

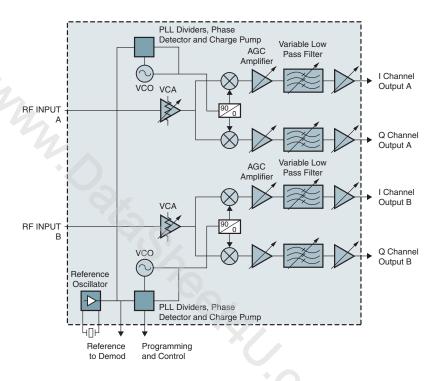
Digital Satellite Dual Tuner RF IC

CX24128

Industry's First Dual Tuner for DVR Applications

Conexant's portfolio includes a comprehensive suite of semiconductor solutions for broadband communications, enterprise networks and the digital home. The CX24128 is Conexant's innovative dual stream direct down-conversion satellite tuner RF IC intended for high-volume digital video, audio, and data receivers. The CX24128 offers excellent phase noise performance and very low implementation loss, required for advanced modulation systems such as 8PSK and DVB-S2. The CX24128 provides bill of materials (BOM) savings over two single tuners and simplifies layout for DVR set-top boxes (STBs).

The CX24128 has a built-in auto-tuning machine that eliminates the need for software calibration routine and accelerates the calibration time. The on-chip fractional synthesizers enable fine frequency step size without adversely affecting lock time. The CX24128 requires a single 3.3 V power supply and has an improved power supply rejection ratio (PSRR) that reduces the need for power supply conditioning components required for proper operation. The CX24128 does not require a Balun, thus reducing external BOM cost. Its highly integrated design saves valuable board space and simplifies RF layout.



CX24128 Block Diagram



Distinguishing Features

- Dual stream RF-to-baseband satellite receiver
- State of the art isolation between two channels
- Zero-IF architecture eliminates the need for image reject filtering
- Very low phase noise for 8PSK and DVB-S2 applications
- Variable baseband filters for optimal interference rejection
- Auto-tuning machine eliminates need for software calibration
- Very low power consumption
- Small (7 mm x 7 mm) footprint
- Lead-free package

Part Number CX24128

Description Digital Satellite Dual Tuner RF IC

Conexant has a broad portfolio of semiconductor products, including:

• DSL, dial-up, and cable modem solutions

• Home network processors

• Broadcast video encoders and decoders

• Digital set-top box components and system solutions

Conexant also offers wireless data and networking solutions that includes HomePlug, HomePNA, and WLAN (802.11) components and reference designs.

CX24128 Features

RF input: 925–2175 MHz
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 kΩ:
Operating temperature: 0–85° C
Package type: 48-pin, Pb- free, QFN

Applications

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

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