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