

# INSTAR



## about INSTAR

The INSTAR Germany GmbH was founded in early 2010 as a young start-up of two youth friends and has evolved over the years into an established brand for high-quality security and surveillance cameras in the lower price segment.

Our aim is the production and sale of devices with the best value for money. How do we do that? Rather than become entangled in bureaucracy our motto is: "Just do it!"

We are a professional German manufacturer of network-based digital video security systems. INSTAR quickly grew from having a focus on the German market into a worldwide orientation using distributors and qualified sales partners in more than 40 countries.

Our target are high quality network camera systems that are affordable for small businesses or home use. Surveillance that is easy to install and does not need an IT department to operate.

All INSTAR products are designed in Germany and manufactured under a strict quality control in our factory in China. INSTAR stands for a high-quality and affordable safety solution, combined with customer service that reaches for *YOUR* satisfaction!

A. Riber.....

Aaron Riber, CEO - INSTAR Deutschland GmbH

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Your Manufacturer for Network and  
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**INSTAR**

Your Manufacturer for Network and  
Safety Technology



The IN-2905 v2 is the successor of the popular IN-2905. Dozens of Upgrades makes this camera on par with the more high-end line of INSTAR cameras. It now features an IR cut filter in order to display nice and clear colours during the day-time. Further you will find Audio I/O for the addition of optional speakers or microphones to use the camera as a 2-way communication system. The IN-2905 V2 is the perfect surveillance camera for businesses and private households. The camera model can easily be connected to your network by using its 54MBit (802.11b/g) Wifi module or through the 100MBit network interface. This will ensure a fast stream of the cameras video.

For surveillance purposes, the IN-2905 v2 is ready for implementation to your existing system. Home Automation Systems as well as NAS Systems like Synology or Qnap are have integrated our cameras into their products. But also as a stand-alone device it offers you a number of alarming features like Email Notification or compatibility with signaling devices.

The sturdy construction of the camera body guarantees maximum durability and is weather proof for outdoor use.



- |   |                                     |    |  |
|---|-------------------------------------|----|--|
| 1 | High quality aluminium IP65 housing | 7  | RJ45 Ethernet connector                  |
| 2 | Photodiode for twilight switch      | 8  | Reset button                             |
| 3 | Standard 6mm F/2 infrared lense     | 9  | Alarm I/O connector for external devices |
| 4 | Infrared LEDs for night vision      | 10 | DC power supply connector                |
| 5 | Polycarbonate wall mount            | 11 | Audio input for external microphones     |
| 6 | SMA Wi-Fi antenna connector         | 12 | Audio output for external speakers       |





### Specifications

#### VIDEO

Sensor.....1/5" CMOS Colour Sensor  
Resolution.....max. VGA 640x480  
Lense.....6mm f/2.0 hor.angle of view 37°  
Video.....MJPEG Compression  
Framerate.....max. 30 fps QVGA

#### COMMUNICATION

Network Interface.....RJ45 Ethernet Port  
Wireless.....Wifi 802.11 b/g  
Encryption.....WEP & WPA/2 (TKIP&AES)  
Remote Access.....preinstalled free DDNS  
Mobile.Windows Phone 8, Android & iOS App

#### HARDWARE

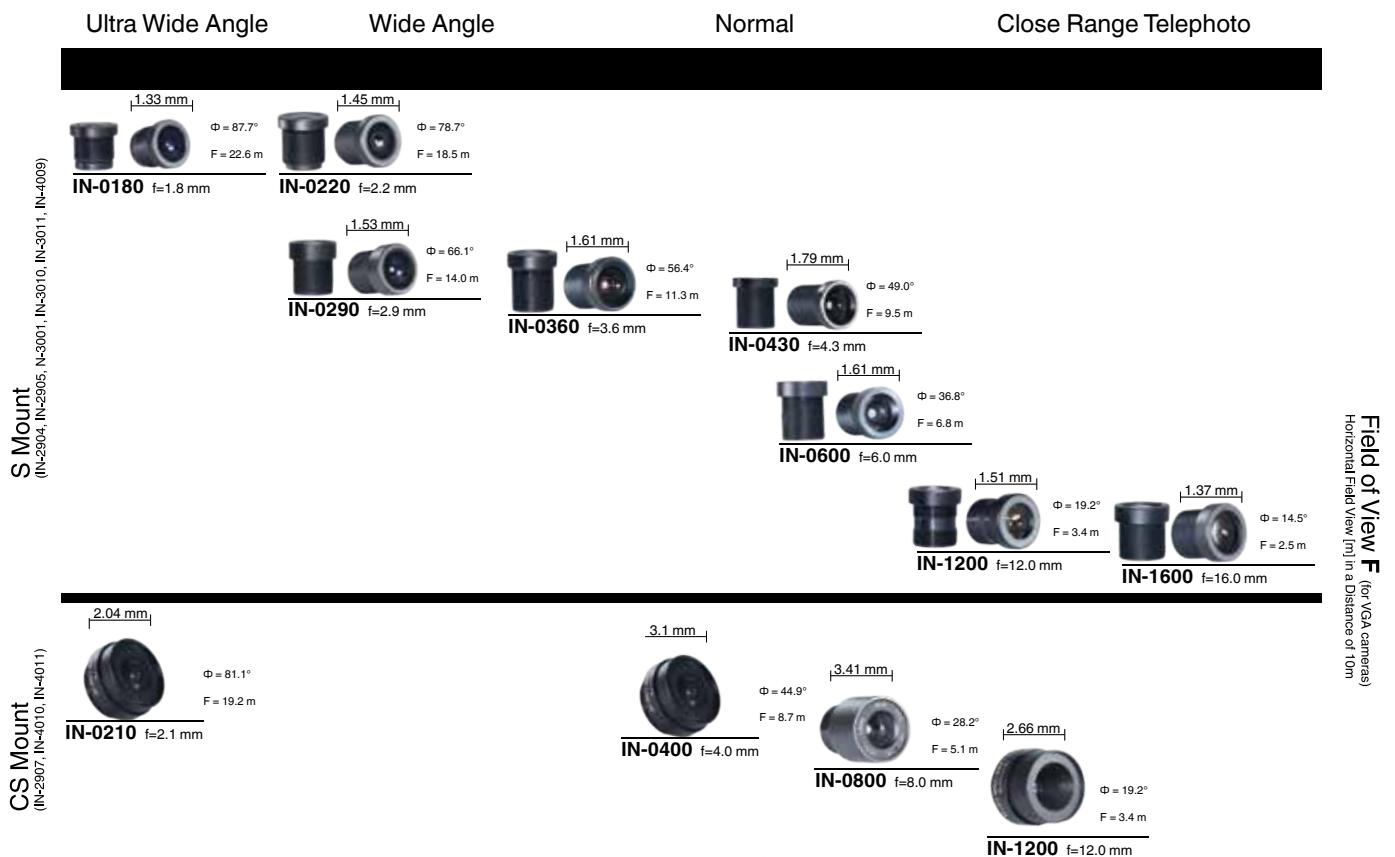
Nightvision.....24 IR LEDs / 10 -15m  
Power Supply...DC 5V/2A (50-60Hz, 110-220V)  
Power Consumption..... max 5W  
Operating Temperature.....-5°C to 55°C



## The Right Angle for your Surveillance

What lense will provide the necessary field of view for your camera's perspective? Do you need a lense that allows you to operate an infrared lighting system? There is no single right answer for every application. The only certainties are that a choice must be made and that more high-quality options mean more operating freedom.

The INSTAR lense line-up offers everything that is needed to realize your application. It's all there. The choice is yours.



## INSTAR CS-Mount and S-Mount Systems

INSTAR cameras are currently produced in two categories, each of which uses a different lense mount and different types of lenses.

**CS-mount** type cameras (only IN-2908, IN-4010, IN-4011, IN-5907 and IN-7011) have a more traditional CCTV type lense, characterized by a large aperture and high light sensitivity combined with a superior imaging quality.

**S-mount** type cameras, on the other hand, offer the compact build needed for an unobtrusive surveillance system and are best used in well-lit environments. The S-mount is an established standard with a wide variety of lenses available.



### S Mount

- 12mm in diameter
- M12 thread with 0.5mm pitch
- 5mm flange focal distance



### CS Mount

- 25.4mm in diameter
- 32 threads per inch
- 12.5mm flange focal distance





The IN-2908 is a complete redesigned successor of the IN-2907. The camera now comes with an integrated auto IRcut Filter for natural colours during the day. In addition the camera now has an Audio In/Output which allows the user to add a microphone and loudspeaker to the camera. Microphones are available in the optional accessories of the camera. The camera's Alarm In/Output connection allows you to connect additional devices such as our new IN-MOTION 300 PIR Sensor Set. This PIR Motion Detector will allow you to cut the false alarm rate by more than 90%.

The camera can also see during the night thanks to 30 Infrared LEDs operating at a wavelength of 850nm. The max. range for the camera's night vision is around 12-20 meters. Together with a fast CCTV lense giving you the extra distance in low-light condition.

The variable focal length can be adjusted remotely between 4mm and 9mm giving you a horizontal field of view between 30° and 50°.



- 1 High quality aluminium IP65 housing
- 2 Standard 6mm F/2 infrared lense
- 3 Infrared LEDs for night vision
- 4 Photodiode for twilight switch
- 5 Polycarbonate wall mount
- 6 SMA Wi-Fi antenna connector

- 7 Audio input for external microphones
- 8 Reset button
- 9 Alarm I/O connector for external devices
- 10 Audio output for external speakers
- 11 DC power supply connector
- 12 RJ45 Ethernet connector





## Specifications

### VIDEO

Sensor.....1/5" CMOS Colour Sensor  
Resolution.....max. VGA 640x480  
Lense.....4mm - 9mm  
Angle of View.....ca. 29 - 51° hor.  
Framerate.....max. 30 fps QVGA

### COMMUNICATION

Network Interface.....RJ45 Ethernet Port  
Wireless.....Wifi 802.11 b/g  
Encryption.....WEP & WPA/2 (TKIP&AES)  
Remote Access.....preinstalled free DDNS  
Mobile.Windows Phone 8, Android & iOS App

### HARDWARE

Nightvision.....30 IR LEDs / 12 - 20m  
Power Supply...DC 5V/2A (50-60Hz, 110-220V)  
Power Consumption.....max 5W  
Operating Temperature.....-5°C to 55°C



## Get Close to the Action from a Distance

Fixed focal-length lenses in general offer stunning sharpness compared to a zoom lens. But sometimes a single focal length just isn't enough. The variable focal lengths of the IN-2908 standard tele optic allows you to capture subjects in the distance while retaining a level of detail that is unparalleled by any camera optic of the 29-series.



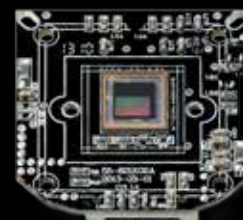
### CS Mount Lenses

You have the option between 3 high-quality lenses available for the model IN-2908. The standard lens is zoom lens with an automatic zoom between a focal length of 4mm and 9mm. Or you can choose between a 6mm or 2.1mm upgrade lens, to take advantage of the high light sensitivity of the CS mount system.



### INSTAR CMOS Sensor

All INSTAR cameras employ the latest technology CMOS (*Complementary Metal Oxide Semiconductor*) sensors. Unlike CCD sensors, CMOS sensors convert and amplify signals before they are transferred to the image processor, enabling them to produce exceptionally clean image data and reduce power consumption by as much as 90%.





The IN-4009 is the perfect outdoor surveillance Pan&Tilt and 3x Optical Zoom camera for businesses and private households. The simple design of the IP65 casing out of high grade aluminium can be installed without attracting too much attention. The camera model can easily be connected to your network by using its 54MBit (802.11b/g) Wi-Fi module (WPA/WPA2) or through the 100MBit network interface to ensure a fluid video stream.

The camera's fixed Infrared-Filter will give you the best possible colours during daylight but doesn't allow you to use any infrared light sources in combination with the camera.

The camera uses an advanced software motion detection. An advanced algorithm compares each frame of the video stream to check for changes in the image. If the camera detects a motion an alarm will be triggered and you can be notified by email.



- |   |  |    |  |
|---|--|----|--|
| 1 | RP-SMA Wi-Fi antenna connector         | 7  | RJ45 Ethernet connector                  |
| 2 | Metal wall mount                       | 8  | Alarm I/O connector for external devices |
| 3 | High quality metal IP65 housing        | 9  | Audio output for external speakers       |
| 4 | Plexiglass dome                        | 10 | Reset button                             |
| 5 | Remote pan & tilt camera head          | 11 | Audio input for external microphones     |
| 6 | Standard 3x optical zoom infrared lens | 12 | DC power supply connector                |





**Specifications**

**VIDEO**

Sensor.....1/5" CMOS Colour Sensor  
Resolution.....max. VGA 640x480  
Lense.....4mm - 9mm  
Angle of View.....ca. 29 - 51° hor.  
Framerate.....max. 30 fps QVGA

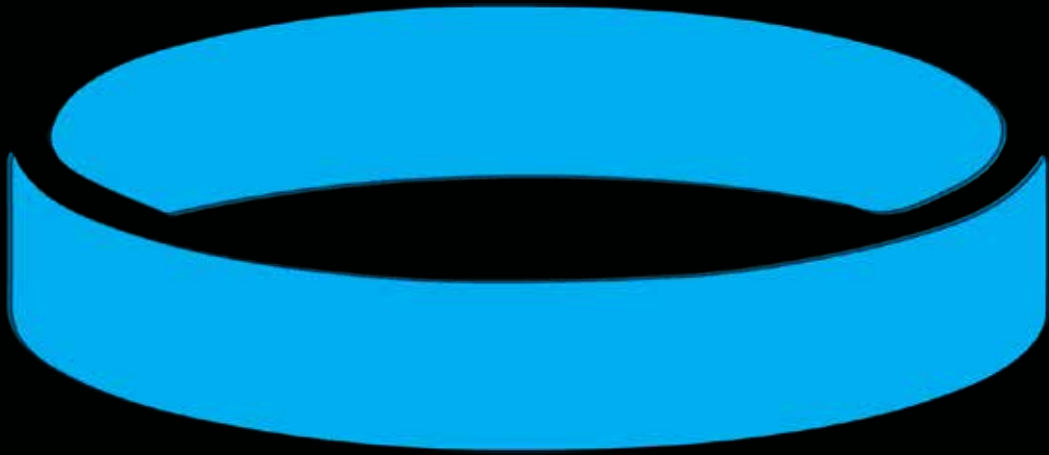
**COMMUNICATION**

Network Interface.....RJ45 Ethernet Port  
Wireless.....Wifi 802.11 b/g  
Encryption.....WEP & WPA/2 (TKIP&AES)  
Remote Access.....preinstalled free DDNS  
Mobile.Windows Phone 8, Android & iOS App

**HARDWARE**

Nightvision.....no  
RC Pan&Tilt.....hor. 355° / vert. 90°  
Power Supply.DC 12V/1.5A(50-60Hz,110-220V)  
Power Consumption.....max 8W  
Operating Temperature.....-5°C to 55°C

# From 0 to 355...



# ...in under 6 seconds.



Even though fixed focal-length lenses tend to offer a superior amount of sharpness - a zoom lense mounted to an automatically pan- and tiltable head, can drastically broaden your surveillance's potential. With its versatile use, you can capture a wide array of subjects in ways no fixed camera can. This remarkable line of cameras is designed to handle a variety of scenes and subject matter. When flexibility is a vital part of your outdoor surveillance - the 4000 series might be your best choice.

## IN-4010 V2 The Universal PTZ Dome Camera



The IN-4010 is the universal outdoor surveillance pan & tilt and 3 x optical zoom camera for businesses and private households. The simple designed IP65 metal casing can be installed outside the office or house without attracting too much attention. The camera model can easily be connected to your network by using its 54MBit (802.11b/g) Wi-Fi module (WPA/WPA2) or through the 100MBit network interface to ensure a fluid video stream.

The camera's automatic IRcut Filter will give you the best possible colours during daylight without losing the cameras infrared night vision capabilities in combination with an external IR light source.

Every INSTAR camera offers a built-in DDNS account that allows you to access your camera from almost anywhere in the world. Each camera has a unique internet address that gives you access to the video stream.



- |   |  |    |  |
|---|--|----|--|
| 1 | RP-SMA Wi-Fi antenna connector           | 7  | RJ45 Ethernet connector                  |
| 2 | Metal wall mount                         | 8  | Alarm I/O connector for external devices |
| 3 | High quality metal IP65 housing          | 9  | Reset button                             |
| 4 | Plexiglass dome                          | 10 | DC power supply connector                |
| 5 | Remote pan & tilt camera head            | 11 | Audio input for external microphones     |
| 6 | Standard 3 x optical zoom infrared lense | 12 | Audio output for external speakers       |



**Specifications**

**VIDEO**

Sensor.....1/5" CMOS Colour Sensor  
Resolution.....max. VGA 640x480  
Lense.....3.7mm - 14.8mm  
Angle of View.....ca. 18 - 56° hor.  
Framerate.....max. 30 fps QVGA

**COMMUNICATION**

Network Interface.....RJ45 Ethernet Port  
Wireless.....Wifi 802.11 b/g  
Encryption.....WEP & WPA/2 (TKIP&AES)  
Remote Access.....preinstalled free DDNS  
Mobile.Windows Phone 8, Android & iOS App

**HARDWARE**

Nightvision.....only with ext. spotlight  
RC Pan&Tilt.....hor. 355° / vert. 90°  
Power Supply.DC 12V/1.5A(50-60Hz,110-220V)  
Power Consumption..... max 8W  
Operating Temperature.....-5°C to 55°C

# Mobility is Key



# 1

## Mobile Access

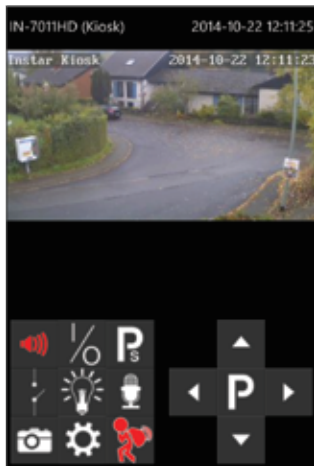
**InstarVision** is an app for the Android and iOS operating system for remote surveillance/control for your network/IP cameras. Monitor your baby, pet, home, business, traffic, and weather remotely and securely.



# 2

## Surveillance Central

The applications multiview displays all your INSTAR IP cameras in a video wall fashion. Ideally with an Android tablet to keep an eye on things that you value the most.



# 3

## Total Control

Control your basic camera functions on the fly. Use the cameras pan & tilt function, save and recall preset positions, set the motion alarm or take a quick snapshot - you are in control.







The IN-4011 is the universal outdoor surveillance pan & tilt and 4 x optical zoom camera for businesses and private households. The simple IP65 casing out of high grade aluminium can be installed outside the office or house without attracting too much attention. The camera model can easily be connected to your network by using its 54MBit (802.11b/g) Wi-Fi module (WPA/WPA2) or through the 100MBit network interface to ensure a fluid video stream.

The camera's automatic IRcut Filter will give you the best possible colours during daylight without losing the cameras infrared night vision capabilities in combination with the internal 66 IR LEDs as well as an external IR light source.

The 40series camera heads can be controlled remotely from anywhere in the world. If you are on the road you can simply use your iPhone or Android app to point the camera in the direction you need.





- |   |                                   |    |  |
|---|-----------------------------------|----|--|
| 1 | RP-SMA Wi-Fi antenna connector    | 8  | Alarm I/O connector for external devices |
| 2 | Metal wall mount                  | 9  | Audio output for external speakers       |
| 3 | High quality metal IP65 housing   | 10 | RJ45 Ethernet connector                  |
| 4 | 66 infrared LEDs for night vision | 11 | Audio input for external microphones     |
| 5 | Remote pan & tilt camera head     | 12 | Reset button                             |
| 6 | Plexiglass dome                   | 13 | Standard 4x optical zoom infrared lense  |
| 7 | DC power supply connector         |    |  |



## Specifications

### VIDEO

Sensor.....1/5" CMOS Colour Sensor  
Resolution.....max. VGA 640x480  
Lense.....3.7mm - 14.8mm  
Angle of View.....ca. 18 - 56° hor.  
Framerate.....max. 30 fps QVGA

### COMMUNICATION

Network Interface.....RJ45 Ethernet Port  
Wireless.....Wifi 802.11 b/g  
Encryption.....WEP & WPA/2 (TKIP&AES)  
Remote Access.....preinstalled free DDNS  
Mobile.Windows Phone 8, Android & iOS App

### HARDWARE

Nightvision.....66 IR LEDs / 8 - 10m  
RC Pan&Tilt.....hor. 355° / vert. 90°  
Power Supply....DC 12V/3A(50-60Hz,110-220V)  
Power Consumption.....max 11W  
Operating Temperature.....-5°C to 55°C

## Night & Day

Unlike the IN-4009, the new models IN-4010 and IN-4011 PTZ outdoor cameras combine the best of a daylight and night vision surveillance by the integration of an automatic IRcut Filter.

A day/night camera has two modes of operation: a day mode and a night mode. The camera switches from day mode (Color) to night mode (B/W) by removing its infrared-cut filter automatically in response to surrounding light conditions. In night mode, the camera becomes sensitive to near-IR light and is capable of reproducing images even when the scene is not visible to the naked eye.

The Day/Night function provides an optimized sensitivity in both day and night shooting scenarios. As the scene illumination reduces and the image darkens, the infrared cut filter is automatically removed and the camera switches to B/W mode, achieving a minimum illumination of 0.5 lx @ F2.0. In addition, the slow shutter mode provides a remarkable enhancement in sensitivity by allowing the charge accumulation period of the sensor to be extended.

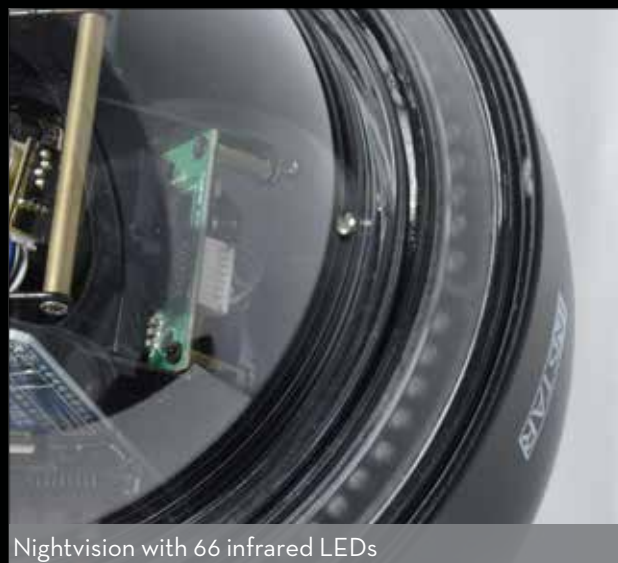
## IP65 Weatherproof

The 40series outdoor cameras are built in conformity with the IP65 standard. The “IP” of IP65 stands for Ingress Protection, and its two-digit number shows the durability rating of equipment for outdoor use.

The first digit of IP65 relates to the ingress protection against dust, and “6” means “dust tight”. The second digit of IP65 relates to the ingress protection against water, and “5” means protected against “water jets,” such as conditions that can be encountered in hurricanes.



Remote controlled 4x optical Zoom



Nightvision with 66 infrared LEDs



Wifi integration with a 10 dBi directional antenna



The IN-5905 is the newest outdoor camera model from INSTAR. The IP camera is using the latest H264 video compression for the video stream and allows recording directly on a MicroSDHC card (up to 32 GB).

The WPS function allows you to connect the camera to your WiFi network with a press of a button. Accessing your camera from the internet is even easier. The Point-2-Point connection can be established by scanning a QR code with our smartphone app. The InstarVision mobile app is available for Android, iOS and Windows Phone 8.

The camera also supports the Open Network Video Interface Forum standard (ONVIF). As a result the camera can be included in third-party security software.



- 1 Infrared LEDs for night vision
- 2 4.3mm wide angle F/2 infrared lense
- 3 Photodiode for twilight switch
- 4 High quality aluminium IP65 housing
- 5 SD card reader slot
- 6 Wi-Fi antenna

- 7 RJ45 Ethernet connector
- 8 Reset button
- 9 Alarm I/O connector for external devices
- 10 DC power supply connector
- 11 Audio output for external speakers
- 12 Audio input for external microphones



**Specifications****VIDEO**

Sensor.....1/3" WDR CMOS colour HD  
Resolution.....max. 720p HD 1280x720  
Lense.....4.3mm f/2 dia. angle of view 90°  
Video.....h.264 compression  
Framerate.....max. 25 fps 720p

**COMMUNICATION**

Network Interface.....RJ45 Ethernet Port  
Wireless.....Wifi 802.11 b/g/n  
Encryption.....WPA/2 (TKIP&AES)  
Remote Access.....preinstalled free DDNS  
Mobile.Windows Phone 8, Android & iOS App

**HARDWARE**

Nightvision.....5 high power IR LEDs / 5 - 10m  
Storage.....SDHC Card (4GB included)  
Power Supply.DC 12V/1.5A(50-60Hz,110-220V)  
Power Consumption.....max 8W  
Operating Temperature.....-5°C to 55°C



## Flash Ring Buffer

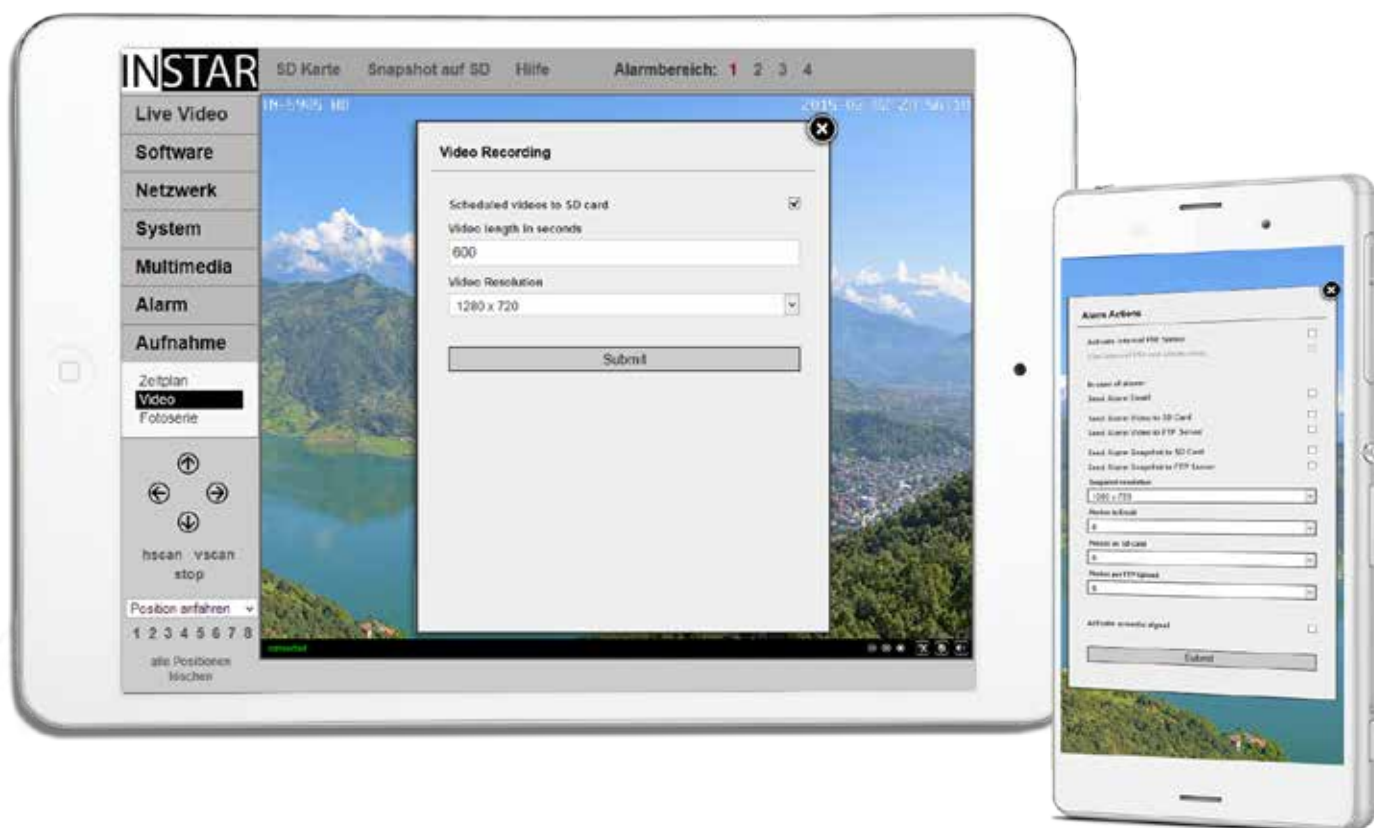
Every INSTAR HD camera comes with an SDHC or MicroSDHC card slot for up to 32GB of expandable storage. By default a 4 GB SD card is used as a ring buffer to keep a record of the last day - in form of alarm videos and / or snapshots.

## Video Recording to SD

INSTAR cameras of the HD line allow you to record videos to the internal - interchangeable - SD card in case of an alarm event or as planned recordings with programmable time schedules.

In addition, you can store photo series with selectable intervals and programmable time schedules. These series can be used to combine single snapshots into time lapse videos (\*external third party software needed).

All alarm videos and snapshots can also be uploaded to external FTP server. This guarantees an optimal data security - even if the camera is damaged or your local video storage gets stolen.





## IN-5907 HD Outdoor in High Definition



The IN-5907 is the newest outdoor camera model from INSTAR. The IP camera is using the latest H264 video compression for the video stream and allows recording directly on a 2GB MicroSD card.

The camera can also see during the night thanks to 3 high-powered Infrared LEDs operating at a wavelength of 850nm. The max. indoor range for the cameras night vision is around 15-20 meters. The spiritual HD successor of the IN-2908 will bring you all the features that you are used to from our VGA series, combined with a superior resolution of 1280x720 Pixel and more.

The camera also supports the Open Network Video Interface Forum standard (ONVIF). As a result the camera can be included in third-party security software.



- |   |   |    |  |
|---|---|----|--|
| 1 | High quality aluminium IP65 housing       | 7  | RJ45 Ethernet connector                  |
| 2 | High power infrared LEDs for night vision | 8  | Reset button                             |
| 3 | Standard 8mm F/1.2 infrared lense         | 9  | Alarm I/O connector for external devices |
| 4 | Photodiode for twilight switch            | 10 | DC power supply connector                |
| 5 | Metal wall mount                          | 11 | Audio output for external speakers       |
| 6 | SMA Wi-Fi antenna connector               | 12 | Audio input for external microphones     |



**Specifications**

**VIDEO**

Sensor.....1/3" WDR CMOS colour HD  
Resolution.....max. 720p HD 1280x720  
Lense.....8mm f/1.2 dia. angle of view 45°  
Video.....h.264 compression  
Framerate.....max. 25 fps 720p

**COMMUNICATION**

Network Interface.....RJ45 Ethernet Port  
Wireless.....Wifi 802.11 b/g/n  
Encryption.....WPA/2 (TKIP&AES)  
Remote Access.....preinstalled free DDNS  
Mobile.Windows Phone 8, Android & iOS App

**HARDWARE**

Nightvision.....3 high power IR LEDs / 15 -20m  
Storage.....SDHC Card (4GB included)  
Power Supply.DC 12V/1.5A(50-60Hz,110-220V)  
Power Consumption.....max 13W  
Operating Temperature.....-5°C to 55°C

## Why High-Definition?

The higher the resolution, the more detailed your image will be. Compared to a MJPEG camera with 0.3 Megapixels (VGA) one single HD camera records around 3 times the amount of detail given an identical field of view.

### Disadvantages Centralized Solutions

MJPEG cameras only supply the images while the processing and recording is done later on a central PC using a video management software. This traditional centralized structure has many limitations, since it requires a high network bandwidth and a PC that is constantly running. A MJPEG solution is therefore often not suitable for a surveillance task that requires more than a few cameras.

### Benefits of our HD Solution

All our HD cameras are designed with the decentralized concept in mind. A high-speed computer and digital long-term memory (SDHC Card slot) is built into every camera, providing several days of recording time. The PC now serves only for viewing and controlling the cameras (PTZ), not for analysis or recording. This makes it unnecessary to invest into an expensive camera management PC or an extensive network infrastructure, as the most computationally intensive functions are already integrated in your IN-STAR cameras.

### Reduce your Storage Costs with SD Cards

INSTAR HD cameras are also able to store up to 32 GB of video onto an integrated SDHC card slot. Thanks to this high storage capacity and the option of recording only in the event of an alarm, external hard disks are rarely required. Also reducing the maintenance cost of mechanical components such as servers, hard drives or fans. The internal SD cards (flash memory) are maintenance-free and robust.

HD cameras are also ideal for unstable network conditions or WLAN connections because the internal flash storage bridges network failures or bandwidth fluctuations.

### Bandwith Friendly

Supporting both MJPEG and h.264 compression formats, the camera provides high-quality still images and smooth moving images, even when the bandwidth is limited - responding to your application demands and network environment. If higher quality still images are preferred, then the industry standard MJPEG compression format is selectable. The image size can be selected to meet your network and application requirements. For a smooth video stream and low bandwidth requirements choose the h.264 compression.

### Wide Dynamic Range

State-of-the-art technologies to expand the video dynamic range of the camera to improve the visibility of images even in extremely high-contrast environments. WDR is a powerful feature to compensate for scenes with extreme lighting conditions. Images from left to right: **Overexposed**, **Underexposed** and **WDR**.





The IN-7011 is the universal HD outdoor surveillance Pan&Tilt camera for businesses and private households. The IP63 casing out of high grade aluminium can be installed outside the office or house without attracting too much attention. The camera model can easily be connected to your network by using its 54MBit (802.11b/g) Wi-Fi module (WPA/WPA2) or through the 100MBit network interface to ensure a fluid video stream.

The camera's automatic IRcut Filter will give you the best possible colours during daylight without losing the cameras infrared night vision capabilities in combination with the internal 22 IR LEDs as well as an external IR light source.

If an alarm is triggered the camera can send an email to notify you. Each email also has 4-6 pictures attached. This way it will be very easy to check quickly what caused the motion to make sure your home is safe.



- |   |                                   |    |  |
|---|-----------------------------------|----|--|
| 1 | High quality metal housing        | 7  | Alarm I/O connector for external devices |
| 2 | Plexiglass dome                   | 8  | DC power supply connector                |
| 3 | 22 infrared LEDs for night vision | 9  | Audio output for external speakers       |
| 4 | Standard wideangle infrared lense | 10 | Audio input for external microphones     |
| 5 | RP-SMA Wifi antenna connector     | 11 | Reset button                             |
| 6 | RJ45 Ethernet connector           | 12 | Metal wall mount                         |



## Specifications

### VIDEO

Sensor.....1/3" WDR CMOS colour HD  
 Resolution.....max. 720p HD 1280x720  
 Lense.....6mm f/1.2 dia. angle of view 57°  
 Video.....h.264 compression  
 Framerate.....max. 25 fps 720p

### COMMUNICATION

Network Interface.....RJ45 Ethernet Port  
 Wireless.....Wifi 802.11 b/g/n  
 Encryption.....WPA/2 (TKIP&AES)  
 Remote Access.....preinstalled free DDNS  
 Mobile.Windows Phone 8, Android & iOS App

### HARDWARE

Nightvision.....22 IR LEDs / 8 -12m  
 Storage.....SDHC card (2GB included)  
 RC Pan & Tilt.....350° hor. / 100° vert.  
 Power Supply....DC 12V/2A(50-60Hz,110-220V)  
 Power Consumption.....max 12W  
 Operating Temperature.....-5°C bis  
 55°C



## Improved Nightvision

Unlike the IN-4011, the new HD model IN-7011 outdoor camera facilitates a far superior night vision surveillance by the integration of directional infrared LED's.

The camera's head is designed to allow the 22 night vision IR LEDs to pan and tilt with the lense - always illuminating the field of view of the camera. This way we were able to reduce the amount of LED's needed and therefore the power consumption of the camera - while still improving the overall night vision.

The Day/Night function provides an optimized sensitivity in both day and night shooting scenarios. As the scene illumination reduces and the image darkens, the infrared cut filter is automatically removed and the camera switches to B/W mode, achieving a minimum illumination of 0.5 lx @ F1.2. In addition, the slow shutter mode provides a remarkable enhancement in sensitivity by allowing the charge accumulation period of the sensor to be extended.

## Versatile Applications

The IN-7011 HD is a weather proof dome camera which can either be used in in- or outdoor environments. The sturdy construction of the camera body guarantees maximum durability and is weather proof for outdoor use.

A convenient motor allows for quick readjusting of the lenses viewing direction and can be controlled by any network device such as a tablet or a smart-phone. The built-in infrared diodes allows you to see in pitch dark environments, while the integrated IR cut filter aids in the display of vibrant colours, as seen by the human eye.



Remote P&T controlled wideangle lense



Nightvision with 22 infrared LEDs



High quality IP 63 weatherproof metal housing



The IN-3001 is the perfect camera for indoor surveillance inside your office or house - light, compact and versatile with a camera module that is less than 10cm in height. The camera can easily be controlled through your smartphone from inside your network and also over the internet - via the free-of-charge integrated DDNS service. Thanks to the integrated microphone the camera can also be used for audio surveillance - transforming this model into the baby monitor of your choice. The IN-3001 can easily be connected to your network by using its 54MBit (802.11b/g) Wi-Fi module (WPA/WPA2) or through the 100MBit network interface to ensure a fluid video stream.

The camera can also see during the night thanks to 8 Infrared LEDs operating at a wavelength of 850nm. The max. indoor range for the camera's night vision is around 5-8 meters.

If an alarm is triggered the camera can send an email to notify you. Each email also has 4-6 pictures attached. This way it will be very easy to check quickly what caused the motion to make sure your home is safe.



- 1 Wi-Fi antenna
- 2 Network status LED
- 3 Infrared LEDs for night vision
- 4 Standard 6mm F/2 infrared lense
- 5 Internal microphone
- 6 Photodiode for twilight switch
- 7 ABS camera stand with ball joint

- 8 Reset button
- 9 Audio output for external speakers
- 10 DC power supply connector
- 11 High quality ABS housing
- 12 RJ45 Ethernet connector
- 13 1/4 inch thread connection for camera stand
- 14 Alarm I/O connector for external devices





## Specifications

### VIDEO

Sensor.....1/5" CMOS Colour Sensor  
 Resolution.....max. VGA 640x480  
 Lense.....6mm f/2.0 hor.angle of view 37°  
 Video.....MJPEG Compression  
 Framerate.....max. 30 fps QVGA

### COMMUNICATION

Network Interface.....RJ45 Ethernet Port  
 Wireless.....Wifi 802.11 b/g  
 Encryption.....WEP & WPA/2 (TKIP&AES)  
 Remote Access.....preinstalled free DDNS  
 Mobile.Windows Phone 8, Android & iOS App

### HARDWARE

Nightvision.....10 IR LEDs / 5 -8m  
 Power Supply...DC 5V/2A (50-60Hz, 110-220V)  
 Power Consumption..... max 5W  
 Operating Temperature.....-5°C to 55°C



**IN-0180** 1.8 mm focal length (IN-2905)**IN-0220** 2.2 mm focal length (IN-2905)**IN-0290** 2.9 mm focal length (IN-2905)**IN-0360** 3.6 mm focal length (IN-2905)**IN-0430** 4.3 mm focal length (IN-2905)**IN-0600** 6.0 mm focal length (IN-2905)**IN-1200** 12.0 mm focal length (IN-2905)**IN-1600** 16.0 mm focal length (IN-2905)**Focal Length vs. Angle of View**

Focal length is the foremost consideration when choosing a lens for a specific surveillance application. The focal length of a lens determines two characteristics that are very important: magnification and angle of view.

Longer focal lengths correspond to higher magnification, and vice-versa. Wide-angle lenses with short focal lengths have low magnification, which means you have to get physically close to an average-size subject to be able to recognize fine details. But that also means you can fit large areas in the frame without having to install the camera in a great distance from your subject. Telephoto lenses with long focal lengths have high magnification, so you can fill the frame with subjects that are further away from the camera.

The angle of view describes how much of the scene in front of the camera will be captured by the camera's sensor. The angle of view is determined by both the focal length of the lens and the format of the camera's sensor.



All INSTAR lenses are compound lenses that use a number of lens elements precisely mounted along the same optical axis. The use of multiple elements allows lens designers to effectively reduce optical aberrations so you get nice sharp, clean images.

Fixed focal length lenses generally have the simplest construction with the fewest groups and elements resulting in a superior image quality. Zoom lenses require a larger number of groups/elements to support the zoom functionality.

Ultra Wide Angle

Tele Photo Range





The IN-3003 is the perfect camera for indoor surveillance inside your office or house. The camera can easily be controlled through your smartphone from inside your network and also over the internet. The camera can easily be connected to your network by using its 54MBit (802.11b/g) Wi-Fi module (WPA/WPA2) or through the 100MBit network interface to ensure a fluid video stream.

The camera can also see during the night thanks to 8 Infrared LEDs operating at a wavelength of 850nm. The max. indoor range for the cameras night vision is around 10-15 meters.

If an alarm is triggered the camera can send an email to notify you. Each email also has 4-6 pictures attached. This way it will be very easy to check quickly what caused the motion to make sure your home is safe.



- 1 Photodiode for twilight switch
- 2 Standard 6mm F/2 infrared lense
- 3 Infrared LEDs for night vision
- 4 ABS camera mount

- 5 High quality ABS camera housing
- 6 Reset button
- 7 DC power supply connector
- 8 RJ45 Ethernet connector



Specifications

VIDEO

Sensor.....1/5" CMOS Colour Sensor  
Resolution.....max. VGA 640x480  
Lense.....6mm f/2.0 hor.angle of view 37°  
Video.....MJPEG Compression  
Framerate.....max. 30 fps QVGA

COMMUNICATION

Network Interface.....RJ45 Ethernet Port  
Wireless.....Wifi 802.11 b/g  
Encryption.....WEP & WPA/2 (TKIP&AES)  
Remote Access.....preinstalled free DDNS  
Mobile.Windows Phone 8, Android & iOS App

HARDWARE

Nightvision.....8 IR LEDs / 5 -10m  
Power Supply...DC 5V/2A (50-60Hz, 110-220V)  
Power Consumption..... max 4W  
Operating Temperature.....-5°C to 55°C

# Change your Eyes



Every surveillance task is unique. Whatever your need, there is an INSTAR lense to draw out your vision. Each product in the lineup represents a solution for a specific task. How will you see the world?



Focal length is the foremost consideration when choosing a lense for a specific surveillance application. The focal length of a lense determines two characteristics that are very important: magnification and angle of view. The wider the angle of view, the less detailed your image becomes. What is it, that your surveillance demands?

## Flexible Application

Compact and competitively priced - the IN-3003 offers a fixed IP security solution that deliver clear, crisp video and all the advantages of IP connectivity for remote video monitoring. Keep an eye on your property while staying unobtrusive.



## Simple Installation

Keep it simple - for installation flexibility, the camera can be mounted easily on either a wall or ceiling using the supplied bracket. With the ball-joint camera mount mechanism incorporated into its bracket, the camera can be rotated freely in any direction. Unlike conventional cameras, it takes only one action to adjust the pan and tilt angles, allowing for quick and easy manual adjustment of the camera's viewing angle. Let you to keep an eye on everything that might be difficult to reach otherwise - like your gas meter downstairs.



## IN-3011 Keep your Eye on Target



The IN-3011 is the perfect pan & tilt camera for indoor surveillance inside your office or house. The camera can easily be controlled through your smartphone from inside your network and also over the internet. The camera can easily be connected to your network by using its 54MBit (802.11b/g) Wi-Fi module (WPA/WPA2) or through the 100MBit network interface to ensure a fluid video stream.

The camera can also see during the night thanks to 10 Infrared LEDs operating at a wavelength of 850nm. The max. indoor range for the camera's night vision is around 10-15 meters. The redesigned camera board now allows for the IR LEDs to be switched through the web user interface making it possible to install the camera behind windows.

If an alarm is triggered the camera can send an email to notify you. Each email also has 4-6 pictures attached. This way it will be very easy to check quickly what caused the motion to make sure your home is safe.





- |   |                                 |    |  |
|---|---------------------------------|----|--|
| 1 | Photodiode for twilight switch  | 6  | Audio output for external speakers       |
| 2 | Standard 6mm F/2 infrared lense | 7  | RJ45 Ethernet connector                  |
| 3 | Infrared LEDs for night vision  | 8  | RP-SMA Wifi antenna connector            |
| 4 | Internal microphone             | 9  | Alarm I/O connector for external devices |
| 5 | High quality ABS housing        | 10 | DC power supply connector                |



**Specifications**

**VIDEO**

Sensor.....1/5" CMOS colour Sensor  
Resolution.....max. VGA 640x480  
Lense.....6mm f/2.0 hor.angle of view 37°  
Video.....MJPEG compression  
Framerate.....max. 30 fps QVGA

**COMMUNICATION**

Network Interface.....RJ45 Ethernet Port  
Wireless.....Wifi 802.11 b/g  
Encryption.....WEP & WPA/2 (TKIP&AES)  
Remote Access.....preinstalled free DDNS  
Mobile.Windows Phone 8, Android & iOS App

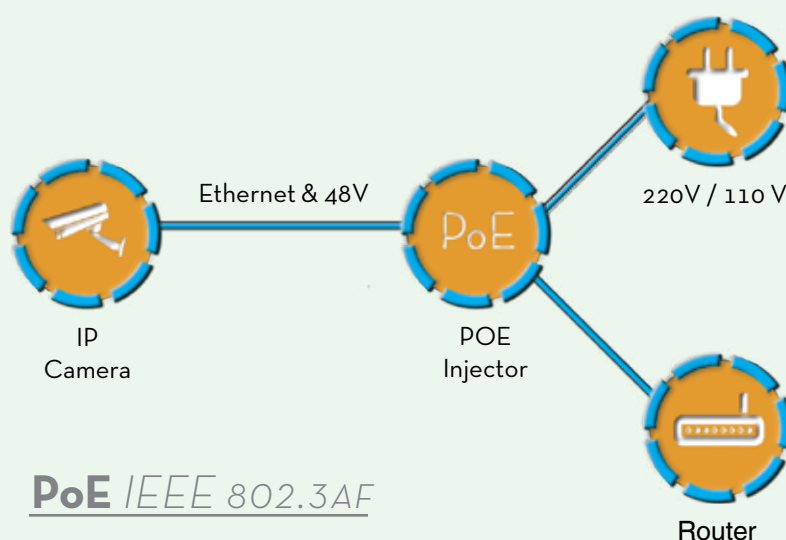
**HARDWARE**

Nightvision.....10 IR LEDs / 8 -12m  
RC Pan & Tilt.....280° hor. / 120° vert.  
Power Supply...DC 5V/2A (50-60Hz, 110-220V)  
Power Consumption..... max 8W  
Operating Temperature.....-5°C to 55°C

**Bi-directional Audio**

Some models, like the IN-3011, already come with integrated microphones and speaker. Others allow you to connect external audio devices, enabling you to sound an alert or make an announcement through the camera unit from a remote location - e.g. by using our smartphone app. This significantly expands the possibilities of monitoring applications.

## What is Power-over-Ethernet ?



PoE IEEE 802.3AF

**Fig.** In simple terms, PoE uses the wires in standard Ethernet cabling to send power to the operating device. This means that a separate, local power supply close to the device is **not** needed.

The models **IN-2905**, **IN-3010**, **IN-5907** **IN-6012** and **IN-7011** are available either as Wifi **OR** a *Power-over -Ethernet* cameras.

### Sensor IN/Alarm OUT

Equipped with a sensor input, these cameras can receive triggers from an external sensor. Also, alarm relay outputs can be used to trigger external devices to perform a variety of actions.

### Wireless or powered over ethernet cable

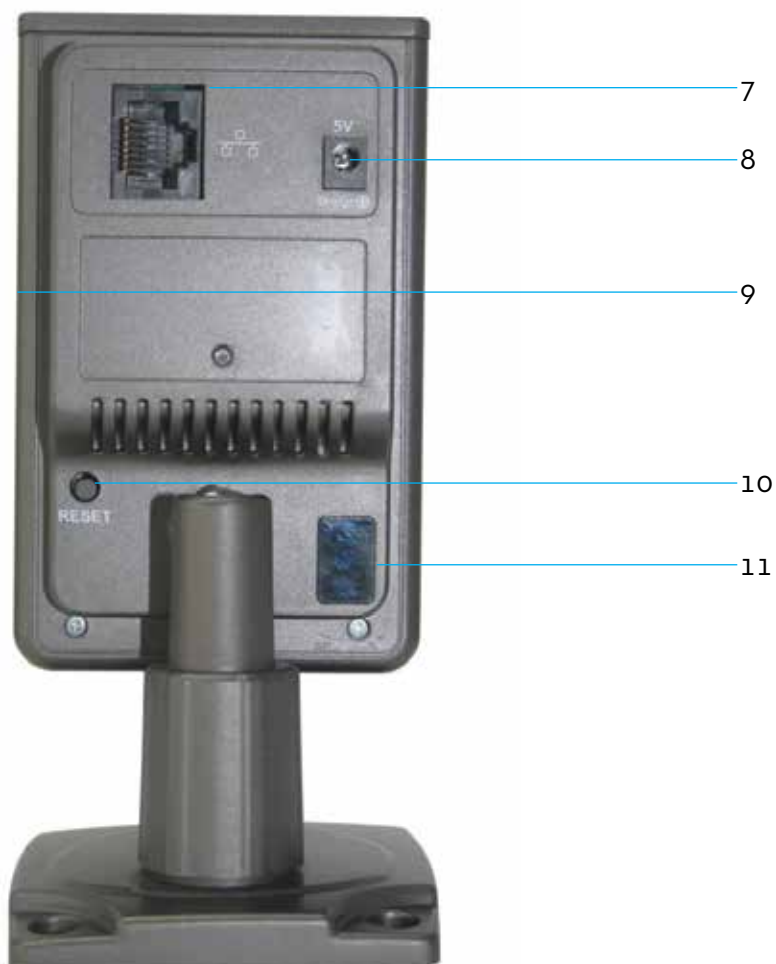
PoE is a technology that integrates data and power on standard Ethernet infrastructure, providing new options for power distribution. This allows IP surveillance cameras and other embedded appliances to receive power as well as data over existing CAT5 (or above) Ethernet cabling. The camera model IN-2905, IN-3010, IN-5907 HD, IN-6012 HD and IN-7011 HD are available either as Wi-Fi **or** PoE model.



The IN-6001 HD is the smallest INSTAR HD 720p camera for indoor surveillance inside your office or house. The camera can easily be controlled through your smartphone from inside your network and also over the internet. The camera can easily be connected to your network by using its 108MBit (802.11b/g/n) Wi-Fi module (WPA/WPA2) or through the 100MBit network interface to ensure a fluid video stream.

The camera can also see during the night thanks to 8 Infrared LEDs operating at a wavelength of 850nm. The max. indoor range for the camera's night vision is around 5-10 meters. The spiritual successor of the IN-3001 will bring you all the features that you are used to from our VGA series, combined with a superior resolution of 1280x720 Pixel and the possibility to record videos on an integrated SD card.

If an alarm is triggered the camera can send an email to notify you. Each email also has 4 pictures attached. This way it will be very easy to check quickly what caused the motion to make sure your home is safe.



- 1 Microphone
- 2 Photodiode for twilight switch
- 3 4.3mm wide angle F/2 infrared lense
- 4 Infrared LEDs for night vision
- 5 Loudspeaker
- 6 Wall Mount

- 7 RJ45 Ethernet connector
- 8 DC power supply connector
- 9 MicroSD card slot
- 10 Reset button
- 11 Status LEDs





## Specifications

### VIDEO

Sensor.....1/3" WDR CMOS colour HD  
 Resolution.....max. 720p HD 1280x720  
 Lense.....4.3mm f/2 dia. angle of view 90°  
 Video.....h.264 compression  
 Framerate.....max. 25 fps 720p

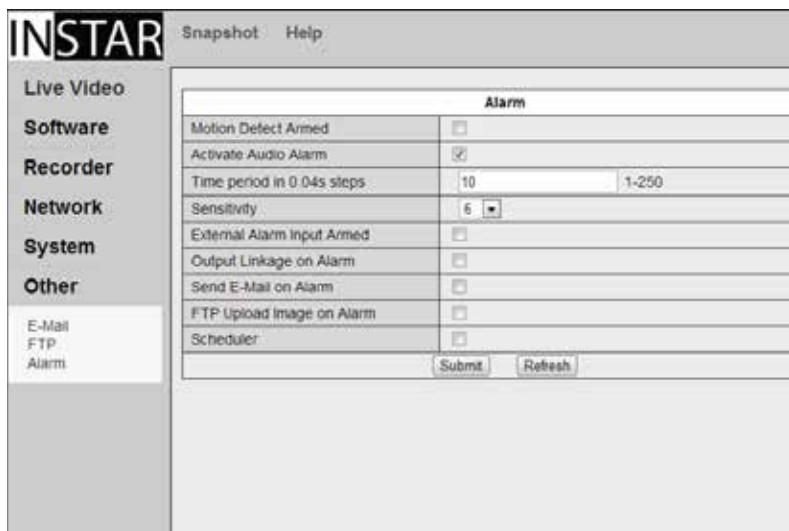
### COMMUNICATION

Network Interface.....RJ45 Ethernet Port  
 Wireless.....Wifi 802.11 b/g/n  
 Encryption.....WPA/2 (TKIP&AES)  
 Remote Access.....free DDNS & P2P  
 Mobile.Windows Phone 8, Android & iOS App

### HARDWARE

Nightvision.....8 IR LEDs / 5 -10m  
 Storage.....MicroSDHC card (4GB included)  
 Power Supply.DC ..5V/1.5A(50-60Hz,110-220V)  
 Power Consumption.....max 7W  
 Operating Temperature.....-5°C to 55°C

# Your Camera is Listening



Every INSTAR IP camera is equipped with a built-in activity detection algorithm that can be set to trigger an alarm. If a change in luminance level is detected in the field of view, an alarm is automat-



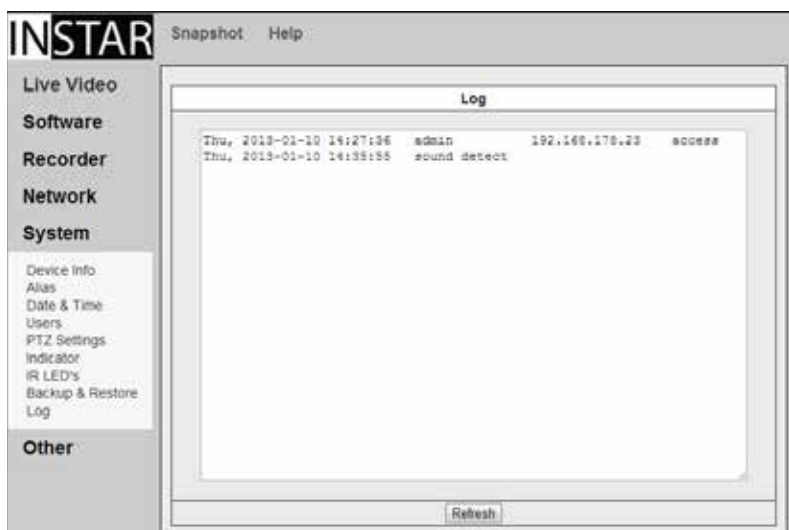
\*Visualisation of the cameras microphone trigger signal

ically triggered. Some models like the IN-3011 or IN-6012 HD comes with an alarm I/O port to receive a trigger from an external sensor.

## Use your camera as a babyphone

But surveillance isn't always about what you can see but what you hear. Whether you want to be aware if your newborn is sound asleep or you want to be notified if the doorbell was rung - simply set your camera to listen to its environment.

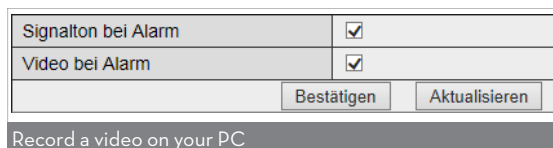
Activate the audio alarm, set the interval a trigger event has to last and adjust the sensitivity to your needs.



In case of a trigger event the alarm settings will be set in motion. Receive an email with six snapshots attached or upload said jpg files to your FTP server, enabling you to see what happened when an alarm occurred. The Audio Alert can also trigger a video recording on your



Be alerted by email



PC (the Internet Explorer has to be running to be able to record video!).



The IN-6012 is the first INSTAR HD 720p pan & tilt camera for indoor surveillance inside your office or house. The camera can easily be controlled through your smartphone from inside your network and also over the internet. The camera can easily be connected to your network by using its 54MBit (802.11b/g) Wi-Fi module (WPA/WPA2) or through the 100MBit network interface to ensure a fluid video stream.

The camera can also see during the night thanks to 10 Infrared LEDs operating at a wavelength of 850nm. The max. indoor range for the cameras night vision is around 10-12 meters. The spiritual successor of the IN-3011 will bring you all the features that you are used to from our VGA series, combined with a superior resolution of 1280x720 Pixel and the possibility to record videos on an integrated SD card.

If an alarm is triggered the camera can send an email to notify you. Each email also has 4 pictures attached. This way it will be very easy to check quickly what caused the motion to make sure your home is safe.



- |   |                                   |    |  |
|---|-----------------------------------|----|--|
| 1 | Photodiode for twilight switch    | 7  | DC power supply connector                |
| 2 | Infrared LEDs for night vision    | 8  | SMA Wi-Fi antenna connector              |
| 3 | Standard 8mm F/1.2 infrared lense | 9  | Reset button                             |
| 4 | Remote pan & tilt camera head     | 10 | RJ45 Ethernet connector                  |
| 5 | High quality ABS housing          | 11 | Audio in- and output                     |
| 6 | SDHC card slot (up to 32GB)       | 12 | Alarm I/O connector for external devices |



**Specifications**

**VIDEO**

Sensor.....1/3" WDR CMOS colour HD  
Resolution.....max. 720p HD 1280x720  
Lense.....12mm f/1.2 dia. angle of view 30°  
Video.....h.264 compression  
Framerate.....max. 25 fps 720p

**COMMUNICATION**

Network Interface.....RJ45 Ethernet Port  
Wireless.....Wifi 802.11 b/g/n  
Encryption.....WPA/2 (TKIP&AES)  
Remote Access.....free DDNS & P2P  
Mobile.Windows Phone 8, Android & iOS App

**HARDWARE**

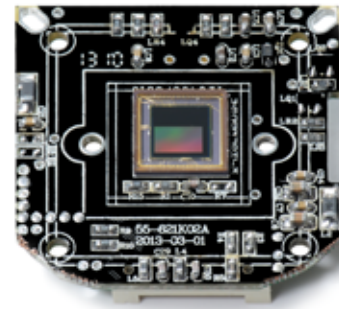
Nightvision.....10 IR LEDs / 5 -10m  
Storage.....SDHC card (4GB included)  
RC Pan & Tilt.....350° hor. / 100° vert.  
Power Supply...DC 5V/1.5A(50-60Hz,110-220V)  
Power Consumption.....max 8W/  
Operating Temperature.....-5°C to 55°C



# Product Specifications

## Image Sensor

Sensor	IN-5907 HD, IN-6012 HD, IN-6001 HD
Sensor	1/3" Megapixel WDR CMOS
Manufacturer	OmniVision Semiconductor Co., Ltd
Type	OV10633 WDR
Active Array Size	1280 x 720 pixel (1.0 Megapixel)
Image Transfer Rate	25 fps @ full resolution
Sensitivity	3650 mV/(lux*s)
Max. S/N Ratio	39 dB
Dynamic Range	115 dB / 38 f-stops (EV)
Image Area	5510.4 $\mu\text{m}$ x 3418.8 $\mu\text{m}$
Pixel Size	4.2 $\mu\text{m}$ x 4.2 $\mu\text{m}$
Scan Mode	progressive
Shutter	rolling shutter
Operating Temperature	0 °C - 50 °C



**IN<sup>WDR</sup>**  
**LINE**

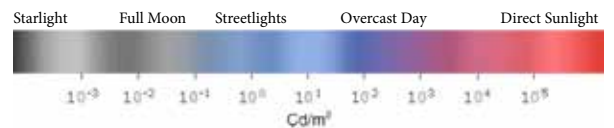


Fig. A human can see objects in starlight or in bright sunlight giving the human eye a dynamic range of 90 dB.

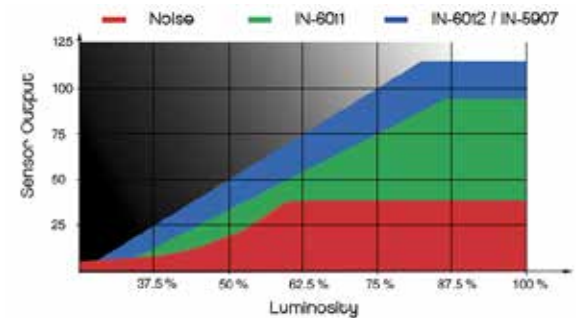


Fig. The 94 dBi enhanced dynamic range of the IN-6011 with its high sensor response and exceptional signal-to-noise ratio is only rivaled by our WDR line.

The sensor is build on a 4.3 micron OmniPixel3-HS™ pixel enabling 720p HD at unparalleled low-light sensitivity and a **wide dynamic range** in colour of 115dB - compared to the 60 dB of a regular VGA IP camera. Allowing you to capture detail-rich colour video even in **high-contrast lighting conditions**.

The focus of our choice of sensor is on image quality with bigger pixel size over just total pixel count. The 1/3 inch sensor size is equivalent to the sensor size found on other 2MP or 4MP cameras.

OmniPixel3-HS™ are larger than ordinary pixels, and take up more space on the sensor. So there are less megapixels, but the **light sensitivity** of each pixel is substantially higher than the industry average.

## Product Features

- Single chip SOC with integrated image processor
- Wide-dynamic range for high-contrast situations
- High speed 25 fps SXGA readout
- Automatic exposure/gain
- Auto white balance control
- Aperture and gamma correction
- 10- or 8-bit YUV and 18-bit RAW RGB output
- Supports HD 720p image size
- Low power consumption
- On-chip tone-mapping function
- Defective pixel correction
- 50 / 60 Hz flicker cancellation



The IN-6014 HD is the first INSTAR HD 720p pan & tilt camera with an integrated infrared motion detector. The camera can easily be controlled through your smartphone from inside your network and also over the internet. The camera can easily be connected to your network by using its 54MBit (802.11b/g) Wi-Fi module (WPA/WPA2) or through the 100MBit network interface to ensure a fluid video stream.

The camera can also see during the night thanks to 12 Infrared LEDs operating at a wavelength of 850nm. The max. indoor range for the camera's night vision is around 10-15 meters. Our new HD indoor camera will bring you all the features that you are used to from our VGA series, combined with a superior resolution of 1280x720 Pixel and the possibility to record videos on an integrated SD card.

The IN-6014 HD is the camera that combines the powerful software based motion detection with a hardware heat motion detector (PIR). Both methods can be used or bundled to increase their effectiveness by minimizing their false alarm rate.



- |   |                                     |    |  |
|---|-------------------------------------|----|--|
| 1 | Photodiode for twilight switch      | 7  | RJ45 Ethernet connector                  |
| 2 | Infrared LEDs for night vision      | 8  | SMA Wi-Fi antenna connector              |
| 3 | Standard 4.3mm F/1.2 infrared lense | 9  | Micro-SDHC card slot (4GB SD card incl.) |
| 4 | Remote pan & tilt camera head       | 10 | Reset button                             |
| 5 | Passive Infrared Motion Detector    | 11 | Status LED                               |
| 6 | 3.5mm Audio-Output                  | 12 | DC power supply connector                |



**Specifications**

VIDEO

Sensor.....1/3" WDR CMOS colour HD  
Resolution.....max. 720p HD 1280x720  
Lense.....4.3mm f/1.2 dia. angle of view 90°  
Video.....h.264 compression  
Framerate.....max. 25 fps 720p

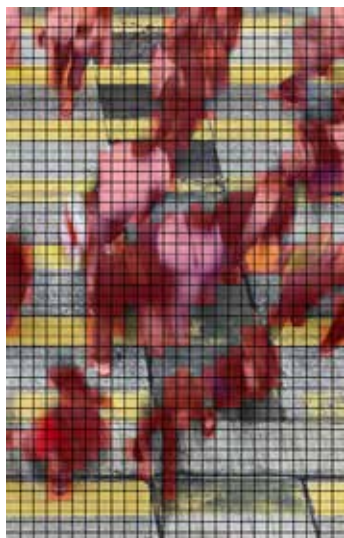
COMMUNICATION

Network Interface.....RJ45 Ethernet Port  
Wireless.....Wifi 802.11 b/g/n  
Encryption.....WPA/2 (TKIP&AES)  
Remote Access.....free DDNS & P2P  
Mobile.Windows Phone 8, Android & iOS App

HARDWARE

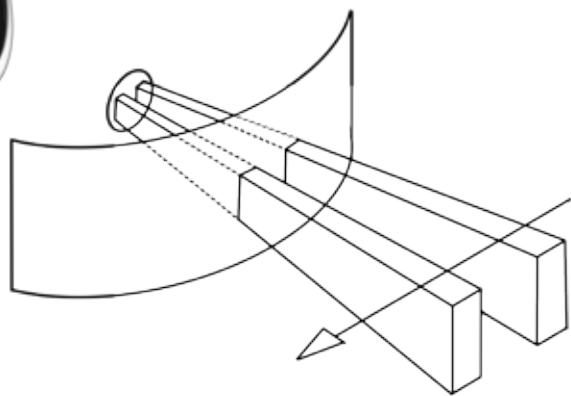
PIR Motion Detection.....detection up to 5m  
Nightvision.....12 IR LEDs / 5 -10m  
Storage.....Micro-SDHC card (4GB included)  
RC Pan & Tilt.....350° hor. / 90° vert.  
Power Supply.DC ..5V/1.5A(50-60Hz,110-220V)  
Power Consumption.....max 8W/  
Operating Temperature.....-5°C to 55°C

## Integrated Heat Detection

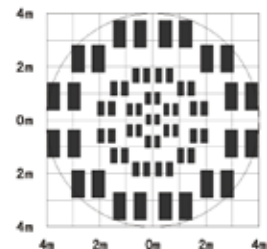


All INSTAR IP cameras detect motion with the help of a sophisticated software image analysis. Just like in the sample frame on the right, every image the camera records is rasterized into a grid. Whenever the content of one zone - the pixel that make up the image - change, a motion detection is triggered (see red highlights in the image). The sensitivity of the detection determines how many pixel actually have to change to trigger that event.

The flaw with software based motion detection is, that many things can cause the image to change its appearance - a passing cloud in front of the sun, a flashing light in the night or falling rain in front of the camera. INSTAR offers IR motion detectors to circumvent this problem for some time now. But the model IN-6014 HD is the first INSTAR IP camera that comes with a build-in PIR motion detection solution.



By concentrating on long wave Infrared light, those visible distractions are easily eliminated. The PIR sensor coverage area is approximately conical in shape covering an area of about  $4\text{m}^2$  at a distance of 5m from the camera. Every time a heat signal - with a temperature different from the background image - passes into or out of one of these zones a alarm is triggered inside the camera. In addition you can also couple both detection methods and only trigger an alert in case that both - the PIR and software analysis recorded an detection event.





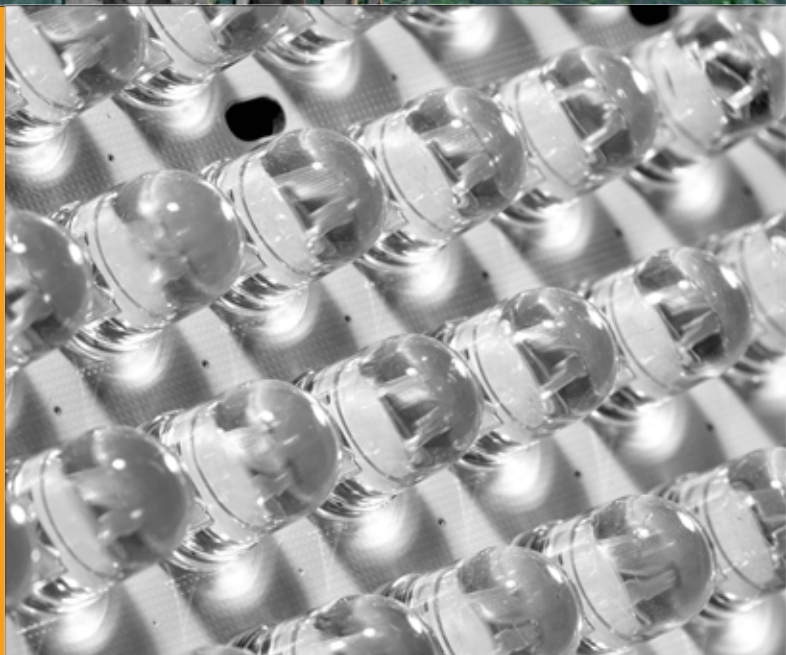
## TURN YOUR NIGHT INTO DAY



### IN-903 V2 & IN-905 V2

IN-905 V2 IR Spotlight with 60 high power IR LEDs for a realistic reach of about **20-30 meter** with a **60 degree** Illumination angle.

And the IN-903 V2 IR Spotlight with 60 IR LEDs for a realistic reach of about **15-20 meter** with a **80 degree** Illumination angle.



### Invisible Infrared Illumination

All INSTAR spotlights hold 60 infrared diodes. Depending on the model, they vary in power output, angle of illumination and emission maxima.

The photodiode of the twilight switch automatically activates the spotlight at night. All you need to do is to plug it into a power socket.

## What is IN-LAN®?

IN-LAN is an intelligent and secure technology that lets you set up a home network easily via your household power grid - without the need of complex and expensive dedicated cabling. IN-LAN communication now attains speeds you would expect from other LAN technologies.

IN-LAN uses the household power grid to transfer data between computers equipped with suitable adaptors and other network components. As a result, any power outlet can be used as a network access point. State-of-the-art technology ensures that the power and data networks do not interfere with each other.



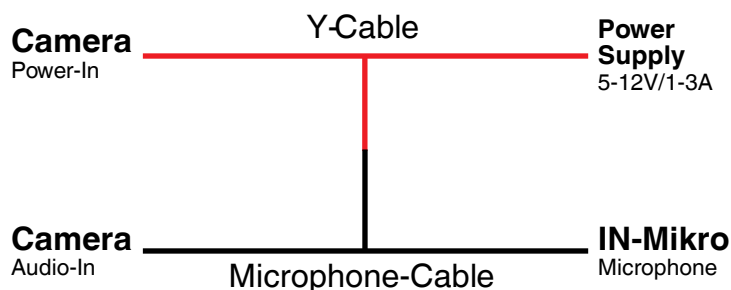
## What does IN-STAR IN-LAN® offer?

IN-LAN offers a PLC transfer rate of up to 500Mbps (effective rate 65Mbps TCP / 90 Mbps UDP) with a range of up to 150m which makes it ideal for applications with high bandwidth requirements, such as IP cameras, HD video streaming, VoIP and fast Internet access. Connecting your IN-LAN adaptor to an electrical outlet transforms the home-based electrical system into a fast net-

work with high data throughput with maximum data security using the powerful 128-bit AES encryption. Simply press the Pair Button on the IN-LAN adaptor to establish an open network or use the Atheros configuration wizard to set up custom encryption for your network. Whether in the office or at home - connect all your LAN devices without the need of an additional LAN cable.



## High quality adjustable microphones for your IP camera



## Specifications

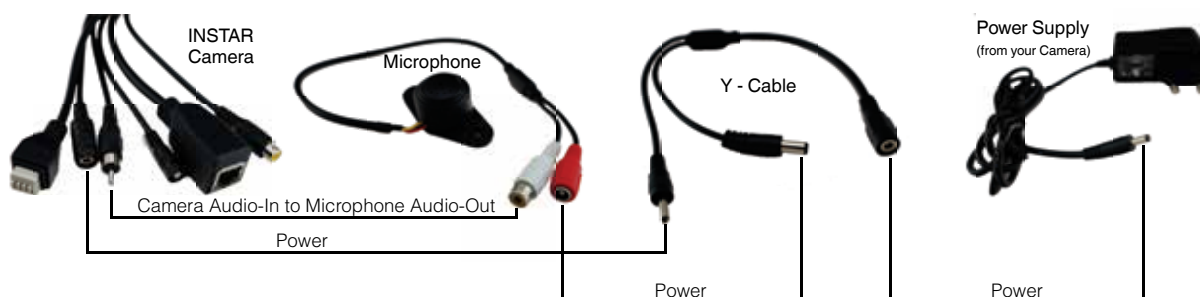
- For room sizes from 5m<sup>2</sup> to 150m<sup>2</sup>
- Power consumption 15mA
- Sensitivity 2.5 dBi
- DC input 5V - 12V
- Frequency range 200Hz ~ 10kHz
- Adjustable signal amplification



## How is it connected to my camera?

The IN-Mikro 380 microphone is can be powered by the cameras 5V or 12V power supply through an included Y-cable. Simply connect the audio-out to your INSTAR cameras integrated audio input connector.

Currently the following outdoor models are supported: IN-2901, IN-2905 V2 (year of manufacture 2013), IN-2908, IN-5907, IN-4010, IN-4011 and the IN-6012HD.





## What is PIR?

PIR stands for Passive Infrared or Pyroelectric Infrared. PIR sensors can be defined as detectors of warm-bodied targets in motion. A stationary target cannot be detected. To detect a moving target, the target must have a surface temperature that is substantially different than the surrounding ambient temperature. Although the usual targets of a PIR detector are

warm-bodied (mammals, birds), the PIR sensor will also detect a moving target that has a surface temperature that is significantly lower than the ambient temperature. As long as the target is large enough, and its surface temperature is detectably different than the ambient (higher or lower) - and the target is moving - it can be detected by a PIR sensor.



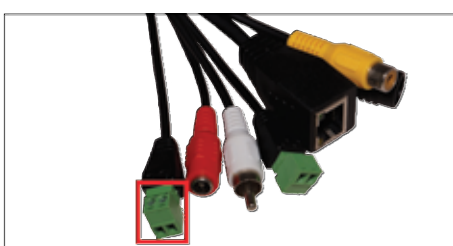
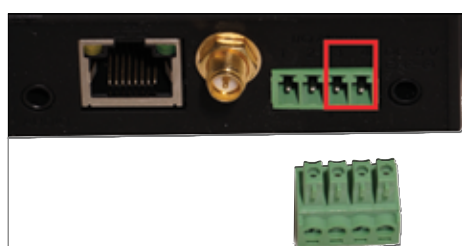
- Internal logic control to avoid false alarms
- Auto temperature compensation
- Pulse count adjustment
- White light interference compensation
- RF interference comp. (20V/m-1GHz)
- Wide angle Fresnel lense
- Ceiling installation
- Alarm output N.C. / N.O.

## How is it connected to my camera?

The IN-Motion PIR Sensor is already connected to the power plug and the alarm output cable. Simply connect the signal cable to your INSTAR cameras alarm input connector.

The alarm input of your camera might look different depending on your camera model. Please refer to your user manual to identify the correct ports. You may choose either polarity when con-

necting the cable - please refer to the next page for information on how to adjust the cameras trigger level accordingly.





The small IN-DV1215 is the perfect camera when you are outdoors. INSTAR offers you with the IN-DV1215 a camera with HD 720p resolution which can be used in many ways. Thanks to an underwater casing you can use the camera up to 20m below the water surface in order to record every moment during your holidays. By using the supplied brackets you can attach the camera to your bike and record your next bike tour or you can use the supplied helmet strip in order to attach the camera to your Ski or Snowboard helmet. Also a neck strap is included so you can take the camera with you everywhere you go.

By using the supplied outdoor / under water casing the IN-DV1215 is perfect for all kind of water sports. For example you are going to summer holidays and plan to go diving or snorkelling then simply bring your IN-DV1215 into the water to record every moment. Or if you are going to make a boat tour with friends or family then record everything and share it with others. No matter if above or below the water. The IN-DV1215 guarantees you best pictures any time.





- 1 Waterproof case
- 2 Power button
- 3 Video button
- 4 Photo button
- 5 120° wide-angle lense
- 6 USB port
- 7 Battery status LED

- 8 Reset button
- 9 MicroSD card slot
- 10 Resolution switch for 720p HD or 848x480
- 11 Status indicator
- 12 Lanyard hole
- 13 Internal microphone



**Specifications**

**VIDEO**

Sensor.....3 Megapixel  
Video Resolution.....max. HD 720p / 1280x720  
Picture Resolution.....2048 x1536  
Lense.....HQ 3 MegaPixel Lense  
Viewing Angle.....120°  
Video.....MJPEG / AVI

**HARDWARE**

Waterproof Casing.....IP68  
Waterproof Max.....20m  
Memory.....MicroSDHC up to 32GB  
Battery.....Build-in Li-Ion Battery  
Battery Runtime.....Approximately 2h  
Operating Temperature.....-10°C to 50°C  
Camera Measurements.....3 x 2.6 x 5.2 cm



Included accessory package



Versatile camera mounting options



IP68 waterproof housing for diving depths up to 20m



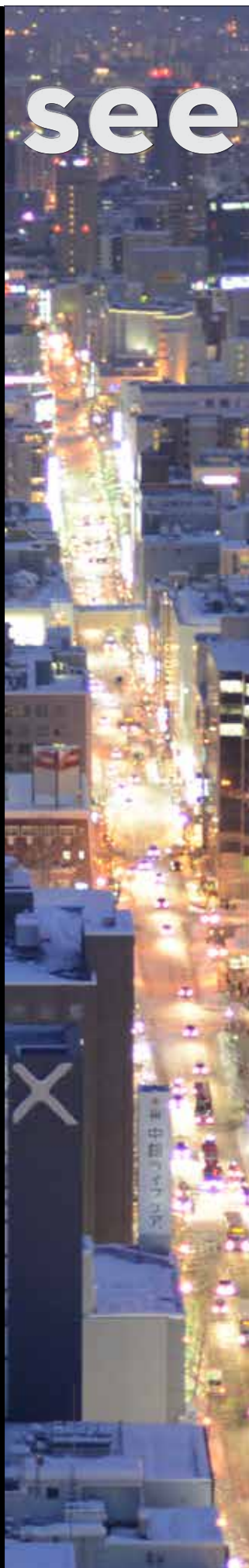
# Now you see it

## Choose your Angle

Your camera lenses focal length determines the angle of view that you are able to use for your surveillance but a large angle can also limit the amount of details that you are able to see.



INSTAR offers a wide range of interchangeable lenses allowing you to adjust your camera to your surveillance application. Do you need a wide angle of view, recognize details like number plates or need a daylight lens for natural colours in sun light?



Please visit our website for information on our wide variety of available lenses.

[www.instar.com](http://www.instar.com)



We offer stronger directional Wi-Fi antenna for all our camera. Giving your camera an extra reach inside your wireless network.



***Winter is coming...***

With the thermo controlled heating element you prepare your camera for operation in the cold season.



Let your Visitors know that this area is under video surveillance. Get a funny indoor sticker or a weatherproof stainless steel plate for outdoor use.



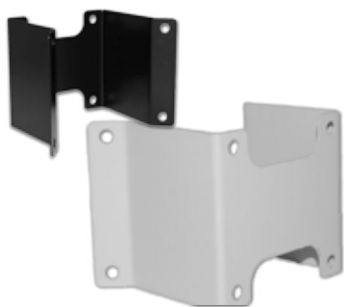
Use our IN-Route P52 Powerbank / Router / WiFi Access Point as a travel companion for your mobile devices.



Use the INSTAR PoE injector or switch to provide your *Power-over-Ethernet* camera with power via an Ethernet cable.













Is the 80cm weatherproof connection cable too short? Easily switch the standard cable of your outdoor camera with a 3m or 5m cable.



All our outdoor cameras are delivered with a suitable coloured Polycarbonate / ABS<sub>(UV)</sub> or metal wall mount bracket. Some models, like the 40series PTZ cameras, can also be employed with corner or ceiling mounts to adapt your camera surveillance demand.



			
Model	IN-2905 V2	IN-2908	IN-3001
Colours	  	 	 
Image			
Sensor	1/5" Colour CMOS	1/5" Colour CMOS	1/5" Colour CMOS
Resolution	640x480 VGA 320x240 QVGA 160x120 QQVGA	640x480 VGA 320x240 QVGA 160x120 QQVGA	640x480 VGA 320x240 QVGA 160x120 QQVGA
Lense	6mm / 37° horizontal	4-9mm/29-51° horizontal	6mm / 37° horizontal
Compression	MJPEG	MJPEG	MJPEG
Framerate	max. 30 fps QVGA	max. 30 fps QVGA	max. 30 fps QVGA
Communication			
Interface	RJ45 Ethernet Port	RJ45 Ethernet Port	RJ45 Ethernet Port
Wireless	IEEE 802.11 b/g	IEEE 802.11 b/g	IEEE 802.11 b/g
POE	POE Model (w/o Wifi !)	no	no
Encryption	WEP & WPA\2	WEP & WPA\2	WEP & WPA\2
Hardware			
Pan/Tilt/Zoom	no	3 x optical Zoom	no
Nightvision	24 IR LEDs / 10 - 15 m	30 IR LEDs / 12 - 20m	10 IR LEDs / 5 - 8m
Alarm I/O	yes	yes	yes
Power Supply	DC 5V/2A - 50-60Hz, 110-230V	DC 5V/2A - 50-60Hz, 110-230V	DC 5V / 2A - 50-60Hz, 110-230V
Consumption	max. 5.8 W	max. 6.3 W	max. 4.9 W
Operation	-5 to 55 °C	-5 to 55 °C	-5 to 55 °C

			
IN-3003	IN-3011	IN-4009	IN-4010 V2
 	 	 	 
1/5" Colour CMOS	1/5" Colour CMOS	1/5" Colour CMOS	1/5" Colour CMOS
640x480 VGA 320x240 QVGA 160x120 QQVGA	640x480 VGA 320x240 QVGA 160x120 QQVGA	640x480 VGA 320x240 QVGA 160x120 QQVGA	640x480 VGA 320x240 QVGA 160x120 QQVGA
6mm / 37° horizontal	6mm / 37° horizontal	4-9mm/29-51° horizontal	4-9mm/29-51° horizontal
MJPEG	MJPEG	MJPEG	MJPEG
max. 30 fps QVGA	max. 30 fps QVGA	max. 30 fps QVGA	max. 30 fps QVGA
RJ45 Ethernet Port	RJ45 Ethernet Port	RJ45 Ethernet Port	RJ45 Ethernet Port
IEEE 802.11 b/g	IEEE 802.11 b/g	IEEE 802.11 b/g	IEEE 802.11 b/g
no	POE Model (w/o Wifi !)	no	no
WEP & WPA\2	WEP & WPA\2	WEP & WPA\2	WEP & WPA\2
no	280° hor. / 120° vert.	355°/90°, 3x Zoom	355°/90°, 3x Zoom
8 IR LEDs / 5 - 10m	10 IR LEDs / 8 - 12 m	no	with external spotlight
yes	yes	yes	yes
DC 5V / 2A - 50-60Hz, 110-230V	DC 5V / 2A - 50-60Hz, 110-230V	DC 12V/1.5A - 50-60Hz, 110-230V	DC 12V/1.5A - 50-60Hz, 110-230V
max. 4.2 W	max. 7.6 W	max. 8.0 W	max. 8.2 W
-5 to 55 °C	-5 to 55 °C	-5 to 55 °C	-5 to 55 °C

			
Model	<b>IN-4011</b>	<b>IN-5905</b> HD	<b>IN-5907</b> HD
Colours	 	 	 

## Image

Sensor	1/5" Colour CMOS	1/3" cWDR CMOS	1/3" cWDR CMOS
Resolution	640x480 VGA 320x240 QVGA 160x120 QQVGA	<b>720P HD</b> 1280 x 720 640 x 352 320 x 176	<b>720P HD</b> 1280 x 720 640 x 352 320 x 176
Lense	3.7-14.8mm/18-56°	4.3mm / 90° diagonal	8mm / 45° diagonal
Compression	MJPEG	h.264 / MJPEG	h.264 / MJPEG
Framerate	max. 30 fps QVGA	max. 25 fps 720p	max. 25 fps 720p

## Communication

Interface	RJ45 Ethernet Port	RJ45 Ethernet Port	RJ45 Ethernet Port
Wireless	IEEE 802.11 b/g/n	IEEE 802.11 b/g/n	IEEE 802.11 b/g/n
POE	no	no	POE Model (w/o Wifi !)
Encryption	WEP & WPA\2	WPA & WPA2	WPA & WPA2

## Hardware

Pan/Tilt/Zoom	355° / 90°, 4x Zoom	no	no
Nightvision	66 IR LEDs / 8 - 10 m	5 IR LEDs / 5 - 10 m	3 HP IR LEDs / 15 - 25 m
Alarm I/O	yes	yes	yes
Power Supply	DC 12V/1.5A - 50-60Hz, 110-230V	DC 12V / 2A - 50-60Hz, 110-230V	DC 12V / 2A - 50-60Hz, 110-230V
Consumption	max. 10.8 W	max. 8 W	max. 13.0 W
Operation	-5 to 55 °C	-5 to 55 °C	-5 to 55 °C



IN-6001 HD

IN-6012 HD

IN-6014 HD

IN-7011 HD



1/3" cWDR CMOS

1/3" cWDR CMOS

1/3" cWDR CMOS

1/3" cWDR CMOS

**720P HD** 1280 x 720  
640 x 352  
320 x 176

**720P HD** 1280 x 720  
640 x 352  
320 x 176

**720P HD** 1280 x 720  
640 x 352  
320 x 176

**720P HD** 1280 x 720  
640 x 352  
320 x 176

4.3mm / 90° diagonal

8mm / 45° diagonal

4.3mm / 90° diagonal

6mm / 60° diagonal

h.264 / MJPEG

h.264 / MJPEG

h.264 / MJPEG

h.264 / MJPEG

max. 25 fps 720p

max. 25 fps 720p

max. 25 fps 720p

max. 25 fps 720p

RJ45 Ethernet Port

RJ45 Ethernet Port

RJ45 Ethernet Port

RJ45 Ethernet Port

IEEE 802.11 b/g/n

IEEE 802.11 b/g/n

IEEE 802.11 b/g/n

IEEE 802.11 b/g/n

no

POE Model (w/o Wifi !)

POE Model (w/o Wifi !)

POE Model (w/o Wifi !)

WPA &amp; WPA2

WPA &amp; WPA2

WPA &amp; WPA2

WPA &amp; WPA2

no

350° hor. / 100° vert.

350° hor. / 100° vert.

350° hor. / 100° vert.

8 IR LEDs / 5 - 7 m

10 IR LEDs / 5 - 10 m

12 IR LEDs / 5 - 10 m

22 IR LEDs / 8 - 12 m

no

yes

no

yes

DC 5V / 1.5A -  
50-60Hz, 110-230V

DC 5V / 1.5A -  
50-60Hz, 110-230V

DC 5V / 1.5A -  
50-60Hz, 110-230V

DC 12V / 2A -  
50-60Hz, 110-230V

max. 3.5 W

max. 8.0 W

max. 8.2 W

max. 8.9 W

-5 to 55 °C

-5 to 55 °C

-5 to 55 °C

-5 to 55 °C

**INSTAR**