

The LuxSonor LS808

A Feature Packed Solution for the Broadband Set Top Box Market!

The LS808 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 system cost.







The LS808 ASIC contains everything you need to build a basic Internet Set Top Box. Use the LuxSonor LS808 reference design to create seamless integration between the LS808 and the board components. Our software partners provide a full-featured browser with Javascript and SSL support as well as an email application.

The LS808 Achieves High Levels of Performance at a Low Cost!








With the LS808, flash, DRAM, and a few mixed signal components, you have created a powerful yet inexpensive engine for broadband web surfing, email, streaming media and printing. High-end solutions can capitalize on the LS808 by taking advantage of powerful features such as Picture-In-Picture and a flexible system interface capable of supporting up to four external devices. It also provides for a small, compact design yielding a product with a small footprint that is easy to manufacture.

Key Features

LS808 Reference Design:

-  **Powerful Internet Browser with a built-in email application**
-  **System interface that supports up to four external devices**
-  **Supports 10Mbps LAN Controller for broadband applications**
-  **Video Input for Picture-in-Picture—Interactive TV!**
-  **Built-in V.90 56K Soft-modem**
-  **Super On-Chip Integration for Low Cost and Low Count Bill of Materi-**

LS808 ASIC:

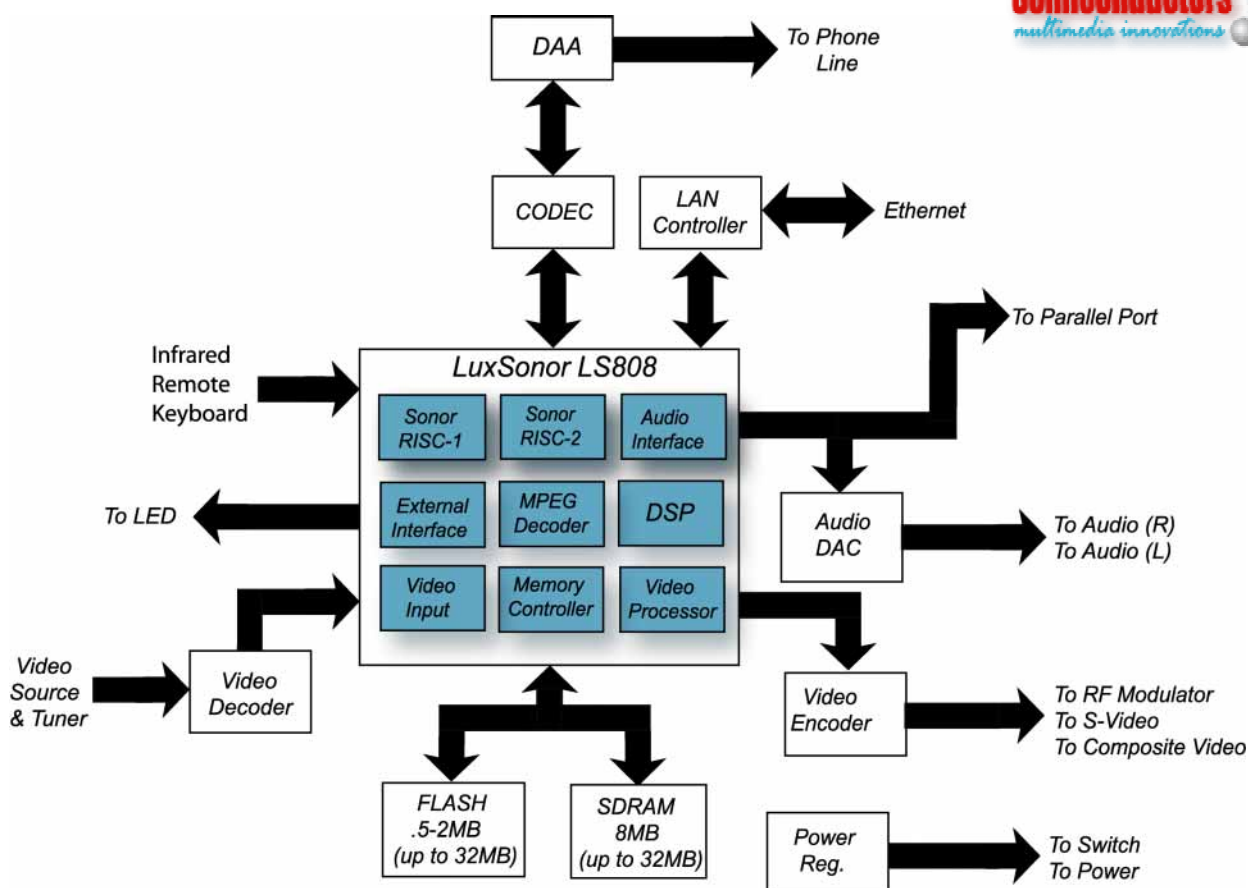
-  **Dual 120 MHz 32-Bit RISC Processor Design**
-  **Internal 120 MHz 24-bit DSP supports AC-3, MPEG, and MP3 audio standards**
-  **Includes 360 MIPS of general purpose processing power**
-  **Powerful Graphic Engine with Advanced Vertical Flicker Filter**
-  **MPEG Video Decoder supports streaming video**
-  **Flexible interface connects disk drive, or other peripherals**
-  **Low cost, low power, 208 pin package**



The LS808 is a powerful, low cost solution for the Internet set top box market. In addition to superior on-chip integration, the LS808 features a built-in soft modem, a powerful internet browser, and Picture-in-Picture.

Typical Applications

Internet Access Device
Streaming Audio and Video Player
Video-on-Demand Set Top Box
Voice-over-IP Device



LS808 Device Details:

Graphics and Video Abilities

- MPEG Video Decoder supports MPEG-1 and MPEG-2
- 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 the graphics industry.
- Includes a separate 8-bit multi-region graphics overlay.
- Includes a Picture-in-Picture video overlay.
- Anti-flicker feature for high-quality interlaced TV outputs.

System Functions

- 208-pin PQFP package.
- Advanced 0.25 micron CMOS technology.
- Chip runs at 81/120 MHz
- Powerful 32-bit RISC processor
- 24-bit Digital Signal 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.

Video Input

- NTSC/PAL video decoder input interface for Picture-in-Picture.
- Built-in video down scaling.

External Interface

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

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