

Vulcan™ GS8120xxxx

ADSL2/ADSL2+ Bridge/Router Chipset



Target Markets

- Customer premises equipment

Applications

- SNMP managed bridge
- 1/2 bridge with ZIP-B
- Full-featured router

Features

- Standards compliant
- Firmware upgradable to ADSL2 and ADSL2+
- Single topology supports both Annex A and Annex B
- Memory optimized solutions
- Remote management over EOC, PVC or IP with auto detection of transport channel

Development Tools/ Software

- Turnkey Ethernet modem reference design
- Complete hardware specifications
- Schematics, gerber files, and network software for Ethernet modem applications

The highly integrated Vulcan™ GS8120xxxx asymmetric digital subscriber line (ADSL) modem chipset offers network equipment manufacturers a complete full-rate, high performance bridging and routing two-chip solution for ADSL Ethernet customer premises equipment (CPE) applications.

This cost effective solution is based on Ikanos' fully programmable multimode digital subscriber line (DSL) digital signal processor (DSP) that supports all standard compliant versions of ADSL, including: ITU G.992.5 (ADSL2+), ITU G.992.1 (G.DMT), ITU G.992.2 (G.Lite), ITU G.992 Annex A, Annex B and ANSI T1.413 Issue 2.

The digital chip integrates a network processor, 10/100 Ethernet media access control (MAC), USB 1.1 compliant interface, DSP, and Reed-Solomon memory. The analog chip integrates an analog front end (AFE), line driver, and transmit and receive amplifiers. In addition, the Vulcan™ GS8120xxxx chipset family provides an option for a smaller memory footprint for bridge application. The combined integration in this two-chip solution significantly reduces the overall system cost.

The Vulcan chipset family provides industry-leading performance. The multiple-line-code capability provides a single ADSL, ADSL2 and ADSL2+ solution for service providers regardless of regional digital subscriber line access multiplexer (DSLAM) deployments with industry leading interoperability.

As a comprehensive ADSL solutions provider, Ikanos offers detailed turnkey reference designs, chipset data sheets, complete hardware specifications, schematics, gerber files, and network software for Ethernet modem applications.

Key Features

- Full ADSL/ADSL2/ADSL2+ support
- IPv6 ready
- Fully integrated ADSL DSP network processor, integrated Reed-Solomon memory, 10/100 Ethernet MAC, USB 1.1 compliant interface
- Fully integrated AFE with line driver, receive amplifier, transmit amplifier
- Standards compliant: ITU G.992.5 (ADSL2plus), ITU G.992.3 (G.DMT.bis), G.992.1 (G.DMT), ITU G.992.2 (G.Lite), ITU G.992 Annex A, Annex B, and ANSI T1.413 Issue 2
- Full-rate bridging and routing performance
- Turnkey Ethernet modem reference design
- Tested for: CSA, CE, FCC part 68 and part 15 Class B, UL1950, CISPR Class B, EN60950, and VCCI Class B
- Visual LED indicates network status
- Interoperable with other ADSL chipsets and DSLAM system vendors
- Optional smaller footprint memory configuration for bridge application
- Dying gasp support
- Simultaneous Ethernet and USB interfaces Microsoft Windows® 98 and 98SE, 2000, Millennium Edition (ME), and XP; Apple Macintosh®; and Linux' family of operating systems
- Supports point-to-point protocol over ATM (PPPoATM), point-to-point protocol over Ethernet (PPPoEthernet), Ethernet over ATM (EoATM), and Internet protocol over ATM (IPoATM)
- RFC 2684 - multi-protocol encapsulation over AAL5
- RFC 2225 - Classical IPoATM
- RFC 2516 - PPPoEthernet
- RFC 2364 - PPPoATM
- DSL Forum TR-37 compliant and single-ended auto configuration
- Asynchronous transfer mode (ATM)/unspecified bit rate (UBR)/variable bit rate (VBR)/constant bit rate (CBR) services
- Multiple virtual circuits (VCs) support
- Hypertext transfer protocol (HTTP) server and command line interface
- Supports zero installation PPP bridge mode (ZIPB)
- Supports management access over simple network management protocol (SNMP), HTTP, and command line interface (CLI) (over Telnet and RS-232)
- Remote management for SNMP over HDLC/EOC, PVC and IP

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