

Tenor BX Series



Tenor BX Series VoIP MultiPath Switch

- 2, 4 or 8 BRI S/T Ports
- Up to 16 simultaneous VoIP channels
- Available in MultiPath or Gateway configurations
- Auto-Provisionable
- Survivable
- Enhanced Unified Communications Proxy (UCP) supports both "Any to Any" Signaling & Switching
- Supported by Remote Management Tools*
- Perfect for small and medium-sized enterprises with ISDN lines

The NET Tenor BX Series MultiPath Switch offers enterprises using ISDN Basic Rate Interface (BRI) lines an easy, cost effective way to capitalize on the power of Voice over IP (VoIP). The Tenor integrates VoIP gateway functionality with its unique intelligent call routing, MultiPath architecture, and QoS support all in one solution.

Enterprises can benefit from a variety of valuable applications such as PBX extension, remote office connectivity, long distance consolidation and call centers. BX Series products can support either 2, 4 or 8 BRI lines.

ALL NET TENORS INCLUDE THE FEATURES THAT MADE NET THE VOIP MARKET VALUE LEADER

- MultiPath architecture for easy integration with existing voice and data infrastructure, meaning little or no re-programming of the PBX, or upgrades are required and no need for special dialing plans.

THE TENOR SERIES VOIP MULTIPATH SWITCH OFFERS A ROBUST VOIP SWITCHING SOLUTION FOR ENTERPRISES

NET's Tenor Series switching/gateway solutions are deployed worldwide to provide highly reliable, easy-to-implement VoIP connectivity in a full range of enterprise and service provider environments. These highly adaptable solutions work with traditional PBXs, IP PBXs and IP phones and SIP-based communications environments. They are perfect for deploying VoIP in small enterprises, or remote offices of larger enterprises.

- Transparent MultiPath Call Routing to intelligently route calls between the PBX, the PSTN, and the IP network to achieve the best combination of cost and quality. The Tenor can also route calls over IP to reduce costs, and then transparently "hop off" to the PSTN, to reach off-net locations.
- Auto Provisioning interface allows the Tenor Series solution to be deployed worldwide, and configured automatically by acquiring the configuration information from a central server, upon installation. The same auto-provisioning capability allows the Tenor Series to be configured from a VoIP application, thus supporting a single user interface between the VoIP application and the Tenor configuration.
- Enhanced Unified Communications Proxy (UCP) provides 'Any to Any' Signaling & Media Switching: SIP<->SIP, SIP <-> H.323, H.323 <-> H.323, TDM<->TDM, SIP<->TDM, and H.323 <-> TDM for easy integration with any network. Operators can also select TCP/UDP as the transport layer for outgoing IP calls.

THE NET TENOR OFFERS A SURVIVABLE BRANCH OFFICE VOIP ACCESS SOLUTION FOR IP PBXs AND IP CENTREX

All NET Tenors offer a complete SIP-based VoIP solution for the branch office or for service provider customer premise equipment, providing full survivability in the event that access to the central and/or hosted IP PBX is lost. Because it delivers a complete solution in a single device - and because it offers such easy, scalable implementation and management - the Tenor significantly reduces the total lifecycle cost of VoIP deployment, while optimizing service reliability. Tenor also offers PSTN connectivity for local access back up and E911 service.

- Universal Dial Plan that provides a programmable dial plan so the Tenor Series can be integrated into any network environment.
- PacketSaver™ Technology multiplexing to reduce bandwidth consumption by up to 57% by combining voice packets from multiple calls into a single packet.
- NATAccess™ to allow Tenor Series to operate behind NAT firewalls to translate internal IP addresses into public addresses when a VoIP call is established with an outside party.
- Remote Management for anywhere, anytime remote management even behind NAT firewalls with NET's Remote Management Session Server.

- Public and private dial plan support
- User programmable dial plan support
- Forced IP routing and IP port mapping
- PSTN pass-through support for calls to Toll-free, local, and special service numbers (emergency service, etc.)
- Automatic appending and stripping of digits to dialed numbers
- Call Detail Records
- Least cost routing with external NET VoIP Call Routing Server*
- Caller ID Name and Number

CALL MANAGEMENT FEATURES

- Automatic call type detection: Voice/Modem/Fax
- Trunk group support

TECHNICAL SPECIFICATIONS:

Telephony Specifications:

- Voice algorithms: G.723.1a, G.729ab, G.711
- Auto codec negotiation
- Fax Support: Group III at 2.4, 4.8, 7.2, 9.6, 14.4 Kbps, using industry standard T.38; Super G3 compatible up to 33.6 Kbps
- Modem support with G.711
- Choice of 2, 4 or 8 BRI S/T ports
- MultiPath VoIP Switch or VoIP Gateway configurations
- Ports individually programmable to NT or TE configuration
- Standard RJ-45 connectors
- Coding: A law or μ -law
- Enhanced (Carrier Grade) echo cancellation: ITU Rec. G.168, up to 128 mSecs tail size
- Signaling protocols: Net 3 ETSI EuroSDN (TBR3), AS/ACIF S031 (Australia), New Zealand Net3 (TNZ), QSIG
- VoIP to circuit, and circuit to circuit (Tandem/TDM) switching

IP Network Specifications:

- LAN interface: 1 Fast Ethernet port (10/100Base-T)
- Standard RJ-45 Interface (IEEE 802.3) for 10Base-T or 100Base-T connections
- QoS Support: IP TOS, DiffServ Code Point

VoIP Network Specifications:

- Support for multiple SIP User Agents (RFC3261 compliant endpoint)
- Any to Any' Signaling & Media Switching: SIP<->SIP, SIP <-> H.323, H.323 <-> H.323, H.323 <-> TDM, TDM <-> TDM, & SIP<->TDM. Incoming/outgoing H.323 calls are not supported in survivable configurations.
- Maximum supported IP to IP calls: 60; actual supported calls maybe lower based on system call traffic patterns.

- IP transport (TCP or UDP) selection for outgoing IP calls.
- DTMF Signaling via RFC 2833 or SIP Info
- SIP Supplementary Services
- Message Waiting Indicator
- SIP Refer Method support
- IVR/RADIUS server support for AAA with integrated multi-lingual IVR+
- Adaptive Voice Activity Detection (VAD) with Comfort Noise Generation (CNG)
- Adaptive jitter buffer
- Packet Loss Concealment
- NATAccess™ - NAT/Firewall
- Security: IP filtering
- Up to 16 simultaneous VoIP calls
- Support for DNS-SRV

Configuration / Management:

- Auto-Provisionable
- NET Tenor Configuration Manager (GUI) for configuration of remote individual Tenors
- NET Tenor Monitor (GUI) for alarm monitoring, call monitoring and CDR monitoring
- Remote access with external Remote Management Session Server
- SNMPv2 Agent
- Command Line Interface (CLI)

GENERAL SPECIFICATIONS:

Dimensions: 1U High Chassis

W 17 3/8" x H 1 3/4" x D 10 3/4"

W 44.5cm. x H 4.5cm. x D 27.6cm.

- Maximum weight: 8.25 lbs. (3.75kg.)
- AC Power: 100-240 Volts AC, 50/60 Hz, 35 watts
- Operating temperature: 40° - 104° F (5° - 40° c.)
- Operating humidity: 20% - 80% non-condensing
- Telco: TBR3, AS/ACIF S031
- EMC: EN55022, EN55024, EN61000-3-2, EN61000-3-3
- Safety: UL60950, EN60950, AS/NZS60950

Model	BRI Ports	BRI B Channels	VoIP Channels
BX204	2	4	4
BX408	4	8	8
BX816	8	16	16

WEBSITE: Please visit our website at www.net.com for information on how to contact us, place an order or get more information on NET solutions.



Corporate Headquarters
6900 Paseo Padre Parkway
Fremont, CA 94555 U.S.A.
T 510.713.7300
F 510.574.4000
E info@net.com

N.E.T. Federal
21660 Ridgeway Circle,
Suite 100Dulles, VA 20166, U.S.A
T 703.948.1800
F 703.948.1850
E net_federal@net.com



OEM Hardware Solutions
Information Worker Solutions
Networking Infrastructure Solutions

This document does not create any express or implied warranty by NET about its products or services, or the features thereof, and NET makes no representation regarding the suitability of its products for any particular purpose. Specifications and other information herein is subject to change without notice.

© 2010 Network Equipment Technologies, Inc. All rights reserved. VXbuilder, VXgate, VXscript, VXvue, VXwatch, NET, and the NET logo are trademarks of Network Equipment Technologies, Inc., and its subsidiary, N.E.T. Federal, Inc. All other trademarks are the sole property of their respective companies.

TENOR BX SERIES-DS-0110