

Product Brief

Intel® CE 6250 Dual-Channel COFDM Demodulator

Demodulators and Tuners

Applications

- DVB-T PVR set top boxes
- DVB-T integrated digital TVs
- PC DVB-T receiver cards

Intel® CE 6250 Dual Channel COFDM Demodulator



Product Overview

The Intel® CE 6250 device is a two-channel COFDM demodulator. Each channel is compliant with worldwide DVB-T digital terrestrial television standards, including NorDig Unified 1.0.2. The Intel CE 6250 demodulator supports two key features required for the set top box and integrated digital television market segments: Watch-and-Record, also known as personal video recording (PVR), and Picture-in-Picture (PIP). Each Intel CE 6250 channel is based on the Intel® CE 6353 DVB-T demodulator, which provides very high field performance with power consumption of less than 260 mW and small package size—10x10 mm 80-pin LQFP.

Dual Channel COFDM Terrestrial Demodulator

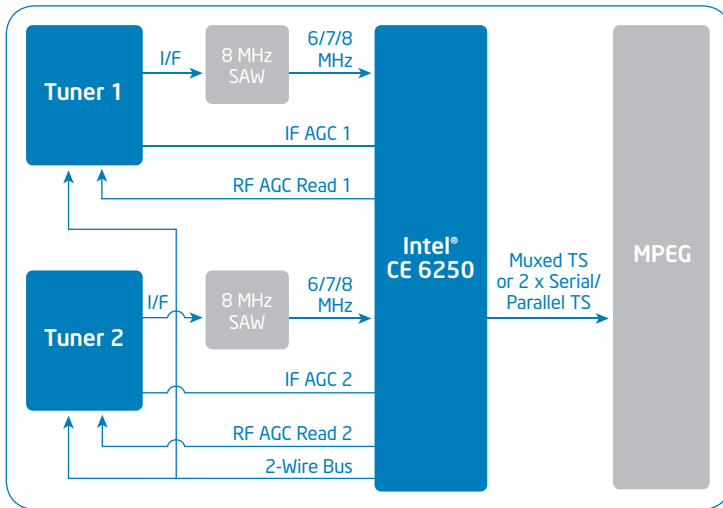
The device's two channels are fully independent, with individual tuner IF inputs and transport stream outputs and each can be programmed separately. The transport stream outputs support either serial or parallel formats, and each includes PID filtering. The transport streams can be multiplexed into a single transport stream output for MPEG decoders that support this feature.

Digital filtering is provided for adjacent channel rejection, and this enables a single fixed-bandwidth IF channel filter to be used for 6, 7 and 8 MHz OFDM bandwidth reception. An on-chip state machine controls automatic adjacent- and co-channel interference signal protection, Doppler tracking and impulse noise rejection.

The Intel CE 6250 demodulator provides all essential signal parameters including signal level, signal-to-noise ratio (SNR), pre- and post-Viterbi bit error rate and block error rate. A high-level command-driven interface simplifies programming. A sophisticated engine controls all acquisition and tracking operations in addition to controlling the tuners via a 2-wire bus.

The device is packaged in a 10x10 mm 80 pin LQFP and consumes less than 260 mW.

Application Diagram



- Blind acquisition capability (including 2K/8K mode detect)
- Fast auto-scan and acquisition technology
- Single SAW operation on 6, 7 & 8 MHz OFDM
- IF sampling at 36.17, 43.5 or 5-10 MHz from a single crystal frequency
- Access to channel SNR, pre- and post-Viterbi bit error rates
- On-chip PLL clock generation using a single low cost 20.48 MHz crystal
- 8 general-purpose ports: 2 dedicated and 6 shared-function
- Operational temperature range -10° to 80°C
- Compact 10x10 mm 80-pin LQFP

Product Features

- Dual channel DVB-T COFDM demodulator for:
 - Watch and record (PVR) applications
 - Picture-in picture (PIP) applications
- Dual parallel/serial MPEG stream output with:
 - Optional PID filtering
 - Transport stream multiplexing to single MPEG port
- NorDig Unified 1.0.2 and ETSI 300 744 compliant
- Superior single-frequency network performance
- On-chip state machine:
 - Active-impulse noise filtering
 - Automatic co-channel and adjacent-channel interference suppression
 - Fast AGC and good Doppler performance for portable applications
 - Large frequency-capture range to enable triple offsets

Customer Support

Contact your current sales representative for availability and customer support details.

- Hardware and software development for Intel CE 6250 applications is supported by the Intel CE 9529 Reference design.

For more information, visit the Intel Consumer Electronics home page at: www.intel.com/go/consumerelectronics



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