DVR Systems
How to Decide What Cameras To Buy

We have created a guide that details the specifications and the pros & cons of all basic cameras.

Cameras

Exterior Design Types:

-Bullet Cameras

-Dome Cameras

Feature Properties:

-Vari-Focal

-High Resolution

-Audio

-Pan Tilt Zoom (PTZ)

-IP Network Cameras

-Hidden Cameras

-Spy Cameras

Exterior Design Types: Bullet Cameras & Dome Cameras

Bullet Style cameras are shaped in an elongated fashion often similar to a tube or soda can.

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All current bullet style cameras that Zmodo carries are designed to be weatherproof.

A bracket is necessary in order to install a bullet style camera. Some bullet cameras have a built-in hollow bracket which is not removable from the camera. It is recommended that installation of hollow-bracket cameras be done carefully so that the cables inside of the hollow bracket are not pinched or severed during installation. Other bracket types include skeletal brackets and single-joint brackets.

Dome Style cameras are shaped in a half-spherical fashion, and do not require a bracket for installation.

Most dome cameras are not designed to be weatherproof. Please refer to individual camera specifications for weatherproof confirmation.



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It is recommended that all non-weatherproof cameras be installed in a location indoors that is safe from rain, wind, & snow. This environment must also maintain a consistent temperature because the components of an indoor camera may contract and expand during temperature change. Therefore, inconsistent temperatures may damage an indoor camera.

Feature Property: Vari-Focal

Vari-Focal cameras have an adjustable lens, which can be adjusted manually from the camera. Adjusting the lens on a vari-focal camera will cause the image to either zoom in or zoom out. The further the camera is zoomed in, the narrower the camera’s peripheral view is.

It is not possible to adjust the lens on a vari-focal camera from the DVR or from a remote location. The lens on a vari-focal camera must be adjusted at the camera during installation.

Vari-focal cameras are recommended for areas that need precise monitoring, such as cash registers and entrances to and from parking areas. The advantage of a vari-focal camera is that the user may adjust the lens to match the exact necessary viewing angle which is needed for their specific location.

Feature Property: High Resolution

High Resolution cameras include a motherboard which captures an image at a higher horizontal Television Line Number (TVL) than 420TVL. Having a higher TVL results in a clearer picture because an increased TVL adds more detail to the image.

For example, a camera that is rated at either 420 TVL or 320 TVL is considered to be Standard Definition. However a camera that is rated at either 480TVL or 600TVL is considered High Resolution because the TVL is higher than 420.

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It is highly recommended that High Resolution cameras only be used with DVR units that are capable of recording in HD1 & D1 resolution. If a DVR is only able to record in CIF resolution and not in HD1 or D1 resolution, the camera will only be able to display a standard definition image. Please refer to individual DVR specifications for HD1 & D1 confirmation.

Feature Property: Audio

Audio cameras have the capability of recording audio as well as video. All audio cameras have a built-in microphone which is not removable.

If you or your client intends to install any number of audio cameras in a business location, please be aware that some states prohibit the action of recording employees verbal conversations without their knowledge.

Please be aware that not all DVR units have as many audio inputs as there are camera channels. For example; some eight channel DVR units may only have four audio inputs. Therefore, that DVR is only capable of recording audio from up to four cameras at the same time.

In order to connect an audio camera to a DVR unit, the end user must connect both a video cable and an audio cable from the DVR to each audio camera. Therefore, power + video + audio cables are highly recommended for use with audio cameras.

Feature Property: Pan Tilt Zoom (PTZ)

Cameras that have any external movement functionality are referred to as either "PT” cameras or "PTZ” cameras. A "PT” camera has the ability to remotely pan and tilt. A "PTZ” camera has the ability to pan, tilt, and zoom.

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In order for a PT or PTZ camera to perform its movement functionality, it must have a copper communication wire run from the camera to the movement device. The communication type is RS485. The wire that is needed to perform the RS485 communication can be obtained at any electronics store, because it is the same wire necessary for installing a home stereo system. The common term for this wire is "24 Gauge Copper Wire.”

The movement device may either be a PTZ controller or the DVR unit. All current Zmodo DVR units have a built-in RS485 port, which allows the end user to control a PT or PTZ camera’s movement functionality either from the DVR or from a remote internet location.

If the end user is intending to connect all PT or PTZ cameras to a DVR, then a PTZ controller is not necessary unless that end user needs to be able to manually move more than one camera at the same time.

Feature Property: IP Network Camera

IP Network Cameras are unable to communicate or connect to a DVR unit. They are only able to connect and communicate directly with a router. The end user may only maintain and view the camera’s image and interface from a PC computer.

IP Network cameras are recommended for a user who required only one or two cameras at their location, as two IP cameras are less expensive than one DVR, two CCTV cameras, two cables, and a camera power source.

IP network cameras are currently the primary option for clients requesting wireless cameras, because the analog signal from a CCTV camera cannot be consistently transmitted wirelessly if there are several wireless devices in the area that are using the same frequency.

Up to nine IP network cameras can connect to the same router wirelessly at the

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same time, depending on the wireless signal strength emitting from the router.

Feature Property: Spy Cameras

Spy cameras are single recording devices that are often disguised to resemble a common household item. Spy cameras that are sold by Zmodo include models that are disguised to resemble a pen, car key fob, clock radio, desk clock, name tag, etc.

Spy cameras are not recommended for consistent surveillance because record times are limited to storage space and the battery life of the item.

Spy cameras are recommended for random or "at-the-moment” surveillance, perhaps to record an event in progress when no other surveillance is present.

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