

MXD1325 Product Brief

GB20600-2006 Demodulator

(Version 1.1)



1. Overview

MXD1325 is a high performance demodulator IC fully compliant with China Digital Television Terrestrial Broadcasting (GB 20600-2006) standard and satisfying the stringent performance requirements of the General Specification for Terrestrial Digital Television Receivers (nation standard draft by MII). It supports all 330 modes defined in the standard, including both the single-carrier and multi-carrier modulation modes. The MXD1325 is housed in a 128-pin QFP package with integrated analog-to-digital converter.

The MXD1325 can be used in Set-Top Box or DTV set for terrestrial digital TV reception.

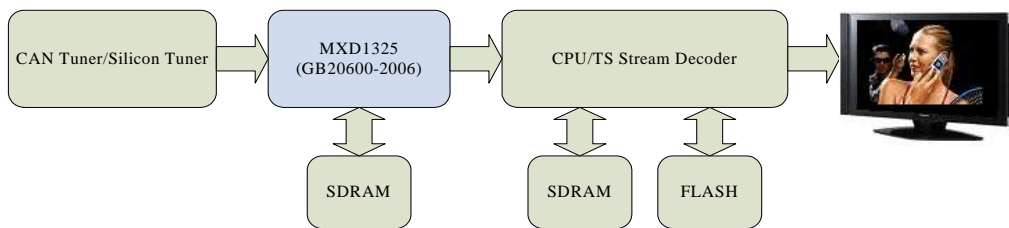


Figure 1-1 MXD1325 Application System

2. Features

- Fully support China Digital TV Terrestrial Broadcasting System Standard (GB20600-2006)
- Satisfy the performance requirements of the General Specification for Terrestrial Digital Television Receivers (nation standard draft by MII)
- Support all 330 modes defined in GB20600-2006
- Support both single-carrier (C=1) and multi-carrier (C=3780) modes
- Sub-carrier modulation: 4QAM-NR, 4QAM, 16QAM, 32QAM, 64QAM
- Forward Error Correction Coding Rate: 0.4, 0.6, 0.8
- Symbol de-interleave : 240, 720
- Guard Interval: 420 (fixed/rotate phase), 595, 945 (fixed/rotate phase)
- Automatic transmission mode detection
- Superior multi-path reception performance with proprietary fast channel estimation
- Handle 0dB echo up to 200us (mode dependent)
- Robust and fast channel tracking ability under dynamic environment
- High immunity to co-channel and adjacent channel interference
- Strong single tone interference rejection capability
- Strong impulse interference rejection capability
- Excellent capability to compensate and track sampling rate offset and carrier frequency offset
- Integrated low power dual-channel 10-bit ADC
- Support of ZIF, LIF and IF input from tuner
- I2C master and PDM AGC for tuner control
- Flexible host interfaces including MPEG2-TS serial/parallel and I2C
- Ultra compact package: 128pin LQFP(14x14x1.4mm³)
- Low power consumption: < 200mW (including ADC)