



# NetVanta 1638

## 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
- Two high-speed interface slots
- Non-blocking, up to 176 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 storage area networks (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, high-bandwidth capabilities, and enhanced Quality of Service (QoS) features, the NetVanta 1638 is ideal in Gigabit-to-the-desk deployments, and converged voice and data networks.

#### Hardware

The NetVanta 1638 rackmount switch provides 48 Gigabit Ethernet ports and 2 high speed option slots. Together these option slots can accommodate up to four 10-Gigabit Ethernet high speed links and can provide up to 80 Gbps of bandwidth between interconnected NetVanta 1638 switches. A field replaceable power supply and fan assembly ensure maximum uptime.

#### 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 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. 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

Rest assured, with the NetVanta 1638 your network is protected. This product 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 assure that only authorized users are allowed access to the network. AOS also features desktop auditing using DHCP in conjunction with Microsoft Network Access Protection (NAP) protocol to monitor the health of client computers. The two protocols work together to ensure that systems connected to the network are compliant with appropriate corporate policies. Desktop auditing provides client details such as firewall settings, antivirus settings and other client health 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 13K), 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. AOS also offers network forensics to aid in troubleshooting network problems by allowing network administrators to easily locate devices on the network by MAC or IP address.





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# NetVanta 1638

## Multi-Layer Gigabit Ethernet Switch 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

### Switching Performance

- Non-blocking Layer 2/3 Switching

### Maximum Forwarding Bandwidth

- 176 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
- RADIUS
- TACACS+
- TCL Scripting
- Auto Config
- Port Scheduler
- DHCP Network Forensics

### 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: 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, 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
Power Supply	1700460F1
.5 Meter Stacking Cable	1700500F1
2 Meter Stacking Cable	1700500F2
5 Meter Stacking Cable	1700500F5



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