Comparison of High Definition Over Coax Technology Solutions

High Definition over Coax (HDoC) technology was introduced to the video surveillance market in 2010 as a lower cost alternative to IP network video solutions. HDoC delivers high definition video images up to 1080p over existing coaxial cable at significant cost savings over IP network solutions. Benefits of HDoC when compared to traditional analog and IP solutions include:

- Easy installation with the capability of upgrading to high definition cameras without the need to replace the existing coax cable infrastructure
- High definition recording up to 1920 x 1080, which is about 5 times more pixels than the standard definition, 960 x 480 resolution of a traditional analog camera
- HDoC video recorders offer backwards compatibility and flexibility in design, with many of them supporting multiple video inputs from traditional analog and HDoC cameras, making it possible to mix and match a variety of cameras in the same recorder
- Affordable technology offering high definition megapixel video at a fraction of the cost of IP cameras

Available HDoC technologies include:

- AHD (Analog High Definition) is the newest technology and works by converting digital signals to analog signals. It is an open platform technology and has lower hardware costs than several of the other technologies, allowing end users to enjoy AHD video images at the same price as traditional analog cameras.
- HD-TVI (Transport Video Interface) was developed as an open platform technology with over 100 manufacturers producing HD-TVI products and Hikvision is the largest. It converts digital signals to analog like HD-CVI but has lower hardware costs.
- HD-CVI (Composite Video Interface) technology coverts digital signals to analog and was originally proprietary to Dahua but is now available for licensing to other manufacturers.
- HD-SDI (Serial Digital Interface) was the first HDoC technology, originally designed for the broadcast industry in 1989. Unlike the other technologies, HD-SDI transmits uncompressed digital signals over coax and has higher hardware cost than the other technologies.

Each HDoC technology offer similar benefits compared to traditional analog and IP but each has unique capabilities and compatibilities. Please refer to the table below for more details.

High Definition over Coax Technology Comparison Table

Technology	AHD	HD-TVI	HD-CVI	HD-SDI
Chipset	CMOS + ISP	CMOS + ISP	CMOS + ISP	CMOS + ISP
Resolution	720p/1080p	720p/1080p	720p/1080p	1080p
Coax cable maximum transmission distance	1500ft	1500ft	1500ft	330ft
Minimum coax cable quality requirement	Low	Medium	Medium	High
1080p frames per second	30	30	30	30
Supported Video Inputs	Analog, AHD	Analog, HD-TVI, IP	Analog, HD-CVI, IP	HD-SDI
Video recorder Type	AHD	HD-TVI	HD-CVI	HD-SDI
Image Quality	Very Good	Very Good	Very Good	Excellent
UTC Camera & OSD Control	Yes	Yes	Yes	No
Installation Cost	Low	Low	Medium	High

ATV's new line of AHD products is the technology that best aligns with our existing video solutions and our ATVision IP VMS software. This powerful software will allow customers to remotely view live and recorded video from either AHD or IP network solutions seamlessly.

Designed with the small to medium business in mind, ATV's AHD Video Solutions offers 4, 8 & 16-channel low cost recorders and 2MP weather-resistant cameras, with a wide-angle lens and IR LEDs for night-time recording. Each recorder is accessible remotely via a web browser, ATVision IP VMS and mobile phone apps with Apple or Android operating systems.