



Telos Alliance® introduced broadcasters to the benefits of VoIP a decade ago with VX, the world's first VoIP talkshow system, in a hardware appliance. Now, Telos VXs is here to help broadcasters reap the benefits of true virtualization as they adapt to changing broadcast workflows and operations, all while making it easier for teams to produce great-sounding and compelling content.



## Telos® VXs

Telos VXs VoIP Talkshow System

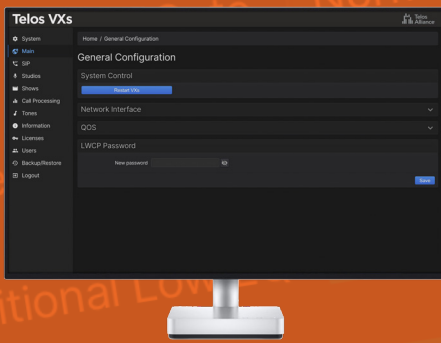
**RADIO APPLICATION**



Route & Monitor with  
**Pathfinder**

Control with  
**Pathfinder**

**AES67  
Livewire+**™



# Our Legendary Telos VXs VoIP System. Now Virtual

## Legendary Telos Audio Quality

Using VoIP, VXs combines modern networking with the power of digital signal processing developed by Telos over the past three decades. Every call gets 5th-generation audio processing packed full of technology engineered to extract the cleanest, clearest caller audio from any phone line—even noisy cellular calls.

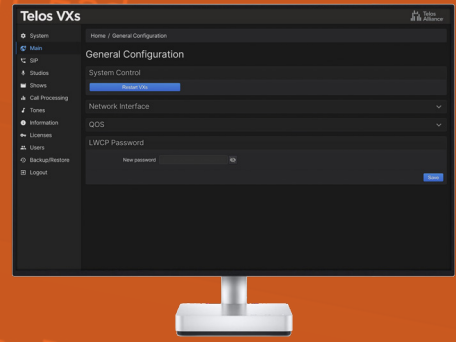
VXs includes Smart AGC coupled with our famous three-band adaptive Digital Dynamic EQ, a three-band adaptive spectral processor, and noise gating. Call-ducking and host override are part of the VXs toolkit as well. Users can conference multiple lines with superior clarity and fidelity. Send audio gets its own sweetening with an AGC, limiter, and Acoustic Echo Cancellation (AEC) technology that eliminates open-mic feedback.

And if you choose to use compatible telco services, calls from mobile handsets with SIP clients, HD capable telephone sets, and PC apps will benefit from VXs's native support of the G.722 codec, instantly improving caller speech quality.

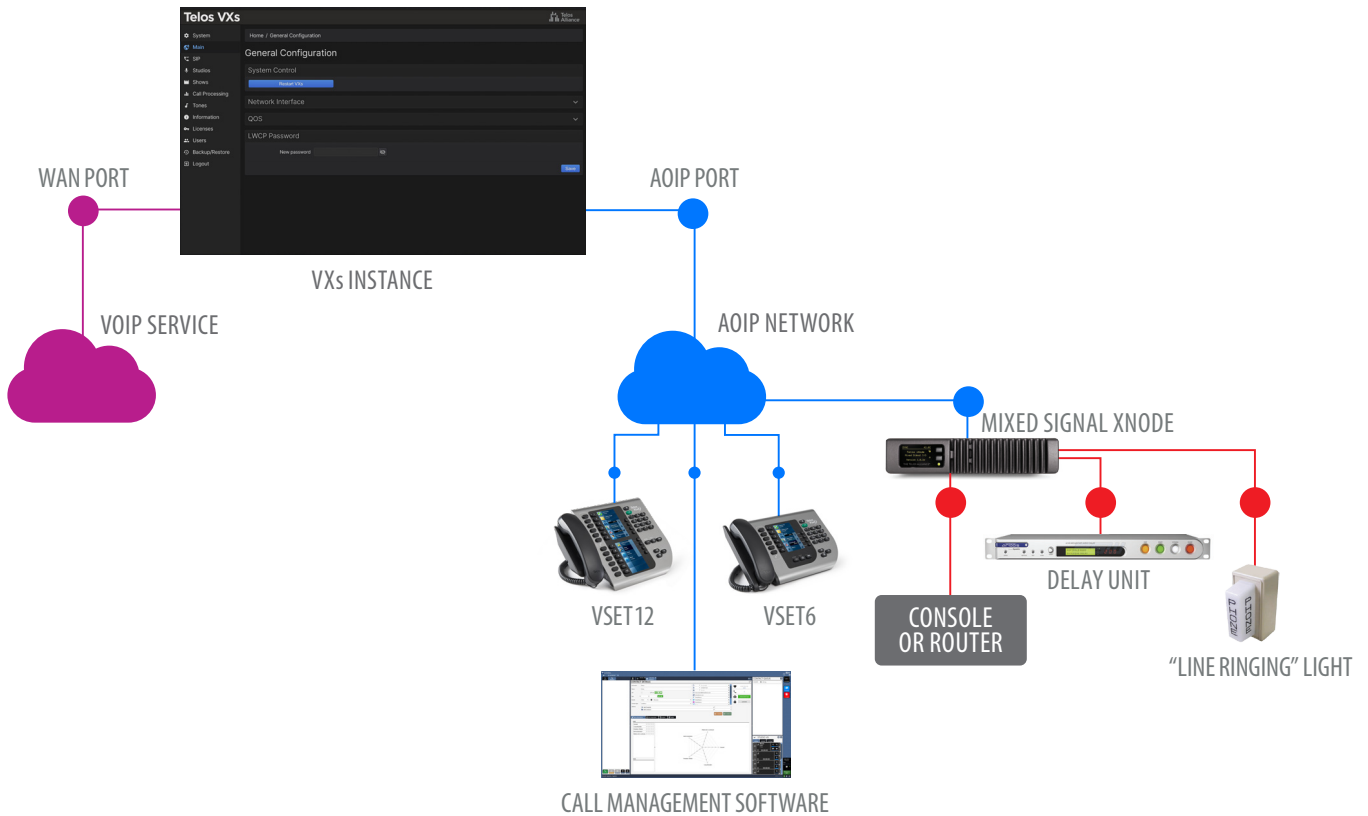
## Standards-Based for Easy Connectivity

Telos VXs systems are “facility-wide” broadcast phone products. That means multiple studios, multiple stations, multiple shows—with minimal hardware requirements. Telco is delivered via IP from your SIP PBX, hosted VoIP service, or UCaaS provider. For carrier-grade reliability and redundancy, a dedicated SIP trunk circuit can be integrated via a Telos-configured Asterisk-based PBX; legacy circuits such as POTS, ISDN, or T1 can be integrated in the same way. Once connected, all telecom and audio connectivity flows via Ethernet.

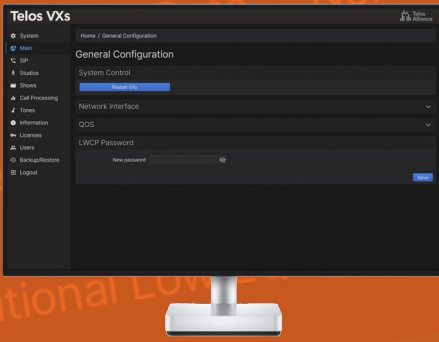
# Complete Workflow Flexibility



## New-to-AoIP Installation

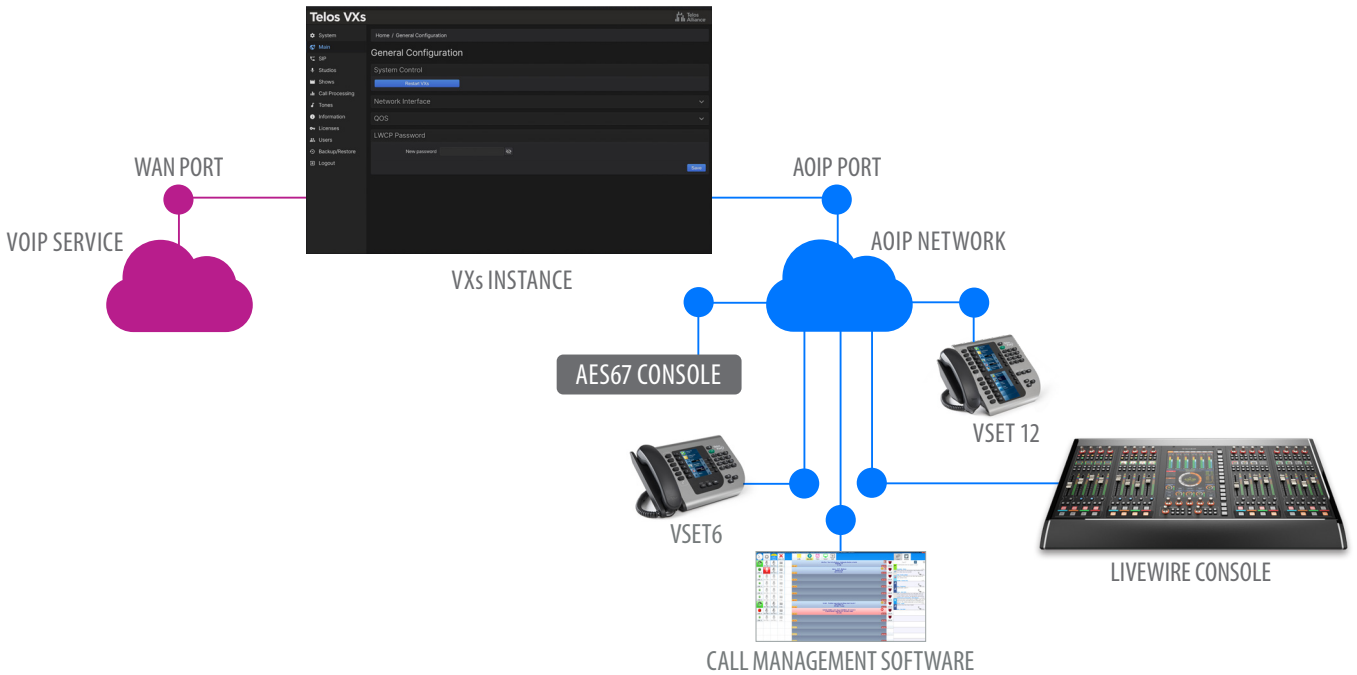


Don't have IP-Audio networking yet? VXs will work with all console brands, networked or not, using Telos Alliance xNodes and the VXs Call Controller drop-in controller for your console. xNodes, like the Telos Alliance Mixed Signal Node, break out audio into analog and digital formats, along with GPIO logic commands. The diagram above shows a typical studio with an analog mixer, using a Telos Alliance Mixed Signal xNode to connect to the console and other broadcast equipment.



# Less Maintenance, Infrastructure, Space Required

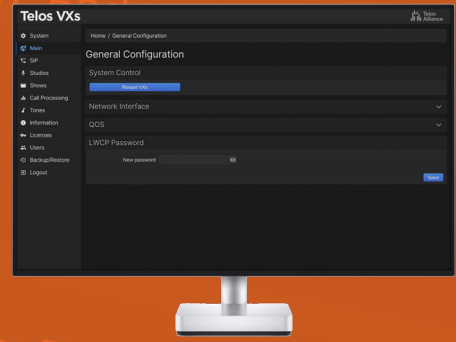
## AoIP Installation



Installing a VXs VoIP system in facilities already powered by Livewire+™ AES67 networks requires even less time and hardware. Your new VXs phone system will plug right in for seamless integration.

Additionally, support for AES67 gives broadcasters the capability of integrating VXs into any AES67 environment or compatible SMPTE 2110-30 environments. With plug-and-play connectivity, you can network multiple channels of audio with any manufacturer's AES67-compliant hardware. Support for SAP advertisement means VXs smoothly integrates alongside AES67-enabled Dante® devices.

# Unlimited Standby Instances Included



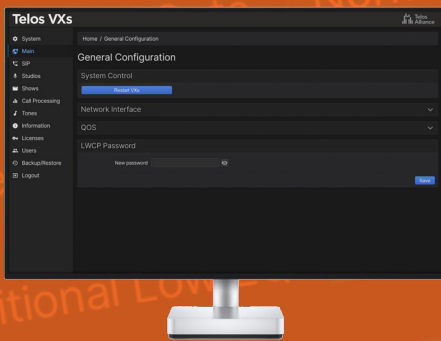
## Call Management

When combined with call management software, producers and talent can screen and air calls from anywhere with a computer and a solid internet connection. Producers can identify repeat or unwanted callers and enter information about the call, such as topic and mood. This information is available to other production staff and talent in real-time. Various software options are available from Telos Alliance partners.

## Use with Axia® Pathfinder Core™ PRO

For more custom needs, Axia Pathfinder Core PRO can monitor, control, and display all aspects of your VXs system. This enables customized solutions such as drag-and-drop construction of custom control panels (pictured), timed Show changes based on studio schedules, or even API translation between third-party systems to display caller information or control lines. The possibilities are endless.





Pay for Only What  
you Need

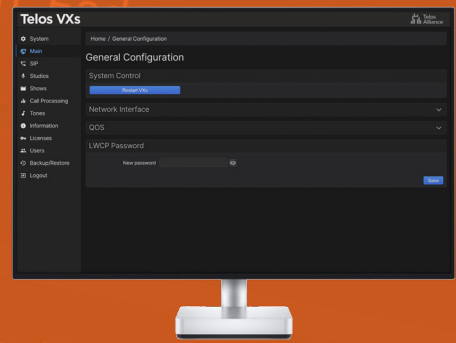
## TelosCare™ PLUS

We know that your VXs is just one piece of the telephony puzzle, which may include your VoIP provider, PBX vendor, IT team, network security team, and more. We love to leverage our combined centuries of telephony experience to serve as your trusted VoIP ninjas and help you complete and maintain your telephony puzzle for years to come. TelosCare PLUS gives you the one-stop service and support you need long after the sale, going far beyond basic support and troubleshooting with proactive, holistic service and membership perks.

## Features

- Includes support for AES67, giving broadcasters added flexibility of integrating VXs into any AES67 network and compatible SMPTE 2110-30 networks, in addition to Livewire networks.
- HTML-5 control via Pathfinder Core PRO.
- SIP call-handling throughout—no internal conversion to analog call handling like some other so-called “VoIP” systems.
- Works directly with hosted VoIP or PBX services, and in conjunction with a PBX may support POTS, T1/E1, and ISDN BRI for maximum flexibility and cost savings.\*
- Standards-based SIP interface integrates with all modern VoIP-based PBX systems to allow transfers, line-sharing, caller ID, and common telco services for business and studio phones.
- Standard Ethernet backbone provides a common transport path for both studio audio and telecom needs, resulting in cost savings and simplified studio infrastructure. Connection to hundreds of control devices (software or hardware) is possible.
- Each call receives a dedicated processing path for unmatched clarity and superior conferencing.
- Native Livewire integration: One connection integrates caller audio, program-on-hold, mix-minus, and logic directly into Axia AoIP consoles and networks.
- Connect VXs to any radio console or other broadcast equipment using available Telos Alliance AES/EBU, Mixed Signal, and GPIO xNodes. Audio interfaces feature 48 kHz sampling rate and studio-grade 24-bit A/D converters with 256x oversampling.

# Configure on Familiar Devices



- Powerful dynamic line management enables instant reallocation of call-in lines to studios requiring increased capacity.
- VSet Call Controllers™ with full-color LCD displays and Telos Status Symbols™ present producers and talent with a rich graphical information display. Each VSet features its own address book and call log.
- The “Drop-in” VSet Call Controller™ modules can directly integrate VXs phone control into your mixing consoles.
- Clear, clean caller audio from 5th-generation Telos Adaptive Telephony technology, including Digital Dynamic EQ, AGC, adjustable caller ducking, and audio dynamics processing by Omnia®.
- Wideband acoustic echo cancellation eliminates open-speaker feedback.
- Support for the G.722 codec enables high-fidelity phone calls from iPhone and Android SIP softphones using a SIP server.

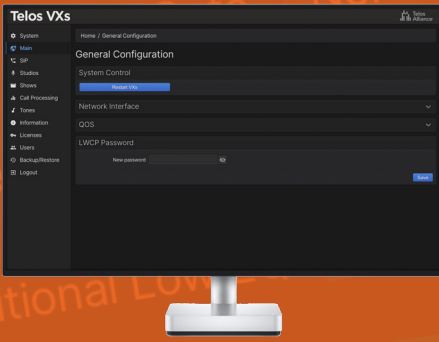
*\* Due to the wide variation in how traditional phone service can be delivered and the complexities involved in converting those services to SIP, we want to talk with you about your system design before you order. Telos has VXs System engineers standing by to help you draw up a configuration that will ensure your VXs purchase will perform to your expectations when using legacy telephony circuits.*

## Deployments

Broadcasters can deploy VXs on their servers in the rack room, on shared servers in the centralized data center, or in cloud instances. These deployment options deliver the benefits of virtualization, such as easier facility-wide upgrades, cost-efficiency, and automated deployment without site visits. Broadcasters can scale VXs in size from a single studio to a facility-wide talkshow system to a multi-location system.

The system is built based on your specific needs by combining features as required: *Channels, Lines, and Acoustic Echo Canceller* instances. These features combine into a license code, which can be active in one VXs instance at a time.

Features are tiered based on quantity to enable economic growth as overall system size increases. VXs features are available as a subscription, which includes the TelosCare PLUS while the subscription is active. VXs features are also available as a one-time buyout, with the TelosCare PLUS included for the first year and optionally renewable yearly after that. The VXs Bill of Material Generation Tool makes BOM generation easy. Please visit [TelosAlliance.com/VXs-bom](https://TelosAlliance.com/VXs-bom) to access this tool.



# Deploy on Your Servers, Shared Servers, Data Center, or in the Cloud

## Pre-Sales Configuration

Pre-sales configuration assistance with a Telos engineer is recommended before order placement. It's free and a great way to ensure the right system components are ordered, with a clear and workable system design. These calls are arranged through your Telos salesperson or dealer and can also include your IT and telecom professionals or vendors.

## VXs Specifications

The first step to deploying VXs is ensuring you are using a compliant platform. A machine with the following specs can, at minimum, handle 64 simultaneous calls on-air, on handset, on hold, or any combination of the three:

Required	Item	Description
✓	≥ 3 GHz CPU	Four cores
✓	RAM	2 GB
✓	OCI Runtime	Container runtime, such as docker engine
✓	Internet	Used for product activation
✓	PTP4L	Additional container for time sync (or system time otherwise synced to PTP)
✓	Quay Account	Need to access VXs container

Telos Alliance is happy to consult with you on your system design to determine your specific use case's appropriate specifications.