Product Brief

TNETC421: DOCSIS® 2.0 Data Cable Modem Reference Design

Key Benefits

• Fully supports the DOCSIS® 2.0 standard

• Enables rapid time-to-market with a complete hardware and software cable modem reference platform

• Provides low-development cost platform for the modem provider

• Provides low-risk DOCSIS certification

• Enables easy customization and product differentiation with highly-optimized 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
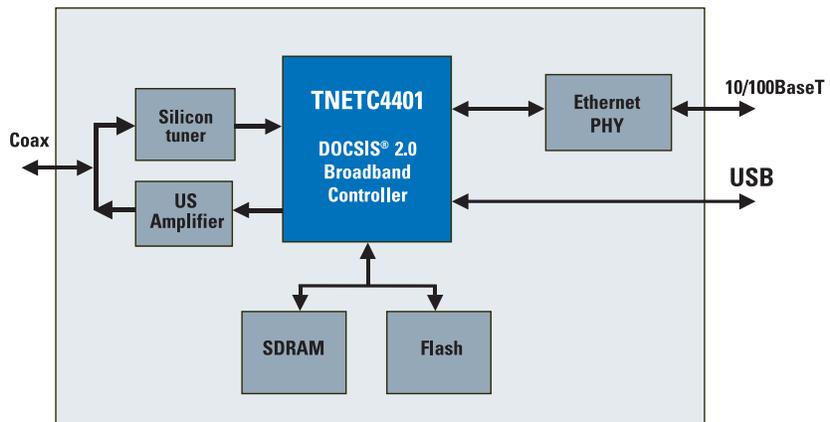
The TNETC421 cable modem from Texas Instruments (TI) provides cable modem developers with quick time-to-market and low-risk certification for a DOCSIS® 1.0/1.1/2.0 modem solution. This platform jump-starts customer-development efforts by providing a reference board utilizing the TNETC4401 integrated cable modem chip with proven DOCSIS 1.0/1.1/2.0 software.

The TNETC421 was conceived with cost and robust design in mind. Based on the TNETC4401, the platform delivers a very low cost, small circuit board footprint, low-risk, certification-ready reference platform featuring TI's proven DOCSIS software.

The TNETC421 is a full-featured cable modem with 10/100 BaseT Ethernet and USB 1.1 interfaces, standby button, and status LEDs. The TNETC4401 is DOCSIS 2.0 compliant and supports high speed data transfers up to 38 Mbps downstream and 30 Mbps upstream. In addition, the TNETC421 supports TI's optional DOCSIS compliant TurboDOX™

bandwidth acceleration software package, which provides enhanced data throughput.

The TNETC421 offers a convenient and trustworthy platform for the integration of TI's comprehensive solutions for quick development of a very cost-effective and differentiated cable modem.

TNETC421 Block Diagram

Items Included in Software Design Kit (SDK)

Item	Description
Software Files	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 DOCSIS 1.0/1.1/2.0 software stack

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