

# DPS7000 Hi-IQ™ Cable Modem VLSI RF Tuner IC



## OVERVIEW

The DPS7000 is a highly integrated, high-performance, very low-power RF Receiver/Tuner IC capable of receiving input signals between 48 MHz-1 GHz over a wide dynamic range and providing IF out to baseband PHY demodulators.

This VLSI product integrates all the essential elements of the down conversion receiver: LNA, AGCs, Mixers, PLLs, IF Amplifier and varactors, thereby requiring minimal external components and no manual tuning. Only one external SAW filter is required.

The unique and proprietary architecture eliminates the need for tracking filters. The LNA provides a low Noise Figure and better than 6 dB return loss across the entire input frequency range. The integrated PLLs and VCOs provide fast lock and superior phase noise characteristics (better than 80 dBc/Hz at 10 KHz offset).

The DPS7000 supports both DOCSIS and DAVIC standards and provides selectable 36/44 MHz IF out for the selected 6 or 8 MHz channels.



*VLSI Solution: Truly Minimal External Components*

## FEATURES

- VLSI RF Cable Tuner IC
- 7 dB Noise Figure
- Single 3.3 V supply operation
- Very low operating power:  
600 mW
- 0-70°C operation
- Fast channel select and lock
- Very small form factor solution:  
64 QFP
- Integrates:
  - LNA
  - Gain control (RF and IF)
  - Wide dynamic range
  - Programmable dual synthesizers
  - Mixers
  - On-chip oscillator tuning elements
  - Serial port control
- Minimal external components:
  - No manual tuning
  - No varactor
  - No other power supplies
  - Only one external SAW filter
  - No IF amplifier required

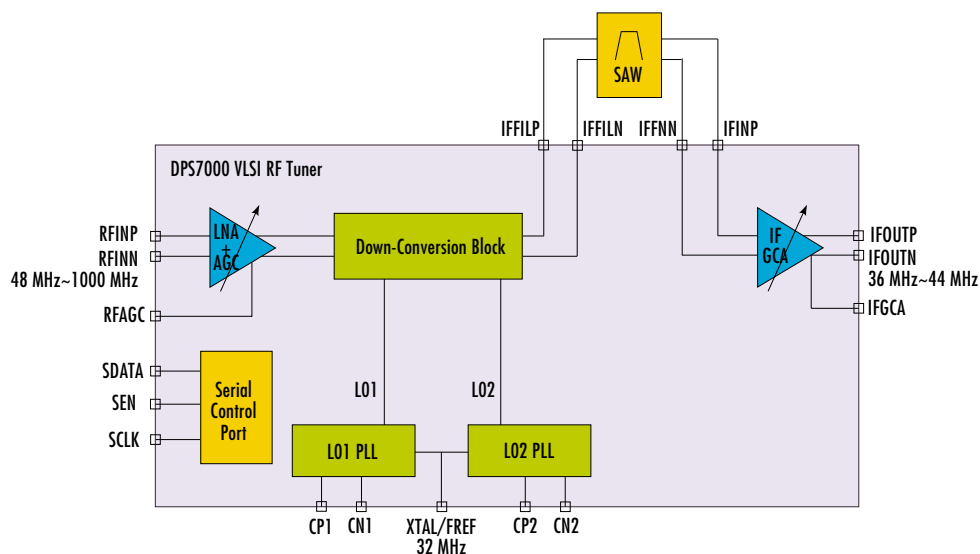


The  
Communication  
Company™

# DPS7000 Hi-IQ™ Cable Modem VLSI RF Tuner IC

## APPLICATIONS

- DOCSIS/DAVIC Cable Modems
- Voice Over IP Telephony
- MMDS Receivers
- Cable TV, STB and DTV - call LSI Logic



For more information please call:

### LSI Logic Corporation

North American Headquarters  
Milpitas, CA  
Tel: 800 574 4286

### LSI Logic Europe Ltd.

European Headquarters  
United Kingdom  
Tel: 44 1344 426544  
Fax: 44 1344 481039

### LSI Logic KK Headquarters

Tokyo, Japan  
Tel: 81 3 5463 7165  
Fax: 81 3 5463 7820  
LSI Logic web site:  
[www.lsilogic.com](http://www.lsilogic.com)

LSI Logic logo design, is a registered trademark of LSI Logic Corporation. Hi-IQ is a trademark of LSI Logic. All other brand and product names may be trademarks of their respective companies.

LSI Logic Corporation reserves the right to make changes to any products and services herein at any time without notice. LSI Logic does not assume any responsibility or liability arising out of the application or use of any product or service described herein, except as expressly agreed to in writing by LSI Logic; nor does the purchase, lease, or use of a product or service from LSI Logic convey a license under any patent rights, copyrights, trademark rights, or any other of the intellectual property rights of LSI Logic or of third parties.

Copyright ©2001 by LSI Logic Corporation.  
All rights reserved.

Order No. R20033  
701.1kJG.IK - Printed in USA