3ch /AD Activation Compare 6ch Selectable), PPG3ch	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	-	1	Multi Function Serial x 8ch (UART/CSIO/I ² C Selectable)	-	1ch (USB-Host/ USB-Function Selectable)	-	Dual Timer, Real Time Clock, Unique ID, DSTC x 64ch, Tiny I2S, HDMI-CEC 2ch, CRC, Smart Card I/F	On-Chip Debug (SWJ-DP/ Boundary SCAN)					
	S6E1B34G0A						256K + 40K	32K																							
	S6E1B36F0A						512K + 40K	64K																							
	S6E1B34F0A		256K + 40K				32K																								
	S6E1B36E0A		BGA-96/ LQFP-80/ WLCSP-80				512K + 40K	64K																							
	S6E1B34E0A		256K + 40K				32K																								
S6E1B1	S6E1B16G0A	40	LQFP-120	1.65 to 3.6	✓	Main Flash +Work Flash	512K + 40K	64K	-	-	24	-	82	-	23	-	Multi-Function Timer x 1units (Free-Run 3ch/Output Compare 6ch/Input Capture 4ch /PPG3ch/Waveform Generator 3ch /AD Activation Compare 6ch Selectable), PPG3ch	Base Timer x 8ch (Reload/PPG/PWM/PWC Selectable)	-	1	Multi Function Serial x 8ch (UART/CSIO/I ² C Selectable)	-	-	-	Dual Timer, Real Time Clock, Unique ID, DSTC x 64ch, Tiny I2S, HDMI-CEC 2ch, CRC, Smart Card I/F	On-Chip Debug (SWJ-DP/ Boundary SCAN)					
	S6E1B14G0A						256K + 40K	32K																							
	S6E1B16F0A						512K + 40K	64K																							
	S6E1B14F0A		256K + 40K				32K																								
	S6E1B16E0A		LQFP-80				512K + 40K	64K																							
	S6E1B14E0A		256K + 40K				32K																								

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 [bit]	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]	LINUART/SIO [ch]	CAN [ch]	USB-Host [ch]	USB-Function [ch]								
STANDARD																																								
MB95650L	MB95F652E	16	TSSOP-24 SOP-24 QFN-32	1.8 to 5.5	✓	Dual Op. Flash	8K	256	-	-	6	-	-	-	-	6(1)	-	-	8/16bit Compound Timer x 2ch (Interval Timer/PWMPWC/ Input Capture Selectable)	-	-	-	2	1	-	1	-	-	-	-	-	-	-	Low-voltage Detection Reset, Clock Supervisor Clock Supervisor	On-chip Debug					
	MB95F652L						12K	512	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	Low-voltage Detection Reset, Clock Supervisor Clock Supervisor		
	MB95F653L						20K	1024	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	Low-voltage Detection Reset, Clock Supervisor Clock Supervisor	
	MB95F654E						20K		-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	Low-voltage Detection Reset, Clock Supervisor Clock Supervisor	
	MB95F654L						36K		-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	Low-voltage Detection Reset, Clock Supervisor Clock Supervisor
	MB95F656E						20K		-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	Low-voltage Detection Reset, Clock Supervisor Clock Supervisor
	MB95F656L						20K		-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
MB95F656L	20K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Low-voltage Detection Reset, Clock Supervisor Clock Supervisor								
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/PWMPWC/ Input Capture Selectable)	4	-	-	1	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][uint]	12bit AD Converter with 4ch sample & hold	DA Converter [bit x ch]	Timer								Serial			Communication			LCD Controller [seg x con]	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																																		
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				
	832K + 48K						TC-RAM: 48KB System - RAM: 16KB Backup - RAM: 8KB																											
	1088K + 112K						TC-RAM: 64KB System - RAM: 16KB Backup - RAM: 8KB																											
S6J3200	S6J32AAKS	160	TEQFP -216 (0.4mm pitch)	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												128	50(1)													32 x 4							
	S6J32AALS												120	46(1)													30 x 4							
	S6J32AALU												128	50(1)													32 x 4							
	S6J32BAKS												120	46(1)													30 x 4							
	S6J32BAKU												128	50(1)													32 x 4							
	S6J32BALS												120	46(1)													30 x 4							
	S6J32BALU												128	50(1)													32 x 4							
	S6J32CAKS												120	46(1)													30 x 4							
	S6J32CAKU												128	50(1)													32 x 4							
	S6J32CALS												120	46(1)													30 x 4							
	S6J32CALU												128	50(1)													32 x 4							
	S6J32DAKS												120	46(1)													30 x 4							
S6J32DAKU	128	50(1)	32 x 4																															
S6J32DALS	120	46(1)	30 x 4																															
S6J32DALU	128	50(1)	32 x 4																															

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 con]	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/S [ch]	SIO [ch]	LIN/UART/SIO [ch]				
CAN/AUTOMOTIVE																																	
S6J3200	S6J323CKS	240	TEQFP -208	1.1 to 5.5	✓	Main Flash +Work Flash	2112K + 112K	TC-RAM: 128KB System - RAM: 128KB Backup - RAM: 16KB VRAM: 2048KB	Instruction: 16 Data: 16	16	16	-	120	46(1)	-	-	24	12	24	Reload Timer x 14ch 16bit Base Timer x 24ch (PWM/PPG/Reload/PWC Selectable)	2	RTC x 1ch	Multi Function Serial x 12ch (LIN/UART/SIO/I2C Selectable)	CAN-FD x 4ch	-	-	30 x 4	-	ARM Cortex-R5, Ethernet AVB, Media-LB, SHE(Secure Hardware Extension), SMC x 6ch, Sound generator x 4ch, 2D Graphic Engine, Display Output x 2ch,	On-Chip Debug			
	S6J323CKU		TEQFP -216 (0.4mm pitch)										128	50(1)													32 x 4						
	S6J323CLS		TEQFP -208										120	46(1)													30 x 4						
	S6J323CLU		TEQFP -216 (0.4mm pitch)										128	50(1)													32 x 4						
	S6J324CKS		TEQFP -208										120	46(1)													30 x 4						
	S6J324CKU		TEQFP -216 (0.4mm pitch)										128	50(1)													32 x 4						
	S6J324CLS		TEQFP -208										120	46(1)													30 x 4						
	S6J324CLU		TEQFP -216 (0.4mm pitch)										128	50(1)													32 x 4						
	S6J325CKS		TEQFP -208										120	46(1)													30 x 4						
	S6J325CKU		TEQFP -216 (0.4mm pitch)										128	50(1)													32 x 4						
	S6J325CLS		TEQFP -208										120	46(1)													30 x 4						
	S6J325CLU		TEQFP -216 (0.4mm pitch)										128	50(1)													32 x 4						
	S6J326CKS		TEQFP -208										120	46(1)													30 x 4						
	S6J326CKU		TEQFP -216 (0.4mm pitch)										128	50(1)													32 x 4						
	S6J326CLS		TEQFP -208										120	46(1)													30 x 4						
	S6J326CLU		TEQFP -216 (0.4mm pitch)										128	50(1)													32 x 4						
S6J327CKS	TEQFP -208	120	46(1)	30 x 4																													
S6J327CKU	TEQFP -216 (0.4mm pitch)	128	50(1)	32 x 4																													
S6J327CLS	TEQFP -208	120	46(1)	30 x 4																													
S6J327CLU	TEQFP -216 (0.4mm pitch)	128	50(1)	32 x 4																													
S6J328CKS	TEQFP -208	120	46(1)	30 x 4																													
S6J328CKU	TEQFP -216 (0.4mm pitch)	128	50(1)	32 x 4																													
S6J328CLS	TEQFP -208	120	46(1)	30 x 4																													
S6J328CLU	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]	PMIC Timer [ch]	PPG Timer [ch]	Up/Down Counter [ch]	Other timers [ch]	I2C [ch]	UART/S [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																																		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): 6 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

FR Family – 32bit Microcontrollers

Series Name	Product Name	Maximum Internal Clock Frequency [MHz]	Package [pin]	Operating Voltage: VCC [V]	Sub-Clock	Memory Type	ROM [byte]	RAM [byte]	Cache [Kbyte]	DMAC [ch]	Ext. Interrupt [ch]	External Bus	Maximum I/O port [ch]	10bit AD Converter [ch/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]		
CAN/AUTOMOTIVE																																
MB91520	MB91F522B	80	LQFP-64	2.7 to 5.5	* See "part number suffix" in Note	Main Flash +Work Flash	320K+64K	56K	-	16	16	-	-	-	-	-	-	8bit x 1	16bit x 6 32bit x 4	16bit x 4 32bit x 5	Reload Timer x 7ch + PPG Timer x 21ch (Reload/PPG/PWM/PWC Selectable)	2	-	Multi Function Serial x 8ch (LIN/UART/SIO/I2C Selectable)	3	-	-	-	✓	LIN, FPU, MPU, Tuning RAM MB91520B/D/F/J/K/L series: CAN: 64Msg-buffer x 2ch, 128Msg-buffer x 1ch, MB91520R/U/M/Y series: CAN: 128Msg-buffer x 6ch, FlexRay: 1 unit Details of part number suffix	On-chip Debug	
	MB91F523B						448K+64K	72K													16(1) 13(1)											
	MB91F524B						576K+64K	104K																								
	MB91F525B						832K+64K	136K																								
	MB91F526B						1088K+64K	16(1) 16(1)																								
	MB91F522D						320K+64K	56K																								
	MB91F523D						448K+64K	72K																								
	MB91F524D						576K+64K	104K																								
	MB91F525D						832K+64K	136K																								
	MB91F526D						1088K+64K	16(1) 21(1)																								
	MB91F522F						320K+64K	56K																								
	MB91F523F						448K+64K	72K																								
	MB91F524F						576K+64K	104K																								
	MB91F525F						832K+64K	136K																								
	MB91F526F						1088K+64K	16(1) 26(1)																								
	MB91F522J						320K+64K	56K																								
	MB91F523J		448K+64K			72K																										
	MB91F524J		576K+64K			104K																										
	MB91F525J		832K+64K			136K																										
	MB91F526J		1088K+64K			16(1) 32(1)																										
	MB91F522K		320K+64K			56K																										
	MB91F523K		448K+64K			72K																										
	MB91F524K		576K+64K			104K																										
	MB91F525K		832K+64K			136K																										
	MB91F526K		1088K+64K			16(1) 32(1)																										
	MB91F527R		1600K+64K			192+16K																										
	MB91F528R		2112K+64K			320K,16K																										
	MB91F522L		320K+64K			56K																										
	MB91F523L		448K+64K			72K																										
	MB91F524L		576K+64K			104K																										
	MB91F525L		832K+64K			136K																										
	MB91F526L		1088K+64K			16(1) 32(1)																										
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	80	LQFP-64	4.5 to 5.5	-	Main Flash +Work Flash	192K+64K	24K	-	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 Serial x3ch (UART/SIO/LIN Selectable)	1	-	-	-	Comparator: 3ch, Slope Compensation: 1ch	On-Chip Debug			



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