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AU8820

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

The AU8820 is a high-performance, fully CTTB (DTMB) GB20600-2006 compliant channel decoder supporting all digital terrestrial TV broadcast modes and standards for the China and Hong Kong markets.

Description

The AU8820 is a high-performance, fully CTTB (DTMB) GB20600-2006 compliant channel decoder supporting all digital terrestrial TV broadcast modes and standards for the China and Hong Kong markets. The AU8820 is based on a unique patent-pending architecture called FADE™ (fully adaptive demodulation and equalization), which enables the AU8820 to provide the “best in class” performance among demodulators in the CTTB receiver market. In addition, the AU8820 is a highly integrated SOC consisting of a high-speed 12-bit ADC, programmable IF input, automatic mode detection circuit and memory to enable a low bill-of-material cost. Its integrated memory removes the burden of sourcing DRAM from the spot market.

AU8820 Key Features and Performance**Key Features**

- GB20600-2006 compliant CTTB (DTMB) HDTV demodulator
- All Single and Multi carrier modes supported
- Dual I2C interface (master/slave)
- Serial and parallel transport stream (TS) output
- On-chip DSP can real-time optimize receiver performance
- Pin-compatible with AU8800 CTTB (DTMB) GB20600-2006 multi-carrier mode (only) demodulator
- Pin-compatible with AU8810 CTTB (DTMB) GB20600-2006 single-carrier mode (only) demodulator
- Pin-compatible with AU8824 integrated CTTB (DTMB) GB20600-2006 and DVB-C 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

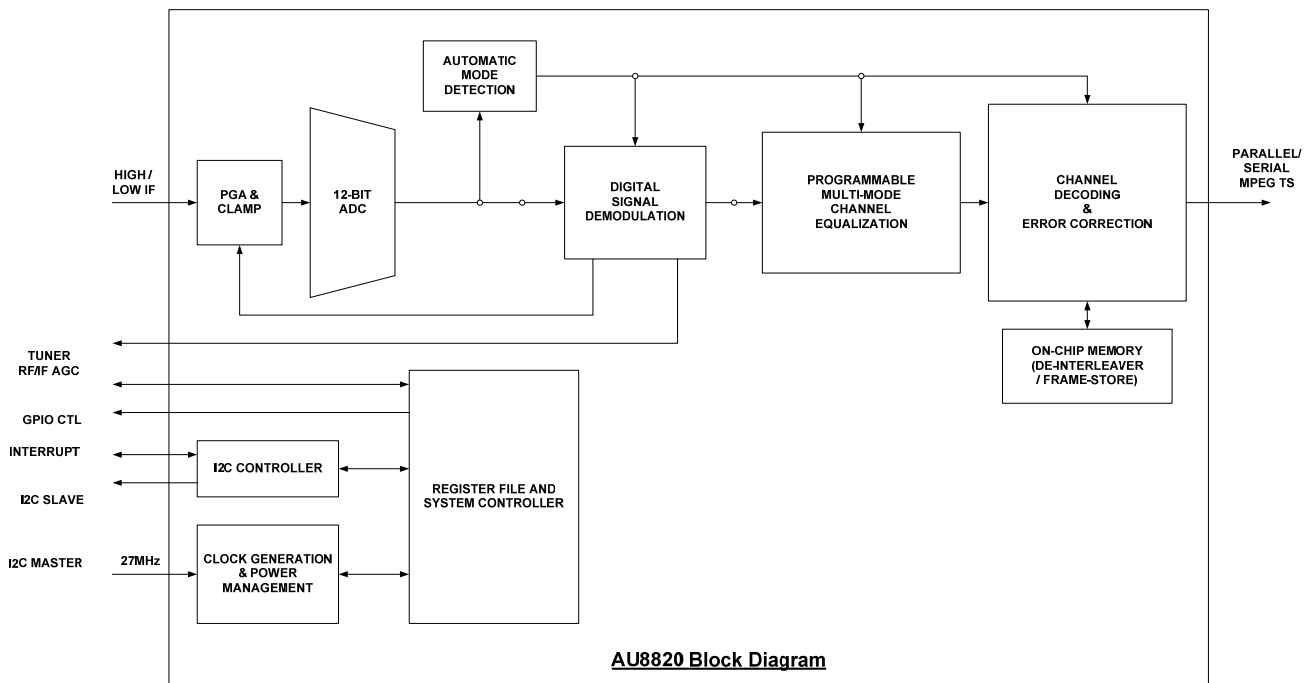
AU8820 Target Segments

- Flat Panel HDTV's
- Set-Top Boxes
- DVD Players / Recorders
- PC-TV for Laptops and Desktops
- Static A/V CE devices
- Portable A/V CE devices

Description

The AU8820 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 AU8820 in order to maximize channel demodulation performance. For GB20600-2006 compliant formats, the AU8820 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 AU8820 includes an I2C compatible control interface.

Block Diagram



Related Documents

- PB-00172 – AU8820 Product Brief (This document)
- DS-00125– AU8820 Data Sheet

Contact and Ordering Information

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