

**Any to Any Connectivity  
Transparent Deployment  
Site Survivability**



**The Performance You Want.  
The Installation Simplicity You Expect.**

# Quintum's innovative solutions are The Perfect Fit for Enterprise & Service Provider VoIP Deployments

## VOIP GATEWAYS FOR ANY NETWORK

The challenges of VoIP deployments affect everyone... from enterprises to service providers, and especially at the edge where their respective networks meet. Enterprises need a VoIP solution that delivers great call quality, fits effortlessly into the existing data and voice environment, and ensures rock-solid service reliability. Service providers need a solution that will fit into their customers' diverse environments, provide non-stop service and meet their requirements for ease of installation and remote manageability.

Quintum has a solution that's the perfect fit for both: Tenor VoIP MultiPath Switches and Gateways. Our VoIP switching and gateway solutions support all types of analog and digital communications environments and install with ease. They offer a unique Unified Communications Proxy for 'Any to Any' connectivity: SIP – SIP, TDM – TDM and SIP – TDM, allowing intelligent integration of all TDM and VoIP equipment, and they deliver unmatched survivability — even when the IP network fails. Tenors provide the intuitive device and call management tools that technical staffs for both enterprise and service providers need to ensure ongoing VoIP success.

So whether you're an enterprise network manager planning to implement VoIP across your HQ and remote offices, or a service provider delivering SIP-based access to your VoIP network, Quintum has the innovative solutions that best address your technical and business requirements.

## QUINTUM® TENOR® VOIP MULTIPATH SWITCHES AND GATEWAYS

### Tenors offer solutions for today's diverse communications infrastructures.

The Tenor is used around the world in a wide variety of applications including IP telephony migration, legacy VoIP enablement, multi-office VoIP, survivable branch office, Hosted IP PBX, SIP trunking, and VoIP calling card and termination. And now, Tenors are being deployed with unified communications applications in enterprise and service provider networks worldwide.

The Tenor S, now with Quintum's Unified Communications Proxy (UCP), provides a complete VoIP access solution for SIP-based enterprise networks offering legacy equipment integration, VoIP-PSTN connectivity, and survivability for remote sites. This product has been specifically designed to offer a superior enterprise solution for IP-PBX branch offices and hosted IP-PBX services CPE. The Survivable Tenor S is the only device, outside of the user VoIP endpoints, that is needed in the branch office to support all legacy equipment, PSTN connectivity and survivability of all legacy and SIP endpoints.

Tenor's intelligent call routing simplifies VoIP deployments, enabling businesses to make the move to VoIP without costly overhauls or equipment re-configurations, while assuring reliable, survivable, and hassle-free VoIP service.

Tenor  
switches  
Gateways

## THE PERFORMANCE YOU WANT. THE INSTALLATION SIMPLICITY YOU NEED.

### Any to Any Connectivity

Quintum has developed a Unified Communications Proxy to address today's hybrid communications environments. Initially developed to support Microsoft® Office Communications Server 2007 deployments, the new **Unified Communications Proxy (UCP)** supports the intelligent integration of all TDM and VoIP equipment, offering unmatched flexibility for today's complex voice networks.

The UCP capability in the Tenor provides intelligent "any to any" MultiPath switching between VoIP and TDM networks, including SIP to SIP calls, TDM to TDM calls and SIP to TDM calls... hence, 'any to any' connectivity! This

capability simplifies the deployment of new VoIP applications such as Unified Communications, assuring easy integration with any existing voice network element (TDM or SIP) and the Public Switched Telephone Network (PSTN). This flexibility also benefits VoIP service providers by providing a flexible customer premises gateway that can interface to all existing business voice network elements including SIP, TDM or both.

Tenors's UCP provides SIP to SIP connectivity with the ability to connect with the disparate SIP systems that exist in today's hybrid network environments. This allows new VoIP applications to interface with a full range of circuit and SIP-based endpoints, systems, and networks.

### Transparent Deployment

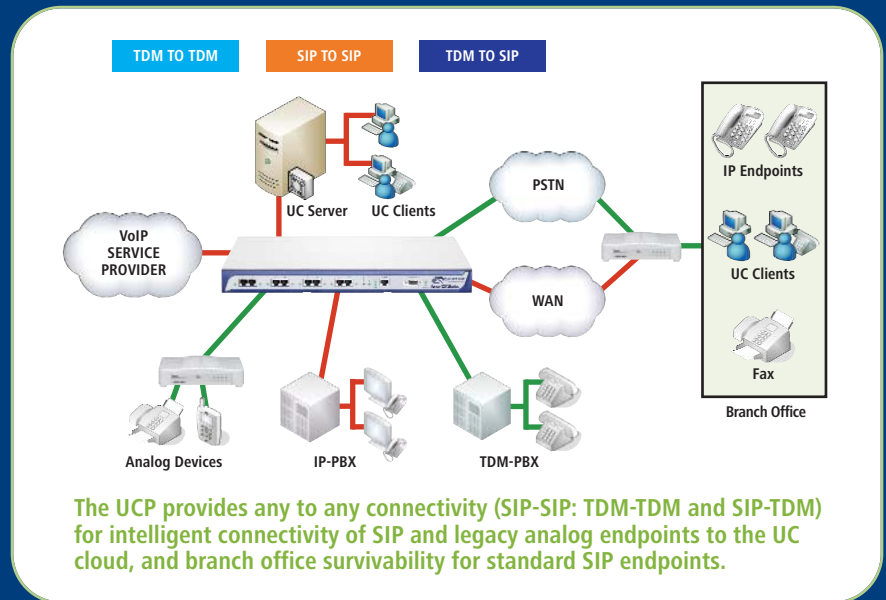
Quintum's Tenor switches offer a unique MultiPath Switch design that drops in easily and transparently into existing voice and data infrastructures, with little to no re-configuration of existing equipment. Tenors interoperate with all types of traditional and IP-based PBXs, allowing them to also support analog and modem-based devices, fax machines, conventional paging systems, and other types of existing infrastructure.

Tenors' MultiPath call routing allows it to intelligently route calls between the phone/key switch/PBX, the PSTN and the IP network, allowing them to support both circuit switching and VoIP calls in a single device. The intelligent call routing and switching that is embedded in the Tenor means that the VoIP implementation does not require call routing resources from the existing network, thus minimizing the need for re-configuration of network devices, or complete forklifts.

The Tenor can also route calls over the IP to reduce costs, and then transparently 'hop off' to the PSTN to reach off-net locations, 911 emergency services, and transparent access to resources such as contact centers and IVR/voice self-service systems.

Tenors offer a programmable dial plan which provides the ability to interface to any private or public network around the world. With the appropriate dial plan, post-dial delay is minimized, avoiding the wait time that can occur with simpler gateways.

Tenors also feature a configuration wizard that dramatically simplifies the user interface to ease the configuration and installation process for most common applications. No other VoIP solution can match this flexibility.



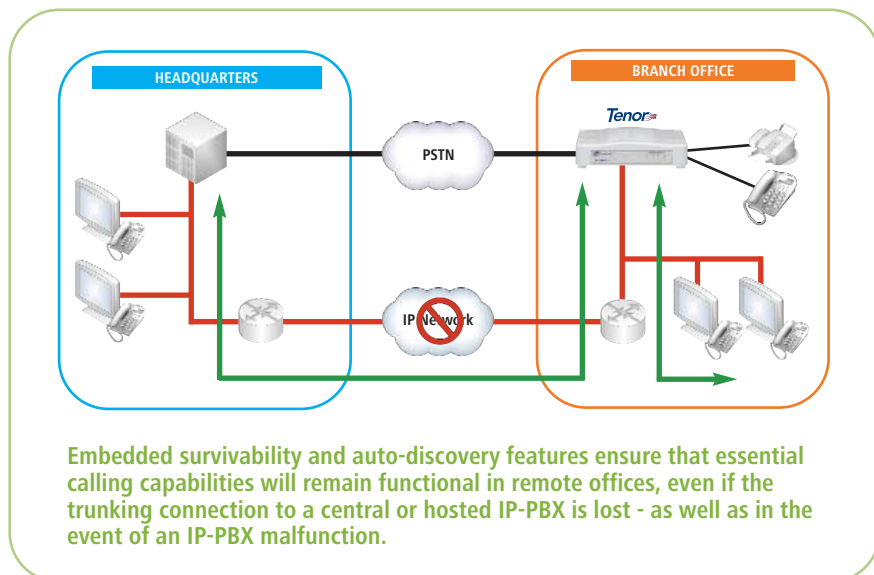
## Site Survivability

The Survivable Tenor S delivers survivability for all SIP and circuit-based equipment at remote sites. The Tenor S also features built-in SIP proxy technology so remote offices can continue to operate even if their connection to a central SIP session border controller is lost. That means IP phones can keep working regardless of what happens on the network. Survivable Tenor is a complete solution and is the only device needed in the branch office to support legacy equipment, local PSTN connectivity and survivability of the local IP telephony network. Survivable Tenor S delivers maximum survivability and is the most dependable SIP access solution on the market.



Tenors provide intelligent connectivity for legacy voice equipment and connectivity to the PSTN. In fact, the Tenor can be deployed to connect a traditional PBX in a branch office to the HQ IP-PBX, so at a later date when the traditional PBX is removed and IP-phones are deployed, the Tenor remains as the survivable branch office gateway.

Tenor's support of survivability could not be easier with its SIP endpoint auto-discovery and auto-configuration. New SIP endpoint information is automatically registered in the internal database where it will be used to provide sufficient call routing intelligence to maintain dial-tone to the desktop and support basic calling capabilities if connectivity with the server is lost.



Embedded survivability and auto-discovery features ensure that essential calling capabilities will remain functional in remote offices, even if the trunking connection to a central or hosted IP-PBX is lost - as well as in the event of an IP-PBX malfunction.

Just as important, this auto-discovery means that network administrators don't have to update Quintum hardware every time there is a change at the remote site. Quintum solutions automatically maintain their own survivability without requiring intervention by a technician.

## The Perfect Fit

### TENORS OFFER MORE THAN TRADITIONAL GATEWAYS

#### Efficient bandwidth utilization.

Quintum's PacketSaver™ Technology "multiplexes" VoIP packets heading along the same network route — delivering efficiency improvements of up to 57% over typical compression techniques. This bandwidth savings is especially important for supporting remote offices using thin WAN connections — as well as for service providers supporting massive volumes of VoIP traffic.

#### Full remote manageability.

Tenor switches provide complete configuration and management tools that enable you to provide fast, effective support — even when devices are located behind NAT firewalls. With Quintum's Remote Management Session Server (RMSS), IT teams can simply and securely manage switches and gateways that are widely distributed from a single application via telnet, FTP or Quintum's own graphical Tenor Management Console to perform essential management tasks remotely. This allows more efficient use of technical support resources, and ensures end-user or customer satisfaction.

## The broadest range of solutions and configurations.

Quintum's Tenor VoIP MultiPath solutions are extremely flexible and scalable, making Tenors ideal for the wide range of environments and applications that exist in enterprises today. Tenor provides full compliance with the SIP and H.323 IP telephony standards, ensuring its interoperability with leading third-party hardware and software.

Quintum Tenors come in a variety of sizes and configurations to meet your real-world VoIP infrastructure requirements and reduce the total cost of ownership.

The Tenor AF and AX Series provide solutions from two to forty-eight ports, and allow you to mix-and-match circuit and VoIP ports as needed, and create many combinations of FXO and FXS ports to best suit your gateway and/or backup implementations. Analog Tenors can be configured as a **station gateway** with only FXS ports, as a **trunking gateway** with only FXO ports, as an **enterprise gateway** with 2 FXO ports and your choice of FXS ports, or as a **MultiPath gateway** with equal numbers of FXO and FXS ports.

Our digital Tenors are available with anywhere from 2 to 32 T1/E1/PRI trunks and support from 8 to 960 VoIP channels. Tenor is also available with support for BRI interfaces.

In addition, the new Tenor Hybrid Gateway is designed to be a single box solution which simplifies VoIP deployments for Microsoft Unified Communications. With its integrated mediation server capability, and the Unified Communications Proxy, the Hybrid Tenor Gateway enables intelligent connectivity of SIP and legacy telephony analog endpoints to the unified communications cloud, and supports branch office survivability for standard SIP endpoints.

## Discover why Quintum is The Perfect Fit



Our unique and practical approach to VoIP implementation has made us the #2 provider of enterprise VoIP gateways in the world. We have been honored twice with Frost & Sullivan's Product Differentiation Innovation Award. No other vendor delivers a more cost-effective, hassle-free VoIP solution. So whether you're an enterprise seeking to reap the many benefits of VoIP across multiple locations, or a service provider looking to maximize your VoIP market share and operating margins, Quintum's Tenor solutions are the perfect fit for your VoIP business applications.



The Perfect Fit.

## TENOR VOIP PRODUCT LIST



**Tenor AF Series** offers small to medium sized businesses and remote offices with analog voice infrastructures a Tenor solution that offers combinations of 2 to 8 FXS and/or FXO ports.



**Tenor AX Series** is an all-in-one solution for businesses with analog voice infrastructures, scaling from 8 to 24 FXS and/or FXO ports, configurable in MultiPath, gateway, and enterprise configurations, or 48 FXO ports for larger trunking applications.



**Tenor BX Series** is perfect for enterprises using ISDN Basic Rate Interface (BRI) lines. The BX can support 2, 4, or 8 BRI S/T lines for up to 16 VoIP calls.



**Tenor DX Series** offers 2, 4, 6, or 8 T1/E1/PRI spans for up to 120 simultaneous VoIP channels, offering MultiPath or gateway configurations.



**Tenor Carrier MultiPath Switch (CMS)** is a slotted alternative for larger VoIP deployments, available in either a 2 or 8 slot chassis, offering up to 32 T1/E1/PRI spans and up to 960 VoIP calls.



**Tenor Hybrid Gateway** is a single box solution that offers up to 2 T1/E1/PRI spans for up to 120 VoIP calls, and is Mediation Server ready.



**Tenor GateKeeper+** is a standalone H.323 compliant gatekeeper designed to manage call routing and administration of any H.323 endpoints.



**Tenor Call Relay Session Border Controller** is offered in an enterprise version that supports up to 60 VoIP calls, and a service provider version that supports up to 672 VoIP calls. These SBCs support both H.323 and SIP, providing signaling translation and inter-networking.



**Remote Management Session Server** simplifies the configuration and management of remotely deployed Tenors, even if they are deployed behind a NAT Firewall. It allows administrators to securely configure, monitor, troubleshoot, and upgrade remote Tenors from a central location.



**Tenor VoIP Call Routing Server** provides CLECs, ILECs, ISPs, and next generation service providers with scalable centralized network routing, policy enforcement, and administration, as well as enhanced network-wide routing flexibility, including QoS-based routing, least-cost routing and source-based routing.