IP Business Gateways
Simplifying VoIP Deployment
Today, service providers are seeking new ways to become a more valued partner to business customers. Many are looking to introduce new IP service offerings for businesses that have the need for voice and data communications, but prefer not to add staff to install and maintain these services. ADTRAN Converged Access Solutions are specifically designed for carriers serving Small- to Medium-sized Business (SMB) customers. We offer an extensive portfolio of solutions enabling cost-efficient, high performance converged services for SMBs, multi-site or branch office networks, and enterprises of all sizes. Choose from a broad range of multiservice routers, switches and IP Business Gateways for business trunking, hosted IP telephony services that give your customers peace of mind so they can focus on their business, not their network.

- **Business Trunking**
  ADTRAN offers a wide range of products from integrated Access Devices (IADs) to IP Business Gateways for IP business trunking applications. Versatile premises-based platforms provide access to a dynamic IP network, while interfacing to traditional/legacy phone systems and existing telephony infrastructure.

- **Hosted VoIP and Data**
  Unique, all-in-one platforms for Hosted VoIP, such as ADTRAN’s NetVanta® Series of IP Business Gateways and multiservice routers are revolutionizing this new market. These simple, affordable solutions make hosted VoIP a viable service offering for business customers looking to implement VoIP without the hassle of on-site IP PBX management.

### Enterprise Session Border Controller
ADTRAN’s Enterprise Session Border Controller Feature Pack is designed to provide superior VoIP interoperability to both service providers and enterprises as the shift to IP communications progresses. As more service providers deliver IP services to the enterprise edge more and more businesses are adopting IP technologies for the premises. Historically there has been a need to support legacy analog services at the customer premises, but the session border control feature pack is designed to provide the SIP interoperability demanded. ADTRAN is providing a migration path to various services, from business trunking, hosted VoIP, and onto native SIP trunking. With standard premises-based configurations that make it easier for you to implement and support, ADTRAN makes the economics of VoIP work for both carriers and SMBs.
IP Business Gateways

ADTRAN’s Total Access® and NetVanta Series are ideal for networks transitioning to VoIP. These platforms such as the Total Access 900/900e Series, provide SIP-gateway functionality and support a number of analog and digital interfaces for existing phone equipment, or for the combination of an IP PBX and an analog fax/phone or modem. The NetVanta 6310 combines all of the functionality of the Total Access 900/900e Series into a modular, multi-function chassis with a variety of network and interface modules and is ideal for Ethernet-fed or e.SHDSL applications. The NetVanta 6355 also adds an integral 24-port Power over Ethernet (PoE) switch. This makes it ideal for networks with a larger number of IP end-points, including IP PBXs, phones, wireless access points, etc. Transparent proxy functionality and remote survivability provide backup capability for phone support in the event of a Wide Area Network (WAN) outage.

Installation and Maintenance Services

For customers who need an extended guarantee or a more rapid response, ADTRAN offers a comprehensive and flexible Installation and Maintenance Services program designed to ensure the equipment is properly installed and the network is protected from unnecessary downtime. With ProServices, customers can design the appropriate level of support from fully trained, ready-to-assist technical experts.

ProServices offers priority access to an entire group of operations and engineering experts including ADTRAN’s technical support engineers, as well as a trained network of field support engineers. Installation services include product selection, application validation, configuration, staging, installation and testing. Ongoing support and service with options for on-site and remote installation services for both ADTRAN products as well as select products from other manufacturers is also available.

Maintenance services include guaranteed rapid phone response, options for four-hour or next-business day product replacement, depot sparing, 7x24 or 5x8 support coverage for troubleshooting via phone or emergency on-site needs, and four-hour, on-site field response. For 24/7 access to online technical support resources visit www.adtran.com/support.

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Fixed Port IP Business Gateways

Powerful solutions for next-generation networks — from the industry leader.

ADTRAN’s line of industry-leading IP Business Gateways and IADs reduces telecommunications costs by collapsing multiple voice and data circuits into a single robust platform, simplifying converged networking and enabling new IP business services.

IP Business Gateways for Networks Transitioning to Premises and Hosted VoIP
The Total Access 900 and 900e Series are ideal solutions for transitioning networks. This product line includes single and multi-T1 platforms designed with a number of analog interfaces, depending on the chassis selected, and one or two digital (PRI/CAS) interfaces to support traditional voice applications over IP network infrastructures. A robust IP router, firewall and VPN functionality provide complete data and security features for an all-IP voice and data network.

Smart Functionality— Affordability for SMBs
ADTRAN Business Trunking Solutions are specifically designed for carriers with SMB customer network requirements. Total Access and NetVanta solutions offer a low initial investment, coupled with simplified installation, configuration and management without sacrificing functionality or reliability. Each product significantly lowers Total Cost of Ownership (TCO) and improves Return on Investment (ROI). These full-featured solutions are priced free of hidden charges such as mandatory maintenance agreements, costly firmware downloads or licensing fees. In addition, all products offer an industry-leading warranty, along with toll-free technical support during normal business hours, for the life of the product.

NetVanta 6250
Fiber, Ethernet and Quad T1 IP Business Gateway
- Includes five routed Ethernet interfaces (One gigabit/SFP and four fast Ethernet)
- Provides seamless voice and data integration over high bandwidth VoIP-based network architectures
- Up to 24 analog POTS interfaces with optional outbound lifeline via FXO

Total Access 908e/916e/924e
SMB and Branch Office IP Gateway
- Designed for Ethernet and Multi-T1 applications
- Interfaces include one gigabit and two fast Ethernets as well as Quad T1/FT1
- Up to 24 analog POTS interfaces with optional outbound lifeline via FXO
- Compatible with industry leading softswitches and call agents

Total Access 912/916/924
SMB and Branch Office IP Gateway
- Single T1 SIP or MGCP gateway with 12, 16, or 24 analog FXS interfaces
- Optional 16 FXS + 8 FXO analog voice option
- Robust IP router with single 10/100Base-T interface
- Single DSX-1 for PRI/T1 CAS handoff to legacy PBX
Voice Quality Monitoring supports your SLA commitments with real time monitoring of your customers’ voice quality.

Business Trunking Solutions

- Carrier-class, cost-effective IP Business Gateways for integrated services such as VoIP
- Analog to SIP or MGCP conversion for legacy support over a dynamic IP network
- Support for up to 24 analog FXS interfaces and integral DSX-1 PRI/CAS for PBX connectivity
- Robust IP routing, firewall, VPN, QoS, dynamic bandwidth allocation, and remote management features
- Voice Quality Monitoring (VQM) for enhanced Quality of Service (QoS)
- Supports migration to premises-based Session Border Control
- Multiple chassis options provide flexibility and room for growth
- Recognizable Command Line Interface (CLI) and user-friendly Web-based Graphical User Interface (GUI)
- Transparent proxy with survivability for network outages
- AC power with optional battery backup
- Industry-leading warranty

Total Access 904/908
Small Business IP Gateway

- Single T1 SIP or MGCP gateway with four or eight analog FXS interfaces
- Robust IP router with single 10/100Base-T interface
- Single DSX-1 for PRI/T1 CAS handoff to legacy PBX

NetVanta 6360
Integrated Layer 2/3 Carrier Ethernet IP Business Gateway

- Supports any mix of Layer 3 IP VPN, Layer 2 VPN (E-LINE/E-LAN), voice, and internet access services
- Multiple WAN interface options: Quad bonded VDSL2, Quad and octal SHDSL (EoCu), as well as Copper and Fiber gigabit Ethernet
- All Ethernet interfaces include carrier Ethernet functionality
- Hardware-based SLA monitoring with automated data export
- Auto-failover and recovery for improved service robustness
- Optional Enterprise Session Border Control
- Troubleshooting tools included such as VQM, QoS, and NQM
- Eliminates the need for multiple platforms on the customer premises
**Fixed Port IP Business Gateways**

**PRI, T1 CAS or Analog Trunks Delivered to PBX/KTS**
The Total Access 900/900e Series is an ideal solution for carrier VoIP Networks allowing customers to benefit from dynamic bandwidth allocation between their voice and data services. The Total Access 900/900e Series provides multiple PRI, T1 CAS, or analog interfaces for connecting to a PBX, Key Telephone System (KTS), phones, modems and fax machines. The Total Access 900/900e also provides a robust ADTRAN Operating System (AOS)-based router and firewall for secure data applications and Internet connectivity.

**IP Trunking and Hosted VoIP**
The Total Access 900/900e Series offers a single-box solution for hybrid IP/TDM and analog voice networks providing IP trunking for existing PBX and KTS. The integral SIP gateway converts analog phones, analog trunks, and TDM-based PBX connections to IP for network migration. When coupled with the Netvanta 1234 with PoE, the Total Access 900/900e provides a seamless transition from digital and analog systems to VoIP.
Internet Access and IP Trunking
The NetVanta 6250 offers a complete voice and data solution at the customer premises for multi-homed networks. The integral analog FXO port on the NetVanta 6250 offers Local Public Switched Telephone Network (PSTN) connectivity for local call routing, survivability and E911 emergency call routing.

Integrated Layer 2/3 Service Deliver
The NetVanta 6360 is the industries first integrated Layer 2 and Layer 3 IP Business Gateway enabling service providers to reduce the physical devices deployed at the customer premises. This new platform is creating operational efficiencies when supporting services such as hosted VoIP, Ethernet, SIP trunking, cloud services, and Layer 2 performance monitoring. The NetVanta 6360 can terminate copper and fiber gigabit Ethernet, bonded VDSL2, and bonded SHDSL.
Industry-leading feature integration.

NetVanta modular IP Business Gateways are global solutions integrating a variety of networking functions into a single, space-saving chassis. Now business trunking and Hosted VoIP services are delivered seamlessly by combining WAN access, SIP gateway, router, PoE switching, security, and QoS into an affordable, one-platform solution.

All-in-One Hosted VoIP
The NetVanta 6355 IP Business Gateway is a unique, all-in-one solution for Hosted VoIP, Internet access, and business connectivity. It delivers converged IP access by combining SIP gateway functionality, a full-featured IP router, security, 24-port powered (802.3af) Fast Ethernet switch with Gigabit uplinks, Layer 3 QoS, and survivability features in a single platform. It allows carriers to expand their service footprint by providing a unique service offering to address the growing Hosted VoIP market.

Modular Multifunction Platforms
The NetVanta Modular IP Business Gateway family is designed for use in integrated IP voice and data service offerings to small-to-medium sized businesses, worldwide. These powerful solutions combine the robust routing and voice features of ADTRAN’s industry-leading Total Access 900e Series of IP Business Gateways into a modular, multi-function chassis with a variety of network and voice interface modules to enable cost-effective IP-based services over a converged services infrastructure.

With these versatile chassis, carriers can offer a variety of services including cost-effective integrated voice and data over an Ethernet-fed Wide Area Network (WAN) or over low overhead bonded EFM e.SHDSL loops and T1 circuits. The dual-slot chassis includes a robust IP router, SIP gateway, integral PRI/PRA T1/E1 for PBX connectivity, and dual 10/100Base-T Ethernet interfaces for routing, DMZ, or Ethernet-fed WAN applications.

NetVanta 6355
Innovative All-in-One Hosted Gateway
- IP Business Gateway with integral 24-port, PoE switch
- Integrated SIP gateway; two FXS interfaces and two FXO interfaces
- Local and remote survivability
- VQM for MOS, jitter, delay and packet loss statistics
- Dual Gigabit/SFP module slots for uplink or stacking

NetVanta 6310
Global, Modular IP Business Gateway
- Dual-slot modular chassis
- Dual 10/100 Base-T Ethernet interfaces for routing, DMZ, or Ethernet-fed WAN
- Integral PRI/PRA T1/E1 for PBX or PSTN connectivity
- SIP gateway
- ETSI compliant

NetVanta 6330
Converged Services Solution
- Modular, single-slot chassis
- Dual 10/100 Base-T Ethernet interfaces for routing, DMZ, or Ethernet-fed WAN
- Supports 8, 16, or 24 FXS interfaces
- Integral SIP gateway, router and security
- Dynamic bandwidth utilization enable efficiency
Carrier Ethernet Converged Services

The NetVanta 6310 combines the capabilities of an Ethernet access device with an IP Business Gateway. The modular chassis provides dual slots for a variety of network and voice interfaces, allowing Carriers to customize the product for specific service offerings. When used in conjunction with ADTRAN’s Total Access 5000 Ethernet aggregation platform, centralized next-generation Ethernet service can be delivered to small and medium businesses, with integrated management capability. The NetVanta 6310 is also ETSI compliant for international deployments.

All-in-One Hosted IP Centrex

The NetVanta 6355 is a powerful new solution designed for Hosted VoIP service delivery. This IP Business Gateway provides an all-in-one solution for carrier Hosted VoIP/IP Centrex, Internet access, and business connectivity services. Now carriers and business customers alike can experience the same voice functionality of ADTRAN’s industry-leading Total Access 900e IP Business Gateways coupled with the robust routing, switching and security/Virtual Private Network (VPN) functionality of the widely deployed NetVanta switch-router, all in a compact 1U chassis. The NetVanta 6355 includes a SIP Gateway, full-featured IP router, stateful inspection firewall, VPN, 24-port PoE switch with Gigabit uplinks, and two expansion slots for Network and Voice Interface Modules (NIM/VIMs).
ADTRAN’s Enterprise Session Border Controller is designed to provide superior VoIP interoperability and security to both service providers and enterprises as the shift to IP communications progresses. Historically ADTRAN has played an important role in supporting legacy communication protocols where IP is present either on the network or premises side of a deployment. As the communications industry moves to more IP centric networks, Session Border Control is an effective way to add value as a demark between IP networks with the same hardware that was once used for supporting legacy protocols. ADTRAN is providing a migration path to various services, from business trunking, hosted VoIP, and onto native SIP trunking.

Why Session Border Control?
Enterprise Session Border Controllers (eSBCs) enable the delivery of secure and high quality interactive communications across multiple IP networks.

For service providers, these include the separate IP networks that comprise fixed line, mobile and cable networks. eSBCs are deployed as a demarc, such as between two service providers or between a service provider and its enterprise, residential or mobile customers.

For enterprises, eSBCs are used as a demarc from the carrier network connecting the enterprise to a wide-area service designed for interactive communications (e.g. SIP trunk). eSBCs also enable selected remote locations or mobile workers to securely access enterprise interactive communications services via the Internet.

Designed to ease the need for extensive interoperability testing, ADTRAN’s eSBC Feature Pack provides the tools necessary to normalize, secure and troubleshoot the SIP to SIP communication between a carrier network and the customers SIP compliant equipment.

Expedite Service Delivery
ADTRAN is interoperable with multiple widely deployed IP PBX’s in use today by your customers. This is an additional value and great reduction in time and effort that you would otherwise have to spend testing yourself. ADTRAN’s pre- and post-technical sales support can assist you with any questions you may have ahead of deploying the eSBC feature pack.

NetVanta 6410
Dedicated eSBC Appliance—Superior VoIP Interoperability
- Supports 1,000 simultaneous SIP sessions
- Topology hiding
- Inherent URL filtering
- VQM for easy fault identification
- Supports header manipulation for SIP protocol harmonization

Enterprise Session Border Controller
Flexible Options to Meet Multiple Deployment Sizes
- Supports from 50 to 300 simultaneous SIP sessions
- Provides a demarcation point for service providers
- Converged multi-service device reduces Total Cost of Ownership (TCO)
- Simplifies and expedites service deployment
- Enables remote phone support
- Supports header manipulation, media anchoring, and transcoding

eSBC-ready Products:
- 50 Simultaneous Calls: NetVanta 3430, NetVanta 3448 and NetVanta 6310
- 100 Simultaneous Calls: Total Access 900e, NetVanta 3430 and NetVanta 3448
- 200 Simultaneous Calls: NetVanta 6250
- 300 Simultaneous Calls: NetVanta 4430
Enterprise Session Border Controller
The Enterprise Session Border Controller Feature Pack is available on multiple ADTRAN platforms including the widely deployed Total Access 900e family of IP Business Gateways. Session Border Control allows service providers to quickly and easily talk to IP technologies on the customer premises such as an IP PBX. This IP standardization allows for efficient service deployment and delivery, while also providing a migration path from legacy analog services that ADTRAN IP Business Gateways support without additional hardware.

Remote Phone Support
ADTRAN's Session Border Control functionality also gives you the ability to offer your employee's remote phone support without a dedicated VPN tunnel present. This allows remote and mobile workers to work from behind a NAT-enabled device while still making and receiving calls using the PBX located at the corporate headquarters.
High Performance Voice Solutions

The NetVanta 600 Series are VoIP media gateways, providing interoperability with industry-leading soft switches and feature servers. This series efficiently converts IP signaling from the carriers network into traditional TDM voice services still present on many premises today. This allows carriers to convert their networks while maintaining interoperability with their customers equipment. The NetVanta 644 is ideal as a PSTN gateway providing IP conversion for newer PBXs, like the NetVanta Unified Communications Enterprise Communication Server.

The NetVanta 600 series features Quad T1/E1 interfaces and supports up to 120 simultaneous VoIP calls while providing ADTRAN’s innovative Voice Quality Monitoring (VQM) on each call. Redundant Ethernet functionality is a unique failover feature that provides customers confidence their voice connectivity will be maintained in the event of circuit failure. This solution is ideal for:

• Service providers offering SIP trunking service to medium and large enterprise customers needing to interface to legacy PBX’s.

• Enterprises who currently have large data networks in place, but still have separate voice infrastructure will utilize this to converge their networks and allow their voice traffic to route to their IP data networks.

• Resellers needing to enable traditional PSTN connectivity to their customers who have converted to Unified Communications solutions like ADTRAN’s NetVanta UC Enterprise Communications Server.

NetVanta 644
Global VoIP Media Gateway

■ Four T1/E1 and two 10/100/1000 Ethernet interfaces
■ Supports 120 simultaneous VoIP calls
■ Supports 120 T.38 fax sessions
■ Compatible with industry leading softswitches and call agents
■ Dynamic bandwidth affords more efficient utilization
■ Layer 1 Ethernet failover for increased uptime
Service Provider SIP Trunking
The NetVanta 644 can provide SIP Trunking to legacy PRI translation extending the life of existing telephony equipment. In this example, the NetVanta 644 provides the needed interface to accept SIP technology from a service provider and provide local communication to an existing PBX.

PSTN Gateway
The NetVanta 644 can be utilized as a PSTN gateway to popular Unified Communications (UC) platforms like the NetVanta UC server. In this case, the NetVanta 644 receives up to 4 PRI’s from a service provider and provides Ethernet based SIP trunks to the UC server providing the local resources needed for full platform utilization.
Configure, manage and update...our tools make it easy to manage your converged services network.

**Multiple Management Options**
The CLI mimics the *de facto* industry standard, and is both familiar and easy to use. The CLI supports multiple configuration scripts to simplify setup of local and remote units. Dual firmware images provide quick and easy recovery. Other management options include RADIUS, SSH, SNMP, and a Web-based GUI.

**Take Control with nCommand MSP**
ADTRAN nCommand MSP provides total control of your Total Access IP Business Gateways and NetVanta products. 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, GUI.

**Voice Quality Monitoring — Supercharging Quality of Service**
As voice and data networks converge into a single communications network, QoS is of the utmost importance. QoS allows a network to provide better service to selected traffic and enables the network to handle both mission-critical and best effort traffic on the same infrastructure. However, what happens when there are problems with voice quality on this new converged network? The answer lies in VQM.

VQM moves beyond QoS and can save time and money in the troubleshooting process. In essence, VQM allows full visioning to the data stream and identify problem areas down to the packet level via an easy-to-use, graphically intuitive interface. To better understand how VQM can supercharge your QoS, reduce both the time and pain associated with troubleshooting and provide the ability to monitor trends within the network, visit [www.adtran.com/vqm](http://www.adtran.com/vqm)

**Voice Quality Monitoring** is a graphically intuitive interface offering easy-to-read dashboards to view critical statistics, including results of RTP monitoring of past and active calls.
Recognized and trusted: ADTRAN solutions are the smart solution for your network.

ADTRAN, Inc. is a leading global supplier of networking and communications equipment with an innovative portfolio of more than 1,700 solutions for use in the last mile of today’s telecommunications networks. Widely deployed by carriers, distributed enterprises and SMB, ADTRAN solutions enable voice, data, video, and Internet communications across copper, fiber and wireless network infrastructures. Our solutions are currently in use by every major U.S. service provider and many global ones, as well as by thousands of public, private and governmental organizations worldwide.

**Simple, Reliable, and Affordable**

When you need a networking solution that fits the unique connectivity requirements of your business, ADTRAN is the smart alternative. Our product portfolio offers a breadth of solutions, including a product suite that is tailored to the specific needs of SMB and distributed enterprise customers. With ADTRAN’s award-winning and innovative NetVanta switches, routers, multiservice access routers, VPN solutions, wireless and Unified Communications products, it is easy to find a quality solution that is perfect for your specific network needs.

Every product is backed by an industry-leading warranty and best-in-class telephone technical support from our team of degreed engineers. As a TL 9000 3.0 and ISO 9001:14001 certified supplier supporting next-generation quality standards, the company maintains in-house labs for reliability, component and compliance testing — all with a focus toward customer satisfaction.

**Comprehensive Training and Certification Services**

ADTRAN provides innovative training solutions designed with a focus toward varying skill levels and job functions. Professional certification programs are designed to help customers structure and individualize continuing education needs. Access to the certification and training programs includes both free and fee-based options. Sessions are available both on- and off-site, using Instructor-Led Training (ILT); Computer-Based Training (CBT); or virtual classroom training with real-time, Web-enabled classes.

**Technical Questions**

**888 423-8726**

[www.adtran.com/support](http://www.adtran.com/support)

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