

Tenor  
Series - DX



## Tenor Series - DX VoIP MultiPath Switch

- Available with 2, 4, 6 or 8 T1/E1/PRI Spans
- Up to 120 simultaneous VoIP calls
- Available in MultiPath or Gateway configurations
- Auto-Provisionable
- Survivable up to 60 channels
- Unified Communications Proxy (UCP)
- Supported by Remote Management Tools\*
- Perfect for enterprises and service providers deploying VoIP applications

Enterprises can benefit from a variety of valuable applications such as PBX extension, remote office connectivity, long distance consolidation and call centers. Service providers can deploy numerous VoIP applications such as SIP Trunking, Wholesale VoIP Termination, Calling Cards, Tandem Switching and Least Cost Routing. Product scales from a fractional T1/E1, with 8 simultaneous VoIP channels up to a full 8 span MultiPath Switch supporting 120 simultaneous VoIP calls.

### 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.
- Transparent MultiPath Call Routing to intelligently route calls between

### 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.

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.
- Unified Communications Proxy (UCP) provides 'Any to Any' connectivity: SIP - SIP, TDM - TDM and SIP - TDM, for easy integration with any network.
- Universal Dial Plan that provides a programmable dial plan so the Tenor Series can be integrated into any network environment.

### 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.

\* Available for an additional cost

- 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.

## CALL MANAGEMENT FEATURES

- Automatic call type detection: Voice/Modem/Fax
- Answer and Disconnect Supervision
- Trunk group support
- Pass-through support for calls to Toll-free, local and special service numbers (ie. emergency services, 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

## TECHNICAL SPECIFICATIONS:

### Telephony Specifications:

- Voice algorithms: G.723.1 and 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, 6, or 8 T1/E1/PRI Spans
- Standard RJ-45 Connectors
- Coding: A-law,  $\mu$ -law
- Enhanced (Carrier Grade) Echo Cancellation: ITU Rec. G 168, up to 128 msec tailsize
- PRI Signaling Protocols: National ISDN-2, Euro ISDN NET5, Japan INS-NET1500, KDD, 4ESS, 5ESS, DMS100
- T1 CAS (E&M, Loop Start, Feature Group-D, DTMF, MF)
- E1 CAS (R2 MF)
- DASS2
- Tandem/TDM switching
- Maximum Call Rate: 7,200 calls/hour
- VoIP to circuit, and circuit to circuit (Tandem/TDM) switching

### IP Network Specifications:

- LAN Interface: 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

### VoIP Network Specifications:

- Support for multiple SIP User Agents (RFC3261 compliant endpoint)
- 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 120 simultaneous VoIP calls
- Support for DNS-SRV

### Configuration / Management:

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

## 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, 50 watts
- Operating temperature: 40° - 104° F (5° - 40° c.)
- Operating humidity: 20% - 80% non-condensing
- Telco: FCC Part 68, TS-016, TBR4, TS-038, CS03
- EMC: FCC Part 15, EN55022, EN55024, EN61000-2-3, EN61000-3-3
- Safety: UL60950, EN60950, AS/NZS60950

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**Corporate Headquarters**  
6900 Paseo Padre Parkway  
Fremont, CA 94555 U.S.A.  
T 510.713.7300  
F 510.574.4000  
E [info@net.com](mailto:info@net.com)

**N.E.T. Federal**  
21660 Ridgetop Circle,  
Suite 100Dulles, VA 20166, U.S.A  
T 703.948.1800  
F 703.948.1850  
E [net\\_federal@net.com](mailto:net_federal@net.com)

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TSDX-DS-0508