

## CCTV





**IP** Technology



**AHD** Technology

# Elvox video surveillance systems. Now even more sophisticated, for ultra-high resolution monitoring.

Greater security means a better quality of life. This is why we have revamped our video surveillance systems by integrating new products with even higher performance levels, to guarantee comprehensive monitoring even in critical areas. Two ranges: AHD up to 1080p and up to 5 Mpx IP have been added to the portfolio of Elvox products showcasing innovative solutions, designed to offer perfect visibility in minute detail.

# RANGE IP H.265 AND H.264.

Definition extends from 1.3 to 5 Mpx, the ultimate in performance.

Suitable for commercial areas and domestic environments requiring ultra-high quality recording, the IP range includes the very latest 1.3, 2 and 3 Mpx cameras, which are now also available with an even greater 4 and 5 Megapixel resolution, which offer the richest details. They guarantee unparalleled recording and faithful colour balancing, even in low light conditions. The video transmitted using H265 compression ensures optimisation both in terms of disk space when recording and as data traffic over the network.



PLUG&PLAY



QR CODE



CVM



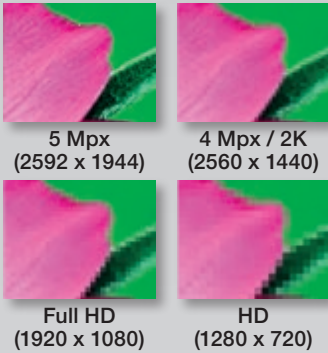
MULTIMEDIA  
VIDEO TOUCH SCREEN



COMPLETE  
RANGE

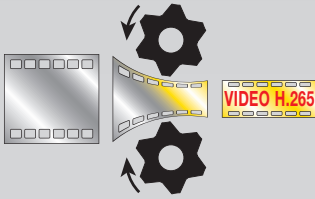


CONTINUOUS  
SECURITY



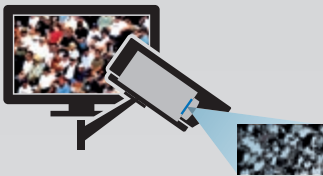
## High quality HD recording, Full HD, 2K and up to 5 Mpx.

Viewing which retains every detail, in daytime and at night, in bad weather and in high contrast conditions with strong backlighting, the ultra-high resolution of images captured by cameras offers the option of zooming in on any recording without any loss of detail whatsoever.



## H.265 video compression.

H.265 compression allows optimal management of the enormous data stream originating from the ultra-high resolution cameras, in terms of data band, bit rate and space required for recording to HDD. The H.265 technology can transmit videos with 50% the bit rate compared to the H.264 standard.



## Extra sensitive sensor.

The cameras with an extra sensitive Sony sensor make it possible to clearly distinguish colours in very low light conditions. Where a traditional camera is forced to switch to night vision, supported by IR illuminators, the new 5 Mpx cameras still show a clear image with easily distinguishable colours.



## Integration.

IP technology can utilise infrastructures and networks for both new installations and the expansion of existing systems.



## Power over Ethernet.

A range offering quick installation using Power over Ethernet (PoE) that allows the use of a single cable to transmit signals and to power the camera.



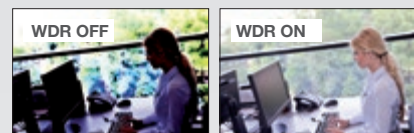
## Plug&Play configuration.

Simply by connecting the cameras to the integrated PoE switch, the NVR is capable of automatically configuring the addresses of those cameras and sending the video streams to the screen without requiring any further configuration by the user.



## Total visibility.

Wide Dynamic Range technology improves images with strong brightness contrasts, ensuring visibility remains high in the event of strong backlighting.





The IP range evolves, with new products now available.



The IP range is boosted with new products, increasing the choice of solutions designed to support video surveillance technologies, including large systems. State-of-the-art products, designed to meet the needs of installers and users with the superior quality and top performance guaranteed by Elvox.



## Bullet and Dome cameras.

New fixed focus and varifocal Bullet and Dome cameras, also with NVR remote controlled motorised focus.



## PTZ cameras.

New PTZ H.265 camera with 3 Mpx resolution, 20x optical zoom, IR illuminators with a range of up to 100 m, complete with wall-mounting bracket.



## NVR.

New NVR for IP systems, with H.265 compression technology. Available with 4, 8, 16, 32 and 64 channels and up to 5 Mpx recording in Real Time. In the 4 and 8 channel versions, the NVRs are equipped with an integrated PoE switch.



## Keypad.

Keypad for the remote control of up to 10 IP PTZ cameras, by the Ethernet connection. It is supplied of joystick for the mouse function or for the control of the 3-axis function as rotation, inclination and zoom.



# AHD RANGE.

Analogue technology discovers new resolutions, from 720p to 1080p.

The 720p and 1080p ranges combine the high resolution offered by HD and Full HD technology with the ease of installation of an analogue system. Innovative cameras with automatic configuration for the 720p version, and offering configuration via OSD as well as management via DVR for the 1080p version. Versatile and complete solutions designed for total control, even from the home automation 10" multimedia video touch screen.



PLUG&PLAY



QR CODE



CVM



CONTINUOUS SECURITY



MULTIMEDIA VIDEO TOUCH SCREEN



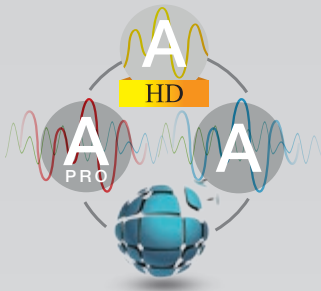
COMPLETE RANGE





## High resolution over long distances.

Cameras with 720p resolution (1280 x 720 pixel) and 1080p (1920 x 1080 pixel), for transmitting HD and Full HD resolution signals with zero latency over distances of up to 400 m (720p) using a standard RG59 coaxial cable.



## Multi-technology DVRs.

AHD DVRs allow easy expansion of an existing installation while retaining analogue cameras. Plus, the new 1080 AHD DVRs also allow connection of additional IP cameras.



## Versatility.

A complete range of fixed focus and varifocal Bullet and Dome cameras with easy access to zoom and focus controls. All DVRs are equipped with professional Hard Disks from 1 TB, recording resolutions up to Full HD, and can be managed via home automation systems (e.g. By-me and Well-contact Plus KNX) through the application of the DVR Controller.



## Easy to configure.

720p cameras do not require configuration; the functions are already set up to achieve perfect visibility in all conditions. The cameras have an AHD/CVBS switch fitted on the cable to make installation easier. 1080p cameras can be configured via the OSD menu control fitted to the cable, or directly through the 1080p DVR interface, by means of the new CsC (Control on Coaxial) function.



## Total visibility.

WDR and 3DNR, configurable functions guaranteeing perfect visibility and well-defined contours, correcting the images in the event of strong backlighting, overexposure or darkness.



# NEW RANGE OF MONITOR.



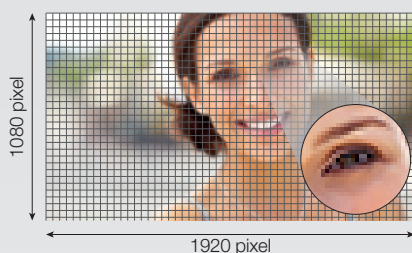
High quality of viewing with HD and Full HD resolution.

Professional monitors fit for an intensive use, with a 16:9 widescreen and HDMI, VGA, CVBS and BNC outputs, to use for video surveillance system in AHD and IP technology.



## Energy rating.

The new range of monitors have an A-class energy rating.



## HD and Full HD resolution.

19.5" / 23.6" monitors with Full HD resolution (1920 x 1080 pixel).

# A common platform for advanced video surveillance systems.

Elvox video surveillance technologies are developed from components that are all characterised by simple use, easy installation, safety and component integration. To guarantee the highest application quality in any situation.



## Plug&Play configuration.

No configuration is required for any of the technologies.  
Easy installation guaranteed, for every technology.



## QR Code.

Immediate remote access from your DVR/NVR via tablet and smartphone. Simply scan the QR Code using the dedicated App and you can access the camera video streaming from anywhere, without having to configure the router.



## CVM Software.

One single centralisation software for remotely monitoring and managing up to 256 DVR/NVRs of all four Elvox technologies, making a total of over 8,000 cameras.



## 10" Multimedia Video Touchscreen.

All Elvox CCTV technologies are managed from the multimedia video touch screen used in home automation systems (By-me and Well-contact Plus KNX).



## Continuous security.

Every DVR/NVR has a specific hard disk for video surveillance applications, designed for continuous operation, 24 hours a day, 7 days a week



## For every technology, a complete range.

Bullet and Dome cameras with both fixed focus and varifocal optics, box cameras with a range of lenses, PTZ tilt cameras and DVR and NVR recording devices, all with the same user interface.

# To each his own: systems for every environment, solutions for every need.

The Elvox video surveillance range adapts to suit the most diverse application settings, regardless of the scale and complexity of the required monitoring: the high-end technology and simplicity of use make the systems the perfect choice for small apartments, commercial environments, and even large companies and industrial settings.



## Residential.

The growing home security market has led to an increase in demand for custom-designed systems. The solutions responding to these requirements include compact and flush-mounting cameras - ideally for placement in access zones (both indoors and outdoors) - and compact, versatile recording systems. These systems offer viewing of live images from all cameras, both locally and remotely, as well as the recording of events for later consultation. In addition to management via IP 10" Multimedia video touch screen (21553.2), everything can be perfectly controlled via smartphone. For uncompromising security.



## Tertiary.

The tertiary sector also requires reliable and flexible monitoring methods. An extensive product range, suited to the specific requirements of commercial environments, is therefore available; this includes compact high-resolution tilt cameras which are monitored and controlled from a supervisory workstation. The solutions on offer suit small shops - with simple and discreet kits - as well as large areas such as supermarkets: in this case the monitoring requirements for large indoor and outdoor areas are fully satisfied through system centralisation.



## Industrial.

Business and industrial environments are the most complex, both in terms of technical devices and privacy restrictions. We therefore offer avant-garde professional solutions with cutting-edge performance, capable of monitoring extremely large areas and offering top-level operation in various installation environments and conditions.

# How to build a tailored system.

A fast, user-friendly outline to guide you in choosing the ideal system, taking into account four key features: area, needs, location and product. Navigating the world of video surveillance has never been easier!

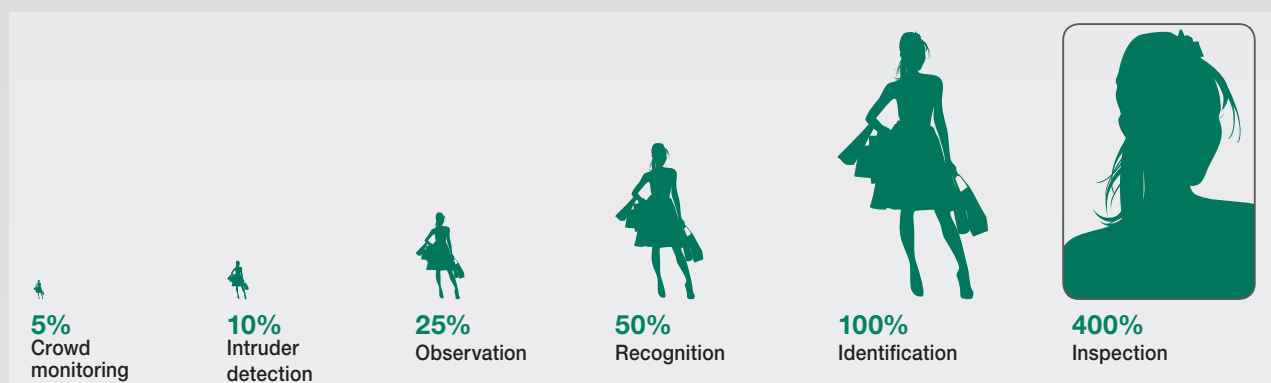
## 1. AREA



### The areas to be monitored: know them to decide.

To understand which areas should be equipped with cameras, you will need to make an inspection with the customer, equipped with a map giving an even more comprehensive idea of the size of the structure.

## 2. NEEDS



### Monitoring, detection, observation, recognition, identification or inspection.

With the customer you will also have to clarify essentially what is the purpose of the surveillance. The CEI EN 50132-7:2014-11 standard gives precise directives, which determine the resolution and the power of the system: the size of the subject ranges from no less than 5% of the image for monitoring up to no less than 400% for inspection.

### 3. LOCATION



#### The cameras: their number and location.

Knowing the size of the areas to film and the intended use is fundamental for choosing the number and location of the cameras. Naturally, their use should take into account the legislation in force, both as regards privacy and the protection of workers.





### 4. PRODUCT



#### Tailored products and accessories.

After identifying the places to monitor and the control methods, it is time to define which is the most appropriate equipment: with regard to the cameras, of course, but also the video recorders, monitors and accessories.

# Guidelines: choice of cameras.

FIXED LENS													
distance	 Half-length (1.5 m x 2 m) (person identification)			 Full-length (3 m x 4 m) (person recognition)			 Entry of vehicles (4.5 m x 6 m) (vehicle recognition)			 Building facade/parking (20 m x 15 m) (intruder detection)			
	Resolution	Bullet	Dome	Special	Bullet	Dome	Special	Bullet	Dome	Special	Bullet	Dome	Special
2 m	3 Mpx and highe												
	Full HD												
	HD and previous		46522.004	46534.037									
3 m	3 Mpx and highe				46212.036C.01	46222.036C.01							
	Full HD				46512.036B; 46212.036B	46523.036B; 46522.036B; 46222.036B							
	HD and previous				46512.036.01; 46212.036.01	46522.036.01; 46522.004; 46222.036.01	46534.037						
5 m	3 Mpx and highe							46212.036C.01	46222.036C.01				
	Full HD							46512.036B; 46212.036B	46523.036B; 46522.036B; 46222.036B				
	HD and previous							46512.036.01; 46212.036.01	46522.036.01; 46522.004; 46222.036.01	46534.037			
7 m	3 Mpx and highe												
	Full HD												
	HD and previous												
10 m	3 Mpx and highe												
	Full HD												
	HD and previous												
15 m	3 Mpx and highe										46212.036C.01	46222.036C.01	
	Full HD										46512.036B; 46212.036B	46523.036B; 46522.036B; 46222.036B	
	HD and previous										46512.036.01; 46212.036.01	46522.036.01; 46522.004; 46222.036.01	
20 m	3 Mpx and highe												
	Full HD												
	HD and previous											46522.004	

■ AHD cameras - ■ IP cameras



VARIFOCA LENS

distance	 Half-length (1.5 m x 2 m) (person identification)			 Full-length (3 m x 4 m) (person recognition)			 Entry of vehicles (4.5 m x 6 m) (vehicle recognition)			 Building facade/parking (20 m x 15 m) (intruder detection)			
	Resolution	Bullet	Dome	PTZ	Bullet	Dome	PTZ	Bullet	Dome	PTZ	Bullet	Dome	PTZ
2-4 m	3 Mpx and high	46216.310E; 46216.312DM; 46216.312D.01; 46216.312C.01	46226.310E; 46226.312DM; 46226.312D.01; 46226.312C.01	46235.020C									
	Full HD	46516.212B; 46216.212B; 46216.212	46526.212B; 46226.212B; 46226.212	46535.020B									
	HD and previous	46516.212.01	46526.212.01										
5-9 m	3 Mpx and high			46235.020C	46216.310E; 46216.312DM; 46216.312D.01; 46216.312C.01	46226.310E; 46226.312DM; 46226.312D.01; 46226.312C.01	46235.020C	46216.310E; 46216.312DM; 46216.312D.01; 46216.312C.01	46226.310E; 46226.312DM; 46226.312D.01; 46226.312C.01	46235.020C			
	Full HD			46535.020B	46516.212B; 46216.212B; 46216.212	46526.212B; 46226.212B; 46226.212	46535.020B	46516.212B; 46216.212B; 46216.212	46526.212B; 46226.212B; 46226.212	46535.020B			
	HD and previous				46516.212.01	46526.212.01		46516.212.01	46526.212.01				
10-15 m	3 Mpx and high			46235.020C			46235.020C			46235.020C			46235.020C
	Full HD			46535.020B			46535.020B			46535.020B			46535.020B
	HD and previous												
16-28 m	3 Mpx and high			46235.020C			46235.020C			46235.020C	46216.310E; 46216.312DM; 46216.312D.01; 46216.312C.01	46226.310E; 46226.312DM; 46226.312D.01; 46226.312C.01	46235.020C
	Full HD			46535.010B; 46535.020B; 46235.020			46535.020B			46535.020B	46516.212B; 46216.212B; 46216.212	46526.212B; 46226.212B; 46226.212	46535.020B
	HD and previous										46516.212.01	46526.212.01	
29-60 m	3 Mpx and high						46235.020C			46235.020C			
	Full HD						46535.010B; 46535.020B; 46235.020			46535.020B			
	HD and previous												

# CCTV

## Selection guide

Technology	AHD				
Resolution	Full HD			HD	
	Fixed	Varifocal		Fixed	Varifocal
<b>Bullet cam</b>					
<b>Dome cam</b>					
<b>PTZ cam</b>	Zoom lens 20x 				
<b>DVR</b>	4 CHANNELS 	8 CHANNELS 	16 CHANNELS 	4 CHANNELS 	8 CHANNELS 
<b>NVR</b>	-				
<b>Monitor</b>	20" Full HD 			24" Full HD 	
<b>Accessories</b>					
<b>Cable</b>					
<b>Kit</b>					

IP				
Up to 5 Mpx				
Fixed		Varifocal		
Fixed		Varifocal		
Zoom lens 20x				
4 CHANNELS	8 CHANNELS	16 CHANNELS	32 CHANNELS	64 CHANNELS
20" Full HD		24" Full HD		

### Fixed outdoor Bullet AHD cameras



Models	46512.036B	46512.036.01
Sensor	1/2.7" CMOS 2 Mpx	1/4" CMOS
Actual pixels	1928 (H) x 1088 (V)	1296 (H) x 732 (V)
Resolution	1080p	720p
Sensitivity	0 Lux (IR LED ON)	0 Lux (IR LED ON)
Day & night	Mechanical ICR	Mechanical ICR
Lens	3.6 mm	3.6 mm
S/N Ratio	50 dB	50 dB
Shutter speed (PAL)	AUTO	AUTO
OSD	Yes (switch on cable)	No
Control over coaxial (CSC)	Yes	No
CVBS output video	Yes (signal switch by OSD)	No
Function	2DNR, Smart-IR, D-WDR, WHITE-BALANCE, AGC, BLC	Auto: 2DNR, Smart-IR, BLC, WHITE-BALANCE, AGC
IR range	35 LED, 30 m	35 LED, 30 m
Protection rating IP	IP66	IP66
Operating temperature	-10° C ~ +50° C	-10° C ~ +50° C
Power supply / consumption	12 V 250 mA	12 V 300 mA
Dimensions (mm)	182 x 112 x 76	182 x 112 x 76
Weight (g)	510	510

### Varifocal outdoor Bullet AHD cameras



Models	46516.212B	46516.212.01
Sensor	1/2.7" CMOS 2 Mpx	1/4" CMOS
Actual pixels	1928 (H) x 1088 (V)	1296(H) X 732(V)
Resolution	1080p	720p
Sensitivity	0 Lux (IR LED ON)	0 Lux (IR LED ON)
Day & night	Mechanical ICR	Mechanical ICR
Lens	2.8 - 12 mm	2.8 - 12 mm
S/N Ratio	50 dB	50 dB
Shutter speed (PAL)	AUTO	AUTO
OSD	Yes (switch on cable)	No
Control over coaxial (CSC)	Yes	No
CVBS output video	Yes (signal switch by OSD)	Yes (switch on cable)
Function	2DNR, Smart-IR, D-WDR, WHITE-BALANCE, AGC, BLC	Auto: 2DNR, Smart-IR, BLC, WHITE-BALANCE, AGC
IR range	4 LED Array, 50 m	4 LED Array, 50 m
Protection rating IP	IP66	IP66
Operating temperature	-10° C ~ +50° C	-10° C ~ +50° C
Power supply / consumption	12 V 700 mA	12 V 700 mA
Dimensions (mm)	261 x 118 x 80	261 x 118 x 80
Weight (g)	865	865

# CCTV

## AHD cameras

### Fixed outdoor Dome and Mini Dome AHD cameras



Models	46523.036B	46522.004	46522.036B	46522.036.01
Sensor	1/2.8" CMOS 2 Mpx	1/3" CMOS 1.3 Mpx	1/2.7" CMOS 2 Mpx	1/4" CMOS
Actual pixels	1984 (H) x 1105 (V)	1305 (H) x 1049 (V)	1928 (H) x 1088 (V)	1296 (H) x 732 (V)
Resolution	1080p	720p	1080p	720p
Sensitivity	0 Lux (IR LED ON)	0 Lux (IR LED ON)	0 Lux (IR LED ON)	0 Lux (IR LED ON)
Day & night	Mechanical ICR	Mechanical ICR	Mechanical ICR	Mechanical ICR
Lens	3.6 mm	4 mm	3.6 mm	3.6 mm
S/N Ratio	50 dB	50 dB	50 dB	50 dB
Shutter speed (PAL)	AUTO/FLICKER 1/25 - 1/50.000 s x2 - x30	AUTO/FLICKER 1/25 - 1/50.000 s x2 - x30	AUTO	AUTO
OSD	Yes (switch on cable)	Yes (switch on cable)	Yes (switch on cable)	No
Control over coaxial (CSC)	Yes	Yes	Yes	No
CVBS output video	Yes (signal switch by OSD)	Yes (signal switch by OSD)	Yes (signal switch by OSD)	No
Function	2DNR, 3DNR, Smart-IR, BLC, HSBLIC, D-WDR, WHITE-BAL, AGC, Defect DeFog, Motion, Alarm, Privacy, Mirror, V-Flip, Rotate, Neg-img, Freeze	2DNR, 3DNR, Smart-IR, BLC, HSBLIC, D-WDR, WHITE-BAL, AGC, Defect DeFog, Motion, Alarm, Privacy, Mirror, V-Flip, Rotate, Neg-img, Freeze	2DNR, Smart-IR, D-WDR, WHITE-BALANCE, AGC, BLC	Auto: 2DNR, Smart-IR, BLC, WHITE-BALANCE, AGC
IR range	10 LED, 5 m	10 LED, 5 m	20 LED, 20 m	20 LED, 20 m
Protection rating IP	IP66	IP66	IP66	IP66
Operating temperature	-10° C ~ +50° C	-10° C ~ +50° C	-10° C ~ +50° C	-10° C ~ +50° C
Power supply / consumption	12 V 300 mA	12 V 300 mA	12 V 250 mA	12 V 250 mA
Dimensions (mm)	50 x 54 x 54	50 x 54 x 54	Ø 94 x 70	Ø 94 x 70
Weight (g)	300	300	570	570

### Max AHD recommended transmission distance

Resolution	Coaxial cable				Network cable	
	RG59	0002/163 (coaxial+supply)	46364.100 (3.3 mm high quality coaxial, internal)	46364.500 (6.3 mm high quality coaxial, external)	Passive Balun (analogue range)	Active Balun (analogue range)
720p	400 m	40 m @ 700 mA (limit by supply)	270 m	500 m	200 m	Not available
1080p	250 m	40 m @ 700 mA (limit by supply)	160 m	300 m	100 m	Not available

If the limit distance is exceeded there is a progressive degeneration of the signal quality

## Varifocal outdoor Dome AHD cameras



<b>Models</b>	<b>46526.212B</b>	<b>46526.212.01</b>
<b>Sensor</b>	1/2.7" CMOS 2 Mpx	1/4" CMOS
<b>Actual pixels</b>	1928 (H) x 1088 (V)	1296(H) X 732(V)
<b>Resolution</b>	1080p	720p
<b>Sensitivity</b>	0 Lux (IR LED ON)	0 Lux (IR LED ON)
<b>Day &amp; night</b>	Mechanical ICR	Mechanical ICR
<b>Lens</b>	2.8 - 12 mm	2.8 - 12 mm
<b>S/N Ratio</b>	50 dB	50 dB
<b>Shutter speed (PAL)</b>	AUTO	AUTO
<b>OSD</b>	Yes (switch on cable)	No
<b>Control over coaxial (CSC)</b>	Yes	No
<b>CVBS output video</b>	Yes (signal switch by OSD)	Yes (switch on cable)
<b>Function</b>	2DNR, Smart-IR, D-WDR WHITE-BALANCE, AGC, BLC	Auto: 2DNR, Smart-IR, BLC, WHITE-BALANCE, AGC
<b>IR range</b>	35 LED, 30 m	35 LED, 30 m
<b>Protection rating IP</b>	IP66	IP66
<b>Operating temperature</b>	-10° C ~ +50° C	-10° C ~ +50° C
<b>Power supply / consumption</b>	12 V 300 mA	12 V 300 mA
<b>Dimensions (mm)</b>	Ø 120 x 80	Ø 120 x 80
<b>Weight (g)</b>	1000	1000

### Camouflage cameras



<b>Models</b>	<b>46534.037</b>
<b>Sensor</b>	1/4" CMOS
<b>Actual pixels</b>	1296 (H) x 732 (V)
<b>Resolution</b>	720p
<b>Sensitivity</b>	1 Lux
<b>Day &amp; night</b>	Electronic ICR
<b>Lens</b>	3.7 mm
<b>S/N Ratio</b>	50 dB
<b>Shutter speed (PAL)</b>	AUTO
<b>OSD</b>	No
<b>CVBS output video</b>	No
<b>Function</b>	AGC, BLC, NR
<b>IR range</b>	No
<b>Protection rating IP</b>	No
<b>Operating temperature</b>	-10° C ~ +50° C
<b>Power supply / consumption</b>	12 V 100 mA
<b>Dimensions (mm)</b>	150 x 30 x 60
<b>Weight (g)</b>	166

### AHD PTZ outdoor cameras



<b>Models</b>	<b>▲ 46535.020B</b>
<b>Sensor</b>	1/3" CMOS 2 Mpx
<b>Actual pixels</b>	1984 (H) x 1225 (V)
<b>Resolution</b>	1080p/720p - 25/30 fps
<b>Sensitivity</b>	0 Lux (IR LED ON)
<b>Zoom</b>	Lens zoom 20x (5.35 - 107 mm)
<b>View angle</b>	51.85° Wide - 2.89° Tele
<b>Day &amp; night</b>	Mechanical
<b>Function</b>	OSD, ATR, 2D DNR, BLC, DeFog
<b>S/N Ratio</b>	> 50 dB
<b>Pan/Tilt limit</b>	360° continue 0° to 90° auto Flip
<b>Preset</b>	220
<b>Patrol/Pattern</b>	8/4
<b>Privacy</b>	8 areas
<b>Control</b>	RS485
<b>In/out alarm</b>	4/1
<b>IR range</b>	150 m
<b>Protection rating IP</b>	IP66
<b>Operating temperature</b>	-40° C ~ + 60° C
<b>Power supply / consumption</b>	24 Vac 3 A (provided)
<b>Dimensions (mm)</b>	Ø 210 x 330
<b>Weight (kg)</b>	6

### 1080p AHD DVR manageable from 10" multimedia video touchscreen (21553.2)



Models	46540.F04	46540.F08	46540.H16
Video compressor	Standard H.264 High Profile	Standard H.264 High Profile	Standard H.264 High Profile
Mode of operation	PENTAPLEX	PENTAPLEX	PENTAPLEX
Video input	4 BNC	8 BNC	16 BNC
Video output	1 HDMI, 1 VGA, 1 BNC	1 HDMI, 1 VGA, 1 BNC	1 HDMI, 1 VGA, 1 BNC
Audio in/out	4 RCA/1 RCA	4 RCA/1 RCA	4 RCA/1 RCA
Resolution for recording	FullHD 1080p (AHD): 4 CH @ 50 Fps. HD 720p (AHD) or WD1 960x576 (analog): 4 CH @ 100 Fps	FullHD 1080p (AHD): 8 CH @ 100 Fps. HD 720p (AHD) or WD1 960x576 (analog): 8 CH @ 200 Fps	FullHD 1080p (AHD): 16 CH @ 200 Fps. HD 720p (AHD) or WD1 960x576 (analog): 16 CH @ 400 Fps
IP cameras matching	Yes	Yes	Yes
No IP cameras connected to DVR (by ext.switch)	1 (in addition to 4 CVBS analog/AHD cameras)	4 (in addition to 8 CVBS analog/AHD cameras)	8 (in addition to 16 CVBS analog/AHD cameras)
IP camera recording resolution	1 Ch 1080p 25 Fps 720p 25 Fps	4 Ch 3 Mpx 50 Fps 1080p 100 Fps 720p 100 Fps	8 Ch 3 Mpx 100 Fps 1080p 200 Fps 720p 200 Fps
VGA/HDMI resolution	1080p (1920 x 1080)	1080p (1920x1080)	1080p (1920x1080)
In/out alarm	4/1	4/1	4/1
OSD camera control over coaxial (CsC)	Yes	Yes	Yes
Network interface	1 RJ45 - 10/100 Mbps	1 RJ45 - 10/100 Mbps	1 RJ45 - 10/100 Mbps
Hard drive interface	1 SATA (3 TB max)	1 SATA (3 TB max)	2 SATA (3 TB max)
Hard disk drive	1 TB professional	1 TB professional	1 TB professional
USB interface	2	2	2
RS485 controlo PTZ	Yes	Yes	Yes
CVM	Yes	Yes	Yes
QR CODE	Yes	Yes	Yes
Control via smartphone	Android and iPhone with SuperLive Pro APP	Android and iPhone with SuperLive Pro APP	Android and iPhone with SuperLive Pro APP
Video analysis	Motion Detection	Motion Detection	Motion Detection
Privacy filter	Yes	Yes	Yes
Interface	Keypad, mouse, remote control	Keypad, mouse, remote control	Keypad, mouse, remote control
Power supply / consumption	12 V 2 A, 6 W (without HDD)	12 V 3 A, 8 W (without HDD)	12 V 4 A, 15 W (without HDD)
Operating temperature	0° C ~ +50°C	0° C ~ +50°C	0° C ~ +50°C
Dimensions (mm)	255 x 212 x 45	300 x 270 x 58	430 x 300 x 55
Weight (kg)	0.8 (excluded HDD)	1.5 (excluded HDD)	4.2 (excluded HDD)

**PENTAPLEX:** the DVR/NVR manages simultaneously the recording, real time visualization, stored image research, back-up (images copy), remote visualization (e.g. from internet). The "OSD control from DVR" function has to be supported by the camera.

**1080p LITE:** the DVR records smooth video (25 fps), because the pixel number is reduced



# CCTV

## AHD DVR

### 720p AHD DVR manageable from 10" multimedia video touchscreen (21553.2)



Models	46540.H04	46540.H08
Video compressor	Standard H.264 High Profile	Standard H.264 High Profile
Mode of operation	PENTAPLEX	PENTAPLEX
Video input	4 BNC	8 BNC
Video output	1 HDMI, 1 VGA	1 HDMI, 1 VGA
Audio in/out	1 RCA/1 RCA	1 RCA/1 RCA
Resolution for recording	HD 720p (AHD) or WD1 960x576 (analog): 4 CH @ 100 Fps	HD 720p (AHD) or WD1 960x576 (analog): 8 CH @ 200 Fps
IP cameras matching	No	Yes
No IP cameras connected to DVR (by ext.switch)	No	1 (in addition to 8 CVBS analog/AHD cameras)
IP camera recording resolution		1 Ch 720p 25 Fps
VGA/HDMI resolution	1080p (1920 x 1080)	1080p (1920 x 1080)
In/out alarm	- / -	- / -
OSD camera control over coaxial (CsC)	Yes	Yes
Network interface	1 RJ45 - 10/100 Mbps	1 RJ45 - 10/100 Mbps
Hard drive interface	1 SATA (3 TB max)	1 SATA (3 TB max)
Hard disk drive	1 TB professional	1 TB professional
Plug&Play	-	-
USB interface	2	2
RS485 PTZ control	Yes	Yes
CVM	Yes	Yes
QR CODE	Yes	Yes
Control via smartphone	Android and iPhone with SuperLive Pro APP	Android and iPhone with SuperLive Pro APP
Video analysis	Motion Detection	Motion Detection
Privacy filter	Yes	Yes
Interface	Front keypad, mouse, remote control	Front keypad, mouse, remote control
Power supply / consumption	12 V 2 A, 6 W (without HDD)	12 V 2 A, 8 W (without HDD)
Operating temperature	0° C ~ +50°C	0° C ~ +50°C
Dimensions (mm)	255 x 212 x 45	300 x 270 x 58
Weight (kg)	0.8 (excluded HDD)	1.5 (excluded HDD)

**PENTAPLEX:** the DVR/NVR manages simultaneously the recording, real time visualization, stored image research, back-up (images copy), remote visualization (e.g. from internet). The "OSD control from DVR" function has to be supported by the camera. It supports 1080p AHD cameras with 928 x 962 Real Time resolution.

### Max AHD recommended transmission distance

Resolution	Coaxial cable				Network cable	
	RG59	0002/163 (coaxial+supply)	46364.100 (3.3 mm high quality coaxial, internal)	46364.500 (6.3 mm high quality coaxial, external)	Passive Balun (analogue range)	Active Balun (analogue range)
720p	400 m	40 m @ 700 mA (limit by supply)	270 m	500 m	200 m	Not available
1080p	250 m	40 m @ 700 mA (limit by supply)	160 m	300 m	100 m	Not available

If the limit distance is exceeded there is a progressive degeneration of the signal quality

### Fixed outdoor 3 Mpx Bullet IP cameras



<b>Models</b>	▲ 46212.036C.01
<b>Sensor</b>	1/3" CMOS Progressive Scan, 3 Mpx
<b>Resolution</b>	2304 x 1296
<b>Sensitivity</b>	0.05 Lux@F1.2 (AGC ON); 0 LUX (IR LED ON)
<b>Video compression</b>	H.264 - H.265
<b>Day &amp; night</b>	ICR
<b>Lens</b>	3.6 mm @F1.6 view angle: 72°
<b>Main frame rate</b>	30 Fps (2304 x 1296) 30 Fps (2048 x 1536) 30 Fps (1920 x 1080) 30 Fps (1280 x 720)
<b>Secondary frame rate</b>	30 Fps (1280 x 720) 30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)
<b>Bit Rate</b>	64 Kbs ~ 8 Mbs
<b>SD card</b>	No
<b>Audio in/out</b>	1/0
<b>In/out alarm</b>	0/0
<b>CVBS output video</b>	Yes
<b>Function</b>	WDR, Smart-IR, ROI, 3DNR, Mask, Motion
<b>Compatibility</b>	ONVIF
<b>IR range</b>	20 - 30 m
<b>Protection rating IP</b>	IP66
<b>Operating temperature</b>	-10° C ~ +50° C
<b>Power supply / consumption</b>	12 Vdc/PoE 510 mA, 6,1 W
<b>Dimensions (mm)</b>	87 x 87 x 219
<b>Weight (g)</b>	635
<b>Notes</b>	RTSP, multi-stream. Bracket included

### Varifocal outdoor 3, 4 and 5 Mpx Bullet IP cameras



Motorised

Models	46216.310E	▲ 46216.312DM	46216.312D.01	▲ 46216.312C.01
<b>Sensor</b>	High sensibility sensor, 1/1.8" Sony CMOS Progressive Scan, 5 Mpx	1/3" CMOS Progressive Scan, 4 Mpx	1/3" CMOS Progressive Scan, 4 Mpx	1/3" CMOS Progressive Scan, 3 Mpx
<b>Resolution</b>	2592 x 1944	2592 x 1520	2592 x 1520	2304 x 1296
<b>Sensitivity</b>	Colors: 0.01 Lux@F1.2, AGC ON; 0 Lux (IR LED ON)	0.05 Lux@F1.2 (AGC ON); 0 LUX (IR LED ON)	0,05 Lux@F1,2 (AGC ON); 0 LUX (IR LED ON)	0.05 Lux@F1.2 (AGC ON); 0 LUX (IR LED ON)
<b>Video compression</b>	H.264 - H.265	H.264 - H.265	H.264 - H.265	H.264 - H.265
<b>Day &amp; night</b>	ICR	ICR	ICR	ICR
<b>Lens</b>	3.6 - 10 mm @F1.4 view angle: 84° - 37°	Motorised 3.3 - 12 mm @F1.4 view angle: 80° - 38°	3.3 - 12 mm @F1.4 view angle: 80° - 38°	3.3 - 12 mm @F1.4 view angle: 80° - 38°
<b>Main frame rate</b>	30 Fps (2592 x 1944) 30 Fps (2560 x 1440) 30 Fps (1920 x 1080)	30 Fps (2592 x 1520) 30 Fps (2560 x 1440) 30 Fps (2304 x 1296) 30 Fps (1920 x 1080)	30 Fps (2592 x 1520) 30 Fps (2560 x 1440) 30 Fps (2304 x 1296) 30 Fps (1920 x 1080)	30 Fps (2304 x 1296) 30 Fps (2048 x 1536) 30 Fps (1920 x 1080) 30 Fps (1280 x 720)
<b>Secondary frame rate</b>	30 Fps (1280 x 720) 30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)	15 Fps (1280 x 720) 30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)	15 Fps (1280 x 720) 30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)	30 Fps (1280 x 720) 30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)
<b>Bit Rate</b>	128 Kbs - 9 Mbs	128 Kbs ~ 9 Mbs	128 Kbs ~ 9 Mbs	64 Kbs ~ 8 Mbs
<b>SD card</b>	Yes, not included (64 GB max)	Yes, not included (128 GB max)	Yes, not included (128 GB max)	Yes, not included (128 GB max)
<b>Audio in/out</b>	1/1	1/1	1/1	1/1
<b>In/out alarm</b>	1/1	1/1	1/1	1/1
<b>CVBS output video</b>	Yes	Yes	Yes	Yes
<b>Function</b>	WDR, Smart IR, ROI, 3DNR, Mask, Motion	Real WDR, Smart-IR, ROI, 3DNR, Mask, Motion, HLC, BLC, DeFog	Real WDR, Smart-IR, ROI, 3DNR, Mask, Motion, HLC, BLC, DeFog	WDR, Smart-IR, ROI, 3DNR, Mask, Motion
<b>Compatibility</b>	ONVIF	ONVIF	ONVIF	ONVIF
<b>IR range</b>	30 - 50 m	30 - 50 m	30 - 50 m	30 - 50 m
<b>Protection rating IP/IK</b>	IP66	IP66	IP66	IP66
<b>Operating temperature</b>	-10° C ~ +50° C	-10° C ~ +50° C	-10° C ~ +50° C	-10° C ~ +50° C
<b>Power supply / consumption</b>	12 Vdc/PoE 600 mA, 7.2 W	12 Vdc/PoE 550 mA, 6.6 W	12 Vdc/PoE 550 mA, 6.6 W	12 Vdc/PoE 550 mA, 6.6 W
<b>Dimensions (mm)</b>	109 x 109 x 264	109 x 109 x 264	109 x 109 x 264	109 x 109 x 264
<b>Weight (g)</b>	1115	1115	1115	1115
<b>Notes</b>	RTSP, multi-stream. Bracket included	RTSP, multi-stream. Bracket included	RTSP, multi-stream. Bracket included	RTSP, multi-stream. Bracket included

**PoE (Power over Ethernet):** this enables using a single network cable for powering a peripheral device and data transmission. This technology is particularly useful in monitoring and IP surveillance applications where it is not always possible to connect the appliances directly to an electrical socket outlet.

**IPTOOL:** camera configuration software.

**RTSP:** function for connecting directly to the By-me home automation system without using NVR.

### Fixed outdoor 3 Mpx Dome IP cameras



<b>Models</b>	▲ 46222.036C.01
<b>Sensor</b>	1/3" CMOS progressive scan, 3 Mpx
<b>Resolution</b>	2304 x 1296
<b>Sensitivity</b>	0.05 Lux@F1.2 (AGC ON); 0 LUX (IR LED ON)
<b>Video compression</b>	H.264 - H.265
<b>Day &amp; night</b>	ICR
<b>Lens</b>	3.6 mm @F1.6 view angle: 72°
<b>Main frame rate</b>	30 Fps (2304 x 1296) 30 Fps (2048 x 1536) 30 Fps (1920 x 1080) 30 Fps (1280 x 720)
<b>Secondary frame rate</b>	30 Fps (1280 x 720) 30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)
<b>Bit Rate</b>	64 Kbs ~ 8 Mbs
<b>SD card</b>	No
<b>Audio in/out</b>	1/0
<b>In/out alarm</b>	0/0
<b>CVBS output video</b>	Yes
<b>Function</b>	WDR, Smart-IR, ROI, 3DNR, Mask, Motion
<b>Compatibility</b>	ONVIF
<b>IR range</b>	10 - 20 m
<b>Protection rating IP/IK</b>	IP66 / IK10
<b>Operating temperature</b>	-10° C ~ +50° C
<b>Power supply / consumption</b>	12 Vdc/PoE 350 mA, 4.2 W
<b>Dimensions (mm)</b>	Ø 116 x 91
<b>Weight (g)</b>	605
<b>Notes</b>	RTSP, multi-stream

### Varifocal outdoor 3, 4 and 5 Mpx Dome IP cameras



#### Motorised

Models	46226.310E	▲ 46226.312DM	46226.312D.01	▲ 46226.312C.01
<b>Sensor</b>	High sensibility sensor, 1/1.8" Sony CMOS Progressive Scan, 5 Mpx	1/3" CMOS Progressive Scan, 4 Mpx	1/3" CMOS Progressive Scan, 4 Mpx	1/3" CMOS Progressive Scan, 3 Mpx
<b>Resolution</b>	2592 x 1944	2592 x 1520	2592 x 1520	2304 x 1296
<b>Sensitivity</b>	Colors: 0.01 Lux@F1.2, AGC ON; 0 Lux (IR LED ON)	0.05 Lux@F1.2 (AGC ON); 0 LUX (IR LED ON)	0.05 Lux@F1.2 (AGC ON); 0 LUX (IR LED ON)	0.05 Lux@F1.2 (AGC ON); 0 LUX (IR LED ON)
<b>Video compression</b>	H.264 - H.265	H.264 - H.265	H.264 - H.265	H.264 - H.265
<b>Day &amp; night</b>	ICR	ICR	ICR	ICR
<b>Lens</b>	3.6 - 10 mm @F1.4 view angle: 84° - 37°	Motorised 3.3 - 12 mm @F1.4 view angle: 80° - 38°	3.3 - 12 mm @F1.4 view angle: 80° - 38°	3.3 - 12 mm @F1.4 view angle: 80° - 38°
<b>Main frame rate</b>	30 Fps (2592 x 1944) 30 Fps (2560 x 1440) 30 Fps (1920 x 1080)	30 Fps (2592 x 1520) 30 Fps (2560 x 1440) 30 Fps (2304 x 1296) 30 Fps (1920 x 1080)	30 Fps (2592 x 1520) 30 Fps (2560 x 1440) 30 Fps (2304 x 1296) 30 Fps (1920 x 1080)	30 Fps (2304 x 1296) 30 Fps (2048 x 1536) 30 Fps (1920 x 1080) 30 Fps (1280 x 720)
<b>Secondary frame rate</b>	30 Fps (1280 x 720) 30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)	15 Fps (1280 x 720) 30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)	15 Fps (1280 x 720) 30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)	30 Fps (1280 x 720) 30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)
<b>Bit Rate</b>	128 Kbs - 9 Mbs	128 Kbs ~ 9 Mbs	128 Kbs ~ 9 Mbs	64 Kbs ~ 8 Mbs
<b>SD card</b>	Yes, not included (64 GB max)	Yes, not included (128 GB max)	Yes, not included (128 GB max)	Yes, not included (128 GB max)
<b>Audio in/out</b>	1/1	1/1	1/1	1/1
<b>In/out alarm</b>	1/1	1/1	1/1	1/1
<b>CVBS output video</b>	Yes	Yes	Yes	Yes
<b>Function</b>	WDR, Smart IR, ROI, 3DNR, Mask, Motion	Real WDR, Smart-IR, ROI, 3DNR, Mask, Motion, HLC, BLC, DeFog	Real WDR, Smart-IR, ROI, 3DNR, Mask, Motion, HLC, BLC, DeFog	WDR, Smart-IR, ROI, 3DNR, Mask, Motion
<b>Compatibility</b>	ONVIF	ONVIF	ONVIF	ONVIF
<b>IR range</b>	20 - 30 m	20 - 30 m	20 - 30 m	20 - 30 m
<b>Protection rating IP/IK</b>	IP66 / IK10	IP66 / IK10	IP66 / IK10	IP66 / IK10
<b>Operating temperature</b>	-10° C ~ +50° C	-10° C ~ +50° C	-10° C ~ +50° C	-10° C ~ +50° C
<b>Power supply / consumption</b>	12 Vdc/PoE 500 mA, 6 W	12 Vdc/PoE 500 mA, 6 W	12 Vdc/PoE 500 mA, 6 W	12 Vdc/PoE 420 mA, 5 W
<b>Dimensions (mm)</b>	Ø 150 x 114 mm	Ø 150 x 114	Ø 150 x 114	Ø 150 x 114
<b>Weight (g)</b>	1260	1260	1260	1260
<b>Notes</b>	RTSP, multi-stream	RTSP, multi-stream	RTSP, multi-stream	RTSP, multi-stream

**PoE (Power over Ethernet):** this enables using a single network cable for powering a peripheral device and data transmission. This technology is particularly useful in monitoring and IP surveillance applications where it is not always possible to connect the appliances directly to an electrical socket outlet.

**IPTOOL:** camera configuration software.

**RTSP:** function for connecting directly to the By-me home automation system without using NVR.

### Fixed outdoor 1.3 and 2 Mpx Bullet IP cameras



Models	▲ 46212.036B	Δ 46212.036.01
<b>Sensor</b>	1/2.8" CMOS Progressive Scan, 2 Mpx	1/3" CMOS Progressive Scan, 1.3 Mpx
<b>Resolution</b>	1920 x 1080	1280 x 960
<b>Sensitivity</b>	0.1 Lux@F1.2 (AGC ON); 0 LUX (IR LED ON)	0.01 Lux@F1.2; 0 LUX (IR LED ON)
<b>Video compression</b>	H.264	H.264
<b>Day &amp; night</b>	ICR	ICR
<b>Lens</b>	3.6 mm @F1.6 view angle: 79°	3.6 mm @F1.8 view angle: 71°
<b>Main frame rate</b>	30 Fps (1920 x 1080) 30 Fps (1280 x 720)	30 Fps (1280 x 960) 30 Fps (1280 x 720)
<b>Secondary frame rate</b>	30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)	30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)
<b>Bit Rate</b>	256 Kbs ~ 5 Mbs	64 Kbs ~ 4 Mbs
<b>SD card</b>	No	No
<b>Audio in/out</b>	0/0	1/0
<b>In/out alarm</b>	0/0	0/0
<b>CVBS output video</b>	No	No
<b>Function</b>	WDR, Smart-IR, ROI, 3DNR, Mask, Motion	WDR, Smart-IR, ROI, 3DNR, Mask, Motion
<b>Compatibility</b>	ONVIF	ONVIF
<b>IR range</b>	20 - 30 m	20 - 30 m
<b>Protection rating IP</b>	IP66	IP66
<b>Operating temperature</b>	-10° C ~ +50° C	-10° C ~ +50° C
<b>Power supply / consumption</b>	12 Vdc/PoE 420 mA, 5 W	12 Vdc/PoE 500 mA, 6 W
<b>Dimensions (mm)</b>	87 x 87 x 219	87 x 87 x 219
<b>Weight (g)</b>	635	635
<b>Notes</b>	RTSP, multi-stream. Bracket included	RTSP, multi-stream. Bracket included

### Varifocal outdoor 2 Mpx Bullet IP cameras



Models	▲ 46216.212B	Δ 46216.212
<b>Sensor</b>	1/2.8" CMOS Progressive Scan, 2 Mpx	1/2.7" CMOS Progressive Scan, 2 Mpx
<b>Resolution</b>	1920 x 1080	1920 x 1080
<b>Sensitivity</b>	0.1 Lux@F1.2 (AGC ON); 0 LUX (IR LED ON)	0 Lux (IR LED ON)
<b>Video compression</b>	H.264	H.264
<b>Day &amp; night</b>	ICR	ICR
<b>Lens</b>	2.8 - 12 mm @F1.4 view angle: 96° - 35°	2.8 - 12 mm
<b>Main frame rate</b>	30 Fps (1920 x 1080) 30 Fps (1280 x 720)	30 Fps (1920 x 1080) 30 Fps (1280 x 720)
<b>Secondary frame rate</b>	30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)	30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)
<b>Bit Rate</b>	256 Kbs ~ 5 Mbs	64 Kbs ~ 8 Mbs
<b>SD card</b>	No	No
<b>Audio in/out</b>	0/0	1/0
<b>In/out alarm</b>	0/0	No
<b>CVBS output video</b>	No	No
<b>Function</b>	WDR, Smart-IR, ROI, 3DNR, Mask, Motion	WDR, Smart-IR, ROI, 3DNR, Mask, Motion
<b>Compatibility</b>	ONVIF	ONVIF
<b>IR range</b>	20 - 30 m	30 - 50 m
<b>Protection rating IP</b>	IP66	IP66
<b>Operating temperature</b>	-10° C ~ +50° C	-10° C ~ +50° C
<b>Power supply / consumption</b>	12 Vdc/PoE 420 mA, 5 W	12 Vdc/PoE 550 mA, 6.6 W
<b>Dimensions (mm)</b>	87 x 87 x 219	109 x 109 x 264
<b>Weight (g)</b>	635	1115
<b>Notes</b>	RTSP, multi-stream. Bracket included	RTSP, multi-stream. Bracket included

### Fixed outdoor 1.3 and 2 Mpx Dome IP cameras



Models	▲ 46222.036B	Δ 46222.036.01
<b>Sensor</b>	1/2.8" CMOS Progressive Scan, 2 Mpx	1/3" CMOS Progressive Scan, 1.3 Mpx
<b>Resolution</b>	1920 x 1080	1280 x 960
<b>Sensitivity</b>	0.1 Lux@F1.2 (AGC ON); 0 LUX (IR LED ON)	0.01 Lux@F1.2; 0 LUX (IR LED ON)
<b>Video compression</b>	H.264	H.264
<b>Day &amp; night</b>	ICR	ICR
<b>Lens</b>	3.6 mm @F1.6 view angle: 79°	3.6 mm @F1.8 angolo di visione: 71°
<b>Main frame rate</b>	30 Fps (1920 x 1080) 30 Fps (1280 x 720)	30 Fps (1280 x 960) 30 Fps (1280 x 720)
<b>Secondary frame rate</b>	30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)	30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)
<b>Bit Rate</b>	256 Kbs ~ 5 Mbs	64 Kbs ~ 4 Mbs
<b>SD card</b>	No	No
<b>Audio in/out</b>	0/0	1/0
<b>In/out alarm</b>	0/0	0/0
<b>CVBS output video</b>	No	No
<b>Function</b>	WDR, Smart-IR, ROI, 3DNR, Mask, Motion	WDR, Smart-IR, ROI, 3DNR, Mask, Motion
<b>Compatibility</b>	ONVIF	ONVIF
<b>IR range</b>	10 - 20 m	10 - 20 m
<b>Protection rating IP/IK</b>	IP66	IP66 / IK10
<b>Operating temperature</b>	-10° C ~ +50° C	-10° C ~ +50° C
<b>Power supply / consumption</b>	12 Vdc/PoE 350 mA, 4.2 W	12 Vdc/PoE 400 mA, 4.8 W
<b>Dimensions (mm)</b>	Ø 108 x 95 mm	Ø 116 x 91 mm
<b>Weight (g)</b>	405	605
<b>Notes</b>	RTSP, multi-stream	RTSP, multi-stream

### Varifocal outdoor Dome IP 2 Mpx cameras



Models	▲ 46226.212B	Δ 46226.212
<b>Sensor</b>	1/2.8" CMOS Progressive Scan, 2 Mpx	1/2.7" CMOS Progressive Scan, 2 Mpx
<b>Resolution</b>	1920 x 1080	1920 x 1080
<b>Sensitivity</b>	0.1 Lux@F1.2 (AGC ON); 0 LUX (IR LED ON)	0 Lux (IR LED ON)
<b>Video compression</b>	H.264	H.264
<b>Day &amp; night</b>	ICR	ICR
<b>Lens</b>	2.8 - 12 mm @F1,4 view angle: 96° - 35°	2.8 - 12 mm
<b>Main frame rate</b>	30 Fps (1920 x 1080) 30 Fps (1280 x 720)	30 Fps (1920 x 1080) 30 Fps (1280 x 720)
<b>Secondary frame rate</b>	30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)	30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)
<b>Bit Rate</b>	256 Kbs ~ 5 Mbs	64 Kbs ~ 8 Mbs
<b>SD card</b>	No	No
<b>Audio in/out</b>	0/0	1/0
<b>In/out alarm</b>	0/0	0/0
<b>CVBS output video</b>	No	Yes
<b>Function</b>	WDR, Smart-IR, ROI, 3DNR, Mask, Motion	WDR, Smart-IR, ROI, 3DNR, Mask, Motion
<b>Compatibility</b>	ONVIF	ONVIF
<b>IR range</b>	20 - 30 m	20 - 30 m
<b>Protection rating IP/IK</b>	IP66	IP66 / IK10
<b>Operating temperature</b>	-10° C ~ +50° C	-10° C ~ +50° C
<b>Power supply / consumption</b>	12 Vdc/PoE 420 mA, 5 W	12 Vdc/PoE 500 mA, 6 W
<b>Dimensions (mm)</b>	Ø 130 x 115 mm	Ø 150 x 114 mm
<b>Weight (g)</b>	710	1260
<b>Notes</b>	RTSP, multi-stream	RTSP, multi-stream

**PoE (Power over Ethernet):** this enables using a single network cable for powering a peripheral device and data transmission. This technology is particularly useful in monitoring and IP surveillance applications where it is not always possible to connect the appliances directly to an electrical socket outlet.

**IPTOOL:** camera configuration software.

**RTSP:** function for connecting directly to the By-me home automation system without using NVR.

### PTZ IP cameras



<b>Models</b>	▲ 46235.020C
<b>Sensor</b>	1/2.8" CMOS Progressive Scan, 3 Mpx
<b>Resolution</b>	2048 x 1536
<b>Sensitivity</b>	0 Lux (IR LED ON)
<b>Video compression</b>	H.264 - H.265
<b>Day &amp; night</b>	ICR
<b>Lens</b>	Zoom lens 20x (5,5 - 110 mm)
<b>View angle</b>	58° Wide - 3,6° Tele
<b>Main frame rate</b>	30 Fps (2048 x 1536) 30 Fps (1920 x 1080) 30 Fps (1280 x 720)
<b>Secondary frame rate</b>	30 Fps (D1) 30 Fps (CIF) 30 Fps (480 x 240)
<b>Bit Rate</b>	64 Kbs ~ 8 Mbs
<b>Limite Pan/Tilt</b>	360° continue 0° to 90° auto Flip
<b>Preset</b>	255
<b>Patrol /Patern</b>	8/4
<b>Control</b>	RS485
<b>SD card</b>	Yes, not included (128 GB max)
<b>Audio in/out</b>	1/1
<b>In/out alarm</b>	7/1
<b>Video uscita CVBS</b>	Yes, (video test)
<b>Function</b>	WDR, Smart-IR, DeFog, BLC, 3D DNR
<b>Compatibility</b>	ONVIF
<b>IR range</b>	Progressive Smart IR with zoom up to 100 m
<b>Protection rating IP</b>	IP66
<b>Operating temperature</b>	-20° C ~ +60° C
<b>Power supply / consumption</b>	24 Vac (65 W with IR activated heater)
<b>Dimensions (mm)</b>	Ø 216 x 349 only cam body
<b>Weight (kg)</b>	5
<b>Notes</b>	RTSP, multi-stream. Braket and power supply included



# CCTV

## IP NVR H.265



### NVR H.265 Real Time 5 Mpx



Models	▲ 46241.H04	▲ 46241.H08	▲ 46241.H16	Δ 46241.F16H	46241.F32H	▲ 46241.H64
Video compression	H.264 - H.265	H.264 - H.265	H.264 - H.265	H.264 - H.265	H.264 - H.265	H.264 - H.265
Mode of operation	PENTAPLEX	PENTAPLEX	PENTAPLEX	PENTAPLEX	PENTAPLEX	PENTAPLEX
Video input	4 Ch	8 Ch	16 Ch	16 Ch	32 Ch	64 Ch
Video output	1 HDMI	1 HDMI, 1 VGA	1 HDMI, 1 VGA	HDMI	1 HDMI, 1 VGA	2 HDMI, 1 VGA
Audio in/out	- / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1
Resolution for recording	Real Time 5 Mpx 4 CH @ 100 Fps	Real Time 5 Mpx 8 CH @ 200 Fps	Real Time 5 Mpx 16 CH @ 400 Fps	Real Time 5 Mpx 16 CH @ 400 Fps	Real Time 5 Mpx 32 CH @ 800 Fps	Real Time 5 Mpx 64 CH @ 1600 Fps
VGA/HDMI resolution	- / 1080p	1080p / 4K	1080p / 4K	1080p / 4K	1080p / 4K	1080p / 4K - 1080
In/out alarm	-	-	-	4 / 1	-	8 / 4
Network interface	1 RJ45 - 10/100 Mbps	1 RJ45 - 10/100 Mbps	1 RJ45 - 10/100/1000 Mbps	1 RJ45 - 10/100 Mbps	1 RJ45 - 10/100/1000 Mbps	2 RJ45 - 10/100/1000 Mbps
Hard drive interface	1 SATA (max 6 TB)	1 SATA (max 6 TB)	2 SATA (max 6 TB)	1 SATA (max 6 TB)	2 SATA (max 6 TB)	8 SATA (max 6 TB) 2 E-SATA
Hard disk drive	1 TB professional	1 TB professional	2 TB professional	2 TB professional	2 TB professional	-
Plug & Play	Yes (on built-in PoE switch, 4-port PoE)	Yes (on built-in PoE switch, 8-port PoE)	-	-	-	-
USB interface	2	2	2	2	2	3
RS485	No	No	No	No	No	Yes
PTZ control	Yes	Yes	Yes	Yes	Yes	Yes
CVM	Yes	Yes	Yes	Yes	Yes	Yes
QR CODE	Yes	Yes	Yes	Yes	Yes	Yes
Control via smartphone	Android, iPhone	Android, iPhone	Android, iPhone	Android, iPhone	Android, iPhone	Android, iPhone
Video analysis	Motion detection	Motion detection	Motion detection	Motion detection	Motion detection	Motion detection
Privacy filter	Yes	Yes	Yes	Yes	Yes	Yes
Interface	Keypad, mouse, remote control	Keypad, mouse, remote control	Keypad, mouse, remote control	Keypad, mouse, remote control	Keypad, mouse, remote control	Keypad, mouse, remote control
Power supply / consumption	48 V 1.04 A (single supply unit)	48 V 2.5 A (single supply unit)	12 V 4 A	12 V 2 A	12 V 4 A	110/230 V (inner supply unit)
Operating temperature	0° C ~ +50° C	0° C ~ +50° C	0° C ~ +50° C	0° C ~ +50° C	0° C ~ +50° C	0° C ~ +50° C
Dimensions (mm)	300 x 270 x 58	300 x 270 x 58	430 x 300 x 55	300 x 270 x 58	430 x 300 x 55	430 x 450 x 90
Weight (kg)	1 (excluded HDD)	1,2 (excluded HDD)	2 (excluded HDD)	1 (excluded HDD)	2 (excluded HDD)	4.5 (excluded HDD)
Notes			1 rack unit		1 rack unit	2 rack units

**PoE (Power over Ethernet):** this enables using a single network cable for powering a peripheral device and data transmission. This technology is particularly useful in monitoring and IP surveillance applications where it is not always possible to connect the appliances directly to an electrical socket outlet.

**IP TOOL:** camera configuration software.

**RTSP:** function for connecting directly to the By-me home automation system without using NVR.

NVR with integrated PoE and manageable from 10" multimedia video touchscreen (21553.2)



<b>Models</b>	<b>46241.F16</b>
<b>Video compression</b>	H.264
<b>Mode of operation</b>	PENTAPLEX
<b>Video input</b>	16 Ch
<b>Video output</b>	1 HDMI, 1 VGA
<b>Audio in/out</b>	1 / 1
<b>Resolution for recording</b>	Real Time 2K (2560 x 1440) Real Time 3 Mpx Real time 1080p 16 CH @ 400 Fps
<b>VGA/HDMI resolution</b>	1080p (1920 x 1080)
<b>In/out alarm</b>	4 /1
<b>Network interface</b>	1 RJ45 10/100/1000 Mbps
<b>Hard drive interface</b>	2 SATA (max 3 TB)
<b>Hard disk drive</b>	1 TB professional
<b>Plug &amp; Play</b>	Yes (on built-in PoE switch, 8-port PoE)
<b>USB interface</b>	2
<b>RS485</b>	Yes
<b>PTZ control</b>	Yes
<b>CVM</b>	Yes
<b>QR CODE</b>	Yes
<b>Control via smartphone</b>	Android, iPhone
<b>Video analysis</b>	Motion detection
<b>Privacy filter</b>	Yes
<b>Interface</b>	Keypad, mouse, remote control
<b>Power supply / consumption</b>	110/230 Vac
<b>Operating temperature</b>	0°C ~ +50°C
<b>Dimensions (mm)</b>	430 x 300 x 55
<b>Weight (kg)</b>	4.7 (excluded HDD)
<b>Notes</b>	1 rack unit

## PoE Ethernet switch

### PoE Ethernet switches



Models	Δ 46260.5P	Δ 46260.9P
PoE standard	IEEE 802.3at	IEEE 802.3at
PoE ports	4	8
Porte	-	-
Uplink ports	1	1
Mbps speed ports	10/100	10/100
Standard	IEEE 802.3 10 BASE-T IEEE 802.3u 100 BASE-Tx	IEEE 802.3 10 BASE-T IEEE 802.3u 100 BASE-Tx
PoE Power Output (per ports)	48 Vdc, 620 mA 30 W max	48 Vdc, 620 mA 30 W max
Total PoE power	50 W max	110 W max
PoE mode	1/2 (+), 3/6 (-), Mode-A, End-Span	1/2 (+), 3/6 (-), Mode-A, End-Span
Power supply/ consumption	Input: 100-240 Vac output: 48 Vdc, 1.25 A 60 W max	Input: 100-240 Vac output: 48 Vdc, 2.5 A 120 W max
Operating temperature	0° C ~ +50° C	0° C ~ +50° C
Dimensions (mm)	117 x 84 x 29	185 x 103 x 28

### Monitor



Models	▲ 46910.H20A	▲ 46910.H24A
Screen	19.5" LED Backlight Monitor	23.6" LED Backlight Monitor
Resolution	1920 x 1080	1920 x 1080
Profile ratio	16:9	16:9
Brightness (NIT)	250 cd/m <sup>2</sup>	250 cd/m <sup>2</sup>
Contrast ratio	500:1	500:1
Viewing angle	170° x 160°	170° x 160°
Response time	5 ms	5 ms
Video inputs	HDMI x 1 VGA x 1 BNC x 1 in BNC x 1 out	HDMI x 1 VGA x 1 BNC x 1 in BNC x 1 out
Audio input/output	1	1
Power supply	12 Vdc 30 W whit standard power supply	12 Vdc 30 W whit standard power supply
Vesa contact	Yes	Yes
Desktop frame	Yes	Yes
Dimensions (mm)	485 x 375 x 50	570 x 425 x 50
Weight (g)	2.8	3.8

### Passive transducers (AHD)



#### ▲ 46862.001

Passive video balun transducer for video transmission on twisted cable, BNC connector for camera connection, spring toolless connection for cable, max distance 330 m with passive receiver and 1500 m with active receiver. Matchable with PAL7NSC/SECAM, integrated electrostatic discharge protection.



#### ▲ 46862.B02

Pair of passive transducer for video transmission on twisted cable, BNC connectors for camera or DVR connection, one transducer with 14 cm of cable, screw connection for cable.

### IP keypad



#### ▲ 46916.004

IP keypad for PTZ control, it controls simultaneously 10 devices, 3-axis control. Supply unit 12 Vdc (provided).

### Power supplies



#### 46902.010

100-240 Vac 50/60 Hz switching supply unit, built-in 2P Europlug, 12 Vdc 1 A standard jack output, max 12 W power.



#### 46901.015

100-240 Vac switching supply unit, 12 Vdc 1.5 A standard jack output, max 18 W power, for installation in consumer unit, junction boxes or waterproof case.

### Splitter



#### ▲ 46903.002

DC splitter, 1-input, 2-output, possibility of 2 devices supplying with just one supply unit.



#### ▲ 46903.004

DC splitter, 1-input, 4-output, possibility of 4 devices supplying with just one supply unit

## Cables - AHD and IP kit

### Cables



**▲ 0002/060**  
PVC NPI video cable, 75 Ohm coaxial, Ø 3 mm, in reel of 200 m. It is necessary to use connectors 46904.S01.



**▲ 0002/063**  
PVC NPI video cable, 12-48 V CEI 20-22, shielded, 75 Ohm and 2 3.5 mm<sup>2</sup> conductors, in reel of 200 m. It is necessary to use connectors 46904.S01 or 46904.V01.



**▲ 0002/163**  
PVC NPI cable, 12-48 V CEI 20-22, shielded, 75 Ohm and 2 0.75 mm<sup>2</sup> conductors, in reel of 200 m. It is necessary to use connectors 46904.S01 or 46904.V01.



**46364.100**  
Coaxial cable for underground laying, Ø 3,3 mm, halogen-free, reel of 100 m, suitable for installation with power supply cables of I category.



**46364.500**  
Coaxial cable for outdoor laying, Ø 6,3 mm, halogen-free inner and PE outer sheath, reel of 500 m, suitable for installation with power supply cables of I category.

### Max recommended transmission distance

Resolution	Coaxial cable				Network cable	
	RG59	0002/163 (coaxial+supply)	46364.100 (3.3 mm high quality coaxial, internal)	46364.500 (6.3 mm high quality coaxial, external)	Passive Balun (analogue range)	Active Balun (analogue range)
AHD 720p	400 m	40 m @ 700 mA (limit by supply)	270 m	500 m	200 m	Not allowable use
AHD 1080p	250 m	40 m @ 700 mA (limit by supply)	160 m	300 m	100 m	Not allowable use
CVBS	400 m	70 m @ 400 mA (limit by supply)	240 m	540 m	330 m	2400 m
HD-SDI 1080p	70 m	Not allowable use	60 m	130 m	Not allowable use	Not allowable use

If the limit distance is exceeded there is a progressive degeneration of the signal quality

### CCTV kit with 4-channel AHD DVR and fixed cameras



**46550.412B**  
Kit with:  
- 1 HD Real Time 4-channel AHD DVR 46540.F04,  
- 2 cameras 46512.036B,  
- 2 power supplies 46902.015,  
- 1 sign RT03.



**46550.412.01**  
Kit with:  
- 1 HD Real Time 4-channel AHD DVR 46540.H04,  
- 2 cameras 46512.036.01,  
- 2 power supplies 46902.015,  
- 1 sign RT03.

### CCTV kit with 4 and 8-channel AHD DVR and varifocal cameras



**46550.416.01**  
Kit with:  
- 1 HD Real Time 4-channel AHD DVR 46540.H04,  
- 2 cameras 46516.212.01,  
- 2 power supplies 46902.015,  
- 1 sign RT03.



**46550.816B**  
Kit with:  
- 1 DVR AHD 8-channel HD Real Time 46540.F08,  
- 2 cameras 46516.212B,  
- 2 power supplies 46902.015,  
- 1 sign RT03.



**46550.816.01**  
Kit with:  
- 1 DVR AHD 8-channel HD Real Time 46540.F08,  
- 2 cameras 46516.212.01,  
- 2 power supplies 46902.015,  
- 1 sign RT03.

## Selection guide for DVR/NVR and cameras

## AHD

## DVR with alarm input and cam matching

DVR	Video compression	Channels number	In/out alarm	Cam resolution	
				720p	1080p
46540.F04	H.264	4	4 / 1	Yes	Yes
46540.F08	H.264	8	4 / 1	Yes	Yes
46540.H16	H.264	16	4 / 1	Yes	Yes
46540.H04	H.264	4	-	Yes	No
46540.H08	H.264	8	-	Yes	No

## Cams with alarm input

Cameras	Sensor (resolution)	Lens	In/out alarm
46535.020B	1/3" (1080p)	5.35 - 107 mm	4 / 1

## IP

## NVR with alarm input and cam matching

NVR	Video compression	Channels number	In/out alarm	Sensor (resolution)				
				1,3 Mpx (1280 x 960)	2 Mpx (1920 x 1080)	3 Mpx (2048 x 1536)	4 Mpx (2592 x 1520)	5 Mpx (2592 x 1944)
46241.H04	H.265 - H.264	4	-	Yes	Yes	Yes	Yes	Yes
46241.H08	H.265 - H.264	8	-	Yes	Yes	Yes	Yes	Yes
46241.F16	H.264	16	4 / 1	Yes	Yes	Yes	No	No
46241.F16H	H.265 - H.264	16	4 / 1	Yes	Yes	Yes	Yes	Yes
46241.H16	H.265 - H.264	16	-	Yes	Yes	Yes	Yes	Yes
46241.F32H	H.265 - H.264	32	-	Yes	Yes	Yes	Yes	Yes
46241.H64	H.265 - H.264	64	8 / 4	Yes	Yes	Yes	Yes	Yes

## Cams with alarm input

	Bullet				Dome			
	Cameras	Sensor (resolution)	Lens	In/out alarm	Cameras	Sensor (resolution)	Lens	In/out alarm
Fixed lens	46212.036C.01 H.265 - H.264	3 Mpx (2304 x 1296)	3.6 mm	-	46222.036C.01 H.265 - H.264	3 Mpx (2304 x 1296)	3.6 mm	-
	46212.036B H.264	2 Mpx (1920 x 1080)	3.6 mm	-	46222.036B H.264	2 Mpx (1920 x 1080)	3.6 mm	-
	46212.036.01 H.264	1.3 Mpx (1280 x 960)	3.6 mm	-	46222.036.01 H.264	1.3 Mpx (1280 x 960)	3.6 mm	-
Varifocal lens	46216.310E H.265 - H.264	5 Mpx (2592 x 1944)	3.6 - 10 mm	1 / 1	46226.310E H.265 - H.264	5 Mpx (2592 x 1944)	3.6 - 10 mm	1 / 1
	46216.312DM H.265 - H.264	4 Mpx (2592 x 1520)	3.3 - 12 mm (motorised)	1 / 1	46226.312DM H.265 - H.264	4 Mpx (2592 x 1520)	3.3 - 12 mm (motorised)	1 / 1
	46216.312D.01 H.265 - H.264	4 Mpx (2592 x 1520)	3.3 - 12 mm	1 / 1	46226.312D.01 H.265 - H.264	4 Mpx (2592 x 1520)	3.3 - 12 mm	1 / 1
	46216.312C.01 H.265 - H.264	3 Mpx (2304 x 1296)	3.3 - 12 mm	1 / 1	46226.312C.01 H.265 - H.264	3 Mpx (2304 x 1296)	3.3 - 12 mm	1 / 1
	46216.212B H.264	2 Mpx (1920 x 1080)	2.8 - 12 mm	-	46226.212B H.264	2 Mpx (1920 x 1080)	2.8 - 12 mm	-
	46216.212 H.264	2 Mpx (1920 x 1080)	2.8 - 12 mm	-	46226.212 H.264	2 Mpx (1920 x 1080)	2.8 - 12 mm	-
	PTZ							
	Cameras	Sensor (resolution)	Lens	In/out alarm				
	46235.020C H.265 - H.264	3 Mpx (2048 x 1536)	5.5 - 110 mm	7 / 1				

## Glossary of functions

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**AGC (Automatic Gain Control)**

Serves to improve low-light vision, it amplifies the video signal when it is too low. The result is clearer vision in low light conditions. The amplification can increase the "noise" of the image, making it "grainy".

**AWB (Automatic White Balance)**

Automatic correction of the white colour temperature, measured in degrees Kelvin, which allows faithful playback and forms the basis for constructing all the other colours in the image. This function must always be active when shooting a scene in changing light conditions, and it can be set manually if the lighting is always constant.

**BLC (Backlight Compensation)**

This function enables improving the image of subjects shot in backlight making them visible.

**DE-FOG**

This function enables improving object recognition in conditions of fog or low visibility.

**DNR (Digital Noise Reduction)**

This function digitally "cleans" the image of noise.

**MIRROR**

Flips the image horizontally on the screen.

**MOTION DETECTION**

This function detects changes in the shot image and generates an alarm.

**OSD (On Screen Display)**

This system enables adjusting the camera or recorder functions, via on-screen menus superimposed on the picture.

**PRIVACY MASKING**

Privacy masking is supported by most DVRs. It enables selecting areas of a scene that can be blocked or masked from viewing and recording. If this function is present in a speed dome, it enables maintaining picture masking even when the field of view of the camera changes due to vertical or horizontal rotation of the camera or because of zooming, since the masking follows the coordinates of the camera system.

**ROI (Region of Interest)**

Smart function of video flux compression, managed from IP cameras, it optimizes the band storing in the network and prevents the loss of image details. If the ROI function is activated, it is possible to determine a section of the image as 'of interest' and stored or visualized it in HD. The section of 'not interest' is visualized with a different compression, losing more details. The video flux saves the HD section of the image stored in a restrained band size

**RS-485**

RS-485 is the updated version of the RS-422 protocol that supports connecting up to 32 peripheral devices through a single connection. RS-485 indicates the electrical specifications of multi-point, half-duplex and two-wire serial connections. This protocol provides a cost-effective solution for configuring local networks and multidrop communications links. It provides high throughput (up to 10 Mbit/s), uses a balanced differential line with twisted cables (similar to those of the RS-422 interface) and enables using relatively long cables of 1,200 metres (4,000 feet). The RS-485 protocol only specifies the electrical characteristics for drivers and receiving units, but does not define or recommend any specific data protocol.

**SMART IR**

This function eliminates image saturation on subjects illuminated by infrared light.

**WDR (Wide Dynamic Range)**

This technology uses two different shutter speeds to capture two alternate video images and combine the two fields into a frame. It optimizes video shooting in high-contrast scenes making all the areas of the image sharp.

**CsC**

The CsC technology enables the remote configuration of the camera via coaxial cable. From the DVR by the OSD menu it is possible to enter to settings.

**2K**

It is a value corresponding to 2560x1440 (3.686.400 pixel) and it is 4 times wider than the HD visualization area 2 x (1280x720).

**4K Ultra HD**

It is a value corresponding to 3840x2160 (8.294.400 pixel) and it is 8 times wider than the HD visualization area 9 x (1280x720).

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