

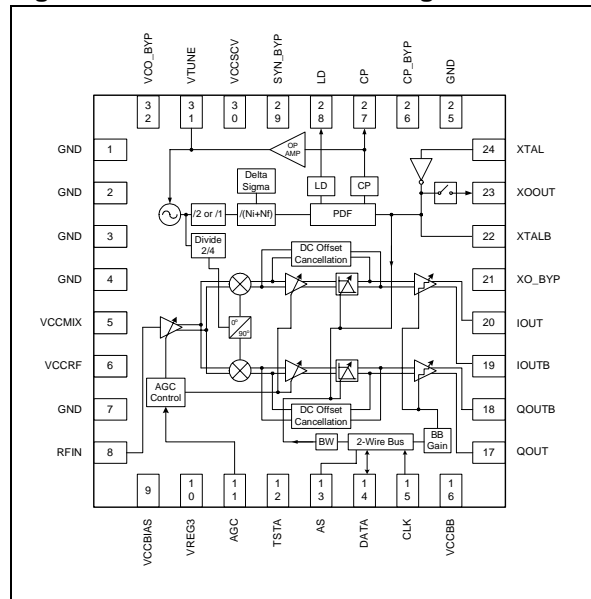
## 8PSK/QPSK direct conversion tuner IC

### Features

- Direct conversion
- Input range 950 to 2150 MHz
- Low pass filter bandwidth 5 to 36 MHz
- 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<sup>®</sup>, VSAT and internet through satellite applications
- QPSK/8PSK/16APSK and 32APSK support
- Simple interface to ST's satellite demodulator devices
- Low phase noise, excellent linearity and high LO harmonics rejection
- VFQFPN2 5x5x1.0 32 pitch package



**Figure 1. Functional block diagram**



**Table 1. Device summary**

| Order code | Packing               |
|------------|-----------------------|
| STB6100    | Standard tray version |
| STB6100T   | Tape and reel         |

# 1 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 VFQFPN2 5x5x1.0 32 pitch 0.50 package, it is ideal for low cost DBS design.

## 2 ECOPACK®

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### 3 Revision history

**Table 2. Document revision history**

| Date         | Revision | Changes                     |
|--------------|----------|-----------------------------|
| 05-Sept-2004 | 1        | Initial release.            |
| 21-Apr-2009  | 2        | Supported features updated. |

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