



ARM Cortex-A15 Hardware Design

Summary:

This course is designed for those who are designing hardware based around the Cortex-A15 processor.

Prerequisites:

- Comprehensive knowledge of the ARMv7-A architecture (see notes below)
- Familiarity with the AMBA on-chip bus architecture
- Knowledge of embedded systems
- Experience with digital logic and hardware/ASIC design issues

Audience:

Hardware design engineers who need to understand the issues involved when designing SoCs around the ARM Cortex-A15 processor.

Length:

3 days

Modules:

- Cortex-A15/A7 Processor Overview
- Cortex-A15 Processor Core
- TrustZone Overview
- Cortex-A15/A7 Memory Management Unit
- Cortex-A15 Clocks and Resets
- Cortex-A15/A7 Power Management
- Introduction to AMBA 3
- Cortex-A15/A7 AMBA 4 Overview
- CCI-400 Cache Coherent Interconnect
- Cortex-A15 Memory Subsystems
- Interrupt Controller
- Cortex-A15/Cortex-A7 System Design Considerations
- Cortex-A15/A7 Debug
- Cortex-A15 Configuration
- Cortex-A15/A7 Booting
- Cortex-A15 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.