



## FM2050

JANUARY 2008

### DVB-T / Analog Demodulator for PC and TV Applications

#### OVERVIEW

The FM2050 is a single-chip, low-power DVB-T and universal analog (NTSC/PAL/SECAM) demodulator enabling consumers to experience true broadcast TV quality on DTVs, set-top boxes, DVD-Rs, DVRs and PCs. The chip leverages the company's breakthrough *agileSP™* architecture which eliminates the part-to-part variation common in existing demodulator implementations, enabling significant system cost reduction and design simplification. Offering the broadest reception coverage, the FM2050 is designed to exceed the performance requirements of the NorDig Unified 1.0.3 specification, as well as other existing standards including ETSI 300 744 DVB-T.

The chip delivers unmatched performance on key analog demodulation benchmarks and provides differentiated performance in dynamic echo and multi-path conditions, such as those encountered in various terrains, structural and Single Frequency Networks (SFN). An impulse noise suppressor noticeably minimizes effects from typical environmental disturbances.

Delivering significant system cost reduction, the FM2050 achieves new levels of integration, eliminating the need for a Programmable-Gain Amplifier (PGA) and all SAW filters. Offering front-end flexibility, the FM2050 allows a direct connection to low-cost IF silicon or "CAN" tuners for PCTV and broad TV applications. The chip provides CVBS and a SIF audio output for legacy analog reception.

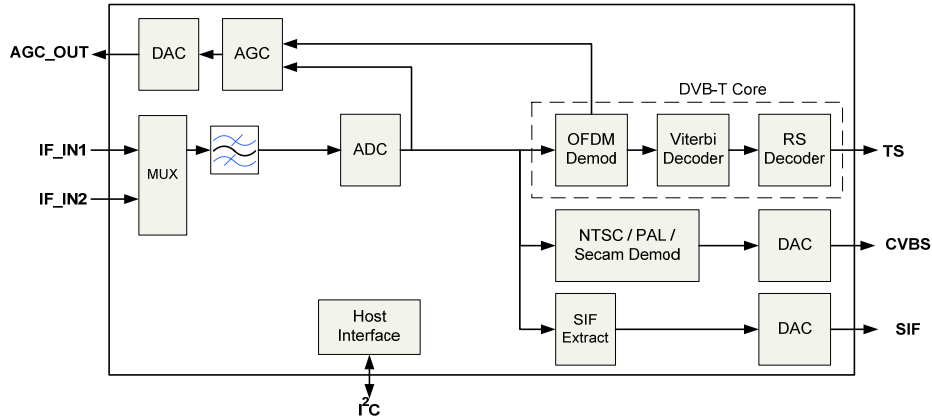
All clock synthesis is referenced to a single external crystal. FM2050 operates on external 1.2V and 3.3V power supplies.

#### FEATURES

- High Performance DVB-T Demodulator
  - NorDig Unified and ETSI 300 744 DVB-T compliant
  - Proven field performance
  - Co-channel Interference algorithms
  - Exceptional performance in Adjacent Channel Interference conditions (digital / analog)
  - Enhanced Impulse Noise Suppression
  - Flexible Channel bandwidth - 6 / 7 / 8 MHz
- Superior Analog Demodulator performance
  - Universal (NTSC/PAL/SECAM) terrestrial and cable support
  - Excellent SNR
  - Precise SIF separation
- Highly integrated, lowest bill of materials
  - Integrated SAW Filter and PGA functionality. No SAW filters required.
  - Low cost IF Tuner compatibility
- Simple programming model
  - Autonomous detection of all DVB-T / analog modes
  - I<sup>2</sup>C Host Interface
- 48-pin QFN package
- Low-power. 500 mW operation

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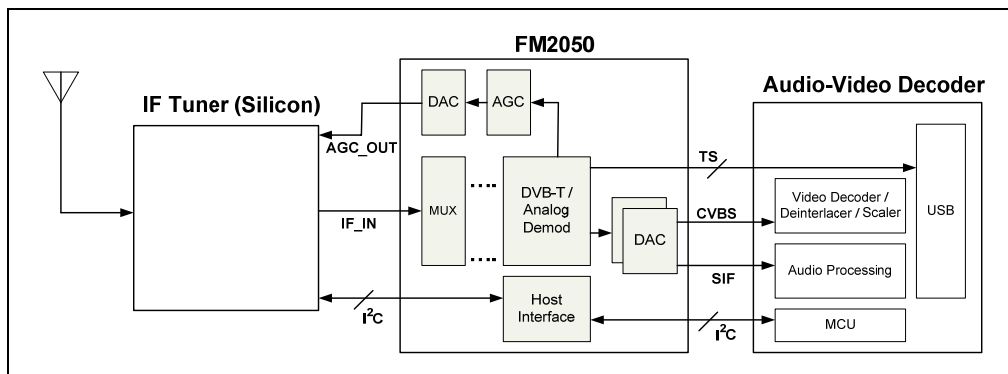


## APPLICATIONS

The FM2050, together with a discrete IF-tuner provides a simple Hybrid (Analog + Digital) television front-end receiver solution. Combined with an application-specific backend, FM2050 is designed to enhance the consumer television viewing experience across a broad spectrum of platforms including:

- Hybrid USB PC TV Dongles
- PCI/PCIe, Mini-card and Add-in Card based PC TV Tuners
- NIM Tuner Modules
- Televisions
- DVD-Rs and DVRs
- Portable video platforms

**SYSTEM BLOCK DIAGRAM: HYBRID USB PC TV TUNER**



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