

## Tenor<sup>®</sup> AS Series

- 2 or 4 Analog line and trunk interfaces
- Up to 4 simultaneous VoIP calls
- Available in MultiPath or Gateway configurations
- Integrated H.323 gatekeeper and SIP B2BUA for survivability\*\*
- Intelligent MultiPath Call Routing
- Answer and Disconnect Supervision
- IVR/RADIUS AAA Compliant (Multi-lingual IVR)
- SelectNet<sup>™</sup> provides superior voice quality
- Support for external Quintum Call Routing Server\*
- Support for external Quintum Tenor Monitor
- Support for external Remote Management Session Server\*



### *A more intelligent way to implement VoIP in remote offices and SOHO environments*

*The Quintum<sup>®</sup> Tenor<sup>®</sup> AS Series gives small to medium sized 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 (PSTN).*

#### **Patented SelectNet<sup>™</sup> Technology assures high quality voice**

The Tenor employs its patented SelectNet<sup>™</sup> 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<sup>™</sup>\* Technology, the Tenor reduces bandwidth consumption up to 57%, by combining voice packets from several calls into a single packet to minimize packet overhead.

#### **More intelligence means better management**

The Tenor comes with a set of easy to use configuration and management tools, including Tenor Configuration Manager (GUI) and Wizard, and the Tenor Monitor that offers realtime monitoring of alarms, call status and CDRs. Tenors can easily be remotely managed behind NAT firewalls utilizing the Tenor Remote Management Session Server.\*

\* Available for an additional cost  
\*\* Not supported in initial release

# Tenor AS MultiPath Switch

## 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
- Forced IP routing and IP port mapping
- Pass-through support for calls to Toll-Free, local and special service numbers (ie. emergency services)
- Automatic appending and stripping of digits to dialed numbers
- Call Detail Records
- Least cost routing with external Quintum VoIP Call Routing Server
- Type I Caller ID/Name support (Telcordia, ETSI, NTT and DTMF)

## 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 or 4 FXS and/or FXO configurations
- Standard RJ-11 connectors
- Loop Start, Reverse Battery, Battery Disconnect
- Maximum Call Rate: 300 calls/hour

### IP Network Specifications

- LAN Interface: 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
- Coding: A law,  $\mu$  law
- Enhanced (Carrier Grade) Echo Cancellation: ITU Rec. G168, up to 128 msec tailsize

### 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 Supplementary Services
- Message Waiting
- 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 4 simultaneous VoIP calls
- Support for DNS Addressing

### 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

## GENERAL SPECIFICATIONS

### Dimensions: 1U High Chassis

W 10 1/8" x H 2" x D 7"

W 24.5cm x H 5.1cm x D 18.73cm

- Maximum weight: 3.5 lbs. (1.6kg)
- AC Power: 100-240 Volts AC, 50/60 Hz, 35 watts
- Operating temperature: 40° - 104° F (5° - 40° C)
- Operating humidity: 10% - 90% non-condensing
- Telco: FCC Part 68, AS/NZ 3260:  
1997: AS/ACIFS002:2001
- EMC: FCC Part 15 Class B
- Safety: UL-1950, ACA TS001:1997

Tenor AS Series	MultiPath ASM Series	Station Gateway ASG Series
2 Simultaneous VoIP Calls	2 FXS / 2 FXO	2 FXS / 0 FXO
4 Simultaneous VoIP Calls	4 FXS / 4 FXO	4 FXS / 0 FXO



\* Quintum product purchased separately  
\*\* Not supported in initial software release

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