PRODUCT BRIEF
Puma Family
Cable Modem, Set-Top-Box (STB), and Cable Video Solutions

Products by Technology: Cable Modem, Set Top Box and Video Gateway Solutions

Overview

The Puma family of cable modem, set-top-box (STB) and cable video solutions is the most comprehensive in the industry, delivering field-hardened hardware and software solutions with industry-leading performance. Intel's long-term commitment to interoperability along with our significant ongoing investments in pre-certification and real-world testing gives equipment manufacturers the highest possible confidence for CableLabs* and Excentis certification, as well as the ability to meet the rigorous demands of field deployment in worldwide markets.

The Puma family has a long track record of providing technically advanced and highly integrated solutions to the cable industry. Equipment manufacturers are able to select from the industry's most extensive portfolio of solutions to find the optimum solution with the most effective price/performance. By working closely with cable operators, large global equipment manufacturers and the pertinent certification bodies worldwide, Intel ensures an easy and efficient evaluation process and the shortest time-to-market possible.

The Puma family of cable solutions has historically been among the first to fully comply with the various versions of the most important industry standards, such as CableLab's Data Over Cable Service Interface Specification (DOCSIS*). The following are TI's cable solutions that comply with the most recent generations of the DOCSIS standard.

DOCSIS* 3.0 Data, Voice, and Video Solutions/Puma 5 Family

The industry's first DOCSIS 3.0 cable modem, STB and video technology, the Puma 5 family has been optimized for triple-play video, voice and data applications, as well as next-generation IP services like IPTV. The Puma 5 helps designers break through certification to lead the market in innovation. In addition to Intel's leading DOCSIS 3.0 technology, the Puma 5 family is supported by a comprehensive ecosystem of third-party technology that shortens an equipment manufacturers' time-to-market and adds significantly to the compelling nature of next-generation cable services.

The Puma 5 Family:

- **TNETC4800 –** Full functionality for embedded multimedia terminal applications (EMTA), including high-quality voice services and battery backup functionality.
- **TNETC4810 –** Full functionality for EMTA applications, including high-quality voice and without battery backup capabilities.
- **TNETC4830 –** High-speed data-centric cable modem applications.

DOCSIS* 2.0 Voice and Data Gateway Modem Solutions/Puma 4

Optimized for high-quality voice services and data gateway applications, the Puma 4 DOCSIS* 2.0 voice/data devices have a flexible and extensible architecture.

With DSP and RISC cores, Puma 4 devices have the horsepower and the voice-processing capabilities for advanced VoIP features that differentiate equipment manufacturers and service providers in the VoCable marketplace.

Many cable operators require battery backup for voice services to ensure emergency communication service in the event of a power outage. The TNETC4700 Puma 4 device integrates battery control and charge monitoring functionality on-chip, eliminating the need for a discrete controller and reducing the system's bill of materials cost substantially.

- **TNETC4700/4710 –** Voice-over-cable modem provides robust integration of all functionality for an embedded multimedia terminal adapter (EMTA).
- **TNETC540 –** A reference design for fast time-to-market, the TNETC540 incorporates the TNETC4700/4710 and supports high-speed data transfers.

DOCSIS 2.0 Data Modem Solutions/Puma 3

Comprised of high-performance cable modem chips and chipsets, the Puma 3 family is targeted at data-centric applications. The family offers a range of peripheral interfaces on-chip for added functionality.

- **TNETC4600/TNETC4602 –** High-performance DOCSIS 2.0 data modem chips with the processing power for a variety of gateway applications. High-level integration reduces bill of materials (BOM) costs.
- **TNETC430/TNETC436 –** A reference design incorporating the TNETC460x integrated cable modem devices, the TNETC430 and TNETC436 accelerate time-to-market and reduces development risks.

Supporting Software

- **DOCSIS2.0 Software:**
  Optimized for Intel silicon, this software speeds time-to-market, reduces development risks and offers easy customization through a simple API.
- **PacketCable Software:**
  An interoperable interface for real-time multimedia services that provides toll-quality voice, QoS and security.

For more information on Intel® Puma Family,
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 324682-001US