



Product Brief

Intel® CE 6313
DVB-S Demodulator
Consumer Electronics

Meets Requirements of ETS 300 421 DVB-S and DirecTV* Specification for DSS



Product Overview

The Intel® CE 6313 DVB-S demodulator meets the performance requirements of the European Broadcast Union ETS 300 421 and DirecTV* specification for DSS. The device integrates an innovative state machine controller with a dual ADC, QPSK demodulator and high-performance Viterbi and Reed/Solomon decoder in a compact 7x7mm package. Capable of supporting high-level, command-driven software, the Intel CE 6313 DVB-S demodulator provides high-speed 1 to 45 Msps scanning capability, simplifies programming, reduces software overhead on the processor, and optimizes the user interface. The range of clocking modes and flexible transport-stream interface provide compatibility with a wide range of MPEG decoders. The Intel CE 6313 DVB-S demodulator also features very low power consumption, including software/hardware power-down modes for Energy Star* requirements.

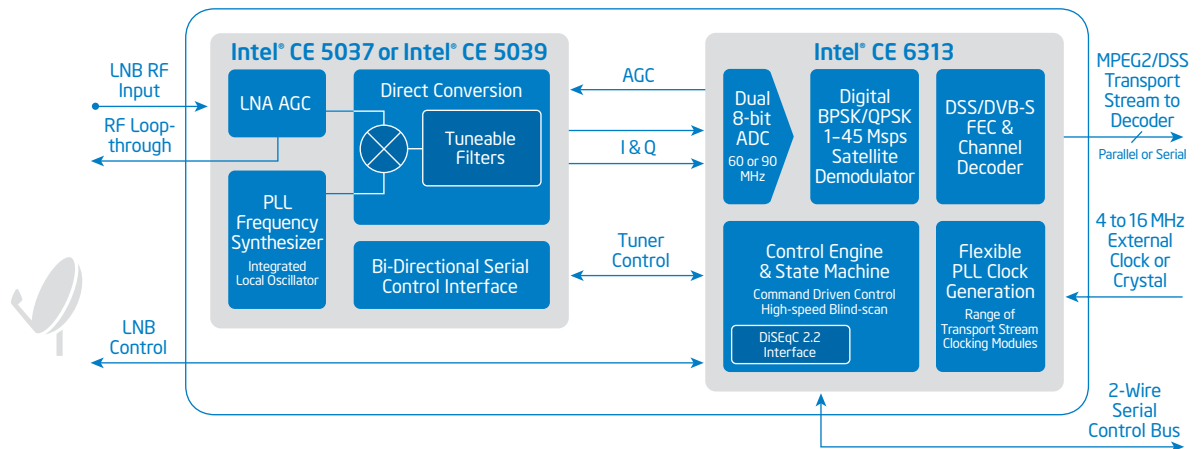
Satellite Receiver Application

Intel supports the Intel CE 6313 DVB-S demodulator with two reference designs that include the Intel® CE 5037 DVB-S PayTV* and Intel® CE 5039 DVB-S Free-to-Air* silicon tuners. These two reference designs enable you to quickly evaluate and implement the DVB-S/DSS standard for your application. Each board includes complete documentation and test results, with software supported directly by Intel.

Intel's DVB-S/DSS reference designs offer excellent signal-handling performance at very low power consumption. The Intel CE 6313 DVB-S demodulator with Intel CE 5037 tuner is optimized for the PayTV market segment where signal-intermodulation performance, quality and reliability is of prime importance. The Intel CE 6313 DVB-S demodulator with Intel CE 5039 solution is optimized to address the additional harsh signal-sensitivity performance requirements of the Free-to-Air market.

The Intel CE 6313 DVB-S demodulator accepts the classic I and Q input signals, digitizes, demodulates and carries out DVB-S/DSS forward error correction (FEC) and descrambling. The Intel CE 6313 DVB-S demodulator has a range of clocking modes and transport-stream interface options to provide a fully flexible interface to MPEG decoder products. The onboard state machine allows high-speed 1 to 45 Msps auto-blind scan capability achieving Astra high-band scanning of both polarizations for 20–30 Msps channels in less than 22 seconds.

Application Diagram



Product Features

Intel® CE 6313 DVB-S Demodulator

- Performance compliance standards
 - ETSI ETS 300 421 DVB-S
 - DirecTV for DSS
- On-chip automatic functions
 - Lost signal re-acquisition with no external programming
 - Very fast blind-channel scan times
 - Automatic spectral inversion resolution
 - Eutelsat DiSEqC* 2v2 receive/transmit for full control of LNB and dish
- Up to ± 22.5 MHz LNB frequency tracking
- On-chip digital filtering supports 1 to 45 Msps symbol rates
- Flexible parallel and serial transport-stream interfaces
- Low power consumption
 - Less than 250 mW (typical) normal operation
 - Eco-friendly standby 2.5 mW and sleep modes 0.4 mW
- Operational temperature range 0 to +70° C
- Compact 64-pin LQFP 7x7 mm 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 automatic blind acquisition capability with automatic mode-detect

Simplified Design

- Full front-end receiver designs
 - Free-to-Air using the Intel CE 5039 tuner
 - PayTV using the Intel CE 5037 tuner

Customer Support

- Offered with production-ready reference designs



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