

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 I²S 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, EuroDOC-SIS) 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
 - I²S digital audio output for analog TV audio ($f_s = 8...48$ kHz/ 16...32 bit) (optional)
 - I²C slave interface
 - JTAG
 - GPIO
- Low power consumption
- Support for low-/near-zero IF
- Selectable I²C addresses
- Packages:
 - QFN48
 - QFN64

DRX 39xyK

Aug/2008

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

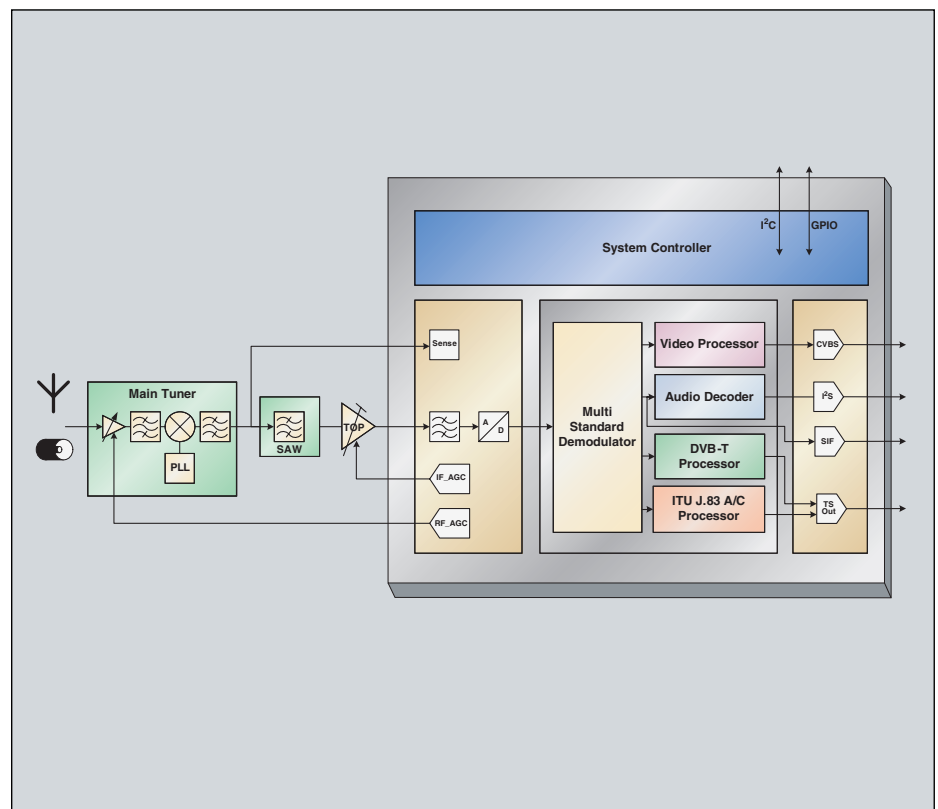


Fig. 1: Block diagram of the DRX 3923K

USA

Trident Microsystems, Inc. (HQ)
 3408 Garrett Drive,
 Santa Clara, CA 95054 USA
 Phone: 408-764-8808
 Fax: 408-988-9178
 Web: www.tridentmicro.com

Taiwan

Trident Microelectronics Ltd.
 6F No.1, Alley 30, Lane 358,
 Rui-Guang Rd.,
 Neihu district, Taipei City,
 Taiwan 11492
 Phone: 886-2-2657-7686

HongKong

Trident Microsystems (Hong-Kong), Ltd
 No 2, 5/F, Futura Plaza, 111-113
 How Ming Street, Kwung Tong,
 Kowloon, Hong Kong,
 Phone: 852-2-756-9666
 Fax: 852-2-796-9849

Japan

Trident Microelectronics, Ltd
 2F, KAKIYA Bldg, 2-7-17, Shin
 Yokohama Kohoku-ku, Yokoha-
 ma-shi,
 Kanagawa 222-0033, Japan-
 Phone: 81-45-478-3125
 Fax: 81-45-473-7251

Korea

Trident Microsystems (Korea), Ltd.
 Hyundai Swiss Tower
 9th floor, 143-40, Samsung-dong,
 Kangnam-gu, 135-092 Seoul
 Phone: 82-2-558-3410
 Fax: 82-2-558-3444