



Digital Satellite Tuner RF IC

CX24108

Highly Integrated, Complete Broadband Satellite Front-End Solution

Conexant's CX24108 is our second generation direct down-conversion satellite tuner RF IC intended for high-volume digital video, audio and data receivers. When combined with the HM1221 QPSK demodulator/FEC IC, the CX24108 provides a complete broadband satellite front-end solution capable of operating from 1 to 45 Msps in the most demanding satellite environments. It is designed for 80+ transponder systems and is compatible with international standards such as DVB and DSS. The highly integrated CX24108 satellite tuner RF IC reduces DBS tuner BOM cost and simplifies RF layout.

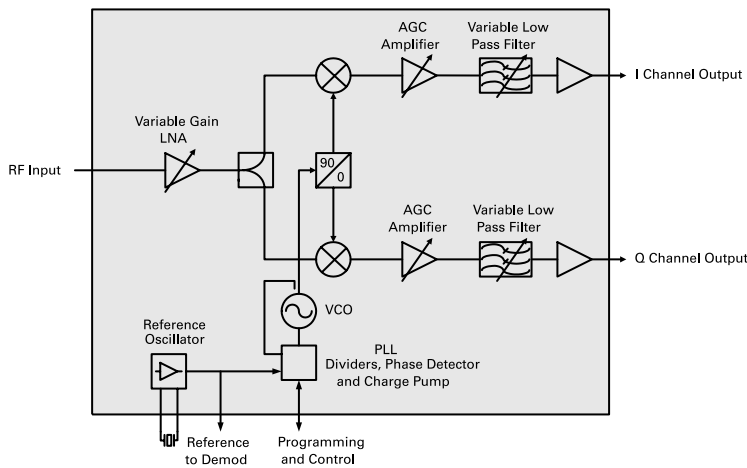
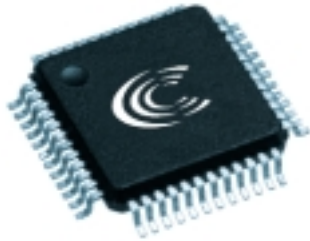
Following the integrated LNA, the CX24108 downconverts the satellite carrier directly to baseband and provides variable baseband filtering for the I/Q signals. It also has a completely integrated local oscillator. The VCO and synthesizer are built in and do not require external resonators or varactor diodes. All of this performance is available with just a single +5V supply.



Distinguishing Features

- 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 LNA and LO with onboard VCO and synthesizer
- Single +5V supply





CX24108 block diagram

Product Features

- Single-chip RF-to-baseband satellite receiver
- Zero-IF architecture eliminates the need for image-reject filtering
- Integrated LNA
- Integrated LO with onboard VCO and synthesizer
- Variable baseband filters for optimal interference rejection
- Single +5V supply

Product Specifications

- RF input: 950 to 2150 MHz
- Input power range: -20 to -81 dBm
- Noise figure: 10 dB, typical
- Input IP3 at minimum gain: 12 dBm, typical
- I/Q phase difference: ± 3 degrees, typical
- I/Q amplitude difference: ± 1.5 dB, typical
- Filter tune range: 0.5 to 30 MHz
- Output voltage, $R_L \geq 1k\Omega$: 0.5 V_{p-p}
- Typical junction temperature: 90° C at room temperature
- Operating temperature range: 0° to 70° C
- Package type: 48-pin eTQFP

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