



NetVanta 3448

Multiservice Access Router

Product Features

- Multiservice Access Router supporting up to two T1s
- Wire-speed performance for IP Telephony, corporate connectivity, and Internet access
- Integral eight-port non-blocking Ethernet switch, with PoE option
- Standards-based routing/switching protocols based on the widely deployed NetVanta Series
- Feature-rich ADTRAN Operating System (AOS)
- CompactFlash® slot for downloading configuration files and new firmware
- Stateful inspection firewall for network security
- Onboard hardware encryption accelerator
- Optional IPSec VPN for secure corporate connectivity across the Internet
- Recognizable Command Line Interface (CLI) eliminates retraining
- User-friendly Web-based Graphical User Interface (GUI)
- NAT-compatible SIP ALG for VoIP
- Industry-leading five-year North American warranty

As a **Multiservice Access Router**, the NetVanta® 3448 delivers the **high-packet throughput required for IP Telephony, corporate connectivity, and Internet access**. This performance-enhanced platform delivers wire-speed throughput, even with advanced services enabled like QoS, NAT, Firewall, and VPN-enabled.

Modular Hardware

The NetVanta 3448 is a modular, 1U-high, rackmountable metal chassis that offers a single-slot to house any of the NetVanta 3000 Series NIMs and DIMs, which include a 56/64k, T1/FT1, T1/FT1 with DSX-1, Dual T1s, E1/FE1, E1/FE1 with G.703, ADSL, or a Serial interface. For dial backup, an analog modem, ISDN BRI, or Serial DIM are available, preventing downtime by dialing around a failed circuit to any PPP-compliant device. The NetVanta 3448 also includes two 10/100Base-T Ethernet interfaces and a fully managed, non-blocking, eight-port switch which can be separately powered to yield an 802.3af-compliant PoE Switch delivering a full 15.4 watts per port.

Standards Protocols

Complementing the versatile hardware, the ADTRAN® Operating System (AOS) allows for the support of standards-based switching, VLAN tagging, static and default routes, and demand routing. This enables fast, accurate network convergence using routing protocols such as BGP, OSPF, and RIP. In addition, the AOS terminates Frame Relay, Multilink Frame Relay, PPP, Multilink PPP, and HDLC WAN protocols. Multihoming is also available to provide redundant or backup WAN links to multiple ISPs, guaranteeing a wide-area connection.

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 3448 uses Low Latency Queuing, Weighted Fair Queuing (WFQ), Class-based WFQ, and DiffServ marking to establish the 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 enterprise networks, 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.

Security

The AOS provides a powerful, high performance stateful inspection firewall that 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.

The NetVanta 3448 supports up to 500 simultaneous IPSec VPN tunnels and encryption algorithms like DES, 3DES, and AES. By supporting IPSec, the NetVanta 3448 is fully compatible with other IPSec VPN-equipped NetVanta products.

Administration

The AOS offers a standard Command Line Interface (CLI) that mimics the widely adopted, industry *de facto* standard. The sequence of commands to configure similar devices is almost identical, virtually eliminating training costs associated with relearning a new operating system or costly industry certifications. The CLI also allows for configuration scripts to be used, saved, and downloaded as a quick and easy recovery mechanism. In addition, an intuitive Web-based GUI provides step-by-step configuration wizards, management capability, and the ability to upload firmware updates.





ADTRAN, Inc.

Attn: Enterprise Networks
901 Explorer Boulevard
Huntsville, AL 35806

P.O. Box 140000
Huntsville, AL 35814-4000

256 963-8000 voice
256 963-8699 fax

General Information

800 9ADTRAN
info@adtran.com
www.adtran.com

Pre-Sales

Technical Support

800 615-1176 toll-free
application.engineer@adtran.com
www.adtran.com/support

Where to Buy

877 280-8416 toll-free
channel.sales@adtran.com
www.adtran.com/where2buy

Post-Sales

Technical Support

888 423-8726
support@adtran.com
www.adtran.com/support

ACES Installation & Maintenance Service

888 874-ACES
aces@adtran.com
www.adtran.com/support

International Inquiries

256 963-8000 voice
256 963-6300 fax
international@adtran.com
www.adtran.com/international

For the regional office nearest you, visit:

www.adtran.com/regional

To download a searchable version of the ADTRAN Enterprise Networks Catalog, visit:

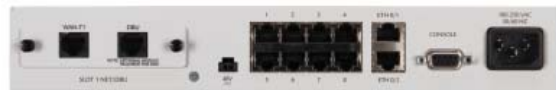
www.adtran.com/ecatalog



ADTRAN is an ISO 9001, ISO 14001 and a TL 9000 certified supplier.

61200821E1-8D AOS 13.1 March 2007
Copyright © 2007 ADTRAN, Inc.
All rights reserved.

NetVanta® 3448



Multiservice Access Router

Product Specifications

Physical Interface

- **NIM:** 56/64k, T1/FT1, T1/FT1 with DSX-1, Dual T1, E1/FE1, E1/FE1 with G.703, ADSL, and Serial
- **DIM:** Analog Modem, ISDN BRI (U and S/T), and Serial
- **LAN:** Two Auto-sensing 10/100Base-T ports (RJ-45) RJ
- **Switch:** Eight-port, Auto-sensing Ethernet Switch 10/100Base-T Full Duplex (Optional PoE support)

Diagnostics LEDs

- Status
- Ethernet 1
- Switch 1-8
- WAN
- Ethernet 2
- PoE
- DBU

Memory

- **RAM:** 128 MB
- **FLASH:** 32 MB
- CompactFlash® Slot

Protocols

- eBGP/iBGP
- OSPF
- RIP (v1 and v2)
- PIM Sparse Mode
- Demand Routing
- Policy-based Routing
- GRE
- ATM (ADSL)
- Frame Relay
- Multilink Frame Relay
- Layer 3 Backup
- PPP
- Multilink PPP
- PPPoE
- PPPoA
- IGMP v2
- RFC 1483
- HDLC
- PPP Dial Backup
- PAP and CHAP
- Multihoming

Quality of Service

- Low Latency, Weighted Fair Queuing (WFQ), and Class-based WFQ
- DiffServ Packet Marking and Recognition
- Frame Relay Fragmentation

Switching

- Weighted Round Robin (WRR) and Strict Priority Queuing
- VLAN Support (802.1Q)
- Spanning Tree (802.1D)
- Rapid Spanning Tree (802.1w)
- 802.1p and DiffServ QoS
- Optional 802.3AF PoE Delivering 15.4 Watts per Port

Administration

- Familiar Command Line Interface (CLI)
- Web-based GUI
- n-Command® Support
- SNMP v3
- SYSLOG Logging

- Email Alerts (SMTP)

- Policy Statistics

DHCP

- Client, Server, and Relay

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 Port Translation
- NAT compatible SIP ALG

Secure Management

- Multi-level Access Control
- TACACS+
- RADIUS AAA
- SSH CLI and SSL GUI

Content Filtering

- Integration with Websense®

Optional Virtual Private Network (VPN)

- **IPSec Tunnel Mode:** 500 Tunnels
- **Encryption:** DES, 3DES, and AES
- **Diffie Hellman Group Support:** Group 1: MODP 768 and Group 2: MODP 1024
- **Hash Algorithms:** MD5-HMAC and SHA1-HMAC
- **Authentication Mechanisms:** XAUTH, Digital certificates, Preshared keys, and Secure ID

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:** IU, metal chassis
- **Dimensions:** 1.75" H, 11.75" W, 7.5" D
- **Weight:** 4 lbs.
- **Auto-ranging Power:** 100-250 Vac, 50-60Hz, 25 Watts

Agency Approvals

- CE Mark, UL & Canadian UL (CUL), IEC/EN
- RoHS

Ordering Information

Equipment	Part #
NetVanta 3448	1200821E1
NetVanta 3448 with VPN	4200821E2
NetVanta 3448 PoE	4200821E11
NetVanta 3448 PoE with VPN	4200821E12
VPN Software Upgrade	1950821E2

Specifications subject to change without notice. ADTRAN and NetVanta are a registered trademark of ADTRAN, Inc. All other trademarks mentioned in this document are the property of their respective owners. For more information regarding ADTRAN's export license, please visit www.adtran.com/exportlicense

ADTRAN believes the information in this publication to be accurate as of publication date, and is not responsible for error. Content subject to change without notice. Five-year warranty applies only to products sold in North America and Europe.

An Export License is required if these ADTRAN products are sold to a Government Entity outside of the EU-8 (Austria, Australia, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom). This is per DOC/BIS ruling G030477 issued June 6, 2003.