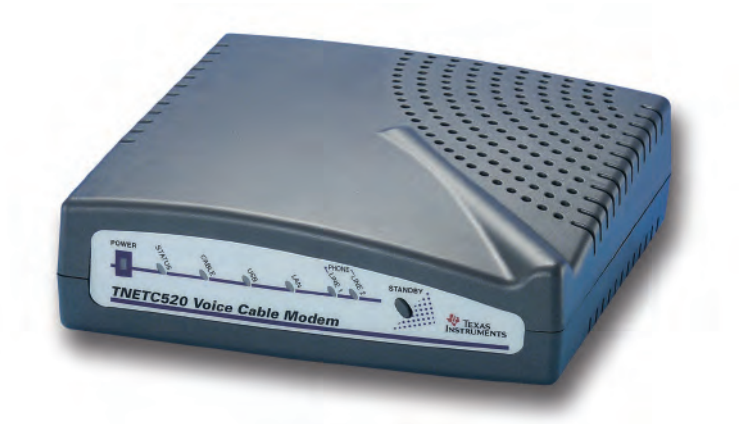
Product Brief

TNETC520: DOCSIS® 2.0 Voice Cable Modem Reference Design



The TNETC520 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 and PacketCable™ 1.0 voice cable modem solution. The TNETC520 combines a data cable modem with two telephone ports providing an economical solution for today's VoIP (voice-over IP) market needs.

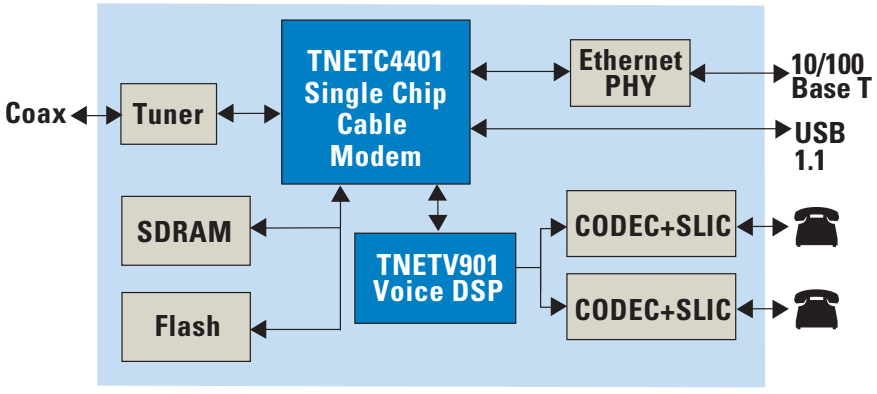
The cable modem is fully DOCSIS 1.0, 1.1, and 2.0-compliant and PacketCable 1.0-compliant and comes with both 10/100 BaseT Ethernet and USB 1.1 ports for easy installation. Industry-leading VoIP service is supplied through two analog RJ-11 phone ports with TI's world-renowned Telogy Software™ voice quality.

The TNETC520 is a complete DOCSIS 1.0/1.1/2.0 and PacketCable 1.0 hardware and software reference platform including schematics, bill-of-materials (BOM), circuit board layout files, and TI's DOCSIS/PacketCable software. The TNETC520 offers manufacturers a complete solution allowing faster time-to-market with products that meet the growing demand for IP telephony over cable. In addition, the TNETC520's flexible architecture enables the easy addition of voice lines to support four or more lines of VoIP.

The TNETC520 platform is based on TI's TNETC4401 integrated cable modem device and the TNETV901 Voice DSP. The TNETC4401 runs TI's DOCSIS and PacketCable software stacks while a single Voice DSP performs all of the necessary processing required for up to four channels of voice. The software stacks are layered, modular, and based on an open architecture enabling smooth adaptation and migration to residential gateway and CableHome™ applications. In addition, the TNETC520 supports TI's optional TurboDOX™ bandwidth acceleration software package, which provides enhanced data throughput.

Key Benefits

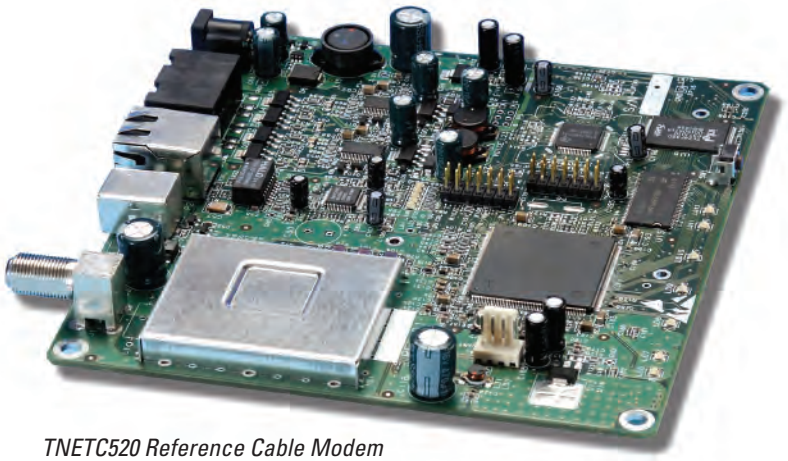
- Fully supports the DOCSIS® 2.0 standard
- Enables high confidence in deployability due to solution's robust and field-proven hardware and software technology
- Enables quick time-to-market with a complete hardware and software reference design kit
- Provides low-development cost platform for the modem provider
- Enables deployment of mature, market-ready PacketCable™ 1.0 solution based on field-proven Telogy Software™ products for voice over IP
- 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



TNETC520 Block Diagram

Key Features

- Compliant with DOCSIS® 1.0/1.1/2.0 and PacketCable™ 1.0
- Mature PacketCable 1.0 software stack handles all required telephony features
- Complete hardware and software reference design kit (RDK) including documentation, board schematics, production files and complete software
- Two RJ-11 phone line interfaces
- 10/100 BaseT Ethernet interface
- USB 1.1 interface
- Supports optional TurboDOX™ software for enhanced data throughput



TNETC520 Reference Cable Modem

Items Included in Software Design Kit (SDK)

Item	*Description*
Software Files	DOCSIS 1.0/1.1/2.0 source code, PacketCable 1.0 source code, IPSEC library sublicensed from Ashley Laurent and ASN compiler and library sublicensed from Objective Systems
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
Residential Gateway Drivers	Features include: NAT (Network Address Translation), Firewall, dynamic host configuration protocol (DHCP), and Web-based management; available through Third-party partners

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