



NX WITNESS VMS • 2026

Build Intelligent Video Solutions. Fast.

Enterprise video management designed to scale with your business.

Every component. One platform.

Nx Witness is an open and extensible, cross-platform IP video management system tuned for intelligent surveillance — with unified control across Cloud, Server, Client, and Mobile applications.

Cloud

A cloud-based service that enables simple, centralized remote access and insight into cloud-connected sites.

SUPPORTED BROWSERS

Chrome · Firefox · Edge ·
Safari · Opera

Server

A powerful, lightweight media server that manages devices, site resources, and maintains all video archives.

OPERATING SYSTEMS

Windows · Ubuntu Linux ·
Arm / Raspberry Pi OS

Client

A full-featured application providing a dynamic viewing GRID and access to all site settings.

OPERATING SYSTEMS

Windows · Ubuntu Linux ·
macOS

Mobile

A mobile application for iOS and Android devices designed for remote viewing and control.

OPERATING SYSTEMS

Android · iOS

4M+

DEVICES MANAGED

25,000+

SUPPORTED DEVICES

150+

COUNTRIES

10 Years

INC. 5000





Connect

- NAT Traversal
- Data Proxy via AWS
- LDAP Credentials
- Encrypted Connections
- LAN / WAN / Wireless / Cellular

View

- Live Video [adaptive]
- Recorded Video [adaptive]
- Camera Details
- Keyword Search
- Calendar Search
- Scalable Timeline

Manage

- System Settings
- User Permissions
- Cloud Connections
- Email Notifications
- Push Notifications
- Health Monitoring

Scale

- Unlimited # of Systems
- Unlimited # of Users
- Unlimited # of Devices
- Cloud API

SCALABILITY

CONNECTED SYSTEMS	Unlimited
USER ACCOUNTS	Unlimited

CONNECTIVITY

CLOUD CONNECT	NAT Traversal + Cloud Data Proxy via AWS
DIRECT ACCESS	NAT Traversal [Default] — connect directly via Cloud addressing

SECURE COMMUNICATIONS

PASSWORD RECOVERY	Reset via email
2FA	Password + Authenticator app
CONNECTIONS	HTTPS / OpenSSL
VIDEO ENCRYPTION	Transmitted and stored archives

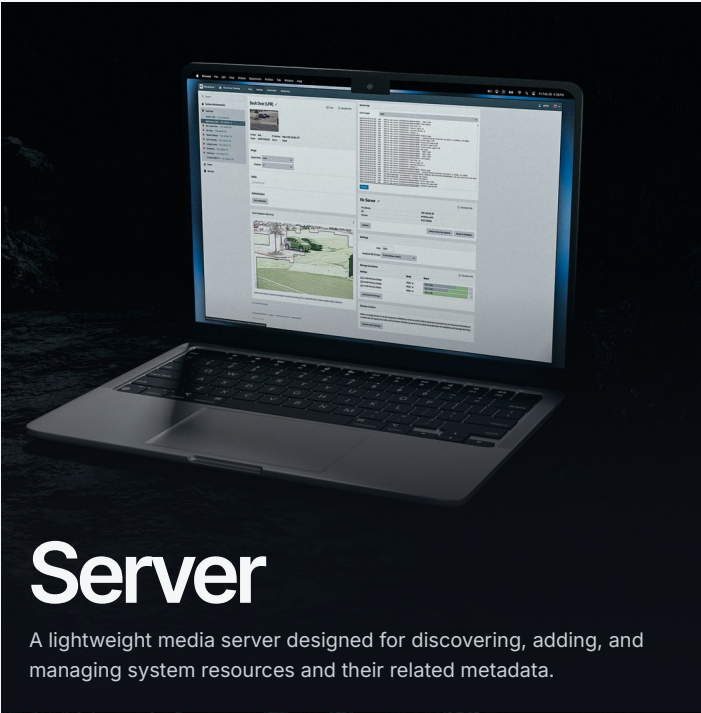
INTERFACE

SITES	Connected System tiles in Cloud WebAdmin
VIEW	Live or recorded video from connected cameras & streams
INFORMATION	Integrated Health Monitoring — last 24 hours
MONITORING	Real-time server monitoring and logs
BROWSERS	Chrome, Safari, Firefox, Edge [mobile & desktop]

INTEGRATION TOOLS

CLOUD API	Integrate with 3rd party applications and devices
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Discover

- 99% of IP Cameras & Webcams
- I/O Devices
- Encoders
- RTSP / HTTP / UDP Streams
- SAMBA NAS Devices
- Nx Sites & Servers

Manage

- Device Configurations
- System Rules
- Failover / Redundancy
- Connections [HTTP, HTTPS]
- Archived Video
- Flexible Archive Backup

View

- Server Health
- Live / Recorded Video
- System Configuration
- Log Files
- Audit Trail
- Storage Status

Integrate

- HTTP Events & Actions
- Server API
- Metadata SDK
- Video Source SDK
- Storage SDK
- Server via Cloud API

MAXIMUMS

SITES / ORG	Unlimited
RESOURCES / SITE	2,560
CLIENTS / SITE	3,333
DUAL RECORDING STREAMS / SERVER	256
SERVERS IN A SERVER HIVE	10

SUPPORTED OS

WINDOWS	10, 11, Server 2016, 2019, 2022, 2025
UBUNTU LINUX	20.04 LTS, 22.04 LTS, 24.04 LTS
ARM DEVICES	Raspberry Pi, NVIDIA Jetson Devices

UNIQUE CAPABILITIES

SERVER HIVE SYNC	Servers synchronize system data in real time
AUTO FAILOVER	Automatic camera failover when server fails
ARCHIVE INTEGRITY	Notification when files are manually modified
BACKUP	Real-time [concurrent] or scheduled
STORAGE	HDD, SSD, NAS [SAMBA]; Storage SDK for FTP/Cloud
INSTALL SIZE	123 MB — no prerequisite software required

MEDIA STREAMING

VIDEO CODECS	H.265, H.264, MJPEG
AUDIO	AAC, PCM (Mu-Law, A-law), G.711, G.726, MP3
PROTOCOLS	RTSP, WebM, HLS
VIDEO FILES	AVI, MKV, MP4, MOV, TS, M2TS, MPEG, FLV, WMV, 3GP
IMAGES	PNG, JPG, GIF, BMP, TIFF



Desktop Client



Configuration

- Events & Rules Engine
- User Management
- IP Video Devices
- Server Management
- I/O Device Management
- Storage Management

Usability

- Drag & Drop Interface
- Consolidated Notifications
- Adaptive Playback
- Customizable Layouts
- Digital Maps
- Adaptive Scaling

Search

- Smart Motion Search
- Keyword Search
- Calendar Search
- Advanced Object Search
- Bookmarks
- Audit Trail

Media

- IP Video Cameras & Devices
- RTSP / HTTP Streams
- I/O Devices
- Web Pages / URLs
- Recorded Video Files
- Static Image Files

SUPPORTED OS

WINDOWS	10, 11
UBUNTU LINUX	20.04 LTS, 22.04 LTS, 24.04 LTS
MACOS	11 Big Sur · 12 Monterey · 13 Ventura · 14 Sonoma · 15 Sequoia

DESKTOP MODES

CONNECTED CLIENT	Manage any connected Nx Witness system
MEDIA PLAYER	View, edit, and export offline videos and images
VIDEO WALL	Remote-controlled video wall mode

UNIQUE FEATURES

MULTILINGUAL	Support for 20+ languages
SHOWREEL	Full-screen tours of live and recorded video across multiple layouts
BRANDING	Customizable desktop background
GPU DECODE	NVIDIA & Intel Quick Sync hardware acceleration
SMART MOTION	Select specific pixels to search a year of archive in seconds

MEDIA PLAYBACK

LIVE CODECS	H.265, H.264, MJPEG
VIDEO FILES	AVI, MKV, MP4, MOV, TS, M2TS, MPEG, FLV, WMV, 3GP
IMAGE FILES	JPG, PNG, GIF, BMP, TIFF
BROWSER	Built-in Chromium — websites, URLs, IP addresses





Connect

- NAT Traversal
- Data Proxy via Cloud
- Encrypted Connections
- WiFi / LAN / WAN
- 4G / LTE / Data

Control

- Fisheye Dewarping
- Pan-Tilt-Zoom [PTZ]
- Soft Triggers
- 2-Way Audio
- Cloud or Local Systems

View

- Live Video [adaptive]
- Recorded Video [adaptive]
- Camera Status
- Layouts
- Adjustable Resolutions
- Portrait / Landscape

Search

- Keyword Camera Search
- Calendar Search
- Thumbnail Search
- Push Notifications
- Flex Timeline
- Smart Motion

SUPPORTED DEVICES

ANDROID	9.0, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0
IOS	16, 17, 18
IPADOS	16, 17, 18

VIEWING & PLAYBACK

VIEWING MODES	Portrait, Landscape
RESOLUTIONS	Highest Speed, Best Quality, 1080p, 720p, 480p, 360p

CONNECT FROM ANYWHERE

LAN / WAN	Public IP address or Dynamic DNS
VIA NX CLOUD	Log in to Nx Cloud to view all shared systems
ADAPTIVE	Works on WiFi or Data [4G, LTE, 3G]

CAMERA CONTROL

FISHEYE	Universal dewarping for fisheye cameras
PTZ	Tap-to-move UX
2-WAY AUDIO	Through I/O or IP cameras with audio support
LIVE THUMBNAILS	Thumbnails refresh in real-time



Extend the platform.

Nx Toolkit, Nx Maps, and Nx AI Manager extend the core platform with developer tools, geospatial intelligence, and AI inference — all designed to integrate without friction.

DEVELOPER TOOLS

Nx Toolkit

A suite of free APIs and SDKs — Video Source SDK, Storage SDK, Server API, and Metadata SDK — that give developers access to virtually every system capability. Integrate any camera, storage medium, or analytics platform directly with Nx Witness.

GEOSPATIAL

Nx Maps

An intelligent GIS mapping tool that enhances any Nx solution with advanced geolocation data visualization. Add cameras to a GIS or image-based map, configure field of view, apply color-coded markers, and launch cameras directly from the map.

AI INFERENCE

Nx AI Manager

A universal AI inference pipeline that optimizes any AI model to run on a wide range of industry-leading accelerators. Upload a model — no extra engineering required. Enhance any video application with intelligence across your fleet of edge devices.



NX TOOLKIT – DEVELOPER TOOLS

VIDEO SOURCE SDK Integrate any live or recorded video source — IP cameras, NVRs, DVRs. Also supports 3rd party I/O devices for hardware interoperability.	STORAGE SDK [C++] Read from or write to any storage location — local, remote, or cloud. Standard functions: I/O stream, file existence, delete, folder listing.
SERVER API [REST] Access every system feature — query/manage servers, cameras, users, and permissions; pull live or recorded video; generate events; control PTZ.	METADATA SDK Create installable plugins running on Nx Server. Bring object metadata — face recognition, retail analytics, LPR — into real-time intelligence and archive search.

ACCESS	Free — install Nx Witness VMS and open the Server Web Admin interface
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NX AI MANAGER

MODEL SUPPORT	Any AI model — customizable pre and post-processing configurations
ACCELERATORS	Wide range of industry-leading edge accelerators
DEPLOYMENT	Upload a model — no additional engineering required
SCOPE	Optimized for fleet-wide edge device management

NX MAPS

CAMERA REPRESENTATION	
CAMERA ICONS	Device name, relative orientation, viewing angle, and range
CUSTOMIZATION	Color-code and specify orientation, range, and field of view per camera
QUICK SEARCH	Search available site resources to quickly add cameras to maps
MAP ICONS	Configurable — open a video stream, webpage, or another map
LIVE TRACKING	Track body-worn and dash-camera positions as they move across a map (Nx Maps Advanced)
OPERATIONAL MODES	
DESKTOP	Full feature access — add Maps to existing layouts
BROWSER	Open from any device with a current-generation browser
MAP VIEWS	Roadway with 3D buildings or satellite imagery (where available)
OVERLAYS	Traffic data, points of interest, Keyhole Markup Data
FLOORPLANS	2D floorplans and digital images for indoor site views



Nx Connect.

A cloud-based portal built for Nx Channel Partners to simplify channel management and streamline the administration of licenses and services.

KEY FEATURES

Add Channel Partners and Organizations

Create, edit, and oversee downstream partners across multiple channels.

Price and Allocate Services

Define the types and quantities of services, including price and currency, to downstream entities.

Add Users and Adjust Settings

Create portal users with role-based permissions and personalized settings.

Revenue Reporting and Usage Statements

Access monthly statements and data charts for revenue and service usage.

Integrations

Connect with HubSpot, Salesforce, QuickBooks, and more.

UNIQUE ADVANTAGES

Centralized Management

Manage all subscription and channel operations in one unified system.

Granular Oversight and Control

Gain complete downstream visibility and tailor offerings to align with your business strategy.

Revenue Insights

Leverage data-driven insights to track performance, predict growth, and manage risk.

Accelerated Business Growth

Unlock recurring revenue streams with a subscription-based pricing model.

Scalable Operations

Grow your business efficiently while minimizing administrative overhead.



Nx Witness is designed for environments where security is not optional. From the way video is stored to how users authenticate, every layer of the platform applies current security standards — independently verified.

VERIFIED · AUDITED

SOC 2 Type 2 Compliant

Independently audited controls for security, availability, and confidentiality. Customer data meets verified, audited security standards.

CERTIFIED · INTERNATIONAL

ISO 27001:2022 Certified

Information security management system certified to the current ISO 27001:2022 standard. Demonstrates systematic management of sensitive data.

GOVERNMENT · SUPPLY CHAIN

NDAA Compliant

National Defense Authorization Act compliant. Meets federal procurement requirements for use in government and critical infrastructure environments.

VULNERABILITY MANAGEMENT

Recognized CVE Numbering Authority

Authorized by MITRE to assign CVE identifiers. Demonstrates a structured, responsible approach to vulnerability disclosure and remediation.

ENCRYPTION AND AUTHENTICATION

CONNECTION ENCRYPTION	HTTPS, OpenSSL, TLS/SSL
VIDEO ENCRYPTION	AES 128-bit archive encryption — transmitted and stored
AUTHENTICATION	LDAP / Active Directory, Salted MD5 Hash, secure password recovery
TWO-FACTOR AUTHENTICATION	Password + Authenticator app
SSO	Single Sign-On via current identity provider



About Network Optix.

ABOUT US

Network Optix [Nx] is a global software company specializing in open, scalable video infrastructure. We develop platforms that enable organizations to manage, unify, and extend video systems across enterprise environments.

Through our products, Nx Witness and Nx Go, and the underlying Nx Enterprise Video Operating System (Nx EVOS), we provide the architectural foundation for modern video applications in security, transportation, and enterprise operations.

Nx is headquartered in Walnut Creek, California, with additional locations in Burbank, Portland, Belgrade, Taipei, and The Hague, and regional teams distributed across the globe.

MISSION

Our mission is to provide the open, scalable software infrastructure that enables organizations to build and operate modern video systems at scale.

We equip forward-thinking enterprises and partners with the tools required to manage distributed environments, integrate complementary technologies, and extend video systems over time.

FACTS & FIGURES

2010	Founded — over a decade of platform development
4M+	Devices intelligently managed worldwide
150+	Countries with Nx presence
Inc. 5000	Recognized for 10 consecutive years
SOC 2 · ISO 27001 · NDAA Certified and compliant	

SECURITY DOCS — TRUST.NETWORKOPTIX.COM

FOR MORE INFORMATION

www.NetworkOptix.com