

Overview

The ATON™ AT-810 is a direct conversion, highly integrated, single-chip tuner supporting many Digital Terrestrial TV standards such as DVB-T/T2/H, ISDB-T full-segment and DMB-TH. Although the operating power consumption (with active loop through output) is as low as 250mW, this chip exhibits unprecedented levels of performances. In particular, it combines both an excellent Noise Figure with very good immunity to interferers and very low PLL phase noise. Integrating all filters, it virtually needs no external components. With its tiny 4x4 mm LQFN package, it enables ultra small half NIM modules

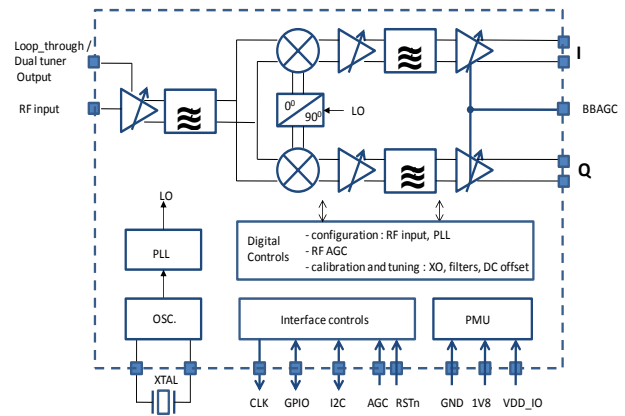


Fig 1 : AT-810 Functional Block Diagram

Applications

- Set-Top-Box, IPTV box
- VCR, DVD players
- Portable DTV receivers

Ordering Information

- AT810A11DQ1C (tape & reel)
- AT810A11DQ2C (tray)

Benefits

- Excellent **RF performances**, with single-ended input, direct conversion architecture :
 - Low Noise Figure
 - High selectivity and signal handling
 - 50 Ω or 75Ω input impedance
- Ultimate low **Bill of Material** cost :
 - 1x XTAL
 - 2x inductors, 9x decoupling caps
 - 2 layer PCB
- Extremely low **power consumption**
 - 250 mW
 - Stand-by and sleep modes
- **Easy to integrate** into any application
 - Small footprint
 - No RF critical external component
 - Straightforward control through I2C interface.

Features

- Zero-IF tuner with innovative new architecture to enhance the selectivity.
- 90 to 862 MHz frequency coverage
- 5, 6, 7 and 8 MHz filter bandwidth
- XTAL frequency : 24 to 63 MHz
- 1.8V power supply voltage
- Superior adjacent channel rejection, close to a CAN tuner
- Signal handling up to +10dBm
- DC offset removal and IQ mismatch compensation.
- Direct loop through output
- Support multi-tuner applications
- Physical interfaces :
 - I²C compatible bus, 3.3V tolerant
 - Clock output for the demodulator

Evaluation Board

The evaluation board (EVB) provides the ability to test the chip performance in your lab or in the field.

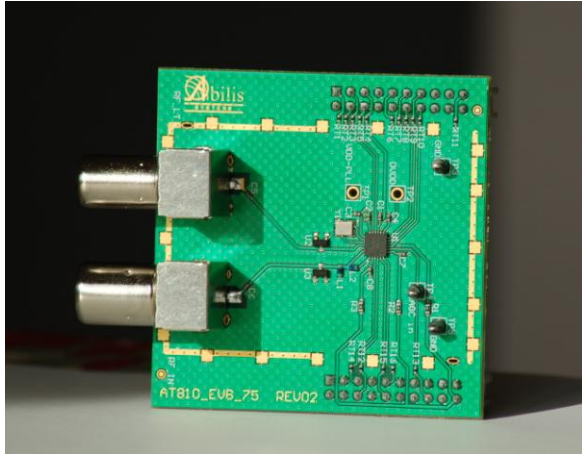


Fig 2 : AT-810 Evaluation Board

Evaluation Tool

Abilis Systems also provides a software tool ("DeEva") to easily set up and control the EVB.

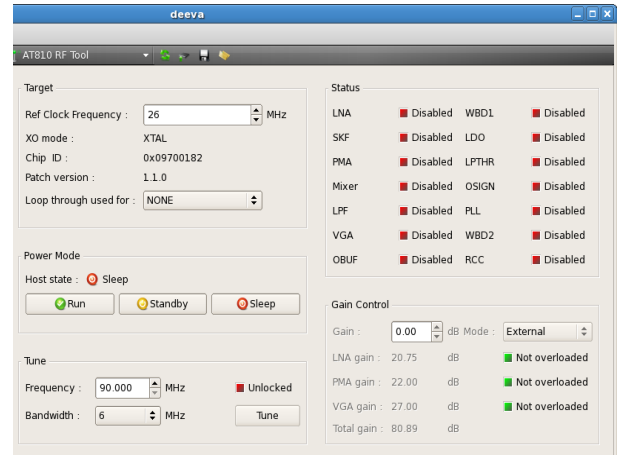


Fig 3 : DeEva Evaluation Tool

Reference Designs

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

In particular, Abilis delivers reference designs of a half NIM (Network Interface Module, tuner only) for embedded applications. Working with demodulator partners, Abilis also provides support for the development of full NIMs (tuner and demodulator).