



DVB-S2 Receiver Card

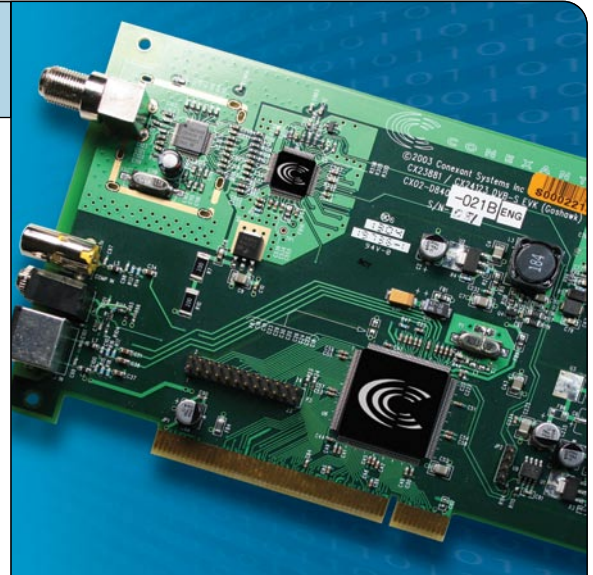
CX23883/CX24116/CX24118A

Conexant's portfolio includes a comprehensive suite of semiconductor solutions for broadband communications and the digital home.

The DVB-S2, the industry's newest digital video broadcast standard, reference design uses Conexant's CX23883 broadcast decoder, the CX24116 DVB-S2 demodulator, and the CX24118A a third-generation 8PSK satellite tuner digital television viewing. The new platform allows viewers to watch, record and replay satellite broadcast programs on their PC.

The CX24118A tuner is a highly integrated, direct down-conversion satellite tuner intended for high-volume digital video, audio, and data receivers. It receives an RF input and sends the intermediate frequency (IF) signal to the CX24116 demodulator. The CX24116 DVB-S2 demodulator and FEC decoder was the industry's first chip to be based on the new next-generation digital video broadcast DVB-S2 standard. This device leverages key developments in channel coding and modulation to provide up to a 30 percent capacity increase over the previous DVB-S standard. The CX24116 demodulator extracts the MPEG stream from the intermediate frequency and sends it to the CX23883. These two combined functions provide a complete broadband satellite front-end solution capable of operating from 1 to 45 MSps in the most demanding satellite environments. The CX24118A and CX24116 provide a streamlined, cost-optimized front-end solution offered in a compact design that saves valuable board space and is easy to implement. The CX23883 enables analog and digital audio/video capture, display, or record and playback at a later time through software or hardware audio/video codecs.

The reference design is also compatible with the DVB-S standard, providing manufacturers with the ability to use a single platform to develop products for multiple industry standards. Furthermore, this allows customers to maximize engineering resources and lower overall manufacturing and design costs. Schematics, layout files, and evaluation boards with production-ready device drivers are included with the reference design.

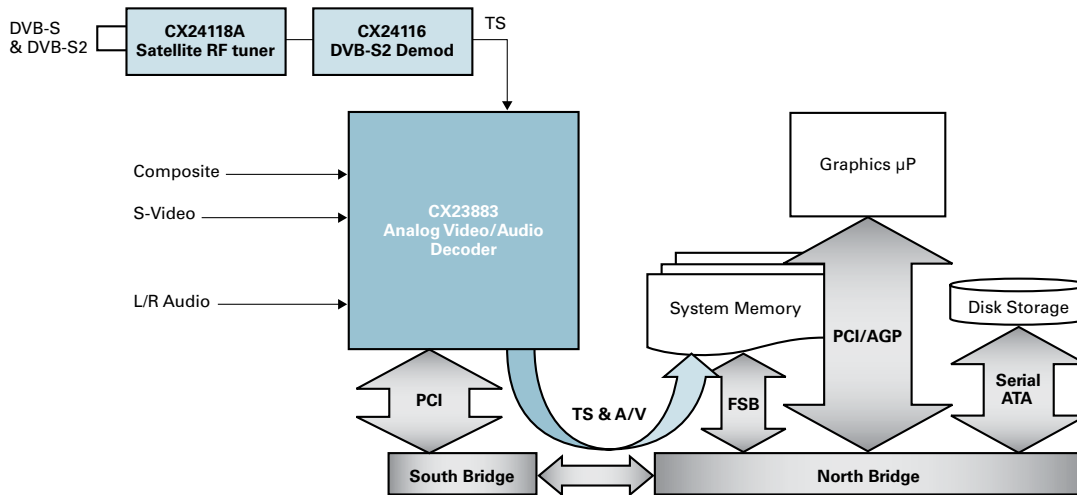


Distinguishing Features

- Zero-IF architecture eliminates the need for image reject filtering lowering the BOM cost
- Very low phase noise integrated local oscillators (LOs) for 8PSK and DVB-S2 applications
- Variable baseband filters for optimal interference rejection and lower BOM cost
- Auto-tuning system eliminates need for software calibration
- Transmission format support:
 - LDPC/BCH (DVB-S2)
 - 8PSK: SR = 10–31 MSps
 - QPSK: SR = 10–30 MSps
 - DVB-S: SR = 2–45 MSps
 - DTV Legacy: SR = 20 MSps
- Integrated SNR and BER monitors
- DiSEqC™ 2.x compliant demodulator

Part Number CX-80-000046-00

Description DVB-S2 Receiver Card



CX23883/CX24116/CX24118A Block Diagram

Product Features

- DVB/DSS/DCII-compliant
- Single-chip RF-to-baseband satellite receiver
- Zero-IF architecture eliminates the need for image-reject filtering
- Variable baseband filters for optimal interference rejection
- Integrated low noise amplifier (LNA) and local oscillator (LO) with onboard voltage-controlled oscillator (VCO) and synthesizer
- Single +5 V supply
- Symbol rates: 1 to 45 MSps
- Automatic acquisition
- Low-power design
- Internal signal-to-noise ratio (SNR) and bit error rate (BER) monitors
- DiSEqC Level 2.x compatible
- Low-noise block converter (LNB) control
- 10-bit video decoder
- Adaptive comb filter
- Stereo DACs
- I2S input and output
- Digital television (DTV) and broadband support
- MPEG encoder and decoder interfaces

Conexant 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 set-top box components and systems solutions, and dial-up modems. In addition to its IEEE 802.11 compliant WLAN chipsets, software, and reference designs, Conexant offers a suite of networking components that includes solutions for applications based on HomePlug® 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.

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