NetVanta 6240 Series
IP Business Gateways
Hardware Installation Guide

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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

Notes provide additional useful information.

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.

- 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.

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 (ADTRAN's Knowledge Base article 3444) available at http://kb.adtran.com.

Save These Important Safety Instructions

FCC-Required Information

FCC regulations require that the following information be provided in this manual:

1. This equipment complies with Part 68 of Federal Communications Commission (FCC) rules and requirements adopted by America's Carriers Telecommunications Association (ACTA). Each registered interface has a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, provide this information to the telephone company.
2. If this equipment causes harm to the telephone network, the telephone company may temporarily discontinue service. If possible, advance notification is given; otherwise, notification is given as soon as possible. The telephone company will advise the customer of the right to file a complaint with the FCC.
3. The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper operation of this equipment. Advance notification and the opportunity to maintain uninterrupted service are given.
4. If experiencing difficulty with this equipment, please contact ADTRAN for repair and warranty information. The telephone company may require this equipment to be disconnected from the network until the problem is corrected, or it is certain the equipment is not malfunctioning.
5. This unit contains no user-serviceable parts.
6. This equipment is designed to connect to the telephone network or premises wiring using an FCC-compatible modular jack, which is compliant with Part 68 and requirements adopted by ACTA.
7. The following information may be required when applying to the local telephone company for leased line facilities:

Part Number	Registration Number	Service Type	REN/SOC	FIC	USOC
NetVanta 6240 T1 Products	US: HDCIT03B1700204G1	1.544 Mbps - SF 1.544 Mbps - SF and B8ZS 1.544 Mbps - ESF 1.544 Mbps - ESF and B8ZS	N/A/6.0N	04DU9-BN 04DU9-DN 04DU9-1KN 04DU9-1SN	RJ-48C
NetVanta 6240 with Optional FXO Ports		Analog Loop Start/Ground Start	0.3B/9.0F	02LS2 02GS2	RJ-11C

8. The ringer equivalency number (REN) is useful in determining the quantity of devices you may connect to your telephone line and still have all of those devices ring when your number is called. In most areas, the sum of the RENs of all devices should not exceed five. To be certain of the number of devices you may connect to your line as determined by the REN, call your telephone company to determine the maximum REN for your calling area.
9. This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs. Contact your state public utility commission or corporation commission for information.

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.

Industry Canada Compliance Information

Notice: The Industry Canada label applied to the product (identified by the Industry Canada logo or the "IC:" in front of the certification/registration number) signifies that the Industry Canada technical specifications were met.

Notice: The REN for this terminal equipment is supplied in the documentation or on the product labeling/ markings. The REN assigned to each terminal device indicates the maximum number of terminals that can be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices should not exceed five (5).

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.

Service and Warranty

For information on the service and warranty of ADTRAN products, visit the *Support* section of the ADTRAN website.

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1. INTRODUCTION

This hardware installation guide describes the NetVanta 6240 Series units' physical characteristics, lists their features and specifications, introduces basic functionality, and provides installation instructions.

- *Physical Description on page 14*
- *Product Specifications on page 17*
- *Unit Installation on page 18*

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

- *Shipping Contents on page 14*
- *Mounting Options on page 19*
- *Supplying Power to the Unit on page 22*
- *Optional Battery Backup Unit (P/N 1175044L1) on page 22*

For information on configuration for a specific application, refer to the configuration guides provided on ADTRAN's Knowledge Base at http://kb.adtran.com. For details on the command line interface (CLI), refer to the *AOS Command Reference Guide* (ADTRAN's Knowledge Base article 2219).

2. PHYSICAL DESCRIPTION

The NetVanta 6240 Series are multiservice Internet Protocol (IP) business gateways designed for use in integrated voice and data service offerings to small-to-medium sized businesses worldwide. This product line is a high-bandwidth business gateway designed to allow carriers to deliver up to 60 channels of Voice over IP (VoIP) to their customers. The NetVanta 6240 Series units run ADTRAN Operating System (AOS), and are managed through an EIA-232 port (DB-9) located on the rear panel, Telnet session, or WEB-based graphical user interface (GUI). The NetVanta 6240 is RoHS compliant (telecommunications exemption).

There are several models in the NetVanta 6240 Series that can provide various combinations up to 24 FXS interfaces, up to 10 FXO interfaces, and up to 60 channels of VoIP. All NetVanta 6240 Series models include four modular T1 wide area network (WAN) interfaces, two 10/100Base-T Ethernet ports, an integrated router, stateful inspection firewall, and transparent Session Initiation Protocol (SIP) proxy. The NetVanta 6240 Series comes equipped with an AC power supply and an onboard battery charger for use with an ADTRAN battery backup unit that can keep the unit running with all interfaces active should the AC power fail.

Shipping Contents

Each NetVanta 6240 Series units are shipped in their 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 *Repair and Return* section of the *Support* page on the ADTRAN website at http:www.adtran.com.)

Shipments of the NetVanta 6240 Series include the following items:

- NetVanta 6240 Series base unit
- A detachable power cable with a grounded, three-prong plug
- Mounting brackets
- Quick start guide

Front Panel Design

The NetVanta 6240 front panel is shown below.

Figure 1. NetVanta 6240 Front Panel Layout

Front Panel Features

Status LEDs

The status LEDs are located on the right side of the front panel. The **STATUS** LED indicates the unit's status. The **VOICE** LED indicates the status of the voice ports. The **NET 1** through **NET 4** LEDs reflect the status of the network interfaces. The **LAN 1** and **LAN 2** LEDs reflect the status of the local area networks (LANs). *Table 1* below describes the front panel LEDs.

Table 1. Front Panel LEDs

LED	Color	Indication
STATUS	Off	Unit is not receiving power.
	Green (flashing)	On power up, the **STATUS** 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 the unit is functioning normally.
	Amber (solid)	Power has failed and the unit is in battery backup mode.
	Red	Power is on, but the self-test failed.
VOICE	Off	All ports are inactive or administratively disabled.
	Green (flashing)	At least one port is ringing.
	Green (solid)	At least one port is off-hook.
	Amber (solid)	Port is in test mode.
	Red	Alarm or fault condition is occurring on the port interface.
NET 1 through **NET 4**	Off	All ports are inactive or administratively disabled.
	Green (solid)	Port is functioning normally.
	Amber (solid)	Port is in test mode.
	Red	Alarm or fault condition is occurring on the port interface.
LAN 1/LAN 2	Off	LAN is administratively disabled or link is down.
	Green (solid)	The link is up.
	Amber (flashing)	There is activity on the link.

Rear Panel Design

The NetVanta 6240 Series rear panel is shown below.

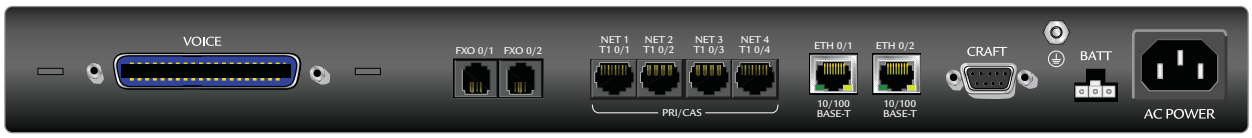

Figure 2. NetVanta 6240 Rear Panel Layout

Rear Panel Interfaces

VOICE Connection

A single 50-pin female amphenol connector, labeled **VOICE**, provides the interconnect wiring for the analog FXS/FXO circuits. See *Table A-1 on page 27* for voice connector pinouts. The status LED, labeled **VOICE**, is located on the front panel.

> NOTE
>
> *The number of circuits used (1 through 24) is dependent on the model NetVanta 6240. FXO interfaces use circuits 17 through 24 depending on the model.*

FXO Interfaces

The **FXO 0/1** and **FXO 0/2** interfaces are RJ-11 connectors and provide analog trunks for local call routing. See *Table A-2 on page 28* for the FXO interface pinouts.

Network Interfaces

The **NET 1 T1 0/1** through **NET 4 T1 0/4** interfaces are DS1 RJ-48C pin connections. See *Table A-3 on page 28* for the network interface pinouts. The status LEDs, labeled **NET 1** through **NET 4**, are located on the front panel.

10/100Base-T Ethernet Interfaces

The **ETH 0/1** and **ETH 0/2** ports are RJ-45 connectors. See *Table A-4 on page 28* for the Ethernet interface pinouts. The status LEDs, labeled **LAN 1** and **LAN 2**, are located on the front panel.

CRAFT Interface

The **CRAFT** interface is an EIA-232 serial port (DCE), which provides for local management and configuration (via a DB-9 female connector). See *Table A-5 on page 28* for the craft interface pinouts.

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

Power Connection

The rear panel has a power input to a 120 VAC power supply with an IEC connector. The appropriate three-prong cable is included in the shipment. Refer to *Supplying Power to the Unit on page 22* for connection details.

Battery Backup Connection

An optional battery backup unit (P/N 1175044L1) is available for use in case of power outages. The battery backup unit connects to the **BATT** port, which also charges the unit during operation. Refer to *Optional Battery Backup Unit (P/N 1175044L1) on page 22* for connection details.

3. PRODUCT SPECIFICATIONS

The NetVanta 6240 Series products have the following features:

- Supports up to 24 foreign exchange station (FXS) ports or 16 FXS ports and 8 foreign exchange office (FXO) ports
- Optional two onboard FXO (RJ-11) interfaces on the rear panel
- Supports four modular T1 WAN (RJ-48C) interfaces
- Supports dual auto medium dependent interface/medium dependent interface crossover (MDI/MDIX) 10/100Base-T Ethernet ports (RJ-48C)
- Supports up to 60 channels of VoIP
- Stateful inspection firewall
- Quality of service/network address translation/Dynamic Host Configuration Protocol (QoS/NAT/DHCP) client, server, and relay
- Supports SIP trunks
- Supports Point-to-Point Protocol (PPP), Multilink PPP (MLPPP), Frame Relay, Multilink Frame Relay (MLFR), and high level data link control (HDLC)
- Three-way conferencing
- Caller ID, message waiting, and stutter dial tone
- Fax and analog modem compatible (V.29, V.32, V.32bis, V.34, V.90, V.92)
- Local station-to-station calls
- Up to 8 channels of ITU T.38
- Up to 60 channels of G.711 (µ-law)
- Up to 60 channels of G.729
- Up to 60 channels of dual tone multi-frequency (DTMF) detection/generation
- Supports 64 ms echo cancellation
- Supports up to 60 channels of caller ID
- 200 ms adaptive jitter buffer per channel
- User-friendly GUI and a familiar CLI
- LEDs for system status information
- Chassis dimensions: 1.75-inch H x 16.5-inch W x 10.25-inch D
- AC power: 120 VAC, 60 Hz
- Operating temperature: 32°F (0°C) to +122°F (+50°C)

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:

For information on configuration for a specific application, refer to the configuration guides provided on ADTRAN's Knowledge Base at http://kb.adtran.com. For details on the command line interface (CLI), refer to the *AOS Command Reference Guide* (ADTRAN's Knowledge Base article 2219).

WARNING

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

CAUTION

- *The NetVanta 6240 Series is intended to be installed, maintained, and serviced by qualified service personnel only.*
- *Ethernet cables are intended for intrabuilding use only. They should not be run outside the building.*

Tools Required

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

- Ethernet cables
- Network cables (module dependent)
- Phillips-head screwdriver
- Drill and drill bit set (wallmount applications only)

NOTE

To access the CLI of the NetVanta, you will also need a VT100 terminal or PC with terminal emulation software and a console port cable. Instructions on how to access the CLI are given in the quick start guide (shipped with your unit) or in the AOS Command Reference Guide (ADTRAN's Knowledge Base article 2219).

Mounting Options

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

Rack Mounting the NetVanta

The NetVanta is a 1U-high, rack-mountable unit 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).*

Instructions for Rack Mounting the NetVanta	
Step	**Action**
1	Attach the rackmount brackets using the supplied screws.
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 22*).

Wall Mounting the NetVanta

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

- *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. Rotate them 90 degrees so that the portion of the bracket with the mounting holes is flush with the bottom of the chassis. Reattach the mounting bracket to the chassis (see *Figure 3 on page 21*).
2	Decide on a location for the NetVanta, keeping in mind that the unit needs to be mounted at or below eye-level so that the LEDs are viewable. The NetVanta 6240 can only be wall mounted with the front panel facing to the right or left (see the example in *Figure 3 on page 21*).
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 3 on page 21*).
5	Proceed to the steps given in *Supplying Power to the Unit on page 22*.

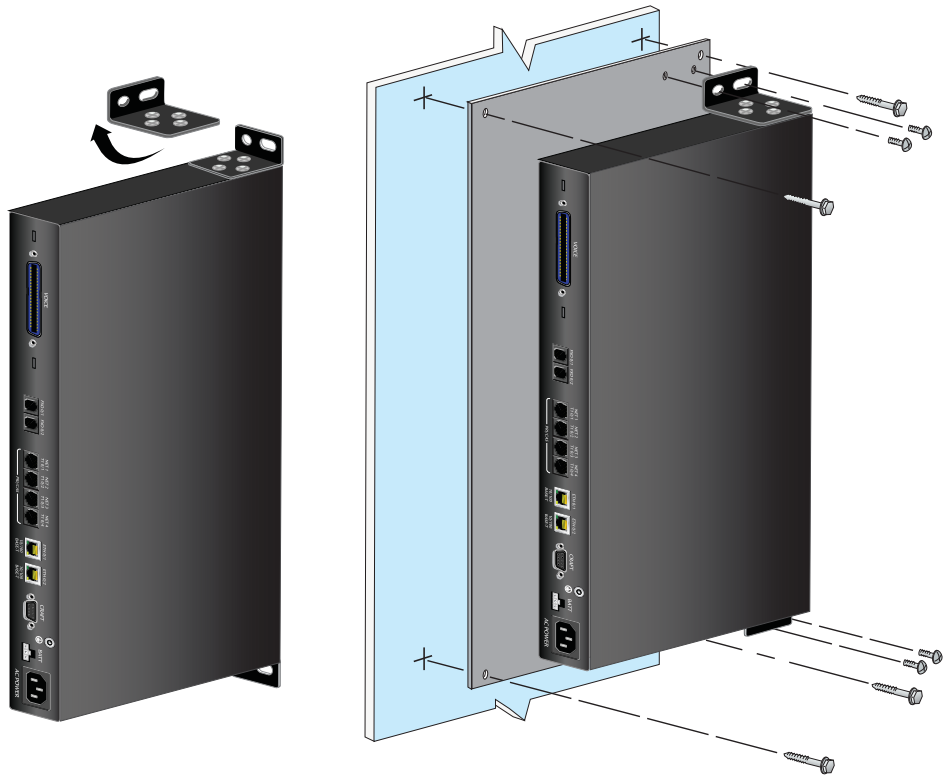

Figure 3. Wallmount Installation

Supplying Power to the Unit

The NetVanta 6240 Series units come equipped with a 120 VAC, 60 Hz power supply for connecting to a properly grounded power receptacle. (A detachable power cable with a grounded, three-prong plug comes with the shipment.) To power this unit, connect the power cable to an appropriate AC power source.

- *In addition to the equipment earthing conductor in the power supply cord, a supplementary equipment earthing conductor is to be installed between the system and earth.*
- *The supplemental earthing conductor shall be connected to the equipment using a number 8 ring terminal and should be fastened to the grounding lug provided on the rear panel of the equipment. The ring terminal should be installed using the appropriate crimping tool (AMP P/N 59250 T-EAD Crimping Tool or equivalent).*
- *The supplementary equipment earthing conductor must not be smaller in size than cross-sectional area of not less than 2.5 mm^2, if mechanically protected. The supplementary equipment earthing conductor is to be connected to the product at the terminal provided, and connected to earth in a manner that will retain the earth connection when the power supply cord is unplugged. The connection to earth of the supplementary earthing conductor must be in compliance with the appropriate rules for terminating bonding jumpers in Part K of Article 250 of the National Electrical Code, ANSI/NFPA 70, and Article 10 of Part 1 of the Canadian Electrical Code, Part 1, C22.1. Termination of the supplementary earthing conductor is permitted to be made to building steel, to a metal electrical raceway system, or to any earthed item that is permanently and reliably connected to the electrical service equipment earthed.*
- *Bare, covered, or insulated earthing conductors are acceptable. A covered or insulated conductor must have a continuous outer finish that is either green, or green with one or more yellow stripes.*
- *A readily accessible disconnect device, that is suitably approved and rated, shall be incorporated in the field wiring.*
- *Maximum recommended ambient operating temperature is 50°C.*

Optional Battery Backup Unit (P/N 1175044L1)

The ADTRAN battery backup unit (BBU) is an optional device designed as a backup DC power supply for the NetVanta 6240 Series. The BBU connects to the NetVanta 6240 through a 6-foot charge/discharge, 2-conductor wire with a keyed modular plug (included with the BBU). The 1175044L1 BBU is a low profile wallmount configuration. It can be rack mounted with the appropriate 19-inch or 23-inch rackmount adapter brackets. The 19-inch rackmount adapter bracket part number is P/N 1175047L1. The 23-inch rackmount adapter bracket part number is P/N 1175048L1.

Features of the BBU, P/N 1175044L1, include the following:

- No-spill battery design
- Compact wallmount or rackmount box
- Double BBU rack mounting available
- 7 AHR battery (up to 8 hours of backup, depending on load)
- Modular plug (provides quick and easy installation)
- All mounting hardware included

Unpack and Inspect the BBU

After unpacking the BBU unit, inspect it for damage. If damage is noted, file a claim with the carrier; then contact ADTRAN Customer Service.

Batteries are retained and prewired in the BBU in a specific pattern. Battery position is maintained by foam spacers press fitted against the housing walls. Removing batteries or disconnecting wires compromises correct reassembly and should not be attempted.

BBU Safety and EMC Notices

CAUTION

- *Removing the BBU covers could allow batteries to fall out.*
- *The BBU should only be used in specified ADTRAN applications.*
- *The BBU (P/N 1175044L1) weighs in excess of 30 pounds. Arrange for assistance when handling the BBU for mounting.*

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including that which may cause undesired operation.

Wall Mounting the BBU

Figure 4 shows the BBU (P/N 1175044L1) mounting dimensions for the NetVanta 6240 Series.

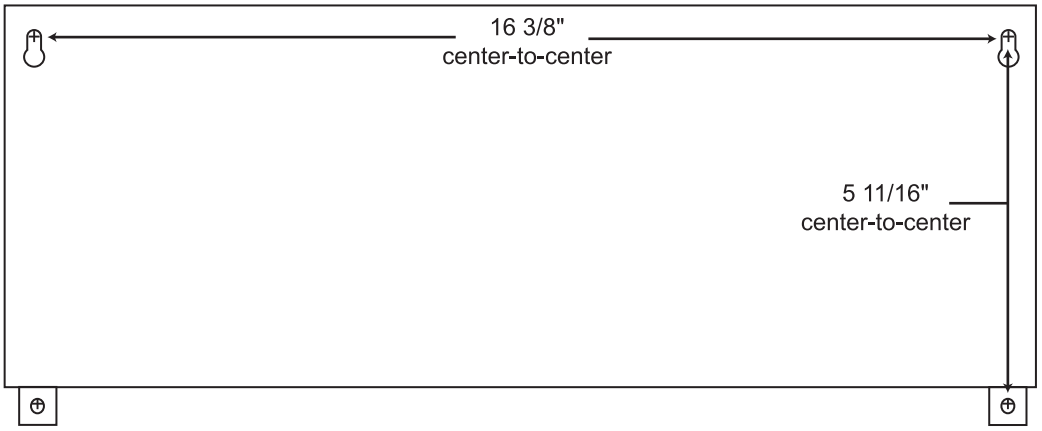

Figure 4. Wall Mounting the BBU

Install the BBU as follows:

Instructions for Wall Mounting the BBU	
Step	**Action**
1	Decide on a location for the BBU, keeping in mind that the cable plugs must be able to reach their designated sockets in the NetVanta unit.
2	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.*
3	Ensuring a plumb measurement, mark where the pilot holes are to be drilled according to the dimensions given in *Figure 4 on page 23*.
4	Drill all four pilot holes using a size 1/16-inch drill bit.
5	Screw two #10 x 3/4-inch pan-head screws into the top two previously drilled holes. Let the head of each screw protrude 1/16 inch from the plywood to engage the keyhole slot.

Do not let the weight of the BBU rest on the two keyhole screws. Maintain support until the lower two screws are fully inserted.

6	With an assistant, lift the BBU and position to engage the screw heads into the top two keyholes. Allow the unit to slide down until the slot end rests against the screws.
7	Insert the two lower screws through the tabs and tighten securely.
8	Use cable ties as appropriate. The battery connection from the BBU should be directly connected to the **BATT** port on the rear of the chassis.

BBU Maintenance

- The BBU does not require routine maintenance for normal operation. The life expectancy of the BBU is 3 to 5 years on standby when used at room temperature.
- Excessive heat decreases battery power and life. Extreme low temperature also decreases battery capacity. Ideal ambient temperature for battery life and capacity is 20°C.
- Battery shelf life is extended in cooler temperatures.
- To order replacement batteries, reference the following part number: 1975044L1 (12 V replacement batteries).

ADTRAN is an environmentally friendly company. Therefore, we encourage the proper recycling and handling of the batteries. Federal and state laws prohibit the improper disposal of all lead acid batteries. The customer is responsible for the handling of their batteries from the day of purchase through their ultimate disposal. For more information on battery replacement and recycling, refer to the document *Battery Replacement and Recycling*.

BBU Specifications

Table 2 provides BBU specifications.

Table 2. BBU Specifications

Battery	
Part Number: Suppliers: Batteries: Voltage: Backup Time: Wire Gauge:	311212V02 YUASA and Panasonic 7 AHR per battery -12 VDC per battery Up to 8 hours 18 AWG
Environmental	
Operating Temperatures: Preferred:	Charge: -15°C to 50°C Discharge: -20°C to 60°C 20°C
Physical Dimensions	
P/N 1175044L1: Weight:	17-inch W x 6.5-inch H x 3.5-inch D 30 lb

Your NetVanta 6240 Series is now ready to be configured and connected to the network. For more information on configuration for a specific application, refer to the configuration documents provided on ADTRAN's Knowledge Base at http://kb.adtran.com. For details on the CLI, refer to the *AOS Command Reference Guide* (ADTRAN's Knowledge Base article 2219).

APPENDIX A. CONNECTOR PIN DEFINITIONS

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

Table A-1. VOICE Connector Pinouts

Pins	50-pin Amphenol Connector	Description
1, 26	Circuit 1	FXS 0/1 Ring, Tip
2, 27	Circuit 2	FXS 0/2 Ring, Tip
3, 28	Circuit 3	FXS 0/3 Ring, Tip
4, 29	Circuit 4	FXS 0/4 Ring, Tip
5, 30	Circuit 5	FXS 0/5 Ring, Tip
6, 31	Circuit 6	FXS 0/6 Ring, Tip
7, 32	Circuit 7	FXS 0/7 Ring, Tip
8, 33	Circuit 8	FXS 0/8 Ring, Tip
9, 34	Circuit 9	FXS 0/9 Ring, Tip
10, 35	Circuit 10	FXS 0/10 Ring, Tip
11, 36	Circuit 11	FXS 0/11 Ring, Tip
12, 37	Circuit 12	FXS 0/12 Ring, Tip
13, 38	Circuit 13	FXS 0/13 Ring, Tip
14, 39	Circuit 14	FXS 0/14 Ring, Tip
15, 40	Circuit 15	FXS 0/15 Ring, Tip
16, 41	Circuit 16	FXS 0/16 Ring, Tip
17, 42	Circuit 17	FXS 0/17 Ring, Tip or FXO 0/3 Ring, Tip
18, 43	Circuit 18	FXS 0/18 Ring, Tip or FXO 0/4 Ring, Tip
19, 44	Circuit 19	FXS 0/19 Ring, Tip or FXO 0/5 Ring, Tip
20, 45	Circuit 20	FXS 0/20 Ring, Tip or FXO 0/6 Ring, Tip
21, 46	Circuit 21	FXS 0/21 Ring, Tip or FXO 0/7 Ring, Tip
22, 47	Circuit 22	FXS 0/22 Ring, Tip or FXO 0/8 Ring, Tip
23, 48	Circuit 23	FXS 0/23 Ring, Tip or FXO 0/9 Ring, Tip
24, 49	Circuit 24	FXS 0/24 Ring, Tip or FXO 0/10 Ring, Tip
25, 50	—	Unused

Table A-2. FXO Connector Pinouts

Pin	Name	Description
1, 2	—	Unused
3	Ring	Ring lead of the 2-wire interface
4	Tip	Tip lead of the 2-wire interface
5, 6	—	Unused

Table A-3. T1 Port Pinouts

Pin	Name	Description
1	RX	Receive data from the network–Ring
2	RX	Receive data from the network–Tip
3	—	Unused
4	TX	Transmit data toward the network–Ring
5	TX	Transmit data toward the network–Tip
6-8	—	Unused

Table A-4. 10/100Base-T Ethernet Port Pinouts

Pin	Name	Description
1	TX+	Transmit Positive
2	TX-	Transmit Negative
3	RX+	Receive Positive
4, 5	—	Unused
6	RX-	Receive Negative
7, 8	—	Unused

Table A-5. CRAFT Port Pinouts

Pin	Name	Description
1	DCD	Data Carrier Detect (output)
2	TXD	Transmit Data (output)
3	RXD	Receive Data (input)
4	DTR	Data Terminal Ready (input)
5	GND	Signal Ground
6	DSR	Data Set Ready (output)
7	RTS	Request to Send (input)
8	CTS	Clear to Send (output)
9	—	Unused

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