

# **MXD0325 Product Brief**

## **GB20600-2006 Demodulator**

(Version 1.2)

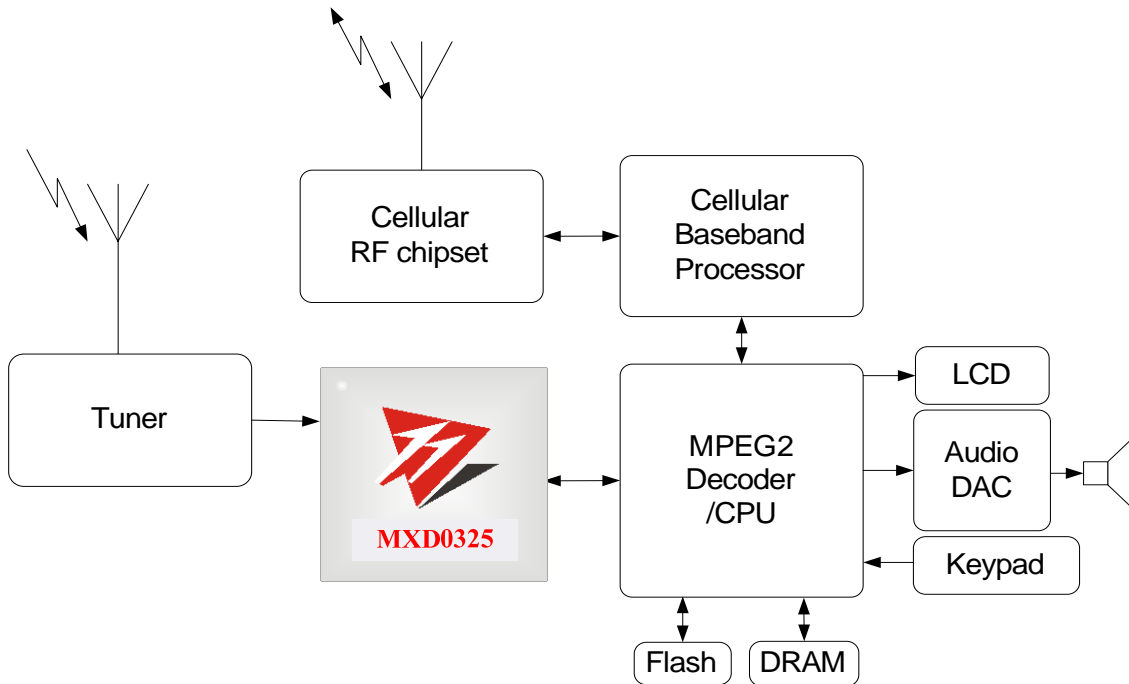


# 1. Overview

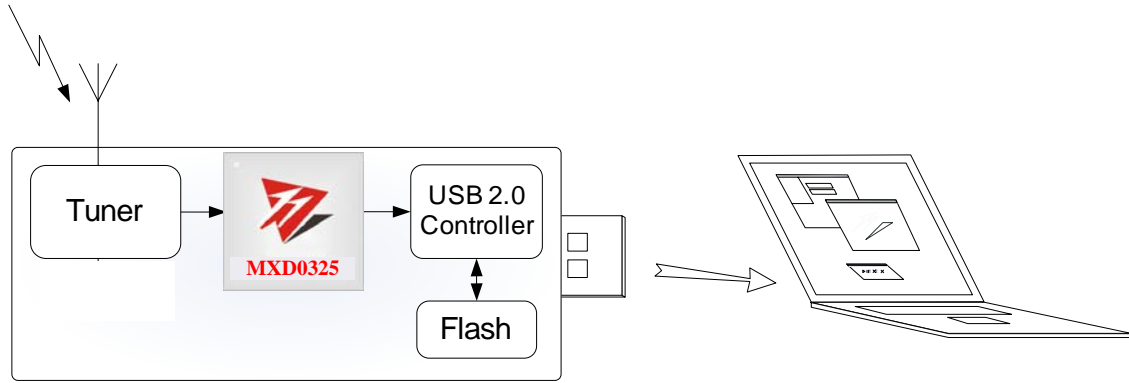
MXD0325 is a high performance demodulator IC fully compliant with China Digital Television Terrestrial Broadcasting (GB 20600-2006) standard and satisfying the stringent performance requirements of the General Specification for Terrestrial Digital Television Receivers (nation standard draft by MII). It supports all 330 modes defined in the standard, including both the single-carrier and multi-carrier modes. Housed in an 80 ball BGA package, the MXD0325 demodulator integrates analog-to-digital converter and all necessary memories.

The MXD0325 can be used in mobile devices such as portable multimedia player, USB dongle and mobile phone, etc.

Figure 2-1 shows a typical mobile phone application with MXD0325 while Figure 2-2 demonstrates the use of MXD0325 in a USB dongle application.



**Figure 1-1 MXD0325 Mobile Phone Application System**



**Figure 1-2 MXD0325 USB Dongle 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 one low power SDRAM
- 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 SPI, SDIO, MPEG2-TS serial/parallel and I2C
- Ultra compact package: 80 pins BGA (7x7x1.12mm<sup>3</sup>)
- Low power consumption: < 250 mW (including ADC and SDRAM)