Luxriot Evo

An open platform for video and security data management

Evolution in Video Data Management

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Luxriot Evo

Evolution Made Easy

Evo Licensing made easy

Luxriot **Evo** is an extremely easy-to-use open platform

It starts with **Evo**'s Simple Licensing:

- One channel (active camera connection) requires one channel license

- No extra server or client connection licenses required

Failover and Replicated channels, as well as disconnected or offline cameras do not count toward license usage

Evo Licensing made easy

CapEx paywall barrier is no longer an issue with the **Evo**'s comfortable entry cost

- One-time fixed price for the perpetual channel license

- The license includes everything, no hidden charges

- No-pressure flexible and affordable yearly Maintenance Plans

That simple. All inclusive.

Evo Comprehensive coverage

Pay only for what you want and when you want

- 2-year Maintenance Plan is included at no extra cost

- Optional add-on Maintenance subscription

- No pressure, no retrospective charges on plan gaps

- Opt-in whenever you want

- Evo Maintenance also includes updates for Evo VA - EVA

Need **Comprehensive** coverage? Benefit from significant discounts on long-term plans!

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Evo Scalable without limitations

Luxriot Evo is scalable without limitations

Manage several or thousands of cameras with the same ease
- anywhere on the network
- across the entire organization
- regardless of geographic location

+ No limitation on channel count

+ Unlimited user connection license is included at no extra cost

+ **Evo** S and **Evo** Global editions are interoperable and upgradable

Evo Truly Unlimited

Got powerful hardware?

Take your advantage with unique **Evo** S **Unlimited** license!
- Fixed cost for absolutely **uncapped*** number of cameras per server

Large-scale or distributed system?

Evo Global provides significant benefits!
- **Unlimited*** servers per system - no per-server and node licensing
- All **Evo** Global channel licenses are shared system-wide

*Hardware limitations may apply

~~When~~ Because **Evo**lution is necessary

Unhappy with your current video surveillance system?
- capricious complexity?
- delayed improvements?
- not able to address new needs?

Hardware requirements grow over time – does your software keep up?

Concerned about the costs of adding camera licenses?

High maintenance fees?

Evolve!

For those who are unhappy with their current video surveillance system or concerned about the costs of adding camera licenses and high-maintenance fees

- Luxriot **Evo** has the widest range of robust features you'd expect to find in an enterprise software

- Upgrading your video management system to Luxriot **Evo** can help to reduce TCO and most likely will cost just a fraction of what you're paying today

- With **Evo** you can take advantage of your existing hardware

Evo Device support and integrations

Being **open**

+ in cooperation with dozens industry-leading technology partners

+ natively integrated with 5K+

+ supporting over 15K+
 cameras, recorders, sensors, and other devices...

Luxriot **Evo** is always on top
 of the never-ending technology **evo**lution

Evo Device support and integrations

Get the most out of your existing systems!

- Luxriot **Evo** provides a long-life consistent support for new and legacy devices, including server hardware, ensuring extended lifecycles for your installations

- **Evo** can easily integrate with existing systems, including access control or even building management

- Thanks to our flexible API and powerful SDK, all the systems can be easily managed in a single interface from a centralized console

Evo Video Analytics Ecosystem

Evo Video Analytics Ecosystem

Powerful optional plugins allow users to expand their video surveillance systems to specific tasks or vertical markets

Luxriot **Evo** video analytics ecosystem includes:

- **Evo** Video Analytics - **EVA**
- License Plate Recognition – **LPR**
- Facial Recognition – **Vero FR**

EVA Ecosystem Differentiation

Native – single application to maintain, no compatibility and version issues

Object searches are performed in Evo - users can go back and analyze recorded video straight from the VMS rather than having to look through external apps

No minimum GPU requirements – **Evo** VA will run fine even on a bare CPU

No lock with fixed hardware appliances – runs on COTS, tailored to your needs

Latest Technology – new-gen CNN, Ray Tracing, Kaufmann prediction algorithm

Evo Extensions – LPR

Luxriot **Evo** License Plate Recognition (**LPR**) module helps to automate license plate reading and identification

The **LPR** module makes it easy to capture license plates

+ search for tags

+ alert on tagged plates

+ automate response on recognition

+ enforce parking restrictions

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Evo Extensions – Vero FR

Luxriot **Vero** Facial Recognition (**FR**) module is a biometric data management subsystem that enables face recognition and creates flexible scenarios of any complexity

Vero FR provides the ability to

- detect, track, extract, classify, catalog and alert
- on persons-of-interest appearing in video footage
- in real-time or forensically, across all cameras

To ultimately enhance situational awareness for safety, security and operational efficiency

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EVA – Luxriot Evo Video Analytics

Evo VA - EVA - is a Luxriot Evo video data analysis subsystem

EVA provides fast and accurate

- convolutional neural network-based object detection
- classification and attribution

+ Utilizes your existing video surveillance infrastructure

+ Serves as a native metadata source component for Evo video and data management platform

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EVA – Luxriot Evo Video Analytics

With Luxriot Evo VA things are much easier

- because the analytics are built-in and native

- because EVA can also pull in the metadata from various smart cameras and external applications

Luxriot Evo can use metadata from several disparate sources, both external and internal, to provide the data management in the middle and then make decisions, actions, run flexible scenarios and reporting

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Evo Events & Actions Manager

Historical approach: event-based actions

- Collections of events and the actions that can be initiated in response to these events

Evolution: **actionable data**

- Multiple events and actions can be turned into sequences
- Metadata management – disparate systems can interact
- Central data processing hub – turns data into information
- Unified Rules engine – metadata-based rules and scenarios

Evo Actionable Data Differentiation

Number of actions combined - unlimited multiconditional logical chains

Metadata exchange - interoperation and collaboration

Metadata postprocessing - analytics on analytics

Analytics are centralized - allowing to perform more complex analytics than edge systems

Unrestricted Rules Engine - allows **Evo** to effectively create solutions not found natively in original metadata sources (cameras or VA), for example vehicle counting/time parked

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Cyber Security and Data Protection

Data Security

Security of your video data can and should be a first-class citizen. Risks are evolving, and older technologies simply can't keep up

The unfortunate truth is a casual collection of loose measures can't provide an adequate cyber resistance

There must be a consistent framework to implement multiple cyber defense layers in order to make sure the entire system will be cyber-secure by design

Evo Data Security

Being proactive with **Evo** layered security is your best defense, with each layer addressing and protecting different vulnerability points of your IT and video security infrastructure

A huge differentiation is that **Evo** designed in robust security as the platform has being built, providing and extraordinarily strong offering

This allows to better protect sensitive information, keep data out of the wrong hands, and avoid the costly damages of a breach

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Evo Data Security Layers

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Layer 0: Training and awareness	• Risk-based approach, Insider Threat, Zero Trust policy
Layer 1: Encryption	• End-to-end: data in transit, data at rest, API/SDK calls
Layer 2: Logical Security	• Authorization, Authentication, Physical and Logical layers separation
Layer 3: Log, Monitor & Alert	• Track, Log and Audit everything
Layer 4: System & Application	• Ensure System Robustness. Evo as an Airgap and extra Security Layer
Layer 5: Data Integrity	• Ensure data integrity and resilience

Evo Data Security – Encryption

Luxriot employs an extensive toolset to support **end-to-end encryption** within the entire **Evo** ecosystem

Connected devices and applications are to provide encrypted data, which **Evo** processes and stores securely

In turn, **Evo** outputs encrypted data to **Evo** client tools (Web, Monitoring UI, Mobile) which use encryption to communicate with the **Evo** services

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Evo Data Security – Encryption

Luxriot **Evo** enhances data protection and cyber resiliency with advanced authentication and end-to-end data encryption technologies at all levels:

- Database encryption by default, plus an extra user password layer
- End-to-end data flow encryption server-server, server-client, camera-server
- Digital certificates: self-signed or customer's own (issued by authority)
- Encrypted session tokens + DoS attack prevention
- Strict "No Basic Authentication" policy for all API/SDK calls
- Enhanced security and faster archives with Proprietary format
- Multi-database architecture as an extra layer against data corruption

Evo User Management

Insider actions and human errors are the most common cause of a data breach. Without proper measures, regular users can be as dangerous as privileged ones

Evo Logical Security consists of comprehensive safeguard measures for managing user identification and password access, authenticating, access rights and authority levels

In addition, Evo employs a dedicated framework for Logical and Physical layers separation to ensure the system is resistant to insider threats and human errors.

Evo Logical security

Evo is intentionally strict with **Physical and Logical layers separation** for the human error resistance:

- Dedicated configuration application – monitoring users are exposed to logical layers only

- Separate Audit database

- Server security policies

- Set control priorities for users and user groups

- Monitor and manage user sessions and connection types

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Evo Logical security

- Advanced and detailed permissions for all logical resources for all users

- Flexible administration access permissions for physical and logical resources

- Separate access to recent archive with configurable interval

- Complex GDRP-ready authentication scenarios, 2FA, 4E (4 eyes)

- Internal and external groups for permissions management

- Organization hierarchy support with Nested groups for multi-level grouping

- Secure Active Directory and LDAP support for external users import

Evo NDAA Compliance
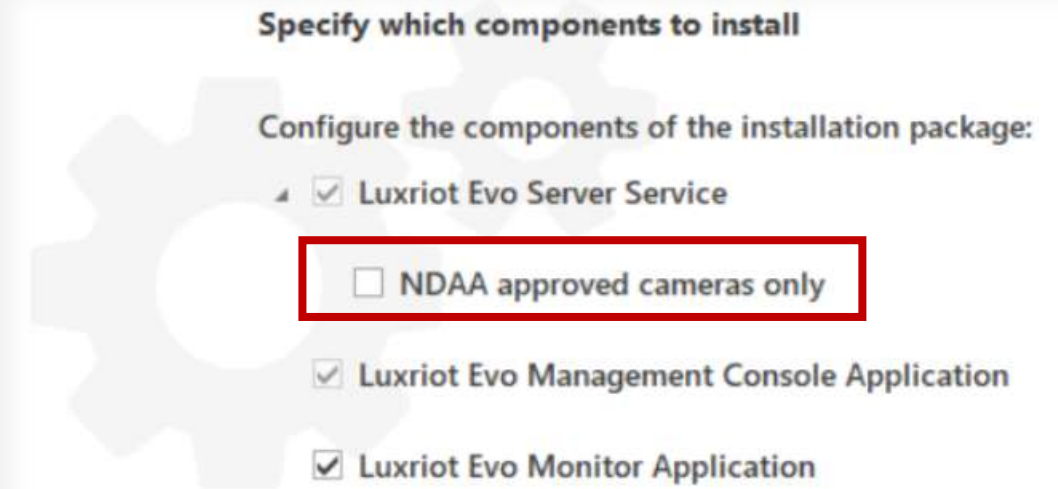
Luxriot position on NDAA compliance:

- Luxriot is pleased to affirm that our entire product portfolio, which includes solutions marketed to the US government, US government contractors and grant recipients, Department of Defense (DoD) and associated contractors and affiliates, is **fully NDAA-compliant**.

- Moreover, Luxriot does not employ any software libraries or software code components and components capable of processing software, from the companies highlighted in Section 889 and their affiliated entities.

- Luxriot Evo has an option to enforce support for use only NDAA compliant cameras

Evo NDAA Compliance Enforcer

For organizations that do business with or take funds from US federal sources

Evo **NDAA Compliance Enforcer**:

- upon the system installation or upgrade it is now possible to "enforce" system-wide NDAA-compliance by blocking non-compliant devices

Specify which components to install

Configure the components of the installation package:

- ☑ Luxriot Evo Server Service
  - ☐ NDAA approved cameras only
- ☑ Luxriot Evo Management Console Application
- ☑ Luxriot Evo Monitor Application

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Comprehensive Tools

Evo Operator Tools

Evo enhances its timeline for an easy operation

instant video previews **+** custom bookmarks **+** clear marks for motion and analytic events

Making locating and retrieving evidence much quicker and easier

Operators can easily create and share convenient custom Views

- up to 100 cameras per layout from multiple servers

User Interface provides an extreme customization flexibility

- change tabs, colors and fonts, or even application modes to get your unique and comfortable interface look

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Evo all-in-one Smart Video Search

- Smart Search (motion-based)
- Event search
- Object search
- Bookmark search – any external and internal events
- Metadata search (Text POS, Attributes for FR, number plates for LPR)
- Sequence explorer
- Access control data search

Evo Video Wall and Digital Signage

Luxriot **Evo** Global can act as your video wall controller - no middleware or extra licenses required

Luxriot video wall helps organize collections of displays, including those in different locations. Moreover, **Evo** Global offers another option - mosaic display -"**the real video wall**" - an ability to combine up to a hundred screens into one

Digital Signage — Luxriot **Evo** Global includes an easy digital signage package that lets you create and control your own content on one, or many, screens using **Evo** Video Wall. From anywhere.

Evo Interactive Maps

Evo enhances its maps with interactive icons to better manage your site geographically with Facility Maps:

- View live cameras by hovering a mouse cursor over any camera icon

- Admit, unlock, or lock any door by simply clicking on its map icon

- Door and device icons also shift colors in real time based on their states

- Create multi-level maps with layer map icons, linking one facility map to another

+ Georeferenced maps for tracking devices on move in real time

Evo - More!

- **Evo** Mobile, iOS and Web clients – work from anywhere
- Reports – inbuilt powerful tool for fully customizable reports
- Fleet tracking and geo-reference – track your fleet in real time
- User buttons – execute your custom scenarios by a simple click
- Camera portals – easy way to navigate through your site views
- Interactive browser – direct access to external web-based content
- External executables and much more...

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Evo Optimized Performance

End-to-end support for H.265
- Benefit from improved efficiency in bandwidth and storage without sacrificing image quality

GPU Friendly
- Leverage wide range of supported GPUs to assist with video image processing, freeing up CPU resources
- Improve system performance for environments with high resolution and camera counts

64-bit and CPU-optimized code
- Easily handle more devices per server and take your advantage with longer hardware service life

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Evo Better TCO

Excellent pricing, powerful capabilities, flexibility and a simple licensing structure make **Evo** different from the rest

Evo provides an extremely **TCO-efficient** enterprise video and data management solution

- With **Evo**, our customers receive a perpetual license that includes the widest range of enterprise features – **all inclusive**, without any hidden fees

- Flexible architecture, CPU- and GPU-friendly

- No hardware lock – **Evo** runs perfectly on COTS

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