Xyron Semiconductor Corporation

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USA
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URL: http://www.xyronsemi.com

Applications

- Video manipulation and storage
- Real-time industrial control
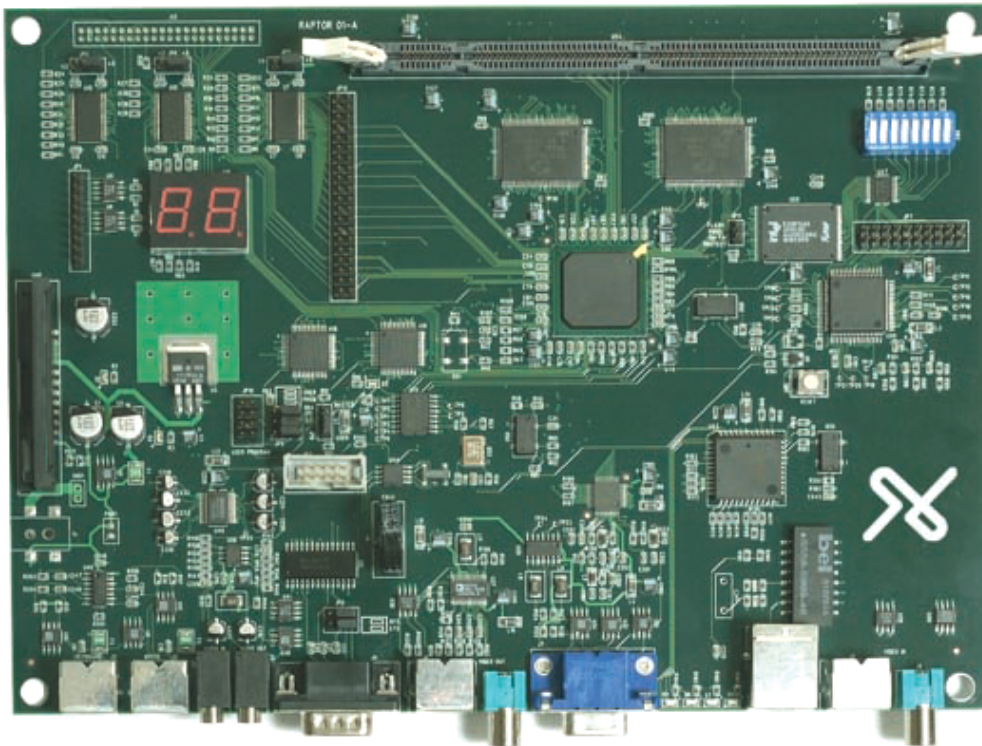- Networking systems - home,office

Figure 1:   Edison (XyBE) Multipurpose Board Picture

Features

Core CPU: 32-bit RISC Processor

- Zero Overhead Task Switch (ZOTS) architecture
  - 8 simultaneous tasks
  - 5 cycle latency from interrupt to execution
- 32-bit proprietary architecture optimized for multi-tasking environments
  - Enhanced DLX compatible instruction set (supports MIPS™ applications)
  - Short data feedback paths for increased pipeline efficiency
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- Virtex™-II Implementation
  - Two density options, V1000 and V3000

50MHz clock frequency enables real-time video processing

GNU C, C++ Development Platform

- Debug and evaluation code
- Component drivers and documentation

Video In and Out

- Video storage and manipulation
- SVGA and Component Video Interface

Stereo Audio In and Out

Enhanced Memory Interface

- Upgradeable to 512MB DIMM
- On-board 1MB High Speed SRAM

I/O Ports

- 10/100 Ethernet Interface
- IDE/ATA and RS232
- Two PS/2 ports for mouse and keyboard

Power

- External 5V DC supply required (supplied with board)

Ordering Options

- '-V1000' for Virtex II-1000 based
- '-V3000' for Virtex II-3000 based

Product Description

The Edison XyBE is a general-purpose Development Board built around a high-performance Xyron-enabled 32-bit RISC microprocessor optimized to meet real-time requirements. The Xilinx Virtex-II FPGA is used as the carrier for the Xyron 32-bit MPU Intellectual Property, known as Xyronium™. Designed around a MIPS-like instruction set, the processor achieves its high performance through the use of the Zero Overhead Task Switch (ZOTS). Essentially, the ZOTS technology puts the task-management portion of an RTOS into hardware, a process that historically is implemented in software. Designers can realize increased operation efficiency with lower power consumption and reduced systems costs while still using familiar MIPS-based applications. Software development can be realized using C++. Combining video, audio, and networking interface, the Edison Board will work in a wide variety of applications and is perfect for small to mid volume video or industrial applications where time-to-market is critical.
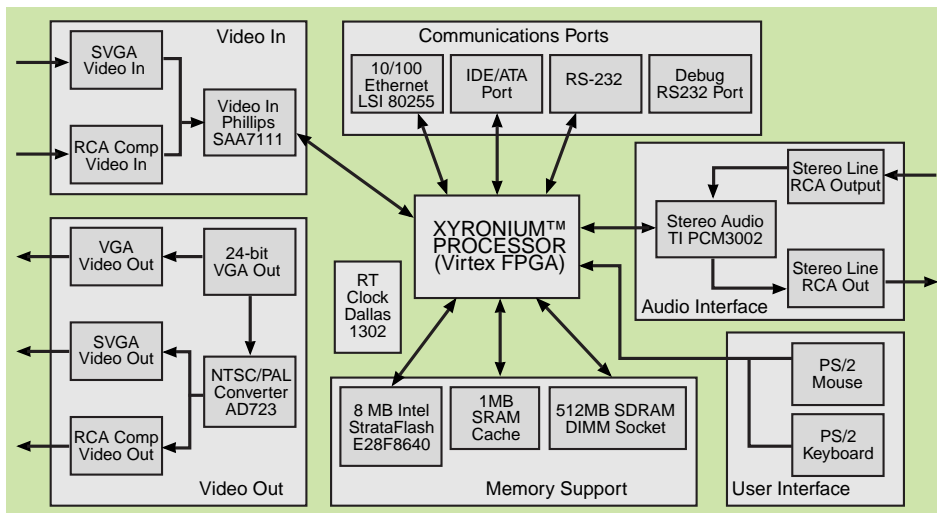
xip2068

Figure 2:   Edison (XyBE) Multipurpose Development Board Block Diagram

Edison Board Box Packing List

1. Development board
   a. Xyron label with "Xyronium V1.0" on Xilinx FPGA (V1.0 is version of code in Xilinx FPGA EPROM)
   b. Label on program Flash "V1.0
   c. Serial number label on board
   d. EPROM and Flash programmed for shipment
   e. Board tested to Xyron specifications
   f. Seal on bag

2. Mounting feet

3. Anti-static bag

4. Moisture containment

5. 5V DC power supply

6. Packing material
   a. Isolate board, power supply & other material
   b. Antistatic material
   c. Environmentally friendly

7. CD – (Silkscreen "Edison Installation CD", Xyron Logo and website)
   a. Contents – HTML based auto start "Xyron Style" home page
      - **Read me** – Info, quick start, links to errata, registration
      - **Install** – Compiler, utility to communicate to board, example code
      - **Register** – registration info, link to latest errata, etc
      - **Browse** - CD
   b. Clear case (Vinyl?)

8. Paper documents – included inside box
   a. Thank you note on Xyron letterhead – 1 page
   b. "Quick Start" instructions including jumper locations/settings, mounting feet instructions – two pages
   c. FAQ's for problem solving – Front/Back – 1 page
   d. Release notes and errata – 1 page with web site URL
   e. Warranty information and notice with web URL – 1 page

9. Box for shipment
   a. Label on box with Xyron letterhead/logo – for shipment
   b. Seal on outside of box – with Xyron logo

Related Information

Xilinx Programmable Logic

For information on Xilinx programmable logic or development system software, contact your local Xilinx sales office, or:

Xilinx, Inc.
2100 Logic Drive
San Jose, CA 95124
Phone: +1 408-559-7778
Fax: +1 408-559-7114
URL: www.xilinx.com

For general Xilinx literature, contact:

Phone: +1 800-231-3386 (inside the US)
        +1 408-879-5017 (outside the US)
E-mail: literature@xilinx.com