



## ARM Cortex-A8 Software Development

### Summary:

This training course covers the issues involved in developing software for platforms powered by the ARM Cortex-A8 application processors.

### Prerequisites:

- Some knowledge of embedded systems
- Familiarity with embedded programming in C and assembler
- A basic awareness of ARM is useful but not essential

### Audience:

This course is aimed at software developers writing low level and bare-metal code for ARMv7-A processors, concentrating on the Cortex-A8 processor.

### Length:

3+ days

### Modules:

Optional Day 0:

ARM Architecture Fundamentals.

Recommended for audiences developing low level code on ARM for the first time. This optional day introduces the ARMv7-A ISA, exception model and memory model.

### Day 1-3

- Introduction to the ARM Architecture
- Software Engineers' Guide to the Cortex-A8
- Caches and Branch Prediction
- Using the MMU
- TrustZone
- Synchronization
- Programming the GIC
- Cortex-A Power Management
- Cache Coherency
- OS Support
- Barriers
- Multi-Cluster
- Booting a Cortex-A15 MPCore
- Debug
- Writing C for ARM
- NEON Overview
- Virtualization

Optional Day 4:

Exploring one subject in more detail. Available topics are:

- TrustZone
- NEON
- Fast Models