

RS8973

ZipWire™ – 2B1Q

DSL network

High Speed, Low Power Single-Chip SDSL/HDSL Transceiver

The RS8973 is Conexant's latest addition to the ZipWire family of 2B1Q xDSL modems. It offers up to 2.32 Mbps operation, ultra-low power consumption and an integrated frequency synthesizer, while maintaining pin-for-pin compatibility with the Bt8970. The integrated frequency synthesizer is ideal for variable rate SDSL applications. Via software control, the RS8973 can be programmed to operate at data rates from 144 Kbps to 2320 Kbps, while requiring only a single crystal as a clock reference. The transmission distance will increase as the data rate decreases — reaching as far as 21,000 ft (or 7 Km) at 144 Kbps and 8,200 ft (or 3.1 Km) at 2.32 Mbps (over 26AWG wire, in absence of noise). In addition, power consumption has been significantly reduced, allowing the RS8973 to dissipate about 850mW when operating at 2.3 Mbps. The power consumption decreases with lower data rates.

The RS8973 is fully compliant with standards for HDSL 2B1Q transmission, and it meets the power spectral density (PSD) and pulse template requirements as specified in ETSITS 101 135 with the same support circuit. This enables a single design utilizing the RS8973 to be configured through a simple software command to operate at either 784, 1168 or 2320 Kbps, and still meet the ETSI requirements. No changes to the hardware are needed.



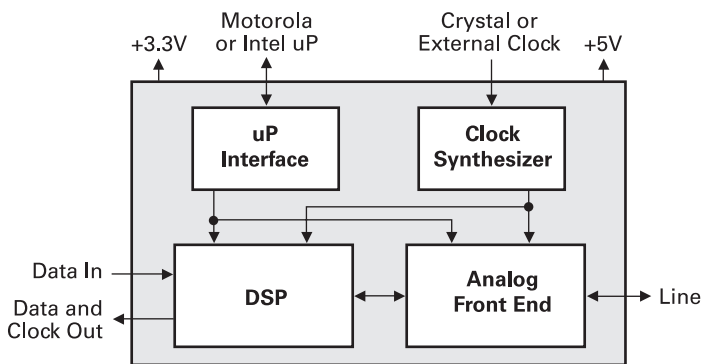
Distinguishing Features

- Extensive suite of flexible software driver features for a variety of applications
- Integrated single chip transceiver (DSP + AFE + LD + VCXO + CLAD)
- Multi-rate operation, 144 Kbps – 2320 Kbps
- Low power dissipation (about 850mW at 2.32 Mbps rate)
- Meets ETR152 pulse template PSD specifications for 784, 1168, 2320 Kbps with single hybrid circuit components

Legendary Performance Heritage

The RS8973 is Conexant's fifth generation full-duplex 2B1Q transceiver. Its predecessors include the very popular ZipWire Bt8970 and Bt8960 devices, as well as the earlier generation Bt8952, Bt8921 and Bt8920 transceivers. Conexant also offers a family of "8953" HDSL/SDSL framers which seamlessly mate with these transceivers. A single set of software application programming interface (API) commands supports all of the Rockwell HDSL/SDSL devices — greatly simplifying upgrades to the next generation devices.

The software driver provided with the RS8973 has been expanded and tailored to support variable rate applications. This software includes an API command for rate adaptation, which automatically determines the maximum data rate achievable on a given loop. Conexant's ZipStartup algorithm is also available — significantly decreasing the time required to establish a link between the transceivers.



Product Features

- Low power dissipation (about 850mW at 2.32 Mbps operation)
- Supports data rates from 144 Kbps to 2320 Kbps
- Integrated frequency synthesizer
- Meets ETR152 pulse template and PSD specs with same support circuit
- Pin-for-pin and software compatible with Bt8970
- Supports automatic rate adaptation
- Single-chip transceiver
- Glueless interface to Motorola and Intel processors
- Flexible monitoring and control
- ZipStartup available for faster

link establishment

- RS8953 companion SDSL/HDSL framers available
- JTAG/IEEE standard 1149.1 compliant
- 100-pin PQFP package
- -40C to +85C operation

Targeted Market Applications

- Data access concentrators
- E1 and T1 HDSL transport
- Next generation DLC/FLC
- Internet connectivity
- N x 64 data access
- Cellular base station
- Campus modems

Further Information

literature@conexant.com
 1-800-854-8099 (North America)
 33-14-906-3980 (International)
 NA.PB36 99-0032
 Network Access
 Printed in USA

Web Site

www.conexant.com

World Headquarters

Conexant Systems, Inc.
 4311 Jamboree Road
 P. O. Box C
 Newport Beach, CA
 92658-8902
 Phone: (949) 483-4600
 Fax: (949) 483-6375

U.S. Florida/South America

Phone: (813) 799-8406
 Fax: (813) 799-8306

U.S. Los Angeles

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

U.S. Mid-Atlantic

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

U.S. North Central

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

U.S. Northeast

Phone: (978) 692-7660
 Fax: (978) 692-8185

U.S. Northwest/Pacific West

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

U.S. South Central

Phone: (972) 733-0723
 Fax: (972) 407-0639

U.S. Southeast

Phone: (770) 246-8283
 Fax: (770) 246-0018

U.S. Southwest

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

APAC Headquarters

Conexant Systems Singapore,
 Pte. Ltd.
 1 Kim Seng Promenade
 Great World City
 #09-01 East Tower
 Singapore 237994
 Phone: (65) 737 7355
 Fax: (65) 737 9077

Australia

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

China

Phone: (86 2) 6361 2515
 Fax: (86 2) 6361 2516

Hong Kong

Phone: (852) 2827 0181
 Fax: (852) 2827 6488

India

Phone: (91 11) 692 4780
 Fax: (91 11) 692 4712

Korea

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

Europe Headquarters

Conexant Systems France
 Les Taissounieres B1
 1680 Route des Dolines
 BP 283
 06905 Sophia Antipolis Cedex
 France
 Phone: (33 4) 93 00 33 35
 Fax: (33 4) 93 00 33 03

Europe Central

Phone: (49 89) 829 1320
 Fax: (49 89) 834 2734

Europe Mediterranean

Phone: (39 02) 9317 9911
 Fax: (39 02) 9317 9913

Europe North

Phone: (44 1344) 486 444
 Fax: (44 1344) 486 555

Europe South

Phone: (33 1) 41 44 36 50
 Fax: (33 1) 41 44 36 90

Middle East Headquarters

Conexant Systems Commercial
 (Israel) Ltd.
 P.O. Box 12660
 Herzlia 46733, Israel
 Phone: (972 9) 952 4064
 Fax: (972 9) 951 3924

Japan Headquarters

Conexant Systems Japan Co., Ltd.
 Shimomoto Building
 1-46-3 Hatsudai,
 Shibuya-ku, Tokyo
 151-0061 Japan
 Phone: (81 3) 5371-1567
 Fax: (81 3) 5371-1501

Taiwan Headquarters

Conexant Systems, Taiwan Co., Ltd.
 Room 2808, 333
 International Trade Building
 Keelung Road, Section 1
 Taipei 110, Taiwan, ROC
 Phone: (886 2) 2720 0282
 Fax: (886 2) 2757 6760