

Overview

The ATON™ AS-105 is a complete DVB-T receiver chip solution dedicated to embedded applications such as Set-Top Boxes. Providing everything from the antenna to the MPEG transport stream data, it can easily be controlled through a serial SPI interface, while the video stream is sent through a serial TS port.

It is implemented in advanced CMOS technology to achieve lowest cost, lowest power and smallest system footprint. The AS-105 is based on Software Defined Radio (SDR) techniques, using adaptive algorithmic techniques to maintain highest video quality while minimizing power consumption.

It is available in a cost effective QFN package (9x9 mm).

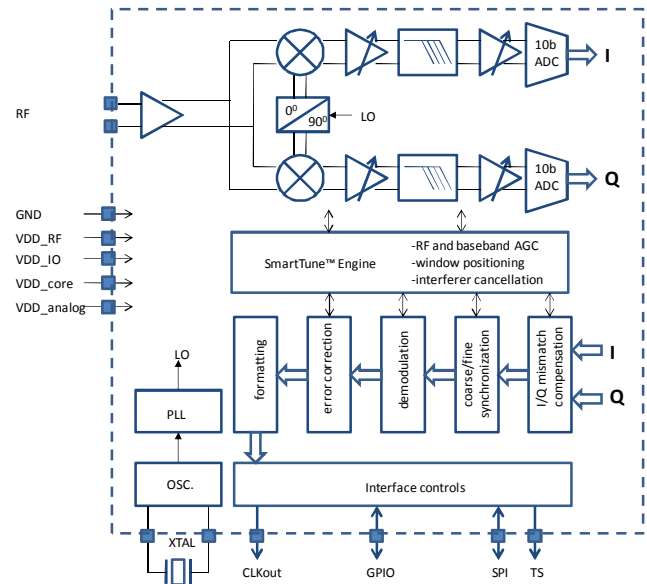


Fig 1 : AS-105 Functional Block Diagram

Applications

- Set-Top Box, IPTV box
- VCR, DVD players
- Game consoles

Benefits

- True **single chip** DVB-T receiver :
 - Lowest footprint
 - Optimized cost structure
- Excellent **performance** :
 - Exceeds Nordig 2.0 , D-Book V5 requirements
 - Robust behavior in field test conditions
- Low Bill of Material :
 - Zero-IF tuner architecture does not need any SAW and IF filters.
 - Clock output can feed the motherboard.

Features

- VHF operation (170 – 240MHz)
- UHF operation (470 – 860 MHz)
- Zero-IF tuner with on chip tank circuits – no external varicaps, inductors or tuned components required.
- 6/7/8 filter bandwidth
- XTAL or external clock frequency : 13-36 MHz
- Superior adjacent channel rejection
- Software-defined-Radio architecture for the demodulator; the performances are tuned by software
- FFT : 2K/8K
- Modulation : QPSK/16 QAM/64 QAM
- I/Q mismatch compensation
- Frequency and phase offset compensation
- Advanced noise cancellation techniques
- Self adaptive behavior to input signal characteristics
- Physical interfaces : serial TS, SPI

Evaluation Tools

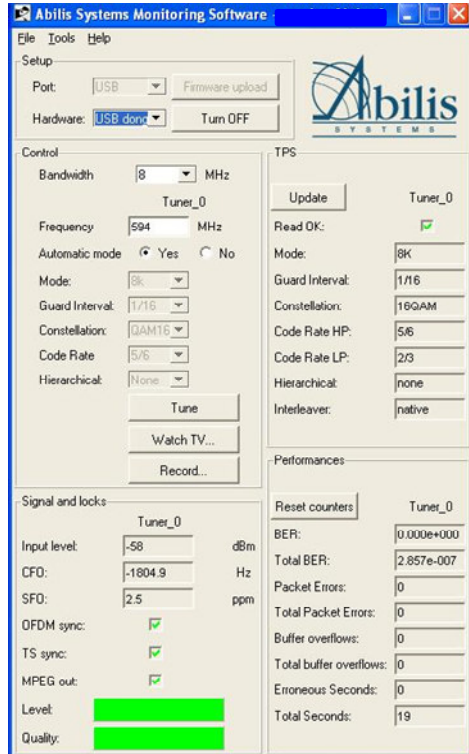


Fig 3 : Evaluation tool

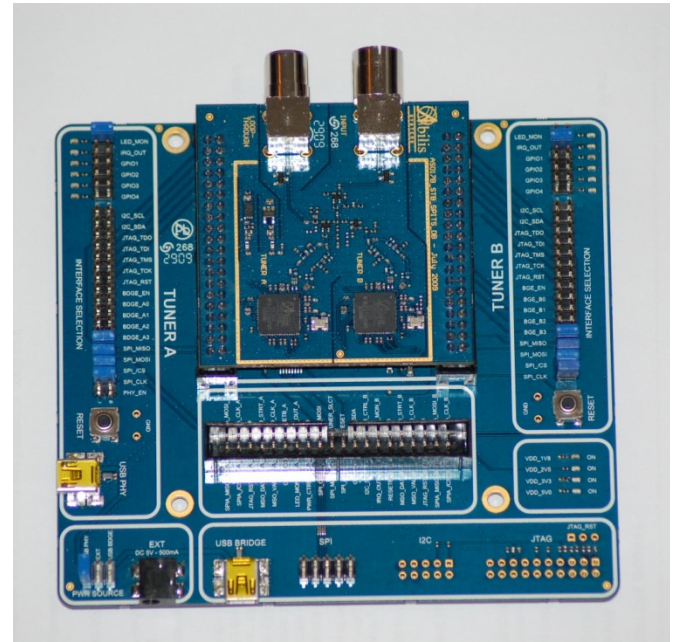


Fig 4 : Evaluation Board

An evaluation board provides the ability to test chip performance in your lab or in the field. Software is also provided to easily set-up the chip in any condition and to display performance data, such as BER, PER and so on. Alternatively, Abilis can provide a library of Linux API to drive the board from your own test environment.

Reference Designs

Abilis Systems delivers ready-to-manufacture reference designs, hardware schematics and software source code, customized for each application.

In particular, Abilis can deliver reference designs of single or dual-tuner NIM (Network Interface Module) for embedded applications. With ODM partners, Abilis can also directly deliver finished goods.