

Digital Satellite Tuner RF IC CX24118

Supports Advanced Modulation Applications

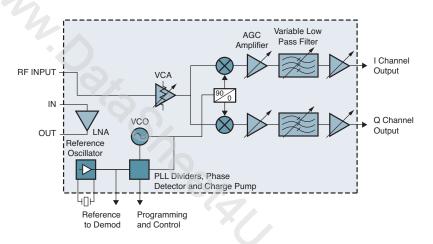
Conexant's portfolio includes a comprehensive suite of semiconductor solutions for broadband communications, enterprise networks and the digital home. The CX24118 is Conexant's third generation direct down-conversion satellite tuner RF IC intended for high-volume digital video, audio, and data receivers. The CX24118 offers excellent phase noise performance and very low implementation loss, required for advanced modulation systems such as 8PSK and DVB-S2.

The CX24118 has a built-in auto-tuning machine that eliminates the need for software calibration routine and accelerates the calibration time. The on-chip fractional synthesizer enables fine frequency step size without adversely affecting lock time. The CX24118 does not require a Balun, thus reducing external BOM cost. Its highly integrated design saves valuable board space and simplifies RF layout.

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.



CX24118 Block Diagram



Distinguishing Features

- Single-chip RF-to-baseband satellite receiver
- 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 (6 mm x 6 mm) footprint
- · Lead-free package

 Part Number
 CX24118

 Description
 Digital Satellite Tuner RF IC

CX24118 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\Omega:
- \bullet Operating temperature: 0–85° C
- Package type: 36-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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