Product Brief

TNETC43x: DOCSIS® 2.0 Data Cable Modem Reference Design

The TNETC43x cable modem reference designs from Texas Instruments (TI) provide cable modem developers with quick time-to-market and a low-risk certification for DOCSIS® and Euro-DOCSIS 1.0/1.1/2.0 cable modems. This platform jump-starts development efforts by providing a reference board utilizing the TNETC460x integrated cable modem chip with proven DOCSIS and Euro-DOCSIS software.

The TNETC43x designs were conceived with cost and robust design in mind. Based on the integrated TNETC460x chip, these reference designs deliver a low-cost, low-risk cable modem solution on a small circuit board footprint. Moreover, TNETC43x features TI's proven DOCSIS software, making it certification-ready.

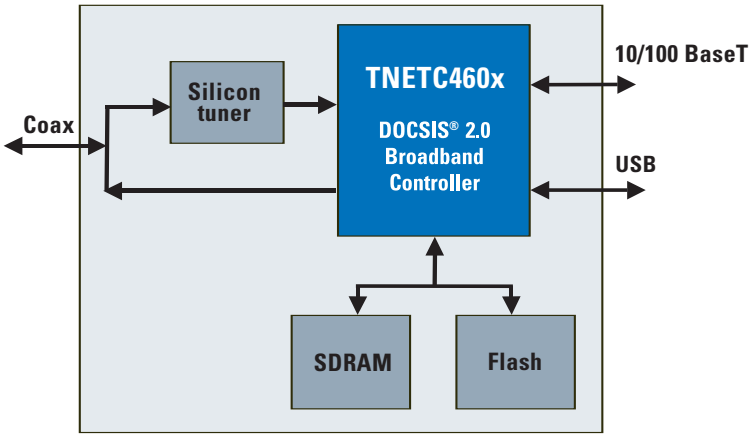
The TNETC43x is a full-featured cable modem with 10/100 BaseT MAC/PHY and USB 1.1 interfaces, standby button and status LED indicators.

The TNETC460x is DOCSIS 2.0-compliant, and it supports high-speed data transfers up to 38 Mbps downstream and 30 Mbps upstream. In addition, the TNETC43x supports TI's optional DOCSIS-compliant TurboDox™ bandwidth acceleration software package, which provides enhanced data throughput.

The TNETC43x offers a convenient and trustworthy platform for the integration of TI's comprehensive solutions for quick development of a cost-effective and differentiated cable modem.

Key Benefits

- Enables rapid time-to-market with a complete hardware and software cable modem reference platform
- Fully supports the DOCSIS® and Euro-DOCSIS 2.0 standards
- Based on TI's latest single-chip, high-performance DOCSIS chip
- Manufacturing flexibility choices including four-layer (TNETC430) and two-layer (TNETC436) lower-cost PCB
- Built with the same software architecture as previous generations, ensuring stable, robust, fast deployment
- Low-risk DOCSIS and Euro-DOCSIS certification
- Enables rapid differentiated feature development with modular software drivers and application program interfaces (APIs)
- Maintains the full speed potential of the broadband connection and improves the consumer experience with TurboDOX™ bandwidth acceleration software



TNETC43x Block Diagram

Key Features

- Fully compliant with DOCSIS® and Euro-DOCSIS 1.0, 1.1 and 2.0
- Available as a four-layer (TNETC430) design or a lower-cost two-layer (TNETC436) PCB design
- Complete hardware and software reference design kit (RDK) includes documentation, board schematics, production files and complete software
- Low-cost reference hardware platform with schematics and production files
- 10/100 BaseT Ethernet MAC/PHY interface
- USB 1.1 interface
- Supports optional TurboDOX™ software for enhanced data throughput

Items Included in Software Design Kit (SDK)

Item	*Description*
Software Files	DOCSIS® and Euro-DOCSIS 1.0/1.1/2.0 source code
Collateral	Software user's guide, installation guide, release note and test reports

Items Included in Hardware Design Kit (HDK)

Item	*Description*
Packaged Modem	Includes all packing material, wrapping and CD
Cables	Serial cable and adaptor
Power Supply	9-V DC external power supply
Collateral	User's guide, device documentation and test reports
Board Design	Board schematics and PCB production files

Additional (Optional) Software Packages

Item	*Description*
TurboDOX™	Bandwidth acceleration software package for boosting modem performance; runs on top of TI's DOCSIS 1.0/1.1/2.0 software stack

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TEXAS INSTRUMENTS

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