



ARM Cortex-M7 Software Development

Summary:

This course is designed for engineers developing software for platforms based around the ARM Cortex-M7 processor. The course includes an introduction to the ARM product range and supporting IP, the processor core, programmers' model, instruction set and debug architecture. The course includes a number of hands-on practical exercises to reinforce the lecture material.

Prerequisites:

- Some knowledge of embedded systems
- A basic awareness of ARM is useful but not essential
- Knowledge of programming in C
- Experience of assembler programming is not required but would be beneficial

Audience:

Software engineers writing application and system software for platforms using the ARM Cortex-M7 processor core.

Length:

3 days

Modules:

- Introduction to the ARM Cortex-M7 Overview
- Cortex-M7 Overview
- ARMv7-M Programmers' Model
- Tools Overview for ARM Microcontrollers
- Keil MDK ARM Introductory Workbook
- CMSIS Overview
- Cortex-M7 Processor Core
- ARMv7-M Assembly Programming
- ARMv6-M and ARMv7-M Assembly Language Workbook
- ARMv7-M Memory Model
- Cortex-M7 Level 1 Sub-Systems
- ARMv7-M Exception Handling
- Exception Handling Workbook
- ARMv7-M Compiler Hints & Tips
- ARM Compiler Workbook
- ARMv7-M Linker and Libraries Hints & Tips
- ARMv7-M Synchronization
- Embedded Software Development
- Embedded Software Development Workbook
- ARMv7-M Debug
- ARMv7-M Memory Protection
- ARMv7-M Extensions (Optional)