**PRODUCT INFORMATION**

# DRX 39xyK

Aug/2008


# DRX 39xyK
# Multistandard Demodulator for Analog TV / DVB-T / DVB-C

The Trident DRX 39xyK is a unique, multistandard, 3-in-1 demodulator. Designed for a wide range of hybrid receiver applications, the DRX 39xyK demodulates analog/DVB-T/DVB-C television broadcast signals. Versions with optional integrated audio demodulator and stereo decoder are available as well. Supported standards include worldwide analog broadcast (ATV), DVB-C (ITU-T J.83, annex A, C) and DVB-T (ETS 300744).

The DRX 39xyK combines existing, field-proven Trident demodulator IP into a single-chip device. The IF-input signal is demodulated and output as either Transport Stream (TS), or analog CVBS and SIF signals. Versions with the optional integrated stereo decoder provide digital audio via standard $I^2S$ interface.

The DRX 39xyK provides significant PCB real estate benefits. Combining three demodulators into a single chip, Trident offers the world's smallest multistandard hybrid demodulator in a QFN64 package (9×9 mm).

The DRX 39xyK is a member of the Trident DRX family, offering pin- and SW driver compatibility to the Trident DRX 394yJ (NTSC/ATSC/QAM demodulator).

Designed with the complete system solution in mind, DRX 39xyK enables highly optimized adjacent channel performance by integrating a broadband input power detector. The API-based software interface enables effortless implementation into any system. Compatibility with existing Trident demodulator products reduces engineering costs by maximizing the re-use of existing software and product experience.

## Main Features

- DVB-T demodulator with excellent adjacent-channel and co-channel performance, exceeding receiver specifications: NorDig-Unified v2.0, DTG, EICTA, and others
- Digital cable demodulator with outstanding phase noise performance supporting ITU-T J.83 annex A (DVB-C, EuroDOCSIS) and C (Japan)
- Field-proven analog standard (ATV) NTSC / PAL / SECAM VIF demodulator, with CVBS output
- Field-proven ATV (AM / NICAM / FM) audio demodulator with SIF output
- Field-proven audio demodulator/ decoder (AM / NICAM / FM / BTSC / A2) (optional)
- FM radio with RDS / RBDS
- Integrated microprocessor provides a high-level command interface to the host processor and downloadable microcode
- Interfaces:
  - IF and RF (optional) gain control outputs to tuners
  - Sense input for tuner IF output signal
  - Parallel and serial MPEG TS outputs
  - Analog CVBS and SIF output
  - $I^2S$ digital audio output for analog TV audio ($f_s$ = 8…48 kHz/ 16…32 bit) (optional)
  - $I^2C$ slave interface
  - JTAG
  - GPIO
- Low power consumption
- Support for low-/near-zero IF
- Selectable $I^2C$ addresses
- Packages:
  - QFN48
  - QFN64

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## Applications

- IDTV/hybrid TV receivers
- Set-top boxes
- PVR/DVD-RW
- PC-TV cards
- USB sticks
- NIM

## Versions

| Part | Package | DVB-C | DVB-T | Analog Demod. | Stereo Decoder |
|---|---|---|---|---|---|
| DRX 3913K | QFN48 | 1 | 1 | 0 | 0 |
| DRX 3916K | QFN64 | 0 | 1 | 1 | 0 |
| DRX 3918K | QFN64 | 0 | 1 | 1 | 1 |
| DRX 3923K | QFN64 | 1 | 1 | 1 | 1 |
| DRX 3926K | QFN64 | 1 | 1 | 1 | 0 |

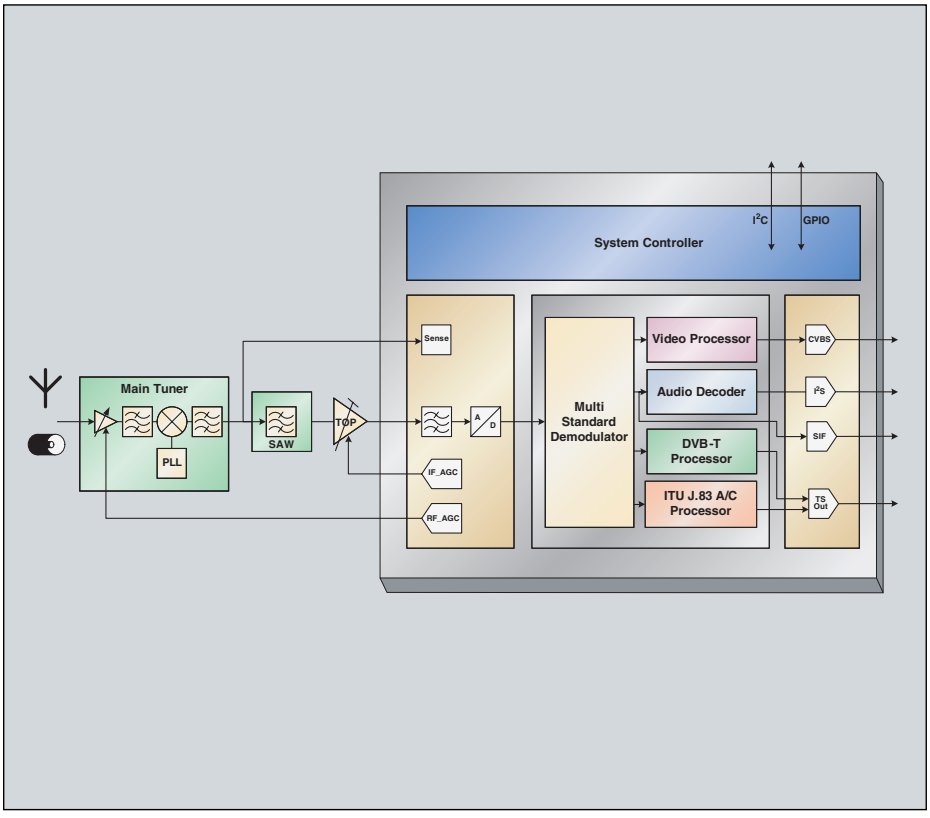


**Fig. 1:** Block diagram of the DRX 3923K

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