

# Tenor® AX VoIP MultiPath Switch



## Tenor® AX Series

- SelectNet™ provides superior voice quality
- Transparent MultiPath Call Routing
- Integrated H.323 gateway and gatekeeper
- SIP User Agent
- IVR/RADIUS AAA compliant
- Stackable architecture
- Answer and Disconnect Supervision
- 8, 16, or 24 Analog line and trunk interfaces
- Up to 24 simultaneous VoIP calls
- Available in MultiPath or Gateway configurations

## A more intelligent way to implement VoIP

The Quintum® Tenor® AX Series gives businesses with analog voice infrastructures an easy, cost-effective way to capitalize on the power of Voice over IP (VoIP). The Tenor integrates a gateway, a gatekeeper, and intelligent call routing, and supports QoS all in one solution. With its MultiPath architecture, the Tenor connects to the data network through a 10/100 Ethernet interface, the voice network through either a PBX or phone, and the public switched telephone network.

### 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.

## CALL MANAGEMENT FEATURES

- Automatic call type detection: Voice/Modem/Fax
- Answer and Disconnect Supervision
- Trunk group support
- Public and private dial plan support
- User programmable dial plan support
- Automated load balancing
- Forced IP routing and IP port mapping
- Pass-through support for calls to 800, 911, 411, etc.
- Automatic appending and stripping of digits to dialed numbers
- Call Detail Records
- Least cost routing with external Quintum VoIP Call Routing Server\*
- Call Blocking
- Type I Caller ID delivery (Telcordia Standard GR-30-CORE)



## TECHNICAL SPECIFICATIONS

### Telephony Specifications

- Voice algorithms: G.723.1a, G.729ab, G.726 ADPCM, G.711 with auto 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 8, 16, or 24 FXS and/or FXO configurations
- Standard 50 pin Telco "D" Connectors
- Coding: A-law,  $\mu$ -law
- Enhanced (Carrier Grade) Echo Cancellation: ITU Rec. G168, up to 128 msec tailsize
- Loop Start, Reverse Battery, Battery Disconnect
- 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
- DHCP Client
- QoS Support: IP TOS, DiffServ

### VoIP Network Specifications

- H.323 v.4 Gateway and Integrated Gatekeeper
- SIP User Agent
- 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 24 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
- SNMP v2 Agent
- Command Line Interface

### Dimensions: 1U High Chassis

- W 17 <sup>3</sup>/<sub>8</sub>" x H 1 <sup>3</sup>/<sub>4</sub>" x D 10 <sup>3</sup>/<sub>4</sub>"
- W 44.5cm x H 4.5cm x D 27.6cm
- Maximum weight: 10 lbs. (4.55kg)
- AC Power: 100-240 Volts AC, 50/60 Hz, 60 watts
- Operating temperature: 40° - 122° F (5° - 50° C)
- Operating humidity: 20% - 80% non-condensing
- Telco: FCC Part 68, TS-016, TBR4, TS-038
- EMC: FCC Part 15 Class A, EN55022 Class A (CISPR22), AS/3548, VCCI
- Safety: UL, IEC 60950, TS001

Tenor AX Series	MultiPath Switch AXM Series	Station AXG Series	Trunk AXT Series	Enterprise AXE Series
8 Simultaneous VoIP Calls	8 FXS / 8 FXO	8 FXS / 0 FXO	0 FXS / 8 FXO	8 FXS / 2 FXO
16 Simultaneous VoIP Calls	16 FXS / 16 FXO	16 FXS / 0 FXO	0 FXS / 16 FXO	16 FXS / 2 FXO
24 Simultaneous VoIP Calls	24 FXS / 24 FXO	24 FXS / 0 FXO	0 FXS / 24 FXO	24 FXS / 2 FXO



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