BILLION ™

Wireless speed up to 300Mbps and 3X the coverage of standard 802.11g

BiPAC 9800N

Wireless-N Point-to-point Fiber Gateway

Experience super fast broadband point-to-point connectivity for FTTH applications!

The BiPAC 9800N is a point-to-point (P2P) Fiber Gateway – featuring a 4-port Gigabit Ethernet Switch, Firewall and Wi-Fi 802.11n access point. The device can be used for fiber-to-the-home (FTTH) applications and offers four different optical connectors of Fiber WAN interface transceiver: 100/1000BASE-BX (single-mode single fiber transceiver), 100/1000BASE-LX (single-mode dual fiber), 100BASE-FX (multi-mode dual fiber), and 100/1000BASE Small Form Factor Pluggable (SFP). Furthermore, the BiPAC 9800N supports remote management on end-user devices, which is available upon request for Telcos/ISPs projects to tightly manage the FTTH service delivery. The router is also equipped with a built-in 4-port Gigabit Switch which enables amazingly fast LAN transmissions for bandwidth-consuming applications such as video streaming and file sharing. The integrated draft 802.11n Wireless Access Point ensures that the 9800N offers faster wireless speeds (up to 300Mbps) while its three built-in antennae maximizes wireless signals. The BiPAC 9800N automatically adopts the optimal connection to deliver smooth and constant signal reception even if obstacles are present. Users can easily enjoy high bandwidth applications such as High Definition IPTV services without changing their home network. The built in robust firewall provides protection against intrusion attacks while the Quality of Service feature allows traffic prioritization and bandwidth management for downloads and online gaming.

FTTH applications
The BiPAC 9800N can be used for a point-to-point fiber access network. Since the Fiber WAN interface transceiver allows faster rates over even longer distances, it can support Telcom operators or ISPs to provide high quality and reliable Internet broadband services to either business users or home users. The 4-port Gigabit Switch incorporated into the BiPAC 9800N enables users to easily connect to multiple computers or wired-Ethernet devices and enjoy blistering LAN transfer rates for multimedia applications such as interactive gaming, IPTV video streaming and real-time audio.

Smooth, Responsive Net Connection
The Quality of Service (QoS) feature gives users full control over outgoing data traffic. Traffic prioritization can be assigned by the router to ensure that important and specific transmissions such as gaming packets, VoIP calls or IPTV / streaming content passes through the router at lightning speed, even during heavy Internet traffic. The speed of different types of outgoing data passing through the router can also be controlled to ensure that different users do not saturate bandwidth with their browsing activities.
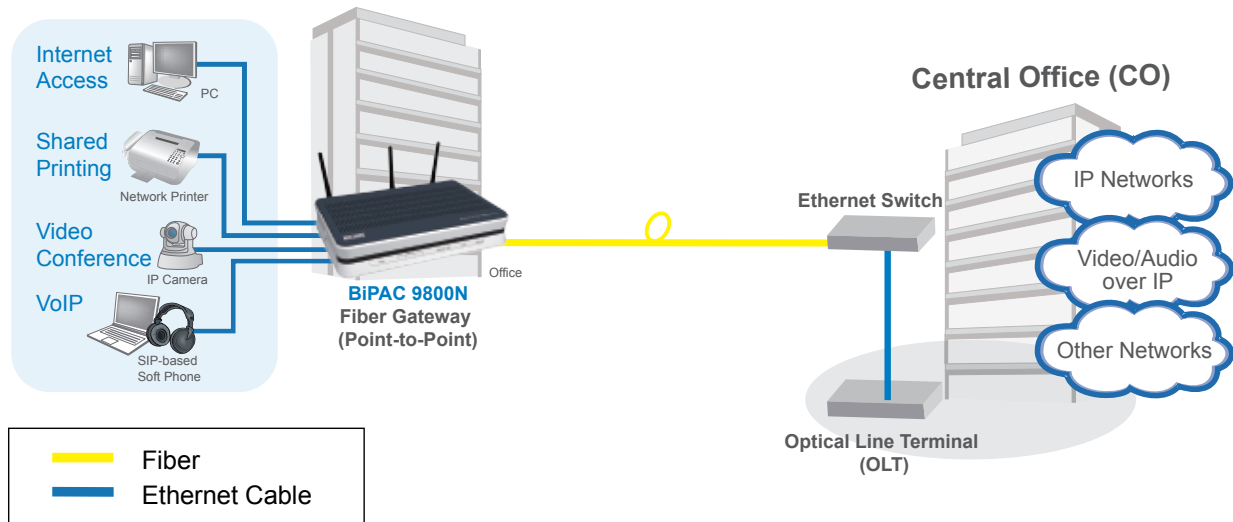
Robust Firewall Security
The NAT default firewall has advanced anti-hacker pattern-filtering protection features that automatically detect and block Denial of Service (DoS) attacks. In addition, the Packet Filtering provides high-level security for access control. With the built in Stateful Packet Inspection (SPI) feature, the router enables users to determine whether or not a data packet is allowed to pass through the firewall to the private LAN.

Optimal Wireless Speeds and Coverage
With an integrated Draft-802.11n Wireless Access Point, the router delivers up to 6 times the speed and 3 times the wireless coverage of an 802.11b / g network device. It supports data rates of up to 300Mbps and is also compatible with 802.11b / g equipment. The Wireless Protected Access (WPA-PSK / WPA2-PSK) and Wireless Encryption Protocol (WEP) features enhance the level of transmission security and access control over the Wireless LAN. The router also supports the Wi-Fi Protected Setup (WPS) standard, allowing users to establish a secure wireless network by simply pushing a button. If the network requires wider coverage, the built-in Wireless Distribution System (WDS) repeater function allows users to expand the wireless network without the need for any external wires or cables.

- Fiber interface supports up to 1000 Mbps downstream and 1000 Mbps upstream rates
- 4-port Gigabit Switch
- Supports Draft-802.11n Wireless Access Point with WPA-PSK / WPA2-PSK
- WPS (Wi-Fi Protected Setup) for Easy Setup
- Wireless Speed up to 300Mbps and 3 Times the Coverage of Standard 802.11b/g
- Quality of Service Control for Traffic Prioritization and Bandwidth Management
- SOHO Firewall Security with DoS Prevention and Packet Filtering
- Easy Sign-On (EZSO)
- Universal Plug and Play (UPnP) Compliance
- Dynamic Domain Name System (DDNS)
- Available Syslog
- Supports IPTV Applications[*1]

Powering communications with **Security**

Central Office (CO)

Internet Access — PC
Shared Printing — Network Printer
Video Conference — IP Camera
VoIP — SIP-based Soft Phone

BiPAC 9800N Fiber Gateway (Point-to-Point)
Office

Ethernet Switch

IP Networks
Video/Audio over IP
Other Networks

Optical Line Terminal (OLT)

Fiber
Ethernet Cable

Features & Specifications

Standards
• IEEE 802.3 10Base-T
• IEEE 802.3u 100Base-TX
• IEEE 802.3ab 1000Base-T
• IEEE 802.3z 1000Base-SX / LX

Network Protocols and Features
• NAT, static routing and RIP-1 / 2
• Universal Plug and Play (UPnP) Compliant
• Dynamic Domain Name System (DDNS)
• Virtual Server and DMZ
• SNTP, DNS relay and IGMP proxy
• IGMP snooping for video service

Firewall
• Built-in NAT Firewall
• Stateful Packet Inspection (SPI)
• Prevents DoS attacks including Land Attack, Ping of Death, etc.
• Remote access control for web base access
• Packet filtering
• Password protection for system management
• VPN pass-through

Quality of Service Control
• Supports the DiffServ approach
• Traffic prioritization and bandwidth management based-on IP protocol, port number and address

PPP Protocols
• PPP over Ethernet (PPPoE)

IPTV Applications[1]
• IGMP Snooping/ proxy
• Virtual LAN (VLAN)
• Quality of Service (QoS)

Wireless LAN
• Compliant with IEEE 802.11n draft 2.0, 802.11g and 802.11b standards
• 2.4 GHz - 2.484 GHz frequency range
• Up to 300Mbps wireless operation rate
• 64 / 128 bits WEP encryption supported
• WPS (Wi-Fi Protected Setup) for easy setup
• Wireless Security with WPA-PSK / WPA2-PSK support
• WDS repeater function support

Management
• Easy Sign-On (EZSO)
• Web-based GUI for remote and local management
• Upload and download of firmware upgrades and configuration data via web-based GUI
• Embedded Telnet server for local management
• Available Syslog
• Supports DHCP server / relay
• TR-069[2] supports remote management

Hardware Specifications
Physical Interface
• Optical SC-connector with options:
  - 100BASE-LX dual fiber single-mode WAN (Tx/Rx1310nm)
  - 100BASE-BX single-strand single-mode WAN (Tx1310nm/Rx1550nm)
  - 100BASE-FX dual fiber multimode WAN (Tx/Rx1310nm)
  - 1000BASE-LX dual fiber single-mode WAN (Tx/Rx1310nm)
  - 1000BASE-BX single-strand single-mode WAN (Tx1310nm/Rx1490nm)
• 100/1000BASE Optical SFP Optical convector
• WLAN: 3 x detachable antennae
• Ethernet: 4-port 10/100/1000M auto-crossover (MDI / MDI-X) Switch
• Factory default reset button
• WPS push button
• Power jack
• Power switch

Physical Specifications
• Dimensions: 9.04" x 6.10" x 1.69" (229.5mm x 155mm x 43mm)

Power Requirements
• Input: 12V DC, 1.2A

Operating Environment
• Operating temperature: 0 - 40 °C
• Storage temperature: -20 - 70 °C
• Humidity: 20 - 95% non-condensing

*Notes:
1. IPTV application may require subscription to IPTV services from a Telco / ISP.
2. Only upon request for Telco / ISP tender projects.
3. Specifications in this datasheet are subject to change without prior notice.
4. Future release

V.1.00c