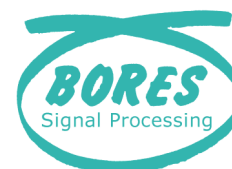# pnx1300 video programming: a 2-day class

TriMedia Specialist

Benefits

- Program the pnx1300 for video
- Work directly at the Device Layer
- Optimize programs

Know how to program the pnx1300 and to use video I/O, working directly at the Device Layer without the streaming software architecture.

A C language engine for video processing

Contents

In this class we explain how to program the pnx1300 Media Processor and to use its video I/O peripherals. We focus on direct C programming at the Device Layer, without using the higher-layer Streaming Software Architecture or the TriMedia Operating System. We also outline basic digital video and sampling schemes, as used in the video peripherals.

pnx1300 TriMedia core

Learn to understand and program the TriMedia core.

- CPU core architecture
- Cache architecture
- VLIW scheduling
- Schedule reports and profiling
- Custom operations

Digital video data

Learn how video data is stored by and for the pnx1300 video peripherals and co-processors.

- RGB and YUV color spaces
- Video fields and frames
- Video sampling schemes
- YUV 420 and 422
- Planar and semi-planar storage

Peripheral architecture

- Device Layer conventions
- Configuring peripherals
- Configuring interrupts
- Handling interrupts

Video input

- Pnx1300 video input
- Video input configuration
- Sampling schemes and storage
- Horizontal video scaling
- Worked example

Video output

- Pnx1300 video output
- Video output configuration
- Sampling schemes and storage
- Horizontal scaling
- Video overlay
- In-depth worked example

Image Co-Processor

- Pnx1300 ICP
- ICP configuration
- Vertical and horizontal scaling
- Color space conversion
- Overlay conversion

Optimization

- Compiler optimizations
- Schedule reports
- Scheduling optimizations
- Profile reports
- Cache optimizations
- Register optimizations
- Custom operations

Time and arrangements

This class takes 2 days.

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

A specialist class

The pnx1300 video programming class is self-contained and specific to people who want to use this device but do not wish to use the streaming software architecture.

Contact us:

chris@bores.com

Booking and questions

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

- contact: Dr Chris Bore
- 'phone: +44 (0)1483 740138
- mobile: +44 (0)7921 153219
- email: chris@bores.com

Foundation class

The 'TriMedia Foundation' is a 4-day class on all aspects of the TriMedia. It includes treatment of the Streaming Software Architecture, or all peripherals, and of the TriMedia Operating System. It is a more general class than this one.