Nexperia pnx1500 peripherals: a 1-day class

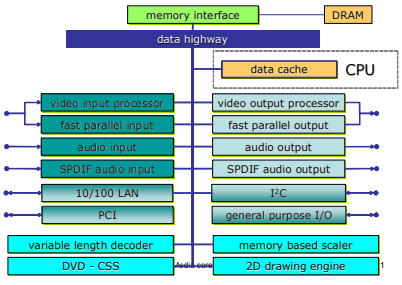
TriMedia Extension

Benefits

- Know the pnx1500 peripherals
- Program pnx1500 I/O
- Program pnx1500 co-processors

Know the pnx1500 peripherals and co-processors, and be able to program them using device libraries and interrupt service routines.

System on Chip?



Know the system.

Contents

This seminar describes the Nexperia pnx1500 peripheral architecture and explains how peripherals are configured and programmed. It also includes explanation of basic digital video and sampling schemes, as used in the video peripherals.

pnx1500 peripherals

Overview of the pnx1500 peripheral architecture and available peripherals.

- Pnx1500 peripheral architecture
- Pnx1500 MMIO registers

Software architecture

Describes the organization of peripheral software support, including the relationship to the TriMedia Software Architecture (TSA) and software layers.

- Peripherals and TSA
- Device Layer
- Board Support Library
- Configuration structures
- Configuration functions
- Interrupt handling
- Interrupt programming

Cache coherency

Explains the important question of synchronizing the cache with data entered directly to memory by peripherals (which bypass the cache).

- Data cache coherency and MMIO
- Data cache copyback simulation

pnx1500 peripherals

In-depth look at pnx1500 peripherals

Video input

- Video Input Processor
- Video scaling module
- Auxiliary video data extraction
- Test pattern generator module
- Fast generic Parallel input
- Video Input Router

Video output

- Video Composition Processor
- Layers and composition
- Video enhancement features
- Fast generic Parallel output
- Video Output Router
- LCD output

Memory based scaler

- Memory Based Scaler
- Scaling and conversion
- Video enhancement features

Other co-processors

- 2D Drawing Engine
- VLD

Audio I/O

- Audio input and output
- SPDIF input and output

General purpose I/O

- General Purpose I/O
- Time stamp units
- Signal generation
- Signal capture

PCI and XIO

- PCI and XIO

Time and arrangements

This session takes 1 day.

It is presented ‘on-site’ by arrangement - the material can be adapted if you have specific needs (at extra cost).

Sometimes we arrange ‘public’ classes: schedules are posted on the Internet:

http://www.bores.com/schedule.htm

Pic’N’Mix

You can design a class to suit your own specific needs. Each of the topics in the TriMedia Foundation class can be a self-contained session, from which you can “pic’n’mix” to make your own class.

Contact us:

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Booking and questions

Call us by ‘phone or send email to book or to ask questions.

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Foundation class

The ‘TriMedia Foundation’ is a 4-day class on all aspects of the TriMedia. It includes this class.

The pnx1500 class is optional. We recommend this be part of the 4-day TriMedia Foundation class but it can stand on its own or be part of a custom class.

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