

Product Brief

Intel® CE 6355
DVB-T Demodulator
Consumer Electronics

Small-package Version of Intel's DVB-T COFDM Terrestrial Demodulator



Product Overview

The Intel® CE 6355 DVB-T COFDM demodulator fully meets the performance requirements of the NorDig Unified 1.0.2 standard. The Intel® CE 6355 DVB-T device is pin compatible with the Intel CE 6353 DVB-T terrestrial demodulator and is housed in a 7x7mm 64-pin QFP (quad flat pack) package, one of the smallest available. Designed specifically for space-restricted applications such as PC-TV and handheld portable TV modules, the Intel CE 6355 DVB-T also offers a wide operating temperature range of -40 to +85°C.

The Intel CE 6355 DVB-T demodulator includes a high-performance 10-bit A/D converter capable of accepting direct IF integrated digital filtering and requires only a single 8 MHz channel SAW filter for 6, 7 and 8 MHz COFDM signal reception, plus a 7-bit ADC RF level indicator. An advanced hard-wired on-chip state machine controls all acquisition and tracking operations, minimizing software overhead and resulting in fast auto-scan and auto-signal re-acquisition. The Intel CE 6355 DVB-T demodulator

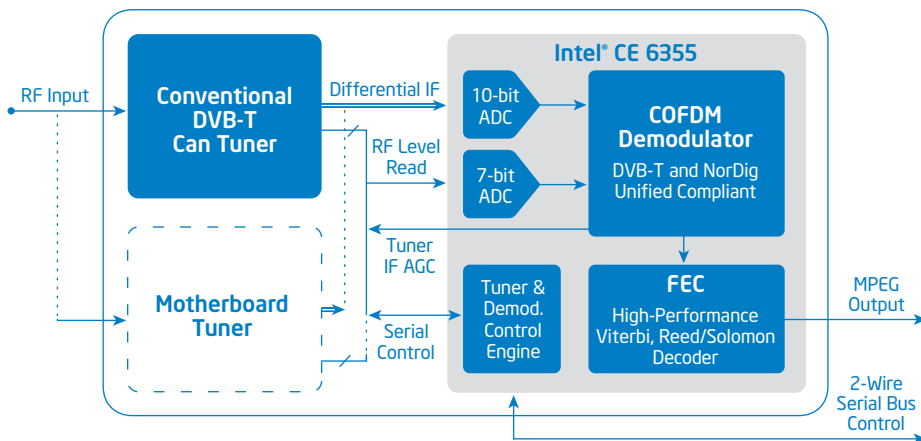
also features excellent single-frequency network SFN performance, unique auto-active impulse noise filtering and very low power consumption, including software/hardware power-down mode.

Terrestrial Receiver Application

Intel supports the Intel CE 6355 COFDM demodulator reference designs with silicon motherboard tuners. These reference designs allow you to quickly evaluate and implement the DVB-T standard for your terrestrial applications. Each board includes complete documentation and test results, with software supported directly by Intel.

The Intel CE 6355 DVB-T demodulator accepts the classic TV IF frequencies of 36/44 MHz and low IF down to 4.57 MHz. The demodulator provides tuner IF AGC control, and the RF AGC control is read by a 7-bit ADC for calculated RF signal-strength indication. The Intel CE 6353 DVB-T demodulator's integrated digital filter reduces the bill of materials by eliminating the need for multi-bandwidth SAW IF channel filters. It provides 6, 7 and 8 MHz operation using a single 8 MHz SAW filter. Driven by high-level commands and featuring full automation, the Intel CE 6355 DVB-T demodulator can be directly interfaced in parallel or serial modes to all standard MPEG-2 processing chips.

Terrestrial Receiver Application Diagram



Product Features

Intel® CE 6355 DVB-T Demodulator

- Performance compliant standards
 - ETSI ETS 300 744 DVB-T
 - NorDig Unified 1.0.2
- Very fast blind-channel scan times
 - UHF 2K only—9 digital with 5 analog channels present—less than 10 sec.
 - UHF 2K/8K only—9 digital with 5 analog channels present—less than 18 sec.
- On-chip automatic functions
 - Lost signal re-acquisition with no external programming
 - Co-channel and adjacent-channel interference suppression
 - Active impulse noise rejection
- Low power consumption
 - Less than 320 mW normal operation
 - Less than 280 mW low power operation
 - Eco-friendly standby and sleep modes
- Excellent single-frequency network SFN performance
- Small 7x7mm QFP package

Easy to Program

- State machine architecture simplifies software implementation and minimizes host processor intervention
- Simple high-level command-driven software
- Vast array of on-chip information available to the user
- Fully automated blind acquisition capability with automatic mode-detect

Simplified Design

- Integrated digital IF filtering reduces cost with single SAW filter operation
- On-chip RF signal-level indicator
- Dedicated 2-wire bus interface for efficient tuner control
- Clock generation from single low-cost 20.48 MHz crystal or external 4 or 27 MHz clock
- IF sampling from 4.57 to 36.17 MHz and at 43.5 MHz
- Direct interface to MPEG decoder chips
- Operational temperature range –40 to +85°C

Customer Support

- Offered with production-ready reference designs



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