

## Satellite channel router

DATA BRIEF

### DESCRIPTION

Relaying satellite signals from the rooftop dish to multiple receivers around the home, Digital Video Recorders (DVR) or throughout an apartment block is an expensive proposition for system installers. The SaTCR-1 satellite channel router addresses this problem by combining up to eight input signals onto a single cable. These signals are then decoded by a corresponding number of tuners, potentially distributed across many set-top boxes.

The SaTCR-1 device is intended for use in LNBS or switchers in satellite receivers. The device shifts the frequency of any input signal to a fixed intermediate frequency. The output signal is band-pass filtered generating a narrow band output.

By combining several SaTCR-1 devices, a corresponding number of sub-bands may be generated and multiplexed together.

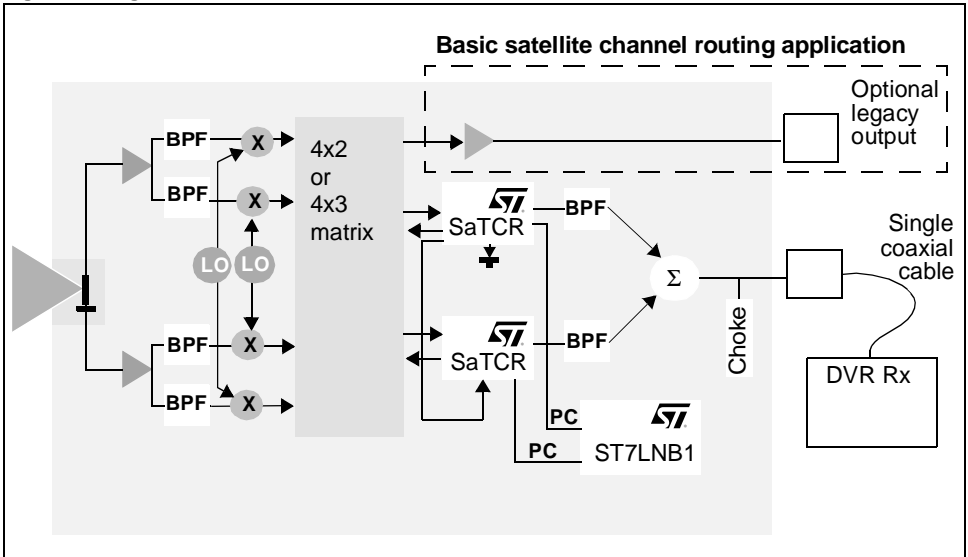
This composite band can be made of different independent channels issued from different LNB

inputs and polarizations, and can be carried on a single coaxial cable.

Figure 1. Package: QFN36 (6 x 6 mm)



Figure 2. Single cable installation for multi-satellite receivers



## FEATURES

- Wide input and wide output frequency ranges (950 MHz to 2150 MHz)
- Four programmable conversion gains
- Fully integrated synthesizer
- RF tone generator for installation loss calibration and for system signalling
- Programmable switch matrix control pins
- System noise figure: 5 dB (typ.)
- Single supply: 3.0 V
- Low power consumption: 90 mA (typ.)
- I<sup>2</sup>C bus control
- QFN36 package (6 x 6 mm)

## APPLICATIONS

- DDBS low-noise block converters
- RF band translation switcher boxes
- Reuse of terrestrial cable for satellite signals
- Provides single-cable capability for:
  - DVR applications
  - multiple STBs/receivers
  - multi-switching for apartment blocks.

## PART NUMBERING

**Table 1. Order codes**

Part Number	Description
SaTCR-1	Satellite channel router
SaTCR-1 Eval	Evaluation board

## REVISION HISTORY

**Table 2. Revision history**

Date	Revision	Description of Changes
October 2004	2	Updated diagram, history added, color removed, CCS template applied.
May 2004	1	Initial release

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)