Ocularis 5

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

Ocularis is OnSSI's innovative and cost effective open platform Video Management Software (VMS) designed to enhance your security while simplifying your daily workload. 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 both analog video and video from newly integrated IP network cameras, and can become your Physical Security Information Management (PSIM) platform, putting you in control of advanced tools and enhanced integrations 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.

The Ocularis Professional model is designed for organizations operating at single or multiple locations with no size limitations. It supports live monitoring and playback with multiple investigation tools.

FULL-FLEDGED VMS WITH PHYSICAL SECURITY INFORMATION MANAGEMENT (PSIM) FUNCTIONALITY

Ocularis manages video and event data received from cameras connected to multiple recording servers, as well as from physical security, content analytic, environmental detection, transaction and other enterprise systems.

DESIGNED FOR INTEGRATION

Ocularis allows the integration of a host of add-on components via integration tools including Data Link integration events, API commands, contact closure and more. A free Software Development Kit (SDK) is also available for 3rd-party manufacturers to integrate their systems into Ocularis.

OPEN-ARCHITECTURE NON-PROPRIETARY TECHNOLOGY

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

OCULARIS MIX & MATCH

With Ocularis, users can use multiple different recorders under the same Base, allowing them to tailor their system to meet their exact needs. Legacy Ocularis systems can be easily expanded using Mix & Match without having to upgrade the entire system.

DYNAMIC DATA MANAGEMENT

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

SYSTEM HEALTH MONITORING

Ocularis provides real time and pertinent information to system administrators including disk utilization, camera status, support for SMNP monitoring as well as email and SMS alerts upon errors and other issues.

MODERN 64-BIT VMS

Ocularis has been updated with all 64-bit components for efficient use of computer and server resources.

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 reduction in storage requirements.

CRITICAL CAMERA FAILOVER

Ocularis Client features automatic switching of interrupted or disconnected video streams in any live view – including maps and blank screen events – to designated alternate camera streams.

CENTRAL MANAGEMENT FOR ALERTING, SHARED EVENT HANDLING, CLIENT ASSET AND USER AUTHORIZATION DATA

All hardware and system 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 activity may be logged by enabling auditing in Ocularis Base. An easy-to-use query tool provides easy-to-read, color-coded results and export capability for further investigation and statistical reporting.

FEATURES

END-TO-END DATA ENCRYPTION

Ocularis features encryption of all communications between servers and clients, and also supports HTTPS encryption between devices and recorders. Ocularis also supports the latest TLS 1.2 security protocol for securing camera-to-server communications and for server-to-server communications.

COMPOSITE EVENTS ('EVENT FUSION')

Composite Events are created by linking two camera 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.

SMART CAMERA DRIVERS

Smart Camera Drivers for Allnet, Arecont, Axis, Bosch, Convision, Canon, Dahua, FLIR, Grundig, Hikvision, Interlogix, Northern, Panasonic, Hanwha Techwin/Samsung, Sony and THK Security allow the use of new camera models immediately without waiting for a model-specific driver. Ocularis 5 also supports thousands of cameras from dozens of technology partners, and also includes full support for ONVIF and ONVIF Profile

SERVER-BASED MOTION DETECTION

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.

AUTOMATIC RECORDER PATCH UPDATES

Recorder patch updates can be automatically downloaded and applied in Ocularis 5, keeping the system up-to-date. Administrators may also choose to download and install patches manually.

MULTI-STREAMING SUPPORT

Ocularis 5 supports smart multi-streaming, which can automatically deliver a full resolution or low resolution stream to Ocularis Client based on the viewing needs of that Client. Views can also be configured to use a low bandwidth stream by default to conserve bandwidth.

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Code: 011018 v5.5

EXCLUSIVE INVESTIGATION TOOLS

Ocularis Client's dynamic TimeSlicer™ senses motion in an area and brings the operator right to that video thumbnail in seconds instead of hours or even days. 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.

INTUITIVE UNIFIED VIDEO CLIENT

Ocularis Client offers a user-friendly operator interface for both desktop and control room video-wall environments, with only minimal training required for full proficiency.

360-DEGREE CAMERA DE-WARPING

Ocularis Client features native de-warping 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.

MIXED CONTENT VIEWS

Users can select among unlimited 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.

MULTI-LANGUAGE SUPPORT

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

SHARED EVENT HANDLING

All events generated within the Ocularis system, or detected by external/add-on devices, are entered in a dynamically-updated list, shared among all authorized users. Users are able to access, investigate and handle events directly from a dedicated event handling interface, with an on-map indicator of the camera that triggered the event and dual video panes displaying the recorded event and a live stream.

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.

ACCESS VIDEO ANYWHERE

Ocularis desktop, web, and mobile clients are provided license-free so video can be accessed from almost anywhere.
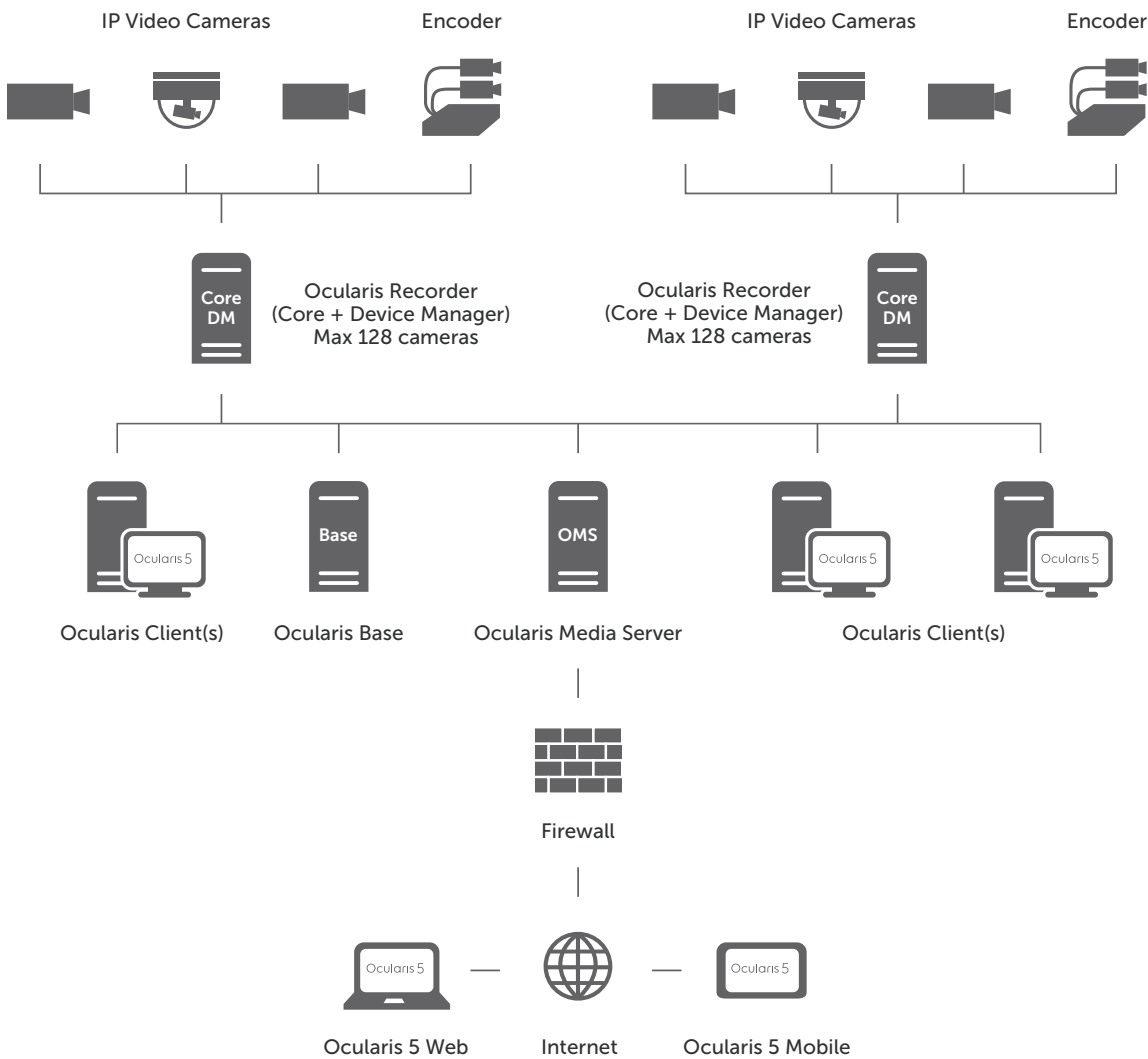
CAPTURE VIDEO ON-THE-SPOT

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

SYSTEM DIAGRAM

IP Video Cameras   Encoder   IP Video Cameras   Encoder

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Core DM — Ocularis Recorder (Core + Device Manager) Max 128 cameras

Ocularis Recorder (Core + Device Manager) Max 128 cameras — Core DM

Base

OMS

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Ocularis Client(s)   Ocularis Base   Ocularis Media Server   Ocularis Client(s)

Firewall

Ocularis 5   Ocularis 5

Ocularis 5 Web   Internet   Ocularis 5 Mobile

* In smaller systems, all Ocularis components may be installed on the same PC/server.

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 (CORE AND DEVICE MANAGER)

Manages camera connections, recording parameters and video data.

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

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OCULARIS SYSTEM FEATURE	PROFESSIONAL	ENTERPRISE	ULTIMATE
Number of cameras per system	Unlimited	Unlimited	Unlimited
Number of recorders per system	Unlimited	Unlimited	Unlimited
Number of concurrent client connections	Unlimited	Unlimited	Unlimited
Ocularis Mix & Match - combining multiple recorder types in a single system	Yes	Yes	Yes
Ocularis OpenSight™ option for sharing video between Ocularis systems	Remote	Remote	Main/Remote
Compatible with Ocularis 4.x and prior recorders	Yes	Yes	Yes
Critical Camera Failover for camera failure protection	Yes	Yes	Yes
Centralized user management with color-coded audit logging of user activity	Yes	Yes	Yes
Active Directory support for client authentication and recorder to Base authentification	Yes	Yes	Yes
Integration with 3rd-party access control	Yes	Yes	Yes
Integration with 3rd-party analytics	No	Yes	Yes
Integration with 3rd-party License Plate Recognition (LPR) systems	Yes	Yes	Yes
Data Link event integration	Yes	Yes	Yes
Event Fusion / Composite Events	Yes	Yes	Yes
Ocularis Media Server for free web and mobile clients and optional M2O (Mobile-to-Ocularis) video streaming	Yes	Yes	Yes
Event Actions including move-to-PTZ-preset, email, TCP/UDP and HTTP messaging	Yes	Yes	Yes
OCULARIS CLIENT FEATURE			
License-free and unlimited Ocularis Client installations	Yes	Yes	Yes
Multi-level map navigation with live camera previews	Yes	Yes	Yes
Support for 8 independently controlled displays from a single workstation	Yes	Yes	Yes
Touchscreen support with interactive overlay controls	Yes	Yes	Yes
Local VideoWall control of workstation connected displays	Yes	Yes	Yes
Remote VideoWall function for command and control centers	No	Optional	Standard
Dynamic TimeSlicer™ thumbnail search and Kinetic Timeline™ for quick and easy investigations	Yes	Yes	Yes
Unlimited views and view groups	Yes	Yes	Yes
Full encryption for client-server communications	Yes	Yes	Yes
Secure multi-camera database export with included Viewer	Yes	Yes	Yes
Snapshot still image export and printed incident report	Yes	Yes	Yes
Case builder with bookmarking	No	Yes	Yes
Support for USB joysticks for PTZ control	Yes	Yes	Yes
Alert management	Yes	Yes	Yes
OCULARIS RECORDER FEATURES			
Number of cameras per server	128	Unlimited	Unlimited
Centralized recorder management	No	Yes	Yes
Fully redundant recorder manager without using clustering	No	Yes	Yes
Automatic recorder patch update service	Yes	Yes	Yes
Automatic failover of recording servers	No	Yes	Yes
Efficient and dynamic disk load balancing with no archiving requirements	Yes	Yes	Yes
Video data aging (grooming) for long term storage	No	No	Yes
Automatic edge recording retrieval after network disconnect	No	No	Yes
Automatic scheduled export of video data	Yes	Yes	Yes
Support for H.265, H.264, MPEG-4, MJPEG, and MxMPEG compression formats	Yes	Yes	Yes
Supports camera-based analytics including Axis Dynamic Event Stream	Yes	Yes	Yes
Server-based motion detection and support for camera-based motion detection and analytics	Yes	Yes	Yes
Support for thousands of IP cameras plus ONVIF, ONVIF Profile S, generic RTPSP and MJPEG drivers	Yes	Yes	Yes
Smart Camera Drivers for most major camera manufacturers (See Supported Devices list for complete details)	Yes	Yes	Yes
Supports multi-streaming from cameras for efficient bandwidth utilization	Yes	Yes	Yes
TLS 1.2 and HTTPS (SSL) encryption for camera to recorder communication	Yes	Yes	Yes
Digital input/output device support (number of devices)	5	Unlimited	Unlimited
Simultaneous Standard and Alarm Recording with separate retention policies	Yes	Yes	Yes
Incoming audio recording for supported cameras	Yes	Yes	Yes
Two-way audio support for select cameras and audio only devices	Yes	Yes	Yes
Multicast live view from recorder to Ocularis Client	No	No	Yes
No device registration or device MAC address required	Yes	Yes	Yes

SYSTEM REQUIREMENTS

Ocularis Base

• CPU: Intel® Xeon®, (Quad Core or better recommended) or Intel® Core™ i5 or better (if running on a workstation)

• RAM: Minimum 8 GB

• Hard Drive: 500 GB or more, more for large systems utilizing extensive video database Bookmarking

• Operating System (all 64-bit):
   • Windows® 7 (Professional, Ultimate, Enterprise)
   • Windows® 8 (Standard, Professional, Enterprise)
   • Windows 10 (Professional and Enterprise)
   • Windows Server® 2012 (Standard, Datacenter)
   • Windows Server® 2016 (Standard, Datacenter)

• Software: Microsoft, .NET 4.0 Framework, .NET 4.6.2 Framework and Internet Information Services (IIS) 6.0 or newer, Microsoft SQL Express 2014 or Microsoft SQL Server 2012, 2014 and 2016

Ocularis Recorder

Core Service + Device Manager (DM) (Installed on the same server or on separate servers)

• CPU: Intel Core i7-4930K @ 3.40GHz or Intel Xeon E5-2640 v3 @ 2.60GHz

• RAM: 8 GB (16 GB or more recommended)

• Available hard disk space: min. 50 GB and additional storage space for image recordings (HDD with 7200 RPM or faster recommended)

• Network: Gigabit or faster Ethernet Connection

• Operating Systems (all 64-bit):
   • Windows® 7 (Home Premium, Professional, Ultimate, Enterprise)
   • Windows® 8 (Standard, Professional, Enterprise)
   • Windows 10 (Professional and Enterprise)
   • Windows Server® 2012 (Standard, Datacenter)
   • Windows Server® 2016 with Desktop Experience (Standard, Datacenter)

Ocularis Client

• CPU – Intel Core i5™ or better

• RAM – 8 GB minimum (16 GB or more recommended)

• Operating Systems (all 64-bit):
   • Windows® 7 (Home Premium, Professional, Ultimate, Enterprise)
   • Windows® 8 (Standard, Professional, Enterprise)
   • Windows® 10 (Professional and Enterprise)

• Software – DirectX 9.0 or newer, Microsoft .NET 4.6.2 Framework

• Graphics Adapter – PCI-Express, minimum 256 MB RAM, Direct 3D supported

Ocularis Media Server

• CPU: Intel® Xeon® E3 Series or Intel® Core™ i5 (or better) recommended

• RAM: Minimum 8 GB (reserve 4GB for Ocularis Media Server if installing with other Ocularis applications)

• Hard Drive: 50GB or more

• Operating System (all 64-bit):

• Windows® 7 (Professional, Ultimate, Enterprise)
   • Windows® 8 (Standard, Professional, Enterprise)
   • Windows 10 (Professional and Enterprise)
   • Windows Server® 2012 (Standard, Datacenter)
   • Windows Server® 2016 (Standard, Datacenter)

• Software: Microsoft, .NET 4.0 Framework, .NET 4.6.2 Framework and Internet Information Services (IIS) 6.0 or newer

• Supported in virtual environments

Please visit the OnSSI Storage and Hardware Calculator for detailed system requirements or contact Sales Engineering at se@onssi.com.

Ocularis Version 5.5, January 2018

On-Net Surveillance Systems, Inc. (OnSSI) was founded in 2002 with the goal of developing comprehensive and intelligent IP video surveillance management software. OnSSI's Ocularis IP security and surveillance VMS platform increases security, reduces operational costs, and helps organizations move closer to prevention. Ocularis delivers open architecture, flexibility, and scalability for a range of applications including education, gaming, government, healthcare, manufacturing, public safety, transportation, and utilities. OnSSI is headquartered in Pearl River, New York and has representation in over 100 countries. With its acquisition of Germany-based VMS company, SeeTec GmbH and the launch of Ocularis 5, OnSSI continues to drive global expansion and technological innovations.