

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.

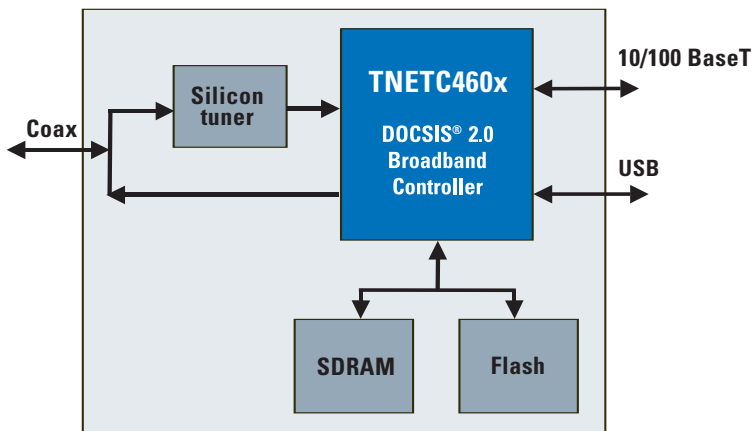
The TNETC43x is a full-featured cable modem with 10/100 BaseT MAC/PHY and USB 1.1 interfaces, standby button and status LED indicators.

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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