OCULARIS ENTERPRISE

Ocularis is the video management system for enterprise and corporate projects with an emphasis on tactical real-time operations and live visualization. From convenience stores to citywide deployments and everything in between, Ocularis can scale up to accommodate an infinite number of cameras to match your growing system needs.

Ocularis lets you record video from IP network cameras—as well as analog cameras using encoders—and can enhanced by integrating advanced tools like smart motion detection, access control, biometrics, and behavior analytics.

The Ocularis platform is offered in three models—Professional, Enterprise and Ultimate—to meet the needs of organizations of all sizes and types.

Ocularis Enterprise provides centralized management of users, cameras and servers and features recording server failover, redundant management servers.

Ocularis Enterprise’s capabilities can be extended with the optional Ocularis VideoWall which allows for collaborative control of video walls at multiple command and control centers.

For the full list of features, see the Ocularis Architecture & Engineering (A&E) document, available by request.
FEATURES

EASILY CONNECT MANY SECURITY RELATED APPLICATIONS

The Event Interface (SEI) breaks new ground to connect Ocularis to third-party security products using a flexible, driver-based approach. All events from third-party applications such as access control, burglar alarm and many more can now be visualized within the Ocularis client, for example by displaying them in maps and floor plans or opening the relevant camera streams.

OPEN ARCHITECTURE FOR EASY INTEGRATIONS

With the newly available Analytics Interface (SAI), Ocularis now also provides an open and standardised interface for technology and solution partners to easily develop plugins to connect Ocularis with their product portfolios. By using the SAI, any edge or server-based license plate recognition solution on the market can now be easily integrated.

CENTRALIZED MANAGEMENT OF USERS, CAMERAS AND SERVERS

Ocularis Enterprise provides easy control and management of the entire system; user access and privileges, camera and server configurations, maps and alerts. Built-in support for Microsoft Active Directory™ authentication provides for simple and secure Single Sign-On (SSO) access to the system.

FAILOVER AND REDUNDANCY INCLUDED FOR MAXIMUM UPTIME

Ocularis Enterprise includes at no extra cost both recording server failover and redundant management server capabilities to keep your critical video system operational 24/7.

END-TO-END DATA SECURITY

Ocularis uses modern TLS 1.2 encryption protocols to secure camera-to-server communications, server-to-server communications and Client-to-server communications. Recorded video is protected by utilizing a randomized data structure containing no camera identification information.

NO PROPRIETARY HARDWARE REQUIREMENTS

Ocularis runs on non-proprietary, off-the-shelf PC hardware and is also supported in virtual environments such as Microsoft Hyper-V and VMware. Ocularis supports the leading manufacturers’ cameras and devices—including almost all embedded analytics and features—as well as the ONVIF and ONVIF Profile S standards allowing you to use the right camera technology for your application.

COMPOSITE EVENTS (EVENT FUSION)

Composite Events are created by linking two events or alerts, configured by sequence order, time interval and logical conditioning (e.g. ‘If Door ‘A’ opens, but no motion detection on Camera ‘N’, within 15 seconds’). Composite Events can be fused with other events to create complex detection scenarios, and assigned priority for push video and handling by Ocularis Client operators.

OPEN-ARCHITECTURE NON-PROPRIETARY TECHNOLOGY

Ocularis runs on non-proprietary, off-the-shelf PC hardware and supports leading manufacturers’ cameras and devices. Support is built-in for all industry-standard compression formats (MPEG-4, MJPEG, H.264, H.265 and MxPEG) and the ONVIF and ONVIF Profile S standards. Ocularis Base and Ocularis Recorders are also fully supported in virtual environments such as VMware and Microsoft Hyper-V.

AUTOMATIC RECORDER PATCH UPDATES

Recorder patch updates are automatically downloaded and applied in Ocularis 5, keeping the system up-to-date and secure. Administrators may also choose to download and install patches manually. This is the most effective way to make sure all of your servers are updated 100% of the time.

DYNAMIC DATA MANAGEMENT

Ocularis Professional features efficient and dynamic data management with automatic load balancing across multiple storage volumes with no archiving requirements.
FEATURES

VIDEO BACKUP
Automatically create a copy of your video data in another location - either on-site or off-site - to protect your important recordings. Video Backup can also be used with mobile NVRs in transportation applications to offload video from a bus, train, delivery van or patrol car to a central location for review.

FLEXIBLE RECORDING OPTIONS
Ocularis features both Standard (continuous) and Alarm Recording, based on motion detection or other alarm input. Each recording mode can be configured with different retention policies ensuring that all critical video data is captured and saved. Alarm Recording can also be configured to use a secondary stream for added recording flexibility and optimal utilization of storage.

SERVER-BASED DETECTORS
In addition to supporting camera-based motion detection and analytics, Ocularis 5 also includes efficient server-based motion detection with multiple regions of interest, each with their own sensitivity and threshold adjustments. Ocularis 5 also includes server-based tampering detection and reference image comparison to monitor the status of your cameras.

SYSTEM HEALTH MONITORING
Ocularis provides real-time and detailed information to system administrators including disk utilization, camera status, bandwidth utilization as well as email and SMS alerts upon errors and other issues.

SMART CAMERA DRIVERS
Smart Camera Drivers for Allnet, Arecont, Axis, Bosch, Convision, Canon, Dahua, Eclipse, FLIR, Grundig, Hikvision, Interlogix, Northern, Panasonic, Hanwha Techwin, Sony, THK Security, Vanderbilt, Vivotek and more support almost all embedded analytics and features allowing full use of the camera’s capabilities including the latest H.265 HEVC compression.

SUPPORT FOR THOUSANDS OF OTHER CAMERAS
Ocularis 5 also supports thousands of cameras from dozens of technology partners with model-specific drivers and also includes full support for ONVIF and ONVIF Profile S compatible cameras. Ocularis’s extensive camera support allows customers to choose the right camera for the application.

CRITICAL CAMERA FAILOVER
Ocularis features automatic switching of interrupted or disconnected video streams in any live view within 2-3 seconds—including maps and blank screen events—to designated alternate camera streams. This unique feature ensures operators never lose sight of the situation.

MULTI-STREAMING SUPPORT
Ocularis 5 takes advantage of multiple streams from cameras to minimize bandwidth usage to web, mobile and desktop Clients. With automatic stream selection, Ocularis Client displays the optimal stream for viewing. Multiple streams can also be used to optimize recording by using a lower resolution stream for Standard Recording and a full resolution stream for Alarm Recording.

CENTRAL MANAGEMENT FOR USERS, ALERTS VIEWS AND MAPS
Client operators are managed by the Ocularis Base, which coordinates all event and alert handling, manages users’ rights to specific cameras and functions system-wide (Active Directory supported), and distributes all shared assets.

USER AUDIT LOGGING
All user and administrator activity may be logged by enabling audit logging in Ocularis Base. A built-in query tool provides easy-to-read, color-coded results with export capability for further investigation and statistical reporting.
**FEATURES**

**VIDEO FLAGGING**

Operators can flag video for later reference, within the Ocularis Client if they see something of interest. Flags may also be created on recorded video.

**INTUITIVE UNIFIED DESKTOP CLIENT**

Ocularis Client offers a user-friendly operator interface with support for up to 8 displays with independent functionality and local video-wall capability. Ocularis Client requires only minimal training and free operator Client training is available online.

**ADVANCED WEB AND MOBILE CLIENTS**

Up to 16 cameras can be viewed live in both the Ocularis Web Client and Mobile apps. Playback, Alert Handling and AVI Export are also supported. Ocularis Mobile apps are available for Android and iOS devices free of charge and the Web Client supports multiple browsers across Mac and PC.

**UNLIMITED SHARED AND PRIVATE VIEWS**

On the desktop, Ocularis Client users can create and save an unlimited number of views of different sizes (up to 8 x 8 panes), consisting of camera streams, carousels, hotspots, web pages and Blank Screen panes for receiving automatic (on-event) and manual (peer-to-peer) push-video alerts.

**LIVE MONITORING WITH INSTANTANEOUS INVESTIGATION**

While monitoring live video feeds, users can perform basic investigation on individual cameras—playback, digital PTZ and optical PTZ (for PTZ cameras)—without the need to switch to a dedicated investigation mode.

**360-DEGREE CAMERA DEWARPING**

Ocularis Client features native dewarping of 360-degree cameras from ACTi, Axis, Bosch, OnCam Grandeye, Panasonic, Pelco, Samsung, Sentry 360, and Vivotek as well as for cameras equipped with the ImmerVision Panamorph lens.

**EXCLUSIVE INVESTIGATION TOOLS**

Ocularis Client’s dynamic TimeSlicer™ can shorten investigation time to seconds instead of hours or even days by quickly showing thumbnails in different time steps or via built-in motion detection. The Kinetic Timeline™ provides fast access to continuous historical data with a backwards and forwards swipe navigation and color codes to help identify recorded video.

**MULTI-LANGUAGE SUPPORT**

Ocularis Client includes support for Arabic-Modern Standard, Chinese (simplified), Dutch, English, Finnish, French, German, Hebrew, Italian, Japanese, Korean, Portuguese, Russian, Spanish and Swedish.

**SHARED EVENT HANDLING**

All events generated within the Ocularis system—or integrated 3rd-party systems—can be handled from any Client with real-time alerting via pop-up video in the desktop Client, notifications on the Mobile Clients or pop-up alerts on the Web Client. Alerts can also be displayed on maps and shared with 3rd-party systems.

**CAPTURE VIDEO ON-THE-SPOT**

With M2O™ (Mobile-to-Ocularis), mobile devices can be used to stream video into Ocularis*, just like another IP camera.

*Requires a camera license.
RecOn5 Servers and NVRs have been certified to work with Ocularis. For more information visit our website.

**SYSTEM COMPONENTS**

**OCULARIS CLIENT**

Unified operator interface for live monitoring, playback and investigation, alert management, map navigation and local VideoWall control for workstation connected displays.

**OCULARIS RECORDER**

The Ocularis Recorder is built upon the foundation of the Core management service and one or more servers running the Device Manager service. These may be installed together or on separate servers. System configuration, alarm processing and video data storage are handled by the Ocularis Recorder components.

**OCULARIS BASE**

Manages the flow of event, user and system status data from the various system components. Provides Active Directory authentication for Client operators.

**OCULARIS MEDIA SERVER**

Enables web and mobile access to video and alerts and also serves as the gateway for M2O™ video from mobile devices.
## Feature Set Comparison

<table>
<thead>
<tr>
<th>Ocularis System Feature</th>
<th>Professional</th>
<th>Enterprise</th>
<th>Ultimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cameras per system</td>
<td>Unlimited</td>
<td>Unlimited</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Number of recorders per system</td>
<td>Unlimited</td>
<td>Unlimited</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Number of concurrent client connections</td>
<td>Unlimited</td>
<td>Unlimited</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Ocularis Mix &amp; Match - combining multiple recorder types in a single system</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ocularis OpenSight™ option for sharing video between Ocularis systems</td>
<td>Remote</td>
<td>Remote</td>
<td>Main/Remote</td>
</tr>
<tr>
<td>Critical Camera Failover for camera failure protection</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Centralized user management with color-coded audit logging of user activity</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Includes Active Directory support for secure system access</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Data Link and Network I/O event integration</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Event Fusion / Composite Events</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ocularis Web and Mobile Clients included with optional M2O (Mobile-to-Ocularis) video streaming</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Event Actions including move-to-PTZ-preset, email, TCP/UDP and HTTP messaging</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Ocularis Client Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Professional</th>
<th>Enterprise</th>
<th>Ultimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>License-free and unlimited Ocularis Client installations and connections</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Multi-level map navigation with live camera previews</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Support for 8 independently controlled displays from a single workstation</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Touchscreen support with interactive overlay controls</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Local VideoWall control of workstation connected displays</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Remote VideoWall function for command and control centers</td>
<td>No</td>
<td>Optional</td>
<td>Standard</td>
</tr>
<tr>
<td>Dynamic TimeSlicer™ thumbnail search and Kinetic Timeline™ for quick and easy investigations</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Create, save, and manage unlimited shared and private views</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>TLS 1.2 encryption for client-server communications</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Secure multi-camera database export with included Viewer (with or without audio)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Snapshot still image export and printed incident report</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Single camera AVI export capability (with or without audio)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Multi-camera Bookmarking function to preserve important video</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Support for USB joysticks for PTZ control</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Alert management with support for metadata overlays on maps and video</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Video Flagging to quickly and easily mark a moment in time for later review</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Ocularis Recorder Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Professional</th>
<th>Enterprise</th>
<th>Ultimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cameras per server</td>
<td>128</td>
<td>Unlimited</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Centralized recorder management</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Fully redundant recorder manager without using clustering</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Automatic recorder patch update service</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Automatic failover of recording servers</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Efficient and dynamic data load balancing with no archiving requirements</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Video data aging (grooming) for long term storage optimization</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Automatic mirroring of video data to failover recorder for complete redundancy</td>
<td>No</td>
<td>No</td>
<td>Optional</td>
</tr>
<tr>
<td>Automatic edge recording retrieval after network disconnect</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Automatic Video Backup of important data to another location</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Support for H.265, H.264, MPEG-4, MJPEG, and MxMPEG compression formats</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Support for camera-based analytics including Axis Dynamic Event Stream</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Server-based motion detection, tampering detection and reference image comparison</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Support for thousands of IP cameras plus ONVIF, ONVIF Profile S, generic RTSP and MJPEG drivers</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Smart Camera Drivers for most major camera manufacturers (See our supported devices list on the web for complete details)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Support for multi-streaming from cameras for efficient bandwidth utilization</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>TLS 1.2 and HTTPS (SSL) encryption for camera to recorder communication</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>License-free digital input/output device support (number of devices)</td>
<td>5</td>
<td>Unlimited</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Simultaneous Standard and Alarm Recording with separate retention policies</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Incoming audio recording for supported cameras</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Two-way audio support for select cameras and audio-only devices</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Multicast live view from recorder to Ocularis Client</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
ABOUT
Qognify helps safeguarding your world, focusing on the outcomes of customers, who place a premium on physical security. Providing solutions to mitigate risks, increase security and optimize operations, Qognify serves thousands of customers all over the world as a trusted advisor. The comprehensive portfolio of Qognify contains physical security and incident management solutions, which create value for many sectors.

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SYSTEM REQUIREMENTS

SUPPORTED OPERATING SYSTEMS (ALL 64-BIT)

- Microsoft Windows® 7 SP1 (Professional, Ultimate, Enterprise)
- Microsoft Windows® 8.1 (Standard, Professional, Enterprise)
- Microsoft Windows 10 (Updates: Anniversary, Creators, Fall Creators) (Professional, Enterprise)
- Microsoft Windows Server® 2008 R2 SP1 (Standard, Enterprise)
- Microsoft Windows Server® 2012 (Standard, Datacenter)
- Microsoft Windows Server® 2012 R2 (Standard, Datacenter)
- Microsoft Windows Server® 2016 (Standard, Datacenter)
- Microsoft Windows Server® 2019 (Standard, Datacenter)

HARDWARE RECOMMENDATIONS

All Ocularis components may be installed on the same PC/server

OCULARIS BASE*

- CPU: Intel Core i3 or better
- RAM: 8 GB
- Hard Drive: Minimum 250 GB
- Software: Microsoft .NET 4.6.2 Framework; IIS 6.0 or newer

OCULARIS RECORDER*

Recommended:

- CPU: Intel Core i7-4930K @ 3.40GHz or Intel Xeon E5-2640 v3 @ 2.60GHz
- RAM: 16 GB
- HDD: 500 GB free disk space @ 7200 RPM for OS and Applications Additional storage as required for video storage
- Network: Ethernet with 1000 MBit/s. Do not team NIC’s except for fault tolerance (Bandwidth aggregation not supported)

Minimum:

- CPU: Intel Core i3 M 370 @ 2.40GHz
- RAM: 8 GB
- HDD: 100 GB free disk space for OS and Applications
- Additional storage as required for video storage
- Network: Ethernet with 1000 MBit/s. Do not team NIC’s except for fault tolerance (Bandwidth aggregation not supported)

OCULARIS MEDIA SERVER*

- CPU: Intel® Xeon® E3 Series or Intel® Core™ i5 (or better) recommended
- RAM: Minimum 8 GB (reserve 4GB for Oculris Media Server if installing with other Ocularis applications)
- Hard Drive: 50GB or more
- Software: Microsoft .NET 4.0 Framework, .NET 4.6.2 Framework and Internet Information Services (IIS) 6.0 or newer

OCULARIS CLIENT**

- CPU: Intel Core i5™ or better
- RAM: 8 GB minimum (16 GB or more recommended)
- Software: DirectX 9.0 or newer, Microsoft .NET 4.6.2 Framework
- Graphics Adapter: PCI-Express, minimum 256 MB RAM

*May be installed on the same PC/server (all-in-one system) and is also supported in virtual environments
** Supported in virtual environments

Please visit the Online Storage and Hardware Calculator for detailed system requirements or contact us.