

# Mirasys Video Management Solutions

## Solutions Portfolio





# Mirasys – Pioneering the Surveillance Industry

## Industry recognized software provider

Mirasys Ltd is one of the leading providers of open platform Video Management Solutions for IP and analog camera surveillance applications and systems. Since 1997, we have developed and supplied solutions that help organizations manage and utilize information captured by digital video and CCTV cameras. Our systems are used, for example, for loss prevention, perimeter protection, building management, and enhancement of operational efficiency by customers from many industries in over 40 countries.

## Decide today but keep your future open

When purchasing a surveillance solution, looking beyond the single investment point of the purchase can save a lot of money in just a few years. During the lifespan of a surveillance system, any company faces different operational changes affecting security surveillance decisions, such as outsourcing, increase of business locations, or centralizing operations. When investing in a VMS solution, the total cost of ownership is the most important single denominator including the purchase price, operating and maintenance costs and the costs of the system growth.

In operational changes, a good solution makes the difference between spending in a new system or expanding an existing one. Choosing Mirasys means earning the right to choose without restrictions: Mirasys solutions can be created with practically any manufacturer's cameras and

devices, and you will never be locked to a specific device vendor.

Whether your requirement is for a two server video surveillance system or a wide, city spanning complex for video and audio surveillance with access control and intelligent video analytics,

we have the expertise to create the solution that best fits your needs.

Mirasys value propositions can be described with these words: easy, open and dedicated



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## Selecting the correct solution

In calculating the total cost of ownership, a multitude of factors needs to be taken into account, and the purchase price is just the start. Operating costs include training and learning costs and can be affected by the system usability. Maintenance costs include warranty, software maintenance fees, labour costs relating to remote or on site work, software upgrade costs, and the cost of migrating from analog to IP - these can bring hefty extra costs. And the cost of system growth is affected by the available selection of cameras and how camera licenses are handled. Another factor is the cost of integrating third party components to the system.

The beauty of the Mirasys solution is in its modularity. For the demanding customer, Mirasys is the perfect combination of ease, freedom of choice, scalability and a lifelong dedication to quality.

## Modular product portfolio

**Mirasys VMS Enterprise** is a corporate grade solution with scope and scale to meet all the needs of the most demanding customer. The VMS Enterprise can scale limitlessly, allowing for hundreds of thousands of cameras to be supported in a single system. It allows an easy integrations with third party solutions and fully realized video intelligence solutions.

**Mirasys VMS Pro** is a cost-effective solution that allows you to do effortless small scale surveillance with truly professional features such as real-time monitoring, playback of recorded video, and intelligent motion detection. When needed Mirasys VMS Pro is easy to upgrade to Mirasys VMS Enterprise.

**Mirasys VMS Enterprise** Options provide unlimited customization and integration possibilities making Mirasys VMS very powerful surveillance solution available on the market. You can read more about the options from the next pages.



## Mirasys VMS Enterprise Options

- Enhanced Master Server
- Agile Virtual Matrix
- Video Content Analysis (VCA)
- Integration connectors
- ANPR+
- Reporting
- Failover

# Mirasys VMS Enterprise



**M**irasys VMS Enterprise is a feature rich corporate grade surveillance solution that scales easily to suit the needs of businesses of all sizes. The system supports up to 6.400 analog and/or IP cameras in one centrally managed environment. All cameras can be managed as a single system independent of location. Mirasys VMS Enterprise can be extended with intelligent VCA and ANPR solutions, and due to its extreme openness, it can be easily integrated with a wide variety of other systems ranging from cash registers to access control and logistics systems. The user interface is available in 19 languages.

## Benefits

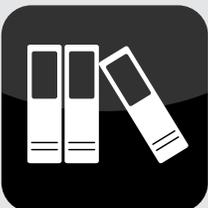
**Powerful VMS** – Practically unlimited number of servers and cameras in one centrally managed environment, providing both performance and efficiency for surveillance data processing

**Wide camera support** – Supports thousands of IP and analog cameras from all major manufacturers

**Customisable** – Plugins to enable multi-stream, multi-cast, two-way audio, Video Analytics, ANPR and management reports

**Flexible** – Open platform architecture supports Access Control, Intruder Alarm and Video Analytics from a wide variety of 3rd party partners

**Redundancy** – True data safety through redundancy via Failover, Edge, and raid storage



VMS

ANPR+



VCA

## Efficiency through ease

Mirasys VMS Enterprise is the perfect solution for businesses and security centers of any size. Extremely flexible and customizable, Mirasys VMS Enterprise can adapt to any video and audio surveillance situation.

Despite its extreme adaptability, the driving design philosophy behind the VMS Enterprise has always been ease of use – no matter how a system is being built and configured, it must be intuitive and fast to design and use. The system administrator must be able to add new devices and integrations without spending time trying to figure how the system adapts to new technologies, and the users must be able to just jump in without the need of extensive training. Even with the extreme scalability of Mirasys VMS Enterprise the user management is nice and easy. Handling hundreds of users and user groups is as easy as handling only few.

## Openness brings safety

One of the most important aspects of Mirasys VMS Enterprise is its dedication to openness. For the owners of surveillance sites, this constitutes a critical benefit: at no time, in no situation, the system is restricted to a single camera or device manufacturer or type.

Mirasys VMS Enterprise supports all analog cameras as well as thousands of IP camera models from all major manufacturers - and new models are added weekly. This makes it easy for the owners of the surveillance system to choose cameras based on their merits, not on their manufacturers - ensuring that the cost of ownership does not depend on the market price for specific camera vendors.

The same philosophy rules on third party add-ons and integrations: Mirasys VMS can be easily integrated with access controls and external devices through its text data drivers and extensive I/O support, as well as on the software side through its SDK kits. It is easy to add video analytics or external programs as user interface plugins or as HTTP add-ons.

## Dedicated to the future

In the past ten years, surveillance technology has advanced more than in the previous 50 years combined. The costs of creating new systems have come down, image quality and reliability have made huge leaps, and the resilience and usability of the solutions have skyrocketed - and the same development is certain to continue as the advances in technology accumulate faster than ever before.

The owners of old surveillance systems are rarely able to reap the benefits of the advances, however, as their technologies are tied to systems relying on specific technologies.

Mirasys VMS Enterprise makes these problems obsolete: as a constantly developed open system,

Enterprise includes all the new technologies and advances in the surveillance industry, incorporating them into its core design and enabling the integration through third party modules, making it a certainty for system owners to reap all the economic and technological advances in the industry - now and in the future.

Likewise, Mirasys VMS Enterprise can be used to gradually bring an old system to current norms – analog cameras can be updated one by one to IP, and technologies that are nearing the end of their lifespan can be replaced on the go.



## Mirasys VMS Pro

**M**irasys VMS Pro is single-server IP video recording software that runs on a standard Windows PC. It contains all the functionality of any professional network video recording solution, such as continuous 24/7 recording, real-time monitoring, playback, and intelligent motion detection. The software is suitable for areas or buildings that can be covered with a limited number of cameras. Thanks to its rich set of features, it is an ideal entry-level package with advanced functionality and compelling cost of ownership.

### Benefits

**Cost-effective** – Attractively priced solution with professional features

**One server** – Single server IP recording and viewing software for up to 50 cameras, making the cost of ownership extremely low

**Reliable** – Mirasys' unique non-fragmenting Secure Data Distribution video storage method

**Expandable** – Easy to expand to multi-server, richly featured VMS Enterprise

### Powerful punch

Mirasys VMS Pro packs a powerful punch for a single-server solution with dedicated enterprise level functionalities and 50 IP cameras per system. Uncommon in single-server solutions, VMS Pro employs a secure data distribution method that ensures that no relevant data is lost if a hard drive crashes.

### Open for expansion

Though perfect as the one-stop solution for single server surveillance needs, Mirasys VMS Pro has an important edge: it can be easily, without hassle, upgraded to a full Mirasys VMS Enterprise server – or as part of a Mirasys VMS Enterprise solution. Typically, upgrading surveillance systems can be costly, especially when moving from a small, localised system to a larger or centralized one – Mirasys eliminates this extra cost with the simple possibility to upgrade from Pro to Enterprise.

# Mirasys Integrations

In addition to their vast built-in features and functions, Mirasys Video Management solutions provide a wealth of integration options making it easy and fast to integrate with other systems – such as access control, fire alarm, point-of-sales, video analytics and various other business application solutions. The ecosystem is extremely open - integrations can be done on multiple levels, all the way from application SDK level to text channel based integrations, camera and device driver integrations, and embedded software.

## Benefits

**Extremely open** – Allows 3rd party applications to control, communicate, and exchange data with the Mirasys VMS, allowing the addition of applications best suited for the customer instead of those preselected by the VMS provider

**Flexible** – Supports various communication options and message formats; highly configurable text channels make it easy to integrate data feeds

**Configurable** – Features rich Software Development Kit (SDK) for application developers; available for C# and Java programming languages

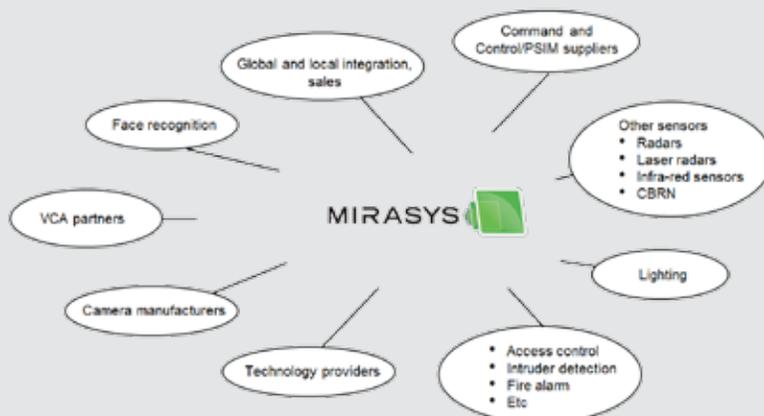
**Scalable** – Usable in Mirasys VMS systems of any size

## From Spotter add-ons to HTTP customizations

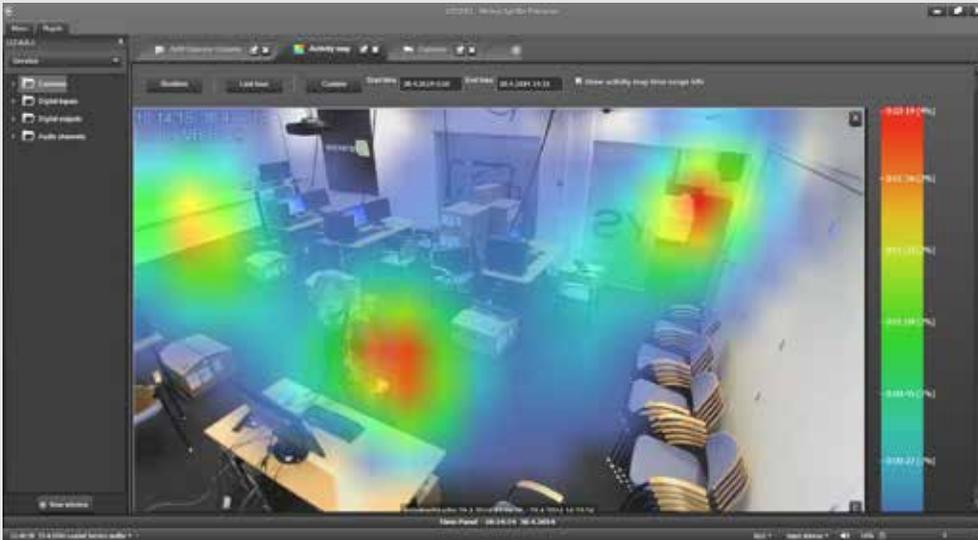
The range of possible integrations is immense: from the client side, it is easy to integrate to the Mirasys VMS solution through an add-on that can be used via the Mirasys Spotter user interface as a simple additional tab, or an additional service that taps directly to the Mirasys HTTP based Gateway server. Access controls and cash registers can be integrated through simple drivers that use our universal text data channel, and new camera and audio devices can be added through driver customizations. Ease of integration has been our leading star in all product design, with hugely diminished cost of ownership as the result.

## Truly open ecosystem

We cooperate with all the leading camera suppliers, analytics providers, distributors, system integrators, service providers and system manufacturers on the global security market to keep our software open and flexible to ensure that our products are future proof and to minimize the cost of ownership for our clients.



# Mirasys Activity Map



**M**irasys Activity Map (MAP) is an excellent tool for providing critical marketing information from surveillance data, creating business value directly from your surveillance infrastructure. MAP is a fully integrated toolset for displaying movement density from surveillance data – showing the highest (and lowest) traffic densities and where people or vehicles have stayed or loitered the longest (or least). MAP can display real-time traffic and traffic histories of specific time periods, and is intended to provide important marketing information for sales campaigns or on consumer behavior for commercial venues as well as surveillance information on traffic or loitering bottlenecks.

## Benefits

**Easy identification** – Hot spots, bottlenecks and dead zones can be easily identified.

**Flexible toolset** – Dynamic masking, real-time activity calculations, combined multi-camera activity maps, duration tools.

**Extends the VMS investment** – MAP can improve your return of investment of the VMS investment by providing critical marketing data on consumer behavior, bottlenecks, and sales campaign success. You can compare and visualize data between different locations and find the best practices for everyone's use.

## Intuitiveness

Mirasys Activity map produces intuitive, easy-to-use graphical information on areas of interest, movement paths and stopping times, providing important information to, for example marketing analysts and shop owners about customer behaviour, or to traffic and security specialists on loitering times.

## Customizable tools

What is needed from the Activity Map changes from one customer to another. That's why MAP has been designed with a wide toolset that enables clients to customize it according to their site specific needs.



## Mirasys Agile Virtual Matrix

**M**irasys Agile Virtual Matrix (AVM) is the perfect solution for surveillance centers, commercial centers, and multi-office environments. Mirasys AVM combines the feature rich environment offered by Mirasys VMS software with an extremely flexible interface for controlling an unlimited number of surveillance monitors in a customizable environment: monitor configurations, layouts, and event handling can be tailored according to any surveillance system's individual needs.

### Benefits

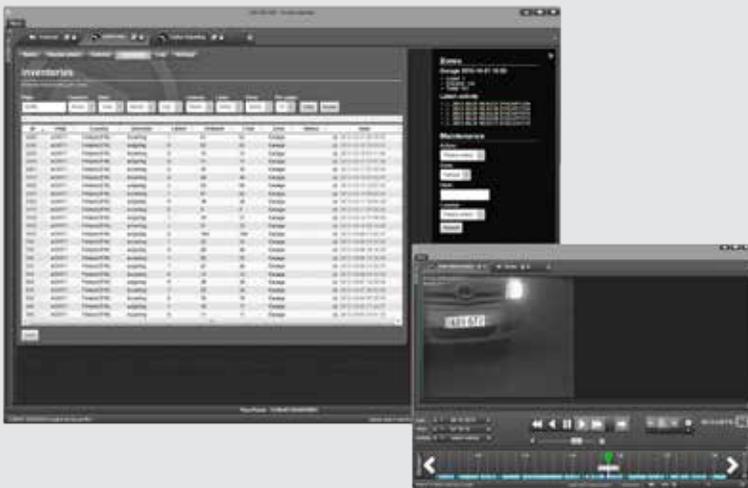
**Fast and powerful** – Instant access to live and recorded video from any camera on any monitor. Can utilize thousands of cameras seamlessly and simultaneously in both real-time and playback modes as well as camera tours and PTZ.

**Unlimited by infrastructure** – No matter what your initial camera setup is, you can use it to build a Mirasys system with an AVM control room

**Extensive tools** – AVM allows you to utilize the openness of Mirasys VMS system, enabling you to choose the tools you need for your site - any tools you want can be integrated via our easy-to-implement SDK.

### Unlimited customizability

How to support thousands of devices on a single video wall easily and effectively? Mirasys AVM can be configured monitor by monitor to display the information needed at the present moment, both in real-time and playback. Each screen can be arranged to present tailored views, and screen configurations can bring essential and time-critical information up effectively. Large numbers of cameras can be accommodated with automated camera tours, and the system supports intelligent cropping functionality to balance varying camera resolutions.



## Mirasys Automatic Number Plate Recognition (ANPR+)

**M**irasys ANPR+ is much more than just an automatic number plate recognition (ANPR) software. It is a fully integrated solution that scales easily to suit the needs of businesses of all sizes who have any kind of need to control vehicles. ANPR+ provides a list management for car number plates to control and overview access to your parking areas with one or multiple doors. Extremely configurable, ANPR+ allows the creation of various scenarios for number plate logging, entry and exit controls, and limited access controls through both black and white lists. The system can be easily integrated with external systems, allowing the creation of extremely reliable number plate dependent solutions.

### Benefits

**Flexible** – Any camera connected to the Mirasys Enterprise VMS can be used with Mirasys ANPR+.

**Open integrations** – Can be integrated with a multitude of external devices and systems, such as vehicle weight measurement devices, access control, and vehicle tracking, making ANPR+ much more than a simple number plate recognition tool.

**Compatible with Mirasys Spotter** – ANPR+ is compatible with the Mirasys Spotter for Windows user interface, and can be used through Spotter as part of a holistic surveillance solution.

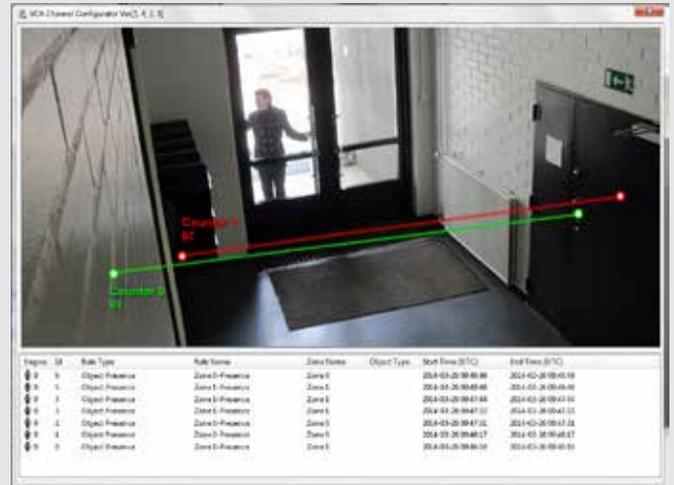
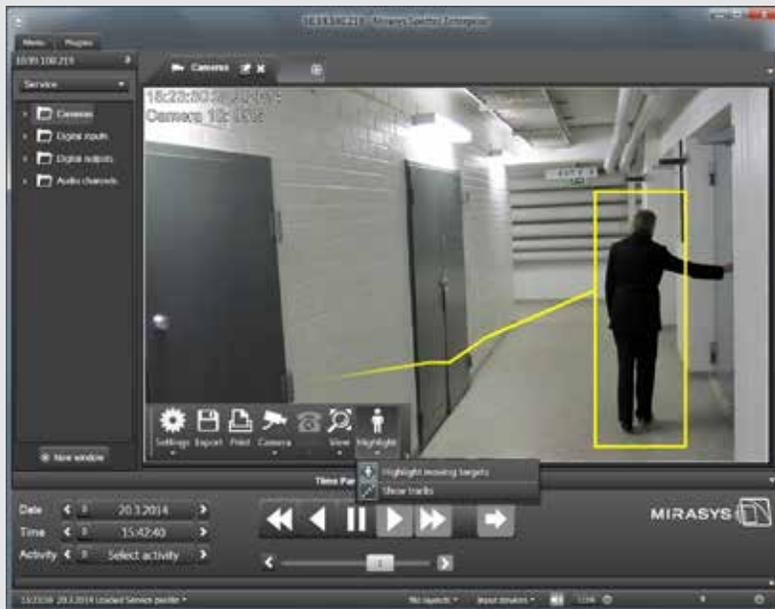
### Power and flexibility

The video analysis processes each recorded image to find a potential license plate within a designated area in the image. When found, the image is saved as a metadata element along with the image, and sent forward to the list management server. Depending on the settings, the recognised plate either grants or prevents access, or triggers an alarm in the NVR system.

### Flexible tools

With ANPR+, any camera connected to the surveillance system can recognize visible number plates. License plate country detection is available through identification libraries, and entry and exit rights can be granted or denied through a configurable web management application. Access provided or limited by date, time, or a certain number of access times. The users can enter license plates manually or by selecting automatically detected license registers. It is easy to - for example - use ANPR+ to gain information on parking hall use levels or to compare the weights of incoming and outgoing vehicles.

# Mirasys Video Content Analytics



**Mirasys Video Content Analytics (VCA)** offers intelligent analytic options into the Mirasys video management system (VMS). Mirasys VCA offers added value to the video management system by increasing the understanding of motion paths and viewing what type of actions are caused. Mirasys VCA can be applied on all supported cameras, whether analog or IP. VCA also supports thermal cameras.

## Benefits

**Powerful** – Pre-packaged integrated analytics available per camera. Supports full VCA functionality with camera stabilization, object classification and enter / exit, direction, vehicle speed, stopping, dwell time, etc. filtering

**Versatile** – The setup is versatile and supports, for example, different type of vehicle classification, zone definitions, entering directions and vehicle speed. You have over 40 different analytic alternatives available per one camera picture. The object that is analysed can have several different analysis going on at one time

**Reliable** – Tested and approved for high-accuracy detection and recognition. Meta-data is saved to common database for easy searching, and tamper detection mechanisms to prevent camera vandalism and data forging

## Seamless integration

Mirasys VMS VCA enables a seamless integration of intelligent analytics modules into Mirasys VMS. The rich and open interfaces of the platform allow any type of VCA solution to be integrated in the Mirasys VMS itself with no changes required – whether running in the edge (camera), network or recorder.

# Mirasys Reporting



**Mirasys Reporting System** is a unique business intelligence tool that can turn video surveillance data into concrete business benefits. Easily scalable to suit the needs of businesses of all sizes, Mirasys Reporting provides an extensive overview of alarms and events from multiple sources for analyzing how the system is operating and how it can be improved. The system provides an exceptional range of other values for business areas outside and inside the classical security market.

## Two powerful reporting tools:

**Audit Trail Reporting** enables the creation and easy monitoring of all system events, containing information on all that has happened in the system and the user and timeframe information.

**Video Content Analysis (VCA) Reporting** provides extensive, yet easy-to-use information on all VCA events handled by the system. The information provides important metadata on all events, enabling the users to customize and access VCA data to provide the best surveillance information available. Mirasys reporting has built-in calculations which have an important role in utilizing the VCA results.

## Benefits

**Comprehensive** – Audit trail reports to include all system events and user actions.

**Insightful** – Provides reports in variety of formats, and enables the creation of easy-to-read graphics from the reports.

**Easy to use** – Pre-configured and customized reports are saved as bookmarks, and it is easy to create custom reports based on specific needs.

## Easy data tracking

Mirasys Reporting brings the numerical information to an easily readable form, from where you can, for example, track trends over time or look for abnormalities from a big amount of data. You can define the events that shall be reported, freely select time frame and compare different time frame activities in graphs.

# Migrate to IP Surveillance



**M**irasys VMS is an excellent solution for migrating from analog to IP video surveillance. Mirasys VMS supports all analog surveillance cameras and all major manufacturers' IP cameras – making it extremely easy to migrate from any analog camera to practically any IP camera. You can easily adapt Mirasys VMS to a fully analog system, replacing analog cameras with IP cameras at your own pace – and adding new cameras at the time and speed that best fits the needs of your surveillance system. This enables you to optimize the costs of video surveillance updates based on the needs of your business.

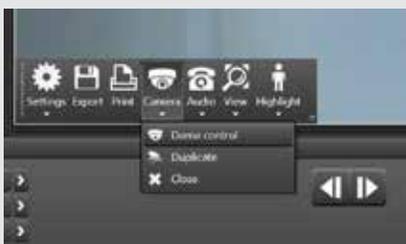
## Why go digital?

**Image quality brings security** – Currently, the best resolution an analog camera can provide is D1, which means 720x480 pixels, or 0.34 Megapixels. Compared to even low resolution IP cameras, the image quality of analog cameras is many times worse – the difference between analog and digital is seeing a face and identifying the face.

**No need for new infrastructure** – Surveillance is available anywhere where there's a network cabling. In cases where there is no network infrastructure, it can be built locally on a small scale and routed wirelessly to the servers. One Ethernet cable per camera can suffice – no need for the long and expensive cablings analog cameras require, or for individual PTZ control cables. Using the same infrastructure for surveillance and IT communications drops the total cost of ownership considerably.

**Intelligence provides ease of surveillance** – IP cameras provide you with camera-based intelligence and camera – server synergy unavailable with analog cameras. Camera-based data storage, resolutions that can vary depending on the situation, video analysis, camera based event processing and intelligent IP audio – all absent from the analog side.

**Openness severely reduces the cost of ownership** – The open architecture of Mirasys VMS enables you to select from all the camera models of all major manufacturers – unlike with many other VMS solutions, with Mirasys VMS you will never be locked to a single manufacturer or camera type, and can add as many IP cameras from as many manufacturers as you need to, ensuring that the cost of upgrading to IP will never be out of your control.



# The Mirasys Solution

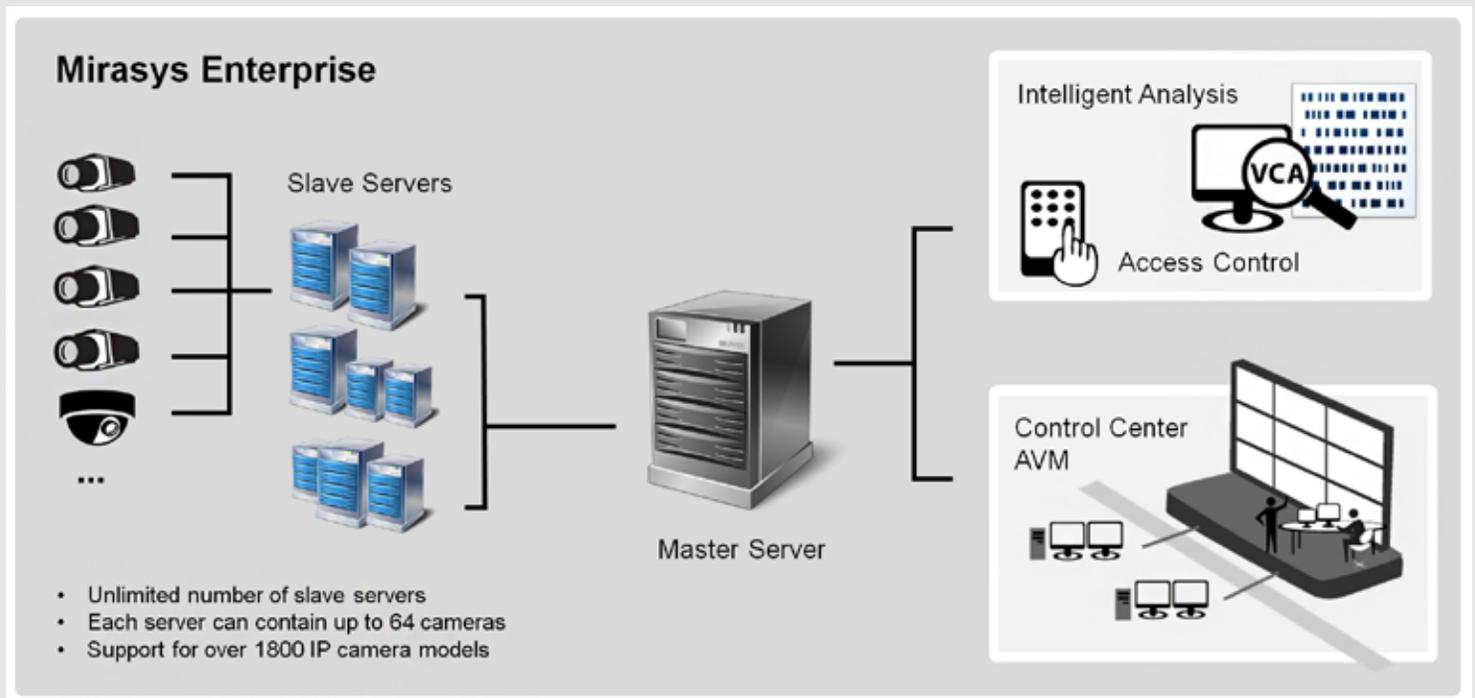
**W**e do not provide products - we provide solutions. Whether your surveillance requirement is for a two server video surveillance system or a wide, city spanning complex for video and audio surveillance combined with access control and intelligent video analytics, we have the best expertise to create the solution that best fits your needs.

The beauty of the Mirasys solution is in its open modularity. Each server can act independently, or as a part of a network of any kind controlled by a Master server - or do both at once. All our solutions are inherently modular. You can add, remove, split and evolve the system freely, without artificial hindrances. Or, if you need, you can simultaneously use the system in any possible combinations of Mirasys servers.

We support a multitude of intelligent analysis tools and integrate to any necessary access control systems to provide the smoothest integration available on the market. Our AVM system enables the creation of control centers with virtually unlimited variations, with a direct and seamless interface with any Mirasys surveillance solution.

When data security is needed, our solutions are invaluable: our Secure Data Distribution (SDD) method ensures that even in case of hard disk failures, relevant data is not lost, and the option of having dedicated failover servers that can replace any recording server within the surveillance infrastructure ensures that even computer breakdowns cannot hamper the functionality of our surveillance solution.

Fully future proof and with the most open integration options, Mirasys surveillance solutions provide you with the most reliable, most scalable, and most secure platform for all your security surveillance needs.





Stockholm Globe Arenas, Sweden



Estrel Berlin, Germany



Lord's Cricket Ground, UK



Hartwall Arena, Finland



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