NetVanta 644

VoIP Media Gateway

Product Features

- Perfect for transitioning to VoIP
- Seamlessly convert TDM to IP
- Up to 120 simultaneous VoIP calls
- Four T1/E1 interfaces
- Two 10/100/1000 Ethernet interfaces
- PSTN gateway connectivity
- Integral PRI/PRA T1/E1 for PBX connectivity
- Compatible with industry leading softswitches and call agents
- Dynamic bandwidth allocation affords more efficient utilization
- Standardized G.729 voice compression requires less bandwidth per voice call
- Quality of Service (QoS) for delay sensitive traffic like Voice over IP (VoIP)
- Supports 802.1q Virtual LAN (VLAN) Trunking
- Voice Quality Monitoring (VQM)
- Command Line Interface (CLI) mimics industry *de facto* standard
- Feature-rich ADTRAN Operating System (AOS)
- Rugged metal case
- Optional battery backup for increased uptime
- Industry-leading five-year warranty

The ADTRAN® NetVanta® 644 is a VoIP media gateway designed to interface between TDM and IP networks allowing connection of legacy telephone and PBX systems to IP Networks. The NetVanta 644 is also ideal as a PSTN gateway providing IP conversion for newer PBXs, like the NetVanta Unified Communications Enterprise Communication Server. Utilizing the ADTRAN AOS, the NetVanta 644 offers simple management and administration.

Superior Performance

The NetVanta 644 is designed to support 120 simultaneous calls and not miss a beat. Interfaces include four T1/E1 ports as well as two 10/100/1000 Ethernet ports providing the flexibility for multiple deployment scenarios.

Media Gateway

The NetVanta 644 utilizes SIP for VoIP applications, providing interoperability with industry-leading softswitches and feature servers. Acting as a gateway, this device converts IP signaling from the carrier into traditional TDM voice services as well as PSTN fed enterprises to IP.

Resilient Call Routing / Processing

Using an internal switchboard and dial plan, the NetVanta 644 dynamically routes three- to 10-digit voice calls to the preferred service provider based on the phone number dialed. This least-cost routing functionality directs local calls to one service provider and long distance calls to another. Number substitution capability is also available. Circuit consolidation offers additional cost savings.

In addition, failover from unresponsive servers is achieved with Primary/Secondary SIP server configurations for each trunk. The NetVanta 644 also offers SIP trunk failover where calls route from one trunk to another if appropriate SIP responses are not received. In the case of DNS failures, FQDN's allow resilient trunk routing.

Functionality to eliminate inactive trunks includes SIP keepalives as well as RFC4028 SIP session timers.

Redundancy

The NetVanta 644 features redundant Ethernet functionality, which provides Layer 1 failover in the event one Ethernet link is lost, or a cable fails. In addition, the Ethernet ports can operate in standalone interface mode which can provide a solution for network failover with least cost IP routing.

Voice Quality Monitoring

The ability to implement and manage voice QoS is becoming a critical part of successful operations. QoS-enabled network devices can provide better performance and higher service levels for delay-sensitive VoIP or other mission-critical applications, as well as accommodating the lower priority traffic on the same infrastructure.

ADTRAN VQM builds on QoS to provide a sophisticated level of network performance visibility. ADTRAN VQM examines VoIP data streams for each voice call, records the voice quality information, and enables network managers to identify problem areas in an easy-to-use, graphical interface.

Management

The NetVanta 644 Series can be remotely managed by either the ADTRAN n-Command® MSP or n-Command Enterprise Edition management platforms. ADTRAN n-Command platforms offer the ability to discover devices, make mass configuration changes or firmware upgrades, backup/restore configuration, and generate inventory reports for asset management. The ADTRAN n-Command MSP also offers VoIP VQM and reporting, as well as an industry leading, easy-to-use, Graphical User Interface (GUI).

NetVanta 644 products are housed in a rugged metal enclosure; enabling wallmount, rackmount, and desktop operation; and offer a battery backup system for up to eight hours of uninterrupted service upon a customer-site power outage. NetVanta 644 products are backed by an industry-leading five-year warranty, free firmware updates, and ADTRAN's world-class technical support.

Smart Solutions for a Connected World.

ADTRAN®

NetVanta 644

VoIP Media Gateway

Product Specifications

Physical Interfaces
T1/E1 Interfaces
- RJ-48C
- Quad T1/E1

Ethernet Interfaces
- RJ-45
- Dual auto-sensing 10/100/1000 Base-T
- Full duplex
- May also be used as the WAN interface
- Supports 802.1q VLAN trunking

Digital Voice
- RJ-48C
- PRI
  - ❏ NI-2
  - ❏ DMS-100
  - ❏ 5ESS
  - ❏ ETSI
- T1 CAS Support
  - ❏ E&M Wink
  - ❏ Feature Group D

Craft
- DB-9

Processor and Memory
- **RAM:** 128 Mb RAM
- **Flash:** 64 Mb Flash

VoIP Protocol
- SIP (TCP/UDP)

Packet-based Voice Resources
- CODECs
- G.711-64k PCM
- G.729a-8k CS-ACELP
- G.168 Echo Cancellation
- Up to 128ms Echo-tail length
- Supports up to 120 channels
- Supports up to 120 T.38 sessions

Media Stream
- RTP/UDP/IP (RFC 3550)
- RTP payload for DTMF digits (RFC 2833/4733)
- SDP (RFC 2327)

Tone Services
- Local DTMF Detection
- Local Tone Generation
- Busy

Quality of Service (QoS)
- DiffServ packet marking and recognition

Voice Quality Monitoring (VQM)
- Mean Opinion Score (MOS) prediction
- Jitter, Delay and Packet Loss
- Past and Active Calls
- Supports monitoring for 120 simultaneous calls

DHCP
- Client
- Relay
- Server

Management and Utilities
- Familiar Command Line Interface (CLI)
- Web-based GUI (HTTP/HTTPS)
- n-Command® support
- SNMP v2 and v3
- SYSLOG logging
- Telnet, Craft/Console Port, SSH, Ping, Trace route, NTP

Firmware Upgrade
- FTP
- X-Modem
- TFTP
- HTTP
- n-Command

Environment
- **Operating Temperature:** 0° to 50 °C (32° to 122 °F)
- **Storage Temperature:** -20° to 70 °C (-40° to 158 °F)
- **Relative Humidity:** Up to 95%, non-condensing
- **Maximum Altitude:** 10,000 feet

Physical and Power
- Chassis
- Wallmount
- 1U Rackmount
- Desktop metal enclosure

Dimensions:
- 1.72" H x 17.22" W x 7.75" D
- 4.37cm H x 43.74cm W x 19.69cm D

Weight:
- 5 lbs., 2.27 Kg

Power:
- 100-240 VAC, 60 Hz AC Power Supply

Battery Backup:
- Optional eight-hour system

LEDs
- Status
- Redundancy
- T1/E1 1–4
- Ethernet 1:2

Warranty
- Five years

Battery Backup Options
- Rackmount or Wallmount

Agency Approvals
- FCC Part 15 Class A
- FCC Part 68
- Industry Canada
- UL 60950
- EN 60950
- AS/N25 60950
- IEC 60950
- ACA 5016
- CE Mark
- ETSI 300

Ordering Information

Equipment	Part #
NetVanta 644	1700144G1
Eight-hour, Wallmount/Rackmount NetVanta 644	1175044L1
Eight-hour, Wallmount, NetVanta 644	1175044L2