

The LuxSonor LS800

High Integration Allows for Cost Effective Internet Set Top Box Solutions!

The LS800 Internet chip is a highly integrated solution for the Internet television set top market. It is designed to maximize performance and minimize system complexity and cost. The LS800 ASIC contains everything you need to build a basic Internet Set Top Box. Just add memory and a few mixed signal components to create a powerful low- to mid-end solution.

High-end solutions can capitalize on the LS800 by taking advantage of powerful features such as a flexible system interface capable of supporting up to four external devices.





Start With the *8Ball!*

The *LuxSonor 8Ball!* Reference Design is a great place to start for building a low cost Internet appliance. The *8Ball!* packs a lot of features into a compact, inexpensive design. The *8Ball!* Software Development Kit provides all the tools and low level drivers you need to build your own software!

Our software partners have developed powerful browsers that allow *8Ball!* users to browse the internet with a high level of functionality. Browsers are equipped to handle Javascript and also include an email application complete with POP3/SMTP support.

Key Features

8Ball! Reference Design:

-  **Powerful Internet browser with a built-in email application**
-  **Software tools include an RTOS, compilers, and source level debuggers**
-  **Built-In V.90 56K Softmodem**
-  **Printer and wireless keyboard support**

LS800 ASIC:

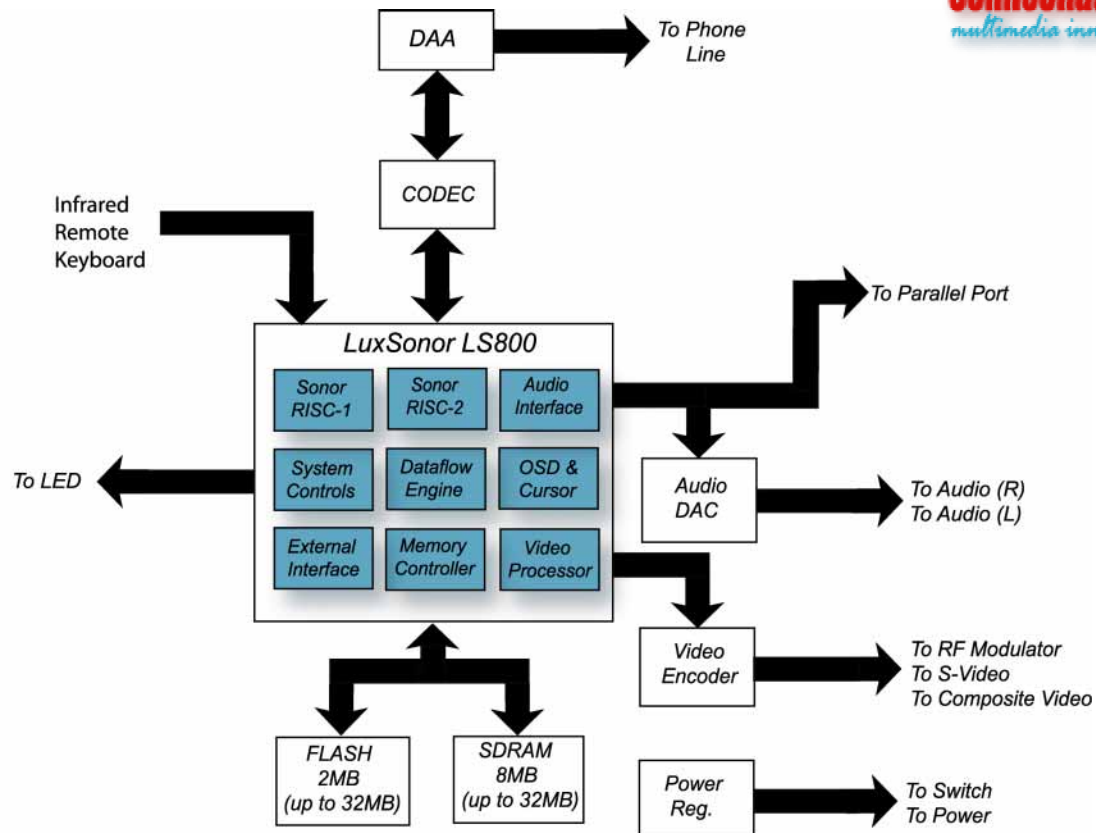
-  **Dual 81 MHz 32-Bit RISC Processor Design for Extra Performance**
-  **Super On-Chip Integration for low cost and low count bill of materials**
-  **System interface that supports up to four external devices**
-  **Powerful Graphic Engine with Advanced Vertical Flicker Filter**



The LS800 Internet TV System-on-Chip has advanced features such as Picture-In-Picture, external device support and a softmodem.



The *LuxSonor 8Ball!* supports several different kinds of devices including printers, I/O controllers, SmartCards, direct infrared support and ethernet support.



LS800 Device Details:

Graphics and Video Abilities

- Supports 24 bit 4:2:0 and 4:2:2 YUV video modes, and 16 bit RGB true color graphics modes.
- Supports 16 bit high color mode which is commonly used in graphics industry.
- DMA engine supports block transfers
- Built-in RGB to YUV conversion
- Includes a separate OSD graphics overlay.
- Includes a hardware cursor
- Anti-flicker feature for high-quality interlaced TV outputs.

System Functions

- Advanced 0.25 micron CMOS technology
- 160-pin PQFP package.
- Chip runs at 81 MHz
- Powerful 32 bit RISC processor

Memory Controller

- Supports SDRAM/SGRAM, from 2MB to 32MB.
- Supports multiple banks of FLASH and ROM up to 32MB.
- 32-bit data bus for DRAM, 8/16 bit data bus for ROM.

Audio Interface

- 4 output channels, 2 input channels.
- Up to 96 KHz input/output rate.

External Interface

- Serial I²C master and slave port
- Hardware assisted support for infrared remote devices, such as remote control, infrared keyboard, mouse, and more.
- Supports printer parallel port
- Programmable parallel host master and slave interface supports many formats including ATAPI, ISA, and more.

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