

# Axxon One

Axxon One is scalable video management software (VMS) that fits both small and large video surveillance installations, including those distributed across many locations. It supports the latest ONVIF standards, such as Profile M, and delivers unique value through integrated solutions, customizable AI video analytics, and fast, intelligent search in video footage from multiple cameras.



## Key features

- Windows 10 & 11, Windows Server (2016, 2019 & 2022), Linux Debian & Ubuntu support
- Failover service and redundant archiving
- Unlimited number of cameras in the system
- Unlimited number of servers in a distributed system
- ONVIF Profile S, G, T, and M support
- Multi-camera synchronous playback
- Synchronous audio/video recording and playback
- Storage on Edge (SOE)
- Tamper-proof Archiving
- Smart forensic search
- Dynamic Masking
- Supports PostgreSQL Database / MS SQL
- Alarm management

## SYSTEM ARCHITECTURE

Feature	Specification
Distributed system servers	Unlimited
Simultaneous client connections	Unlimited
Servers transmitting video to a client	Unlimited
Operating Systems	Windows 10 & 11, Windows Server (2016, 2019 & 2022), Linux Debian & Ubuntu
CPU support	32-bit (x86), 64-bit (x64)
Architecture	Micromodule-based and decentralized
Virtualization support	Yes
Failover service	Yes
Redundant Archiving	Yes
Monitoring Capabilities	Centralized monitoring and remote monitoring through cloud services (Axxon Net)
Self-Diagnostics Service	System monitoring and alerting toolkit. Auto System Recovery

## AUDIO MANAGEMENT

Feature	Specification
Microphone signal processing	Unlimited (Audio detector)
Audio output channels	Sound card dependent
Full Duplex Audio	Yes

## VIDEO MANAGEMENT

Feature	Specification
Video input channels per server	Unlimited
IP device support	Over 10,000 models, including proprietary protocols
Analog camera support	Through compatible encoder cards (e.g., Stretch and Yuan)
ONVIF Compliance	Profile S, G, T, and M
Video compression	MJPEG, MPEG-2, MPEG-4, MxPEG, H.264, H.265, H.264+, H.265+, Motion Wavelet, Hik264 (x86 only)
Video Resolution	32MP/24MP/16MP/12MP/8MP/6MP/5MP/4MP/3MP/1080p/960p/720p/D1/CIF/QCIF
Frame rate	1-60 fps per channel
Recording modes	Continuous, pre/post-event, alarm-triggered, motion detection
Multi-camera synchronous playback	Yes
Bandwidth optimization	GreenStream (Adaptive Streaming)
Streaming Protocol	TCP/IP, UDP/IP, DHCP, RTP/IP,
Multimedia streaming	UDP, multicast, unicast TCP, HTTP
Hardware acceleration	NVIDIA GPU & Intel OpenVINO
Video stitching (FrameMerge)	Combine a panoramic view from up to 4 camera feeds
Video walls management	Yes
PTZ Control	Yes, with presets and tours
Camera Resolution Support	CIF, 2CIF, VGA, 4CIF, 720p, 1080p, 3MP, QHD, 5MP, 10MP, 4K
Synchronous audio/video recording and playback	Yes, include live and archive mode. Two-way audio communication
Video Sequencing	Automatic monitoring based on time intervals and camera selection

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## STORAGE AND ARCHIVING

Feature	Specification
File system	Solid Store Proprietary
Storage support	Internal drivers, DAS, SAN, NAS, iSCSI
Storage on Edge (SOE)	Yes (same format as recorder)
Tamper-proof Archiving	Yes
Customizable recording parameters	Yes, scheduled and event-based recording
Pre- and Post-Recording	Yes, for alarm and motion-based recording
Recording / Playback Functionality	Video, Audio, Metadata, Motion Detection

## USER INTERFACE AND EXPERIENCE

Feature	Specification
Multi-camera view	Unlimited views
Monitor support	Yes, supports unlimited monitor and camera viewing with SVGA resolutions & above. Limited by hardware
Monitor Control	Customised video interface for overlay control and optimal video monitoring usage
Mobile App	Android / iOS support
Customizable GUI Layout	Yes. Applies to camera sequence, video sequence, video layout and archived video and audio sources
Video Display Functionalities	Allow content viewing from modern browser through HTML/URL
Map Builder	Yes, with HTML-based maps
Physical Tree	Configuration of servers and edge devices
Logical Tree	Hierarchy based on geography or organization. Show device status, audio equipment, floor plan, users and monitors
CCTV Keyboard Connections	Yes
Virtual Matrix and Remote Control	Yes
Display Matrix	Single Tile, 2x2, 3x3, 4x4, 5x5, Dynamic Layout
Bookmark	Yes, video sequence (investigation management)
Picture-in-Picture Features	Yes. Supports multi-sensor view

## ANALYTICS AND INTELLIGENT FEATURES

Feature	Specification
Object tracking	Up to 25 objects simultaneously
Face recognition	Yes (license dependent)
License plate recognition	Yes (license dependent)
Smart forensic search	Yes (MomentQuest)
Neural Tracker	Yes (including human/vehicle detection)
Smoke/fire detection	Yes
QR/Barcode reader	Yes
Human Behavior Analytics	Yes (Man down, Raised arms, Crouched man, Social distancing)
PPE Detection	Yes (Helmets, Hi-viz vests, Protective Clothing)
Water level detection	Yes
Multicamera Tracking	Yes
Similarity Search	Yes
Real-time face recognition	Yes
Real-time vehicle license plate recognition	Yes
Dynamic Masking	Yes (Blurred/Mosaic and liftable masking). Enable / Disable on display. No impact on video analytics
Retail Analytics	Visitor counter, Queue detection, Heat map
Face Mask Detection	Yes

## INTEGRATION AND INTEROPERABILITY

Feature	Specification
Access Control System integration	Yes
Fire and Security Alarms integration	Yes
Perimeter Intrusion Detection System integration	Yes
POS terminal integration	Yes
Network Protocols	TCP/IP, UDP/IP, DHCP, RTP/IP, HTTP, SNMP
Database Support	Supports PostgreSQL Database / MS SQL
SDK / API availability	Yes

## SECURITY AND COMPLIANCE

Feature	Specification
Multi-level user rights	Yes
Authentication	LDAP, Active Directory integration
Recorded Data Encryption	Yes (Proprietary file system) / SHA1 based Hash Function and 1024-bit RSA encryption key
Audit trail and reporting tool	Comprehensive user activity, events, alarms, external event, server monitoring, equipment failure and system reports
User management	User groups and privileges
Recording Watermark	Location, time, and date marker

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## ALARM MANAGEMENT

Feature	Specification
Alarm Board	Display notification window (Active alarms in order of priority)
Alarm Escalation	Assess alarms as confirmed, suspicious, or false. User can define alarm type
Alarm Monitoring	Display all alarms in a time-based or type-based view. Users can select any alarm for playback or post-event analysis
Alarm Notification	Red flashing alarm indicator displays the number of active alarms on-screen. Alarm videos pop up in a tile with a red flashing border, and a notification window appears in the screen corner
Alarm Categories	Shows alarm type, triggered analytics type, and alarm location
Alarm Script	Display an alarm procedure via script automation
Alarm Case Compilation	Gather related data and metadata from the system for case. Include video and audio clips, snapshots, alarms, incidents, bookmarks, other files, URLs, and maps
Motion Detection	Yes
Camera Video Analytics	Yes

## ADDITIONAL FEATURES

Feature	Specification
PTZ device support	Unlimited, with presets and tours
Event-driven response scenarios	Yes
Automated device discovery	Yes
Bulk configuration of cameras	Yes
Body Worn Camera Streaming	Yes. Through RTSP
I/O Support	Through IP relays
Offline analytics	Yes
Report Generation	PDF, RTF, Excel formats
Automatic system updates	Yes
Integral Alarm / Event Management	Yes

## SEARCH / QUERY FUNCTIONS

Feature	Specification
Video Scrubbing and Timeline Hovering	Yes
Text-based query	Yes
Location-based query	Yes
Time and Date query	Yes
Thumbnail / Record Lock query	Yes
User-defined search based on Region of Interest	Yes
Audio and video Alarm query	Yes

## EXPORT AND REPORTING

Feature	Specification
Export Audio & Video Format	MP4, AVI (Interleaved Video/Audio Export), MKV, EXE format (Axxon Player)
Dynamic Masking video Export	Removable Masking on Live View and Recorded Videos by Authorized User with password for investigation
Report Types	User Logon, Alarm/Analytic, Equipment Failure, Server Monitoring, User Activity, External Events

## AxxonSoft Key Features and Advantages

### GENERAL FEATURES — USER-CENTRIC FEATURES

Feature	AxxonSoft	Competitor A	Competitor B	Competitor C	Competitor D
Cross-platform server and client software	Yes	No	No	No	Yes
Launch configuration Wizard	Yes	Yes	No	Yes	No
Support for ONVIF bridge/ONVIF server	Yes	Yes	No	No	No
ONVIF Profile M	Yes	Yes	Yes	No	Yes

### DATA PRIVACY & CYBERSECURITY — CRITICAL SELLING POINT

Feature	AxxonSoft	Competitor A	Competitor B	Competitor C	Competitor D
GDPR (hiding private information) in live video	Yes	No	Yes	Partly	No
GDPR (hiding private information) in the archive	Yes	No	Yes	Yes	No

ANALYTICS: COMPETITIVE EDGE					
Camera stream selection for video analytics	Yes	No	Yes	No	Yes
Fight detection	Yes	No	No	No	No
Pose detection	Yes	No	No	No	Yes
Fire and smoke detection	Yes	Yes	Yes	No	No
Crowd detection	Yes	Yes	Yes	Yes	Yes
Queue length detection	Yes	No	Yes	No	
Agile configuration of hot keys	Yes	No	No	No	No
LPR/ANPR, ROAD TRAFFIC					
Detecting vehicle speed from video (without a radar)	Yes	No	No	No	No
Detecting traffic violations	Yes	No	Yes	No	Yes
Stopped vehicle detection	Yes	N/A	Yes	N/A	Yes
GDPR COMPLIANCE — CYBERSECURITY					
Archive encryption	Yes	Yes	Yes	No	Yes
Digital signing exported frames and videos	Yes	Yes	Yes	No	Yes
Frame export in PDF	Yes	Yes	No	Yes	No
Video and frame export with a mask	Yes	No	No	Yes	YesNo
EVENTS					
Event queue for operator response	Yes	N/A	Yes	Yes	No
Event escalation to the supervisor	Yes	N/A	No	No	No
Voice notification	Yes	No	Yes	No	Yes
ALARMS					
Agile alarm configuration	Yes	Yes	Yes	Yes	Yes
Displaying alarm events in the archive	Yes	No	No	Yes	Yes
REPORTS					
Configure graded user access to all reports	Yes	Yes	Yes	No	No
MAP					
Execute macros from the map	Yes	No	Yes	No	No
View camera videos on the map	Yes	Yes	Yes	Yes	Yes
RIGHTS AND USERS					
Scheduled user rights	Yes	No	No	No	No
VIDEO SURVEILLANCE					
Manual start of macros from a layout	Yes	No	No	No	No
Mixing several audio channels in live video	Yes	Yes	No	Yes	Yes
Switching video streams when digitally zooming a camera	Yes	No	Yes	Yes	No
MOBILE APPS					
Executing macros	Yes	No	No	No	No
Two-factor authentication	Yes	No	No	Yes	Yes
Viewing maps	Yes	No	Yes	No	No