



NetVanta 1550 Series Hardware Installation Guide

17101524F1	NetVanta 1550-24
17101524PF1	NetVanta 1550-24P
17101548F1	NetVanta 1550-48
17101548PF1	NetVanta 1550-48P

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Conventions

**NOTE**

Notes provide additional useful information.

**CAUTION**

Cautions signify information that could prevent service interruption or damage to the equipment.

WARNING

Warnings provide information that could prevent injury or endangerment to human life.

Safety Instructions

When using your networking equipment, please follow these basic safety precautions to reduce the risk of fire, electrical shock, or personal injury:

1. Do not use this product near water, such as a utility sink, water heater, or in a wet basement.
2. Use only the power cord, power supply, and batteries indicated in the manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for special disposal instructions.
3. The socket-outlet shall be installed near the equipment and shall be easily accessible.

If any of the following conditions occur, unplug the product from the electrical outlet and replace the part or contact your qualified service personnel:

1. The power cable, extension cable, or plug is damaged.
2. An object has fallen into the product.
3. The product has been exposed to water.
4. The product has been dropped or damaged.
5. The product does not operate correctly when you follow the operating instructions.



This equipment incorporates double pole/neutral fusing. If the neutral fuse opens and the line fuse does not open, voltage could still be present in the unit.



These units contain no user-serviceable parts. They should only be serviced by qualified service personnel.



Additional safety guidelines, such as Waste Electrical and Electronic Equipment (WEEE), are given in the document [NetVanta Safety and Regulatory Information](https://supportforums.adtran.com) available at <https://supportforums.adtran.com>.

Save These Important Safety Instructions

FCC Radio Frequency Interference Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio frequencies. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Canadian Emissions Requirements

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled “Digital Apparatus,” ICES-003 of the Department of Communications.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Class A prescrites dans la norme sur le matériel brouilleur: “Appareils Numériques,” NMB-003 édictée par le ministre des Communications.

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Service and Warranty

For information on the service and warranty of ADTRAN products, visit the [Support](#) section of the ADTRAN website at <http://www.adtran.com>.

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1. INTRODUCTION

The NetVanta 1550 Series Gigabit Switches include the NetVanta 1550-24, NetVanta 1550-24P (Power over Ethernet (PoE)), NetVanta 1550-48, and the NetVanta 1550-48P (PoE).



In this document, the term NetVanta 1550 Series means all of the units collectively. If a statement only applies to one particular switch, the text refers to that switch individually.

This hardware installation guide lists the NetVanta 1550 Series units' physical characteristics and product specifications, introduces basic functionality, and provides installation instructions.

- *Physical Descriptions on page 14*
- *Product Specifications on page 22*
- *Unit Installation on page 24*

For additional information on mounting options, supplying power, and grounding the unit refer to the following sections:

- *Mounting Options on page 25*
- *Supplying Power to the Unit on page 27*
- *Attaching the Supplemental Ground on page 27*

For information on switch configuration for a specific application, refer to the configuration guides provided on the [ADTRAN Support Community](#). For details on the command line interface (CLI), refer to the *AOS Command Reference Guide*. All other related documents are also available online at <http://supportforums.adtran.com>.

2. PHYSICAL DESCRIPTIONS

NetVanta 1550 Series

The NetVanta 1550 Series is a Layer 3 Lite managed switch housed in a 1U-high, metal enclosure that can be mounted in a standard 19-inch rack and includes a universal AC power supply. The NetVanta 1550-24 Series front panel contains 24 10/100/1000Base-T Ethernet interfaces and the NetVanta 1550-48 Series contains 48 10/100/1000Base-T Ethernet interfaces. All are accessed via standard RJ-45 connectors. Four 10GBase-X SFP+ slots are also available on the front panel of the entire series for high-speed uplink via fiber or copper. The NetVanta 1550 Series is fully RoHS compliant.

Management

Using the AOS, the NetVanta 1550 Series is managed through an RJ-45 **CONSOLE** port or a Micro USB **CONSOLE** port, Telnet or SSH sessions, or the AOS GUI. Only one **CONSOLE** port is supported at a time, either RJ-45 or Micro USB.

SFP+ Module Slots

The NetVanta 1550 Series units support four 10GBase-X SFP+ slots on the front panel that accept a number of industry standard SFP+ modules. The SFP+ modules provide Gigabit Ethernet Fiber connectivity for high-speed uplinks. For a list of supported SFP+ modules, visit the ADTRAN website at <http://www.adtran.com>.

Power over Ethernet

The NetVanta 1550-24P and NetVanta 1550-48P units provide PoE. PoE provides the ability to detect attached powered devices (PDs), and deliver 48 VDC to the PD via Ethernet cabling. The NetVanta 1550 PoE series is fully compliant with the IEEE 802.3af PoE and IEEE 802.3at PoE+ standards. By default, the PoE switch discovers and provides power to IEEE-compliant PDs. The NetVanta 1550 PoE series also supports legacy PDs.

The NetVanta 1550 PoE series has a PoE budget of 370 W. Caution should be taken not to add greater than 370 W of load from powered devices. A 370 W PoE budget enables the user to power: 12 ports at 30 W each, 24 ports at 15.4 W each, or any combination as long as the sum of load is less than 370 W.

NetVanta 1550 Series Shipping Contents

Each NetVanta 1550 Series unit is shipped in its own cardboard shipping carton. Open each carton carefully, and avoid deep penetration into the carton with sharp objects.

After unpacking the unit, inspect it for possible shipping damage. If the equipment has been damaged in transit, immediately file a claim with the carrier and contact ADTRAN Customer Service (refer to the [Support](#) page on the ADTRAN website at <http://www.adtran.com/support>).

Domestic shipments of the NetVanta 1550 Series includes the following items:

- NetVanta 1550 Series base unit
- A detachable power cable with a grounded, three-prong plug
- Quick start guide
- Two 19-inch rack mounting brackets with six mounting screws

International shipments of the NetVanta 1550 Series includes the following items:

- NetVanta 1550 Series base unit
- All necessary power cords
- Quick start guide
- Two 19-inch rack mounting brackets with six mounting screws

NetVanta 1550-24 Front Panel Design

The NetVanta 1550-24 front panel is shown below. [Table 1 on page 21](#) describes all of the LEDs, and [Appendix A on page 29](#) shows the connector pinouts.

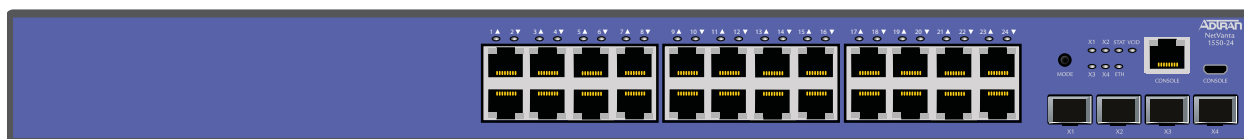


Figure 1. NetVanta 1550-24 Front Panel Layout

Front Panel Features

10/100/1000Base-T Ethernet Interfaces

The front panel contains 24 10/100/1000Base-T Ethernet interfaces (RJ-45). These interfaces are arranged in stacked pairs, with the numbers **1** through **24** screened from left to right directly above the corresponding ports. Status LEDs for each stacked pair of interfaces are located directly over the interfaces. Refer to [Table A-1 on page 29](#) for pinouts.

10GBase-X SFP+ Interfaces

The front panel contains 4 10GBase-X SFP+ interfaces. These interfaces are labeled **X1** through **X4** screened below the corresponding interface.

LED Mode Switch

The LED **MODE** switch is located on the right side of the unit and is used to toggle ports **1** through **24** between link/activity (ETH), ETH and VCID display modes.

Link/Activity LEDs

The link/activity LEDs labeled **1** through **24** are located above the 10/100/1000Base-T Ethernet interfaces and indicate when there is activity on the interface. The link/activity LEDs labeled **X1** through **X4** indicate when there is activity on the SFP+ interfaces.

Status LED

The **STAT** LED, located on the right side of the unit, indicates the unit's status.

Ethernet LED

The **ETH** LED, located on the right side of the unit, indicates that the port LEDs are displaying link activity on the port.

VCID LED (Future Release)

The **VCID** LED, located on the right side of the unit, indicates that the port LEDs are displaying VCID.

CONSOLE Interfaces

The RJ-45 **CONSOLE** interface provides local management and configuration via a DB-9 to RJ-45 serial cable (rollover cable). Refer to [Table A-3 on page 30](#) for the RJ-45 **CONSOLE** pinouts. The Micro USB **CONSOLE** interface provides local management and configuration via a Micro USB 2.0 5-pin type B cable. Only one **CONSOLE** port is supported at a time, either RJ-45 or Micro USB.

NetVanta 1550-24 Rear Panel Design

The NetVanta 1550-24 rear panel is shown below.



Figure 2. NetVanta 1550-24 Rear Panel Layout

Rear Panel Interfaces

Grounding Point

The rear panel has a supplemental grounding point. Please refer to [Attaching the Supplemental Ground on page 27](#) for grounding instructions.

Power Connection

The rear panel has a power input to the AC universal power supply. Please refer to [Supplying Power to the Unit on page 27](#) for connection details.

NetVanta 1550-24P Front Panel Design

The NetVanta 1550-24P front panel is shown below. [Table 1 on page 21](#) describes all of the LEDs, and [Appendix A on page 29](#) shows the connector pinouts.

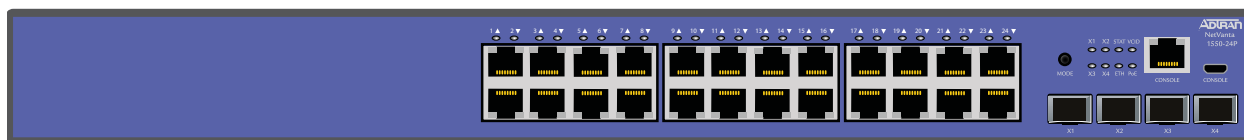


Figure 3. NetVanta 1550-24P Front Panel Layout

Front Panel Features

10/100/1000Base-T Ethernet Interfaces

The front panel contains 24 10/100/1000Base-T Ethernet interfaces (RJ-45). These interfaces are arranged in stacked pairs, with the numbers **1** through **24** screened from left to right directly above the corresponding ports. Status LEDs for each stacked pair of interfaces are located directly over the interfaces. Refer to [Table A-1 on page 29](#) for pinouts.

10GBase-X SFP+ Interfaces

The front panel contains 4 10GBase-X SFP+ interfaces. These interfaces are labeled **X1** through **X4** screened below the corresponding interface.

LED Mode Switch

The LED **MODE** switch is located on the right side of the unit and is used to toggle ports **1** through **24** between link/activity (ETH), PoE, and VCID display modes.

Link/Activity LEDs

The link/activity LEDs labeled **1** through **24** are located above the 10/100/1000Base-T Ethernet interfaces and indicate when there is activity on the interface. The link/activity LEDs labeled **X1** through **X4** indicate when there is activity on the SFP+ interfaces.

Status LED

The **STAT** LED, located on the right side of the unit, indicates the unit's status.

VCID LED (Future Release)

The **VCID** LED, located on the right side of the unit, indicates that the port LEDs **1** through **8** are displaying VCID.

Ethernet LED

The **ETH** LED, located on the right side of the unit, indicates that the port LEDs are displaying link activity on the port.

Power over Ethernet LED

The **PoE** LED, located on the right side of the unit, indicates that the port LEDs **1** through **24** are displaying PoE status.

CONSOLE Interfaces

The RJ-45 **CONSOLE** interface provides local management and configuration via a DB-9 to RJ-45 serial cable (rollover cable). Refer to [Table A-3 on page 30](#) for the RJ-45 **CONSOLE** pinouts. The Micro USB **CONSOLE** interface provides local management and configuration via a Micro USB 2.0 5-pin type B cable. Only one **CONSOLE** port is supported at a time, either RJ-45 or Micro USB.

NetVanta 1550-24P Rear Panel Design

The NetVanta 1550-24P rear panel is shown below.



Figure 4. NetVanta 1550-24P Rear Panel Layout

Rear Panel Interfaces**Grounding Point**

The rear panel has a supplemental grounding point. Please refer to [Attaching the Supplemental Ground on page 27](#) for grounding instructions.

Power Connection

The rear panel has a power input to the AC universal power supply. Please refer to [Supplying Power to the Unit on page 27](#) for connection details.

NetVanta 1550-48 Front Panel Design

The NetVanta 1550-48 front panel is shown below. [Table 1 on page 21](#) describes all of the LEDs, and [Appendix A on page 29](#) shows the connector pinouts.

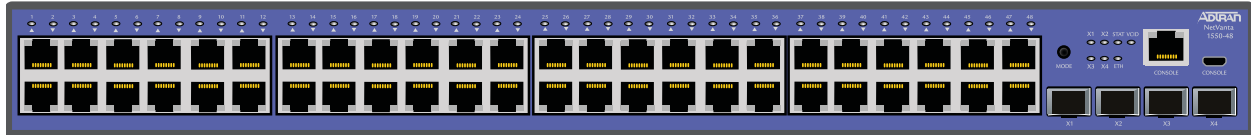


Figure 5. NetVanta 1550-48 Front Panel Layout

Front Panel Features

10/100/1000Base-T Ethernet Interfaces

The front panel contains 48 10/100/1000Base-T Ethernet interfaces (RJ-45). These interfaces are arranged in stacked pairs, with the numbers **1** through **48** screened from left to right directly above the corresponding ports. Status LEDs for each stacked pair of interfaces are located directly over the interfaces. Refer to [Table A-1 on page 29](#) for pinouts.

10GBase-X SFP+ Interfaces

The front panel contains 4 10GBase-X SFP+ interfaces. These interfaces are labeled **X1** through **X4** screened below the corresponding interface.

LED Mode Switch

The LED **MODE** switch is located on the right side of the unit and is used to toggle ports **1** through **48** between link/activity (ETH) and VCID display modes.

Link/Activity LEDs

The link/activity LEDs labeled **1** through **48** are located above the 10/100/1000Base-T Ethernet interfaces and indicate when there is activity on the interface. The link/activity LEDs labeled **X1** through **X4** indicate when there is activity on the SFP+ interfaces. When the LED **MODE** switch has been activated, these LEDs will display VCID.

Status LED

The **STAT** LED, located on the right side of the unit, indicates the unit's status.

VCID LED (Future Release)

The **VCID** LED, located on the right side of the unit, indicates that the port LEDs **1** through **8** are displaying VCID.

Ethernet LED

The **ETH** LED, located on the right side of the unit, indicates that the port LEDs are displaying link activity on the port.

CONSOLE Interfaces

The RJ-45 **CONSOLE** interface provides local management and configuration via a DB-9 to RJ-45 serial cable (rollover cable). Refer to [Table A-3 on page 30](#) for the RJ-45 **CONSOLE** pinouts. The Micro USB **CONSOLE** interface provides local management and configuration via a Micro USB 2.0 5-pin type B cable. Only one **CONSOLE** port is supported at a time, either RJ-45 or Micro USB.

NetVanta 1550-48 Rear Panel Design

The NetVanta 1550-48 rear panel is shown below.



Figure 6. NetVanta 1550-48 Rear Panel Layout

Rear Panel Interfaces

Grounding Point

The rear panel has a supplemental grounding point. Please refer to [Attaching the Supplemental Ground on page 27](#) for grounding instructions.

Power Connection

The rear panel has a power input to the AC universal power supply. Please refer to [Supplying Power to the Unit on page 27](#) for connection details.

NetVanta 1550-48P Front Panel Design

The NetVanta 1550-48P front panel is shown below. [Table 1 on page 21](#) describes all of the LEDs, and [Appendix A on page 29](#) shows the connector pinouts.

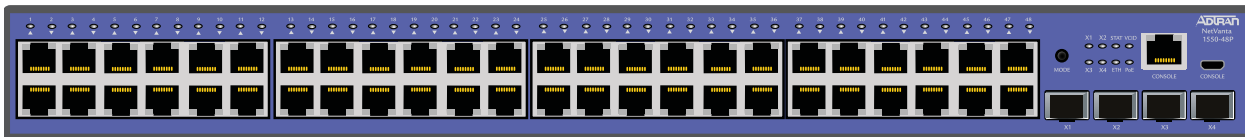


Figure 7. NetVanta 1550-48P Front Panel Layout

Front Panel Features

10/100/1000Base-T Ethernet Interfaces

The front panel contains 48 10/100/1000Base-T Ethernet interfaces (RJ-45). These interfaces are arranged in stacked pairs, with the numbers **1** through **48** screened from left to right directly above the corresponding ports. Status LEDs for each stacked pair of interfaces are located directly over the interfaces. Refer to [Table A-1 on page 29](#) for pinouts.

10GBase-X SFP+ Interfaces

The front panel contains 4 10GBase-X SFP+ interfaces. These interfaces are labeled **X1** through **X4** screened below the corresponding interface.

LED Mode Switch

The LED **MODE** switch is located on the right side of the unit and is used to toggle ports **1** through **48** between link/activity (ETH), PoE, and VCID display modes.

Link/Activity LEDs

The link/activity LEDs labeled **1** through **48** are located above the 10/100/1000Base-T Ethernet interfaces and indicate when there is activity on the interface. The link/activity LEDs labeled **X1** through **X4** indicate when there is activity on the SFP+ interfaces.

Status LED

The **STAT** LED, located on the right side of the unit, indicates the unit's status.

VCID LED (Future Release)

The **VCID** LED, located on the right side of the unit, indicates that the port LEDs **1** through **8** are displaying VCID.

Ethernet LED

The **ETH** LED, located on the right side of the unit, indicates that the port LEDs are displaying link activity on the port.

Power over Ethernet LED

The **PoE** LED, located on the right side of the unit, indicates that the port LEDs **1** through **48** are displaying PoE status.

CONSOLE Interfaces

The RJ-45 **CONSOLE** interface provides local management and configuration via a DB-9 to RJ-45 serial cable (rollover cable). Refer to [Table A-3 on page 30](#) for the RJ-45 **CONSOLE** pinouts. The Micro USB **CONSOLE** interface provides local management and configuration via a Micro USB 2.0 5-pin type B cable. Only one **CONSOLE** port is supported at a time, either RJ-45 or Micro USB.

NetVanta 1550-48P Rear Panel Design

The NetVanta 1550-48P rear panel is shown below.



Figure 8. NetVanta 1550-48P Rear Panel Layout

Rear Panel Interfaces**Grounding Point**

The rear panel has a supplemental grounding point. Please refer to [Attaching the Supplemental Ground on page 27](#) for grounding instructions.

Power Connection

The rear panel has a power input to the AC universal power supply. Please refer to [Supplying Power to the Unit on page 27](#) for connection details.

LED Descriptions

The following table describes LED activity.

Table 1. Front Panel LED Descriptions

LED	Color	Indication
STAT	Off	Unit is not receiving power.
	Green (flashing)	On power up, the STAT LED flashes rapidly for five seconds, during which time the user may escape to boot mode from the CONSOLE port.
	Green (solid)	Power is on and self-test passed.
	Red (solid)	Power is on, but the self-test failed or the application code could not be booted.
VCID	Off	VCID status is not being displayed.
	Green (solid)	VCID is selected. The port LED that corresponds to the unit's VCID will display green.
ETH	Off	Link/activity status is not being displayed.
	Green (solid)	ETH is selected. The port LEDs are displaying link/activity status.
PoE (PoE units only)	Off	PoE status is not being displayed.
	Green (solid)	PoE is selected. The port LEDs are displaying PoE status.
SFP+ Port LEDs (25 through 28 or X1 through X4)	Off	The port is not connected.
	Green (solid)	The link is up and the port is enabled.
	Green (flashing)	There is activity on the port.
Port LEDs (1 through 48) in ETH Mode	Off	The port is not connected.
	Green (solid)	The link is up and the port is enabled.
	Amber (flashing)	There is activity on the port.
Port LEDs (1 through 48) in PoE Mode (PoE Models Only)	Off	The port is not delivering power.
	Green (solid)	The port is delivering power.
	Red (solid)	The port has detected a PoE fault.

3. PRODUCT SPECIFICATIONS

Physical Interfaces

Ethernet Ports

- Up to 48 10/100/1000Base-T Ethernet interfaces
- Up to 4 SFP+ interfaces
- Autorate/duplex/MDI/MDI-X

Console Port

- RJ-45
- Micro USB

Switching

- Layer 3 Lite switching capability
- Nonblocking
- 16 k media access control (MAC) addresses

Diagnostics

- Port mirroring
- Link Layer Discovery Protocol (LLDP) (802.1ab)
- LLDP-Media Endpoint Discovery (LLDP-MED)
- Ping
- Cable diagnostics

Front Panel Status LEDs

- Power status
- PoE status (depending on model)
- VCID status (depending on model)
- LAN link, activity

Port Statistics

- Number of TX/RX frames
- Number of collisions
- Number of errors

Spanning Tree Support

- 802.1d spanning tree
- 802.1w rapid spanning tree

Link Aggregation

- 802.3ad link aggregation
- Support for six trunk groups, 8 ports per group

Quality of Service (QoS)

- 802.1p and DiffServ
- Four output queues per egress port
- Weighted round robin (WRR) and strict priority

VLAN Support

- Port-based virtual local area networks (VLANs)
- 802.1Q tagged trunked VLANs
- Support for up to 255 active VLANs

Administration

- Familiar CLI
- GUI
- n-Command® support
- SNMP v3
- SYSLOG logging
- Email alerts (Simple Mail Transfer Protocol (SMTP))
- Tool command language (Tcl) scripting

Network Access Control

- Port authentication (802.1x)

Wi-Fi Controller

- Controls up to 24 NetVanta wireless access points (WAPs)

Environment

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

Physical

- Chassis: 1U, 19-inch, rack-mountable metal enclosure
- Dimensions (NetVanta 1550-24): 1.75-inch H x 17.4-inch W x 9.0-inch D
- Dimensions (NetVanta 1550-48): 1.75-inch H x 17.4-inch W x 11.0-inch D
- Dimensions (NetVanta 1550 PoE models): 1.75-inch H x 17.4-inch W x 13.0-inch D
- AC power (NetVanta 1550-24): 100 to 240 VAC, 50/60 Hz, 0.37 A to 0.22 A, 20 W maximum
- AC power (NetVanta 1550-48): 100 to 240 VAC, 50/60 Hz, 0.75 A to 0.42 A, 60 W maximum
- AC power (NetVanta 1550-24P): 100 to 240 VAC, 50/60 Hz, 4.6 A to 2.1 A, 460 W maximum (370 W PoE budget)
- AC power (NetVanta 1550-48P): 100 to 240 VAC, 50/60 Hz, 4.8 A to 2.2 A, 460 W maximum (370 W PoE budget)

Compliance

- FCC Part 15 Class A
- EN 300 386
- EN 61000-3-2
- EN 61000-3-3
- ICES 003 Class A
- AS/NZS CISPR22 Class A
- UL/CUL 60950-1
- EN 60950-1
- IEC 60950-1
- AS/NZS 60950.1
- RoHS compliant

4. UNIT INSTALLATION

The instructions and guidelines provided in this section cover hardware installation topics, such as mounting options and supplying power to the unit. These instructions are presented as follows:

- *Tools Required on page 25*
- *Mounting Options on page 25*
- *Supplying Power to the Unit on page 27*
- *Attaching the Supplemental Ground on page 27*

For information on switch configuration for a specific application, refer to the configuration guides provided on the [ADTRAN Support Community](#). For details on the command line interface (CLI), refer to the *AOS Command Reference Guide*. All other related documents are also available online at <http://supportforums.adtran.com>.

WARNING

To prevent electrical shock, do not install equipment in a wet location or during a lightning storm.



The NetVanta 1550 Series is intended to be installed, maintained, and serviced by qualified service personnel only and should be installed in a restricted access location as described in UL/IEC 60950-1.

WARNING

- *Ethernet cables are intended for intrabuilding use only. Connecting an ADTRAN unit directly to Ethernet cables that run outside the building in which the unit is housed will void the user's warranty and could create a fire or shock hazard. To connect an ADTRAN unit to Ethernet cables that run outside the building, ADTRAN's Ethernet Port Protection Device (EPPD) (P/N 1700502G1) must be connected between the unit and the outside plant cable. Use of any Ethernet protector other than ADTRAN's for this purpose will void the user's warranty.*
- *PoE cables are intended for intrabuilding use only. Connecting an ADTRAN PoE unit directly to PoE cables that run outside the building in which the unit is housed will void the user's warranty and could create a fire or shock hazard.*
- *For outdoor PoE applications, ADTRAN recommends using the NetVanta PoE Protector/Injector (P/N 1702595F15). Use of a third-party PoE injector that is not rated for outdoor/exposed wiring applications will void the user's warranty and could create a fire or shock hazard.*

Tools Required

The customer-provided tools required for the hardware installation of the NetVanta are:

- Ethernet cables
- Phillips-head screwdriver



To access the CLI of the NetVanta, you will also need a PC with VT-100 terminal emulation software and an appropriate console port cable. Instructions on how to access the CLI are available in the quick start guide shipped with your unit or online on the [ADTRAN Support Community](#).

Mounting Options

The NetVanta 1550 Series units can be installed in tabletop, rackmount, or wallmount, configurations. The following sections provide step-by-step instructions for tabletop, rack, and wall mounting.

Tabletop Mounting the NetVanta 1550 Series

Attach the four self-adhesive pads (shipped with the unit) to the bottom corners of the NetVanta 1550 Series unit.



The NetVanta 1550 Series units have a Kensington lock slot on the side of the device that accepts a lock and cable security device. Consult the manual shipped with your Kensington lock for installation instructions.

Rack Mounting the NetVanta 1550 Series

The NetVanta 1550 Series are 1U-high, rack-mountable units that can be installed into a 19-inch equipment rack. The following steps guide you in mounting the NetVanta into a rack.




- *If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient temperature. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature specified by the manufacturer.*
- *Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.*
- *Be careful not to compromise the stability of the equipment mounting rack when installing this product.*
- *Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading the circuit might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.*
- *Reliable grounding of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).*

Rack Mounting the NetVanta Using the Rack Mounting Brackets	
Step	Action
1	Install the rack mounting brackets on the NetVanta. To avoid damaging the unit, use only the screws shipped with the mounting brackets when attaching them to the chassis (see Figure).
2	To allow proper grounding, scrape the paint from the rack around the mounting holes where the NetVanta will be positioned.
3	Position the NetVanta in a stationary equipment rack. This unit occupies 1U of space.
4	Have an assistant hold the unit in position as you install two mounting bolts through the unit's brackets and into the equipment rack using a #2 Phillips-head screwdriver.
5	Apply power to the unit (refer to Supplying Power to the Unit on page 27).

Wall Mounting the NetVanta 1550 Series Units

By following these instructions exactly, the NetVanta 1550 Series units can be safely mounted on the wall.

 CAUTION	<ul style="list-style-type: none"> To avoid damaging the unit, use only the screws included in the shipment when attaching mounting ears to the chassis. When wall mounting the NetVanta, care must be taken not to damage the power cord. Do not attach the power cord to the building surface or run it through walls, ceilings, floors, or openings in the building structure. The socket-outlet must be installed near the equipment and must be easily accessible.
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Instructions for Wall Mounting the NetVanta	
Step	Action
1	Attach the mounting brackets to the chassis using the provided screws (see Figure 9).
2	Decide on a location for the NetVanta. NetVanta 1550 Series units are mounted with the front panel facing down (see Figure 9). Keep in mind that the unit needs to be mounted at or above eye level so that the LEDs are viewable.
3	Prepare the mounting surface by attaching a board (typically plywood, 3/4-inch to 1-inch thick) to a wall stud using #6 to #10 (2.5-inch or greater in length) wood screws. Important! Mounting to a stud ensures stability. Using sheetrock anchors may not provide sufficient long-term stability.
4	Have an assistant hold the unit in position as you install two #6 to #10 wood screws (1 inch or greater in length) through the unit's brackets and into the mounted board.
5	Proceed to the steps given in Supplying Power to the Unit on page 27 .

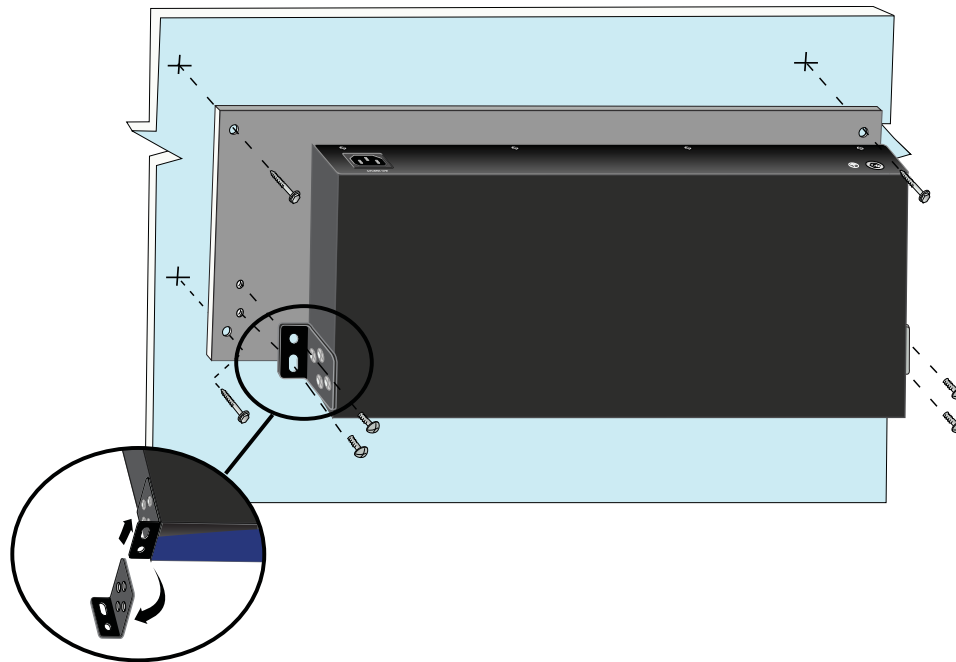


Figure 9. NetVanta 1550 Series Wallmount Installation

Supplying Power to the Unit

The NetVanta 1550 Series comes equipped with an auto-sensing 100 to 240 VAC, 50/60 Hz power supply for connecting to a properly grounded power receptacle. All necessary power cords are shipped with the units. To power these units, connect the power cable to an appropriate AC power source.

Attaching the Supplemental Ground

Follow these instructions to provide supplemental ground to the NetVanta 1550 Series units.

Instructions for Attaching the Supplemental Ground	
Step	Action
1	Connect a ground wire (fitted with a UL-approved loop terminal end) to the grounding point using the screw provided. Connect the other end of the ground wire to a protective earth ground.
2	Supply power to the unit.

Your NetVanta unit is now ready to be configured and connected to the network. For information on switch configuration for a specific application, refer to the configuration guides provided on the [ADTRAN Support Community](#). For details on the command line interface (CLI), refer to the *AOS Command Reference Guide*. All other related documents are also available online at <http://supportforums.adtran.com>.

APPENDIX A. CONNECTOR PIN DEFINITIONS

The following tables provide the pin assignments for the base unit.

Table A-1. 1000Base-T Gigabit Ethernet Port Pinouts

Pin	Name	Description
1	TRD0+	Transmit/Receive Positive
2	TRD0-	Transmit/Receive Negative
3	TRD1+	Transmit/Receive Positive
4	TRD2+	Transmit/Receive Positive
5	TRD2-	Transmit/Receive Negative
6	TRD1-	Transmit/Receive Negative
7	TRD3+	Transmit/Receive Positive
8	TRD3-	Transmit/Receive Negative

Table A-2. SFP Slot Pinouts

Pin	Name	Pin	Name
1	GND	11	GND
2	TX_FAULT	12	RX_DAT-
3	TX_DISABLE	13	RX_DAT+
4	I2C_SDA	14	GND
5	I2C_SCL	15	VddR
6	MOD_DEF(0)	16	VddT
7	RATESEL	17	GND
8	RX_LOS	18	TX_DAT+
9	GND	19	TX_DAT-
10	GND	20	GND

Table A-3. RJ-45 Console Port Pinouts

RJ-45 Pins	DB-9 Pins	Name	Description
1	TRD0+	CTS	Clear to Send (output)
2	TRD0-	—	Unused
3	TRD1+	RD	Receive Data (output)
4	TRD2+	SG	Signal Ground
5	TRD2-	SG	Signal Ground
6	TRD1-	TD	Transmit Data (input)
7	TRD3+	—	Unused
8	TRD3-	RTS	Request to Send (input)