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**AU8824**
**Integrated Single-Chip CTTB (DTMB) and DVB-C HDTV Demodulator**

The AU8824 is a highly integrated, fully GB20600-2006 and ITU-T J.83 Annex A/C compliant, high-performance CTTB (DTMB) and DVB-C demodulator supporting all digital terrestrial TV and cable broadcast modes and standards for the China and Hong Kong markets.

**Description**

The AU8824 is a highly integrated, fully GB20600-2006 and ITU-T J.83 A/C compliant, high-performance CTTB (DTMB) and DVB-C demodulator supporting all digital terrestrial TV and cable broadcast modes and standards for the China and Hong Kong markets. The AU8824 is based on a unique patent-pending architecture called FADE™ (fully adaptive demodulation and equalization), which enables the AU8824 to provide the “best in class” performance among demodulators in the CTTB (DTMB) receiver market. In addition, the AU8824 integrates a DVB-C demodulator that fully meets the requirements of the China market. AU8824 integrates 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.

**AU8824 Key Features and Performance**

Key Features
<ul style="list-style-type: none"> <li>▪ GB20600-2006 compliant CTTB (DTMB) HDTV demodulator</li> <li>▪ All Single and Multi carrier modes supported</li> <li>▪ DVB-C ITU-T J.83 Annex A / C compliance</li> <li>▪ Serial and parallel transport stream (TS) output</li> <li>▪ Dual I2C interface (master/slave)</li> <li>▪ On-chip DSP can real-time optimize receiver performance</li> <li>▪ Pin-compatible with AU8820 CTTB (DTMB) GB20600-2006 demodulator</li> <li>▪ Integrated memory – no need for external DRAM</li> </ul>
Performance
<ul style="list-style-type: none"> <li>▪ Excellent multipath/SFN performance</li> <li>▪ Fast auto channel search and detection</li> <li>▪ Optimized for best performance in all conditions (fading, echoes, impulse noise, etc.)</li> <li>▪ Auto detection of spectrum inversion</li> </ul>
Package & Power
<ul style="list-style-type: none"> <li>▪ 80 pin LQFP package (10mm x 10mm)</li> <li>▪ Typ. Power: &lt;600 mW</li> <li>▪ Low standby power: &lt;20mW</li> <li>▪ Compliant to RoHS and GADSL</li> </ul>

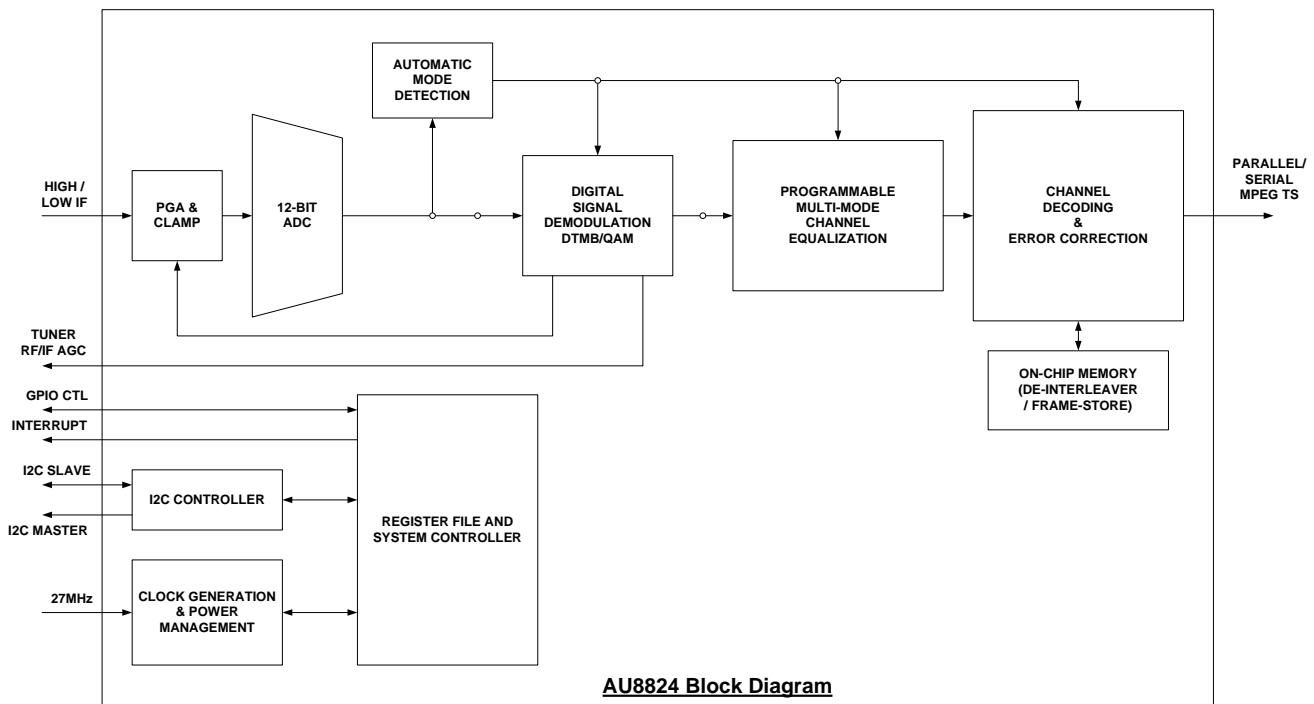
## AU8824 Target Segments

- 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 AU8824 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 AU8824 in order to maximize channel demodulation performance. For GB20600-2006 compliant formats, the AU8824 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. AU8824 supports all DVB-C modes required for the China and Hong Kong markets. Decoded MPEG transport streams are available in both serial and parallel formats. For ease of system integration, the AU8824 includes an I2C compatible control interface.

## Block Diagram



## Related Documents

- PB-00174 – AU8824 Product Brief (This document)
- DS-00119– AU8824 Data Sheet

## Contact and Ordering Information

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