



AU8502 Product Brief ATSC/NTSC HDTV Demodulator

The AU8502 is a sophisticated demodulator IC for digital ATSC 8-VSB and analog NTSC/BTSC TV transmission, which builds on Auvitek's powerful and efficient demodulator algorithm and adaptive filter technology. The AU8502 is an ideal device for iDTVs, STBs and PC add-on products.

AU8502 FEATURES

Digital TV Demodulation:

- ◆ Built-in 30dB range analog AGC and 12-bit ADC
- ◆ Built-in Tuner RF and IF AGC controllers
- ◆ Programmable IF frequency
- ◆ ATSC compliant 8-VSB demodulation
- ◆ Transport Stream or Program Stream input/output in parallel or serial format
- ◆ Auto analog, digital channel detection and switching

Bus and Interface:

- ◆ I2S for audio input/output
- ◆ I2C Bus support (master/slave configurable)
- ◆ GPIO support

Package: 128-pin LQFP

Analog TV Processor:

- ◆ NTSC analog demodulation and audio/video separation filters
- ◆ TV decoder with 2-D comb filter
- ◆ VBI data slicer
- ◆ Supports up to four analog video inputs: CVBS and S-video
- ◆ Control of brightness, contrast, saturation and hue
- ◆ Three levels of Macrovision copy protection detection according to Macrovision detection specification Rev.1
- ◆ Adaptive anti-alias filtering and versatile filter bandwidth selection
- ◆ Video output in ITU656 format

Audio Processor:

- ◆ BTSC TV sound decoder
- ◆ Audio output configurable in Digital or Stereo audio format
- ◆ On-chip MCLK ($256 \cdot F_s$) output

APPLICATIONS

- 1) HD/SDTV
- 2) Set-top boxes
- 3) STB/DVD players
- 4) PC USB device

AU8502 BLOCK DIAGRAM

