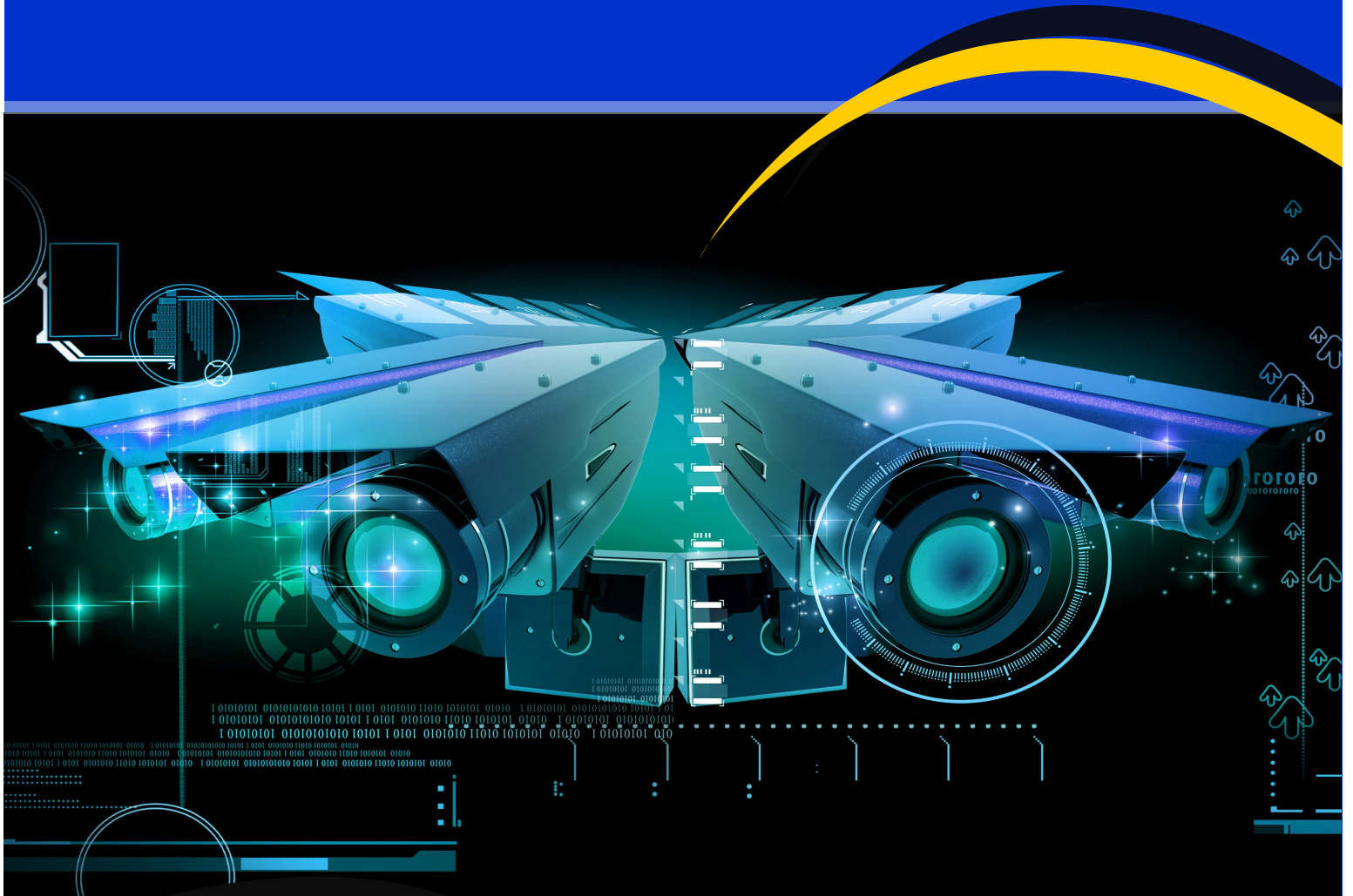


A Guide to **Critical Elements** in Surveillance



TYPES OF CAMERAS



TYPES OF SURVEILLANCE CAMERAS

Fixed Cameras

These cameras use fixed lens i.e. focal length of lens are fixed. These types of cameras are called fixed cameras. Fixed lens doesn't let you adjust the focal length which changes angle of view and level of zoom. It is positioned to capture an image. They are always pointing in the intended direction and more reliable. These cameras work well for residential or small offices.

Pan/Tilt/Zoom (PTZ) Cameras

These cameras use varifocal lens. The focal length of the lens can be adjusted to focus on the required object. These cameras are called Pan/Tilt/Zoom (PTZ) due to their ability to do the following:

Panning: The camera can swivel to the left and right, allowing it to have a wide area of coverage. Pan can range from a complete 360 circle to smaller areas.

Tilting: The camera can tilt up and down, giving it a wide vertical range of coverage. The amount the camera can tilt will vary by camera model, but goes up to 180 degrees.

Zooming: Optical zoom physically adjusts the camera lens, changing the focal length to zoom in and out; this allows the camera to maintain image quality. The amount of optical zoom is expressed as #x, such as 18x, and represents how much the camera can zoom (change the lens focal length). Digital zoom blows up the image using software, often resulting in pixilated images when zoomed too far, and is not recommended.

Virtual PTZ or 360° Cameras

In this type there are several high-resolution fixed cameras in a single (usually dome) housing. The images are stitched together and you can zoom in after the fact, up to the limits of the cameras being used. The camera faces all directions and can have unobstructed view in all directions.

ACTIVE DETERRENCE™

Siloed management of disparate security, safety and operational systems leaves too many opportunities for error and ultimately creates unwanted and unnecessary inefficiency. Therefore, the only way to feasibly tackle a challenge of this scope and scale is to adopt a **video surveillance solution** i.e. **ACTIVE DETERRENCE™** thereby uniting surveillance systems and enabling multiple levels of monitoring and control from a single reliable platform. This is where intelligent surveillance monitoring and control integration can offer real benefit.

NEW AGE TECHNOLOGY

The word surveillance comes from a French phrase for "watching over" (sur means "from above" and veiller means "to watch"). At Securens, with our award winning Central Monitoring Station (CMS), we keep watch over your business and protect everything that matters the most to you.



TYPES OF SURVEILLANCE CAMERAS HOUSING

After selecting the camera type, housing of camera plays an important role depending on the location, area and discretion required.

Outdoor

Outdoor cameras will be more weather resistant and include heaters and blowers to allow for environmental variances.

Dome

Dome housings are designed to conceal the orientation of the camera, with some doing a better job than others. When someone can't tell which way the camera is pointing, they often assume it is pointing in all directions.

Bullet

Bullet security cameras are the video monitoring cameras shaped like rifles or lipstick cases. And that's why they are also called lipstick cameras. The bullet surveillance cameras are often installed outside of a wall or a ceiling and point in a certain direction like the barrel of guns. These clearly show the direction of orientation and provide a better picture.

Discreet

You want to hide the entire camera using covert or discreet housings. These can be designed to look like something else (smoke detector, motion sensor) or nothing at all, with pinhole lenses or flush mount lenses mounted on a wall or ceiling. These are not designed to be deterrents but are often preferred by architects seeking to achieve a certain aesthetic within a space.

FEATURES OF SURVEILLANCE CAMERAS

Resolution

Resolution influences the quality of image. Resolution is measured in millions of pixels, or megapixels. The higher the resolution, the more space required to store the images and processing power to manipulate it. For perspective, an old analog camera is about 1/4 megapixel, your giant HDTV screen is a little over 2 megapixels.

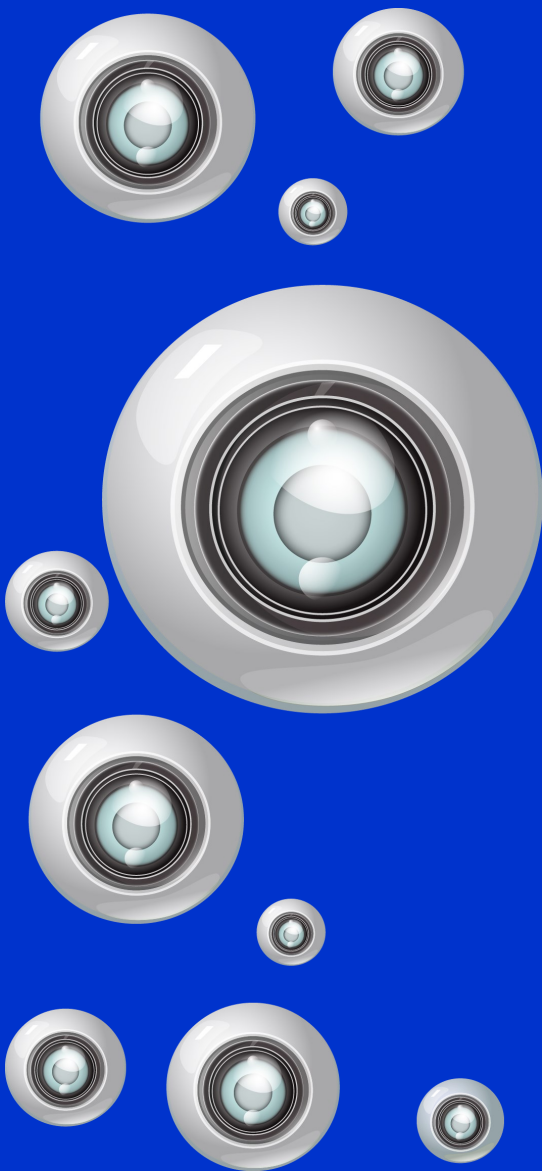
Below are quick reference guides for Analog / Digital Cameras.

Analog	PAL-Based
QCIF	176 X 144
CIF	352 x 288
2CIF	704 x 288
4CIF	704 x 576
D1	720 x 576
Digital	
QQVGA	160 x 120
QVGA	320 x 240
VGA	640 x 480
HDTV	1280 x 720
1M	1280 x 960
1M	1280 x 1024
2M	1600 x 1200
HDTV	1920 x 1080
3M	2048 x 1536

Even if resolutions are very high, bright areas or low light areas could be a deterrence for well-defined images.

Resolution coupled with wide dynamic range processing technique which uses an algorithm that samples the image several times with different exposure setting and provides more detail to the bright and dark areas offer a more detailed and web-defined image. In it important to look out for WDR feature along with resolution while picking a camera.





FEATURES OF SURVEILLANCE CAMERAS

Motion Detection

Cameras with motion detection can send you notifications when the camera observes motion within its field of view. These notifications can alert you to suspicious activity so you can monitor the situation. The video recording to hard disk can be programmed upon motion thus reducing the hard disk space utilized for recording.

Night Vision – Low light / infrared

Cameras with day/night capabilities switch into a different mode in low light situations, with various technologies allowing usable images in near total darkness. Cameras with infrared illuminators provide their own light source, allowing better images in dark areas as well. To get better low light images we need to reduce resolution.

Varifocal

Varifocal camera can adjust the focal length, angle of view, and level of zoom. There is direct relation between the focal length and angle of view. As you increase the focal length the camera focus on the object by narrowing the angle of view. Hence we need to take care while adjusting the focal length so that our objectives are met.

Remote Zoom

Camera come with remote zoom and focus. This allows the user to adjust the camera without physically going to the camera site, a big cost savings.

Auto-focus

Short focal length lenses have wide fields of view which are ideal for close ups or for seeing a large area, although objects will appear relatively small. Long focal length lenses have narrow fields of view but distant targets are easier seen with better definition. A camera which caters to providing both a large field of view as well as a short field of view on the fly needs autofocus. These are achieved by using a combination of lenses that optimize the physical principles of the lenses.



FEATURES OF SURVEILLANCE CAMERAS



These cameras can vary their focal length automatically, i.e. autofocus. Autofocus cameras can be zoomed in or out to account for changes in the field of view. Normally, these cameras' zoom function is controlled electronically either by a control panel with sliders, levers, knobs, joysticks, or buttons or through the use of programming that is run through the processing unit or digital video recorder.

Wireless

A camera with Wi-Fi can communicate with your home network wirelessly. Wireless cameras are needed somewhere that can't be hardwired.

Sound

The sound feature refer to your camera receiving sound via a microphone, emitting sound via a speaker, or both. Cameras with both can double as intercoms.

Thermal Imaging

A thermal camera uses thermal imaging to produce surveillance footage in dark or harsh environments. It uses heat to differentiate objects. Detect people and objects in smoke, haze, dust, light fog. Works in complete darkness.



About Securens



Founded in 2011, **Securens Systems Pvt. Ltd.** rapidly emerged as India's leading electronic surveillance company, designing and delivering bespoke surveillance solutions and managed services for a wide range of commercial, private and public-sector markets. As the pioneer in live monitoring video surveillance systems in India, headquartered in Mumbai and operating across **22 states** with **28 offices** nationwide,

Securens is an award winning globally recognized 360° eSurveillance solutions provider protecting over **25,000 sites** monitored live with our proprietary **ACTIVE DETERRENCE™** technology and affiliated services.

The need for video analytics, business intelligence and personalized solutions has further spurred the demand for intelligent video surveillance systems among the consumers. With Securens **ACTIVE DETERRENCE™** video surveillance solutions gaining popularity and trust in the market, especially in banks, retail outlets, commercial offices, residential societies, factories, warehouses, educational institutes etc., to protect human life, infrastructure and enhance security in their compounds, we are equipped to grow exponentially. With the aim of preventing crime before it happens, Securens provides live (real time) and alert based surveillance monitoring, business intelligence, video analytics and best practice models to protect and safeguard property and assets from internal and external threats.

simplifying surveillance

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