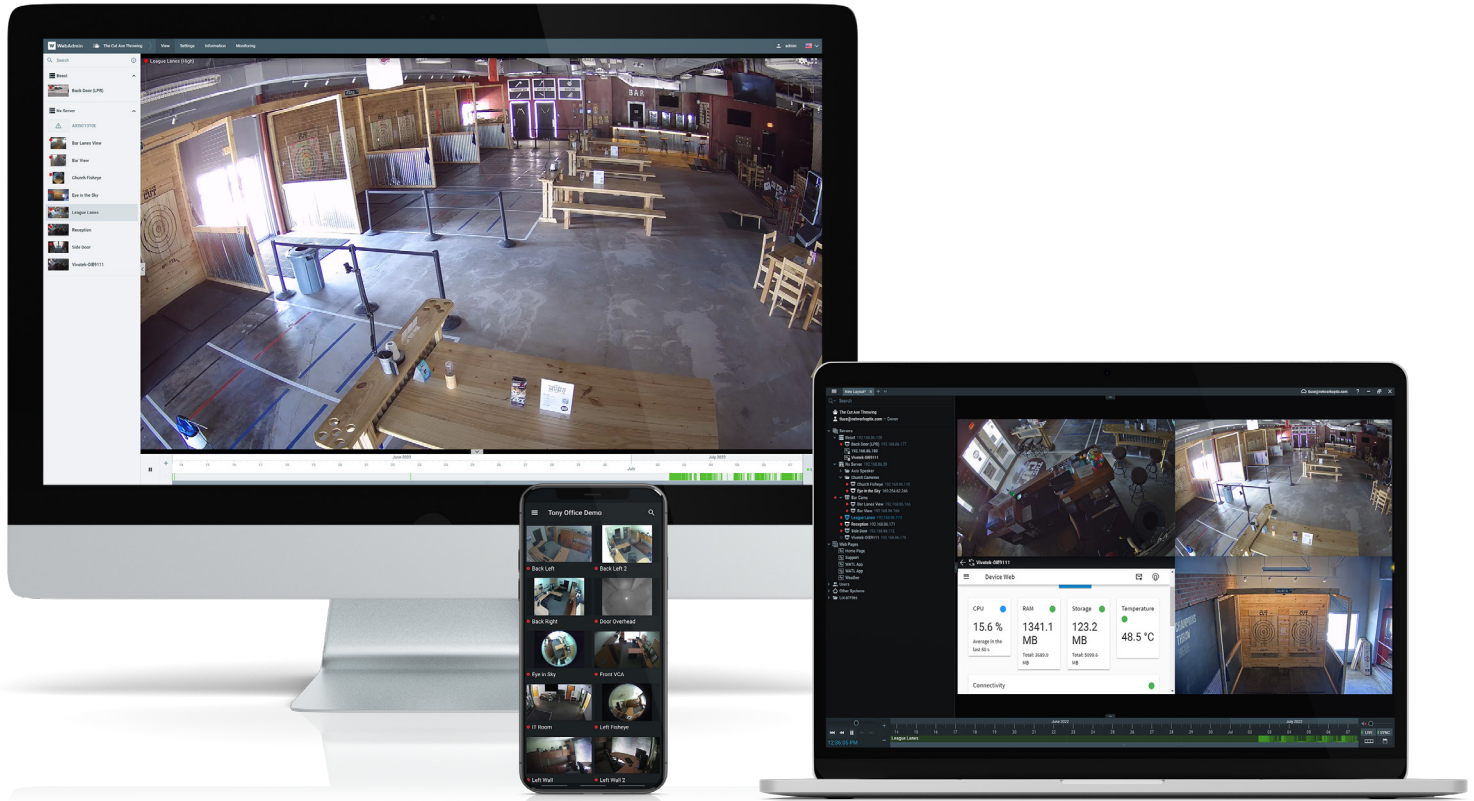


# Platform Overview

Nx Meta is an open, extensible IP video management platform with Cloud, Desktop, Mobile, and Server applications designed to help innovators rapidly develop intelligent video services, devices, and applications.



## CLOUD

A cloud-based service that enables simple, centralized remote access and insight into any Nx Witness system.

## DESKTOP

A rich media player with a flexible GRID interface designed for connecting to and managing an Nx Witness system.

## SERVER

A powerful, lightweight media server designed to discover, add, and manage system devices and resources.

## MOBILE

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

### BROWSERS

	Google Chrome
	Mozilla Firefox
	Microsoft Edge

### OPERATING SYSTEMS

	Windows
	Ubuntu Linux
	Mac OS

### OPERATING SYSTEMS

	Windows
	Ubuntu Linux
	ARM / Debian Linux

























### OPERATING SYSTEMS

	Google Android
	Apple iOS
	Microsoft Edge

# Desktop Overview

A rich desktop application with a flexible GRID interface designed for connecting to, viewing, and managing your Powered By Nx System.



























USABILITY	MEDIA	CONFIGURATION	SEARCH
 Drag & Drop Interface	 IP Video Cameras / Devices	 Events & Rules Engine	 Smart Motion Search
 Consolidated Notifications	 RTSP/HTTP Streams	 User Management	 Keyword Search
 Adaptive Playback	 I/O Devices	 IP Video Devices	 Calendar Search
 Customizable Layouts	 Web Pages / URLs	 Server Management	 Object Search
 Digital Maps	 Recorded Video Files	 I/O Device Management	 Bookmarks
 Adaptive Scaling	 Static Image Files	 Storage Management	 Audit Trail



# Server Overview

A lightweight media server designed for discovering, adding, and managing system resources and their related metadata.

























DISCOVER	MANAGE	VIEW	INTEGRATE
 99% of IP Cameras, Webcams	 Device Configurations	 Server Health	 HTTP Events & Actions
 I/O Devices	 System Rules	 Live / Recorded Video	 Server API
 Encoders	 Failover / Redundancy	 System Configuration	 Metadata SDK
 RTSP / HTTP / UDP Streams	 Connections (HTTP, HTTPS)	 Log Files	 Video Source SDK
 SAMBA NAS Devices	 Archived Video	 Audit Trail	 Storage SDK
 Nx Systems and Servers	 Flexible Archive Backup	 Storage Status	 Server via Cloud API

# Cloud Overview

A public cloud application built to enable simple, fast, remote connectivity and management of Powered By Nx Systems.



CONNECT	VIEW	MANAGE	SCALE
 NAT Traversal	 Live Video (adaptive)	 System Settings	 Unlimited # of Systems
 Data Proxy via AWS	 Recorded Video (adaptive)	 User Permissions	 Unlimited # of Users
 LDAP Credentials	 Camera Details	 Cloud Connections	 Unlimited # of Devices
 Encrypted Connections	 Keyword Search	 Email Notifications	 Cloud API
 Wifi / LAN / WAN	 Calendar Search	 Push Notifications	
 4G / LTE / Data	 Scalable Timeline	 Health Monitoring	



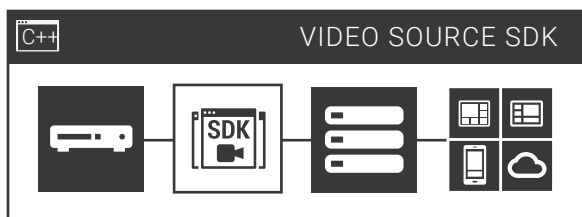
# Mobile Overview

A mobile application for iOS and Android devices designed for on-the-go viewing and control of system devices.



CONNECT		VIEW		CONTROL		SEARCH	
	NAT Traversal		Live Video (Adaptive)		Fisheye Dewarping		Keyword Camera Search
	Data Proxy via Cloud		Recorded Video (Adaptive)		Pan-Tilt-Zoom (PTZ)		Calendar Search
	Encrypted Connections		Camera Status		Soft Triggers		Thumbnail Search
	Wifi / LAN / WAN		Layouts		Two-way Audio		Push Notifications
	4G / LTE / Data		Adjustable Resolutions		Cloud or Local Systems		Flex Timeline
	Encrypted Video		Portrait / Landscape		Unlimited # of Systems		Smart Motion

# Developer Tools

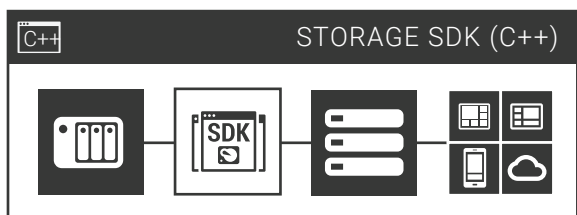


**3RD PARTY VIDEO DEVICES**

The Video Source SDK provides the ability to integrate virtually any live or recorded video source (IP Cameras, NVRs, DVRs, etc) into System. It also allows integrating device I/O ports and motion detection information.

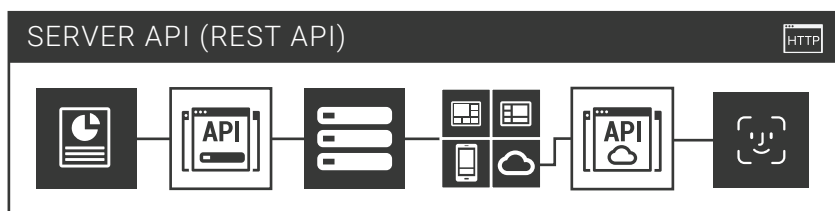
**3RD PARTY I/O DEVICES**

The Video Source SDK also provides the ability to integrate 3rd party I/O devices which can increase hard wire interoperability with 3rd party systems and connected devices.



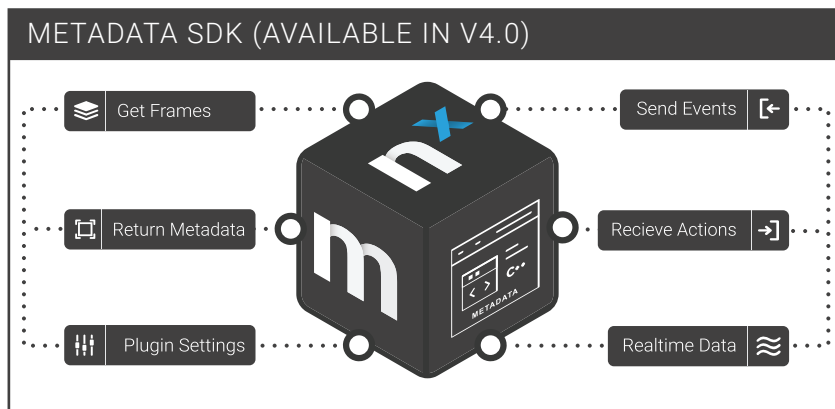
**3RD PARTY STORAGE**

The Storage SDK allows developers to read from or write to any storage location: local, remote, and cloud. Creating a storage plugin requires implementing standard functions such as: I/O stream, if file exist, delete file, list of files in the folder, etc. The Storage SDK also contains an example for using an FTP server as a storage location.



**INTEGRATE ANYTHING USING HTTP API CALLS**

A REST API that gives developers the ability to access almost every system feature available in the regular client: query/manage system resources (servers, cameras, users, permissions), pull live or recorded video out of System, generate events, create rules, control PTZ cameras, and more.



**CREATE PLUGINS THAT RUN ON NX SERVER**

The Metadata SDK allows developers and tech partners to create installable Plugins for Powered By Nx Systems which run on the Nx Server application to create tight, seamless integrations. The Metadata SDK is focused on bringing object metadata from 3rd party Systems - like Face Recognition, Retail Analytics, License Plate Recognition, etc - to enhance both real-time system intelligence and post-event, post-capture video search and review.

**Powered By Nx Dev Tools are FREE!**

Nx developer tools are FREE to use and can be accessed by installing Nx Meta and opening the Server Web Admin interface.

Download Nx Meta today at:  
<https://www.networkoptix.com/powered-by-nx>

# Desktop Specs

## HARDWARE REQUIREMENTS

### MINIMUM SUPPORTED SPECS

HARD DRIVE: HDD/SSD/mSATA  
RAM: 2GB  
CPU: Quad Core Intel Celeron CPU or higher  
GRAPHICS: Intel HD Graphics 3000  
w/ OpenGL2.1 support  
NETWORKING: 1Gbps NIC

### PERFORMANCE SPECS

HARD DRIVE: Performance SSD  
RAM: 16 GB  
CPU: Intel Core i5  
GRAPHICS: NVIDIA GeForce GTX 1050  
(OpenGL2.1 support is required)  
NETWORKING: 10 Gbps NIC

### MAXIMUM # OF GRID ITEMS PER LAYOUT

64 Items (e.g. 64 live streams)

## SUPPORTED OPERATING SYSTEMS

### WINDOWS

Windows 8  
Windows 8.1  
Windows 10  
Windows 11  
Windows Server 2012  
Windows Server 2012 R2  
Windows Server 2016  
Windows Server 2019  
Windows Server 2022

### UBUNTU LINUX

Ubuntu Linux 16.04 LTS  
Ubuntu Linux 18.04 LTS  
Ubuntu Linux 20.04 LTS

### MAC OS

macOS 10.14, 10.15  
macOS 11.0, 11.1, 11.2  
macOS 12

## UNIQUE CAPABILITIES

### DESKTOP MODES

**CONNECTED CLIENT:** Manage any connected Nx Witness System

**MEDIA PLAYER:** View, edit, and export offline videos and images

**VIDEO WALL:** Put Nx Desktop into Video Wall mode to control remotely

### UNIQUE FEATURES

**MULTILINGUAL SUPPORT:** Support for 20+ languages

**SHOWREEL:** Fully customizable viewing sequences of any GRID media

**CUSTOMIZABLE BRANDING:** Customizable Desktop background

**DRAW & DROP REASSIGNMENT:** Move cameras/streams between Servers

**INTEL® QUICK SYNC:** Decode high-resolution video on low power hardware

### SEARCH

**ADVANCED OBJECT:** Search by detected object and metadata attributes

**FLEX TIMELINE:** Search by date / time using calendar or mouse movements

**EVENTS:** Quickly search System event log to find event-driven video

**SMART MOTION:** Select specific pixels to search a year of archive in seconds

**BOOKMARKS:** Create Bookmarks manually or automatically with Rules Engine

## SUPPORTED MEDIA PLAYBACK & CONTROL

### LIVE STREAMING (CAMERAS & STREAMS)

**CODECS:** H.265 H.264 MJPEG

### OFFLINE MEDIA FILES

**VIDEOS:** AVI MKV MP4 MOV, TS M2TS MPEG MPG FLV WMV 3GP

**IMAGES:** JPG PNG GIF BMP TIFF

### CONTROL DEVICES

**I/O Devices:** Status and Triggers

**SERVERS:** Server Health Monitoring

### BUILT-IN BROWSER

**BROWSER SUPPORT:** Websites, URLs, IP Addresses

# Server Specs

## COMPATIBLE HARDWARE

### RECOMMENDED BASED ON # OF STREAMS

STREAMS	RAM	NIC	CPU
Up to 8	1 GB	1 GB	Dual Core ARM
Up to 16	2 GB	1 GB	Dual Core Atom
Up to 32	4 GB	1 GB	Dual Core Celeron
Up to 64	8 GB	1 GB	Core i3
Up to 128	16 GB	1 GB	Core i3

\*CPUs change fast and this spec sheet is fixed.

### RECOMMENDED MAXIMUMS

# OF RESOURCES PER SYSTEM: 10,000  
 # OF CLIENTS PER SYSTEM: UNLIMITED  
 # OF STREAMS PER SERVER: 128  
 # OF SERVERS IN A SERVER HIVE: 100  
 # OF USERS IN A SYSTEM: 1000

\* Based on lab environments. Designing a system that exceeds the numbers above? Contact us for assistance.

## SUPPORTED OPERATING SYSTEMS

### WINDOWS

Windows 8  
 Windows 8.1  
 Windows 10  
 Windows 11  
 Windows Server 2012  
 Windows Server 2012 R2  
 Windows Server 2016  
 Windows Server 2019  
 Windows Server 2022

### UBUNTU LINUX

Ubuntu Linux 16.04 LTS  
 Ubuntu Linux 18.04 LTS  
 Ubuntu Linux 20.04 LTS

### ARM DEVICES

Raspberry Pi  
 NVIDIA Jetson Development Devices  
 \* Contact us to learn more about our ARM support

## UNIQUE CAPABILITIES

### SERVER HIVE

**SYNCHRONIZATION:** SERVERS SYNCHRONIZE SYSTEM DATA IN REAL TIME

**FAILOVER:** AUTOMATIC CAMERA FAILOVER WHEN SERVER FAILS

### ARCHIVE INTEGRITY

**INTEGRITY CHECK:** NOTIFICATION WHEN FILES MANUAL MODIFIED

**BACKUP:** REAL-TIME (CONCURRENT) OR SCHEDULED

### NO PREREQUISITE SOFTWARE REQUIRED

**DATABASE:** SQLITE + PROPRIETARY ARCHIVE INDEX

**LIGHTWEIGHT:** ~75MB INSTALL FILE

### STORAGE

**LAN / WAN:** HDD SSD NAS (SAMBAA)

**STORAGE SDK:** INTEGRATE NEW STORAGE MEDIUMS (E.G. FTP, CLOUD)

### SECURITY

**USER RIGHTS:** LDAP/ACTIVE DIRECTORY SECURE PASSWORD RECOVERY

**TECHNOLOGIES:** HTTPS OPEN SSL SALTED MD5 HASH TLS/SSL

**ENCRYPTION:** SECURE CONNECTIONS ENCRYPTED VIDEO

### SUPPORTED MEDIA STREAMING

**LIVE STREAM (AVAILABLE VIA SERVER API)**

**VIDEO:** H.265 H.264 MJPEG

**AUDIO:** AAC PCM (Mu-Law, A-law) g726 MP3

**PROTOCOLS:** RTSP WebM HLS

**TRANSCODING:** SUPPORTED (FOR WEB CLIENT, MOBILE, API)

### OTHER MEDIA

**VIDEOS:** AVI MKV MP4 MOV TS M2TS MPEG MPG FLV WMV 3GP

**IMAGES:** JPG PNG GIF BMP TIFF

**VIRTUAL CAMERA:** Upload footage from offline cameras (e.g. wearable cameras)



# Cloud Specs

## SCALABILITY

### MAXIMUM # OF CONNECTED SYSTEMS

UNLIMITED

### MAXIMUM # OF USERS

UNLIMITED

## NX CLOUD SERVICES

### CLOUD CONNECT

Connect any Nx Witness System to Nx Cloud for simple remote connectivity from anywhere using Network Optix's NAT Traversal and Cloud Data Proxy technology.

### MANAGE USERS

Add an unlimited number of users to a single Nx Cloud System. Share access to your Powered By Nx System in seconds using only email addresses. Create Custom Roles to quickly assign access to multiple Nx Cloud connected Systems.



## UNIQUE CAPABILITIES

### CONNECTIVITY

**CLOUD DATA PROXY:** Connect via Nx Cloud to view System data and video

**NAT TRAVERSAL (DEFAULT):** Connect directly to System via Cloud addressing

### SECURE COMMUNICATIONS

#### SECURITY

**PASSWORD RECOVERY:** Reset password via email

**TWO FACTOR AUTHENTICATION:** Combine Password with Authenticator

**ENCRYPTED CONNECTIONS:** HTTPS OPENSSL

**ENCRYPTED VIDEO:** Encrypt transmitted and stored video archives

## INTERFACE

### CLOUD INTERFACE

**SYSTEMS:** View connected System tiles in Cloud Web Admin

**SETTINGS:** View users, rename systems, disconnect systems

**VIEW:** View live or recorded video from connected cameras / streams

**INFORMATION:** Integrated Health Monitoring of the last 24 hours

**MONITORING:** Real-time Server monitoring and Logs

### SUPPORTED BROWSERS

**MOBILE / TABLET:** CHROME SAFARI FIREFOX EDGE (AND OTHERS)

**COMPUTERS:** CHROME SAFARI FIREFOX EDGE (AND OTHERS)

## INTEGRATION TOOLS

### FOR DEVELOPERS

**CLOUD API:** Integrate with 3rd party applications and devices

### FOR ADMINS

**ZAPIER:** Create connections to other Cloud apps with Zapier.com

# Mobile Specs

## SUPPORTED DEVICES



### ANDROID PHONES / TABLETS

Android 8  
Android 9  
Android 10  
Android 11  
Android 12



### APPLE PHONES / TABLETS

iOS 12, 13, 14, 15  
iPadOS 14, 15

## VIEWING / PLAYBACK

### VIEWING MODES

PORTRAIT

LANDSCAPE

### ADJUSTABLE RESOLUTIONS

HIGHEST SPEED (BEST AVAILABLE FRAME RATE)

BEST QUALITY (BEST AVAILABLE RESOLUTION)

1080p

720p

480p

360p

## KEY FEATURES

### CONNECT FROM ANYWHERE

**LAN / WAN:** Connect to Systems using public IP address or Dynamic DNS

**VIA Nx CLOUD:** Login to Nx Cloud to view all shared Systems

**ADAPTIVE CONNECTIONS:** Works well on Wifi or Data (4G / LTE / 3G)

### VIEW LIVE OR RECORDED VIDEO

**LIVE VIDEO:** View live video remotely in real-time

**ARCHIVED VIDEO:** Review archived footage remotely

### CONTROL CAMERAS

**FISHEYE CAMERAS:** Universal dewarping for fisheye cameras

**PTZ:** Control PTZ cameras with Joystick and/or tap to move UX

**SOFT TRIGGERS:** Control soft triggers on cameras

**TWO-WAY AUDIO:** Talk through I/O or IP cameras that support Audio In / Out

### SEARCH

**KEYWORD:** Search for cameras or layouts by name

**CALENDAR:** Search by date and time

**LAYOUTS:** View thumbnails of System Layouts

**LIVE THUMBNAILS:** Thumbnails refresh in real time

**FLEX TIMELINE:** Search using the same timeline interaction as Nx Desktop

**SMART MOTION:** Search using Smart Motion

**PUSH NOTIFICATIONS:** Receive customizable push notifications for key events

Try Nx Meta FREE for 30 days.

Nx Meta is FREE for live streaming. To try recording cameras activate a FREE 30-DAY TRIAL for 4 cameras.

Get Started with your free trial today:  
<https://www.networkoptix.com/powered-by-nx>