Honeywell

The LCD Monitor's Place in Today's Surveillance Systems

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Honeywell Video Systems

LCD eSeries and Systems Series – 17" and 19"

LCD complements hi-tech.

Video surveillance systems have come a long way since the days of black and white tube cameras.

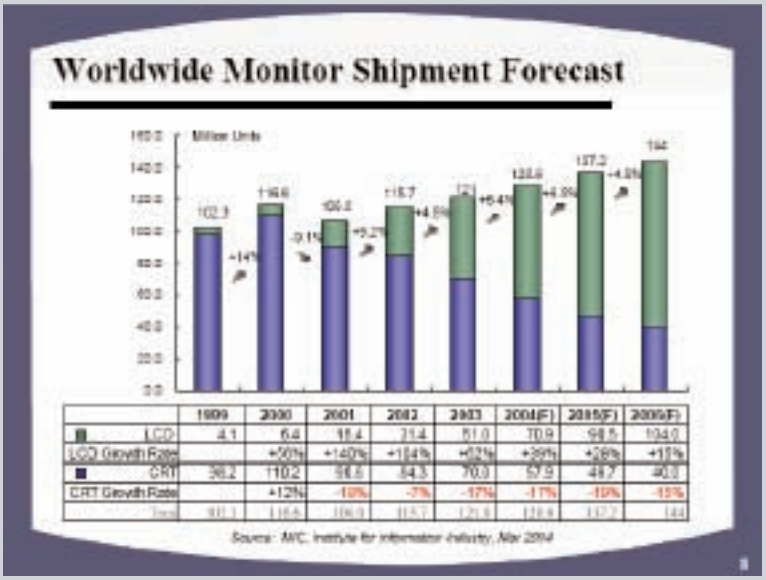
Today's surveillance systems involve multiple digital and network video recorders, analog and streaming cameras, and servers that produce crystal-clear, high-resolution images. Users are finding they need high-quality display monitors to fully appreciate the superior footage.

The monitor's basic function – displaying video images – hasn't changed in decades, but the ways in which this basic function is performed has changed drastically. The increasing use of digital products in video surveillance has cleared a path for the use of digitally based monitors.

Evolving From CRT to LCD Monitors

In the world of video surveillance, the cathode ray tube (CRT) monitor is like the family station wagon: not fancy, but reliable, effective and gets the job done.

The CRT has been used for more than 40 years in the CCTV industry and has many useful attributes. A low-priced commodity available from any major supplier, the phosphor-based tube recreates images in a way that is pleasing to the eye – an important quality for security personnel who spend hours watching video.



While the CRT monitor certainly maintains its place as a critical component to effective surveillance, many security professionals are casting their gazes to Liquid Crystal Display (LCD) monitors. The LCD monitor is gaining ground as a piece of essential equipment that, in certain applications, may be better suited for specific systems than the CRT monitor. Its flexibility, user-friendly technology, reduced space and energy requirements and greater lifespan are valuable features that should be considered when developing an efficient and effective security surveillance system.

While the technology has been available for many years, only in the past few years has it become affordable to the general public and to the video surveillance industry. The past five years have seen a dramatic increase in both the quantity of LCD monitors sold and the rate of increase of the sales as compared to CRT monitors.

Advantages of LCD Monitors

Flexibility

The LCD monitor's digital design makes it possible to add many useful features. A single LCD monitor can accept multiple channels of standard composite video, S-Video, analog VGA and digital DVI inputs. With a feature like picture-in-picture or video-on-video, operators have a single LCD monitor that can do the job of two CRT monitors, since the LCD can simultaneously display images from any two inputs. The LCD monitor can also be used as a 1280 x 1024 resolution display for the system's digital video recorder (DVR) or network video recorder (NVR). This resolution is not achievable with a CRT monitor.

Additionally, the LCD technology causes less eyestrain because it uses progressive scanning (not interlaced). The screen is brighter than a CRT, which helps in high-ambient light environments. These features, combined with the ergonomics of looking at a single monitor instead of two, make the LCD more user-friendly.

Space Requirements

An LCD monitor's space requirements also make a huge difference in a security room's size: 1 cubic foot for a nominal 19-inch LCD monitor versus 3.6 cubic feet for a nominal 21-inch CRT monitor (both have comparable viewable dimensions). Add the picture-in-picture or video-on-video and the same 1 cubic-foot requirement for the LCD monitor accomplishes the same as 7.3 cubic feet of CRT monitors.

Energy Savings

Energy savings is also a major difference between the LCD and CRT. The 19-inch LCD monitor mentioned above uses an industry average of 55 watts. The nominal 21-inch CRT uses about 75 watts. This difference of 20 watts is not much, but if one LCD monitor can replace two CRT monitors, the energy savings is 40 watts. The savings in environmental control will approximately double this savings. By factoring in both electricity and air conditioning savings, the LCD monitor could save the customer approximately $55 per year in energy costs over two CRT monitors.

Product Life

The average color CRT monitor has a lifespan of 20,000 hours or 2.3 years. A high-quality LCD panel will have a minimum lifespan of 50,000 hours (5.7 years) – 2.5 times longer than the CRT. Combining the energy savings and replacement costs (one LCD monitor is used to replace two CRT monitors) results in a savings of more than $115 per year.

Placement Options

A 19-inch LCD monitor weighs about 18 pounds, which enables it to be easily mounted to a wall or ceiling with standard Video Electronics Standards Association (VESA®) mounting brackets.

These mounting brackets are inexpensive and easy to use compared to the heavy-duty brackets required to safely support larger monitors. Some of the options are fixed and tilting wall mounts, ceiling and desktop pedestal mounts and articulating arm mounts. These offer many mounting options and make it easy and practical to add monitors in areas where a CRT monitor would not physically fit into the available space.

Rack Mounting Options

A 19-inch LCD monitor can be mounted in an EIA standard rack. Since the depth of an LCD is only four to five inches, the entire area behind it is available for mounting other surveillance equipment. This is a great savings in rack and floor space.

As digital surveillance systems gain in popularity, so too will LCD monitors. Because of their user-friendly attributes and competitive pricing, there is a good chance that an LCD monitor is in your future.

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