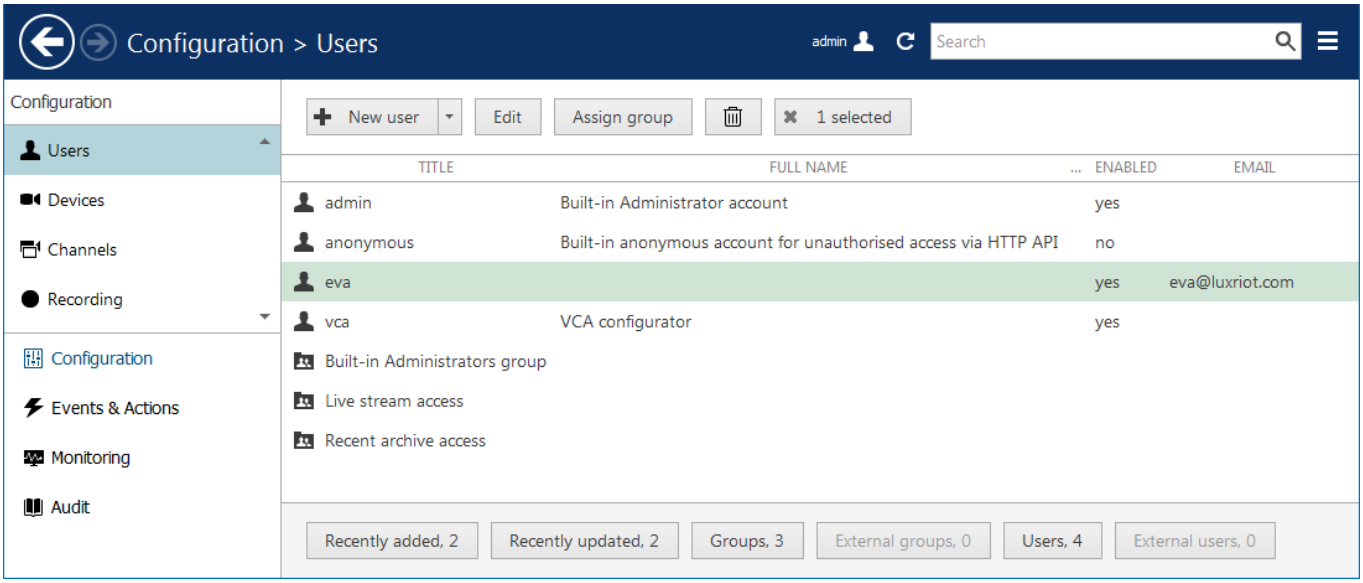
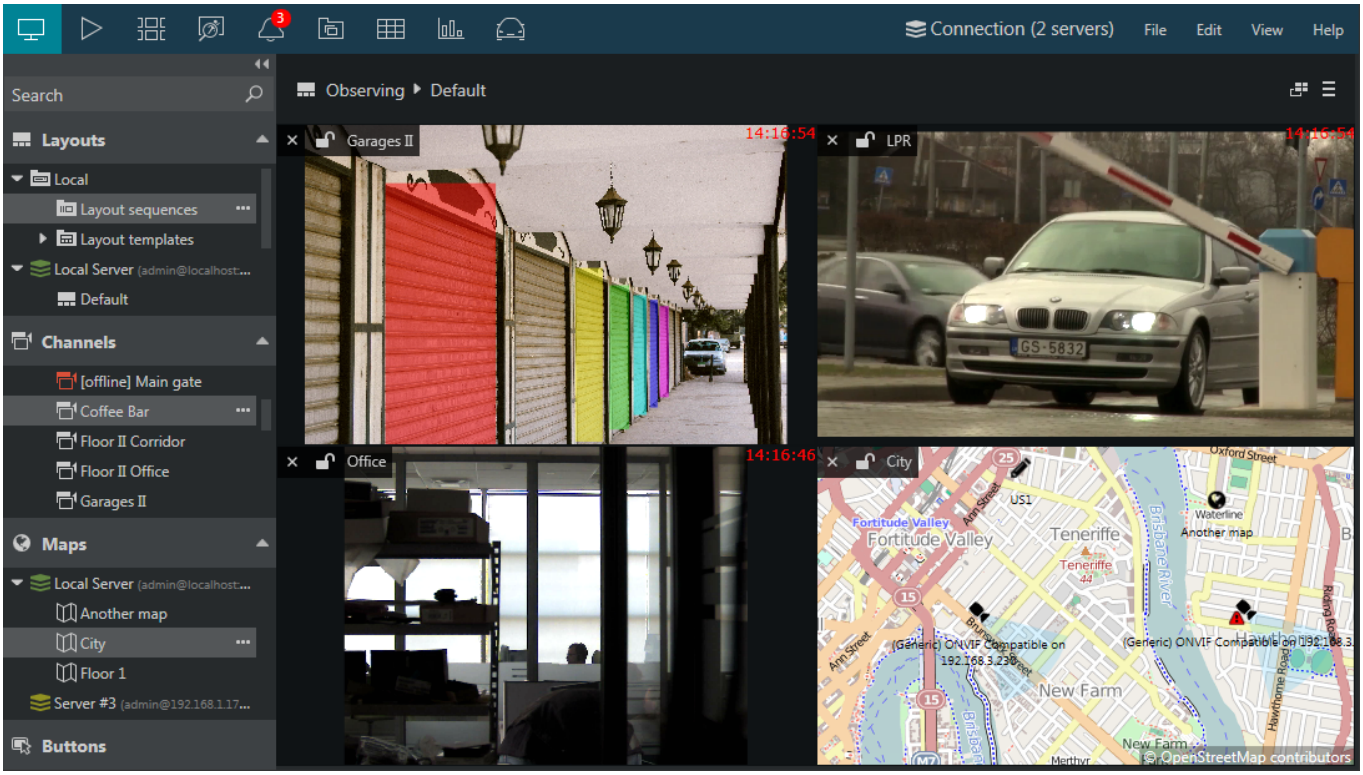
LUXRIOT EVO

ARCHITECTURAL & ENGINEERING SPECIFICATIONS AND FEATURES

Tuesday, January 07, 2020

Interface





General Information

Luxriot EVO is a highly stable software, easy to use on any network and very easy to deploy with the advanced Auto Detection feature for IP cameras. Luxriot EVO also provides extreme flexibility as it can manage unlimited servers, sites, and cameras remotely, quickly and efficiently. Luxriot EVO is an open architecture Video Management Software (VMS) for Windows. Luxriot EVO accepts MJPG, MPEG-4, H.264 and H.265, as well as Full HD and megapixel video streams from Network (IP) cameras, encoders and capture boards. This, along with Luxriot EVO client-server architecture, allows you to build hybrid scalable solutions from a single NVR/DVR to multiple servers handling thousands of cameras.

Luxriot EVO accepts video streams from Network (IP) cameras from 90+ manufacturers including all major manufacturers such as Axis, Arecont Vision, Pixord, SONY, JVC, Panasonic, IQinVision, Toshiba, Zavio, Acti, Vivotek and UDP (more than 4000+ models supported) Luxriot EVO also works with several DVR cards, like H.264, SDI "HDCCTV" (up to 960fps and up to 64 channels at D1 resolution) boards from UDP and other manufacturers. Moreover Luxriot EVO is considered to be a hybrid system, since a DVR card with analog cameras, IP cameras, webcams and IP megapixel cameras, could be combined together on a single server.

Optimized and designed for Microsoft Windows Server 2008/2012/2016/2019, and Microsoft Windows 7/8.1/10.

Surveillance from anywhere: multiple client options are supported, including Windows-based application, Web browser client, Mobile client app for IOS and Android, and OS X client. Web client for Luxriot EVO Streaming Server supports Chrome, Firefox, Safari, iOS, Android, etc.

Server core: accepts and handles incoming channels, provides recording and streaming functionality. Runs silently as Windows service. Luxriot EVO interfaces are: Luxriot EVO Console application for Luxriot EVO server administration, and Luxriot EVO Monitor application as rich Windows-based client.

Dedicated configuration interface: separate Luxriot EVO Console application for secure server administration, unified interface for all product editions. Detailed permissions for resource access and configuration.

Full-featured client application: unified interface for all Luxriot EVO editions. All server resources can be accessed both locally and remotely (only one user interface). Anyone operating the client application can connect to the server, access live and recorded video, as well as other server contents in accordance with granted user rights. Luxriot EVO Monitor enables quick navigation between resources from any server and allows easy and intuitive remote video wall management.

Full range of editions: for all needs and budgets from home users to large enterprises.

32- and 64-bit support for all components.

Multi-language support: Czech, Dutch, English, English (US), French, German, Italian, Korean, Russian, Latvian, Polish, Slovenian, Spanish, Thai and Turkish localisations, with many more to be added.

Enterprise scalability and monitoring: All functions such as: Screen Mapping, Layout Sequencing, Alert Notifications, PTZ Control, Camera Configuration, Video Wall control and more without exception may be accessed and administered both locally and remotely allowing management and administration for an unlimited number of servers around the world. Flexible Event & Action configurator enables you to manage events and notifications such as emails, text messages and more tasks for multiple servers from a single, user-friendly interface.

Luxriot EVO API/SDK Included: Developed for future. It allows to integrate third party applications. Custom programming and exclusive features also available. Luxriot EVO offers customisable integration with other software systems in form of SDK or simplified HTTP API.

Luxriot EVO simplified HTTP API allows implementation of many different features for third party applications and systems.

Server and Management Console

Server core with Remote & Local System Configuration

- Configuration import/export via XML file
- Database import
- Server runs as Windows Service
- Automatic and manual configuration backup
- Manual configuration restore from a previously created restore point
- Remote upgrade for servers and configuration reset
- Remote upgrade for Luxriot EVO Console and Luxriot EVO Monitor applications
- Service watchdog for operation monitoring
- Native archive backup tool for selective footage backup in the proprietary format
- Redundancy features on all levels
- Encryption for all databases, the recorded archive and all connections

Central Server Management via Console Application

- Luxriot EVO Global server provides ability to combine virtually unlimited number of servers under centralized management
- Configurable TCP port (default is 60554)
- Unlimited number of recording servers and failover nodes can be involved without any imposed limitations
- Central server mirroring for enhanced stability
- Resource grouping for easy permission management
- Automatic discovery for servers and devices
- Advanced permission management and user audit
- Option to import external AD/LDAP users

Video Support

- Supported codecs: H.264, H.265, MPEG4, MJPEG, JPEG, MxPEG
- RTSP, HTTP, and native video transport supported
- Configurable compression, resolution, FPS, bitrate (exact available settings depend on camera)

Support for IP and Analog Devices

- Support of wide range of IP cameras and video encoders: all IP cameras on the LAN may be configured via Auto Search Wizard. Using the Wizard a user is able to find all Network IP cameras available within the network. The user can configure them and connect them in no time and with little effort.
- Each device is individually configurable
- Support for video, audio, hardware-side motion detectors and digital I/O
- Link to the supported camera list: http://www.luxriot.com/support/supported-cameras/. The list is constantly updated
- ONVIF Profile S support
- Generic drivers (RTSP, MJPEG, ONVIF)
- Support for Direct Show compatible devices: the list of these devices includes everything from very basic USB cameras to camcorders to advanced multichannel video capture boards. These devices can be used alone or together with supported hardware and/or IP cameras, including GigE cameras installed via DirectShow driver.
- Capture boards

- External I/O devices via TCP/IP
- Video streaming to and from Android and iOS phones and tablets via Luxriot EVO Mobile
- Camera search (automatic discovery)
- Single and multiple (bulk) device and channel configuration
- Copy device and channel configration
- Video stream preview in Luxriot EVO Console
- Easily combine video stream with textual data overlay and visual channel shortcuts on the configuration stage for later usage in Luxriot EVO Monitor application

Archive Recording

- Flexible recording setup: built-in and custom recording profiles, recording schedules, individual recording quotas
- Video, audio, motion, VCA and external textual data recording, all supplementary streams being synchronised with the video
- Main video stream and substream recording
- Schedules on a weekly basis with convenient graphical (grid view) configuration
- Reduced frame rate recording
- Dedicated storage per channel, channel group or individual main/secondary stream
- Recording by motion and alarms of different kinds (DI, VCA events, custom events)
- Bookmarks: manual, automatic, semi-automatic (user comment required)
- Channel replication in Luxriot EVO Global (automatic scheduled archive backup) - unlimited number of channel copies can be created
- Replication to multiple servers with different settings
- Replication from regular recording servers and from failover nodes
- Manual archive backup tool with local and remote access options
- Encryption for the proprietary archive and archive backups

Edge Recording Support

- For ONVIF Profile G conformant devices
- Native edge recording support for the following manufacturers: UDP Technology, Axis, Bosch, Dahua, ArecontVision, Vivotek, Uniview (more coming)
- Separate storage for the edge stream, if required
- Ability to upload offline-recorded videos from Luxriot EVO Mobile

Recording Options

- Recording of video, audio, VCA streams, motion information, as well as serial textual data streams
- Configurations, profiles and schedules
- Pre- and post-recording for event-based recording plans
- Automatic triggering of unlimited number of recording profiles for a wide variety of events on any server in the system
- Manual controlling of recording profiles via Luxriot EVO Monitor application, e.g., emergency recording start/stop
- Duration and storage amount quotas per disk, per recording plan (for individual channels or streams, also channel groups)
- Configurable storage cleanup hours
- Fully independent recording, storage and quota setup for dual streaming (main and secondary stream)

Archive replication: automatic backup of the footage. Each channel can be copied unlimited number of times with different stream and frame rate choice.

Fallback storage: a special storage location that will be used for recording only if all specified target storages of the certain type have failed (storage failover within one server)

Watchdog

For every Luxriot EVO server and Luxriot EVO Monitor application

Protects the software from certain types of failures by automatically attempting to restart the service and the server machine, if required

Scheduled restarts (default maintenance restart period is one week) with configurable time limitations

Operates based on the software and system overall health monitoring

Default trigger values selected based on extensive tests run on systems of different configuration and stability levels

Configured for each server independently

Logging of watchdog activity

Individual watchdog for the Luxriot EVO Monitor application that observes software behaviour and restarts the application in case of certain failures

Watchdog can be used by License Plate Recognition module if it is installed on the same machine

Motion Detector

Camera-side motion detection support for most devices: analysis of raw (non-compressed) video stream on the device side decreases resource usage on the server side and provides best detection results

High performance software motion detector mode: analysis of key frames only, lower CPU and memory usage, limited accuracy

High accuracy software motion detector mode: analysis of the whole video stream, maximum accuracy for motion detection on a compressed video stream. Recommended for use cases where motion shorter than 1 second must be detected.

Ability to use lower resolution stream for server-side motion detection to decrease server resource usage, both for high performance and high accuracy modes

Camera-side VCA Event Support

Multiple vendors (including ONVIF Profile S devices), exact list of supported events depends on camera brand

Data mining for post event analysis and data management

Sensitive tracking with a low false alarm rate

VCA adapts automatically to varying lighting and weather conditions

Simple detection zone setup

Fire and Smoke – WARNING - The smoke and fire video analytics do not comply with any detection standards and should not be used as a safety device. VCA should only be installed in addition to certified safety devices and used only to supply additional information.

VCA enabled encoder/camera can be used as a stand-alone intruder sensor or digital output contact can be set to react to specific triggers

Analytics stabilization allows software to work effectively on swaying cameras

Rapid 'learning time' of just a few seconds. Can be used with PTZ cameras - detection is suppressed during camera movement

Unique features - PTZ auto tracking, fog and smoke reduction, image stabilization and camera tamper

VCA has NO single point of failure, because the Analytic s is integrated on the Edge HW; Video server or into the Camera

VCA is very easy and simple to configure even for installers with limited experience

- VCA fits many market segments without modifications

Software VCA Support (requires additional license)

- Video Analytics with Data Mining Filters
- Built into the server core - no extra installation required
- No extra hardware pieces required
- Zones and lines: virtual fences, trip wires, perimeter protection, intrusion detection, behaviour detection, non-detection zones
- Counting lines
- Camera Tamper Detection
- Camera Shake Cancellation
- Surveillance tracker
- Presence filter
- Appear and Disappear Filters
- Abandoned Object Detection
- Removed Object Detection
- Class and speed filters + calibration
- Direction filter
- Dwelling (loitering) detection
- Tailgating filter
- On-screen counters
- Object Meta data
- Counting (people, cars, object counting): highly accurate information on the number of people who enter their premises to use their facilities. It can apply to different applications, such as airports, bus and train stations, bars and clubs, car parks, retail stores and shopping malls, museums and tourist attractions, sports and leisure facilities, and many more.
- VCA event investigation in Luxriot EVO Monitor application
- VCA filters can be used as event basis for automated server-side scenarios (Events & Actions)
- Use Open VCA counters to build real-time or automated (scheduled) reports
- Use Open VCA counters to trigger events based on certain counter value

Events & Actions (E&A)

- Send emails notifications: text macros are supported for automatic insertion of such data as timestamp, event source etc.
- Send emails with snapshots: same, with an option to attach a video frame from any available main or secondary stream
- Send custom notifications via Run third party program feature, for example, using telnet or generic socket connections
- Events: recording errors, disk excluding, video lost, video restored, server connected/disconnected, motion events, VCA events, digital input, user's events (software button pressed), scheduled and periodic event (clock event), events from external services (LPR, FR, API, OPC, access control), events from video walls, events for external data streams (data sources, POS systems): textual, or based on logical comparison of a variable value where the variable is extracted from external textual data stream
- Actions: PTZ preset, digital output, write to application/event log, activate layout, popup live channel/layout, pop up instant playback, send email notification, send email notification with attached snapshot, run third-party program, activate any recording profile for any stream, highlight object on the map(s), send SNMP trap to a third-party SNMP manager, send HTTP request, create a bookmark for any channel, save frame to FTP, send a textual and/or audio notifications to any Luxriot EVO Monitor

application, send live/pre-defined audio to camera, send notification to an external service (API, OPC, access control), send push notification to mobile application

Configurable subtitles for exported frmaes

Multiple SMTP server configuration: use many different email servers for notification sending

Rule schedules: configured rules can be triggered on weekends or working days only, or follow a fully custom time schedule on a weekly basis

Global events: share events between servers and make events from one server trigger actions on another one

Indicators: items with multiple states, which can be changed based on external events and displayed on maps

Rule combining (conditions): use two events (event conditioning) to trigger a single action

Event postponing and aggregation (delay timers): action execution may be postponed for the required amount of time

Single event can trigger an unlimited number of actions on one or multiple servers

Software counters: increment or decrement counter values based on any event

Audio Support

Receive audio from device: supported compressions are G.711 (PCM a-law and u-law) and raw audio

Transmit to device (two-way audio), including mobile devices via Luxriot EVO Mobile application

External audio source support (microphone connected to the server directly or using additional hardware)

Combine video channel(s) with audio source from a different device

Organisations

Enterprise feature in Luxriot EVO Global for hosted solution providers or projects that require splitting of resources on a logical basis

Sub-administrator role with the ability to create/manage new user accounts inside the organization and also manage resource permissions

Resource management: channels, sub-administrators and regular users can be assigned to organisations

Failover Clustering

Failover setup for recording servers

Unlimited number of failover clusters and failover nodes (servers) available for Luxriot EVO Global without any extra fee

1-to-many, many-to-1 configurations supported

Automatic failover server start in case of a failure with an option to define time for failover event triggering

Automatic or manual switch back after main server recovery

Zero downtime (immediate substitution)

Failover server can be forcibly (manually) started to take over operation of a recording server, allowing server hardware maintenance procedures without any system downtime

Real-time node status monitoring

Central Server Mirroring

Redundancy feature for the central management server in Luxriot EVO Global

Mirror keeps the last good copy of the management server and provides the system with all required functionality if the main management server is down

Multicast Support

Video via multicast from cameras to server(s)

Server-client multicast (for Luxriot EVO Monitor applications)

Networks

Enterprise feature for sites with multiple different networks: provides centralized connection via central server address

TCP/IP routing configuration for Luxriot EVO Global installation

Makes system infrastructure transparent for the user

Groups

For easy resource management via Luxriot EVO Console

Grouping available for: servers, users, devices, channels, e-maps, shared layouts, layout templates, video walls, user buttons

Visual groups for resource arrangement in the Luxriot EVO Monitor application

Users

User details: login, password, email, organisation attachment, PTZ priority, number of incoming connections, group membership

Advanced permission control with detailed access levels

Detailed resource permissions for organizations, servers, networks, devices, channels, e-maps, user buttons, layout groups, video walls, and other resources

Administration profile for creating sub-administrator roles with limited management permissions

Membership in groups, nested and/or overlapping groups can be configured

Virtually unlimited number of users

User account control via server policy, global and per-user

Server policy includes password complexity settings for enhanced security and password expiration

Server policy allows to define a maximum number of simultaneous connections from a single user account, with the ability to override the global setting for individual users

AD & LDAP

Export of users from Active Directory or LDAP

Support for Active Directory groups

Automatic synchronisation for the deleted and newly created users

Active Directory accounts can be used for local and remote login via Luxriot EVO Console and Luxriot EVO Monitor applications regardless of used Windows account

Health Monitoring

Real-time monitoring of servers, devices, channels, user sessions, recording status, storage health, reports, indicators, video walls and external services (LPR, FR), as well as access control and OPC servers

Centralized monitoring for all servers in Luxriot EVO Global; direct monitoring of any server locally or remotely

Statuses and hardware load for remote servers

Connectivity, failover, video stream status, channel jitter

Recording information per stream and storage report, disk queue length monitoring

Live stream statistics for main and secondary video stream

Detailed recording statistics per-channel and per-storage, including total size and estimated data per day

Current client, video wall, external service connections

Connections from access control and OPC servers

Status and last execution time for automatic reports based on counters' data

Current states of all indicators in the system

Audit Log

- Logging of a vast variety of important events, such as: user actions related to server administration, resource management and access, archive access, internal system events like server connection/disconnection and configuration synchronisation
- Logging of any user-defined events, including external, via Event & Action configuration
- Event reports for servers and users
- Event filtering by period, by event or by server/user
- Audit export to a CSV file

E-Maps

- Bitmap based maps, all popular image types supported: JPG/JPEG, PNG, TIFF, BMP, static GIF; images of size up to 8.25 megapixels
- Geo maps based on the OpenStreetMap under the Creative Commons CC BY-SA license: any sector of the world map can be used as the map basis instead of the image
- GPS tracking of mobile devices for geo maps
- Map grouping for easier permission management
- Interactive and multilayer maps: markers for channels, layouts, user buttons and links to other maps for easy navigation, as well as access control doors and indicators
- Variety of icons and colours to choose from for each object placed on the map

User Buttons

- User button grouping for easier permission management
- Manual action controls for Luxriot EVO Monitor and Luxriot EVO Mobile applications: user buttons are used to manually trigger events, which can be linked to any available action including DO control, activation of recording profiles, various notifications etc.
- Schedules, timers and conditions can be applied in the Event & Action Configurator for user button related rules just as for any other regular Event & Action scenarios
- User buttons can be bound to any channel(s) and appear attached to these automatically in the Luxriot EVO Monitor application

Data Sources

- Receive, store, display and investigate textual data from third-party data providers like POS systems
- UDP, TCP and COM port can be used for feeding serial data to any server
- Data are stored embedded with the video stream, allowing to track timing at the investigation stage
- Text from a single data source can be split between multiple video channels

Live Podcasts

- Streaming of any live channel to third-party RTMP servers (e.g., Youtube, Wowza) for further broadcasting
- Video (main, secondary) stream and audio casting supported

Reports

- Daily, weekly, or monthly reports based on VCA or software counters
- Graphical representation: bar, line, pie type diagrams
- Reports are automatically sent to the specified email address in PDF format after the reporting period is over
- Get reports for any type of event, internal or external

Layout Templates

- Custom layout templates for the Luxriot EVO Monitor application
- Up to 20 rows/columns, up to 100 viewports per layout in total

Layouts

- Groups for sharing layouts between multiple Luxriot EVO Monitor applications throughout the whole system

Visual Groups

- Special group type for arranging resources on the Luxriot EVO Monitor application side
- Grouping of channels, maps, layouts and user buttons
- Multi-level (nested) visual groups for smarter channel management in client application

External Services

- LPR - Luxriot License Plate Recognition software (separate service and license)
- FR - Luxriot Face Recognition module (separate service and license)
- HTTP API interface for third party integration and events' exchange - e.g., access control systems, POS systems, building management systems etc.
- Centralized or direct connection to any server in Luxriot EVO Global systems

Integrations

- Third-party access control integrations (Keri Doors .NET, Keep by Feenics, Gallagher Controle Centre, Visual Access System by GSF Corporation, Roger RACS 5 and more coming)
- Access control: doors, live status changes, cardholder information
- Support for Camio services: cloud video analytics, label objects in the video for quick textual search
- Camio: video streaming, receive events, archive navigation based on Camio events, natural language search from client application
- Connection to OPC servers (OPC client functionality): support for multitude of industrial hardware devices
- Support for third-party textual data sources, e.g., Point-of-Sale terminals, and other serial text sources
- Support for audio- or event-only devices (IO modules, gunshot detectors etc.)
- Possibility to build automated Event&Action scenarios based on triggered external events, and send requests to external systems

Video Walls

- Quick and easy graphical configuration from the management console
- Any number of pre-configured video wall layouts, up to 20 rows/columns and up to 100 screens per layout in total
- Tiles (composite screen) - combine physical displays into virtual screens with single output

Client: Luxriot EVO Monitor

Free distribution - license free application

Multiple servers can be connected to a single Luxriot EVO Monitor and many Luxriot EVO Monitor applications can connect to a single server

Multiple displays for live view and main multi-purpose window

Local and remote video wall control

Automatic connection to all resources via central server - full system hardware and architecture transparency

Automatic re-connection to the mirroring server in case of main central management server failure

Automatic re-connection to recording servers for live view and playback in case of the central management server failure

Direct connection to recording servers supported for live view and archive access

Configurable viewport overlay controls in live mode and playback mode

Application themes: fully customisable interface colours with the ability to save a scheme for future reference

Application administration tool for choosing what functionality is available in every application instance

Single- and multichannel snapshot and video export from multiple archive investigation modes

Channel online/offline status reflected in the channel list and on interactive maps

Export of the search results to a comma separated value file for VCA, textual data, access control, license plate recognition and face recognition service data, as well as for third-party services integrated via HTTP API

Access to archive backup in native format with provided user account

Live View

- Live video streaming from server(s) to one or multiple client applications without delays, unicast or multicast
- Dual streaming support with automatic switching mode for optimal resource and bandwidth usage
- Overlay controls and stream statistics
- Snapshot export
- Two-way audio support, also for mobile phones
- Global and individual stream aspect ratio
- PTZ and digital PTZ, dewarp for fisheye and panomorph lenses
- Layouts (stored locally) and shared layouts (stored on the server
- Layout sequences
- Channel shortcuts: video overlay elements that act as links to other channels when clicked
- Configurable time presentation (local/server/UTC)

Instant Playback

- Playback of the newest footage simultaneously with the live view
- Supported for one or multiple viewports
- Used for presentation when investigating results from external services and data sources
- Configurable instant playback timeline duration and rewind interval
- Configurable default state: paused/autoplay
- Instant playback pop up on screen based on configured events

Archive Playback

- Multichannel playback with layout templates and a calendar for footage summary

- Channel layout is retained from live view mode
- Main or secondary stream playback preference
- Dual timeline presenting the currently selected channel and the summary for all channels present on the layout, with a possibility to disable the summary timeline
- Up to 128x speed playback in both directions
- Video, audio, VCA metadata, bookmark and motion marking on the timeline
- Controls for browsing timeline in both directions step by step
- Snapshot and video clip export
- Bookmark search
- Server-side VCA event investigation
- Archive calendar
- Archive interval protection and manual deletion (using special permissions)

Sequence Explorer

- Footage sequencing: splitting the video from specified time range into specified number of pieces
- Quick visual investigation of the footage by the means of repeated sequencing
- Down to 2 minutes each portion of footage
- Only video stream required, no extra prerequisites
- Instant playback and video export options

Smart Search

- Advanced archive investigation mode
- Search by motion region based on motion detection metadata
- Configurable threshold for distance between consecutive motion events
- Works for both device-side and server-side motion detection

Video and Snapshot Export

- Single snapshot export available in live view and in any archive view mode
- Multichannel snapshot export from multichannel archive playback
- Single channel video export from instant playback, multichannel playback, sequencing and smart search modes
- Multichannel video export with or without merging all channels into one picture, with the ability to combine video with audio from different source
- Video export in AVI, MKV, MP4 formats, as well as video export as frame series
- Supported codecs: native, JPEG, VP8
- Soft and hard subtitles
- Post-export watermark validation tool for all exported files to prove footage authenticity
- Exported files can be later played by common media players
- Portable player tool to ensure playback on computers without Luxriot EVO installed
- Export-time motion blur (privacy masking) with configurable blur level and sensitivity

Joysticks and DCZ Keyboard Support

- Default set of commands for keyboards and DCZ keyboards
- Custom command mapping for any type of keyboard/joystick
- All main application related actions can be bound to the keyboard shortcuts, e.g., archive navigation, channel control, PTZ presets and layout related actions

- Generic DirectShow compatible controller devices supported
- Multiple application windows can be controlled with joysticks and DCZ keyboards

Operation Modes

- Always on top: application window stays on top of other windows
- Exclusive: application does not allow accessing other applications until a pre-defined password is provided
- Locked: application controls are not available until a pre-defined password is provided
- Combined settings for operation modes
- Startup operation mode setting
- Screen saver overriding
- Admin tool for the Luxriot EVO Monitor application allows to define available interface elements and functionalities regardless of user permissions (Windows administrator right required to run the tool)

Screen Layouts

- Built-in layout templates for each Luxriot EVO Monitor application
- Custom layouts that can be saved locally on the client workstation or shared via central server
- Shared layouts: layouts are shared between all Luxriot EVO Monitor applications via central server
- Individual viewport settings (e.g., aspect ratio, map zoom) in the live view are saved with the layout
- PTZ presets and DPTZ positions for each individual camera are saved with the layout
- Layout sequences: automatically loaded series of layouts with the possibility of manual control and controllable time period per layout
- Default startup layouts and layout sequences

PTZ

- Generic PTZ: pan, tilt and zoom controls available for PTZ-capable devices
- PTZ controls for Luxriot EVO Monitor as well as for Luxriot EVO Mobile and Web clients
- DCZ keyboard and generic joystick support for PTZ control and related actions, such as calling presets
- HUD: Heads Up Display control overlay for Luxriot EVO Monitor application
- Classic virtual PTZ sphere as an alternative to HUD mode
- PTZ controls can be hidden via application settings for Luxriot EVO Monitor
- Presets with the option to save the last used preset with the layout
- PTZ Tours: custom sets of presets for the PTZ camera to follow, with users able to override these

Digital PTZ

- Supported for any video stream
- For live view and playback modes
- DPTZ settings saved and loaded with the layout for both channels and maps
- DPTZ presets
- Single video stream can be displayed multiple times with different regions of interest
- Zoom by mouse wheel
- Region mode with picture-in-picture preview
- Point-to-Click mode with picture-in-picture preview

Fisheye Dewarping

- Generic dewarp for any fisheye image with any resolution and aspect ratio
- Configurable via Luxriot EVO Console application using simple, user-friendly visual controls

- Region mode, 180-degree and 360-degree panorama

ImmerVision Enables® Panomorph lens support

E-Maps and Geo Maps

- Can be displayed in any viewport just like any regular channel, with the ability to use digital zoom
- Interactive map contents: click markers on the maps in order to display related contents, e.g. other maps and channels, and to trigger custom actions assigned to user buttons placed on the map
- Interactive markers for channels, layouts, links to other maps, user buttons, doors from access control integration
- Location of mobile devices is displayed on geo maps if GPS tracking is enabled

User Buttons

- Software buttons defined for each server via Luxriot EVO Console application and bound to any available action
- User buttons can be triggered from the button list, attached to any channel(s) in the viewports, and also activated from interactive maps

Alerts

- Alerts section for server connection errors and logging of user actions
- Client notifications from server E&A scenarios: popup messages, write to Alerts section, per-channel notifications, configurable sound alerts
- Individual notification area for each live channel with configurable font size and optional thumbnail

Library

- Pre-configurable library directory
- Pre-configurable default settings for snapshot and video export
- File export from the library to the external folder/disk, as well as removable media, CD and DVD burning included
- Watermark Validator and Portable Player tools can be included with the files copied externally

Data Sources

- Representation of serial textual data, e.g. POS feeds
- Live video overlay
- Investigation of recorded results embedded with the footage
- Review individual transactions

External Services

- Representation of data from LPR, FR and third-party integrations
- Live results in the notification area of each related channel
- Archive investigation with search options

VCA

- VCA metadata overlay for server-side Open VCA
- Playback mode: VCA search for counters and rules with instant playback with an option to export search results in CSV format
- Report generation based on counters for the desired period with configurable days/hours of interest
- Report export in PDF format

Access Control

- Live statuses
- Archive navigation based on events

- Cardholder information

Reports

- Graphs: build diagrams based on VCA or software counters (counter data present in the archive)
- Bar, line and pie type charts for the selected time period
- Heatmaps: visual reporting of motion intensity in the scene for the specified time period, based on recorded software-side motion metadata
- In-application reports and image export (JPG format for heatmaps, PDF format for graphs)

Video Wall

Convenient management of monitoring workstations in big installations with large number of displays in Luxriot EVO Global

Unlimited number of video walls - no extra fee

Up to 100 physical displays per each video wall - up to 20 rows/columns and up to 100 screens per layout in total

Tiled video walls (composite screen): use multiple physical displays for a single layout output, up to 9 physical monitors per single virtual video wall screen

Quick intuitive setup, configuration and management

Send individual channels, maps and layouts to the video wall manually via user interaction from the Luxriot EVO Monitor application or automatically via Event & Action scenarios, including half-automated solution with user buttons

Use video wall events in Events & Actions: detect if certain channel was placed onto a specific video wall screen or even a specific viewport on a video wall screen

Video wall actions in Events & Actions Configurator: pop up contents on the target part of the video wall

Instantly share the contents of any application window with any video wall screen

Once set up, remote video wall screens can be easily managed from any other Luxriot EVO Monitor application connected to the same server - no need to configure every display individually using local mouse/keyboard

Each video wall can be driven by any number of physical machines - no hardware dependencies

Watermark Validation

Portable tool provided with files exported to external media to prove footage authenticity
All data is signed while received and recorded
AVI, MKV, MP4 containers; JPEG and VP8 codecs supported for exported video data
Native archive validation

Portable Player

Independent lightweight tool for playing back files exported via Luxriot EVO Monitor application, as well as viewing native Luxriot EVO archive

Multichannel layout templates for the proprietary archive playback with synchronous playback of multiple channels

Own library for snapshots and video clips exported from the native archive playback mode

API/SDK

HTTP/CGI API

- Simplified API for third party software integration that allows interaction of third party services and Luxriot EVO servers
- Receive list of resources permitted for user account used
- Retrieve live main and sub video streams in HTML5 compatible format
- Retrieve archive video streams in HTML5 compatible format
- Receive and transmit audio data
- Stream video and audio to Luxriot EVO servers
- Retrieve snapshots (JPEG) from live and recorded video
- An option for unauthorized access to public resources
- Control pan, tilt, zoom, focus and presets (PTZ)
- Trigger actions on Luxriot EVO servers
- Receive Luxriot EVO events
- Push live data from third party software (e.g., Access Control, Point of Sale, Building Management, License Plate Recognition, Face Recognition and others)
- Retrieve third party recorded data in Luxriot EVO Monitor application

Client Kit API for customisable integrations with third party software systems, available functionality including:

- Access live video from one or multiple local or remote servers
- Access archived video from servers
- Configure camera and recording settings
- Receive motion detection notifications
- Create and delete media devices
- Adjust software motion detector properties
- Receive motion region information for media device
- Export archive video (with optional subtitles if exported with recompression)
- Pan/tilt/zoom/focus (PTZF) control motorized and otherwise PTZF-enabled cameras
- Is based on Microsoft Component Object Model (COM) technology and can be used with various development environments, including: Microsoft Visual Studio .NET (VB.NET, C#, C++) and earlier versions (VB), Borland/Inprise Delphi
- Already included in the software installation

Mobile Applications

Android & iOS ready

Connect over WiFi, 3G and 4G

Multiple server setup

Live video streaming for the main or secondary stream, stream preference based on output window size or manual setting

Live video statistics

Video playback - access to recorded main video streams with audio

Two-way audio in live view and audio playback for the recorded streams

PTZ control for live view: pan, tilt and zoom for PTZ-capable devices

PTZ presets and tours

Visual group support (channel grouping)

Chromecast support in the local network

Live video and audio streaming from mobile app to the server using the mobile phone's camera(s)

Edge video recording (live or offline)

GPS data transmission to the server

HTTPS support

No stream re-compression on the server side - no extra CPU or memory usage

1x1, 2x1, 2x2 and 3x2 stream layout templates

Custom layouts based on available templates

Snapshot saving

Widgets for single channel view with refresh rate from 30 seconds to 1 hour

Support for H.265

Per codec decoder configuration (software/hardware)

Battery usage monitoring when software decoding (battery-intensive) is used

User button support - any action defined on the Luxriot EVO server can be triggered from Luxriot EVO Mobile

Push notifications with an option to open archive for the corresponding camera and time

MacOS Thin Client

OS X and macOS compatible

Connect over cable, WiFi, 3G and 4G

Multiple server setup

Live video streaming for the main or secondary stream, stream preference based on output window size or manual setting

Live video statistics

Video playback - access to recorded main video streams with audio

Two-way audio in live view and audio playback for the recorded streams

PTZ control for live view: pan, tilt and zoom for PTZ-capable devices

PTZ presets and tours

Visual group support (channel grouping)

Chromecast support in the local network

Live video and audio streaming from mobile app to the server using the mobile phone's camera(s)

Edge video recording (live or offline)

GPS data transmission to the server

HTTPS support

No stream re-compression on the server side - no extra CPU or memory usage

1x1, 2x1, 2x2 and 3x2 stream layout templates

Custom layouts based on available templates

Snapshot saving

Widgets for single channel view with refresh rate from 30 seconds to 1 hour

Support for H.265

Per codec decoder configuration (software/hardware)

Battery usage monitoring when software decoding (battery-intensive) is used

User button support - any action defined on the Luxriot EVO server can be triggered from Luxriot EVO Mobile

Push notifications with an option to open archive for the corresponding camera and time

Web Client

Local and remote access via dedicated configurable HTTP port

HTTPS support

Live video streaming to browser Client application

Access to recorded video streams

Pan, tilt and zoom control for PTZ-capable devices

1x1, 1x2, 2x1, and 2x2 stream layouts with the ability to save the layout

Main and sub stream switching

No stream re-compression on the server side - no extra CPU or memory usage

License Plate Recognition

Designed to detect, recognise and register vehicle license plates with a high level of reading reliability

Intuitive installation process

Designed to work with Luxriot EVO with both live and recorded streams

64-bit

Runs as Windows service

Simple Web user interface for local or remote configuration

Works with any camera Luxriot EVO supports

Live result presentation in Luxriot EVO

Result browsing in Luxriot EVO

Event & Action (E&A) scenarios of Luxriot EVO server can be based on the recognition events

Can be used for vehicle access, traffic control and enforcement applications

High performance recognition with low error rate

Frame engine for accurate detection of fast moving vehicles

Configuration presets for typical scenarios based on the vehicle speed

Recognizes license plates from multiple countries

> Supported countries: AL DZ AR AU AT AZ BH BY BE BO BA BR BN BG CA CL CO CG CD CR HR CZ CU DK EG EE EC FN FR DE GE GH GR GT GG HK HR HU IN ID IR IE IM IL IT JE JO KZ KP KR KW LV LB LT LU MK MY MX MD MC NZ NL NG NO PK PY PE PH PL PT QA RO RU SA RS SG SK SL ZA ES SE CH TW TZ TN TR UA GB US UY VE VN

Recognition area adjustment for system load optimisation

Lighting conditions adaptive algorithm

Support for local and remote unlimited “White” and “Black” lists

Result re-filtering

Interface to external applications and devices

Storing recognized license plates and snapshots on local or central database

No imposed limitation on the number of cameras

Face Recognition

Designed to work with Luxriot EVO, Luxriot EVO S and Luxriot EVO Global
Suited for human resource control applications as well as for security and enforcement applications
64-bit
Runs as Windows service
Simple Web user interface for local or remote configuration
Works with any camera Luxriot EVO supports
Simultaneous multiple face recognitions
1-to-1 and 1-to-N face matching modes
Simultaneous processing of multiple video streams
Connection to one or more Luxriot EVO servers
Live result presentation of both tags and pictures in Luxriot EVO
Result browsing in Luxriot EVO
Result search based on the user-defined picture containing a face
Event & Action (E&A) scenarios of Luxriot EVO server can be based on the recognition events
Local or central database
No imposed limitation on the number of cameras