

IP Cameras

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We are at the beginning stages, in our opinion, of a revolution in our industry in the use of IP cameras, although many vendors have used them for some years. We have felt that the added cost of these cameras for the minimal gain have not made them worthwhile. These cameras have not added much greater resolution, either for the cost or other problems they represent.

Firstly the cable must be CAT5/6 and thus it has an approximately 300 foot cable limitation without going through a switch or a hub. We suggest IP cameras do not run on an existing client network, to allow for optimal frame rates and resolutions, thus a second network needs to be set up parallel to a business's own local data network. These limitations only add to the cost. Most IP camera systems require that PC-based DVRs must be used. The O/S of the DVR often has issues and incompatibilities with the O/S of more dated workstations used to remotely view the DVRs. This coupled with the IT requirements of PCs for Windows upgrades and maintenance make these DVRs a second choice.

What we are now being impressed with are the megapixel (MP) cameras - 3 MP (and above) - that offer for the first time the resolution increase to be able to actually manipulate a recorded image – ie: blow it up and still be able to make something meaningful out from it. A 5 MP camera may offer as much as a usable image 100 ft away (as opposed to an analog camera's 20 ft usable range) and there are up to 16 MP cameras now on the market. Where these fall short is in the cable limitation (as stated above), the need for a PC based DVR(s) (stated above) and lastly and the biggest issue - storage. A 5 MP camera uses 16 times (at worst) the amount of storage as the best analog one does - ie: 1 month storage for analog camera becomes 2 days for a 5 MP - depending on the compression technology being used.

Our recommendation is to use megapixel cameras where required and where affordable, but wire all camera locations with CAT5/6 regardless. Our hopes are that either a different cable emerges to overcome the 300 foot cable distance limitation or that megapixel cameras and DVRs can be designed to use coax cable which would extend the distance greatly.