

Arm Ethos-N57 N37 NPU Hardware Design

Summary

The Arm Ethos-N processor series delivers the highest throughput and efficiency in the lowest area for Machine Learning inference from cloud to edge to endpoint. This training course covers the steps involved in designing hardware systems using Arms Ethos N57 or N37 Neural Processor Units

At the end of this course, delegates will be able to

- Describe the Ethos Neural Processor Unit (NPU) main functions and supported API
- Explain the Ethos NPU data flow and block architecture
- Describe the physical model integration and the NPU interface signals
- Configure and integrate the Ethos NPU into their SoC
- Run the supplied test cases

Prerequisites:

- A working knowledge of RTL design
- Experience of IC verification flow
- Machine Learning using Arm Online Training Module

Audience:

Engineers working on a SoC project using Ethos NPU and carrying out System Design or verification.

Length:

1 day or 2 x 1/2 days

Modules:

- Machine Learning using Arm Online Training Module
- Ethos NPU Overview
 - Machine Learning overview
 - Arm's heterogeneous ML platform
 - Supported APIs
 - Deliverables
 - Performance scenarios and summary
- Ethos NPU Architecture
 - Definitions
 - Data flow
 - Block architecture
 - Programmers model
 - Boot flow
- Ethos NPU HW Integration
 - Getting Started
 - Implementation process flow
 - Configuration
 - Physical Model integration
 - Clock and resets
 - Interface signals
 - Memory system considerations
 - Testbenches and Integration Kit