



# ARM Cortex-A17 MPCore Software Development

## **Summary:**

This training course covers the issues involved in developing software for platforms powered by the ARM Cortex-A17 application processors.

## **Prerequisites:**

- Basic understanding of ARMv7-A exception model
- Familiarity with ARM assembler and C programming
- Experience of embedded system development is helpful 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-A17 processor.

## **Length:**

3+ days

## **Modules:**

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
- Cortex\_A17/A15/A7 MPCore Overview
- Caches and Branch Prediction
- Using the MMU
- TrustZone
- Synchronization
- Programming the GIC
- GIC Workbook
- Cortex-A Power Management



- Cache Coherency
- OS Support
- Barriers
- Multi-Cluster
- Booting an MPCore
- Booting Workbook
- Debug
- PMU Workbook
- Writing C for ARM
- NEON Overview
- Virtualization

#### **Optional Day 4:**

Exploring one subject in more detail. Available topics are:

- TrustZone
- NEON
- Fast Models