

Product Brief

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Description

Zoran's SupraHD-660 ATSC/NTSC reference design is a complete hardware and software solution for building an integrated Digital Television (DTV) targeted at the United States market. The reference hardware module can either be used in LCD-based or CRT-based DTVs. The reference TV application software complies with the ATSC broadcast standards.

The reference design is a full-featured system that allows tuning, decoding, and display of analog (NTSC) and digital (ATSC) terrestrial broadcast. The SupraHD-660 DTV System IC decodes standard-definition and high-definition content. This IC is highly integrated, consisting of a MPEG-2 HD decoder, NTSC video decoder, HDMI interface, IEEE-1394 interface, high-performance CPU, powerful graphics engine, video scalar, video enhancement, LVDS driver and other peripherals necessary for building an integrated DTV. The reference hardware module accepts composite (CVBS), S-video

(Y/C), and component (YPbPr) inputs, and more advanced interfaces, such as HDMI from newer DVD players and IEEE-1394 from digital video recorders. It also accepts VGA input from a personal computer. The reference hardware module output interfaces can directly drive an LCD panel or a CRT TV. Other outputs include L/R audio for its internal speakers and SPDIF for multi-channel output to an external audio receiver.

The reference TV application supports the basic functionalities required for a DTV, such as an ATSC/NTSC software stack, Electronic Program Guide (EPG), closed-caption decoding, parental control, basic audio control (i.e. bass, treble, balance), and basic video control (i.e. contrast, brightness, color). For ease of connectivity to external devices, such as digital video recorders, the IEEE-1394 software stack is also bundled with the software package.

Key Hardware Features

- SupraHD-660 DTV System IC
- Boot ROM: 32KByte on SPI bus
- NOR Flash Memory: 16MByte
- DDR SDRAM: 64MByte
- ATSC/NTSC Tuner
- Zoran 8VSB/QAM Demodulator
- Video In: ATSC/NTSC Tuner, CVBS, S-Video, YPbPr, VGA, HDMI, IEEE-1394
- Audio In: Left and Right Channels
- Main Video Out: LVDS (for LCD Panel), Analog YPbPr or RGB (for CRT TV)
- Auxiliary Video Out: CVBS and S-Video (for CRT TV)
- Audio Out: Left and Right Channels, SPDIF
- IR Remote, I2C, and RS-232 interfaces



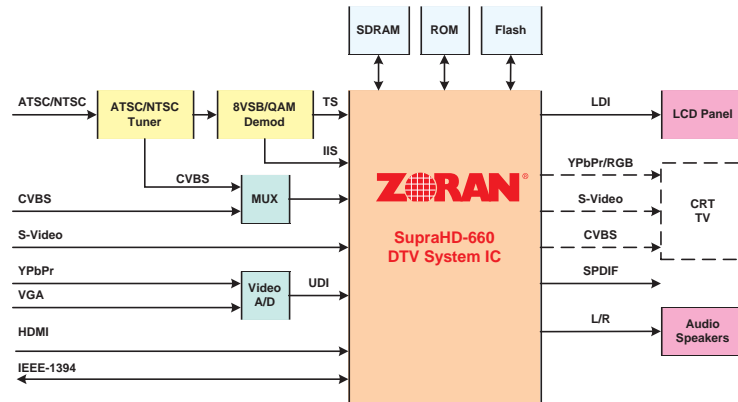
Zoran's SupraHD DTV Reference Design includes main board installed in flat panel display, stereo speakers, remote control, cables, preloaded software and documentation.

DTV Reference Design

Product Brief



System Block Diagram



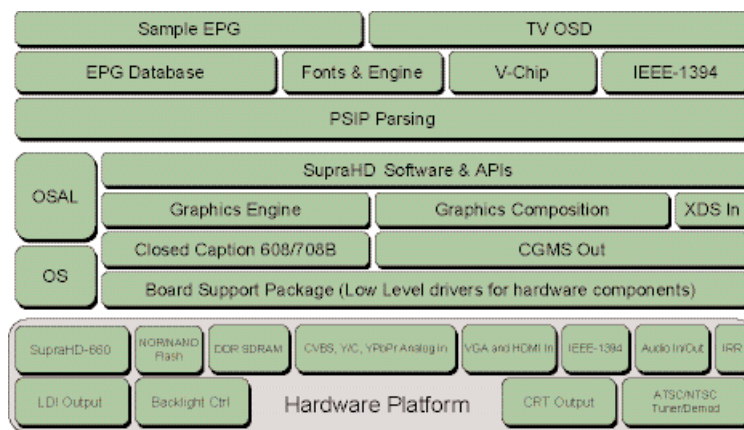
System Software Features

- ATSC/NTSC DTV application with customizable OSD
- Sample EPG
- V-Chip for analog and digital channels
- PSIP Parsing for channel map and EPG
- Analog and Digital Closed-Captioning (EIA-608 and EIA-708B)
- Fonts for OSD and Closed-Captioning
- Transport, Video Decode (single MP@HL), Audio Decode (AC-3, MPEG Layer I & II), Graphics, and Display drivers
- Peripheral drivers for Tuner, Demodulator, HDMI, and Analog inputs
- Thread-X royalty-free operating system
- IEEE-1394 software (Customer to license directly from VividLogic)

Package Contents

- 23-inch LCD HDTV with built-in main board, front-panel, and stereo speakers
- 110V-240V power adapter, remote control, and necessary cables
- Pre-loaded ATSC/NTSC compliant software on flash memory
- Complete documentation for reference design, software, and IC on a CD-ROM

Software Architecture Diagram



Export Classification Control Number (ECCN): 5A992 Product Order Code: ZR839660-ATSC-LCDX

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