



## **ARM Cortex-A9 Hardware Design**

### **Summary:**

This course is designed for those who are designing hardware based around the Cortex-A9 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-A9 multiprocessor.

### **Length:**

4 days

### **Modules:**

- The ARM Architecture
- Cortex-A9 Instruction Sets
- ARM v6 Memory Types
- Memory Management
- ARMv6 VMSA
- Exception Handling
- Introduction to TrustZone
- CPU Architectures
- Memory Sub-systems
- AXI Protocol
- AXI Interconnection Architectures
- NIC301
- AMBA Designer
- APB
- Cortex-A9 Overview
- Cortex-A9 Processor Core
- Cortex-A9 L1 Sub-Systems
- Cortex-A9 Sub-systems
- Cortex-A9 L2 Interfaces
- Cortex-A9 Configuration & Deployment
- Cortex-A9 MPCore Implementation Overview
- Cortex-A9 Clocks, Resets & Power Management
- Cortex-A9 Memory Management
- Cortex-A9 Interrupt Controller
- Initializing Cortex-A9 based Systems
- L2CC – PL310
- Introduction to CoreSight
- Cortex-A9 Invasive Debug
- Cortex-A9 Non-Invasive Debug
- Cortex-A9 Integration