

Overview

The ATON™ AS-102 is a complete multi-band receiver chip solution dedicated to DVB-T applications. Providing everything from the antenna to the MPEG transport stream data, it has various physical interfaces, including USB for PC centric applications and TS (transport stream) for STB or IDTV applications.

It is implemented in advanced CMOS technology to achieve lowest cost, lowest power and smallest system footprint. The AS-102 is based on Software Defined Radio (SDR) techniques, using adaptive algorithmic techniques to maintain highest video quality while minimizing power consumption.

Two packages are available, a cost effective QFN package (9x9 mm) and an ultra small CSP package (5x5 mm).

Applications

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

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.

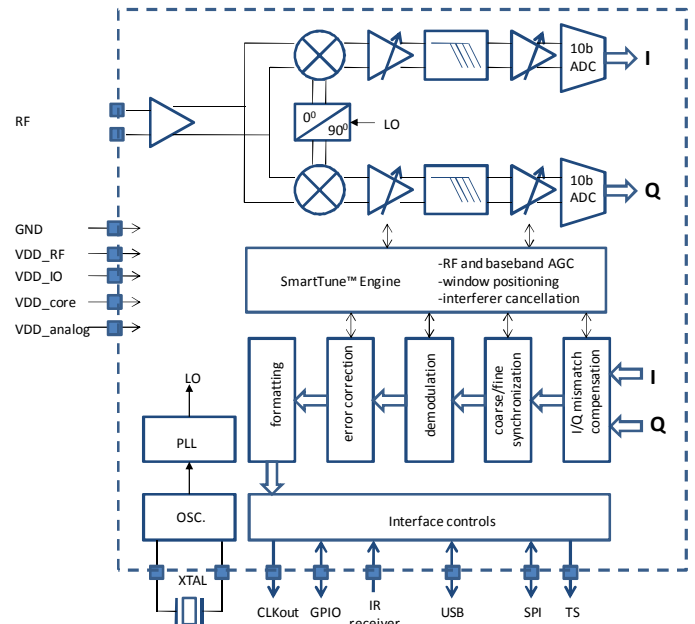


Fig 1 : AS-102 Functional Block Diagram

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 : USB, serial TS, SPI

Evaluation Tools

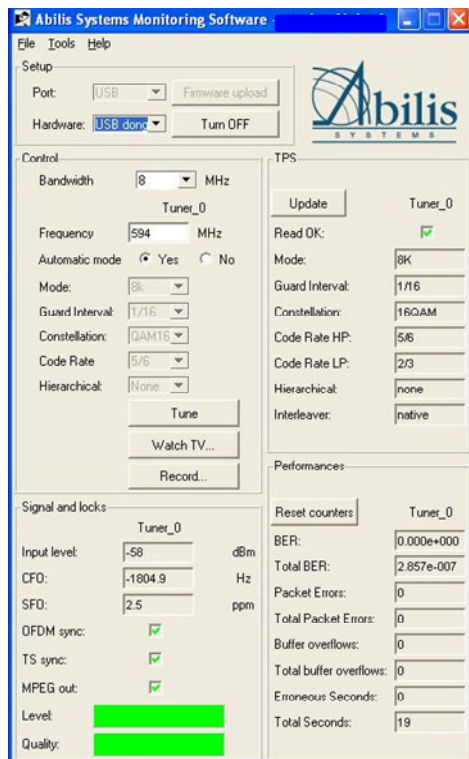


Fig 3 : Evaluation tool

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.

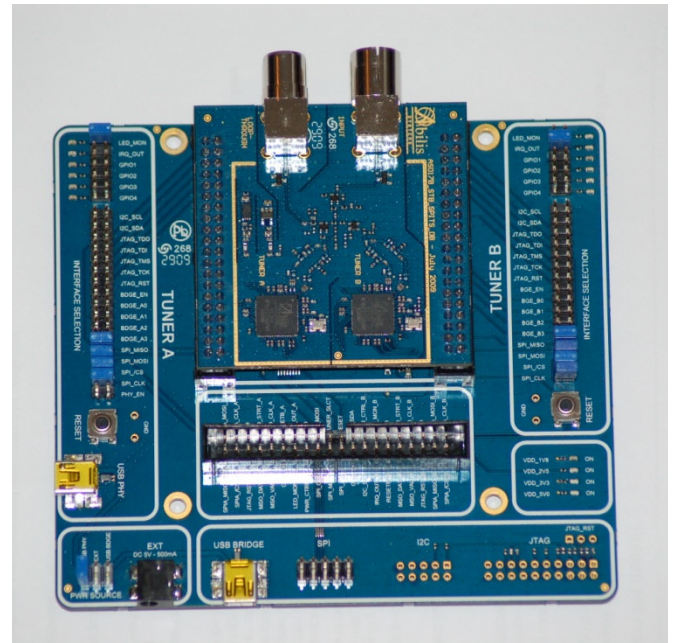


Fig 4 : Evaluation Board

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 and USB sticks for various form factor. With ODM partners, Abilis can also directly deliver finished goods.