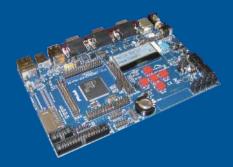
# Cypress FM4 Family of MCUs Development Starter Kit SK-FM4-216-ETHERNET



## **Cypress FM4 Starter Kit**

#### DESCRIPTION

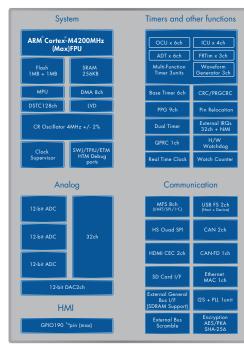
The Cypress FM4 starter kit, SK-FM4-216-ETHERNET, is equipped with everything you need to evaluate this general-purpose microcontroller. This board contains a selection of typical external components to easily test the S6E2CC's advanced internal peripheral functions. All pins are accessible through pin headers enabling custom hardware, such as sensors and motors, to be connected easily.

#### ABOUT CYPRESS'S FM4 MCU FAMILY - S6E2CC SERIES

The S6E2CC series, based on the ARM® Cortex®- M4F core, boasts a 200 MHz operating frequency and supports a diverse set of on-chip peripherals for enhanced human-machine interfaces (HMIs) and machine-to-machine (M2M) communication. The architecture is optimized for very high performance allowing efficient data movement with a 16kB flash accelerator enabling zero wait state execution. Peripheral-to-RAM and RAM-to-peripheral data movement is possible without CPU intervention by either an 8-channel DMA or the unique and powerful descriptor system data transfer controller (DSTC). In addition, this series supports up to 2MB flash and 256KB SRAM memory, more than a dozen different communication and memory interfaces and motor control functionality.

The rich set of peripherals and large memory of this series, allows single-chip solutions for a wide variety of applications requiring advanced, highspeed computing performance including wireless communication hubs with special accommodation for over-the-air (OTA) programming, factory automation, industrial Internet of Things (IoT), motor control, office automation, building management systems, smart meters, digital cameras and multi-function printers.

#### S6E2CCAL0AGL20000 BLOCK DIAGRAM



#### **KEY FEATURES**

- Monitoring all pins: 216 pins
- IEEE802.3 Ethernet RJ45
- USB Type-A, Type-B connector
- CAN transceiver, CAN-FD transceiver
- SDIF (SD card Interface)
- On board ICE (CMSIS-DAP)
- Flash memory S25FL164K (via Quad SPI)
- I2S audio interface
- Motor control interface
- Multi function serial interface
- LCD module
- TFT display interface
- Potentiometer (via A/D Converter)
- Push buttons (via GPIO)
- Reset button
- User setting jumpers
- JTAG-ICE, ETM Trace connecter
- USB bus power, USB-device bus power, JTAG, external power supply (9V-24V)

#### **PACKAGE CONTENTS**

#### HARDWARE

SK-FM4-216-ETHERNET (starter kit board)

#### **FIRMWARE**

- s6e2cc\_template
- s6e2cc\_pdl
- sw-examples
- USB Virtual–COM port

#### **DOCUMENTS & TOOLS**

- Flash USB Direct Programmer
- Schematic file
- ReadMe\_SK-FM4-216-ETHERNET
- Serial Port Viewer

#### USB DIRECT Programmer

SELECT			FLASH INFORM	IATION		
Target MCU	SCE2OCAH0A/LOA		Start Addr	End Addr	Size	
		00000000H 001FFFFFH		00200000H		
Hex File		00400000H	00400001H	00000002H 00000004H		
COM (1-255)	1	0040200CH	0040200FH			
		00404000H	0040400FH	00000010H		
Command to CO!	V256	00406000H	0040FFFFH	0000A000H		
Full Operation(D+E+B+P)			Set Environr	ment	Help	
Download	Etase	Elank Oheck	Check SU	M V	Version Into	
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Program the Flash through USB I/F

# Peripheral Driver Library



Development workspace

### Serial Port Viewer

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Display test result through UART

#### **DEVELOPMENT ENVIRONMENT**

All sample and peripheral driver library code is developed under IAR Embedded Workbench and KEIL µVision.

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IAR site: http://www.iar.com/



KEIL site: http://www.arm.com/

#### Web

Detailed Cypress FM4 evaluation board (SK-FM4-216-Ethernet) starter kit information is available at: URL : http://www.cypress.com/ARMStarterKits

#### **Cypress Semiconductor Corporation**

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