

Question: Which CCTV technology should I use for my installation - analogue, IP or HD-TVI? (Pros & Cons)

Answer: Analogue CCTV is an adequate low cost solution but lacks the stunning detail of HD and some IP systems. Below are our explanations along with the pros and cons of each system.



Why not Ask the Expert?

CCTV technology has changed over the years since its inception in the 1940s, electronics have become more advanced and more compact each year and cameras are now commonplace in most streets and businesses.

The early “noughties” saw cameras being mass produced with colour electronics and a move from tape recording systems to digital video recorders saving footage on hard drives.

Since that time picture resolutions and recording quality have all improved but there has been little in terms of major changes in the industry until the last three or four years.

First came the buzz word “IP” and now “HD” so **what does it all mean?**

Analogue CCTV

Most CCTV systems you will see out and about are analogue CCTV cameras and analogue recording devices. The “analogue” technology has been the CCTV staple for many years now and still is a perfectly adequate technology for many installations where general surveillance is required. However Analogue lacks the stunning high definition picture quality of HD and some IP CCTV systems. As many end-users are used to home HD TV at home, HD CCTV is now being adopted by many installers to live up to end user expectations.

Pros	Cons
<p>Low Cost Massive Choice of Styles Compatibility with most existing installs Easy to fit (Co-Ax)</p>	<p>Limited Resolution Suffers noise/interference</p> 

This CCTV installation tip is aimed at helping you to install CCTV equipment. If you are looking for answers on “how to fit CCTV” or perhaps “how to network a DVR or NVR” or even “how to get CCTV on your mobile phone” why not check out our full range of CCTV installation tips at: www.systemq.com
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IP CCTV

Another high definition alternative to analogue that is popular for new installations as it can use a building's existing IT network to transmit CCTV images from one location to another. IP is quite liked by some installers as it can share the customers existing LAN but this can be as much a curse as a blessing. Often the LAN is not fast enough for the huge bandwidth required for IP CCTV and the installer can't stop the customer altering or tinkering with their own LAN after install! This can result in call backs when the cameras don't work properly due to "bottle necks" on the LAN.

As IP cameras sometimes reside on a customers LAN its not officially a "CCTV" system any more as this refers to "Closed Circuit Television System" and the LAN actually Opens it up! Maybe it should be called OCTV IP ! Some IT departments also don't like the vulnerability of sharing the LAN with CCTV equipment.

Pros	Cons
<ul style="list-style-type: none"> High definition quality Easy CAT5 cabling Can use an existing IT network Good choice for IT professionals who know what they are doing 	<ul style="list-style-type: none"> More expensive than analogue Limited designs as such new technology Requires networking knowledge for set up No single worldwide IP standard as yet, although ONVIF 2 is getting better Can Suffer from network interruptions and delays (shared resources, ie LAN) Not cross compatible with analogue equipment Larger hard drives required for storing recordings

HD

This latest HD technology offers superb HD 1080P picture quality at little extra cost to standard analogue equipment but uses the same cable and many of the same accessories so it represents a truly affordable upgrade path.

Pros	Cons
<ul style="list-style-type: none"> Uses existing RG59 & CAT5 type cables High definition megapixel surveillance Up the co-ax telemetry available Some DVRs (alienMEGAHero) take TVI, analogue & IP cameras for an easy upgrade path High resistance to EMI so lossless Non proprietarial so fast becoming an industry standard with wide choice available Closed system so reduce cyber attack risks 	<ul style="list-style-type: none"> Higher quality so larger bandwidth used Higher quality so more HDD space used New technology so limited designs available 

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