



8-Port VDSL2 Managed Switch with 2 Gigabit TP/SFP Combo ports

Ideal for
Telco, ISP, SI,
and IP
surveillance
providers

High Performance over Existing Phone Lines

BiPAC VS2008-P is an 8-Port VDSL2 Managed CO (Central Office) Switch for Telecom, ISP (Internet Service Providers), SI (System Integration) and IP Surveillance providers. This switch uses two core networking technology, Ethernet and VDSL2 (Very-high-data-rate Digital Subscriber Line 2) to provide the highest performance. It cooperates with VDSL2 CPE (Customer Premises Equipment), and offers the absolutely fastest data transmission speeds over existing copper telephone lines without the need of rewiring. This ideal DSL technology provides the best solution over the last mile.

Enabling multi-media services

Compliant with VDSL2 standards, the VS2008-P enables service providers to offer very cost-effective broadband solutions to their customers. A GbE Edge Router can be placed in the Central Office and then connected to a BiPAC VS2008-P deployed in a building with a fiber or Ethernet cable. Over the last mile, a VDSL modem/router can be implemented on each floor of the building. This type of network deployment can enable service providers to offer multi-media services such as IPTV, VOD (Video on Demand), VoIP, videophone, Internet caching, and distance education to customers, via existing copper telephone wires. The EoVDSL (Ethernet over VDSL) technology allows BiPAC VS2008-P to provide up to 100Mbps download capability. The BiPAC VS2008-P series provides an excellent bandwidth to satisfy triple play devices for home entertainment and communication.

Network backbone extension

Just plug in 10/100/1000Base-T cable, or add 1000Base-SX and 1000Base-LX modules into the Gigabit TP/SFP (Small Form-factor Pluggable) combo interfaces and the VS2008-P can fit into existing networks, providing flexible interface selections for the users. The two integrated Gigabit TP/SFP combo interfaces provide fat pipes for connecting to core backbone network or connecting to servers, which can be extended from 100 meters (at TP), 550 meters (at Multi-mode fiber), up to over 10/30/50/70/120 kilometers (Single-mode fiber).

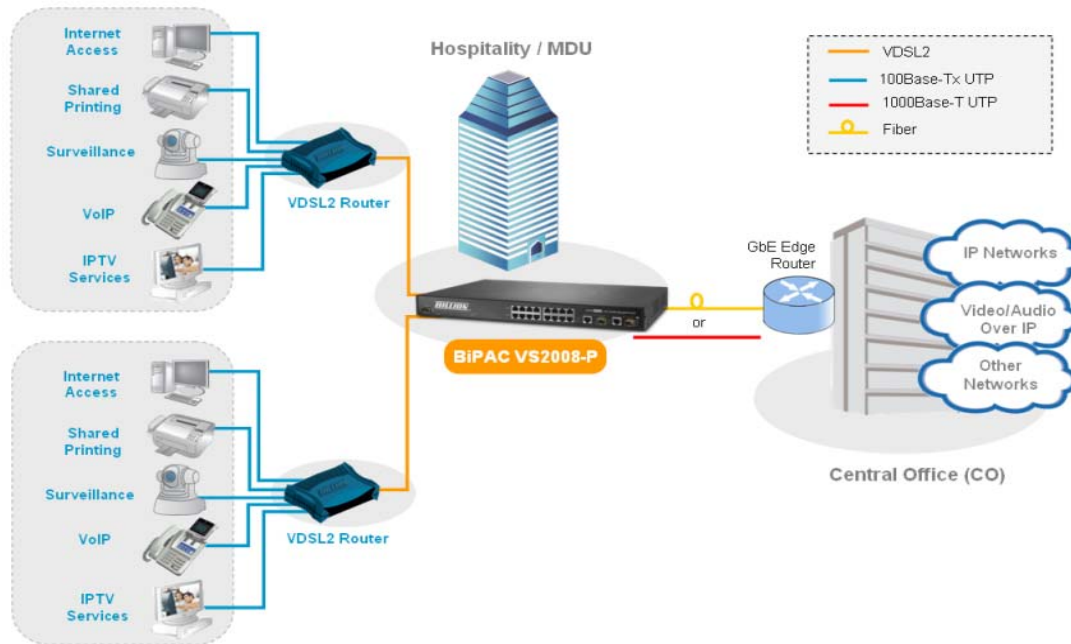
Traffic prioritization

The BiPAC VS2008-P contains robust Quality of Service features such as Port-Based, 802.1p priority and also IP TOS/DSCP, which guarantees the optimal performance of VoIP and Video stream transmission and empowers enterprises to take full advantages of limited network resources.

Web-based management

The BiPAC VS2008-P contains an advanced management capability that can be remotely accessed through Web Browsers and SNMP. The standard IEEE 802.1Q with VLAN tagging feature makes logically separating nodes easier with up to 256 VLAN groups allowed. Four priority queues with 802.1p support, IGMP snooping and rate control function are also provided to optimize network bandwidth. Through the Web management interface, administrators can control the data transmission speed of each VDSL2 interface. The advanced management capability facilitates Telecom operators or ISPs to remotely manage their bandwidth services when necessary - upgrade or downgrade according to users' demands.

- 8 full-duplex VDSL links via 8 RJ-11 connectors
- Built-in POTS splitter for each VDSL port
- Auto-speed functions for VDSL link (by distance and cable quality)
- 2-Port Gigabit TP/SFP combo interfaces
- Cost-effective VDSL link and central management solution
- ITU-T G.993.2 VDSL2 standard
- DMT (Discrete Multi-Tone) line coding VDSL
- Built-in surge protection against surge damage from high energy spike
- Voice and data communication can be shared on an existing telephone line simultaneously
- Broadcast / Multicast / Unicast storm control
- IEEE 802.1Q Tag-based VLAN / port-based VLAN / Q-in-Q tunneling
- Supports link aggregation
- STP / RSTP / MSTP Spanning Tree Protocol
- Port Mirroring for incoming or outgoing traffic on a particular port
- IEEE 802.1p, IP DSCP, Port-Based traffic classification
- Strict priority and Weighted Round Robin (WRR) CoS policies
- Supports QoS and in/out bandwidth control for each port
- RADIUS users access authentication
- L3/L4 Access Control List (ACL)
- SSL switch management



Features & Specifications

Protocols and Standard Compliances

- ITU-T: G.993.1 (VDSL), G.997.1, G.993.2 VDSL2
- IEEE 802.3 10BASE-T, IEEE 802.3u 100BASE-TX, IEEE 802.3z Gigabit SX/LX, IEEE 802.3ab Gigabit 1000Base-T, IEEE 802.3x Flow Control
- IEEE 802.1p Class of service, IEEE 802.1Q VLAN Tagging, IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- IEEE 802.1D Spanning Tree Protocol, IEEE 802.1s Multiple Spanning Tree, RFC 768 UDP, RFC 793 TFTP, RFC 791 IP, RFC 792 ICMP, RFC 2068 HTTP, RFC 1112 IGMP version 1, RFC 2236 IGMP version 2

Regulation Compliances

- FCC Part 15 Class A, CE

VDSL2 Features

- Selectable rate limit control
- Selectable target SNR (Signal to Noise Ratio) mode
- POTS voices pass through

Hardware Specification

- **VDSL Interface**
 - 8-Port VDSL2, RJ-11 connectors
 - 8-Port POTS/Telephone, RJ-11 connectors
- **Ethernet Interface**
 - 2-Port Gigabit TP/SFP combo interface i.e. 2 10/100/1000Mbps RJ-45 auto MDI/MDI-X ports; or 2 1000Base-SX/LX/BX, shared with port-9 ~ port-10
- **Console:** 1 x RS-232 Serial Port (DB9, 57600, 8, N, 1)
- **Surge protection:** 3KV
- **Switch architecture:** Store-and-Forward
- **Switch fabric:** 5.6Gbps / non-blocking
- **Switch throughput:** 4.16Mpps @64Bytes
- **Address table:** 8K entries
- **Share data buffer:** 2M bits
- **Maximum frame size:** 9K Bytes packet
- **Weight:** 2.8kg
- **Dimensions:** 440mm (W) x 220mm (D) x 44mm (H), 1U height

External Power Adapter

- Power Input: 100~240V AC, 50-60 Hz

Operating Environment

- Operating temperature: 0 ~ 50°C (32 -122°F)
- Operating humidity: 20% ~ 85% (non-condensing)

Front and Rear Panel



Layer-2 Functions

- **Management interface**
 - Console, telnet, web browser, SSL, SNMPv1 / v2c / v3
- **Gigabit Port configuration**
 - Port disable/enable
 - Auto-negotiation
 - 10/100/1000Mbps full and half duplex mode selection
 - Flow control disable / enable
- **Port mirroring**
 - TX / RX / Both
 - 1 to 1 monitor
- **Bandwidth control**
 - Ingress / Egress rate limit control
 - Gigabit Port: Allow configuring per 128Kbps
 - VDSL2 Port: Allow to configuring per 5Mbps
- **VLAN**
 - IEEE 802.1Q Tag-based VLAN, up to 256 VLANs groups, out of 4041 VLAN IDs
 - Port-based VLAN
 - GVRP, up to 128 dynamic VLAN groups
 - Q-in-Q tunneling
 - Private VLAN Edge (PVE / Protected port) with two protected port groups
- **Quality of Service**
 - 4 priority queue
 - Traffic classification based on port priority, 802.1p priority, TOS/DSCP field in IP Packet
- **Link aggregation**
 - Static Port Trunk
 - IEEE 802.3ad LACP (Link Aggregation Control Protocol)
 - Supports 13 groups of 8-Port trunk
- **IGMP snooping**
 - IGMP (v1/v2) Snooping, up to 256 multicast groups
- **Access control list**
 - IP-Based Layer 3 / Layer 4 ACL
 - Up to 220 ACL rule entries
- **Security**
 - Port Security (Disable Per Port of MAC Address Learning)
 - IEEE 802.1x Port-Based network access control protocol
 - RADIUS users access authentication
 - L3 / L4 Access Control List (ACL)
- **SNMP MIBs**
 - RFC-1213 MIB-II, RFC-2863 Interface MIB, RFC-2665 EtherLike MIB
 - RFC-1493 Bridge MIB, RFC-2819 RMON MIB (Group 1, 2, 3 and 9)
 - RFC-2737 Entity MIB, RFC 5650 VDSL2 MIB

Note: Any or all of the above specifications are subject to change without prior notice.