Tenor® AS VoIP MultiPath Switch

Tenor®AS Series

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

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

The Quintum® Tenor® 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™ 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

QUINTUM
TECHNOLOGIES, INC.

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 delivery (Telcordia Standard GR-30-CORE)

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, μ 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 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

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

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: 3.5lbs. (1.6kg)
- AC Power: 100-240 Volts AC, 50/60 Hz, 15 watts
- Operating temperature: 40° - 104° F (5° - 40° C)
- Operating humidity: 20° - 80% non-condensing
- Telco: FCC Part 68, AS/ACIF S003, CS03, JATE AS/ACIFS002:2001
- EMC: FCC Part 15 Class B, EN55022, EN55024, EN61000-2-3, EN61000-3-3, AS/NZS3260
- Safety: UL60950, EN60950, AS/NZS60950

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

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