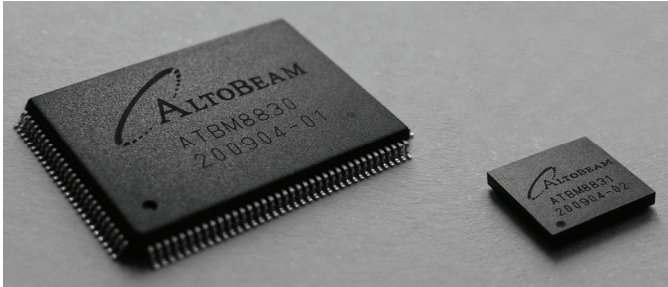




# ATBM8830 / ATBM8831

## Low-power and high-performance DTMB full modes demodulator

### Product Brief



#### Full DTMB demodulation

- 3780 carriers and single carrier
- QPSK/4QAM-NR/16QAM/32QAM/64QAM
- FEC rates of 0.4, 0.6 and 0.8
- Guard internals of PN420, PN595 and PN945
- Time de-interleaver depth M=240 and M=720
- Modulation mode automatic detection

#### General description

- Compliant to GB20600-2006, China Digital Terrestrial Broadcasting Standard
- Supporting demodulation of single-carrier and multi-carrier modes
- Supporting high IF, low IF and I/Q input, compatible with CAN tuners and silicon tuners
- TS output in parallel or serial format
- Pin compatible with other AltoBeam LQFP/BGA demodulator chips

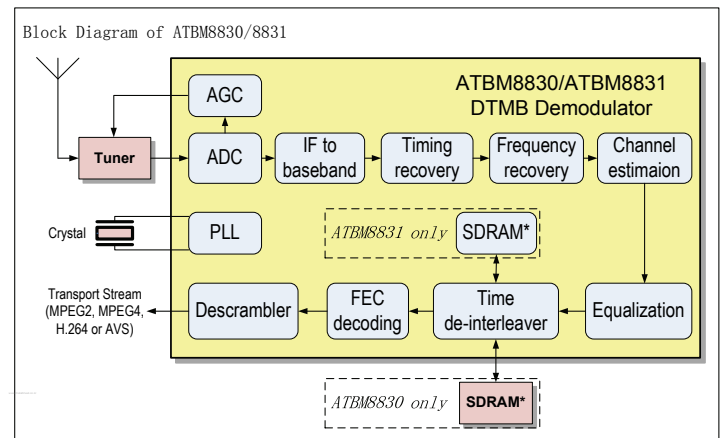
#### Advantages

- High performance in both multi-carrier and single-carrier modes
- Rapid PLL lock and channel changing
- Outstanding multipath and pre-echo performance in SFN environment
- Very low power consumption
- Very simple software driver, easy to integrate

#### Applications

- iDTV, set-top-box, car receiver
- PCTV card and USB TV dongle
- Portable or handled TV receiver
- DTV testing or experiment equipment

#### Block Diagram and Technology



- 130nm CMOS process
- On chip 10-bit ADC
- On chip PLL, supporting external crystal at the frequency range of 28~32MHz
- On chip 64Mbit SDRAM (ATBM8831 only)
- Full I<sup>2</sup>C bus support. Isolate tuner from the I<sup>2</sup>C bus to avoid interference.
- Voltage supply: 1.2V (core), 2.5V/3.3V (I/O)
- Package: LQFP128 20×14×1.4mm<sup>3</sup> (8830)  
BGA100 8×8×1.3mm<sup>3</sup> (8831)
- Power consumption (typical):  
300mW (ATBM8830), 350mW (ATBM8831)

