

AURORA

Communication Technologies

ionosphere



Aurora believes VIDEO MANAGEMENT Software should be...

Quick and Easy Start:

Powerful and feature-rich, yet requiring no training to install, configure, or use — even at an advanced level.

Easy to Install:

- Set up and launch a complete system in under 2 minutes.

Simple to Set Up/Configure:

- Automatically discover compatible devices and hardware
- Connect from anywhere, anytime over any type of data network.

Painless to Maintain:

- Upgrade all system components with a single click



ionosphere

Cross-Platform and lightweight

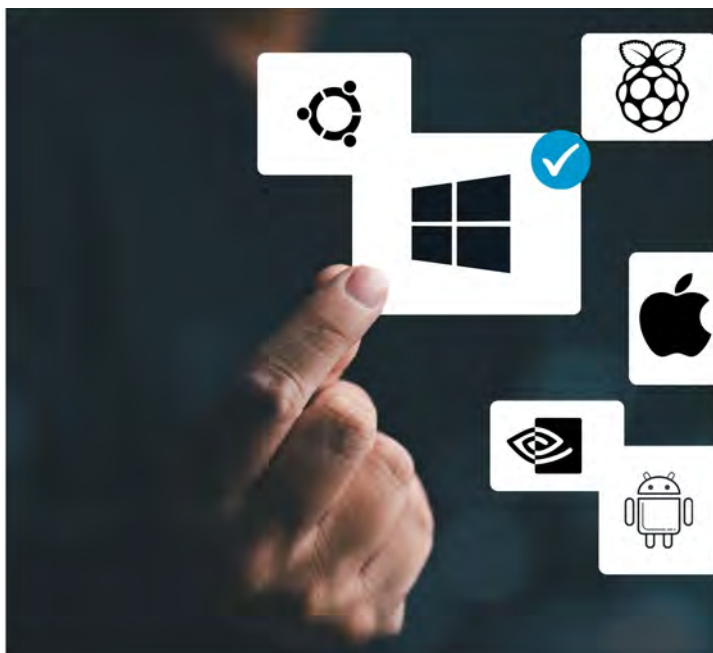
Compatible with the world's most widely used operating systems and devices — right out of the box.

Supports All Major Operating Systems:

- ~200 MB installer for both Client and Server
- No prerequisite software needed to install or operate at full capacity

CPU Based Efficiency:

- No need for expensive client-side hardware or high-end GPUs
- Handles up to 128 dual-streaming cameras on an Intel Core i3



Designed for Developers & Open to Customization

Solves the core challenges of IP video management, empowering developer partners to easily customize and extend the platform for their specific use cases.

Advantages

Built for Users

Designed with simplicity in mind—new users can install, configure, and manage systems with minimal or no training.

Supports 99% of Cameras

Seamlessly integrates with almost any source; IP cameras, USB Webcams, RSTP/ HTTP/ UDP Streams, Offline video and image files.

Cross Platform Capability

Run on any platform; Windows, Mac, Linux, Virtual Machines, Docker, ARM, iOS & Android, browsers.

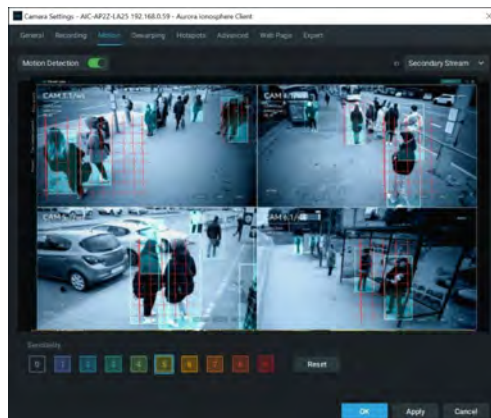
Smart Motion Search

Quickly find what matters with intuitive timeline search.

- Click once to play all motion events one after another
- Draw a zone to isolate motion in specific areas
- Red tags instantly highlight motion events on the timeline for fast navigation

Fast On Standard Hardware

Speed and responsiveness come from clean, efficient code and adaptive scaling—no need for expensive hardware.



Extremely Dependable

Built on **Server HIVE Architecture**

- No single point of failure
- Automatic camera failover ensures continuous operation even in network or server disruptions

Fisheye Dewarp

Supports all types of fisheye cameras live streams, video files, and snapshots with No extra CPU usage required for dewarping.

Integrate Anything

A comprehensive suite of free developer tools — including RESTful APIs and SDKs — making integration accessible to everyone.

Customizable

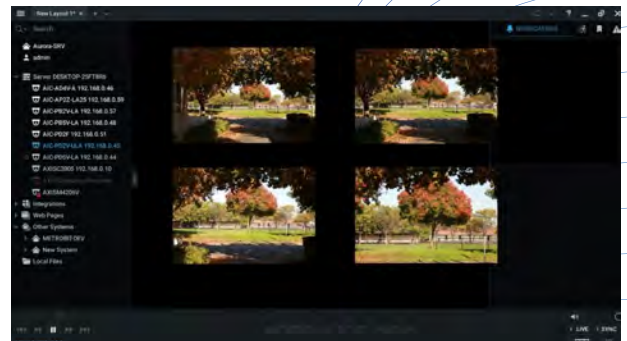
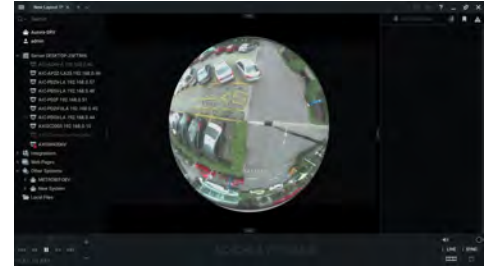
Users can personalize their experience with custom layouts, backgrounds, and settings tailored to their preferences.

Zoom Window

Unlimited ability to create multiple zoom frames on a single camera simply by drawing a frame on the view.

Saves Money

No annual support fees, free upgrades, minimal maintenance, and low hardware costs — delivering exceptional value.



Advanced PTZ

Intuitive PTZ control using keyboard and mouse — no joystick required.

Soft Trigger (I/O Controller)

Trigger and control events such as locks, lights, fans, gates, elevators, or LPR systems based on detected inputs.

2-way Audio

Supports two-way communication—turn any compatible camera into an intercom.

Push Notification

Receive live event alerts as instant messages for any alarms.

Web Admin

Access system live view, playback, licensing, server and user settings, dynamic health monitoring, and a full status dashboard—all through a browser.

2FA

Enhanced security to protect your account even if your password is lost or compromised.

Key Footage Backup

Efficient backup without requiring large storage capacity.

Smart/Advanced Object Search

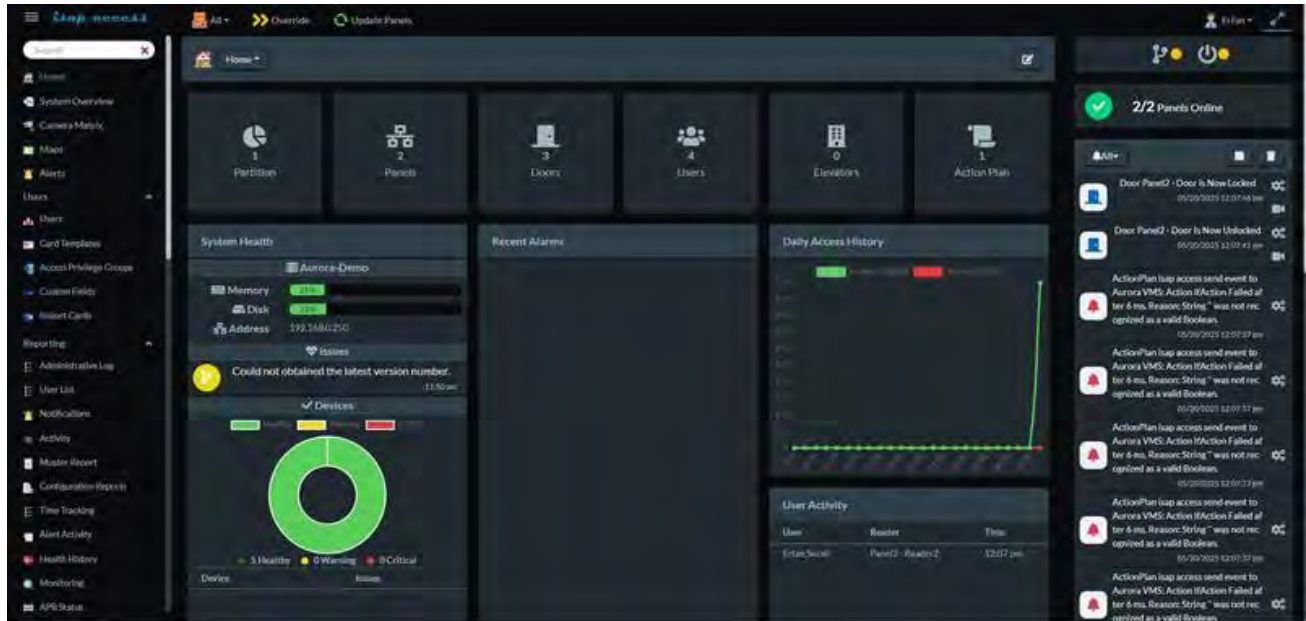
Yellow tags highlight multiple objects or specific attributes on the timeline for quick review.

Event Rule

Manage all platform integrations, HTTP requests, soft triggers, and push notifications centrally via event rules

Health Monitor

Real-time monitoring of servers, CPU, RAM, HDD, network, and uptime for overall system health.



Web Proxy

External users securely connect to the *ionosphere* server, which forwards and displays the internal web platform without exposing sensitive infrastructure.

AD / LDAP / JumpCloud

ionosphere supports centralized account systems like Active Directory, LDAP, and JumpCloud – without storing passwords locally, ensuring enhanced security. Access is automatically revoked when accounts are removed. Cross-platform compatibility is fully supported.

One-Click Upgrade

Upgrade the entire system effortlessly with no additional cost, no reinstallation, and no internet connection required for servers. All online clients update simultaneously.

Video Wall (license needed)

Manage remote video walls, either single-screen or merged setups, with centralized control.



OPENVINO Object Detection Plugin

An open-source plugin that enables advanced video analytics, including: Person recognition, Cross-line detection, Loitering detection, Object motion analysis.

Vehicle Attribute Recognition

Accurately identifies vehicle count and attributes such as Brand, Color and Speed.

Person Attribute Recognition

Rapidly recognizes individuals based on attributes including Clothing color and type, Gender, Presence of bags or hats.

Hardware Requirements

Super lightweight VMS

- **Ultra-efficient design** – Run up to **32CH** cameras on a simple USB PC stick
 - **Intel Core i3** supports up to **128CH**—even basic laptops can handle enterprise-grade video loads.
 - **Raspberry Pi** supports up to **8CH**—a true edge solution at minimal cost.
 - **NVIDIA Jetson** enables **AI + iisap** for powerful edge analytics and smart processing.
- GPU not required** – **iisap** Client runs smoothly without a GPU and leverages **Intel Quick Sync** for video decoding efficiency.

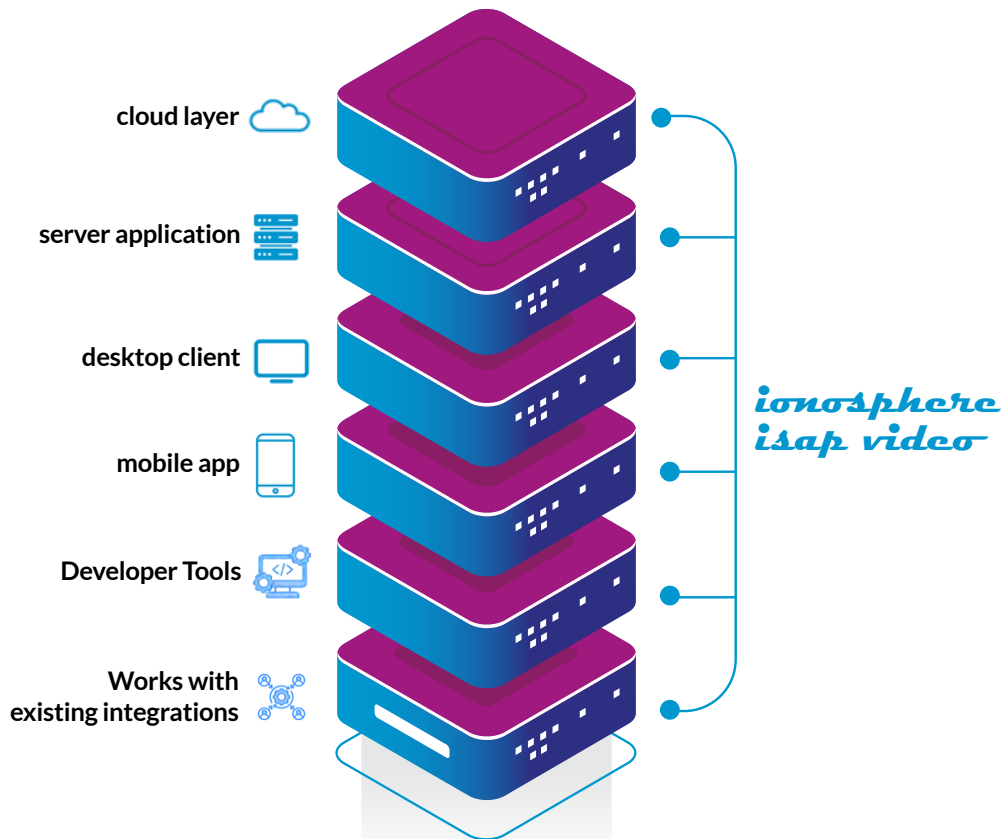


These are the core philosophies of Aurora Communication Technologies' software, known as *ionosphere*.

ionosphere is an open and extensible IP video management platform, featuring Cloud, Desktop, Mobile, and Server applications. It is designed to empower innovators to rapidly develop intelligent video services, devices, and applications.

integral security application platform - isap video

ionosphere represents a modern, full-stack, and market-adapted VMS platform, addressing 95% of real-world use cases without the need for customization.



Cloud layer

A cloud-based service that provides simple, fast, and centralized remote access to any *ionosphere* system — enabling customers to scale their VMS effortlessly to any size.

- No static IP or router configuration required — connect to your server with a single click
- Manage an unlimited number of systems from one place
- Monitor system health and connected devices in real time
- Control user access with customizable roles and permissions
- Built-in 2FA for maximum security



Server application

A powerful, lightweight, and cross-platform media server designed to manage system connections, data flow, access control, automation, and the discovery and management of devices, resources, and metadata.

- Server Hive Architecture with automatic failover for high availability
- No prerequisite software — includes a built-in database
- Ultra- lightweight— supports up to 128 channels on an Intel Core i3
- Auto-discovers tens of thousands of devices from over 809 manufacturers



Desktop client (thick for rich media)

A super-responsive, intuitive, and performance-optimized media browser designed for advanced monitoring and customized management of system resources.

- Lightning-fast video playback and search — no GPU required
- Seamlessly combine video, images, web pages, and I/O devices for enhanced situational awareness
- Smart Search enables video investigation in seconds
- Runs on Windows, macOS, and Ubuntu Linux
- No prerequisite software — install and run instantly



Mobile app (iOS, Android)

A purpose-built mobile application for iOS and Android devices, designed for real-time alerts, remote video access, and responsive device control – anytime, anywhere.

- Custom-built media player delivers ultra-low latency playback
- Soft Triggers for remote control of connected peripheral devices
- Instantly view live video, search, and play back recordings based on push notifications
- Advanced features: Fisheye Dewarping, PTZ Control, Live Thumbnails, 2-Way Audio, Soft Triggers, and more



Developer Tools

Built directly into the platform, *ionosphere* Developer Tools make it easy to integrate *ionosphere* with third-party hardware and software to capture, generate, and manage video-associated metadata.

- Server API – for managing system-level functions
- Cloud API – for remote integration and cloud-based access
- Client JavaScript API – for embedding functionality in web applications
- Metadata SDK – to generate and inject custom video metadata
- Storage SDK – for integrating custom or third-party storage solutions
- Video Source SDK – to add support for new or custom video sources





Works with existing integrations

An integration ecosystem built directly into *ionosphere* Cloud (available as an optional add-on), enabling seamless collaboration with third-party solutions.

- Help companies discover and promote value-added, complementary products such as Face Recognition, Object Analytics, Behavioral Analytics, Access Control, Alarms, Networking Hardware, and more
- Supports technologies that work with or are powered by *ionosphere* software, expanding the system's capabilities without custom development

And should address the following ongoing needs:

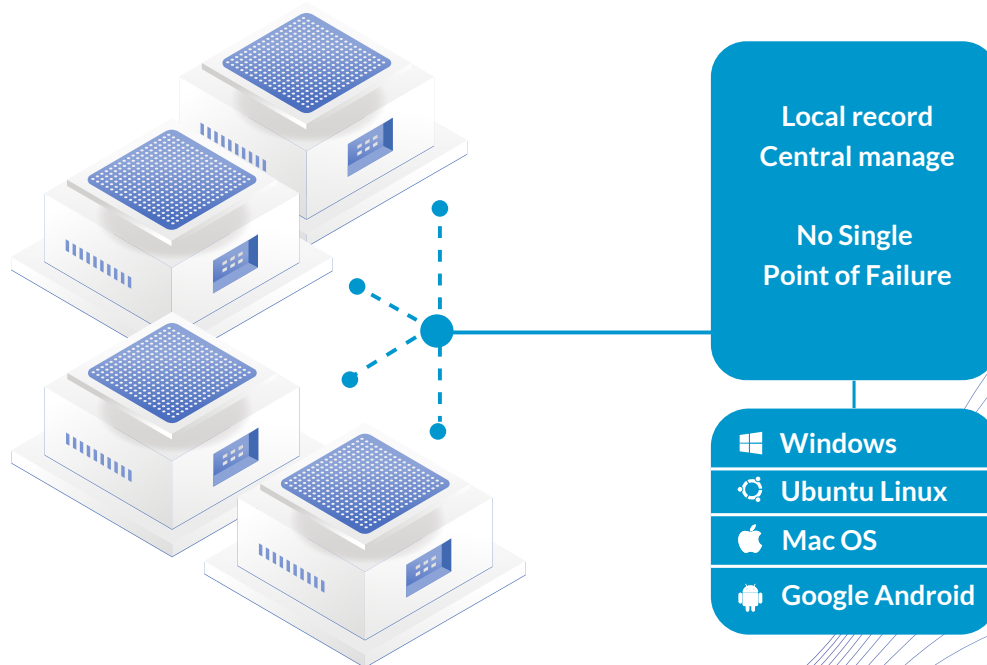
- Features that adapt to evolving market demands
- Cyber security
 - 2FA
 - Enhanced encryption standards
 - End-to-end encryption across connections, events, video streams, data, and stored footage
 - Operator Watermark
 - Audit Trail



HIVE Architecture

A distributed, resilient server architecture designed for flexibility and high availability.

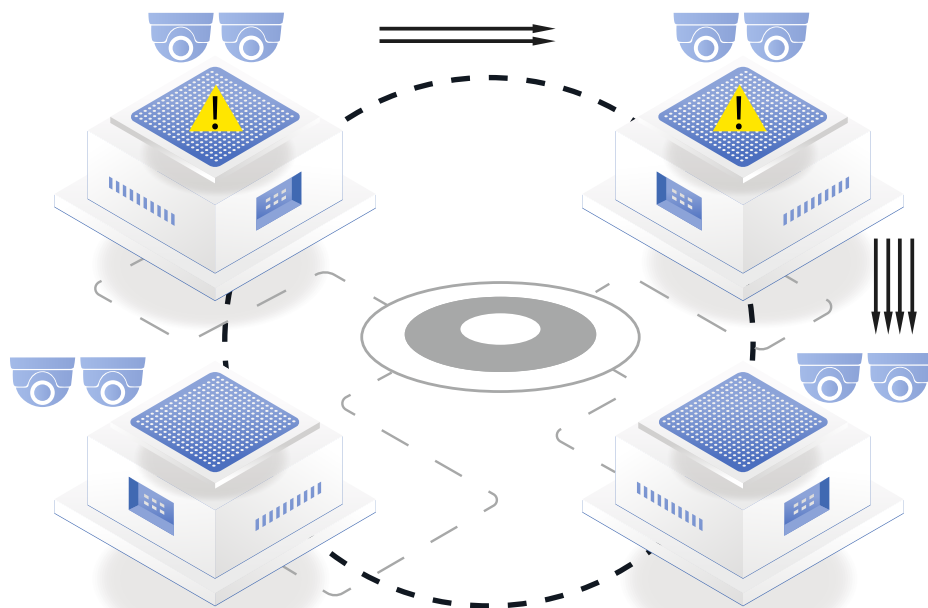
- All servers are equal – No master-slave hierarchy; all servers can be merged and centrally managed.
- Cross-platform support – Deploy on Windows, Ubuntu, or ARM; just install *ionosphere* Server and connect.
- No Single Point of Failure – Every *ionosphere* Server acts as a login and management server.
- Real-time synchronization – Settings, events, and configurations sync instantly across all servers.
- Cloud Connect enabled – Merge servers remotely without needing a static IP.



Smart Failover

Seamless system resilience with automatic recovery and no interruption to live operations.

- **Mutual failover** – In the HIVE architecture, all servers can act as failover for one another..
- **Automatic triggers** – Failover is activated by network, server, or storage failure
- **Continuous operation** – Cameras automatically reconnect to alternate servers to keep streaming.
- **Transparent recovery** – Once the original server is restored, cameras return; video playback remains accessible on the timeline without manual steps.
- **Location-based grouping** – Use Server Location ID to define smart failover groups.
- **Multi-server support** – A single server (under 128CH load) can handle failover for multiple servers.
- **Client-side failover** – Online users are seamlessly redirected to another server during a failover event.



The image features a dark blue background with a subtle, wavy pattern of thin white lines on the left side. On the right, there is a horizontal band of light, suggesting a sunset or sunrise over a body of water, with distant mountains visible on the horizon. The word "AURORA" is centered in the lower half of the image, enclosed in a dark rectangular box.

AURORA