



# NetVanta 4305

## Multi-slot Access Router Supporting up to Eight T1s of Bandwidth

### Product Features

- Three-slot, dual-Ethernet IP Access Router for Frame or PPP networks
- Dual auto-sensing 10/100Base-T interface for LAN segmentation
- Stateful inspection firewall for network security
- Command Line Interface (CLI) mimics *de facto* industry standard
- QoS for delay sensitive traffic like VoIP
- VLAN Trunking (802.1Q) for routing between VLANs
- Network Address Translation (NAT) conceals private IP addresses
- Optional VPN for secure corporate connectivity across the Internet
- Built-in DSU/CSU for circuit protection
- Feature-rich ADTRAN Operating System (AOS)
- Industry-leading five-year North American warranty

The NetVanta® 4305 is an access router designed for cost-effective Internet access, corporate Frame Relay, point-to-point connectivity, ADSL, and Virtual Private Networking (VPN) for large-bandwidth applications supporting up to eight T1s.

#### Modular Hardware

Residing in a 1U high, 19" rackmountable metal enclosure, the NetVanta 4305 is a single platform that offers one Wide Module slot, two Network Interface Module (NIM) slots and dual 10/100Base-T Ethernet LAN ports for true LAN segmentation or DMZ applications. The single Wide Module slot within the NetVanta 4305 will house the Octal T1/E1 Wide Module, while the NIM slots will support a variety of the NetVanta NIMs and DIMs: 56/64k, T1/FT1, T1/FT1 with DSX-1, Dual T1s, E1/FE1, E1/FE1 with G.703, ADSL, and Serial interfaces. For dial-backup an Analog Modem, ISDN BRI, or Serial DIM are available for preventing downtime by dialing around a failed circuit to any PPP compliant device.

#### Standard-based Protocols

The versatile hardware platform of the NetVanta 4305 is further complemented with the ADTRAN® Operating System (AOS). AOS allows for the support of static and default routes, demand and policy-based routing, and allows for fast, accurate network convergence using routing protocols such as BGP, OSPF, RIP, and PIM Sparse Mode for multicast routing. In addition, AOS terminates Frame Relay, utilink Frame Relay, PPP, Multilink PPP, PPPoE, PPPoA, RFC 1483, and HDLC WAN protocols. Multihoming is also available to provide redundant or backup WAN links to multiple ISPs, guaranteeing a wide-area connection.

#### Security

For added security, AOS provides a powerful, high performance stateful inspection firewall. It will examine all incoming and outgoing packets against the security policies established by the IT manager. In addition, the firewall can identify and protect against common Denial of Service (DoS) attacks like TCP syn flooding, IP spoofing, ICMP

redirect, ping-of-death, and IP reassembly problems. In addition, with the AOS Enhanced Feature Pack Upgrade, the NetVanta 4305 adds the support for IPSec compliant VPN. The NetVanta 4305 supports up to 1,000 simultaneous VPN tunnels, while supporting encryption algorithms like DES, 3DES, and AES. With this upgrade, the NetVanta 4305 is fully compatible with ADTRAN's IPSec VPN equipped NetVanta products: Ethernet switches, access routers, and VPN/Firewall appliances.

#### Quality of Service (QoS)

QoS is also supported for delay sensitive traffic like VoIP or video. To prioritize mission critical traffic and control network congestion, the NetVanta 4305 uses Low Latency Queuing, Weighted Fair Queuing (WFQ), Class-based WFQ, and DiffServ marking to establish priority of IP packets routed over the WAN.

#### VoIP Ready

In combination with the QoS features, a specialized SIP Application Layer Gateway (ALG) allows SIP traffic to traverse NAT-enabled firewalls. For an enterprise network, this interoperability allows IP PBXs, phones, and other SIP-based devices to set up, tear down, and pass voice and call control messages seamlessly through the integral NAT-enabled firewall.

#### Administration

AOS offers a standard Command Line Interface (CLI) that mimics the widely adopted, industry *de facto* standard. Using an already familiar CLI virtually eliminates training costs associated with learning a new operating system or costly industry certifications. The CLI also allows for configuration scripts to be used, saved, and downloaded for a quick and easy recovery mechanism.

ADTRAN, the leader in WAN connectivity, offers reliable equipment that increases network performance, lowers cost, and positions networks for the future. The NetVanta 4305 is no exception. In addition, these products are backed by an industry-leading five-year North American warranty, free firmware downloads, and world-class 24-hour technical support from ADTRAN.





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### Physical Interface

- **One Wide Slot:** Octal T1/E1 Wide Module
- **Dual NIM Slots:** 56/64k, T1/FT1, T1/FT1 with DSX-1, Dual T1, ADSL, E1/FE1, E1/FE1 with G.703, and Serial
- **DIM:** Analog Modem, ISDN BRI (U and S/T), and Serial
- **Dual LAN Ports:** Auto-Sensing 10/100Base-T Ethernet Ports (RJ-45)
- Console Port

### Diagnostics LEDs

- Power
- **Slots:** status, activity, test
- **LANs:** link, transmit, receive

### Processor and Memory

- 450 Mhz, MPC 8250
- **RAM:** 256 MB
- **FLASH:** 32 MB

### Security

#### Firewall

- Stateful Inspection Firewall
- Denial of Service (DoS) Protection
- Access Control Lists
- Application Level Gateways (ALGs)

#### Network Address Translation

- Basic NAT (1:1), NAT (Many:1), and 1:1 Port Translation
- NAT compatible SIP ALG

#### Secure Management

- Multi-level access control
- RADIUS AAA
- TACACS+
- SSH CLI and SSL GUI
- Port Authentication (802.1x)

#### Optional Virtual Private Network (VPN)

- **IPSec Mode:** Tunnel
- **Encryption:** DES, 3DES, and AES
- **Diffie Hellman Group Support:**
  - Group 1: MODP 768
  - Group 2: MODP 1024
- **Hash Algorithms:** MD5-HMAC and SHA1-HMAC
- **Authentication Mechanisms:**
  - XAUTH
  - Secure ID
  - X.509 Digital certificates
  - DSS Signatures
  - Preshared keys
- **Key Management:** IKE (ISAKMP/Oakley)
- **IKE Modes:**
  - Main
  - Perfect Forward Secrecy
  - Aggressive
  - Mode Config
- Dead Peer Detection
- NAT Traversal V2

### Quality of Service (QoS)

- Class-based Weighted Fair Queuing, Low Latency, and Weighted Fair Queuing
- DiffServ marking and packet recognition
- Frame Relay Fragmentation

### Routing

- eBGP/iBGP
- OSPF
- RIP (v1 and v2)
- PIM Sparse Mode
- Demand Routing
- Policy-based Routing
- GRE
- ATM (ADSL)
- Frame Relay
- Multilink Frame Relay
- PPP
- Multilink PPP
- PPPoE
- PPPoA
- IGMP v2
- RFC 1483
- HDLC
- PPP Dial Backup
- PAP and CHAP
- Multihoming

### Frame Relay

- Point-to-point
- RFC 1490 Encapsulation (Multiprotocol Over Frame Relay)
- LMI types: LMI, ANSI (Annex D), CCITT (Annex A) and Static

### DHCP

- Client, Server, and Relay

### Administration

- Familiar Command Line Interface (CLI)
- Web-based GUI
- n-Command™ support
- SNMP v2
- SYSLOG logging
- Email alerts (SMTP)
- Policy statistics

### Environment

- **Operating Temperature:** 0° to 50 °C (32° to 122 °F)
- **Storage Temperature:** -20° to 70 °C (-4° to 158 °F)
- **Relative Humidity:** Up to 95%, non-condensing

### Physical

- **Chassis:** 1U, rack mountable metal enclosure
- **Dimensions:** 1.75" H, 17.25" W, 11" D
- **Weight:** 7.5 lbs.
- **AC Power:** 100-250 VAC, 50/60 Hz, 75 W max. (1200890L2)
- **DC Power:** -48 +24 VDC, 75 W max. (1200950L1)

### Agency Approvals

- FCC Part 68
- Industry Canada CS03
- UL & Canadian UL (CUL), IEC/EN, CSA
- CE Mark

## Ordering Information

Equipment	Part #
NetVanta 4305 Chassis (AC)	1200890L2
NetVanta 4305 Chassis (DC)	1200950L1
NetVanta 4305 Chassis with VPN	4200890L2
VPN Upgrade	4200368L2
<b>Systems</b>	
NetVanta 4305 with Octal T1/E1 Wide Module	4200893L1

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