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**AU8800**

Single-Chip HDTV Demodulator for CTTB (DTMB) Multi-Carrier Modes

The AU8800 is a high-performance, fully CTTB (DTMB) GB20600-2006 (multi-carrier) compliant channel decoder supporting all multi-carrier digital terrestrial TV broadcast modes and standards for the Hong Kong and China market.

**Description**

The AU8800 is a high-performance, fully CTTB (DTMB) GB20600-2006 (multi-carrier) compliant channel decoder, supporting all multi-carrier digital terrestrial TV broadcast modes and standards for the Hong Kong and China market. The AU8800 is based on a unique patent-pending architecture called FADE™ (fully adaptive demodulation and equalization), which enables the AU8800 to provide the “best in class” multi-carrier performance among all demodulators in the CTTB receiver market. The AU8800 is not only a high-performance SOC but also enables a cost-effective bill-of-material by integrating additional components such as a high-speed 12-bit ADC, programmable IF input, automatic mode detection circuit and memory. Its integrated memory removes the burden of sourcing DRAM from the spot market.

**AU8800 Key Features and Performance****Key Features**

- Compliant with CTTB (DTMB) GB20600-2006 multi-carrier mode (only)
- Serial and parallel transport stream (TS) output
- Dual I2C interface (master/slave)
- On-chip DSP can real-time optimize receiver performance
- Pin-compatible with AU8810 CTTB (DTMB) GB20600-2006 single-carrier mode (only) demodulator
- Pin-compatible with AU8820 CTTB (DTMB) GB20600-2006 single and multi-carrier mode demodulator
- Integrated memory – no need for external DRAM

**Performance**

- Excellent multipath performance
- Excellent SFN (single frequency network) performance
- Fast auto channel search and detection
- Optimized for best performance in all conditions (fading, echoes, impulse noise, etc.)

**Package & Power**

- 80 pin LQFP package (10mm x 10mm)
- Typ. Power: <600 mW
- Low standby power: <20mW
- Compliant to RoHS and GADSL

## AU8800 Target Segments

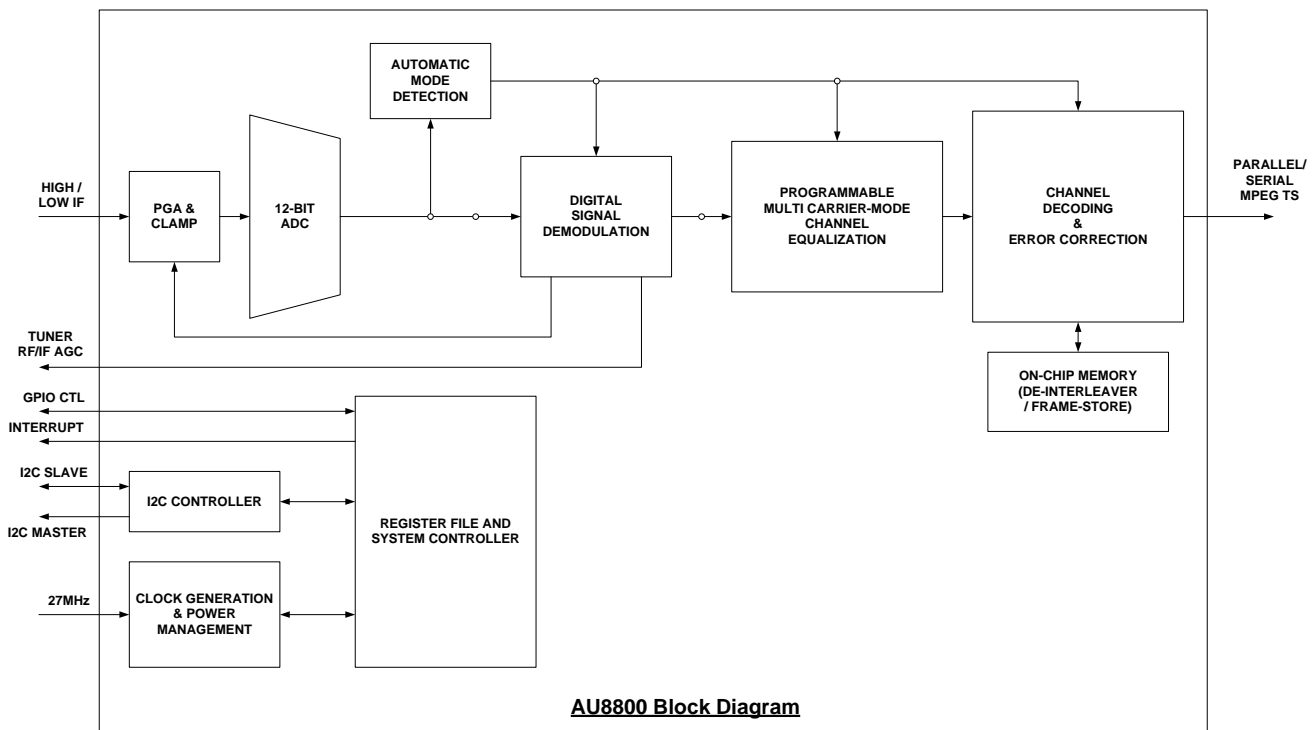
- Set-Top Boxes
- PC-TV for Laptops and Desktops

## Description

The AU8800 directly accepts either low or high IF inputs from either silicon or can tuner modules and is fully programmable. Both RF and IF tuner AGC outputs are precisely controlled by the AU8800 in order to maximize channel demodulation performance. For GB20600-2006 compliant multi-carrier formats, the AU8800 utilizes a proprietary, highly segmented equalizer architecture to achieve the best possible dynamic echo cancellation performance. The channel demodulator supports all GB20600-2006 multi and single-carrier modes with no external memory required. Decoded MPEG transport streams are available in both serial and parallel formats.

For ease of system integration, the AU8800 includes an I2C compatible control interface.

## Block Diagram



## Related Documents

- PB-00170 – AU8800 Product Brief (This document)
- DS-00130– AU8800 Data Sheet

## Contact and Ordering Information

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