



ARM Cortex-A12 MPCore Hardware Design

Summary:

This course is designed for those who are designing hardware based around the Cortex-A12 MPCore multiprocessor.

Prerequisites:

- Some knowledge of embedded systems
- Familiarity with digital logic and hardware/ASIC design issues
- A basic awareness of ARM is useful but not essential

Audience:

Hardware design engineers who need to understand the issues involved when designing SoC's around the ARM Cortex-A12 MPCore multiprocessor.

Length:

3 days

Modules:

- Cortex-A15/A12/A7 Processor Overview
- Cortex-A12 Processor Core
- TrustZone Overview
- Cortex-A15/A12/A7 Memory Management Unit
- Cortex-A12 Clocks and Resets
- Cortex-A15/A12/A7 Power Management
- Introduction to AMBA 3
- Cortex-A15/A12/A7 AMBA 4 Overview
- CCI-400 Cache Coherent Interconnect
- Cortex-A12 Memory Sub-Systems
- Interrupt Controller
- Cortex-A15/A12/A7 System Design Considerations
- Cortex-A15/A12/A7 Debug
- Cortex-A12 Configuration
- Cortex-A15/A12/A7 Implementation Overview
- Cortex-A15/A12/A7 Booting
- Cortex-A15/A12/A7 DFT & MBIST
- Cortex-A12 Integration Summary

Notes:

For students who do not have the pre-requisite knowledge of the ARMv7-A architecture and AMBA, we provide an optional one-day introductory course on these subjects.