



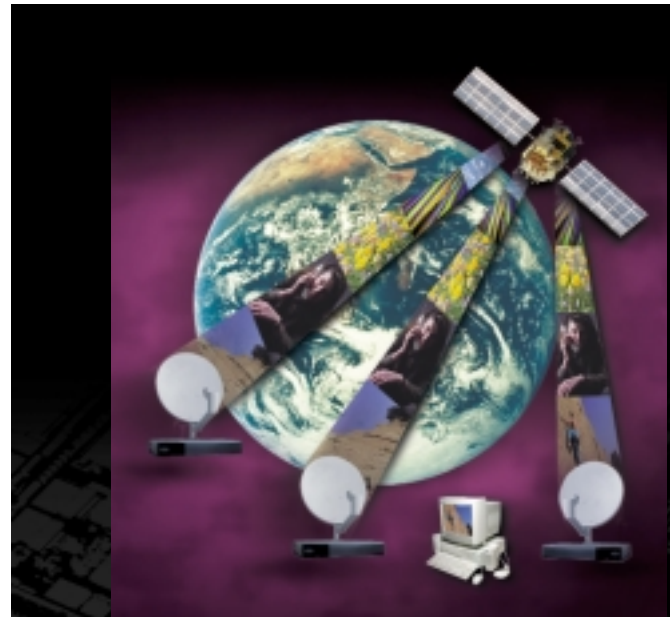
Digital Satellite Tuner RF IC

CX24108

Highly Integrated, Complete Broadband Satellite Front-End Solution

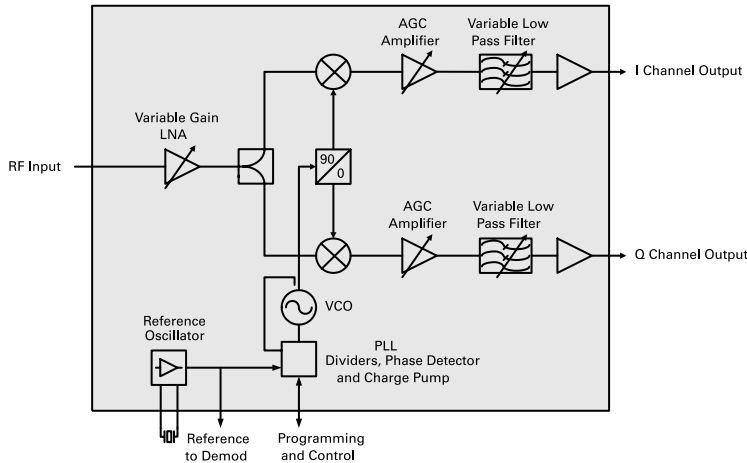
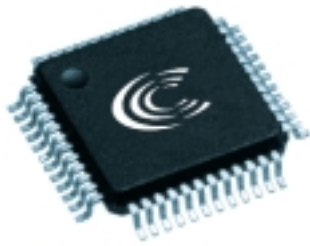
Conexant's CX24108 is our second generation direct down-conversion satellite tuner RF IC intended for high-volume digital video, audio and data receivers. When combined with the HM1221 QPSK demodulator/FEC IC, the CX24108 provides a complete broadband satellite front-end solution capable of operating 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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Further Information

literature@conexant.com
(800) 854-8099 (North America)
(949) 483-6996 (International)
Order # 100969A
00-0600
Digital Infotainment
Printed in USA

World Headquarters

Conexant Systems, Inc.
4311 Jamboree Road
Newport Beach, CA
92660-3007
Phone: (949) 483-4600
Fax 1: (949) 483-4078
Fax 2: (949) 483-4391

Americas

U.S. Northwest – Santa Clara

Phone: (408) 249-9696
Fax: (408) 249-7113

U.S. Southwest – Los Angeles

Phone: (805) 376-0559
Fax: (805) 376-8180

U.S. Southwest – Newport Beach

Phone: (949) 483-9119
Fax: (949) 483-9090

U.S. San Diego

Phone: (858) 713-4730
Fax: (858) 713-4008

U.S. North Central – Illinois

Phone: (630) 773-3454
Fax: (630) 773-3907

U.S. South Central/Mexico – Texas

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Fax: (972) 407-0639

U.S. Northeast – Massachusetts

Phone: (978) 367-3200
Fax: (978) 256-6868

U.S. Carolinas – North Carolina

Phone: (919) 858-9110
Fax: (919) 858-8669

U.S. Southeast/South America – Florida

Phone: (727) 799-8406
Fax: (727) 799-8306

U.S. Mid-Atlantic – Pennsylvania

Phone: (215) 244-6784
Fax: (215) 244-9292

Canada – Ontario

Phone: (613) 271-2358
Fax: (613) 271-2359

Europe

Europe Central – Germany

Phone: +49 89 829-1320
Fax: +49 89 834-2734

Europe North – England

Phone: +44 1344 486444
Fax: +44 1344 486555

Europe – Israel/Greece

Phone: +972 9 9524000
Fax: +972 9 9573732

Europe South – France

Phone: +33 1 41 44 36 51
Fax: +33 1 41 44 36 90

Europe Mediterranean – Italy

Phone: +39 02 93179911
Fax: +39 02 93179913

Europe – Sweden

Phone: +46 (0) 8 5091 4319
Fax: +46 (0) 8 590 041 10

Europe – Finland

Phone: +358 (0) 9 85 666 435
Fax: +358 (0) 9 85 666 220

Asia Pacific

Taiwan

Phone: (886-2) 2-720-0282
Fax: (886-2) 2-757-6760

Australia

Phone: (61-2) 9869 4088
Fax: (61-2) 9869 4077

China – Central

Phone: 86-21-6361-2515
Fax: 86-21-6361-2516

China – South

Phone: (852) 2 827-0181
Fax: (852) 2 827-6488

China – South (Satellite)

Phone: (86) 755-5182495
Fax: (86) 755-5183024

China – North

Phone: (86-10) 8529-9777
Fax: (86-10) 8529-9778

India

Phone: (91-11) 692-4789
Fax: (91-11) 692-4712

Korea

Phone: (82-2) 565-2880
Fax: (82-2) 565-1440

Korea (Satellite)

Phone: (82-53) 745-2880
Fax: (82-53) 745-1440

Singapore

Phone: (65) 737 7355
Fax: (65) 737 9077

Japan

Phone: (81-3) 5371 1520
Fax: (81-3) 5371 1501



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