nREF 1500 Development KIT

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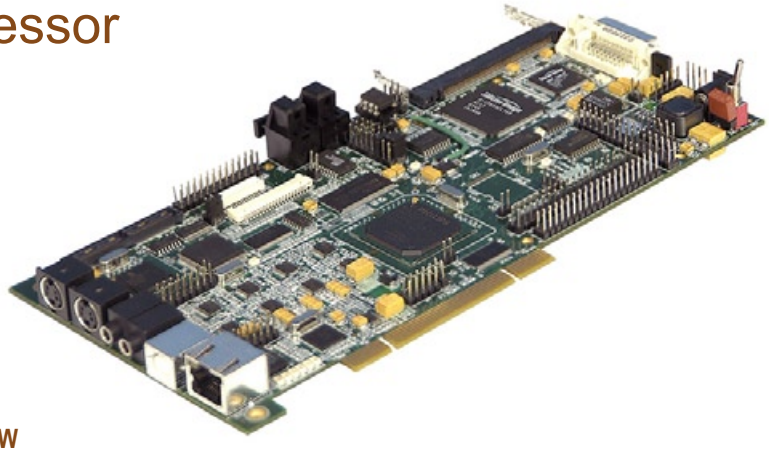
Complete hardware design and software tools for Philips PNX1500 media processor



Compact Design
Extremely compact design allows it to fit into a standard PC conveniently

Design / Develop / Debug through USB
Eliminating the need of expensive JTAG card

Comprehensive interfaces
Supports a large array of interfaces such as mini-PCI, USB, CCIR 656, DVI, LAN etc.

OVERVIEW
The Streaming Networks nREF-1500 developer kit for the Philips PNX1500 Nexperia media processor (with TriMedia VLIW processor core) provides everything necessary to build a cutting-edge multimedia software product in the shortest possible time. Due to its extremely compact design, it conveniently fits into a PCI slot within a standard PC.

HARDWARE COMPONENTS
The hardware portion of the development kit includes a comprehensive reference design optimized for high performance. There is a 300-MHz PNX1500 media processor for complete audio, video, and graphics functionality. The media processor is connected to 64 Mbytes of high-bandwidth DDR SDRAM (capable of operating at 200 MHz), and a series of programmable, state-of-the-art audio and video peripherals.

STANDALONE & HOSTED CAPABILITY
The board is available in either standalone or hosted mode. For hosted applications, there is a PCI standard 2.2 host interface. For standalone applications, the board has a 128-Mbit NOR Flash organized as a 8/16-bit data bus. The NOR can be used to store the application, creating a Flash-bootable design.

VIDEO/DATA PERIPHERALS
The Video/data In function supports S-Video, CVBS, CCIR 656 and Component operation. The Video/data Out function supports S-Video, Component, DVI, CVBS, CCIR 656, LVDS and LCD operation. CVBS and RGB IN / OUT are also provided on a connector plate provided with the board.

SUPPORTED INTERFACES
The mini PCI interface allows the addition of a whole new set of development options, e.g. Wireless LAN and Firewire can be added through the mini PCI interface. The two IDE 40 pin headers support connection of up to four ATA drives. The 10/100 Ethernet interface supports LAN operation and audio/video streams. A standard I^2C link makes it easy to program the peripherals, while built-in IR receiver capability makes applications more user-friendly. Two integrated optical modules support SPDIF I/O.

DESIGN / DEVELOP / DEBUG THROUGH USB
For easy, seamless development and debug, there is a USB interface to support legacy designs like JTAG. The USB mode eliminates the need for a JTAG card in standalone configurations.

PRODUCT SUPPORT PACKAGE
For the fastest possible time-to-market, the nREF-1500 development kit comes with a complete set of device drivers, test algorithms, and software examples. The kit also includes a complete, easy-to-use software design environment for the PNX1500. Supplied by Philips, the PNX1500 design environment provides all the building blocks for advanced applications.

KEY FEATURES
- Complete hardware reference design optimized for high performance
  - 300 MHz Philips PNX1500 Nexperia media processor (with TriMedia VLIW processor core)
  - 64 Mbytes of DDR SDRAM main memory (two chips of x32)
  - 128-Mbit NOR Flash organized as 8/16-bit data bus (supports NAND Flash if added)
- Select hosted or standalone board
  - Host interface: PCI standard 2.2
  - Supports Flash-bootable configurations
- Flexible video options
  - Video/data In: S-Video, CVBS, CCIR 656 and Component, RGB
  - Video/data Out: S-Video, Component, DVI, CVBS, RGB, CCIR 656, LVDS and LCD
- Comprehensive I/O options
  - Mini PCi interface
  - Debug: USB, JTAG
  - LAN: 10/100 Ethernet
  - IDE, I^2C, IR (interface and receiver), SPDIF I/O
- Complete set of software tools
  - Device drivers, test algorithms, software examples
  - PNX1500 software design environment

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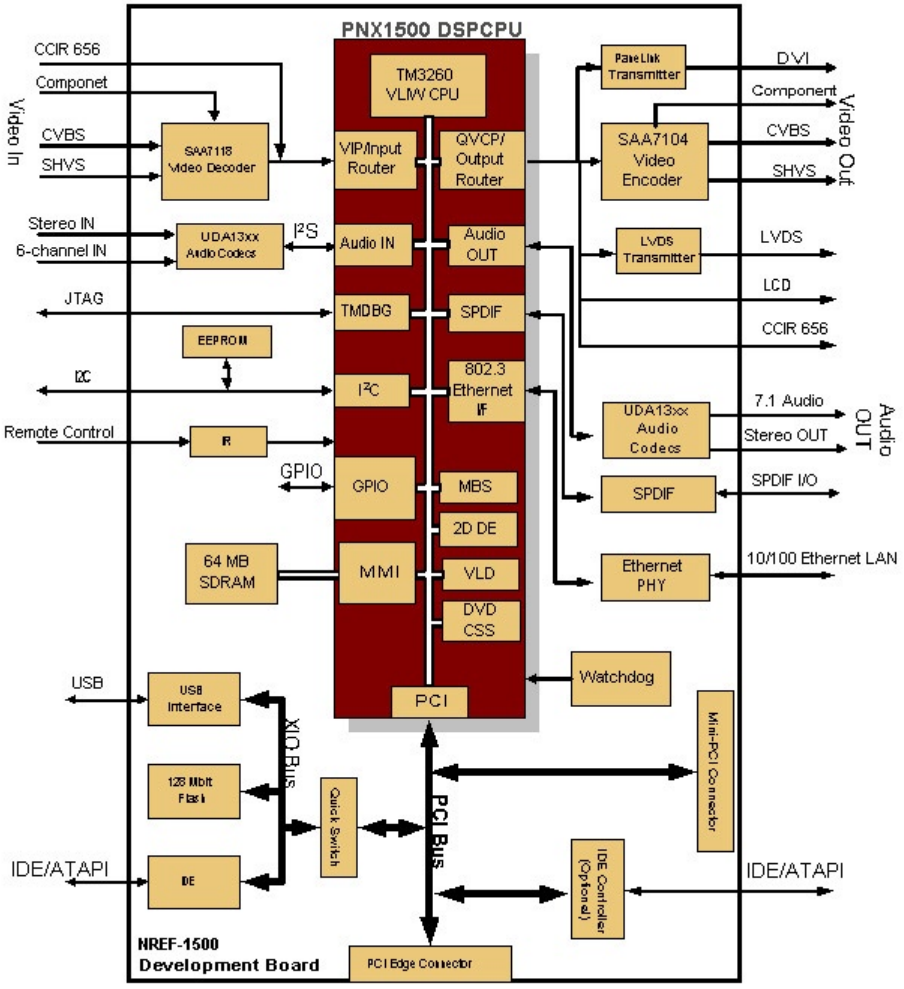
BLOCK DIAGRAM



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Enabling the Digital Media Revolution