



# Lantiq™ XWAY™ VRX268 Chip-Set

## True Universal DSL Router Solution

### Main Features

- Key Interfaces
  - 2-4 x 10/100BT or 1-2 x 10/100/1000BT PHYs
  - Up to 3x MII/RMII/RGMII
  - X1 lane PCIe 1.1
  - 32-bit PCI 2.2 bus PCI, Mini PCI, Card Bus
  - 2x USB 2.0 host/device
  - SDIO/SD-Card interface
  - 16-bit DDR1/2 DRAM, 16/8-bit NOR/NAND
  - Flash and NAND storage mode
  - UART for RS-232, UART HW Flow Control
  - TDM/PCM Interface

### 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

The Lantiq™ XWAY™ VRX268 cost-optimized chipset will help carriers to upgrade their networks for deployment of multi-mode VDSL/ADSL capabilities. It can be used in ADSL mode to support today's subscribers, and subscribers can easily migrate to VDSL2 Router (RT) and Modem applications incl. WLAN 11b/g/n-router and Internet Protocol Television (IPTV).

XWAY™ VRX268 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. Lantiq is the only supplier who supports all profiles and bandplans up to 30A, even with a single Hybrid. The XWAY™ VRX268 chipset is part of Lantiq XWAY™ VRX200 family which is industry's 1st universal DSL product with unmatched integration level.

The embedded Ethernet PHY technology eliminates external 4 Port Fast Ethernet LAN switches and has a unique re-programmability for Fast and Gigabit Ethernet LAN Ports.

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 Router
- VDSL2 Gigabit Router
- VDSL2 modem

### Main Features

- Lantiq Smart CPU Architecture
  - 32-bit MIPS® 34Kc Core and 32-bit Multi-threading Protocol Processor Engine (PPE)
  - Smart Acceleration for guaranteed session bandwidth & QoS (e. g. IPTV)
  - Gigabit WAN/LAN support
  - Integrated Gigabit Ethernet PHY and Switch
  - IPv6-ready
  - Data Encryption Unit (DEU) for IPsec
  - Designed for energy efficiency /CoC compliance

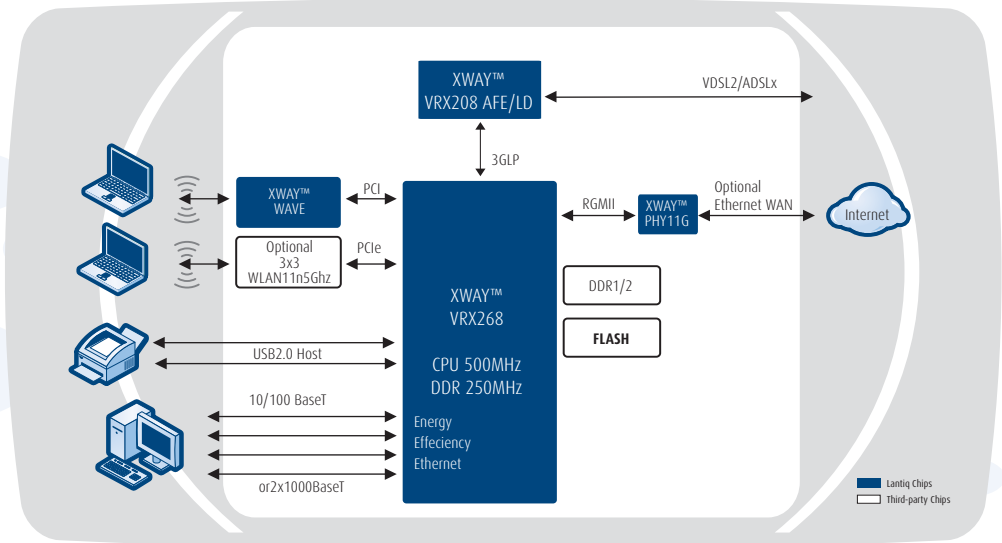
# Lantiq™ XWAY™ VRX268 - PSB 80910

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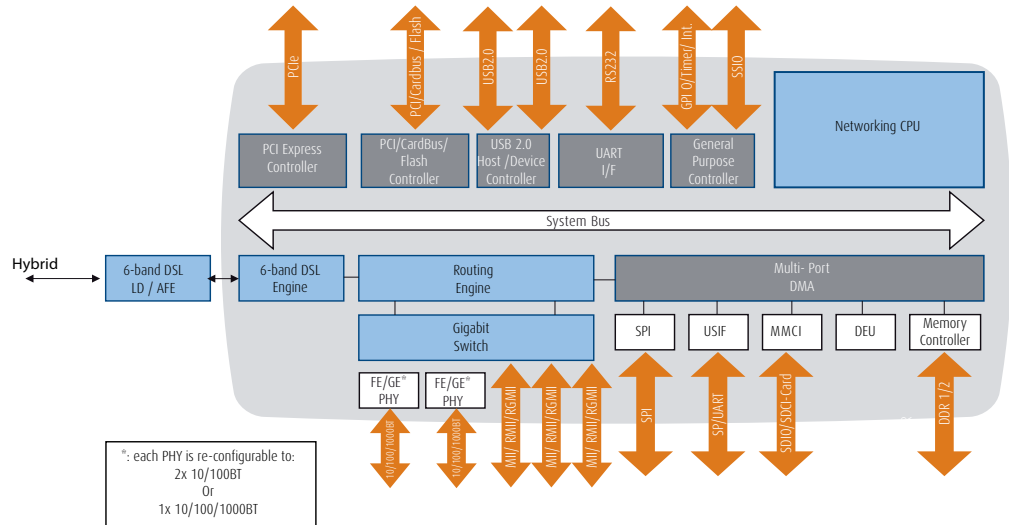
### Support Tool

- EASY KIT Reference Design
- System Overview, Hardware and Software Documentation
- Linux® based Board Support Package
- Universal Gateway (UGW) - Lantiq's Gateway Software Package

### Application Example



### Block Diagram



### Product Summary

Product Name	Sales Code	Description	Package
XWAY™ VRX268	PSB 80910	SoC VDSL2, ADSL2/2+ Router	PG-LFBGA-369
XWAY™ VRX208	PSB 80190	AFE&LD VDSL2, ADSL1/2/2+	PG-VQFN-108
XWAY(TM) VRX288 family board	EASY80920	VDSL IAD Evaluation kit	

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**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.

Order Number: PB-e-0027-v2