



# ARM Cortex-A72 MPCore Software Development

## **Summary:**

This training course covers the issues involved in developing software for platforms powered by ARMv8-A processors.

## **Prerequisites:**

- Knowledge of the ARMv7-A Architecture
- Familiarity embedded programming in C and assembler
- Experience of embedded system development is an advantage

## **Audience:**

This course is aimed at software developers and system architects developing for systems powered by ARMv8-A processors. It is relevant for operating system development, device drivers, low-level coding and for application software. The course assumes prior knowledge of the ARMv7-A architecture.

## **Length:**

3+ days

## **Modules:**

### **Optional AArch32 Fundamentals:**

For customers who require it, we are able to provide an overview of the ARMv7-A Architecture (AArch32) as part of the course. This can be substituted for other modules in the course agenda.

### **Day 1-3**

- Cortex-A72 Processor Overview
- Introduction to ARMv8-A
- AArch64 A64 ISA Overview
- A64 ISA Workbook
- AArch64 Exception Model
- ARMv8-A Exception Model Workbook
- ARMv8-A Memory Management



- ARMv8-A Memory Model
- Caches and Branch Prediction
- MMU and Cache Initialization Workbook
- Barriers
- Synchronization
- Cache Coherency
- OS Support
- Software Engineer Guide to the Cortex-A72
- Booting
- Power management for Cortex-A
- Virtualization
- Security
- GIC Programming
- Debug (Optional)