

Complete Hardware and Software Kit:

Get Started with Cortex-M Programming!

http://c4everyone.com



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#### Complete Embedded C Kit for \$99

- ST-Nucleo Cortex-M board with Arduino headers and builtin ST-LINK/V2 debug pod
- ACE (Arduino Compatible Education) Shield with devices using all the major peripherals of the STM32F030 microcontroller (I2C, SPI, GPIO etc...)
- JumpStart C for Cortex-M Compiler Tools
- "C for Everyone" book (Complete C tutorial reference)
- Example programs

# Why JumpStart MicroBox?

- Most popular 32-bit architecture: ARM Cortex-M0
- Program in Standard C language
- Arduino headers for shield compatibility
- Supported by ImageCraft
- Competitively priced
- Nothing else is needed to program the kit!
- Great for students or engineers transitioning to 32-bit Cortex-M development

#### **ACE Shield**

"Kitchen Sink!" design with:

- 8x8 LED matrix (I2C)
- 2 line OLED (GPIO)
- RTC module with battery (I2C)
- Serial EEPROM (I2C)
- Micro-SD card (SPI)
- Thermistor temperature sensor (ADC)

## **ACE Shield (cont.)**

- Optical Light Sensor (ADC)
- 2-wire output to drive a small speaker (DAC)
- Atmel Crypto chip (I2C)
- Two user buttons (GPIO)
- Communication over the USART is through the ST-LINK/V2 VCOM port.

## "C for Everyone" book

A complete tutorial textbook-style reference to C. Chapter list:

- A Tutorial Introduction
- Basic Elements of C
- Expressions and Operators
- Statements
- Variables
- Type and Declarations

# "C for Everyone" book (cont.)

- Functions
- The C Preprocessor
- The Standard C Library
- Advanced Topic: Effective Pointer and Array Usage
- Advanced Topic: Dynamic Data Structures

# "C for Everyone" book (cont.)

#### Appendices:

- Introduction to Computer Arithmetic
- A Brief History of C
- The C Standards
- C Compilers and the Runtime Environment

"C for Everyone" can be integrated as part of a college level syllabus on Embedded Systems.

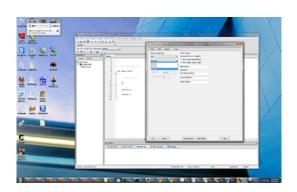
# **JumpStart API**

JSAPI makes it very easy to start programming the Cortex-M devices.

It removes the tedium of low- level initialization and I/O register coding, without blocking access to the powerful features provided by the device.

#### **JumpStart for Cortex-M Compiler**

- Fast efficient modern IDE with debugger
- Seamless support for JTAG pods
- Fast efficient Standard C compiler
- User-friendly, with extensive examples and documentation



#### **Flexibility**

- Bulk or individual purchase of complete kits
- ImageCraft works with professors and staff to provide support and any desired customization

#### **About ImageCraft**

- In business since 1994, over 20,000 licenses sold
- E.g.: 250 CPU12 compiler licenses purchased by DeVry Inc., 2008; 65 AVR compiler licenses purchased by Kookmin University (Korea) in 2014
- Many educational institutions have used ImageCraft compilers in Embedded classes, including Stanford, CalPoly, West Michigan U., Carleton U., Red River Community College, etc.

