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C O N E X A N T

Dual DVB-S2 Demodulator and FEC Decoder

CX24117

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

The CX24117 is a dual-integrated demodulator based on an open DVB-S2 standard. The demodulator offers an alternate path for service providers to use advanced modulation and coding (AMC) with 8PSK/ quadrature phase-shift keying (QPSK) demodulation and LDPC/BCH forward error correction (FEC). This allows an increased satellite throughput of up to 30 percent that can be used to offer additional programming and services. The CX24117 also supports DVB-S and DIRECTV® Legacy modes.

The CX24117 can simultaneously demodulate and decode two separate signals transmitted with accordance to the DVB-S2 signals and DVB-S and DIRECTV specifications. It has an automatic acquisition algorithm that searches and acquires the carrier within ±10 MHz range during initial acquisition and performs a smart search to reacquire during fade condition. The CX24117 has an on-chip microcontroller for fast signal acquisition, Es/No estimation and system monitoring. The on-chip microcontroller saves software integration time by minimizing the external driver code.

The CX24117 is a DiSEqC 2.x-compliant demodulator that enables two-way communication between the set-top box (STB) and peripheral satellite equipment, such as low-noise block (LNB) converters and switches. The CX24117 has integrated signal-to-noise ratio (SNR) and bit error rate (BER) monitors for channel-performance measurements that simplify production testing.

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 HDTV channels.

Distinguishing Features

8PSK/QPSK Demodulation
- DVB-S/DIRECTV Legacy modes
  Symbol Rates
  - 1-45 Msps
  Code Rates
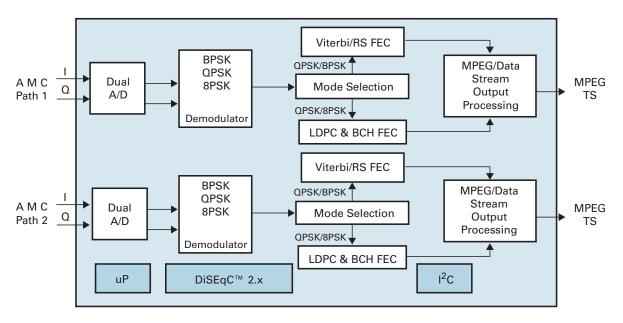 - 1/2, 2/3, 3/4, 4/5, 5/6, 6/7, 7/8
- DVB-S2 modes
  Symbol Rates
  - QPSK/LDPC/BCH: 20-30 Msps
  - 8PSK/LDPC/BCH: 10-30 Msps
  Code Rates
  - QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
  - 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
- Automatic Acquisition
- ±10 MHz Acquisition range
- Internal microcontroller reduces software driver development time
- Integrated SNR and BER monitor
- DiSEqCTM 2.x compliant
- Power-down mode for each demodulator path
- 1.0 V core voltage
- 3.3 V I/O voltage
- 144-pin eTQFP

Part Number	CX24117
Description	Dual DVB-S2 Demodulator and FEC Decoder

CX24117 Dual DVB-S2 Demodulator and Forward Error Correction Decoder

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 802.11a/b/g-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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