STM32F4 Discovery Kit Now Available

Following the successful launch of its advanced STM32F4 ARM Cortex-M4 microcontroller family, STMicroelectronics, a global leader serving customers across the spectrum of electronics applications, has begun shipping the STM32F4 Discovery Kit to appointed distributors worldwide. The kit provides an ultra low-cost development environment enabling fast, convenient design starts using the new devices.

The STM32F4 Discovery Kit builds on ST's proven formula, established with its sub-$10 USB plug-in Discovery Kits for the STM8S/L and STM32L/VL families. The kit includes a board featuring the STM32F407VGT6 microcontroller and circuitry to speed up development of applications utilizing the microcontroller's signal-processing capability and innovative peripherals. The board includes a MEMS motion sensor for functions such as movement and gesture detection, a MEMS digital microphone plus audio DAC with class-D speaker driver, pushbuttons, indicator LEDs and a USB micro-A/B connector for USB OTG connectivity.

The kit embeds the STLINK/V2 for rapid debugging and programming and is compatible with third-party Integrated Design Environments (IDEs) such as Atollic TrueSTUDIO, IAR EWARM, Keil MDK-ARM and Tasking VX-Toolset. It can also be used with IAR and Keil free-of-charge distributions for designs with code size up to 32KB and Atollic TrueSTUDIO Lite, which has no limitations on code size or usage time. In addition, the kit provides a large library of sample code for actions such as audio playback and recording firmware upgrade from an USB key, interacting with the system watchdog, and using the microcontroller's low-power modes. Sample software demonstrating the MEMS motion-sensing capability is also pre-loaded in on-board Flash.

"The STM32F4 Discovery Kit includes everything required for beginners and

experienced users to start new designs quickly," said Michel Buffa, General Manager of STMicroelectronics' Microcontroller Division. "Over 120,000 discovery kits for STM8 and STM32 microcontrollers are now in the field, and we have already shipped more than 10,000 units of the STM32F4 Discovery Kit. I expect demand to grow as developers look to the STM32F4 family for increased performance and feature integration."

ST announced the STM32F4 microcontroller family, the world's highest performance Cortex-M product with 210DMIPS/363 Coremark at 168MHz – comprising the STM32F405, STM32F407, STM32F415 and STM32F417 series - in September 2011. The new devices extend ST's STM32 platform to include over 250 pin- and software-compatible devices, and enable developers to leverage the advanced signal-processing capabilities and increased speed of the ARM Cortex-M4 processor with Floating Point Unit (FPU). Compared to existing ARM Cortex-M3 based STM32 variants, the family provides access to extra, innovative peripherals including a parallel camera interface supporting data speeds up to 54 Mbytes/s, dedicated audio features including a PLL and full-duplex I2S, and up to 15 communication interfaces such as SPI, SDIO, CAN and up to two USB OTG ports.

The STM32F415 and STM32F417 also integrate a crypto/hash processor providing hardware acceleration for AES 128, 192, 256, Triple DES, and HASH (MD5, SHA-1), in addition to the CRC calculation unit and analog true Random Number Generator featured on all STM32F4 devices. Family members also share power-saving innovations such as dynamic power scaling, an enhanced low-power RTC, and efficient 90nm CMOS process technology.

Major features of STM32F4 Discovery Kit:
• STM32F407VGT6 MCU: 168MHz, 1 MB Flash, 192 KB RAM
• USB powered, or external 5V power supply
• LIS302DL, ST MEMS motion sensor, 3-axis digital output accelerometer
• MP45DT02, ST MEMS audio sensor, omni-directional digital microphone
• CS43L22, audio DAC with integrated class-D speaker driver
• Extension header simplifying board connections and probing

The STM32F4 Discovery Kit is available immediately from ST and its appointed distribution partners throughout North America, Asia-Pacific, EU and EMEA regions including Arrow, Avnet, Digikey, EBV Elektronik, Future Electronics, Mouser Electronics, Premier Farnell and Rutronik Electronic Components. It is supplied in a blister pack at a recommended resale price of $14.90.

Further information on ST can be found at www.st.com [1].

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Links:

[1] http://www.st.com