CONEXANT

DVB-S2 Demodulator and Forward Error Correction Decoder

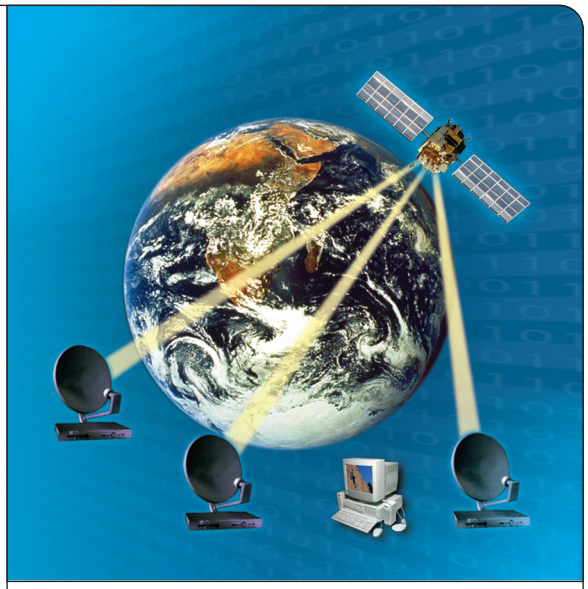
CX24116

Conexant's portfolio includes a comprehensive suite of semiconductor solutions for broadband communications, enterprise networks, and the digital home. The CX24116 is based on an open DVB-S2 standard and offers an alternate path for service providers to use advanced modulation (8PSK) with LDPC/BCH FEC. This will realize increased satellite throughput that can be used to offer additional programming and services.

The CX24116 can demodulate and decode signals transmitted in accordance with the new DVB-S2, DVB-S and DIRECTV specifications. It has an automatic acquisition algorithm that searches and acquires the carrier within a ±10 MHz range during initial acquisition and performs a smart search to reacquire under fade condition. The CX24116 has an on-chip microcontroller for fast-signal acquisition, Es/No estimation, and system monitoring. In addition, the on-chip microcontroller saves software integration time by minimizing the external driver code. The CX24116 has integrated signal-to-noise ratio (SNR) and bit error rate (BER) monitors for channel-performance measurements that simplify production testing.

The CX24116 can be used in conjunction with the Conexant's CX24118 Tuner RF IC to create a complete satellite AMC front-end solution.

Conexant's advanced modulation front-end solution enables satellite STB providers to deliver cost-effective, digital STBs that support a wide range of consumer video services, such as transmitting additional local channels and high-definition television (HDTV) channels.

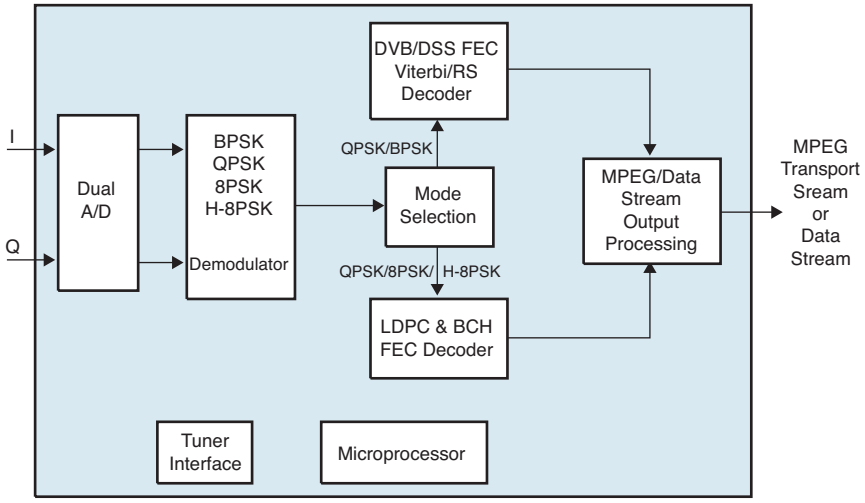


Distinguishing Features

- 8PSK/H-8PSK/QPSK/BPSK
- DVB-S/DSS backward compatible
- Nonbackward-compatible mode
  - Symbol Rates
    - QPSK/LDPC/BCH: 20-30 Msps
    - 8PSK/LDPC/BCH: 10-30 Msps
  - Code Rates
    - QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
    - 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
- Automatic acquisition
- ±10 MHz acquisition range
- Internal microcontroller
- Serial/parallel output data intermediate frequency (IF)
- Integrated SNR and BER monitor
- DiSEqC™ 2.x compliant
- Power-down mode
- 1.2-V core voltage
- 3.3-V I/O voltage
- 100-pin exposed thin quad flat pack (ETQFP)

Part Number CX24116
Description DVB-S2 Demodulator and FEC Decoder

The company's broad portfolio of semiconductor products also includes client-side digital subscriber line (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, 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.



CX24116 DVB-S2 Demodulator and Forward Error Correction Decoder

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