

Video Surveillance Buyers Guide



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Whether you need a single camera and monitor or a complex video surveillance system with hundreds of cameras, multiple operators, and digital recorders, surveillance systems can provide security for a wide range of businesses. A good video surveillance system can make your business safer, more efficient, and less prone to theft and accidents. Specifically, video surveillance can provide many benefits:

- reduce shrinkage by catching shoplifters
- deter potential thieves
- monitor cash registers
- record evidence to prevent bogus accident claims
- identify visitors and employees
- monitor hazardous work areas
- increase security in and around business premises and parking lots
- meet insurance requirements

Evaluating your Needs:

Before you can compare systems or choose a vendor, you should consider and understand your needs carefully.

The 3 Top Things to Consider:

1. The WHAT:
2. The WHY:
3. The HOW:

What do you want to monitor?

General comings and goings

Vehicle traffic

See faces

Merchandise

Crowds

Why are you looking at installing a video surveillance system?

To **deter** potential crimes

To **catch** perpetrators.

Both can be important, but your priority will influence your purchasing decisions.

If you are more interested in deterring certain activities, large, visible cameras are

your best bet. Trying to catch criminals on tape without them being aware of it requires hidden cameras, which cost more both for hardware and for installation. If your monitoring target is internal, you run the added cost of having to hide and secure the recorder and monitor as well.

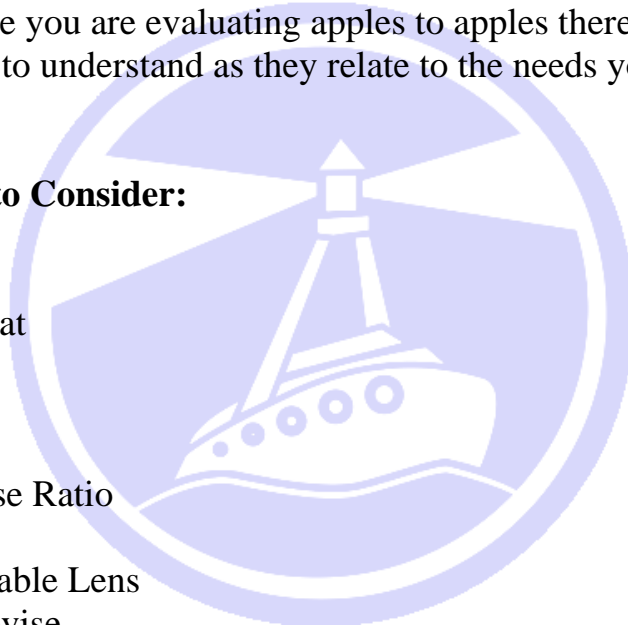
- How much detail** do you need?
- How fast the **frame rate** is?
- How will your system be **monitored**?
- How much **storage** do you want?

Evaluating your Quotes:

In order to make sure you are evaluating apples to apples there are some technical terms you will need to understand as they relate to the needs you have identified for yourself.

The 9 Top Things to Consider:

1. Frame Rate
2. Camera Format
3. IP vs Analog
4. Resolution
5. Camera Type
6. Signal to Noise Ratio
7. Lux
8. Fixed vs Variable Lens
9. Recording Device



Frame Rate - full-motion TV is 30 frames per second (fps) most cameras record at a slower rate, which means a more jerky-looking images but saves tape or hard drive space, allowing longer periods of time to be recorded.

Camera Format - most surveillance cameras fall between 1/4" and 1". This refers to the usable image size created inside the camera. For most security use, a small size is fine – 1/4" or 1/3" cameras. Larger formats do not necessarily result in better images, but can be advantageous in dimly lit situations since they are able to gather more light.

IP vs. Analog - IP cameras general offer better quality pictures as well as more flexibility in monitor options.

Resolution - Resolution refers to how detailed a picture the camera can see. The measurement to look for is horizontal TV lines (TVL) or Horizontal Resolution. For a Day light camera the minimum TVL should be 480 and for a Day/Night camera the minimum TVL you should consider is 520. You need to make sure your entire system is capable of supporting that resolution. If your VCR records 350 lines and your monitor displays 400, the money you spent to upgrade to a camera with 500 lines is completely wasted.

Camera Type - indoor or outdoor cameras, day/night, heated housings, motion detection, vandal proof dome, PTZ (pan, tilt, zoom) megapixel, fixed box, fixed dome-all of these options are dependent on your specific WHAT, WHY, HOW considerations.

Signal to Noise Ratio - (s/n) Indicates how much “signal,” or actual picture information, the camera transmits, as opposed to “noise,” which comes across as static. An s/n ratio of 48db indicates that the signal is 100 times the noise, which results in an acceptable picture with some fine grain or snow. 30db results in a poor picture, and 60db produces an excellent picture with no static visible. Keep in mind that noise can be introduced by other components in addition to the camera.

Lux - is Sensitivity to light. A sensitivity of 2 lux means the camera can see fairly well by the light of a 40W fluorescent bulb; 0.5 lux surveillance cameras can make out images outside on a dim night. Your needs will depend on the lighting in the area being filmed.

Fixed vs. Variable Lens - Fixed focal length lenses offer only one set field of view and are the least costly. To change the resulting image, you need to switch lenses. Variable focal length lenses and zoom lenses offer greater flexibility, allowing you to adjust your image’s field of view. Motorized zoom lenses, the most costly type available, give you the ability to control your surveillance cameras remotely. If you want to zoom out for general surveillance and in for detail when you spot suspicious activity, motorized zooms are the ways to go. If you will be using the surveillance camera outdoors, look for a lens with an automatic iris. As in the human eye, the iris of a lens is what controls the amount of light coming in to the camera. Automatic irises can significantly improve performance for outdoor cameras, where light levels vary considerably. However,

you can save money and use a manual iris lens when the scene illumination never changes, for example in an illuminated store or office.

Recording Device - You need to decide how “good” the recorded picture needs to be, either for your own use later or possibly to use in court. The size of the hard drive will dictate how much you can record, you’ll have to decide whether you want to record all the time, only on motion, how long you want to store the images, and how many cameras you will be recording now and in the future

Evaluating Vendors:

The overall success of your Video Surveillance System can hinge on the expertise of the installers who set it up. There are many important factors to take into consideration that require an expert understanding of lighting, optics, wiring, security, and more. In other words, your experience connecting your home TV to the DVD player does not mean you should set up your business security system!

Top 4 Things to Consider in Prospective Vendor:

1. Experience
2. Installation
3. Demonstration
4. References

Experience - A vendor’s experience in the industry is a significant indicator of the firm’s reliability and long-term stability. You will want to be able to work with your chosen vendor on an ongoing basis as you expand or upgrade your system, so choosing someone who will be around next year is important. Specific experience with businesses of your size and in your industry is also desirable: large warehouses may present problems that a vendor who specializes in small retail shops may not be prepared to address.

Installation - The quality of the installation can have lasting effects on your business. Qualified vendors will not take a standardized approach to installation: they will analyze your needs and make sure you get a system that is customized to your location and business needs. They will also provide enough training and documentation to make sure your staff fully understands the operation and maintenance of your system.

Demonstrations - Nothing will give you a better sense of how well a Surveillance system achieves your goals than seeing it in action. Ask to see a demonstration on the proposed camera to make sure they will need your needs.

References - Another familiar way to investigate a prospective vendor for your business is to ask for reference of other customers. Of course, you will be referred to the vendor's most satisfied customers, but you can still learn quite a bit from them. There are many components to video security systems: cameras, monitors, recorders, and cabling to connect the system. Add in the need for a quality installation, and it should be apparent that shopping by price alone is not a good approach. Some dealers will put together low-end packages to try to lure price-conscious shoppers – these systems suffer from lower quality, shaky reliability, and will not last for years and years the way higher quality systems will.

Along with every quote from Pilothouse Communications you will receive a *Quote Comparison Checklist*, filled in so that you can easily compare the different quotes. It's important to make sure you are comparing apples to apples as well as ending up with a solution that meets your unique needs.

The Bottom Line:

There are many components to video security systems: cameras, monitors, recorders, and cabling to connect the system. Add in the need for a quality installation, and it should be apparent that shopping by price alone is not a good approach. Some dealers will put together low-end packages to try to lure price-conscious shoppers – these systems suffer from lower quality, shaky reliability, and will not last for years and years the way higher quality systems will. Some dealers will provide a price quote without a site visit - these quotes undoubtedly come with hidden costs for wiring or a surveillance solution that does not meet your objectives and business requirements. Be leery of vendors who give you a quote *without* a site visit, and look for the fine print.