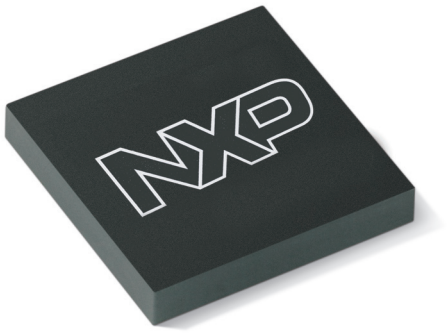


NXP digital satellite tuner IC CX24113A

Highly integrated, worldwide satellite silicon tuner

The CX24113A is NXP's third generation direct down-conversion satellite tuner RF IC intended for operator-based digital satellite networks and free-to-air systems.

Key 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
- Auto-tuning machine eliminates the need for software calibration
- Very low power consumption
- Small (6 mm x 6 mm) footprint
- Lead-free package

Applications

- DSS/DVB set-top boxes
- Digital VCR (DVR)
- Commercial digital video, audio, and data receivers

The CX24113A is a highly integrated satellite tuner solution that incorporates an advanced Fractional-N synthesizer, I^2C serial interface, a fully integrated local oscillator, and variable baseband filters. The device has an improved power supply rejection ratio (PSRR), requires a single +3.3V supply, and features very low power consumption.

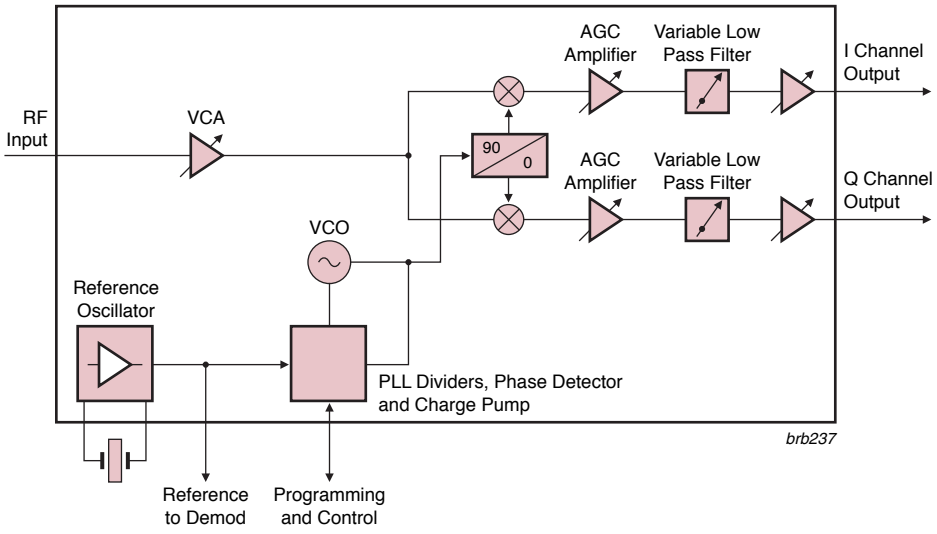
The CX24113A has a built-in auto-tuning machine that eliminates the need for software calibration and accelerates the calibration time. The on-chip fractional synthesizer enables fine frequency step size without adversely affecting lock time. The CX24113 does not require a balun, thus reducing external bill of materials (BOM) cost. Its highly integrated design saves valuable board space and simplifies RF layout.

NXP founded by Philips

The company's broad portfolio of semiconductor products also includes client-side xDSL 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, NXP 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.

CX24113A features

- RF input: 925–2175 MHz
- Input power range: -20 to -90 dBm
- Symbol rate: 1–45 MSps
- Noise figure: 10 dB, typical
- Input IP3 at minimum gain: 10 dBm, typical
- Baseband filter bandwidth: 3–40 MHz
- Output voltage: 0.5 Vp-p @ RL > 1 k_
- Operating temperature: 0–85° C
- Package type: 36-pin, Pb-free, QFN



CX24113 Block Diagram

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