NetVanta 1544

Layer 3 Gigabit Ethernet Switch

NetVanta[®] 1544 is a managed, 28-port, Layer 3, Gigabit Ethernet switch designed as an access layer or network backbone switch for small to medium-sized businesses. With the combination of the advanced multi-layer switching fabric, high-bandwidth capabilities, and enhanced Quality of Service(QoS) features, the NetVanta 1544 is ideal as an aggregation switch for high-bandwidth Voice over IP (VoIP), Gigabit-to-the-desktop deployments, and

converged voice and data networks.

Hardware

The NetVanta 1544 rackmount switch provides 28 Gigabit Ethernet ports, consisting of 24 fixed 10/100/1000Base-T Ethernet ports and four 2.5 Gbps Small Form-factor Pluggable (SFP) ports. The 10/100/1000Base-T ports provide auto-rate, auto-duplexing, and auto-MDI/ MDI-X sensing. The enhanced SFP ports support standard 1Gbps up to 2.5 Gbps data rates. Together the four SFP ports can provide up to 20 Gbps of bandwidth between interconnected NetVanta 1544 switches.

Multi-layer Switching

The NetVanta 1544 supports advanced multi-layer (Layer 2 and Layer 3) switching. It supports static routes, RIP V1/V2, OSPF, Border Gateway Protocol (BGP) and Virtual Router Redundancy Protocol (VRRP), allowing it to easily scale from small and medium-sized businesses to enterprise-sized customers.

Standards Protocols

Based on the ADTRAN® Operating System (AOS), this device offers support for Link Aggregation (802.3ad); Port Mirroring; port-based switching features including Broadcast Storm Control, Spanning Tree (802.1D) and Rapid Spanning Tree (802.1w) for faster network convergence, link redundancy, and recovery from topology changes. Link Layer Discovery Protocol (LLDP) auto-discovers neighboring Ethernet devices, simplifying integration into multi-vendor environments.

Virtual LANs (VLANs)

All NetVanta switches support 802.1Q trunking and up to 255 VLANs to allow network managers to separate broadcast domains for efficient network performance and traffic control. NetVanta 1544 also supports dynamic VLANs assigned via 802.1x. This is an ideal way to make



sure users are automatically assigned to the correct VLAN, based on the login. Private VLANs are also available to provide extra security by isolating upstream traffic from user ports.

VoIP Ready

NetVanta 1544 has been designed specifically for VoIP. The ability to automatically configure IP phones using LLDP-MED, and the ability to separate voice traffic onto voice VLANs, helps ease the deployment of VoIP.

Quality of Service

NetVanta switches also support QoS to prioritize mission-critical traffic like VoIP and control network congestion. NetVanta 1544 offers 802.1p and DiffServ Class of Service (CoS). It also supports frame tagging, as well as enforcement of tagged traffic received from trusted sources. Four egress queues (per port) are available for assigning traffic priorities using Weighted Round Robin (WRR) and Strict Priority Scheduling.

Security

Rest assured, with NetVanta 1544 your network is protected. This product offers a variety of data security features including MAC-based port security, multilevel user passwords, Secure Shell (SSH) and Secure Socket Layer (SSL) for encrypted user login, and Access Authentication and Authorization (AAA) for authentication with RADIUS, RSA SecurID and TACACS+. With features such as 802.1x and port security, administrators can assure that only authorized users are allowed access to the network.

Port Scheduler

NetVanta 1544 allows ports to be scheduled, or turned on or off based on time of day. This ability to schedule available ports allows for added security and can provide less power consumption during off hours saving on utilities bills.

Administration

AOS offers both a Command Line Interface (CLI) that mimics the widely deployed, industry *de facto* standard and an intuitive Web-based Graphical User Interface (GUI) with step-by-step configuration wizards. For automating setup and configuration, NetVanta 1544 also supports features like Auto-Provisioning which allows automatic configuration scripts to be run from the integrated CompactFlash slot and Auto-Config which provides the ability to automatically obtain the switch configuration via DHCP.

Product Features

 28-port multi-layer Gigabit Ethernet aggregation switch

- 24-Gigabit Ethernet ports and four SFP optical ports
- SFP ports support standard 1 Gbps or enhanced 2.5 Gbps data rates
- Non-blocking, up to 68 Gbps switching capacity
- Line rate Layer 2 and Layer 3 switching
- Static routes, RIP V1/V2, OSPF and BGP
- VRRP
- 802.10 VLANs, Private VLANs and VLAN assignment via 802.1x
- Advanced QoS with support for 802.1p and DiffServ prioritization with four queues per egress port
- Automate actions with Port Scheduler and TCL scripting
- VoIP Ready with LLDP/ LLDP-MED and Voice VLANS
- Business-class security with RADIUS, TACACS+, 802.1x and port security
- CompactFlash[®] slot for auto provisioning
- Wi-Fi® access controller for centralized management of NetVanta Wireless Access Points
- Cable diagnostics identifies cable length and detects shorts or open twisted pair
- Recognizable CLI and intuitive Web-based GUI
- Limited lifetime warranty

Smart Solutions for a Connected World.



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TI 191270



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Product Specifications

Physcial Interface

- **Ethernet Ports**
 - 24-10/100/1000Base-T
 - 4-1 Gbps/2.5 Gbps SFP Ports
 - Auto rate/duplex/MDI/MDI-X

Console Port

- DB-9, RS-232
- Switching Performance
- Non-blocking Layer 2/3 Switching
- **Maximum Forwarding Bandwidth** 68 Gbps

802.1w Rapid STP

RIP V1/V2

UDP Relay

1k ARP Entries

LLDP (802.1AB)

Troubleshooting Page

BGP

Pina

Layer 2 Support

- 802.1D Spanning Tree
- 802.3ad Link Aggregation 16,000 MAC Addresses

Layer 3 Support

- Static Routes
- OSPF VRRP
- 128 Layer 3 Interfaces
- 1k Unicast Routes

Diagnostics

Port Statistics

- Number of TX/RX Frames
- Number of Collisions
- Number of Errors

Quality of Service

- 802.1p and DiffServ
- Four output queues per egress port
- Weighted Round Robin (WRR)
- Strict Priority Scheduling

VLAN

- Port-based VLANs
- 802.10 tagged trunked VLANs
- Voice VLANs Private VLAN Edge
- Dvnamic 802.1x assigned VLANs
- Support for up to 255 active VLANs

Storm Control

Broadcast, Unicast, and Multicast

Administration

- CLI (Console/Telnet/SSH)
- Web-based GUI (HTTP/SSL)
- n-Command[®] support
- RADIUS
- FLASH Provisioning
- TCL Scripting

Network Access Control

- Port authentication (802.1x)
- Port Security

SNMP v3

Email Alerts

Auto Config

Port Scheduler

TACACS+

SYSLOG

Wi-Fi Controller

Controls up to 24 NetVanta Wireless Access Points

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, 19" Rackmountable Metal Enclosure
- Dimensions: 1.7" H, 17.2" W, 9.2" D
- Weight: 6.0 lbs.
- AC power: 100–250 VAC, 50/60 Hz
- Power: 80 Watts

Agency Approvals

FCC Part 15 Class A, UL 1950/CSA, CE Mark, C-tick, RoHS

Ordering Information

Equipment	Part #
NetVanta 1544	1700544G1
NetVanta 1000BaseSX SFP Transceiver	1200480E1
NetVanta 1000BaseLX SFP Transceiver	1200481E1
NetVanta 2.5Gbps Multimode SFP Transceiver	1200482G1
NetVanta 2.5Gbps Singlemode SFP Transceiver	1200483G1
NetVanta 1 Meter SFP Interconnect Cable	1200484G1
NetVanta 3 Meter SFP Interconnect Cable	1200484G3



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- Port Mirroring LLDP-MED
- Cable Diagnostics
- Front Panel Status LEDs
 - Power Status

