

Product Brief

Intel® CE 6230 USB 2.0 COFDM Demodulator

Demodulators and Tuners

Applications

- DVB-T PC USB TV receivers
- DVB-T TV/Monitor add-on receivers
- Portable, mobile or hand-held TV display modules

DVB-T COFDM Terrestrial Demodulator for USB PC-TV



Product Overview

The Intel® CE 6230 USB 2.0 COFDM demodulator combines DVB-T demodulation with a USB 2.0 slave interface. The primary application is USB PC digital TV modules or “sticks.”

The demodulator is designed to meet the worldwide performance requirements for DVB-T, including NorDig Unified and DTG standards. The USB serial interface engine (SIE) is fully USB 2.0 slave mode-compliant and supports both USB 2.0 and USB 1.1.

The Intel CE 6230 demodulator features an integrated program identification (PID) filter, which enables a reduced data-transfer rate between the Intel CE 6230 device and the host PC, minimizing the PC software overhead and need to support this function. The PID filters may be turned off. The device includes two independent 2-wire bus driver outputs, one for the RF tuner and the second for 2-wire bus peripherals including an active antenna and EEPROM memory.

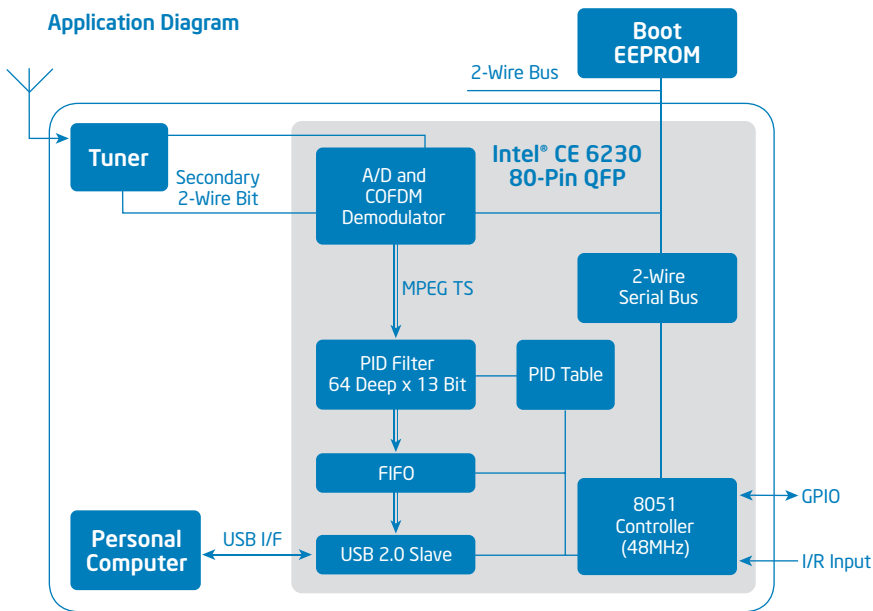
DVB-T USB Demodulator for PC-TV

Intel CE 6230 coded orthogonal frequency division multiplex (COFDM) television demodulator is compliant with NorDig Unified version 1.0.2 and DVB (ETS 300 744). It can be used in either 2K or 8K modes with 6, 7 or 8 MHz channels and is capable of addressing all modes of transmission.

The device includes a high-performance 10-bit A/D converter capable of accepting direct IF sampling at 36.17, 43.5 MHz or a low IF down to 4.57MHz from a single crystal frequency. Sampling rates required for these frequencies in 6, 7 or 8 MHz OFDM channels can be generated from a single 48 MHz crystal.

Blind acquisition mode enables automatic detection of all OFDM signal parameters, including mode, guard and spectral inversion. The frequency capture range is sufficient to compensate for up to ± 3 offsets (500 KHz) introduced by the tuner and broadcaster. The USB function is managed using a 8051 micro-controller that manages the I²C's, GPIO, RC and PID functions.

The device is packaged in an 80 pin LQFP and typically consumes less than 500 mW of power at the highest USB data transfer rate.



- IF sampling at 36.17, 43.5 MHz or a low IF down to 4.57MHz from a single crystal frequency
- Channel bandwidth of 6, 7 & 8 MHz from single SAW filter
- Blind acquisition capability (including 2K/8K mode detect)
- Automatic spectral inversion detection
- Fast auto-scan and acquisition technology
- Access to channel SNR, pre- and post-Viterbi bit error rates
- Compact 10x10mm 80-pin LQFP
- Less than 500mw, typical power consumption

Customer Support

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

- Software development for Intel CE 6230 applications is supported by the Intel® CE 9527 Software Development Platform.
- The Intel CE 6230 is supported by the Intel® CE 9500 PC-TV USB stick reference design as an example of an end product solution.



Product Features

- USB 2.0 slave (USB 1.1 compatible)
- One 64x13 PID filter (can be turned off)
- Support for two independent 2-wire bus devices
- Unified Version 1.0.2 and ETSI 300 744 compliant
- Automatic frequency capture for up to ± 3 offsets (500 KHz)
- Input for tuner signal-strength detector/ antenna positioning aid
- Superior single frequency network performance
- Improved active impulse-noise filtering
- Automatic co-channel and adjacent-channel interference suppression
- Clock generation from single low-cost 48 MHz crystal

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

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