



TDA10071 DVB-S2 Demodulator and FEC Decoder

Low-Power DVB-S2 Satellite Demodulator for Single-Channel STBs

In February 2010, Trident Microsystems acquired the set-top box and television product lines from NXP Semiconductor's home business unit. This product is now a part of Trident's product offering for the set-top box market.

Designed for equipment manufacturers targeting the cost-sensitive market for single channel STBs, this is an outstanding solution that reduces power, shrinks size, and lowers system cost.



Key Features

- Ultra-low power
- Internal microcontroller
- Power-down sleep mode
- DVB-S compatible
- Automatic ± 10 MHz acquisition range
- Integrated SNR and BER monitors
- DiSEqC 2.x-compliant
- Symbol rates
 - QPSK (DVBS2): 1-45 Msps
 - 8PSK (DVBS2): 1-45 Msps
 - DVBS: 1-45 Msps
- Code rates
 - QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
 - 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
- I²C serial bus
- 1.0 V core voltage
- 3.3 V I/O voltage
- 64-pin eLQFP package

Benefits

- Low-power design reduces cost of power regulator
- On-board microcontroller makes software development faster

- Sleep mode meets worldwide green initiatives
- DVB-S supported for backward compatibility
- Optimized blind scan support for free-to-air (FTA) market vendors
- Internal BER & SNR monitors facilitate production test requirements
- Ultra-small footprint (64-pin) conserves valuable PCB board space

Applications

- DVB-S2 single-channel set-top boxes
- DVB-S2 NIMs

Offering the smallest 64-pin footprint available on the market today, the TDA10071 is a simple, cost-effective solution that delivers low power and high performance. It has an automatic-acquisition algorithm that searches for and acquires the carrier within a ± 10 MHz range during initial acquisition and, performs a smart search to reacquire the carrier under fade conditions. Blind scan allows FTA customers to automatically scan the sky for available FTA satellite programming.

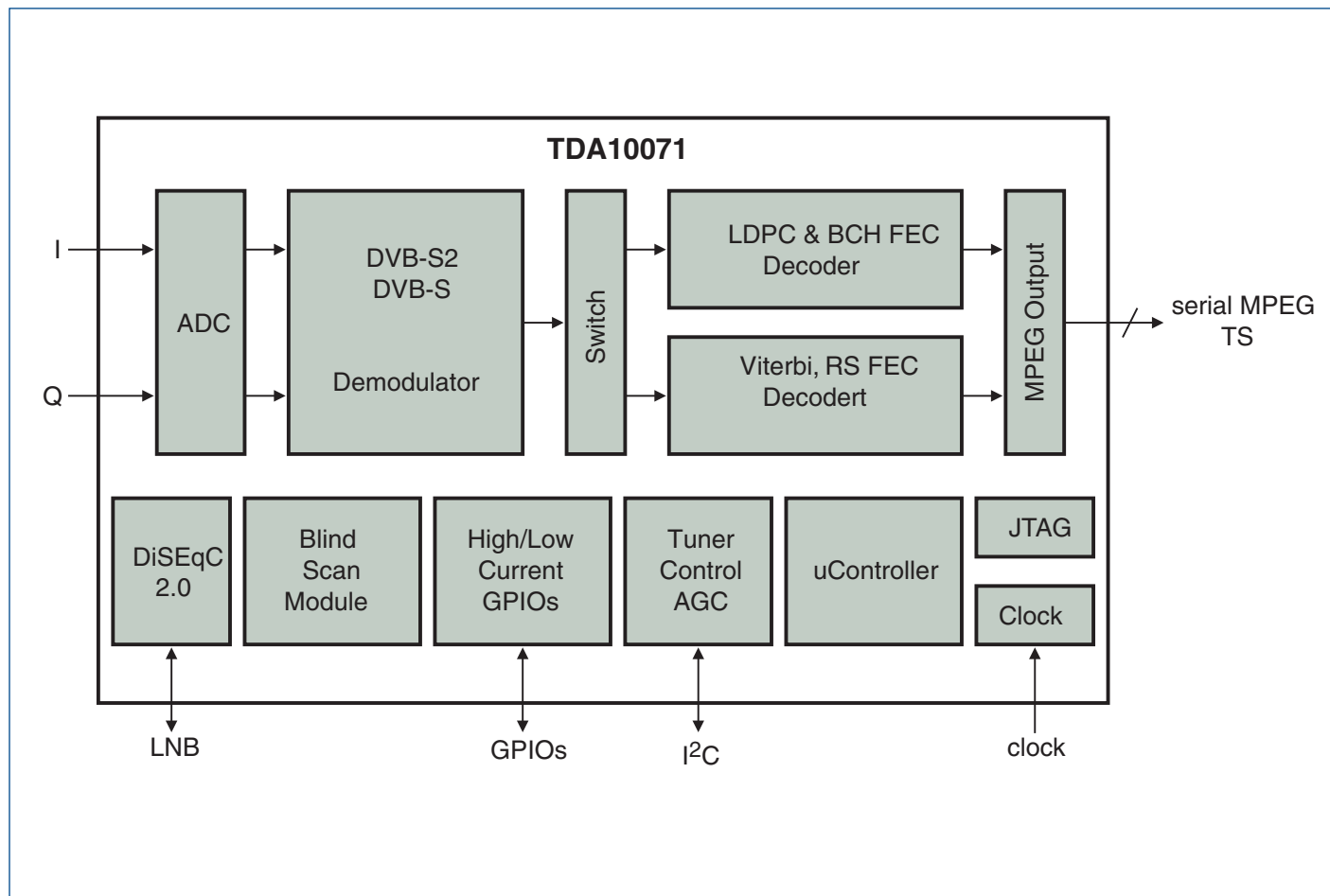
The TDA10071 has an on-chip microcontroller for fast signal acquisition, Es/No estimation, and system monitoring. In addition, the on-chip microcontroller reduces time to market by limiting the external driver code required, and conserves valuable software engineering resources. Integrated internal signal-to-noise-ratio (SNR) and bit-error-rate (BER) monitors provide channel-performance measurements to simplify product development and production testing.

When combined with the Trident CX24118A tuner and the Trident CX24501 HD decoder, the TDA10071 demodulator provides a complete set-top box solution that includes both software and hardware.

This combination allows vendors to quickly deliver a low-power, high-performance complete satellite system solution that spans a wide range of consumer products within rapid time-to-market constraints.

DVB-S2 Demodulator and FEC Decoder

TDA10071 Raptor64 DVB-S2 Single-Channel Demodulator



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