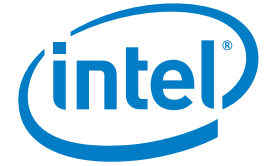


PRODUCT BRIEF

Intel® TNETC460x

High-Performance Single-Chip
DOCSIS® 2.0 Cable Modem Chip



TNETC460x: High-Performance Single-Chip DOCSIS* 2.0 Cable Modem Chip

Intel's TNETC460x is a high performance cable modem chip with integrated functionality to reduce bill of materials (BOM) costs. Based on a MIPS RISC processor core, the TNETC460x has the processing power to serve in small office/home office (SOHO) broadband network controller applications or as a residential gateway. Fully compliant with DOCSIS* standards, the TNETC460x integrates the DOCSIS PHY and MAC. In addition, a range of peripheral interfaces are included on-chip, including 10/100 Ethernet and USB 1.1. The TNETC460x has glueless access to 802.11 wireless local area network (WLAN) devices, digital signal processors (DSP), or other chips offering a wide variety of functionality.

The TNETC460x has a flexible external memory interface (EMIF) to connect with Flash* and SDRAM.

Software developed for Intel's previous-generation cable modem chips, including the TNETC4401, is compatible with the TNETC460x, minimizing development risks and speeding new products to market.

Field-approved software on the TNETC4401 will gain fast approval with the TNETC460x chip, giving manufacturers a low-risk path to the market.

Key Benefits

- Integrated high-performance RISC processor
- Supports DOCSIS* 2.0 with A-TDMA and S-CDMA functionality
- Flexible memory interface enabling OEMs with high-performance or low-cost choices, depending on the application
- Lowers system BOM costs through increased integration
- Integrated USB 1.1 on-chip
- Built with software and architecture similarity to previous-generation Intel Cable ICs, reducing design risks and shortening time-to-market

Key Features

- MIPS RISC processor core
- DOCSIS* 2.0-compliant MAC and PHY, including Annex F (European specification addition) and Annex J (Japan)
- DOCSIS and Euro-DOCSIS 1.1/1.0-compliant MAC and PHY
- Flexible external memory interface controller (EMIF)
- 10/100 BaseT Ethernet MAC and PHY
- MII interface for external Ethernet PHY or Switch
- Flexible USB function controller (integrated link layer and PHY)
- On-chip RAM and ROM
- On-chip I-cache and D-cache
- On-chip ADC and DAC
- On-chip upstream amplifier
- Security module supporting IPSEC encryption/decryption
- General purpose DMA channels
- General Purpose Input/Outputs (GPIOs)
- Timers (one configured as watchdog)
- Two 16550 UART modules
- I₂C module
- Single-reference crystal
- Interrupt controller
- Internal pre-programmed ROM enables boot from Flash,* SRAM, EPROM via I₂C
- Low power consumption

For more information on Intel® TNET460x, visit www.intel.com/go/cablemodem

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL® PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER, AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. UNLESS OTHERWISE AGREED IN WRITING BY INTEL, THE INTEL PRODUCTS ARE NOT DESIGNED NOR INTENDED FOR ANY APPLICATION IN WHICH THE FAILURE OF THE INTEL PRODUCT COULD CREATE A SITUATION WHERE PERSONAL INJURY OR DEATH MAY OCCUR.

Intel may make changes to specifications and product descriptions at any time, without notice. Designers must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined." Intel reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The information here is subject to change without notice. Do not finalize a design with this information.

The products described in this document may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request. Contact your local Intel sales office or your distributor to obtain the latest specifications and before placing your product order. Copies of documents which have an order number and are referenced in this document, or other Intel literature, may be obtained by calling 1-800-548-4725, or by visiting Intel's Web site at www.intel.com.

Copyright © 2010 Intel Corporation. All rights reserved. Intel and the Intel logo are trademarks of Intel Corporation in the U.S. and other countries.

*Other names and brands may be claimed as the property of others.

Printed in USA

1110/GRB/HBD/PDF

 Please Recycle

324683-001US

