ADTRAN

NetVanta 1230 Series
Fast Ethernet Switch
Hardware Installation Guide

1703594G1	NetVanta 1234
1703595G1	NetVanta 1234P
1702599G1	NetVanta 1238P

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> **CAUTION** *Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

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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 telephone 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 bathtub, wash bowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.

2. Avoid using a telephone (other than a cordless type) during an electrical storm. There is a remote risk of shock from lightning.

3. Do not use the telephone to report a gas leak in the vicinity of the leak.

4. 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.

5. 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.

> **CAUTION**   *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.*

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

> **NOTE**   *Additional safety guidelines, such as Waste Electrical and Electronic Equipment (WEEE), are given in the document NetVanta Safety and Regulatory Information 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 radioelectriques applicables aux appareils numériques de Class A prescrites dans la norme sur le materiel brouilleur: "Appareils Numériques," NMB-003 edictee 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 1230 Series includes the NetVanta 1234, NetVanta 1234P Power over Ethernet (PoE), and NetVanta 1238P (PoE).

> **NOTE** *In this document, the term NetVanta 1230 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 1230 Series units' physical characteristics and product specifications, introduces basic functionality, and provides installation instructions.

- *Physical Descriptions on page 14*
- *Product Specifications on page 21*
- *Unit Installation on page 22*

For additional information on mounting options and suppling power refer to the following sections:

- *Mounting Options on page 23*
- *Supplying Power to the Unit on page 25*

For information on configuring a specific application, refer to the configuration guides or the *AOS Command Reference Guide* provided on the ADTRAN Support Community at https:supportforums.adtran.com.

2.   PHYSICAL DESCRIPTIONS

NetVanta 1230 Series

The NetVanta 1230 and NetVanta 1230P Series are managed switches housed in 1U-high rack-mountable metal enclosures that include a universal AC power supply. The front panels contain 24 (NetVanta 1234 Series) or 48 (NetVanta 1238) 10/100Base-T Ethernet interfaces and two 100/1000Base-T Gigabit Ethernet interfaces all accessed via standard RJ-45 connectors. Four industry standard small form-factor pluggable (SFP) slots (supporting industry standard SFP modules) are available for high-speed uplink via fiber. NetVanta 1230 units run the ADTRAN Operating System (AOS), and are managed through an EIA-232 **CONSOLE** port (DB-9) located on either the rear panel, Telnet session, or Web-based graphical user interface (GUI). The NetVanta 1230 is RoHS compliant.

Power over Ethernet

The NetVanta 1230P Series provides the same basic functionality as the NetVanta 1230 Series products. PoE provides the ability to detect attached powered devices (PDs), and deliver power to the PD via existing CAT 5 cabling. The NetVanta 1230 Series is fully compliant with the IEEE 802.3af PoE standard. By default, the PoE switches discover and provide power to IEEE-compliant PDs. NetVanta 1230P Series PoE supports legacy PoE. The NetVanta 1230P Series units support a maximum of 15.4 W per port. The NetVanta 1234P can carry a full PoE load on all 24 ports. The NetVanta 1238P can supply up to 370 W PoE spread over 48 ports.

SFP Module Slots

The NetVanta 1230 Series devices support four SFP slots that accept a number of industry standard SFP modules for high-speed uplinks or switch stacking. SFP slots **G1** and **G2** provide up to 1 Gbps and SPF slots **G3** and **G4** provide up to 2.5 Gbps fiber connectivity. For a list of supported SFP modules, visit the ADTRAN website at http://www.adtran.com.

NetVanta 1230 Series Shipping Contents

Each NetVanta 1230 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 1230 Series include the following items:

*   NetVanta 1230 Series base unit
*   Quick start guide
*   Rackmount brackets and screws
*   A detachable power cable with a grounded, three-prong plug

International shipments of the NetVanta 1230 Series include the following items:

• NetVanta 1230 Series base unit
• Quick start guide
• Rackmount brackets and screws
• All necessary power cords

NetVanta 1234 Front Panel Design

The NetVanta 1234 front panel is shown below. *Table 1 on page 20* describes all of the LEDs, and *Appendix A on page 27* shows the connector pinouts.
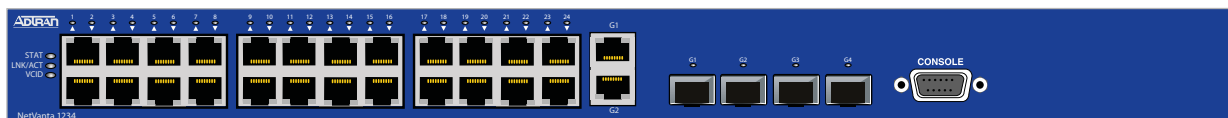

Figure 1. NetVanta 1234 Front Panel Layout

NetVanta 1234 Front Panel Features

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

Link/Activity LED
The **LNK/ACT** LED, located on the left side of the unit, indicates that the port LEDs are displaying link/activity status.

VCID LED (Future Release)
The **VCID** LED, located on the left side of the unit, indicates that the port LEDs are displaying VCID.

Link/Activity LEDs
The link/activity LEDs labeled **1** through **24** are located above the 10/100 Base-T Ethernet interfaces and indicates when there is activity on the interface.

10/100Base-T Ethernet Interfaces
The front panel contains 24 10/100Base-T Ethernet interfaces (RJ-45). These interfaces are arranged in stacked pairs, with the numbers **1** through **24** screened directly above corresponding ports.

100/1000Base-T Gigabit Ethernet Interfaces
The front panel contains two 100/1000Base-T Gigabit Ethernet interfaces (RJ-45) labeled **G1** and **G2**. Status LEDs **G1** and **G2** are shared with SFP slots **G1** and **G2** and are located above the SFP slots.

SFP Slots
The front panel contains four standard SFP slots for fiber connectivity numbered **G1** through **G4** with Status LEDs located directly above the slots. SFP slots **G1** and **G2** are associated with the Gigabit Ethernet (RJ-45) interfaces numbered **G1** and **G2** and share status LEDs. (Use either the RJ-45 connectors for up 100/1000 Mbps copper connectivity or the SFP slots for 1 Gbps fiber connectivity. The SFP slots have precedence.) Slots **G3** and **G4** provide fiber connectivity at 1 or 2.5 Gbps.

CONSOLE Interface

The **CONSOLE** interface is an EIA-232 serial port (DCE) that provides for local management and configuration (via a DB-9 female connector).

> 📝 **NOTE**   *Connection directly to an external modem requires a cross-over cable.*

NetVanta 1234 Rear Panel Design

The NetVanta 1234 rear panel is shown below.

Figure 2. NetVanta 1234 Rear Panel Layout

NetVanta 1234 Rear Panel Interfaces

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 25* for connection details.

NetVanta 1234P Front Panel Design

The NetVanta 1234P front panel is shown below. *Table 1 on page 20* describes all of the LEDs, and *Appendix A on page 27* shows the connector pinouts.
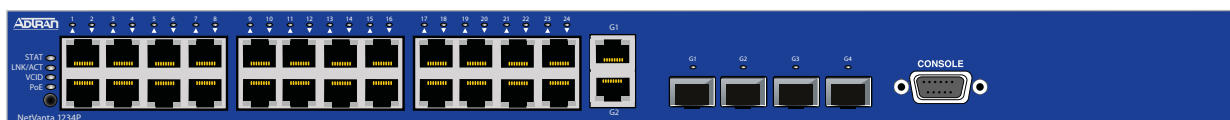

Figure 3. NetVanta 1234P Front Panel Layout

NetVanta 1234P Front Panel Features

Status LED

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

Link/Activity LED

The **LNK/ACT** LED, located on the left side of the unit, indicates that the port LEDs are displaying link/activity status.

Power over Ethernet LED

The **PoE** LED, located on the left side of the unit, indicates that the port LEDs are displaying PoE status.

VCID LED (Future Release)

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

LED Mode Switch (Future Release)

The LED mode switch is located on the left side of the unit and is used to toggle Ports **1** through **24** between link/activity and VCID display modes.

Link/Activity LEDs

The link/activity LEDs labeled **1** through **24** are located above the 10/100Base-T Ethernet interfaces and indicate when there is activity on the interface. When the LED mode switch has been activated, these LEDs will display VCID (future release).

10/100Base-T Ethernet Interfaces

The front panel contains 24 10/100Base-T Ethernet interfaces (RJ-45). These interfaces are arranged in stacked pairs, with the numbers **1** through **24** screened directly above corresponding ports.

100/1000Base-T Gigabit Ethernet Interfaces

The front panel contains two 100/1000Base-T Gigabit Ethernet interfaces (RJ-45) labeled **G1** and **G2**. Status LEDs **G1** and **G2** are shared with SFP slots **G1** and **G2** and are located above the SFP slots.

SFP Slots

The front panel contains four standard SFP slots for fiber connectivity numbered **G1** through **G4** with Status LEDs located directly above the slots. SFP slots **G1** and **G2** are associated with the Gigabit Ethernet (RJ-45) interfaces numbered **G1** and **G2** and share status LEDs. (Use either the RJ-45 connectors for up 100/1000 Mbps copper connectivity or the SFP slots for 1 Gbps fiber connectivity. The SFP slots have precedence.) Slots **G3** and **G4** provide fiber connectivity at 1 or 2.5 Gbps.

CONSOLE Interface

The **CONSOLE** interface is an EIA-232 serial port (DCE) that provides for local management and configuration (via a DB-9 female connector).

> ✎ NOTE   *Connection directly to an external modem requires a cross-over cable.*

NetVanta 1234P Rear Panel Design

The NetVanta 1234 rear panel is shown below.

Figure 4. NetVanta 1234P Rear Panel Layout

NetVanta 1234P Rear Panel Interfaces

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 25* for connection details.

NetVanta 1238P Front Panel Design

The NetVanta 1238P front panel is shown below. *Table 1 on page 20* describes all of the LEDs, and *Appendix A on page 27* shows the connector pinouts.

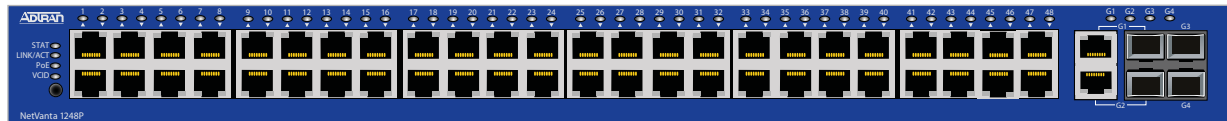**Figure 5. NetVanta 1238P Front Panel Layout**

NetVanta 1238P Front Panel Features

Status LED

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

Link/Activity LED

The **LNK/ACT** LED, located on the left side of the unit, indicates that the port LEDs are displaying link/activity status.

Power over Ethernet LED

The **PoE** LED, located on the left side of the unit, indicates that the port LEDs are displaying PoE status.

VCID LED (Future Release)

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

LED Mode Switch (Future Release)

The LED mode switch is located on the left side of the unit and is used to toggle Ports **1** through **48** between link/activity and VCID display modes.

10/100Base-T Ethernet Interfaces

The NetVanta 1238P front panel contains 48 10/100Base-T Ethernet interfaces (RJ-45). These interfaces are arranged in stacked pairs, with the numbers **1** through **48** screened directly above the corresponding port. Status LEDs for each stacked pair are located directly over the interfaces.

100/1000Base-T Gigabit Ethernet Interfaces

The front panel contains two 100/1000Base-T Gigabit Ethernet interfaces (RJ-45) labeled **G1** and **G2**. Status LEDs **G1** and **G2** are shared with SFP slots **G1** and **G2** and are located above the SFP slots.

SFP Slots

The front panel contains four standard SFP slots for fiber connectivity numbered **G1** through **G4** with Status LEDs located directly above the slots. SFP slots **G1** and **G2** are associated with the Gigabit Ethernet (RJ-45) interfaces numbered **G1** and **G2** and share status LEDs. (Use either the RJ-45 connectors for up 100/1000 Mbps copper connectivity or the SFP slots for 1 Gbps fiber connectivity. The SFP slots have precedence.) Slots **G3** and **G4** provide fiber connectivity at 1 or 2.5 Gbps.

CONSOLE Interface

The **CONSOLE** interface is an EIA-232 serial port (DCE) that provides local management and configuration (via a DB-9 female connector).

NOTE	*Connection directly to an external modem requires a cross-over cable.*

NetVanta 1238P Rear Panel Design

The NetVanta 1238P rear panel is shown below. Refer to *Appendix A on page 27* for pinouts.

Figure 6. NetVanta 1238P Rear Panel Layout

NetVanta 1238P Rear Panel Interfaces

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 25* for connection details.

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 has passed.
	Red (solid)	Power is on, but the self-test failed or the application code could not be booted.
LNK/ACT	Off	Link status/activity is not being displayed.
	Green (solid)	Link status/activity status is being displayed.
PoE	Off	PoE status is not being displayed.
	Green (solid)	PoE status is being displayed.
VCID	Off	VCID is not selected.
	Green (solid)	VCID is selected. The port LED that corresponds to the unit's VCID will display green.
Port LED in Link/Activity Mode (**1** - **24** NetVanta 1234) (**G1** - **G4**)	Off	The port is not connected.
	Green (solid)	The link is up and the port is enabled.
	Amber (flashing)	The link is up and activity (transmit or receive) has occurred on the port.
Port LED in PoE Mode (**1** - **24** NetVanta 1234P) (**1** - **48** NetVanta 1238P)	Off	Powered device is not connected.
	Green (solid)	Powered device is connected.
	Green (flashing)	The port has detected a PoE fault.

NOTE   *Ports **G1** through **G4** are always in link/activity mode.*

3. PRODUCT SPECIFICATIONS

	1234	1234P	1238P
Physical Interfaces			
10/100Base-T Ethernet interfaces on the front panel	24	24	48
Combination 100/1000Base-T Gigabit Ethernet RJ-45/SFP interfaces on the front panel (SFP slots for fiber and copper connectivity/RJ-45 connectors for copper connectivity)	2	2	2
Enhanced 1.0/2/5 Gbps SFP interfaces on the front panel	2	2	2
Integrated DB-9, EIA-232 console port (DCE) on the rear panel	1	1	1
Spanning Tree Support (802.1D and 802.1w)	✔	✔	✔
Link Aggregation (802.3ad)	✔	✔	✔
VLAN Support (802.1Q), up to 255 active VLANs	✔	✔	✔
Priority QoS (802.1p)	✔	✔	✔
Management			
Console	✔	✔	✔
Telnet CLI	✔	✔	✔
SSH CLI	✔	✔	✔
SNMP V2	✔	✔	✔
Port mirroring	✔	✔	✔
Power: 110 to 240 VAC, 50/60 Hz	0.5 A	5.0 to 2.0 A	5.0 to 2.0 A
Mechanical Specifications			
Housing: 1U-high metal enclosure (1.72-inch H x 17.22-inch W x 7.8-inch D) (The 1234P and 1238P are 12.8-inches deep.)	✔	✔	✔
10/100Base-T Ethernet: Ganged RJ-45 jacks	24	24	48
100/1000Base-T Gigabit Ethernet: Standard RJ-45 jacks	2	2	2
100/1000Base-T Gigabit Ethernet: SFP slots	4	4	4
Console Port: DB-9, female	✔	✔	✔
Environmental Specifications			
Storage Temperature: -20°C to 70°C	✔	✔	✔
Operating Temperature: 0°C to 50°C	✔	✔	✔
Relative Humidity: Up to 95 percent, noncondensing	✔	✔	✔

4. UNIT INSTALLATION

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

For information on configuring a specific application, refer to the configuration guides or the *AOS Command Reference Guide* provided on the ADTRAN Support Community at https:supportforums.adtran.com.

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

CAUTION

- *The NetVanta 1230 Series is intended to be 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.*

- *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, ensure any PoE injector used is approved and rated for outdoor/exposed wiring applications. Use of a 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

NOTE   *TTo access the CLI of the NetVanta, you will also need a PC with terminal emulation software and a console port cable. Instructions on how to access the CLI are available in the quick start guide shipped with your unit or online at ADTRAN's Support Forum.*

Mounting Options

The unit may be installed in rackmount, tabletop, or wallmount configurations. The following sections provide step-by-step instructions for rack mounting, wall mounting, and tabletop installation.

Rack Mounting the NetVanta

The NetVanta is a 1U-high, rack-mountable units that can be installed into a 19-inch equipment rack with the mounting brackets that are shipped with the units.

NetVanta 1230 Series units can be safely mounted in a rack by following these instructions:

> **CAUTION**
> - *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).*

	Instructions for Rack Mounting the NetVanta
Step	**Action**
1	Install the mounting brackets on the NetVanta. To avoid damaging the unit, use only the screws included in the shipment when attaching mounting brackets to the chassis.
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 25*).

> **CAUTION**
> *To avoid damaging the unit, use only the screws included in the shipment when attaching mounting ears to the chassis.*

Tabletop Installation of the NetVanta

Install the NetVanta on a sturdy, level tabletop or shelf that can support at least 9.35 lbs (4.24 kg). Allow enough space for ventilation between the NetVanta and other objects in the vicinity.

> **CAUTION**
>
> *Make sure there is adequate ventilation around the NetVanta unit to properly dissipate heat. Leave at least 4 inches (10 cm) of space at the front and rear of the NetVanta for ventilation.*
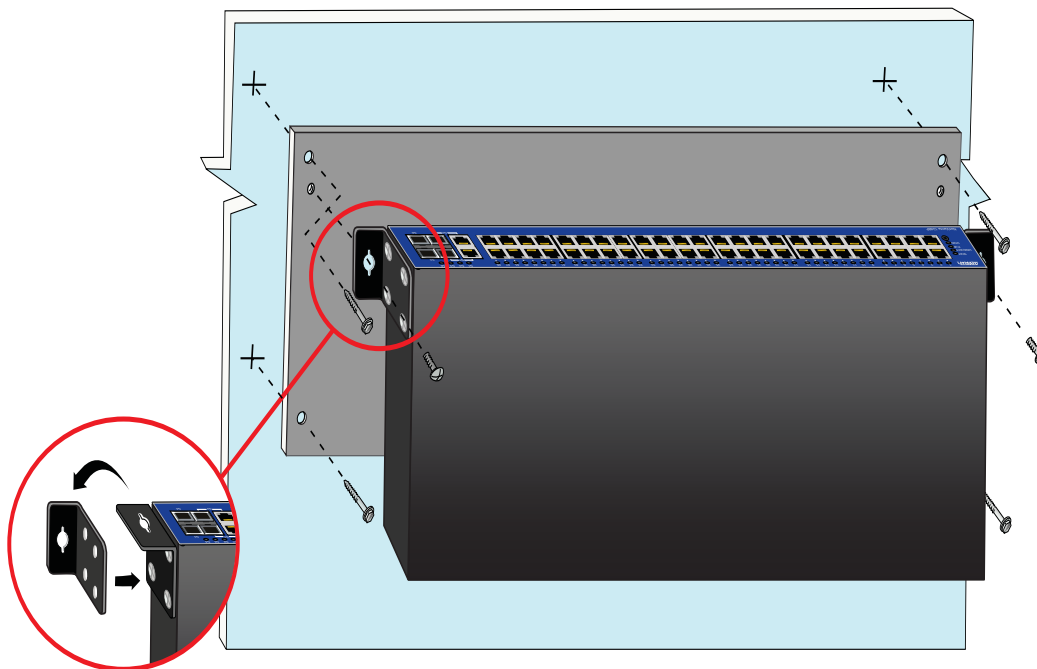
Wall Mounting the NetVanta

By following these instructions exactly, the NetVanta can be safely mounted to the wall.

> **CAUTION**
>
> • *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.*

Instructions for Wall Mounting the NetVanta	
Step	**Action**
1	Remove the mounting brackets. For a non-PoE 1234 installation, rotate them 90 degrees and reattach the mounting brackets to the chassis as shown in *Figure 7 on page 25*. For all other products, attach the specially designed wallmount brackets (P/N 1700506G1) as shown in *Figure 7 on page 25*. **Note:** *The NetVanta 1234 non-PoE brackets have two slots rather than a single keyhole to mount to the wall.*
2	Decide on a location for the NetVanta. The NetVanta 1230 Series is mounted with the front panel facing up as shown in *Figure 7 on page 25*. 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 (1 inch or greater in length) wood screws through the unit's brackets and into the mounted board (see *Figure 7 on page 25*).
5	Proceed to the steps given in *Supplying Power to the Unit on page 25*.

Figure 7. Wallmount Installation

Supplying Power to the Unit

The NetVanta 1230 Series units come equipped with an auto-sensing 110 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, plug one end of the power cable into the power connector of the NetVanta and the other end to an appropriate AC power source.

CAUTION	*Use only approved power cable(s). If you have not been provided with a power cable for your system, purchase a power cable that is approved for use in your country. The power cable must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cable should be greater than the ratings marked on the product.*

WARNING	*To help prevent electric shock, plug the system and peripheral power cables into properly grounded electrical outlets. These cables are equipped with three-prong plugs to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable. If you must use an extension cable, use a 3-wire cable with properly grounded plugs.*

After the NetVanta is powered on, the LED indicators will flash momentarily. This flashing represents a reset of the system.

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 CLI, refer to the *AOS Command Reference Guide*. All other related documents are also available online at https://supportforums.adtran.com.

APPENDIX A. CONNECTOR PIN DEFINITIONS

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

Base Unit Pinouts

Table A-1. 10/100Base-T Ethernet Port Pinouts

Pin	Name	Description
1	TX1	Transmit Positive
2	TX2	Transmit Negative
3	RX1	Receive Positive
4, 5	—	Unused
6	RX2	Receive Negative
7, 8	—	Unused

Table A-2. SFP Slot Pinouts

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

Table A-3. 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