



Silicon Germanium Dual-Band LNA/Downconverter RFIC CX74004

Conexant Delivers RF Chipsets for 2G and 3G CDMA Applications

The CX74004 is a tri-mode, dual-band LNA/downconverter designed in Conexant's advanced SiGe process. The device meets and exceeds cdmaOne, cdma2000, and AMPS requirements for U.S. and Korean cellular, Japan cellular, U.S. PCS and Korean PCS markets. The CX74004 can also be optimized for dual-mode GSM/wideband CDMA (WCDMA) applications in the GSM and IMT-2000 bands.

Employing silicon germanium (SiGe) bipolar complementary metal oxide semiconductor (BiCMOS) process technology, the RFIC is designed for low current consumption at a high performance. By utilizing the advanced process, standby times are up to 15 percent longer than with previous generation of devices.

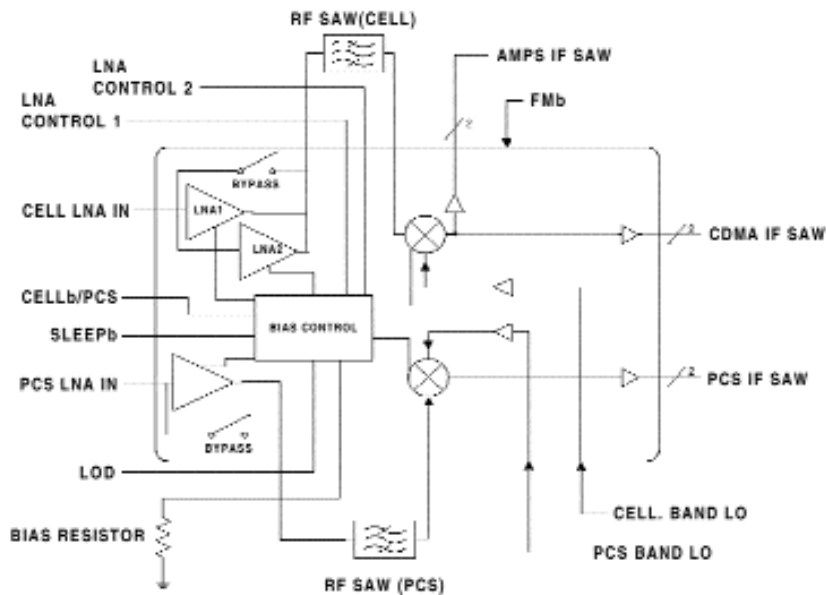
The CX74004 is a super-heterodyne receiver incorporating all the components required for implementing the receiver front end, except for the RF SAW filters. It has two internal low noise amplifiers (LNAs) — one for the cellular band and another for the PCS or IMT-2000 band.

The CX74004, along with Conexant's CX74002 Transmit RFIC, CX74005 VGA + I/Q demodulator, a Conexant power amplifier module, and Conexant's baseband analog processor forms a complete RF subsystem that interfaces with the most common cdma baseband devices.

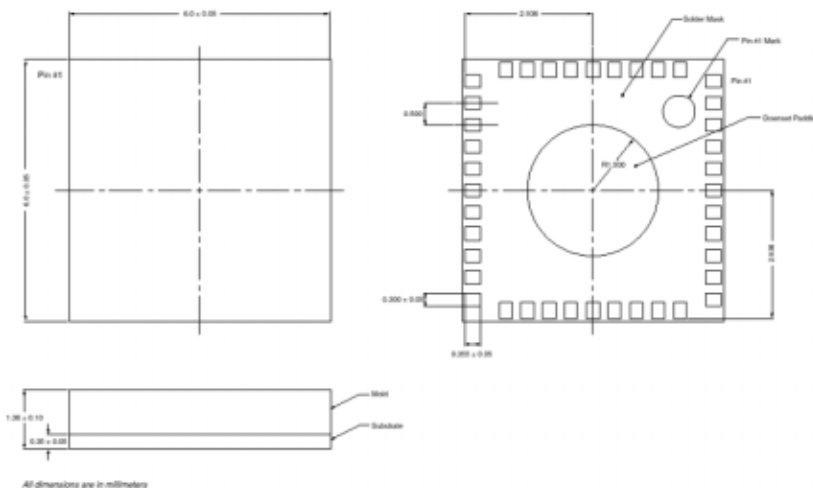


Distinguishing Features

- Tri-mode, dual-band functionality
- Battery-cell operation (2.7V < VCC < 3.6V)
- PCS bypass LNA NF=1.9 dB typical
- Three-step cellular LNA NF=1.8 dB typical
- 5mm x 5mm land grid array (LGA) chipscale package



CX74004 Rx ASIC block diagram



Package dimensions – 32-pin 5mm x 5mm LGA package

Product Features

- Three-step gain LNA designed to meet intermodulation distortion specifications for CDMA applications
- Three independent mixers, one for the PCS band and two for the cellular band, designed to operate with very low LO power of -10dBm

Applications

- Cellular- and PCS-band phones
- cdmaOne, cdma2000 and AMPS modes in the following bands:
 - U.S. cellular
 - Japan cellular
 - U.S. PCS
 - Korea PCS
- GSM/WCDMA dual-mode applications

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Further Information

literature@conexant.com
 (800) 854-8099 (North America)
 (949) 483-6996 (International)
 Order # 101067A
 00-0881
 Wireless Communications
 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
 Phone: (972) 871-1920
 Fax: (972) 871-8910

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