

Appendix

This appendix lists some further resources that are worth investigating once you have worked through this book

Debug Tools and Software

There are lots of development tools available for ARM Cortex-M microcontrollers. The following is by no means an exclusive list. I have just tried to list some of the key software resources available.

Commercial GNU-Based Toolchains

Atollic	www.atollic.com
Rowley	www.rowley.co.uk
Code Red	http://www.code-red-tech.com/

Commercial Toolchains

IAR	www.iar.com
Keil	www.keil.com
Tasking	www.tasking.com

Auto Coding

National Instruments	http://www.ni.com/labview/arm/
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Rapid Prototyping and Evaluation

Mbed	mbed.org
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Mbed is a low-cost Cortex-M-based module with a web-based development environment. It has a thriving community with lots of free resources.

Operating Systems

Like the compiler toolchains, there are many RTOS for Cortex-M processor. Here I have listed some of the most widely used RTOS vendors.

Free Rtos	www.freertos.org
Keil	www.keil.com
Micrium	Micrium.com
Segger	www.segger.com
CMX	www.cmx.com

DSP

DSP resources	www.dspguru.com
Filter Design	www.iowegian.com
DSP algorithm development	www.mathworks.co.uk

Other Tools

CANdroid	Mobile data and Signal Analysis for your Smartphone	www.hitex.co.uk/index.php?id=3333
PC Lint	The essential static analysis tool also supports MISRA C	www.gimple.com
Powerscale	Energy profiling tool	www.hitex.co.uk/index.php?id=powerscale-system

Books

Programming

The C Programming Language Kernighan and Ritchie.

Cortex-M Processor

Cortex-M Technical Reference Manuals	http://www.arm.com/products/processors/cortex-m/index.php
The Definitive guide to the Cortex M3 Joseph Yui	
Insiders Guide to the STM32 Martin	http://www.hitex.co.uk/index.php?id=download-insiders-guides00

CMSIS

CMSIS Specification	www.onARM.com
MISRA C	www.misra.org.uk
Barr Coding standard	http://www.barrgroup.com/ Coding-StandardResources

RTOS

Real-Time Concepts for Embedded Systems	Qing Li and Caroline Yao	
Little Book of Semaphores	Downey	http://www.greenteapress.com/ semaphores/

DSP

Digital Signal Processing: A Practical Guide for Engineers and Scientists	Stephen Smith	
Understanding Digital Signal Processing	Lyons	

Silicon Vendors

There are now over 1000 Cortex-M-based microcontrollers and the list is still growing. The link below is a database of devices supported by the MDK-ARM. This is an up-to-date list of all the mainstream devices and is a good place to start when selecting a device.

Cortex-M-device database	http://www.keil.com/dd/
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Training

The following companies provide hands on Embedded systems training courses:

Hitex.co.uk	http://www.hitex.co.uk/ index.php?id=3431
Feabhas	www.Feabhas.com
Doulos	www.Doulos.com

Accreditation

ARM maintains an accreditation program which provides Professional Certification for Development Engineers working with ARM.

<http://www.arm.com/support/arm-accredited-engineer/index.php>

Contact Details

If you have any questions or comments, please contact me on the e-mail below:

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You can also register for a monthly Embedded systems Newsletter.

<http://news.hitex.co.uk/newsletter/4PZ-3QW/signup.aspx>