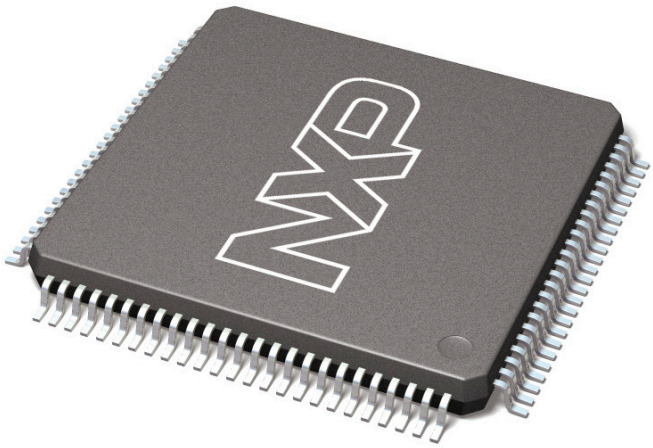


NXP MPEG-2 SD decoder for FTA set-top boxes CX24301/6

Low cost, high quality MPEG-2 SD decoder for FTA set-top boxes

NXP's single-chip IC set-top box (STB) system solution features all the major subsystems required to implement the core system and decoder electronics of a highly cost-effective Free-To-Air (FTA) STB.

Key features

- MPEG-2/DVB broadcast service decoder for worldwide FTA market
- Integrated I-45 Msps QPSK Demodulator (CX24301 only)
- High-performance 32-bit 150 MHz ARM946 CPU
- High-performance 2D graphics rendering acceleration
- High-performance 16-bit SDRAM memory controller architecture
- Integrated satellite Blind Scan function
- 208-pin LQFP package
- Bidirectional HSDP
- Complete reference design package complete software solution

The CX24301/6 offers a highly cost effective set-top box solution, featuring an MPEG-2 MP@ML decoder, integrated 1-45 Msps quadrature phase-shift keying (QPSK) demodulator (CX24301 only), a 32-bit RISC CPU, a 2D graphics accelerator, TV encoder, a video/graphics display compositing controller, integrated video DACs, and a set of peripheral I/O ports for STB front and back panel connectors.

For a complete system hardware design, the only additional components required are a tuner, audio DACs, SDRAM, and flash memory ICs. This high level of integration delivers a low-cost system bill-of-materials (BOM) and high-feature MPEG solution. Integrating the CX24301/6 with the NXP CX24113 tuner provides highly cost-effective solution for satellite systems. With the integrated high-speed data port (HSDP) that easily interfaces to a variety of broadband front-ends the CX24301 IC can also serve as a common back-end platform for terrestrial and cable applications.

The CX24301/CX24113 are available in a fully manufacturable reference design package featuring complete schematics, layout, BOM information, and a complete software solution, including electronic program guide (EPG) and drivers.

Full-featured development platform

The CX24301/6 is integrated into a fully engineered STB reference design which also features NXP's award winning CX24113 DVB-S tuner. This reference design provides a low-cost system bill of materials (BOM) and reduces overall development time and cost.

The hardware platform comes equipped with a fully functional NXP software solution, including license free operating system, application software, support for third party middleware, EPG and all required drivers providing a complete STB solution.
A mature and robust hardware abstraction layer is assured by re-use of core driver libraries developed on early generation ICs which also minimizes development time by ensuring reuse of software developed on previous NXP platforms.

The reference development platform STB hardware is based on existing reference design platforms and is designed to be fully manufacturable.

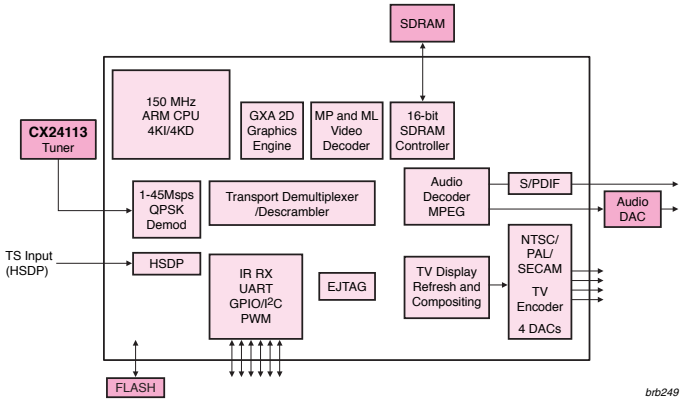
CX24301 features

- MPEG-2 MP@ML video decoder
- MPEG-1/MPEG-2 audio decoder
- MPEG-2/DVB, transport stream demultiplexing
- NTSC/PAL/SECAM TV encoder supporting CVBS, YC, and RGB/YPrPb analog video output signals
- NTSC/PAL auto conversion
- 150 MHz 32-bit ARM946 CPU with 4 KB (I&D) caches
- 16-bit SDRAM support
- Integrated I-45Msps QPSK Demodulator with Blind Scan function (CX24301 only) and DiSEqC 1.x
- RS-232 and JTAG interface
- 4/8 bpp on-screen display (OSD) support
- Sony/Philips Digital Interface Format (S/PDIF) Audio Output
- SCART support
- Programmable Flash memory interface
- Infrared receive

NXP's product portfolio

The company's broad portfolio of semiconductor products also includes client-side DSL and cable modem solutions, home network processors, broadcast video encoders and decoders, digital STB components and systems solutions, and dial-up modems. In addition to its IEEE 802.11a/b/g-compliant wireless local area network (WLAN) chipsets, software, and reference designs, NXP offers a suite of networking components that includes solutions for applications based on HomePlugSM and HomePNA™. Additional products include a complete line of asymmetric and symmetric DSL central office solutions, which are used by service providers worldwide to deliver broadband data, voice, and video over copper telephone lines.

Part Number	QPSK Demod
CX24301	Yes
CX24306	No



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