



ATBM8859 ATBM8846E

Ultra-low-power and high-performance
combo DTMB/DVB-C demodulator

Product Brief

Generic features

- Compatible with low to high IF tuners and I/Q baseband silicon tuners
- High-performance integrated ADC for direct IF architecture in all QAM modes
- Built-in PLL, supporting either external crystal or oscillator
- Built-in 64Mbit SDRAM for de-interleaver
- Ultra low power consumption and multi level power saving modes

DTMB demodulation

- Full compliance with GB20600-2006
- Full compliance with requirements of the GB/T 26683-2011 and GB/T 26686-2011
- Channel impairments management:
 - Built-in reception quality indicators
 - Impulsive noise rejection capable
 - Outstanding adjacent and co-channel rejection capability with integrated and flexible digital channel filtering
 - High-performance digital carrier, timing and symbol recovery loops
- Performance advantages
 - Rapid PLL lock and channel changing
 - Outstanding multipath and pre-echo performance in SFN environment
 - High speed mobile receiving

DVB-C demodulation

- Full compliance with GY/T 170-2001
- 16, 32, 64, 128 and 256QAM
- Variable symbol rates
- Front de-rotator for better low symbol rate performance and relaxed tuner constraints
- Integrated matched filtering
- Fast signal acquisition

Interfaces

- Full I²C bus support, with I²C pass-through feature to isolate tuner from the I²C bus to avoid interference
- Flexible and diversified forms for serial or parallel TS output interface

Technology

- 55nm CMOS process
- Multi supply
 - Core: 1.2V
 - Analog: 3.3V
 - Digital interface: 3.3V
- Chip package: 48pin QFN
- Size dimension: 7×7×0.85 mm³
- Power consumption:
 - Working mode: 312 mW
 - Standby mode: 66 mW
 - Suspend mode: 33 mW

Applications

- iDTV, Set-top-box and car receiver
- DTV NIM module
- DTV testing and detection equipment
- Portable or handled TV receiver
- PCTV card and USB TV dongle
- DTV extension module for digital device

