## Product Brief

## Nortel VPN Router 200 Series

### For small offices and home offices

Enterprises have been quick to see the merits of the Internet and IP to extend their business communications to customers, employees and partners. But the Internet was not designed with security in mind. Nortel VPN Router* products have led the market in addressing these enterprise IP security needs. Now the powerful security of the VPN Router family can be extended to small office and home office sites. The VPN Router 200 series is an affordable all-in-one solution for tying small satellite offices and teleworkers into a secure corporate network.

The VPN Router 200 series of VPN devices (formerly known as Contivity) are the answer to enterprises requiring low-cost secure connectivity across the Internet or managed IP networks. Designed for telecommuter and small office/home offices, the VPN Router 200 series provides Virtual Private Networking (VPN), stateful firewall, IP routing, URL/content filtering and optional integrated DSL in a compact easy-to-manage platform.

Consisting of VPN Router 221 and 251 models, the VPN Router 200 series provides options for small sites seeking secure Internet connectivity along with firewall-based perimeter defense func-



**VPN Router 221 and 251**

tions in a single device. Both models have an integrated four-port Ethernet switch for connecting local LAN devices. The VPN Router 221 provides Ethernet-to-Ethernet connectivity while the VPN Router 251 offers integrated ADSL conforming to international standards to allow global deployment.

### Low-cost IP security for small sites

With its low-cost and integrated services, the VPN Router 200 is an affordable device for small sites that might previously have felt such an IP security solution was too costly. It combines the advanced IP-VPN, stateful firewall, routing and content filtering functions required by most telecommuter and small office/home offices when connecting to and accessing Internet services. It further delivers these in a compact and quiet chassis that neatly fits into these environments.

## Robust VPN and firewall

Advanced IPsec services with flexible tunneling and powerful encryption are designed to ensure the highest security for transmitted traffic. VPN encryption options include DES, 3DES and AES to address the most stringent security requirement. A stateful packet inspection engine with up to 50 filter rules, built-in denial of service, logging and e-mail alerting functions provides perimeter defense against unwanted network intrusion. URL/content filtering further serves to block unwanted Web-based traffic that might disrupt remote site PCs.

## Flexible site-to-site VPN services

The VPN Router 200 can flexibly and securely extend the corporate network to small remote sites. Supporting both IPsec and PPTP tunneling, it can connect remote sites to a headquarters location or can connect to other branch sites or to other enterprises in either a hub and spoke or small mesh configuration. The VPN Router 200 can also connect to a larger central site VPN Router in a variety of IPsec modes (e.g., branch office or client mode) to best fit an enterprise's VPN needs. As a member of the VPN Router family, the VPN Router 200 can also participate as an endpoint in VPN Router's Secure Routing Technology (SRT) framework.

## Easy installation and management

The VPN Router 200 can be quickly set up and managed through an advanced set of management options. A "client emulation mode" allows the VPN Router 200 to use information on a central-site VPN Router to minimize set-up time. An existing ID and password can be used to authenticate the VPN Router 200 and IP address, WINS and DNS server can be dynamically assigned without user intervention. The VPN Router 200 can further be remotely initialized via an Easy Install utility, which enables a non-technical user using a Web browser to download an initial configuration to the VPN Router for quick connection and set-up. The VPN Router 200 also supports integrated Web-based and command-line interfaces for flexible device configuration, as well as SNMP for remote monitoring. Last, the VPN Router 200 series can be managed by Nortel's VPN Router Multi-Element Manager, which can act as a central configuration and provisioning system for up to 2,500 VPN Router devices.

In summary, if you are looking for a robust IP security solution for small offices and homes offices — either for your own enterprises or as part of a managed service solution, you can count on the VPN Router 200. It can provide a complete standalone IP security solution or connect to other members of the Nortel VPN Router family.
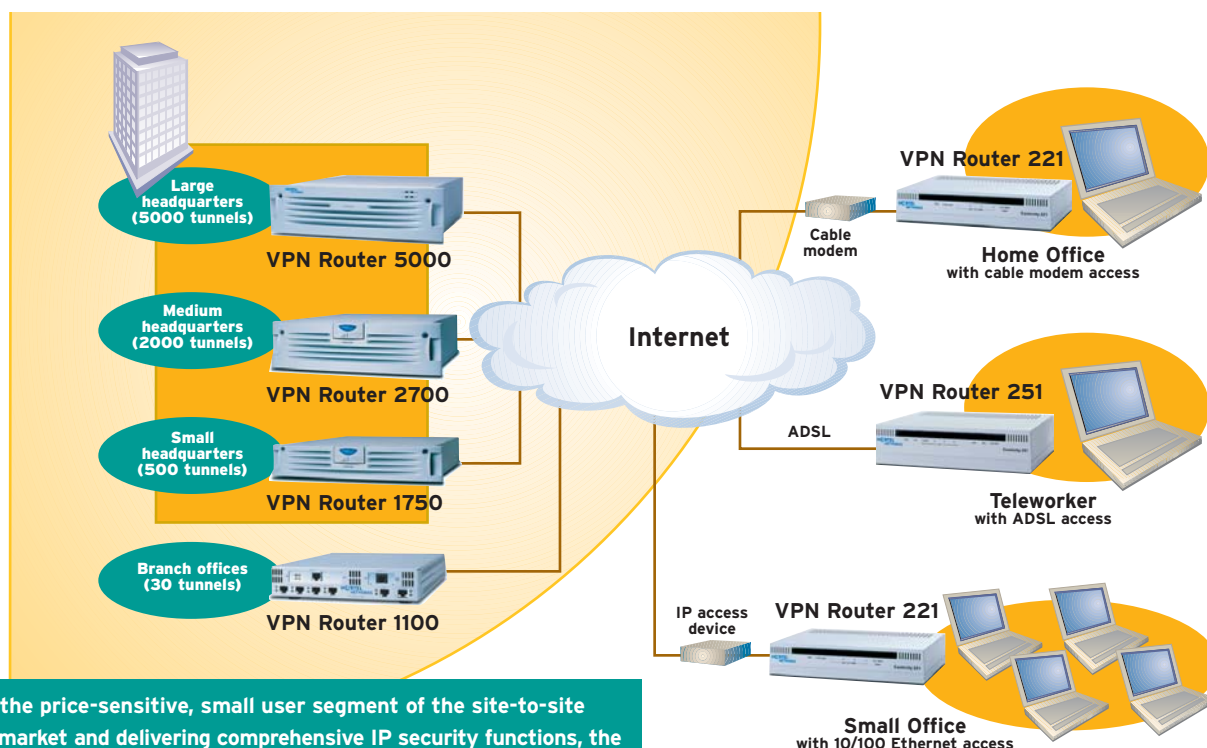
### Key benefits:
- Low-cost IP security for small sites
- Robust VPN and firewall features
- Flexible site-to-site VPN services
- Integrated ADSL option for global deployment
- Easy installation and management

## Key VPN Router 200 features and benefits

| Features | Benefits |
|---|---|
| Extensive IPsec VPN capabilities | Five VPN tunnel capacity along with advanced IPsec features make it a versatile site-to-site VPN solution for telecommuters and small offices. |
| Powerful stateful firewall | Full stateful inspection with up to 50 rules, denial of service, logging and e-mail alerting tools prevent unwanted network intrusion. |
| Integrated 4-port 10/100 Ethernet switch | User PCs and LAN devices can be directly connected — no need for separate Ethernet switch or hub. |
| VPN Router VPN client emulation mode | Simplifies remote set-up by emulating "VPN client" connection to another VPN Router. IP attributes are dynamically assigned and existing remote access VPN information can be re-used. |
| Content (URL) filtering | Blocks ActiveX, Java applets and cookies and disables Web proxies so that network administrators can tailor remote site access policies to be consistent with rest of enterprise. |
| Secure Voice over IP (VoIP) transport | Reliably forwards VoIP traffic across network address translation (NAT) and firewall boundaries through intelligent handling of SIP and H.323 voice protocols. Allows flexible, yet secure, deployment of VoIP over Internet or public IP connections. |
| Sophisticated Quality of Service (QoS) | Bandwidth management and class-based queuing services ensure delivery of high-priority traffic, including latency-sensitive VoIP traffic. |
| Dial back-up through console/auxiliary port | Can re-direct either secure VPN or 'clear text' traffic across a back-up connection if the primary IP interface fails. |
| Integrated ADSL option | Conforming to a wide range of international standards, the VPN Router 200 can be readily connected into virtually any global service provider's ADSL service. |

# Technical specifications — features and capabilities

## VPN Router 200 Series

**IP routing and network addressing**
- RIPv1 and v2, ARP, ICMP
- PPPoE (two sessions)
- DHCP client and server: 'static' DHCP
- Dynamic DNS and DNS proxy
- NAT — many-to-many, many-to-one, one-to-one, port forwarding

**VPN tunneling**
- IPsec, including AH and ESP with main and aggressive mode IKE
- PPTP
- Nailed-up VPN tunnels with control PING
- Support for branch VPN tunnels with NAT port forwarding
- Up to 5 VPN tunnels

**Encryption**
- DES, 3DES
- 3DES uses 3 independent keys; 168-bit key length (effective strength of 128 bits)
- 128, 192 or 256-bit AES

**Authentication services**
- 802.1x (via internal VPN Router 200 database or external RADIUS server)
- X.509 digital certificates (PKCS #7 and #10; SCEP and CMP for open SSL Certificate Authorities)
- Support for third-party Extensible Authentication Protocol (EAP) clients
- Shared secret
- Data authentication via SHA-1 or MD-5

**VPN (Hard) Client support**
- On-demand or manual VPN tunnel establishment
- Automatic IP fail-over assignment
- Support for RADIUS authentication
- Exclusive use mode

**Stateful firewall**
- Stateful packet inspection of up to 50 rules
- LAN to LAN, LAN to WAN, WAN to WAN
- Denial of Service (DoS) protection
- Attack logging and e-mail alerts
- ALGs for CU-SeeME, FTP, H.323, IPsec, RealAudio, VDoLive

**Voice-friendly capabilities**
- SIP/H.323 ALGs for firewall and NAT traversal
- Port-restricted Cone NAT for Nortel Unistim VoIP forwarding
- Class-based queueing and bandwidth management for latency-sensitive VoIP traffic
- Interoperable with Nortel Multimedia Communication Server, BCM and Communication Server VoIP portfolios

**Management**
- VPN Router Multi-Element Manager provides multi-device configuration for up to 2,500 VPN Router devices, including the VPN Router 200 series
- Web-based browser (HTTP) and/or Command-line interface (CLI) configuration
- SNMP monitoring/alerts
- Easy Install utility for centralized remote set-up
- SSL/SSH administration
- SFTP for software downloads
- Denial of Service (DoS) attack alert and logging capability

**Environmental compliance**
- FCC Class B
- Underwriters Laboratory
- CSA
- FCC Part 68 (for xDSL devices)
- CE



Large headquarters (5000 tunnels) — VPN Router 5000

Medium headquarters (2000 tunnels) — VPN Router 2700

Small headquarters (500 tunnels) — VPN Router 1750

Branch offices (30 tunnels) — VPN Router 1100

Internet

VPN Router 221 — Cable modem — Home Office with cable modem access

VPN Router 251 — ADSL — Teleworker with ADSL access

VPN Router 221 — IP access device — Small Office with 10/100 Ethernet access

**Serving the price-sensitive, small user segment of the site-to-site IP-VPN market and delivering comprehensive IP security functions, the VPN Router 200 can provide connectivity to headquarters offices and other branch locations that have other VPN Router devices.**

# Technical specifications — physical and operational

## VPN Router 221 — up to 5 tunnels

**Interfaces**
- 10/100 Mbps Ethernet (RJ-45)
- 4-port 10/100 Mbps Auto-sensing Ethernet switch
- Console port (RS-232, DB-9f)

**Physical**
Length: 7.4" (188 mm)
Width: 5.0" (128 mm)
Height: 1.4" (36 mm)
Weight: 10.9 oz. (310 grams)

**IPsec performance**
9.0 Mbps for 3DES

## VPN Router 251 — up to 5 tunnels

**Interfaces**
- 4-port 10/100 Mbps Ethernet switch
- ADSL – G.992.1 Annex A, Annex B or U-R2
- Console port (RS-232, DB-9f)

**Physical**
Length: 9.1" (230 mm)
Width: 6.3" (161 mm)
Height: 2.1" (53 mm)
Weight: 1.0 lbs. (468 grams)

**IPsec performance**
4.5 Mbps for 3DES

**ADSL compliance:**
- ITU G.992.1 (G.DMT)
- G.992.1 Annex A – ADSL over POTS
- ITU G.992.2 (G.Lite)
- RADSL – ANSI T1.413 Issue 2
- DSL Forum document TR-042 ATM
- Transport over ADSL
- G.hs 994.1
- G.ploam G.997.1
- Auto negotiation rate adaptation
- RFC 2364 – PPP over AAL5
- RFC 2684 – MPoA; both bridged and routed encapsulation
- British Telecom SIN 329; BT Broadband IP Product requirements for End User NTE equipment
- RFC 2516 – PPPoE
- Traffic shaping UBR, CBR
- ATM Forum UNI 3.1/4.0 PVC

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For more information, contact your Nortel representative, or call 1-800-4 NORTEL or 1-800-466-7835 from anywhere in North America.

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