

# Tenor® BX VoIP MultiPath Switch



## Tenor® BX Series

SelectNet™ Auto-switching provides superior voice quality

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Intelligent Call Routing

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Integrated Gatekeeper and SIP B2BUA for survivability\*\*

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Available with 2, 4 or 8 BRI S/T Ports

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IVR/Radius AAA Compliant (Multi-lingual IVR)

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Support for external Quintum Call Routing Server\*

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Support for external Quintum Tenor Monitor

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MultiPath and Gateway configurations

## A more intelligent way to implement VoIP

The Quintum® Tenor® BX 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.

### Patented SelectNet™ Technology assures high quality voice

The Tenor employs its patented SelectNet™ Technology to monitor calls for jitter, packet loss and latency, and can transparently switch mid-call to the voice network whenever conditions demand.

### More intelligence means greater flexibility.

With its MultiPath call routing, the Tenor can 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. No other VoIP solution can match this flexibility.

### More intelligence means easier installation.

With its MultiPath architecture, the Tenor is the only VoIP solution that can be installed without upgrades to the existing voice or data networks.

### More intelligence means greater reliability.

The Tenor is designed to pass calls through to the existing voice network in the event of system malfunction—even a total power failure.

### More intelligence means less network congestion.

With its PacketSaver™ Technology, the Tenor reduces bandwidth consumption up to 57%, by combining voice packets from several calls into a single packet to minimize packet overhead.

### NATAccess™ intelligence means greater security.

The Tenor VoIP MultiPath Switch also features a unique technology that allows it to operate behind NAT-enabled firewalls. The innovative NATAccess™ solution overcomes the problem of NAT firewalls not correctly translating internal IP addresses into public addresses when a VoIP call is established with an outside party.

\* Quintum products purchased separately

\*\* Not supported in initial software release

## CALL MANAGEMENT FEATURES

- Automatic call type detection: Voice/Modem/Fax
- Trunk group support
- 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 Quintum VoIP Call Routing Server\*



## TECHNICAL SPECIFICATIONS

### Telephony Specifications

- Voice algorithms: G.723.1a, G.729ab, G.711
- Auto codec negotiation
- FAX support: Industry standard T.38 and Group III at 2.4, 4.8, 7.2, 9.6, 14.4 Kbps
- Modem over IP
- 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
- Supports point-to-point or point-to-multipoint
- Standard RJ-45 connectors
- Coding: A law or  $\mu$ -law
- Enhanced (Carrier Grade) echo cancellation: ITU Rec. G.168, up to 128 mSecs tail size
- Signaling protocols: Net 3 ETSI EuroISDN (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 (10/100 Base-T)
- Standard RJ-45 Interface (IEEE 802.3) for 10 Base-T or 100 Base-T connections
- QoS Support: IP TOS, DiffServ Code Point

### VoIP Network Specifications

- H.323 v.3 Gateway and Integrated Gatekeeper
- SIP User Agent (RFC3261 compliant endpoint)
- SIP Back-to-Back User Agent (B2BUA)\*\*
- SIP RFC2833 In-band DTMF Signaling
- 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 compensation
- NATAccess™
- Security: IP filtering
- Up to 16 simultaneous VoIP calls

### Configuration / Management

- Quintum Tenor Configuration Manager (GUI) for configuration of remote individual Tenors
- Quintum Tenor Monitor (GUI) for alarm monitoring, call monitoring, and CDR monitoring
- SNMPv2 Agent
- Command Line Interface (CLI)

### 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

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\*\* Not supported in initial software release



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