

The AU8523 is a sophisticated demodulation IC for ATSC, digital cable, and legacy TV applications. The AU8523 includes an analog TV demodulator and independent audio processor. The AU8523 utilizes Auvitek's proprietary demodulation algorithms and adaptive signal-tracking architecture to offer market-leading receiver performance. Internally, the AU8523 consists of a fully compliant ATSC A/74 8-VSB demodulator, a 64/256 QAM demodulator, an NTSC analog TV demodulator, and a BTSC/A2/FM audio decoder. The AU8523 directly accepts IF or low IF from the RF tuner section via a 12-bit internal Analog-to-Digital Converter, and following demodulation and error correction, outputs MPEG-2 transport stream. The AU8523 is ideally suited for any DTV or PC-TV system that employs an external analog video decoder to support analog TV broadcast or legacy content alongside DTV reception.

## AU8523 FEATURES

- ◆ ATSC A/74 compliant 8-VSB demodulation
- ◆ OpenCable, ANSI/SCTE DVS-031, ITU-T J.83 Annex B, and DOCSIS compliant 64/256 QAM demodulation
- ◆ EIA/CEA-909 Smart Antenna IF
- ◆ Integrated 12-bit ADC
- ◆ Integrated -30dB range analog RF and IF AGC controllers
- ◆ Fully programmable IF frequency
- ◆ TS and PS MPEG inputs and outputs
- ◆ Dual I<sup>2</sup>C Bus support

## Audio TV Decoder:

- ◆ SIF and Mono audio inputs
- ◆ I<sup>2</sup>S (32/44.1/48kHz) audio output
- ◆ BTSC/A2/FM compliant decoding
- ◆ 3-band audio EQ
- ◆ On-chip MCLK

**Package:** 128-pin LQFP

## APPLICATIONS

- 1) HD/SDTV receivers
- 2) Set-top boxes
- 3) PC peripherals

**AU8523 BLOCK DIAGRAM**

