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SupraTV® 260

INTERACTIVE CABLE SET-TOP BOX PROCESSOR

Product Brief

Overview

The SupraTV® 260 processor, which is designed for cable Set-Top Boxes, combines a high performance processor, advanced security, QAM demodulator and 10/100 ethernet MAC. The SupraTV® 260 processor also supports single or dual tuner Digital Video Recording (DVR) through a USB 2.0 high speed interface.

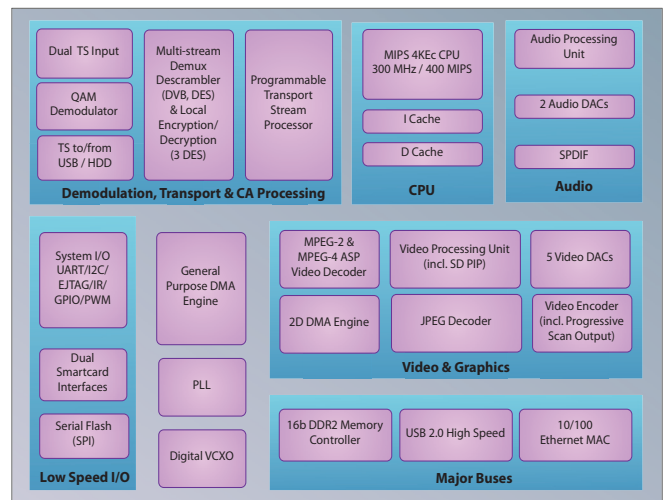
Combining the key functions required to support digital cable Set-Top Boxes, the SupraTV® processor enables products with enhanced flexibility and performance to be developed at the lowest possible system cost.

A high performance MIPS® processor provides access to Zoran and industry standard middleware and leverages previous SupraTV® software. With a comprehensive set of software drivers, proven tool kit and reference platforms, the SupraTV® 260 processor keeps product development times to a minimum.

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SupraTV® 260 IC Block Diagram



SupraTV® 260 Processor Features Summary

CPU

- MIPS® 4KEc CPU with MMU
- 300 MHz / 400 Dhrystone MIPS®

Memory

- 16 bit DDR2 DRAM controller
- Serial interface to flash memory

Demodulator

- QAM Annex A/B
- ADCs plus IF and IQ tuner interfaces

Transport stream demultiplexer

- Programmable multi-stream transport demultiplexer
- Two transport stream interfaces
- Support for single and dual tuner Digital Video Recording (DVR)
- DVB/DES/3DES descrambling
- Local triple DES encrypt/decrypt engine
- 1KB OTP memory and secure boot
- Dual Smart Card interfaces with integrated protection & control

Video and imaging decoder

- MPEG-2, ISO/IEC13818-2 (MP@ML) at up to 15Mbits/sec
- MPEG-4 Advanced Simple Profile (ASP)
- Standard definition Picture-In-Picture (PIP)
- JPEG hardware decoding

Graphics and video processing

- Advanced DMA engine to support 2D graphics
- 4, 8 bit CLUT, 16bit RGB with OSD, anti-flicker filtering
- Flexible down/up-scaling of video
- 5 graphic planes

Video Output

- Integrated PAL/NTSC/SECAM Video Encoder
- VBI (Teletext, WSS, CC, TVGI, Nielsen) and VPS reinsertion
- Simultaneous Component, S-Video and RGB output
- Progressive Scan Output (PSO)
- 5 video DACs

Audio support

- Audio processor unit for standard audio formats
- Stereo audio DACs integrated
- Two-channel audio output using I2S or analog
- SPDIF output

Interfaces

- USB 2.0 high speed controller and PHY
- 10/100 ethernet MAC with RMII interface to external PHY
- UARTs, I2C, IR, GPIOs
- Integrated digital timing oscillator replacing VCXO

Package

- 208-pin PQFP

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SupraTV® 260 Development Platform

A comprehensive development platform is available for the SupraTV® 260 processor, including tuner boards for digital cable Set-Top Boxes. An Integrated Development Environment includes a proven windows based GNU tool kit, Zoran's SiliconSoftware® registration drivers, and applications that add functions such as flash memory burning, high performance code download, software protection, a sophisticated GUI development tool, (Embedded Wizard), and an automatic code generator.

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The SupraTV® 260 platform significantly reduces the time taken to develop high performance, cost optimized cable Set-Top Box products. The SupraTV® 260 processor based evaluation board supports all needed peripherals including ethernet and USB. The platform is available with a cable tuner. Single and dual tuner Digital Video Recording capabilities can be achieved by adding a USB based hard drive, Zoran's DVR software, additional memory, and a second front end (for dual tuner DVR).

SupraTV® 260 Processor Set Top Box Block Diagram



Zoran SiliconSoftware® API Package

Zoran provides software support for the SupraTV® 260 family of processors and a documented Application Programming Interface. Based on the company's extensive Set-Top Box, DVD and Digital TV experience, the API provides a stable base on which users can build their own applications.

The software stack, including the operating system (Nucleus+), is available on a royalty-free basis. Zoran's SiliconSoftware API is supported from previous SupraTV® ICs.

Software portability from one generation to the next minimizes project design time and effort while enabling the software to be reused.

Other components of the standard software package include a sample Electronic Programming Guide (EPG), close captioning, DVB and US subtitle and OSD Teletext decoding.

For more information, contact Zoran's Sunnyvale office or the office nearest you:

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