



Camera Selection Overview

- Identify the objective for the CCTV system. Are the cameras for security surveillance, monitoring a manufacturing process or for general area observation?
- Determine the environmental factors for each camera - indoor or outdoor? Will the camera be exposed to extreme conditions such as dust, vibration, temperature etc.
- Assess the lighting available for each camera. Standard color cameras work well in areas with consistent lighting whereas a Day/Night camera may be more suitable for locations with variable light conditions.

Basic Camera Types

PTZ

Pan/tilt/zoom cameras are very versatile, providing coverage of large areas with the ability to zoom in on specific targets when needed. PTZ cameras can be programmed to "tour" an area meaning the camera continually pans and rotates to a series of selected points. An operator can manually take control of the camera at any time with either a joystick control or using software. Indoor and outdoor options are available.



Box

Box cameras consist of the camera body and a separate lens selected for the specific target to be viewed. A separate mounting bracket is needed for installation. For outdoor installation an environmental housing is required which may include a heater/blower unit for low temperature applications.



Dome

Dome cameras are compact and include either a varifocal or fixed lens within the housing. Economical mini-dome models are discreet and popular for indoor surveillance. Vandal resistant domes feature rugged housings and impact resistant polycarbonate covers. Some models include heaters for low temperature installations.



Bullet

Bullet cameras feature a cylindrical type housing with a mounting bracket attached. Indoor and outdoor models are available and many have built-in infrared LED's for low light applications.





Video Installation Tips

Issue #4
Published Monthly

Specific Camera Selection Criteria

Determine the image target that each camera should capture for your application:

1. Is the objective simply to detect movement within a given area? If so then a single camera with a wide field of view (FOV) may be adequate. (See Bulletin 3 for information on FOV) These are often applications where a PTZ camera can be successful in providing wide area coverage with the ability to zoom in when movement is detected.
2. Does the camera need to capture an event with enough detail to identify exactly what is occurring? Typically this means there is a very specific target area such as a doorway or vehicle entry point. Cameras for this purpose will need a narrower FOV to capture more detail.
3. Do you need to be able to positively identify individuals, objects or specific problems? Such situations require high resolution images of just a small portion of the overall scene. A camera behind a teller's wicket at a bank will have a narrow FOV to capture the face of the customer. In a manufacturing setting the camera may be positioned to record a specific gauge or other critical machinery operations. More advanced applications such as license plate recognition which require highly specialized equipment also fall into this category.

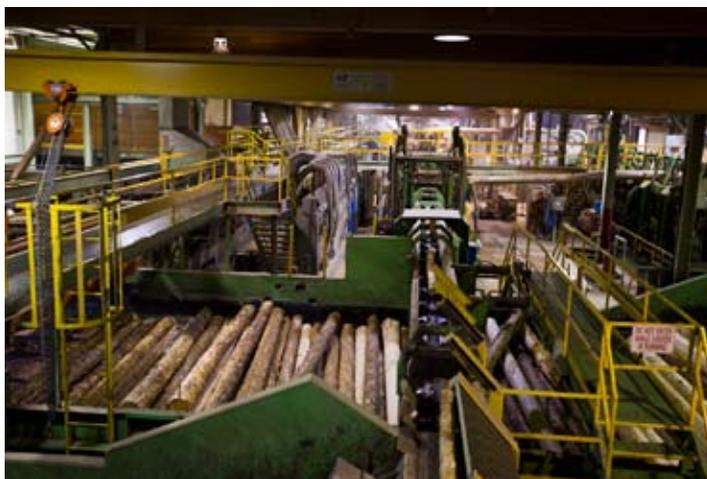
Low Light Solutions

Lighting conditions play a critical role in determining image quality. Day/Night cameras are widely available for applications where light levels drop significantly at night. Like all color cameras, a true Day/Night camera has an infrared (IR) cut filter for daytime operation. When light levels drop, a clear glass filter mechanically replaces the IR filter and the camera switches to black & white to maximize image quality. Additional IR light can be provided by cameras with built-in IR LED's.

Special Considerations for Heavy Industry

Cameras in the heavy industrial setting may be subject to much more extreme conditions than would normally be found in a typical surveillance application. The ability to withstand high vibration, dust and high temperature are the main factors to consider when selecting cameras for production monitoring.

The primary objective of correct camera selection in these applications is to minimize the potential for camera failure. This directly reduces maintenance and equipment expenses and increase productivity.



Look for our next issue: IP Video vs. Analog – Factors in System Selection

Sign up to receive our Video Installation Tips by email. Go to www.toughestvideocamera.com