Technical Specification
Eocortex 2.8 / Eocortex Ultra 1.8

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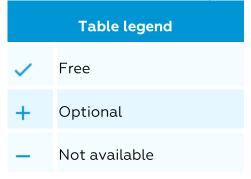
About Eocortex

Eocortex is a global provider of an open platform video management software with the strong intelligence of video analytics added. The software package is easy to layout, install, set up, and service. Regular updates and technical support are provided for free.

The present specification contains the review and the comparison of the capabilities provided by each type of the **Eocortex** licenses.

More details on the capabilities of **Eocortex** can be found in the documentation posted on eocortex.com.

Table legend	
✓	Free
+	Optional
—	Not available

Licensing features

Single **Eocortex** license permits the connection of one IP camera with the capabilities listed in the license documentation.

Client software, mobile applications and Web-client are provided free of charge.

The following types of Eocortex **Eocortex** licenses are available:

- **Eocortex ML** is a great solution for creating smaller systems with up to 20 IP cameras. It allows building a system with one server and two monitoring workstations. **ML** version does not support intelligent modules but, if necessary, can be upgraded to **LS** or **ST** versions.

- **Eocortex LS** is used to create an IP video surveillance system with up to 400 IP cameras. It allows combining up to 5 servers and 10 monitoring workstations into a single system; supports all intelligent modules. All modules for the **LS** version are available at an additional cost. If necessary, this version can be upgraded to **ST**.

- **Eocortex ST** allows an unlimited number of IP cameras, servers and monitoring workstations to be connected to a video surveillance system. This version includes several free intelligent modules; all other video analytic modules are available at an additional cost.

- **Eocortex ULTRA** allows an unlimited number of IP cameras, servers and monitoring workstations to be connected to a video surveillance system. This version includes 16 free intelligent modules; all other video analytic modules are available at an additional cost.

   License protection methods:

- **Hardware USB key**: the hardware key must be connected to the USB port of the video surveillance server. The hardware key may be installed on another server if required.

- **Software key**: at activation, the software key is tied to the specific computer and cannot be subsequently transferred to another video surveillance server.

Main features

FEATURE	VALUE	DESCRIPTION
Operating Systems	Windows 7 SP1 / 8 / 8.1 / 10 Windows Server 2008 R2 SP1 / 2012 / 2012 R2 / 2016 (for Intel x86 and x64) with the full functionality of abovementioned Windows versions	Operation systems that can be used for launching server applications of Eocortex
Video Stream Formats	MJPEG, MPEG-4, H.264, H.265, MxPEG	List of supported video codecs
Audio Stream Formats	PCM, G.711U, G.711A, G.722.1, G.726, G.729A, GSM-AMR, AAC	List of supported audio codecs
Standards	ONVIF (Profile S) PSIA (ver. 1.2) RTSP	List of supported video surveillance standards
IP Camera and Device Support	More than 5.500 models of more than 167 manufacturers. The detailed list is posted on the web site.	List of supported cameras and devices
Resolution	Limited only by IP camera capabilities	Resolution of the image obtained from the cameras
FPS	Limited only by IP camera capabilities	Framerate of the video stream received from the cameras
Interface Languages	Dutch, English, German, Italian, Russian, Spanish	Languages used in system settings and client applications

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION

Cameras per one server	20	80	Unlimited		Maximum number of cameras on one server
Servers in the system	1	5	Unlimited		Maximum number of servers in the system
Remote workstations	2	10	Unlimited		Maximum number of remote workstations
Video analytics (intelligent modules)	−	+	✓	✓	Processing of video using intelligent video analysis modules
PTZ camera management	✓	+	+	✓	Support of PTZ camera functions
Sound	✓	+	+	✓	Support of sound reception and transmission functions

High reliability and failover

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Reserved Drives	✓	✓	✓	✓	In case the main drive breaks down or fails to do the recording, the channel will be recorded by the reserved drives
Archive Mirroring (Backup Drives)	—	—	—	✓	Set simultaneous recording of the video archive and the database both on the mirror and main drives of the single server
Hot Swap	—	+	+	✓	In case of server failure, real-time broadcast of channels and archive recording are performed by the reserved servers; Switching between failed and reserved servers takes up to 10 seconds
Cold Standby	✓	✓	✓	✓	Cameras' settings protection in case the server breaks down
System Healthcheck	✓	✓	✓	✓	Self-diagnosis is the function aimed at the automatic search for the possible problems in a system. The users will receive the notifications of problem detections and will be able to solve the problems as soon as possible
Increased stability and safety of databases	✓	✓	✓	✓	The replication of the databases is done automatically. If a database is damaged, it will be automatically restored from the replication. Therefore, the Journal data is protected as well as the results of Suspect Search and Suspect Tracking

Devices

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
IP Network Connection	✓	✓	✓	✓	Connection via IP network to IP video cameras, network video recorders, video servers, encoders
IPv4 and IPv6 Support	✓	✓	✓	✓	Connecting cameras to IPv4 and IPv6 addresses, including auto search for such cameras in a network
Audio stream processing	✓	+	+	✓	Broadcasting and archiving of audio from IP cameras
Duplex Audio Mode	✓	+	+	✓	Sound transmission from the operator workstation to the camera's speaker or audio output
ONVIF™	✓	✓	✓	✓	ONVIF™ Profile S support
PSIA	✓	✓	✓	✓	PSIA version 1.2 support
IP Camera Auto Search	✓	✓	✓	✓	IP device auto search, if the IP device supports ONVIF or UPnP
IP Camera Remote Configuring	✓	✓	✓	✓	Configure IP camera settings remotely from Eocortex Configurator application: codec, resolution, frame rate, compression level (for certain camera models only)
Camera Network Ports Setup	✓	✓	✓	✓	Specify camera network ports when using non-standard ports of cameras for video streaming
Two Video Streams Parameters	✓	✓	✓	✓	Receives up to two video streams from IP camera, each stream with customizable parameters: codec, frame rate, resolution

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
IP Camera Motion Detector	✓	✓	✓	✓	Employ in-built IP camera motion detector
Devices Internal Archive Support	✓	✓	✓	✓	Archive viewing at DVRs (devices must support data transfer in MJPEG, MPEG-4 or H.264); Access to the internal archives of DVR and IP Cameras placed at SD-card, in-built HDD, etc.
DVR, Video Server and Video Decoder Support	✓	✓	✓	✓	Real-time broadcast and archiving of the video and audio streams received from IP and/or analog cameras connected to video decoders, video recorders and video servers; Support of PTZ functionality of such cameras
Devices Internal Archive Support	✓	✓	✓	✓	Archive viewing at DVRs (devices must support data transfer in MJPEG, MPEG-4 or H.264); Access to the internal archives of DVR and IP Cameras placed at SD-card, in-built HDD, etc.
Panoramic, Multi-Lens Camera Modes	✓	✓	✓	✓	Support of various modes used in panoramic and multi-lens cameras, including broadcasting of video streams received from different lenses on different channels (for certain camera models only)
IP Audio Encoders	✓	✓	✓	✓	Real-time broadcasting and archiving of individual audio channels (for certain devices only)
IP Intercom Support	✓	✓	✓	✓	Support of the two-way audio channel and access control system (for certain devices only)
DevicePack Support	✓	✓	✓	✓	Provides backward compatibility of IP cameras and devices: after the Server Application upgrade
Camera diagnostics	✓	✓	✓	✓	Diagnostics of cameras from Eocortex Configurator application in order to identify issues with their connection and functioning

PTZ camera management

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Basic PTZ functions	✓	+	+	✓	Support of basic PTZ camera functions: turning and tilting with adjustable speed of movement, zoom in/out (optical zoom), manual and automatic focusing
Service PTZ functions	✓	+	+	✓	Support of service PTZ functions: lens washing, wiper
I/O ports	✓	+	+	✓	I/O ports support
Transition by Presets	✓	+	+	✓	Transition by presets of PTZ camera
Auto Patrolling (Tours)	✓	+	+	✓	Create customized preset tours (routes of transition by presets); Stop auto patrolling while operating manually; Connect custom axes and buttons of PTZ joystick and PTZ control panel to the presets and tours
AreaZoom	✓	+	+	✓	Support of the AreaZoom function implemented in some cameras
PTZ Camera Management for Panoramic Cameras	✓	+	+	✓	Use PTZ camera management emulation for panoramic cameras
PTZ Camera Interactive Control	✓	+	+	✓	Manual PTZ camera control using a mouse, a touch screen, a keyboard, a game joystick, as well as the specialized PTZ consoles and joysticks
Virtual PTZ Joystick	✓	+	+	✓	Manage with the help of virtual PTZ joystick with custom rotation speed
Automatic PTZ camera control	✓	+	+	✓	PTZ camera control according to schedule or by a particular event

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
User setup of joystick and PTZ console	✓	+	+	✓	User binding of joystick axes. Binding of user functions to joystick and PTZ console buttons

Client application

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Eocortex Client application	✓	✓	✓	✓	Operate in the video surveillance system with Eocortex Client application; Access all the video surveillance features in several clicks: video real-time and archive video, configure and manage IP cameras, view events, employ video analytics (intelligent modules); Set custom settings for a number of parameters
Direct connection to cameras	✓	✓	✓	✓	Direct connection to cameras from the operator's computer
Connection to cameras thru server	✓	✓	✓	✓	Connection from the operator's computer to the servers to which the cameras are bound
Connection to cameras thru proxy server	—	✓	✓	✓	Connection from the operator's computer to one proxy server which, in its turn, is connected to the servers to which the cameras are bound
Event Log	✓	✓	✓	✓	Event Log contains information about all events registered in the system, including starting and stopping server applications, information about camera connections, settings changes, user actions, alarms, video analytics results and other events. To make it easier to find events in the log, you can filter and sort them by various criteria.
Decoding H.264 on GPU	✓	✓	✓	✓	Decode H.264 on GPU to reducing the CPU load during display. DXVA technology
Camera HTML-page Support	✓	✓	✓	✓	Open HTML-page of the camera in browser
Eocortex Client Auto Update	✓	✓	✓	✓	Set automatic updates of Eocortex Client when connected to a Eocortex server

Screen profiles and Video wall

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Display modes	✓	✓	✓	✓	A variety of display modes: full-screen mode and many screen grids with various quantities of cells (up to 262)
Drag and Drop IP Camera Transfer Between Screen Profiles	✓	✓	✓	✓	Drag and Drop IP Camera Transfer Between Screen Profiles
Digital Zoom Support	✓	✓	✓	✓	Zoom in real-time and while viewing archive, expand selected area to the full-screen
Custom Frame Dimensions	✓	✓	✓	✓	Set various frame dimensions during display: dimensions by default, stretching the cell size, automatic selection; Set custom frame dimensions for each cell individually
Video Stream Buffering	✓	✓	✓	✓	Increases the smoothness of the display due to frames buffering
Screen Profiles Configuring and Automation	✓	✓	✓	✓	Perform centralized customization of the screen profiles in a few clicks; Display a specific set of cameras placed on a grid template in multiscreen mode; Configure automatic grid change sequences with a custom period for display; Set default screen profiles; Create unlimited number of templates and lists of profiles; Display up to 262 cameras on a single screen
Multiple monitors	✓	✓	✓	✓	Support of multiple monitors on one workstation
In-built Video Wall	—	—	—	✓	Create a video wall of any number of monitors without any external devices

Archive playback

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Independent Archive Playback in Selected Cells	✓	✓	✓	✓	Run independent archive playback in selected cells, while real-time broadcasting in the other cells simultaneously
Synchronized Archive Playback of Multiple Cameras on a Single Monitor	✓	✓	✓	✓	Run time-synchronized archive playback on a single monitor; Supports up to 25 cameras simultaneously
Custom Control and Navigation Parameters	✓	✓	✓	✓	Customize the variety of control and navigation parameters: timeline, calendar, playback speed, play / pause, forward / back; Use timeline to define the presence of archive, move to the certain archive fragment
Smooth Playback of Combined Archives	✓	✓	✓	✓	Enjoy smooth automatic switch between the archives located on the server and the camera in case the archive is available on the camera only
Archive Bookmarks Support	✓	✓	✓	✓	Mark fragments with Archive Bookmarks, range bookmarks by importance and categories, add comments to the bookmarks; Filter Archive Bookmarks in the Event Log based on date and time, channels, importance and categories; Run archive playback from the bookmark in preview window from the Event Log, switch playback to the main window manually

Export and printout

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Real-time and Archive Video Frame Export	✓	✓	✓	✓	Make a screenshot in real-time or archive video; Save the image to the selected location; Frame Export Formats: JPEG, PNG, BMP
Real-time and Archive Video Frame Printout	✓	✓	✓	✓	Print out the image or selected area of the frame
Archive Video Export	✓	✓	✓	✓	Export selected video fragments from archive. Video Export Formats: AVI, MP4 (with or without timestamps), MCM (proprietary Eocortex format); Export time-synchronized video fragments from multiple channels (MCM only)

Site plans

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Site Plans Support	✓	✓	✓	✓	Place cameras, sensors and relays of the system on 2D site plans (maps); Display field of view coverage of all the cameras of the system at the single site plan; Display the frames received from the certain camera at the site plan; Display real-time video by pointing the certain camera of the site plan
Sensors and relays on plans	✓	✓	✓	✓	Displaying of sensors and relays connected to camera signal inputs and outputs on the site plans. Visualization of statuses of sensors and relays placed on the plans
Video analytics on plans	−	+	+	✓	Visualization of data of individual video analysis modules on the fields of view of the cameras placed on the site plans

User scenarios. Schedules

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Scheduled actions	✓	✓	✓	✓	Execution of actions or sequences of actions according to schedule. It is possible to create reasonably flexible schedules, varying from one execution of action to regular executions with different intervals: in a preset number of seconds, minutes, days; on a preset hour, weekdays, dates, months, and using several other parameters
Actions by events	✓	✓	✓	✓	Execution of actions or sequences of actions by occurrence of certain events. It is possible to set reasonably flexible conditions of the execution of actions
Automation actions	✓	✓	✓	✓	Available automation actions: Turn on recording; Turn on washer; Turn on Autofocus mode; Disable recording; Alarm generation; Add an event to intercom log; Run external application on server; Set main stream for archiving; Disable frame skipping when recording to the archiv; Send Push notifications to mobile devices; Send to messenger; Send report by email; Send event to Guard Center "Andromeda"; Send notification by email; Send notification by SMS; Pause; Send signal to Camera output; Save frame; Set camera position
Automation events	✓	✓	✓	✓	Available automation events: Large number of people in the queue; Large crowd of people; Fire; Call over the intercom; Loud sound; Motion; Smoke; External alarm start; Motion started; Inactive zone; Recognized license plates; Face Detection; Face recognized; Analog camera connection fail; No connection with camera; End of external alarm; Motion stopped; Abandoned object; Moving objects tracking; No connected camera; No hat; Users alarm; Video suveillance sabotage; Camera input signal; Honeywell Pro-Watch event; Siemens DMS8000 event; External event; Request to close gate; Request to open gate; Connecting to analog camera; Established connection with camera

Alarm management

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Guard Mode Support	✓	✓	✓	✓	In Guard mode, the user is notified (in Eocortex Client) if the alarm has been generated; This certain channel switches to the Alarm mode; Guard mode can run on schedule or manually
Alarm generation	✓	✓	✓	✓	Setup of automatic alarm generation when certain events occur on cameras put on guard. Generation of alarms by operators. Development of own alarm generation mechanisms using Eocortex API and SDK
Registration and processing of alarms	✓	✓	✓	✓	Registering of the alarms in an event log. Setup of actions and sequences of actions to be executed when an alarm is registered, including sending alarm notifications
Visual, Audible Alarm Signaling	✓	✓	✓	✓	Notify the operators on the alert event instantly with visual and audible alarm signaling system
Alarm Monitor	✓	✓	✓	✓	Set one of the monitors as an Alarm Monitor to display alarm events; Exclude certain channels from the Alarm Monitor's grid when a specified period passes after the alarm; Configure and display alarms on the Alarm monitor only
Alarm Cells	✓	✓	✓	✓	Use Alarm cells for certain channels to display alerts and alarms when the event is happening
Alarm Button	✓	✓	✓	✓	Enable user alarm for certain channels with Alarm button; Alarm button display is configured by the system administrator

Storage optimization

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Storage Modes Available	✓	✓	✓	✓	Continuous; at the operator's request; when motion is detected by the camera; upon Eocortex motion detector; on a schedule; upon a system event (scenario). Recording modes can be combined
Archive organization	✓	✓	✓	✓	The archive of each server stores the recordings of only those cameras that were bound to it at the moment of the recording. The archive is stored on the server's logical drives that are determined by the operation system. It is possible to use any acceptable devices as storage media: HDD, SSD, RAID, external storage drives, network drives, as well as their combinations. Archive Storage Format: the format received from an IP camera. The rate of recording and playback of the archive is only restricted by the hardware. To increase performance while using several logical drives, the recording is made to all the available drives simultaneously. If one of the drives becomes unavailable, the recording of new data to it stops and is redistributed to the available drives. Reciprocally, when the drive becomes available, the recording to it resumes. The archive has a circular structure: when the space allocated for it becomes fully used up, new archive files start to replace the oldest ones, overwriting them, taking into account the archive depth parameters set for each camera.

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Archive Size Optimization	✓	✓	✓	✓	Size is limited only by the drive storage and operating system; Various archive size limits can be set for each IP camera/group of cameras; Storage limits can be set for the each logical drive: maximum storage size, minimum allowable free space. Frame skipping reduces the storage space when no motion is happening; With H.264 reference frames can be chosen to be archived when no motion is noticed; Switching of Archiving from Alternate stream to the Mainstream allows to switch archive recording from an alternative stream (low quality, small archive volume) to the Mainstream (high quality, large archive volume) when certain system events occur (or scheduled)
Archive Replication	—	✓	✓	✓	Duplicate archive data received from the defined IP cameras to a dedicated replication server; Set custom parameters for the archive stored at replication server
Reports on archive depth	✓	✓	✓	✓	Users can get a report on the archive depth showing the archiving for particular days and cameras. The function will help to monitor the problems with cameras and the network. The report will be especially useful for large scale systems

Centralized configuration and management

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Centralized Setup	✓	✓	✓	✓	All configuration settings are made from the Eocortex Configurator application with remote or local connection to the Eocortex server
Eocortex Server Info	✓	✓	✓	✓	Eocortex Server Info is local console application used to notify a user about the current system state, to run and stop Eocortex Server service and open Eocortex Configurator application
IP Camera Remote Preview	✓	✓	✓	✓	Preview the video stream from this camera before applying new settings
Device Settings Transfer	✓	✓	✓	✓	Copy settings of the devices and apply to the new ones: connection parameters, scenarios, schedules, video analytics (intelligent modules) settings
Device Group Settings	✓	✓	✓	✓	Apply settings to the groups of devices: connection parameters, scenarios, schedules, video analytics (modules) settings
Drag and Drop IP Camera Transfer Between Servers	—	✓	✓	✓	Transfer IP camera from one server to another in a few seconds
Multiserver systems	—	✓	✓	✓	Integrating several servers, including those geographically distributed, into one system thru local and global TCP/IP networks
Centralized setup of distributed video surveillance systems	—	✓	✓	✓	To set up a multiserver system, it is just required to connect to one of the servers of the system

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Applications Auto Start	✓	✓	✓	✓	Configure automatic start of Eocortex application after the start of operating system; Configure automatic authentication after the application start
Versions Compatibility	✓	✓	✓	✓	Compatibility of client software with server software of other versions (other than the client software version)
Centralized update of all the servers in a system	✓	✓	✓	✓	The capability to remotely update all the system's servers from one application; it is also possible to roll back to the previous version remotely
System Health Monitoring	—	—	—	✓	Monitor the current state of Eocortex server parameters: accessibility, status, CPU usage, memory usage, analysis system usage, archiving system usage, client-server system usage, network usage, hard drives status, connected cameras status; Monitor the current state of multiple servers simultaneously

Video analytics (intelligent modules)

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Motion detector	✓	✓	✓	✓	Detect movement in the frame by real-time video stream analysis; Set several detection zones and limiting dimensions of detected objects for each zone; Use Motion Detector metadata both to start the archiving and for further video analysis
Auto zoom	—	✓	✓	✓	Display a separate zoomed-in area of the frame with the moving objects
Loud sound detection	—	+	+	✓	Detect an excessive audio level registered by the camera microphone
Fire and smoke detection	—	+	+	✓	Detect the presence (emergence) of smoke, fire
Abandoned object detection module	—	+	✓	✓	Detect abandoned objects and highlights them up on the screen
Hard Hat detector	—	+	✓	✓	Detect people not wearing hard hats
Sabotage detector	✓	✓	✓	✓	Detect camera defocusing, panning away from pre-defined view, illumination and overlapping
People counting in queue module	—	+	+	✓	Count people in queues; if necessary, it notifies the operator should the number of people exceed a preset limit in a given queue, allows building temporary reports
Interactive search	—	+	✓	✓	Interactive object search in archive by uploaded photograph or by object's characteristics: color, dimensions/size, position in the frame, shape
Personnel monitoring module	—	+	+	✓	Perform remote monitoring of the staff activities at workstations

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Suspect tracking	—	+	✓	✓	Tracking moving objects in the field of view of multiple cameras
Shelf Fullness Check	—	+	+	✓	Fullness monitoring of shelves in a store in order to fill them with merchandize in time
Face detection	—	+	✓	✓	Detect faces in the frame
Crowd counting module	—	+	+	✓	Notifies the operator should the quantity of people exceed an indicated limit
People counting module	—	+	+	✓	Count the number of entering and existing visitors — either through one or several inputs; create customized reports
Fisheye dewarping module	—	+	+	✓	Expand a spherical image from the Fisheye camera in three ways: double panorama, in simulation PTZ mode, in 4x90 mode. Expansion in real time and while playing archive
Licence plate recognition	—	+	+	+	Available for 150 countries: detection of license plates in the frame; events archive; maintaining a database of license plates with different settings for each license plate; maintaining multiple lists; interception of license plates by the list; barrier control by the list or by an operator command; export to Excel; determining the movement direction; output of license plates on bases of different color, depending on groups; differentiation of access rights; import of license plates databases using external files
Face Recognition (Complete)	—	+	+	+	Recognition of faces using a database. Determining sex and age of recognized persons. Recognition of faces using an archive. Creation of reports.
Face Recognition (Light)	—	+	+	+	Recognition of faces using a database. Creation of reports.

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Face Recognition (Basic)	−	+	+	+	Recognition of faces using a database. Creation of reports, including the option of sending them in accordance with the preset schedule.
Unique Visitor Counting	−	+	+	+	Creation of unique visitor counting reports based on face detection and recognition, including the reports regarding age and sex pattern. It is possible to exclude certain groups from the calculation to avoid, for example, counting employees.
Heat map module	−	+	+	+	Create heat maps based on traffic in different areas of the frame
Tracking module	−	+	✓	✓	Track moving objects in a camera's field of view. Alert generation on intersecting lines and borders (one way or both ways), entering the dedicated zone, prolonged stay in the zone, alert search in archive; interactive archive search on intersecting lines set by an operator

Mobility

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Eocortex Web-client	✓	✓	✓	✓	Viewing of real-time and archived video in any browser with HTML5 support. Possibility to perform authorization using an Active Directory account
Mobile client for Android	✓	✓	✓	✓	Viewing of real time and archived video on Android devices, including listening to camera audio and PTZ camera control
Mobile client for iOS	✓	✓	✓	✓	Viewing of real time and archived video on iOS devices, including listening to camera audio and PTZ camera control
Internal Chat	—	—	—	✓	Exchange messages, screen profiles and certain settings between the users
Integration with messengers	✓	✓	✓	✓	This service connects the Eocortex servers and the popular messengers, allowing to receive the images from the cameras, event notifications, server status reports and other information via the messengers

Security

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
User Rights Management	✓	✓	✓	✓	Perform centralized or distributed management of all User rights in the system; Customize User rights for the variety of actions available in the system; Differentiate user rights basing on the groups of users; Customize User access rights to the certain IP cameras in the system, Differentiate User rights for real-time broadcasting and archive viewing for each IP camera; Main server of the system provides centralized authentication and user permissions checks; Cameras will not be displayed in the Client Application, if the user does not have rights to view them
Support of Microsoft® Active Directory	—	—	—	✓	Support of Users and User Groups in Microsoft® Active Directory
Secure connection	✓	✓	✓	✓	Usage of TLS and SSL security certificates for encoding data transmitted between cameras and servers working with Eocortex, as well as between the servers and client applications, including mobile and web ones, and also the Eocortex Configurator application.

Centralization and scaling

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
Additional Main Drives	✓	✓	✓	✓	Scalable directly attached storage space
Multiserver Architecture	✓	✓	✓	✓	Ensures high flexibility of the system and resiliency of its components
Main and Reserved Servers	—	✓	✓	✓	By default, one server in the system is assigned as the Main Server, and the others are Reserved. System configuration parameters are stored on the Main Server: user rights, roles of the servers, channel settings (including the connection parameters, scenarios, schedules and video analytics parameters), channels distribution settings, backup and archive replication settings, screen profiles, site plans; Each Reserved Server stores the backup of system configuration parameters
System interconnection	—	✓	✓	✓	To connect to a video surveillance system of another multiserver system, just connect one of the system's servers: the other servers will be connected automatically
Disconnection of servers	—	✓	✓	✓	When a server is disconnected from the multiserver system, all the cameras bound to it are disconnected as well; the camera settings remain. Thus, the simple and trouble-free migration of servers between multiserver systems is ensured

Integration with other systems

FEATURE	ML	LS	ST	ULTRA	DESCRIPTION
SDK	✓	✓	✓	✓	The set of libraries and code samples in C # not only ensure seamless integration of third-party products with Eocortex, but also allow to develop proprietary video surveillance system components
API	✓	✓	✓	✓	Contains a list of API, Json- and XML-requests; allows integrating Eocortex software with various applications
Flash-Component for Web-sites	✓	✓	✓	✓	Allows real-time audio and video broadcasting, as well as controlling PTZ cameras
Integration with Honeywell's Pro-Watch®	✓	✓	✓	✓	Receiving events from Honeywell's Pro-Watch®, setting response for these events, and viewing the received events in the Events Log of the Eocortex Client application.
Integration with Siemens DMS8000	✓	✓	✓	✓	Integration Eocortex software with Access Control and Fire Alarm system Siemens DMS8000