Lantiq™ XWAY™ VINAX-E & VINAX-A

Integrated VDSL2 chipset solution for VDSL2 router applications

Features

- 1-channel of up to 100Mbit/s symmetrical bit rate
- Full VDSL2 bandwidth of up to 30MHz
- ADSL/2/2+ compatibility and interoperability
- 4096 tones supported, Programmable tone spacing of 4 kHz or 8 kHz
- Extended US_0 band up to 276kHz
- MIPS24KEc CPU subsystem at 333 MHz
- Long Reach VDSL using Echo Cancellation
- Protocol Processing Engine (PPE)
- Consumer temperature range 0°C to + 70°C

Supported Standards

- VDSL2 (G.993.2)
- VDSL1 (G.993.1, T1.424, TS 101 270)
- ADSL/2/2+ (G.992.1, G.992.3, G.992.5)
- EFM (IEEE 802.3 ah) with 5 timers

The Lantiq™ XWAY™ VINAX-E and XWAY™ VINAX-A chipset is a highly integrated System-on-Chip (SoC) solution for VDSL2 router applications. This chipset solution consists of the XWAY™ VINAX-E, with integrated dual MIPS 24KEc CPUs along with the VDSL2 Digital Front End and the XWAY™ VINAX-A, which provides the Analog Front End and Line Driver functions of the chipset. The chipset is compliant with the VDSL2 (G.993.1), ADSL2+ (G.992.5), ADSL2 (G.992.3), and ADSL full-rate (G.992.1) line CODEC standards. The chipset supports ADSL2/2+ backwards-compatible mode. The XWAY™ VINAX-E and XWAY™ VINAX-A chipset enables system vendors to address worldwide VDSL2 router/ home gateway requirements.

One MIPS CPU in the XWAY™ VINAX-E is assigned to high performance and secured network processing.
Additionally, the XWAY™ VINAX-E chip has an embedded proprietary Processor Protocol Engine (PPE) that handles network protocol functions with high bandwidth throughput without any involvement by either of the two integrated MIPS CPUs.

The XWAY™ VINAX-E is offered with a complete development kit, the EASY 80800 (using XWAY™ VINAX-VE), consisting of reference designs, documentation and a Software package based upon the Linux® operating system.

Applications

- VDSL2 Router

Lantiq™ XWAY™ VINAX-E & VINAX-A

## Integrated VDSL2 chipset solution for VDSL2 router applications

Interfaces

- One 10/100/200 MII/Reverse MII/TMII
- interface with double VLAN
- 16-bit SDR/DDR DRAM
- 16/8-bit NOR/NAND Flash memory
- 32-bit PCI 2.2 bus supports PCI, Mini
- PCI and CardBus
- Multi Media Card (SD/MMCI/SDIO) with DMA support
- USB 2.0 host/device with DMA support
- TDM (PCM, IOM-2, AC97 mode)
- UART for RS-232 and HW Flow Control
- SPI with DMA support
- GPIOs

Application Example
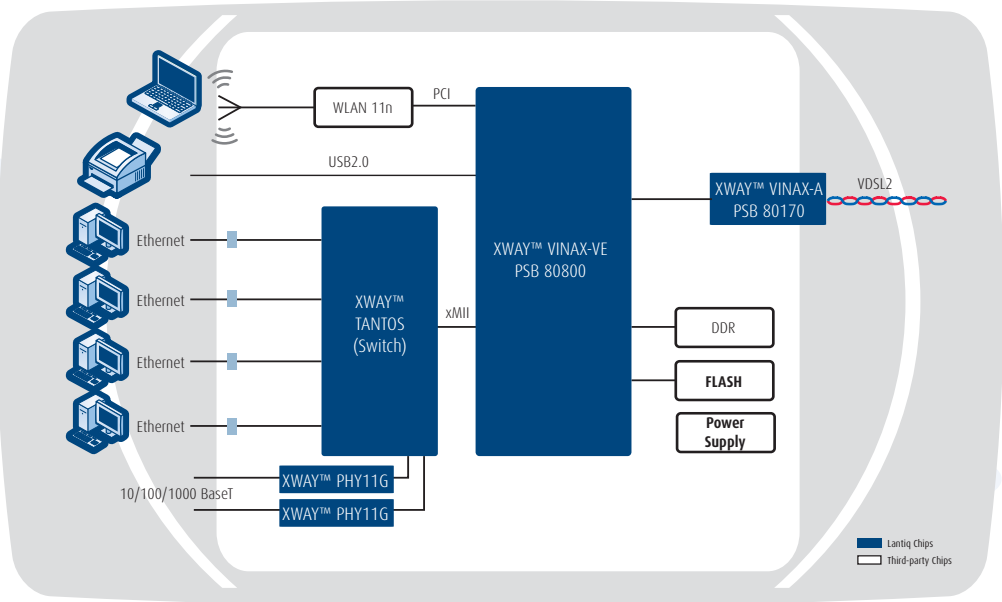
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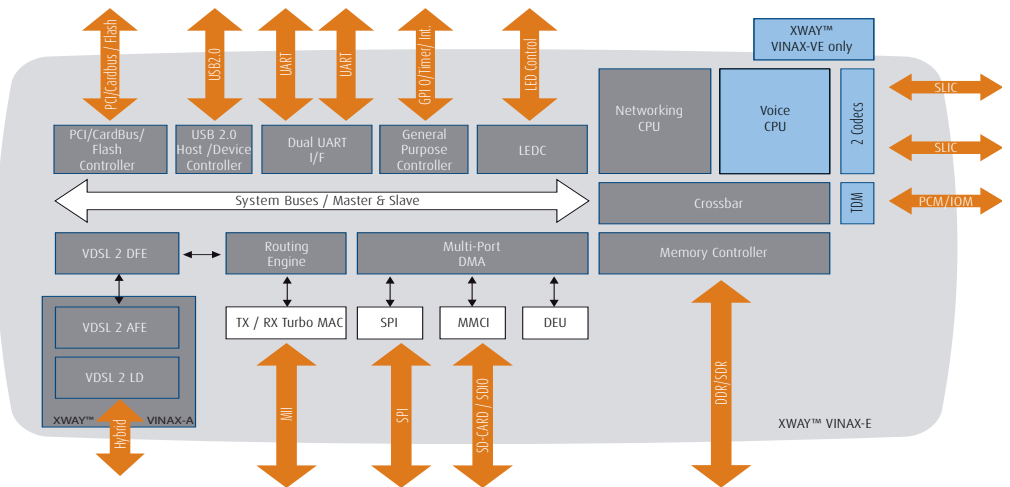
Product Summary

Product Name	Sales Code	Description	Package
XWAY™ VINAX-E	PSB 80700	SoC router for VDSL2 CPE solution	PG-LBGA-256
XWAY™ VINAX-A	PSB 80170	AFE/LD for VDSL2 CPE solution	PG-LBGA-144
XWAY™ VINAX-VE/-A reference board	EASY 80800	VDSL2/ADSL2+ home gateway reference board	

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How to reach us: http://www.Lantiq.com

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Information For further information on technology, delivery terms and conditions and prices, please contact the nearest Lantiq Office (www.Lantiq.com).

Warnings Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Lantiq Office. Lantiq components may be used in life-support devices or systems only with the express written approval of Lantiq, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.

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