



---

The following document contains information on Cypress products. Although the document is marked with the name "Spansion", the company that originally developed the specification, Cypress will continue to offer these products to new and existing customers.

#### **Continuity of Specifications**

There is no change to this document as a result of offering the device as a Cypress product. Any changes that have been made are the result of normal document improvements and are noted in the document history page, where supported. Future revisions will occur when appropriate, and changes will be noted in a document history page.

#### **Continuity of Ordering Part Numbers**

Cypress continues to support existing part numbers. To order these products, please use only the Ordering Part Numbers listed in this document.

#### **For More Information**

Please contact your local sales office for additional information about Cypress products and solutions.

#### **About Cypress**

Cypress (NASDAQ: CY) delivers high-performance, high-quality solutions at the heart of today's most advanced embedded systems, from automotive, industrial and networking platforms to highly interactive consumer and mobile devices. With a broad, differentiated product portfolio that includes NOR flash memories, F-RAM™ and SRAM, Traveo™ microcontrollers, the industry's only PSoC® programmable system-on-chip solutions, analog and PMIC Power Management ICs, CapSense® capacitive touch-sensing controllers, and Wireless BLE Bluetooth® Low-Energy and USB connectivity solutions, Cypress is committed to providing its customers worldwide with consistent innovation, best-in-class support and exceptional system value.

# S6E2C4 Series

## 32-bit Microcontroller FM4 Family

### Fact Sheet (Preliminary)



S6E2C4 Series are highly integrated 32-bit microcontrollers dedicated for embedded controllers with high-performance and competitive cost. S6E2C4 Series are based on the ARM<sup>®</sup> Cortex<sup>®</sup>-M4F Processor with Flash memory and SRAM, and has peripheral functions such as Motor Control Timers, ADCs, DACs and Communication Interfaces.

## 1. FEATURES

### ■ ARM Cortex-M4F CPU Core

- Processor version : r0p1
- FPU built-in, Support DSP instruction

### ■ Clock

- Maximum clock frequency : 200MHz

### ■ Base Timer : 16 channels (Max.)

### ■ Watch counter

### ■ CRC accelerator

### ■ Multi-function Timer : 3 units (Max.)

- 16-bit free-run timer : x3 channels/unit
- Input capture : x4 channels/unit
- Output compare : x6 channels/unit
- A/D activation compare : x6 channels/unit
- Waveform generator : x3 channels/unit
- 16-bit PPG timer : x3 channels/unit

### ■ QPRC : 4 channel

### ■ Dual Timer : 1 unit

### ■ Watch dog Timer : 1 channel (SW) + 1 channel (HW)

### ■ Multi-function Serial Interface : 16 channels (Max.)

- Selectable from UART/CSIO/LIN/I<sup>2</sup>C

### ■ Real Time Clock : 1 unit

### ■ DMA Controller : 8 channels

### ■ DSTC : 256 channels

### ■ CAN : 2 channels

### ■ CAN-FD : 1 channel

### ■ SD card Interface : 1 channel

### ■ I<sup>2</sup>S : 1 unit (except for S6E2C48H/9H/AH)

### ■ External Interrupt Controller Unit

- External interrupt input pin : Max. 32 pins
- Include one non-maskable interrupt (NMI)

### ■ 12-bit A/D Converter : Max. 32 channels (3 units)

### ■ 12-bit D/A Converter : 2 units (Max.)

### ■ Low Power Consumption Mode

- Sleep mode/Timer mode/RTC mode/Stop mode/Deep standby RTC mode/Deep standby stop mode supported

### ■ General Purpose I/O port

- S6E2C48H/9H/AH : 120 (Max.)
- S6E2C48J/9J/AJ : 152 (Max.)
- S6E2C48L/9L/AL : 190 (Max.)

### ■ Built-in CR

### ■ Unique ID

### ■ Low Voltage Detector

### ■ Clock Super Visor

### ■ Debug

- Serial Wire JTAG Debug Port (SWJ-DP)
- Embedded Trace Macrocells (ETM)
- AHB Trace Macrocells (HTM)

### ■ Power Supply : 2.7 to 5.5V

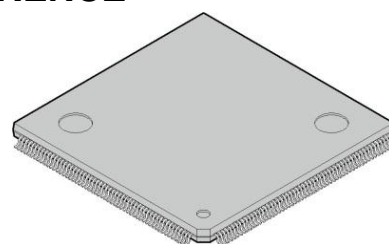
## 2. PRODUCT LINEUP

Part number Parameter	S6E2C48 H/J/L	S6E2C49 H/J/L	S6E2C4A H/J/L
Main Flash (Byte)	1024K	1536K	2048K
RAM (Byte)	128K	192K	256K

## 3. ORDERING INFORMATION

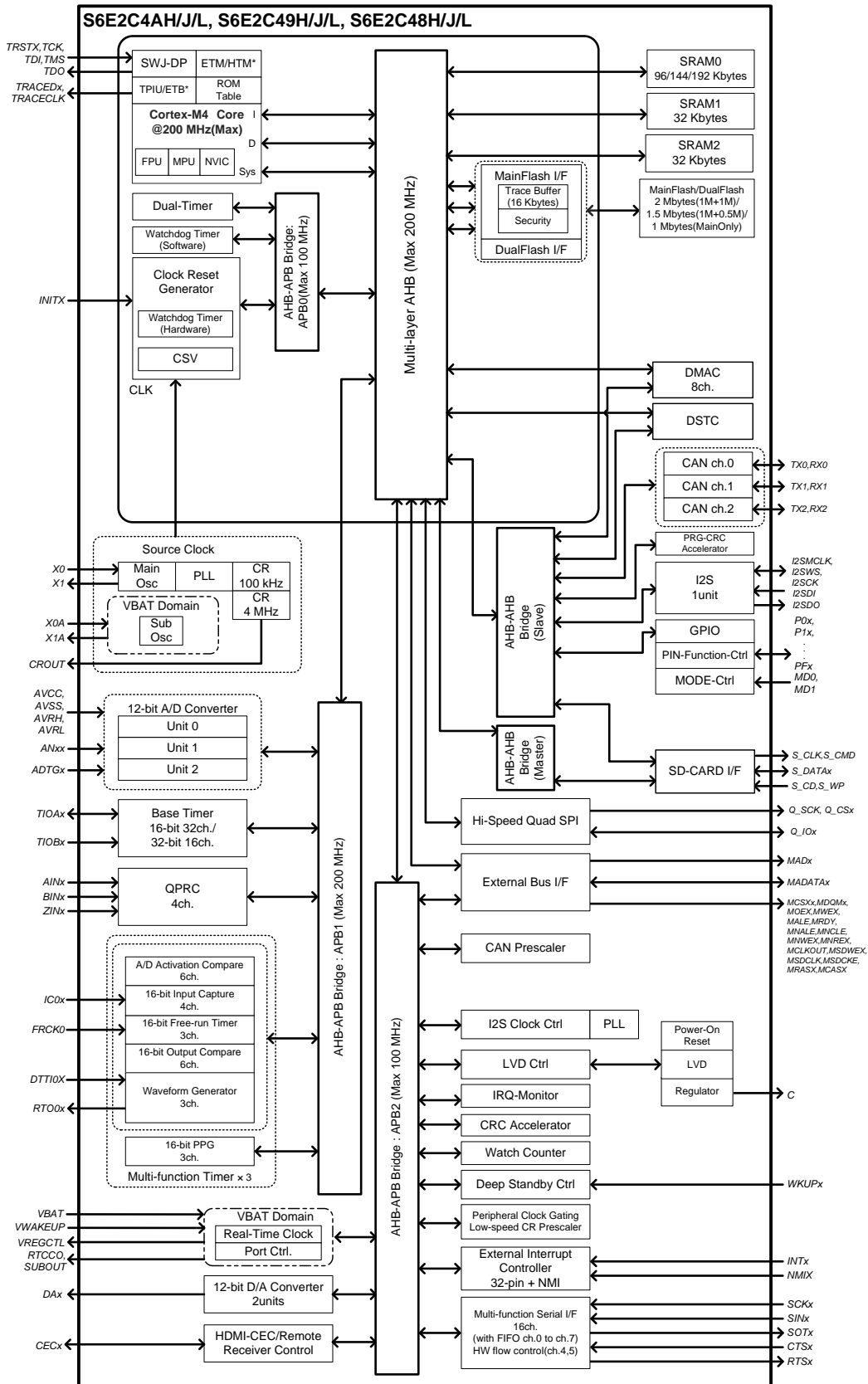
Part number	Package
S6E2C48H0AGV20000	Plastic · LQFP(0.5mm pitch), 144-pins (FPT-144P-M08)
S6E2C49H0AGV20000	
S6E2C4AH0AGV20000	
S6E2C48J0AGV20000	Plastic · LQFP(0.5mm pitch), 176-pins (FPT-176P-M07)
S6E2C49J0AGV20000	
S6E2C4AJ0AGV20000	
S6E2C48J0AGB10000	Plastic · BGA(0.8mm pitch), 192-pins (LBE192)
S6E2C49J0AGB10000	
S6E2C4AJ0AGB10000	
S6E2C48L0AGL20000	Plastic · LQFP(0.4mm pitch), 216-pins (FPT-216P-M01)
S6E2C49L0AGL20000	
S6E2C4AL0AGL20000	

## 4. PACKAGE EXAMPLE OF REFERENCE



Plastic · LQFP, 216-pins  
(FPT-216P-M01)

## 5. BLOCK DIAGRAM



ARM and Cortex are the trademarks of ARM Limited in the EU and other countries.