

## 8PSK/QPSK direct conversion tuner IC

## DATA BRIEF

### DESCRIPTION

The STB6100 ASIC is a highly integrated, low-cost direct conversion (zero IF) tuner IC for DVB-S2 broadcast satellite applications.

This device includes an LNA, down-converting mixers, baseband low-pass filters, gain control, on-chip VCO and a low noise PLL. Its wide gain control range is well suited for low symbol rate applications.

The STB6100 is controlled by a simple two wire interface and has been designed to minimize the external bill of materials to reduce manufacturing costs and to simplify the board layout. The reduced component count ensures greater system reliability leading to increase consumer satisfaction.

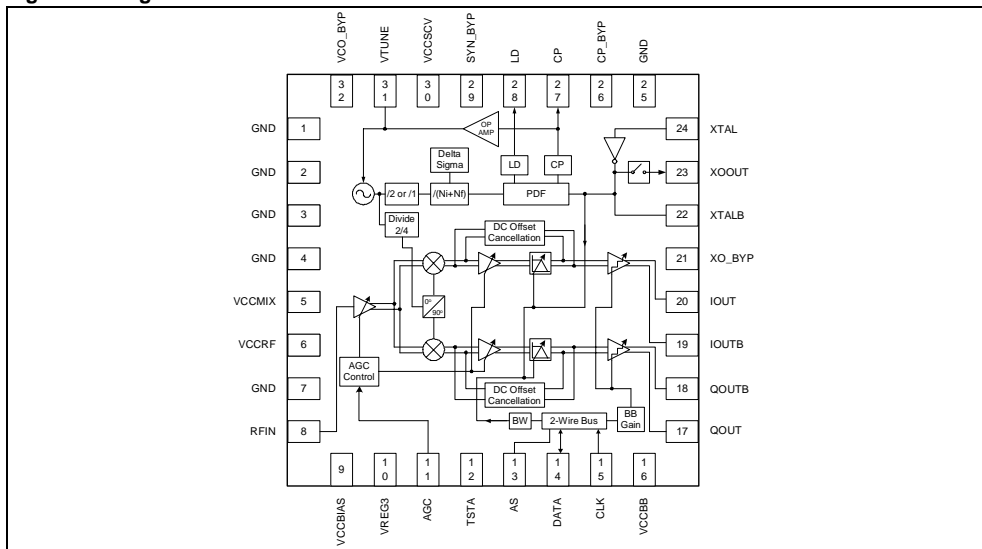
The DVB-S2 standard increases the capacity of satellite broadcasts by as much as 30%, so enabling the effective deployment of high data rate applications such as high definition TV and broadband internet.

Packaged in a small QFN 32-pin package, it is ideal for low cost DBS design.

**Figure 1. Package (420 + 36 PBGA 27 x 27)**



### Figure 2. Integrated silicon tuner



FEATURES

- Powered by RF Magic
- Direct conversion
- Input range 950 to 2150 MHz
- Supports 1 to 45 Msymbol/s
- Fully integrated LO and PLL
- Differential I/Q outputs
- Buffered XO output to clock other devices
- Low external component count
- Low power consumption
- 2-wire I<sup>2</sup>C serial interface
- Low cost integrated ZIF tuner for DVB-S2 and DIRECTV, VSAT and internet through satellite applications
- 8PSK/QPSK support
- Simple interface to ST's satellite demodulator devices
- Low phase noise, excellent linearity and high LO harmonics rejection
- Small QFN-32 pin package

Table 1. Order Codes

Part Number	Description
STB6100	Standard tray version
STB6100T	Tape and reel

REVISION HISTORY

Table 2. Revision History

Date	Revision	Description of Changes
September-2004	1	First Issue

Information furnished is believed to be accurate and reliable. However, STMicroelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of STMicroelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. STMicroelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of STMicroelectronics.

The ST logo is a registered trademark of STMicroelectronics.  
All other names are the property of their respective owners

© 2004 STMicroelectronics - All rights reserved

STMicroelectronics group of companies

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America  
[www.st.com](http://www.st.com)

