



High Speed ADSLplus Chipset with Enhanced INP and USB 2.0

CX94410

Conexant's portfolio includes a comprehensive suite of semiconductor solutions for broadband communications and the digital home.

The CX94410 is part of a new family of pin compatible CPE products from Conexant designed to leverage common DSP firmware, software, and hardware efforts across multiple applications from DSL bridges to wireless enabled DSL Integrated Access Devices (IADs). Other products in this family include the CX94610 (ADSLplus Chipset with Integrated Wireless LAN) and the CX94615 (ADSL2plus Chipset with Integrated Wireless LAN and Voice). The CX94410 chipset includes a highly integrated analog front end (AFE) and high speed network processor along with all the key interfaces required to enable feature-rich DSL CPE platforms.

The CX94410 handles connections to an Ethernet PHY, Ethernet switch, or HomePlug®/HomePNA™ through a 10/100 Ethernet MAC with MII interface. Support for USB 2.0 host/device applications is available to attach peripherals such as print servers, network attached storage, cameras, or other USB input devices. Both parallel and serial flash (SPI) support is included in the CX94410 for maximum design flexibility. The device interfaces to high speed SDRAM using a 16/32-bit wide connection and includes additional GPIOs for further expansion.

The CX94410 incorporates a flexible dedicated DSP, which supports multiple DSL standards including ADSL, ADSL2, ADSL2plus (Annexes A, B, M, I, J and L), using proven firmware to reduce time-to-market, and is fully programmable to give OEMs a secure, stable path for future upgrades and features.

At the center of the CX94410 chipset is a high performance ARM™-based RISC processor core, which supports industry standard operating systems such as Linux® as well as Conexant's full-featured, advanced ISOS® software suite. To assist the processor, additional hardware engines, including a dedicated virtual private network (VPN) engine, and hardware ATM SAR, are integrated to support compute intensive tasks. The software solutions for the CX94410 include full support for advanced features such as IPTV quality of service (QoS), advanced Firewall, and DSLHome™, the DSL Forum's initiative to standardize and simplify the provisioning and configuration of the DSL gateway.



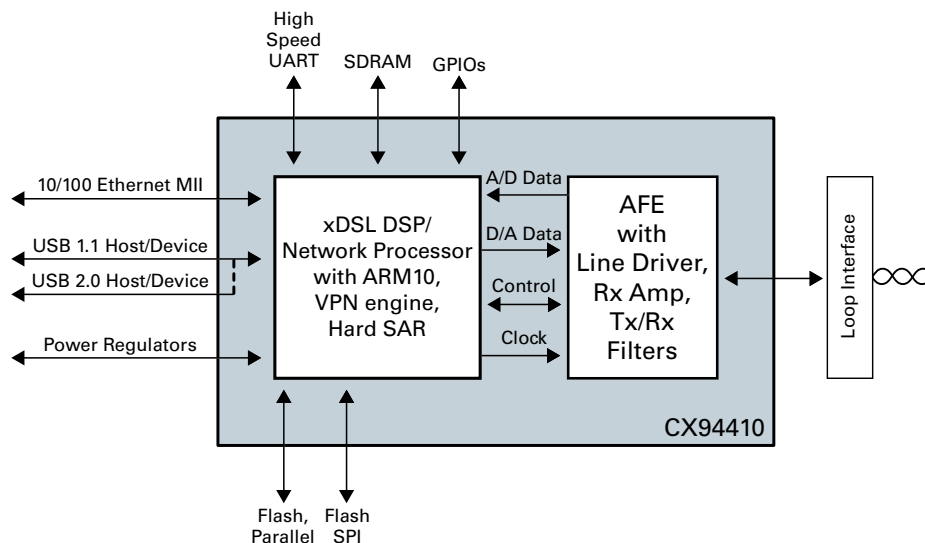
Distinguishing Features

- Support for ADSL/ADSL2/ADSL2plus
- Integrated high performance ARM network processor
- Integrated power regulators to simplify power supply design and reduce overall system cost
- Support for USB 1.1 and 2.0 Host/Device applications
- High speed SDRAM interface
- Hardware VPN engine supporting DES, 3DES, AES), SHA-1, SHA-256, and MD5 operations
- Open OS support for Linux, ISOS, and third party stacks
- Support for extended impulse noise protection (INP) for better IPTV quality

Part Number CX94410

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CX94410 Block Diagram

Product Features

- Support for ADSL/ADSL2/ADSL2plus (G.992.1, G.992.2, T1.413, G992.3, G.992.5) with optimized AFE designed to meet ADSL (TR-067) and ADSL2plus (WT-100) requirements
- Integrated field-proven xDSL DSP core with Annex A, B, M, I, J, and L support
- Integrated 10/100 Ethernet MAC with MII interface
- Optimized power management with support for dying gasp
- QoS features including support for extended Impulse Noise Protection (INP) for better IPTV quality
- Support for parallel and serial (SPI) flash
- Support for DSLHome including TR-064, TR-068, TR-069, TR-098, TR-104, TR-106, TR-110, TR-111, TR-124, TR-133
- Memory and feature optimized binary and source software releases for targeted deployments
- Advanced Wireless features including Wi-Fi Simple Config and Smart Antenna Support
- Easy to use HTML based graphical user interface (GUI) tools for customization of user configuration web pages
- Modular IP stack with comprehensive networking protocol support including advanced bridging and routing capabilities, dynamic host configuration protocol (DHCP), point-to-point protocol over Ethernet (PPPoE), point-to-point protocol over ATM (PPPoA)
- PPP and tunneling features and routing information protocol (RIP)
- Simple network management protocol (SNMP) agent and tools
- Stateful packet inspection (SPI) firewall and network address translation (NAT) security solution
- ATM SAR engine supporting unspecified bit rate (UBR), constant bit rate (CBR) and other service classes
- UPnP for seamless network interconnectivity
- Common customer development environment and tools across ADSL to VDSL2 products
- Reference designs available for rapid prototyping
- Pin compatible option to the CX94610 Family (ADSL2plus Chipset with Integrated Wireless LAN) for platform flexibility

Applications

- DSL Bridge
- DSL Router

Conexant Product Portfolio

The company's broad portfolio of semiconductor products also includes client-side DSL and cable modem solutions, home network processors, broadcast video encoders and decoders, digital set-top box components and systems solutions, and dial-up modems. In addition to its IEEE 802.11a/b/g-compliant WLAN chipsets, software, and reference designs, Conexant offers a suite of networking components that includes solutions for applications based on HomePlug® and HomePNA™. Additional products include a complete line of asymmetric and symmetric DSL central office solutions, which are used by service providers worldwide to deliver broadband data, voice, and video over copper telephone lines.

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