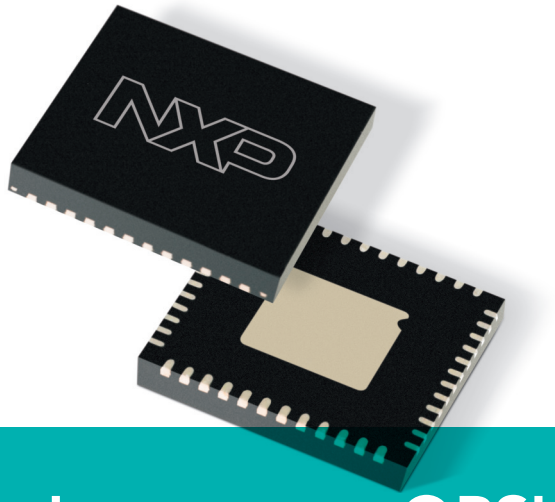


NXP DVB/DSS demodulator CX24123

Low-power QPSK demodulator for worldwide satellite set-top box applications

The CX24123 is a DVB, DSS, and DCII compliant demodulator and Forward Error Correction (FEC) decoder. When combined with a satellite tuner, such as the CX24109 tuner, the CX24123 provides a complete broadband satellite front-end solution capable of operating from 1 to 45 Msps.

Key features

- DVB/DSS/DCII - compliant
- Symbol rates: 1-45 Msps
- Automatic acquisition
- Low-power design
- Internal SNR and BER monitors
- DiSEqCTM 2.x compatible
- Low-Noise Block Converter (LNB) control
- Available in both 80 and 64 pin TQFP

Applications

- DVB/DSS/DCII set-top box and PC receivers
- Residential Gateways

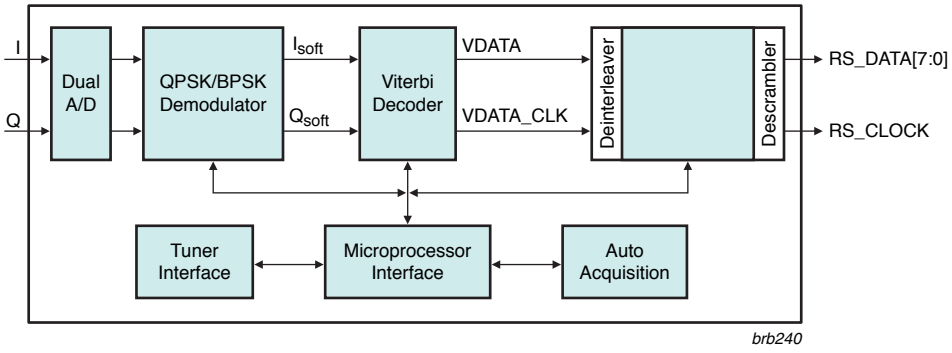
The CX24123 is the ideal solution for a wide variety of applications in digital satellite set-top box, personal computer receivers and residential gateways.
This DiSEqC 2.x compliant demodulator enables two-way communication between the set-top box and peripheral satellite equipment such as Low-Noise Block Converters (LNB) and switches.

Providing digital derotation, digital filtering, equalization, and Viterbi/Reed-Solomon FEC, the CX24123 provides many advanced features that enhance overall system performance. The CX24123 automatically corrects for external quadrature gain/phase imbalances and for DC offsets. Input signal level variations (e.g., due to rain fade) are compensated by automatic gain control (AGC). Frequency offsets due to inexpensive consumer LNBs are corrected by a robust Carrier-Tracking Loop

NXP founded by Philips

CX24123 features

- DVB/DSS/DCII-compliant
- Symbol rates 1 to 45 Msps
- Internal PLL, only a single low-frequency crystal or clock is required
- Automatic acquisition
- ±10 MHz acquisition range
- Carrier tracking: ± 5 MHz
- 6-bit Analog-to-Digital Converters (ADCs)
- 4-bit soft decision
- Digital matched filtering
- Multirate decimation filter
- Internal carrier and bit-timing recovery
- Boundary scan test function
- Serial or parallel output data interface
- External symbol clock reference
- Internal SNR and BER monitors
- DiSEqC™ level 2.x two-way Low-Noise Block Converter (LNB) control
- Power-down mode
- Quadrature equalization compensation
  - ± 3.0 dB gain imbalance
  - ± 13-degree phase offset



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