NetVanta 1638 with ActivChassis

Multi-Layer Gigabit Ethernet Switch

Product Features

- 48-port multi-layer Gigabit Ethernet switch with up to four 10-Gigabit uplink ports
- 48 – 10/100/1000Base-T Ports
- Advanced stacking capabilities with ActivChassis
- Two high-speed interface slots
- Non-blocking, up to 224 Gbps switching capacity
- Line rate Layer 2 and Layer 3 switching
- Static routes, RIP, OSPF, BGP and VRRP
- Advanced QoS with support for 802.1p and DiffServ prioritization with four queues per egress port
- 802.1Q VLANs, Private VLANs and VLAN assignment via 802.1x
- VoIP ready with LLDP/LLDP-MED and voice VLANS
- Automate actions with integrated Port Scheduler and TCL scripting
- Business-class security with RADIUS, TACACS+, 802.1x and port security
- Field replaceable power supply and fans
- Optimized for iSCSI SANs solutions
- Wi-Fi® Access Controller for centralized management of NetVanta Wireless Access Points
- Cable diagnostics provide easy to use troubleshooting tools for copper cable
- Familiar CLI and Web GUI
- Next business day advance replacements
- Limited Lifetime Warranty

The NetVanta® 1638 is a managed, 48-port, Layer 3, Gigabit Ethernet switch providing advanced access and distribution capabilities for Small to Medium-sized Enterprises (SMEs). With the combination of the advanced multi-layer switching fabric, ActivChassis stacking, high-bandwidth capabilities, and enhanced Quality of Service (QoS) features, the NetVanta 1638 is ideal in Gigabit-to-the-desktop deployments, and converged voice and data networks.

Hardware

The NetVanta 1638 rackmount switch provides 48 Gigabit Ethernet ports and two high-speed option slots. Together these option slots can accommodate up to four 16-Gigabit Ethernet high-speed links and provide up to 128 Gbps of bandwidth between interconnected NetVanta 1638 switches. A field replaceable power supply and fan assembly ensure maximum uptime.

ActivChassis

The NetVanta 1638 supports ADTRAN's ActivChassis stacking technology, which allows up to eight NetVanta 1600 Series switches to be interconnected and actively managed as a single, logical chassis-like system—up to 400 switch ports can share a single configuration file and single IP address—allowing SMEs to cost-effectively add capacity, simplify administration of interconnected switches and improve network resiliency. When used with the NetVanta 1600 Dual Stacking XIM, backplane capacity can be enhanced up to 128 Gbps, to support the most demanding business applications. ActivChassis also enables switches located in multiple wiring closets across distances up to 10,000 meters to be connected and managed as single switch, providing ultimate flexibility in network configurations. Combined with features designed for redundancy and high-availability, the NetVanta 1600 Series switches provide the best performance and value in the industry.

Multi-layer Switching

The NetVanta 1638 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 businesses to enterprise-sized networks.

Standards Protocols

Based on the ADTRAN® Operating System (AOS), this device supports Link Layer Discovery Protocol (LLDP) which autodiscovers neighboring Ethernet devices, simplifying integration into multi-vendor environments.

VoIP Ready

The NetVanta 1638 is VoIP-ready out of the box. 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 Voice over IP (VoIP).

Quality of Service

NetVanta switches also support QoS to prioritize mission-critical traffic like VoIP and control network congestion. The NetVanta 1638 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

The NetVanta 1638 offers a variety of data security features including denial of service protection, 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 and TACACS+. With features such as 802.1x and port security, administrators can be assured that only authorized users are allowed access to the network. AOS also features DHCP Network forensics allowing administrators to quickly locate specific clients on the network directly from the management session. This protocol in conjunction with Desktop auditing allows administrators to verify client security information.

Port Scheduler

The NetVanta 1638 allows ports to be enabled or disabled based on time of day. This ability to schedule available ports allows for added security and can significantly lower power consumption during off hours saving on utility cost.

iSCSI Optimized

All ADTRAN NetVanta Gigabit Ethernet switches are optimized for iSCSI Storage Area Networks (SANs) deployments. Network administrators can take advantage of features such as Jumbo frame support (up to 12K), separation of iSCSI network traffic utilizing VLANs, and 802.3x flow control to seamlessly integrate ADTRAN switches with iSCSI SANs devices.

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 1638 supports Auto-Config which provides the ability to automatically obtain the switch configuration via DHCP.

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Product Specifications

Physical Interface

Ethernet Ports

- 48 10/100/1000Base-T
- Auto rate/duplex/MDI/MDI-X

Option Slots

- 2 High Speed Option Slots

XIM Modules

- Dual Stacking XIM
- Dual SFP+ XIM
- Dual SFP XIM

Switching Performance

- Non-blocking Layer 2/3 Switching

Maximum Forwarding Bandwidth

- 224 Gbps

Layer 2 Support

- 802.1D Spanning Tree
- 802.1w Rapid STP
- 802.3ad Link Aggregation
- 32,000 MAC Addresses
- Jumbo Frames (12K)
- 802.3x Flow Control

Layer 3 Support

- Static Routes
- RIP V1/V2
- OSPF
- BGP
- VRRP
- UDP Relay
- 256 Layer 3 Interfaces
- 1k ARP Entries
- 2k Unicast Routes
- IPv6 Management

Diagnostics

- Port Mirroring
- Troubleshooting Page
- LLDP-MED
- LLDP (802.1AB)
- Cable Diagnostics
- Ping

Front Panel Status LEDs

- Power Status
- LAN: link, activity

Port Statistics

- Number of TX/RX Frames, Collisions, 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
- 802.1Q tagged trunked VLANs
- Voice VLANs
- Private VLAN Edge
- Dynamic 802.1x assigned VLANs
- Support for up to 255 active VLANs

Storm Control

- Broadcast, Unicast, and Multicast

Administration

- CLI (Console/Telnet/SSH)
- SNMP v3
- Web-based GUI (HTTP/SSL)
- SYSLOG
- n-Command® support
- Email Alerts
- ActivChassis support
- TACACS+
- RADIUS
- Auto Config
- TCL Scripting
- DHCP Network Forensics
- Port Scheduler

Security

- Port authentication (802.1x)
- Port Security
- DoS Protection
- Hardware ACLs
- Microsoft Desktop Auditing

Wi-Fi Controller

- Controls up to 24 NetVanta Wireless Access Points

Environment

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

Physical

- **Chassis:** 1U, 19" Rackmountable Metal Enclosure
- **Dimensions:** 1.7" H, 17.2" W, 16.7" D
- **Weight:** 11.5 lbs.
- **AC Power:** 110–230 VAC, 50/60 Hz
- **Power:** 160 Watts, 1.75 A

Agency Approvals

- FCC Part 15 Class A, UL 1950/CSA, RoHS

Ordering Information

Equipment	Part #
NetVanta 1638 w/ Power Supply	4700568F1
Dual Stacking XIM	1700470F1
Dual SFP+ XIM	1700471F1
Dual SFP XIM	1700473F1
Power Supply	1700460F1
.5 Meter Stacking Cable	1700500F1
2 Meter Stacking Cable	1700500F2
5 Meter Stacking Cable	1700500F5
Dual Stacking XIM w/ .5 Meter Stacking Cable	4700470F1
Dual Stacking XIM w/ 2 Meter Stacking Cable	4700470F2
Dual Stacking XIM w/ 5 Meter Stacking Cable	4700470F5

TL9000 TL19.1270

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

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