Lantiq™ XWAY™ VRX288 Chipset

True Universal DSL Gateway Solution for Triple-play Applications/Gigabit Ethernet

VDSL Features

- ITU-T G.993.2 (VDSL2)
- ITU-T G.993.1, T1.424, TS 101 270 (VDSL1)
- ITU-T G.992.1/3/5 (ADSL1/2/2+) Annexes A, B, I, J, M, and L
- DSL Forum performance specifications: ADSL TR-048/67, TR-100; VDSL: WT-114
- Data Rates >100 Mbit/s downstream
- Industry-leading IPTV PHY supporting extended framing INP Protection >2,
- Erasure Decoding, increased interleaver depth and Re-Transmission
- Bonding
- EFM (IEEE 802.3 ah)
- ITU-T G.998.2
- Smart CPU Architecture
- Smart Acceleration for guaranteed session bandwidth & QoS (e. g. IPTV)
- Programmable TC-Layer for all ATM/PTM related flavors (incl. pre-emption)

The Lantiq™ XWAY™ VRX288 is a cost-optimized chipset will help carriers to upgrade their networks for deployment of triple-play multi-mode VDSL/ADSL capabilities. It can be used in ADSL mode to support today's subscribers, and subscribers can easily migrate to VDSL2 Gateway targeting Internet Protocol Television (IPTV) applications and multi service Gateway designs with high throughput and Quality of Service (QoS) requirements. They benefit from the high routing capabilities as well as from DSL Physical Layer features and service improvement techniques like Erasure Decoding & ITU-T Universal Retransmission.

XWAY™ VRX288 is a universal 6-band DSL System-on-Chip (SoC) in combination with 6-band single chip Analog Frontend and Line Driver (AFE and LD) XWAY™ VRX208 (AFE/LD). Lantiq is the only supplier who supports all profiles and bandplans up to 30A, even with a single Hybrid. On top of this it supports Bonding of two DSL lines on-chip.

The XWAY™ VRX288 chipset is part of Lantiq XWAY™ VRX200 family which is industry's 1st universal DSL product with unmatched integration level.
Driving cost reduction and performance, feature rich interfaces like PCI Express and High-Speed DDR2 set new standards. On top customers still have the choice to use their preferred interfaces, like DDR1 or PCI.
A wide range of energy saving features built into the solution enable gateway designs to meet the requirements listed in the EU's Code of Conduct (CoC) on Energy Consumption of Broadband Equipment.

Applications

- VDSL2, ADSL2/2+ WLAN 802.11b/g/n Gateway
- VDSL2, ADSL2/2+ Media Gateway incl. VoIP/DECT/CatIQ
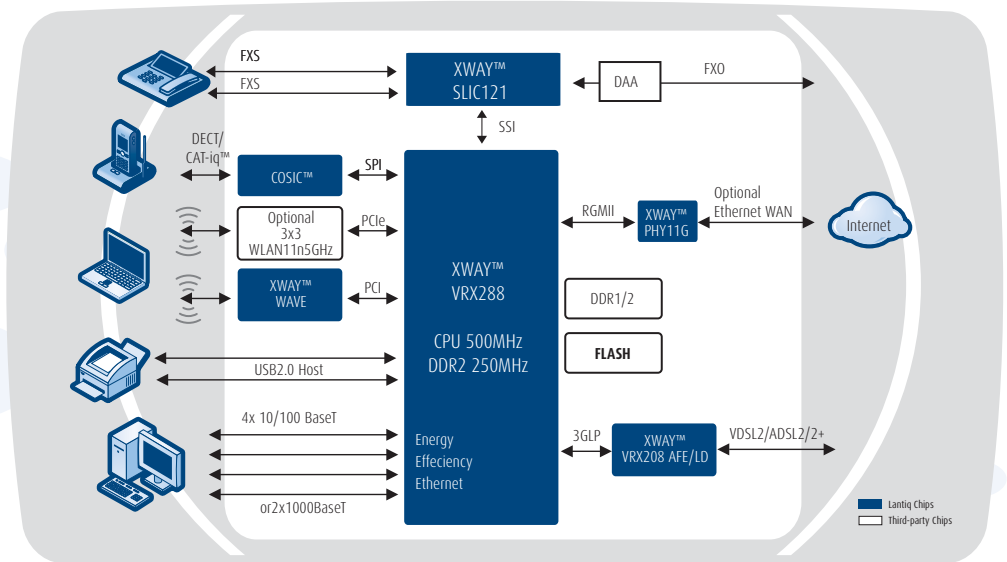- VDSL2 Gigabit Gateway

Lantiq™ XWAY™ VRX288 - PSB 80920

VDSL2/ADSL2/2+ True Universal DSL Gateway Solution for Triple-play Applications/Gigabit Ethernet
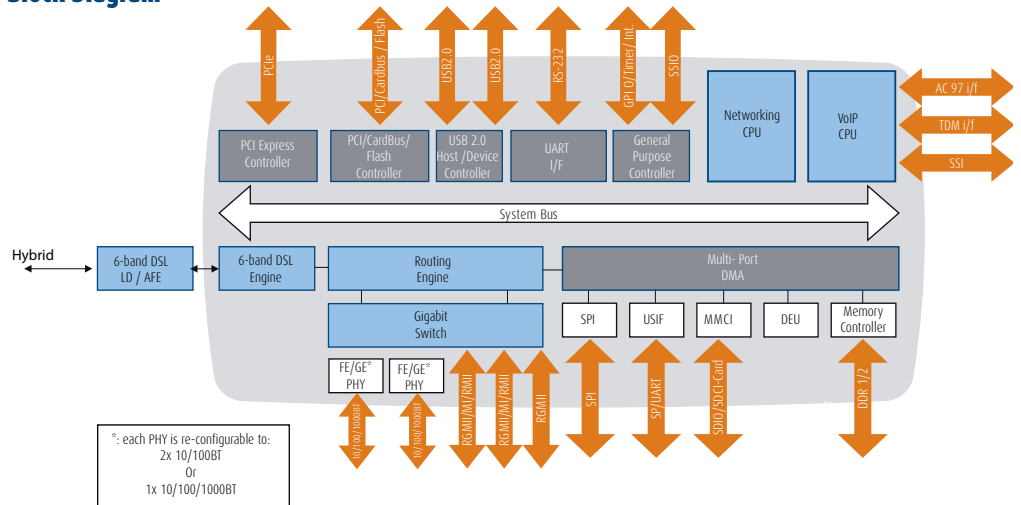
Interfaces

- 6-band DSL Hybrid
- 2-4 x 10/100BT or 1-2 x 10/100/1000BT PHYs
- 2x MII/RMII/RGMII + 1x RGMII
- X1 lane PCIe 1.1
- 32-bit PCI 2.2 bus supports PCI, Mini PCI, CardBus
- 2x USB 2.0 host/device
- Smart-SLIC Interface (SSI)
- SDIO/SD-Card
- 16-bit DDR1/2 DRAM, 16/8-bit NOR/NAND Flash memory with XiP
- Dedicated UART for RS232 and SPI for Control/DECT

Application Example

Block Diagram

Product Summary

Product Name	Sales Code	Description	Package
XWAY™ VRX288	PSB 80920	SoC VDSL2, ADSL1/2/2+ Home Gateway	PG-LFBGA-369
XWAY™ VRX208	PSB 80190	AFE&LD VDSL2, ADSL1/2/2+	PG-VQFN-108
XWAY™ VRX288 family board	EASY 80920	VDSL2 home gateway evaluation kit	
XWAY™ VRX reference design	EASY 80900	VDSL2 gateway reference kit	

Legal Disclaimer The information given in this Product Brief shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Lantiq hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.

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.