5168NV
Triple-Play, Bonded ADSL2+/VDSL2 Gateway

FEATURES

• Dual-core processor with hardware accelerated routing for exceptional performance
• ADSL/VDSL Pair Bonding
• Advanced Quality of Service for Managing Voice, IPTV, and Data Traffic
• Best-in-class wireless performance with Pace’s high-power wireless design
• HomePNA interface for video distribution throughout the home
• Intelligent service delivery platform
• Carrier-Quality TR-069, TR-098 and TR-104 Network Management
• Professional-Grade Firewall
• Low Total Cost of Ownership

PRODUCT OVERVIEW


The 5168NV intelligent gateway is the optimum solution for today’s service provider. It enables superior double and triple-play service delivery via is flexible xDSL interfaces. The 5168NV terminates single-pair or pair-bonded ADSL2+/VDSL2 and automatically detects the configured profile. It can even receive a gigabit Ethernet handoff from an optical network terminal (ONT). The 5168NV allows service providers to use one SKU to serve all areas of their delivery network.

ADSL/VDSL PAIR BONDING

The 5168NV residential gateway features bonded ADSL2+/VDSL2 modem technology, allowing service providers to increase rate and reach with their existing broadband infrastructure.
GIGABIT SPEEDS

Enable Gigabit service offerings utilizing the integrated Gigabit Ethernet switch.

SUPERIOR WIRELESS PERFORMANCE

High-powered 802.11n 2x2 MIMO wireless technology virtually eliminates wireless “cold spots” in the home. Our intelligent gateways provide more than four times the maximum transmit power of competitive products that traditionally transmit at less than 100mW.

The 5168NV gateway has superior transmit power and receiver sensitivity, in conjunction with an optimized antenna design, and boosts performance compared to typical 802.11n wireless designs. Better range throughout the home means higher customer satisfaction with wireless coverage.

INTEGRATED VOICE OVER IP

The 5168NV provides built-in VoIP capabilities to support today’s voice needs. Additional VoIP capabilities include a full SIP ALG, and back-to-back IP user agent (proxy) to support additional ATA adapters.

STREAMLINED MANAGEMENT

The 5168NV intelligent gateway drastically simplifies both gateway and application management; remote management is supported with any TR-069-compliant auto-configuration server, such as our industry-leading ECO Manage device management system.

ECO Manage gives providers a valuable insight into the customer’s network, enabling them to remotely configure, manage and troubleshoot deployed gateway devices, eliminating costly truck rolls and lengthy customer care calls. Additionally, IP-based services can be remotely managed using the web-based ECO Service Management tools. ECO Service Management can reduce operational expenses, shorten time-to-market for next-generation services, and increase customer satisfaction.

MAIN INTERFACES

- Bonded ADSL2+/VDSL2
- Gigabit Ethernet WAN
- HomePNA 3.1 coax port
- 4 x Gigabit Ethernet LAN ports
- 802.11n 2x2 MIMO Wi-Fi
- 2 x FXS (VoIP) Lines
- Optional USB Host Ports
GENERAL SPECIFICATIONS

Broadband Network Interfaces

Integrated Bonded ADSL2+/VDSL2 Modems (1 RJ-14)

Gigabit Ethernet (1 RJ-45)

Broadband interface auto detection feature

DSL Modem

ADSL 1, ADSL 2, ADSL 2+

VDSL2

T1.413 Issue 2, G.992.1, G.992.3, G.992.5, G.HS/G.994.1

VDSL-DMT per G.993.2 standard

Ethernet Bonding G.998.2

TR-067- and TR-100-compliant

ANSI and ETSI loops

Annex A, L and M support

Extended frames support

Cabinet mode support

High-Powered Wireless Functionality

IEEE 802.11n 2x2 2.4 GHz wireless access point, backwards compatible with 802.11b/g

10 power settings available through gateway user interface, up to 25 +/- 1dBm, for 802.11b, 802.11g, and 802.11n

Settings also configurable via CWMP

WEP64, WEP128, WPA, WPA2

Automatic channel selection with interference detection

Multiple SSID support

Wi-Fi Multimedia (WMM) and Multimedia Power Save (WMM-PS)

MAC-based filtering

Wi-Fi Protected Setup (WPS)

Local Network Interfaces

Gigabit (10/100/1000 Mbps) Ethernet (4 ports RJ-45)

Wireless 802.11b/g/n access point

HomePNA 3.1 interface over coax, utilizing Sigma CG3210 chipset

1 x USB 2.0 Host interface (2 option)

VoIP Functionality

Two (2) voice lines via RJ-14 port

SIP user agent interoperability, including Alcatel-Lucent IMS

Audio codecs: G.711 (a-law and u-law) and G.729, software upgradeable to support G.726

Software upgradeable to support back-to-back SIP user agent (Proxy function)

Echo Cancellation

T.38 Fax Relay capable

Advanced statistics gathering and reporting support

Software Tools and Diagnostics

Zero-touch subscriber activation including Captive Portal

Simple Web-based user interface for easy configuration and diagnostics

Quick summary page with shortcuts to most commonly used features

Standard and advanced DSL Diagnostics provided as TR-098 vendor extensions

Network Protocol Support

ATM UNI, UBR, VBRnrt, VBRrt, CBR

IPv4, IPv6 6RD, TCP, UDP, ARP, ICMP

DHCP client/server, DNS client/server, HTTP client/server

Single IP and multi-IP support

PPPoE, PPPoA, PAP, CHAP, RFC 2684/1483 Ethernet

Diagnostics and Management Tools

Remote management and provisioning via SSL connection from ECO Manage or other TR-069-compliant ACS

Supports TR-069, TR-098, and TR-104

Integrated gateway-based diagnostics automatically intervene during error conditions, such as Missing Filter Detection, intercept subscriber Web requests, and provide self-guided resolutions

Web-based remote gateway technician view and remote management

ICMP Ping, Traceroute

Multicolor indicator lights monitor the connection and assist with troubleshooting
## GENERAL SPECIFICATIONS

### Security
- Integrated firewall includes stateful packet inspection (Layer 4) and local IP spoofing verification
- Supports stealth mode operation
- Unique signed security certificate manufactured into each gateway for TR-069 management authentication

### NAT/PAT Support
- Standard NAT/PAT between LAN and WAN
- Automated NAT pass-through for LAN client-initiated VPN tunnels (IPSec, PPTP, L2TP), SIP, H.323, RTP
- Easy-to-configure NAT pass-through (pinholes) for common applications (games, servers, etc.)
- DMZplus for automatic WAN IP assignment to a local computer
- Supports most popular ALGs: HTTP, FTP, H.323, IPSEC-IKE/ ESP, PPTP, RTP, RTSP, and SIP

### Software Upgrade
- Secure TR-069 software updates procedure via ECO Manage

### Standard Hardware Features
- TR-068-compliant industrial design and LED indicators
- Vertical placement via provided stand or horizontal desktop placement
- Wall mount capable (with optional bracket)

## GENERAL SPECIFICATIONS

### Physical Specifications
- With stand: 3.1” x 9.6” x 9.7” (7.8 cm x 24.3 cm x 24.5 cm)
- Without stand: 1.6” x 8.7” x 8.9” (4.0 cm x 22.1 cm x 24.6 cm)
- 1.6 lbs (0.70 kg)

### Power Supply
- External PSU: 12V, 3A
- 2-prong ungrounded non-polarized AC plug

### Memory
- Up to 128 MB Flash (64 MB standard)
- Up to 256 MB RAM (128 MB standard)

### Operating Environment
- Temperature: 32° to 104° F (0° to 40° C)
- Humidity: 5% to 95%, non-condensing
- Altitude: -197’ – 6,000’ MSL