

CCTV Glossary

AC Adapter

Alternating Current Adapter; when plugged to AC Power (usually 117VAC/60Hz in the United States) it produces 12VDC, 24VAC or others. "UL Listed" and "Regulated" recommended. It is also called Power Transformer.

AC Power

Alternating Current Power. In the United States, the standard AC Power is single-phase 117VAC/60Hz and is provided from power outlets in the house. 24V AC power can be produced from an AC Adapter.

AGC (Automatic Gain Control)

Automatically adjusts the video quality in low light condition.

Alarm Sensor

Like Video Motion Detector, detects changes of motion to produce an alarm.

ALC (Automatic Light Control)

Allows the auto-iris circuitry to either take bright spots more into consideration (peak), bringing out detail in bright areas, or less into consideration (average) bringing out detail in shadows. Select this mode when an auto-iris lens is used.

Algorithm

A procedure or formula for solving a problem.

Analogue (Analog)

Continuously variable numerical values such as voltage, current, etc. (The [CCD](#) camera produces analogue video signals.)

Angle of View

The scene angle that a video camera lens can show on the monitor, like Diagonal Angle, Horizontal Angle and Vertical Angle, usually described in degree. [More details...](#)

ANSI

American National Standards Institute. This organization is responsible for approving U.S. standards in many areas, including computers and communications.

Aperture

The light gathering area of a lens, controlled by the iris.

ARP

Address Resolution Protocol; for mapping an IP address to a physical machine address.

ASCII

American (National) Standard Code for Information Interchange. A standard character-to-number encoding widely used in the computer industry.

ASIS

American Society for Industrial Security.

Aspect Ratio

The ratio of the vertical to the horizontal image size; 3:4 is the NTSC standard.

Aspherical Lens

A lens designed with a non spherical shape so that it passes more lights or decreases barrel distortion on wide angle lenses.

Attenuation

A decrease or loss in a signal, usually measured in decibels.

Auto-focus Lens

Automatically adjusts the lens focus from surrounding scene and keeps a moving object in focus.

Automatic Gain Control (AGC)

Automatically adjusts the video quality in low light condition.

Automatic Iris (Auto-iris)

A diaphragm device in the lens that adjusts to light level changes. The iris diaphragm opens or closes the aperture to control the amount of lights coming through the lens.

Automatic Level Control (ALC)

Allows the auto-iris circuitry to either take bright spots more into consideration (peak), bringing out detail in bright areas, or less into consideration (average) bringing out detail in shadows.

Auto Terminating

Automatically select the correct termination depending on whether the video output is connected.

Auto White Balance (AWB)

Automatically adjusts a color camera's color to maintain white areas.

Bandwidth

The capacity of the transmission medium stated in bits per second or as a frequency. Or, the amount of data that can be transmitted in a fixed amount of time. For digital devices, the bandwidth is usually expressed in bits per second (bps) or bytes per second. For analog devices, the bandwidth is expressed in cycles per second, or Hertz (Hz).

Back Light Compensation (BLC)

Electronically compensates for high background lighting to give detail which would normally be silhouetted.

Baud

A unit of measurement that denotes the number of bits that can be transmitted per second. For example, if a modem is rated at 9600 baud it is capable of transmitting data at a rate of 9600 bits per second.

Bifocal Lens

A lens system that has two different focal length lenses and images two identical or different scenes onto a single camera sensor. The two captured scenes appear as a split image on the monitor.

Binary

A numbering system with only two values: 0 (zero) and 1 (one).

Bit

Abbreviated with small "b". Binary Digit. The smallest unit of data in a computer.

Blanking

The process whereby the beam in a CRT is cut off during the retrace period.

BLC (Back Light Compensation)

Electronically compensates for high background lighting to give detail that would normally be silhouetted.

BNC

Bayonet Neil-Concelman or British Naval Connector. A connector widely used in the CCTV industry, usually for [coaxial cable](#). Easy to install and reliable with little video signal loss. [Pictures of BNC Connectors](#)

bps

Bits Per Second is the unit used for measuring line speed, the number of information units transmitted per second.

Brightness Control

The manual bias control on a cathode ray tube or other display device that controls the average brightness and the contrast of a picture.

Browser

An application program that provides a way to look at and interact with all the information on the World Wide Web. Netscape and Microsoft Internet Explorer are the two browsers that vast majority uses.

Byte

Abbreviated with capital "B". A unit of data that is eight bits long and is used by most computers to represent a character such as a letter, number or symbol

C-Mount

An industry standard for lens mounting. C-Mount is 1-inch diameter with 32 threads per inch. A C-Mount lens needs C-ring when it is mounted at a CS-Mount camera. [More details...](#)

C-MOS

Complementary - Metal Oxide Semiconductor. A video image sensor chip that produces much lower quality picture than CCD chip.

Camera Format

Video camera's [CCD chips](#) format; 2/3", 1/3", 1/4", etc.

Camera Sensor

Video image sensor. CCD or C-MOS chip. [More details...](#)

CATV

Cable Access Television.

CCD

Charge Coupled Device. A video image sensor chip. [More details...](#)

CCIR

International Radio Consultative Committee; has made the technical recommendation for the European 625 line standard for video signals.

CCTMA

Closed Circuit Television Manufacturers Association.

CCTV

Closed Circuit Television. It does not broadcast TV signals but transmits them over a closed circuit through electrically conducting cable or wireless transmitter and receiver. [More details...](#)

CCTV Camera

A part of the CCTV system that captures the video pictures.

CCTV Monitor

A part of the CCTV system that receives the video pictures from a CCTV camera and displays them. [More details...](#)

Coaxial Cable

A cable that can carry a wide range of frequencies with very low signal loss. It consists of a metallic shield with a single wire placed along the center of a shield and isolated from the shield by an insulator. [More details...](#)

Color Saturation

The degree of mixture of a color and white. High saturation means little or no white.

Component Video

A type of video information that is transmitted or stored as two or more separate signals. Opposed to composite video.

Composite Video

A combined signal in a television transmission. Standard format such as NTSC, PAL or SECAM. The picture signal, blanking signal, and vertical/horizontal synchronizing signals are all combined.

CRT

Cathode Ray Tube. The vacuum tube part of a monitor or television.

CS-Mount

An industry standard for lens mounting. CS-Mount is 1 inch diameter with 32 threads per inch. A C-Mount lens needs C-ring when it is mounted at a CS-Mount camera. [More details...](#)

Date/Time Generator

Installed between a CCTV camera and a monitor, it generates the information of Date, Time and camera ID.

DC Power

Direct Current Power; can be derived from an AC adapter or from a battery. Among DC voltages of 6, 9, 12, 24, 28, 12VDC is most common in the CCTV industry. [More details...](#)

Decibel (dB)

The power or voltage ratio of two signals.

DIP switches

Dual Interface Poll switches usually allow you to change the configuration of a circuit board to suit your application.

DMZ

Detection of Motion Zone

DHCP

Dynamic Host Configuration Protocol; lets network administrators manage centrally and automate the assignment of [IP addresses](#) in an organization's network.

DIN

Multi-wire cable with DIN connectors at both ends. Usually has 5 or 6 inner wires. Different diameter and configuration from maker to maker. [Pictures of DIN connectors](#) or, [more details about DIN Cable...](#)

Distortion

A general term when the object is not shown exactly as is.

DNS

1) **Domain Name System**. A general purpose distributed, replicated, data query service. Its principal use is the lookup of host IP addresses based on host names. 2) **Domain Name Server**. A computer that converts host names, such as www.pelikancam.com to its corresponding IP Address, such as 67.100.253.111

DRAM

Dynamic Random Access Memory. Most common RAM (Random Access Memory) for PC.

DSL

Digital Subscriber Line. A technology for bringing higher-bandwidth information to homes and businesses over ordinary copper telephone lines. [More details...](#)

DVR

Digital Video Recorder; records video pictures digitally. [More details...](#)

Dwell Time

The length of time a switcher displays one camera before sequencing to the next.

EIA

Electronic Industries Association. American standard for B/W camera system.

ELC (Electronic Light Control)

Compensates for moderate light changes in indoor applications without the use of auto iris lenses. Select this mode when a fixed iris lens or manual iris lens is used.

Electronic Shutter

Compensates for moderate light changes in indoor applications without the use of auto iris lenses.

EMI

Electro-Magnetic Interference.

Ethernet

The most widely installed Local Area Network ([LAN](#)) technology. Specified in a standard IEEE802.3.10/100 BASE-T, the most commonly installed Ethernet system, provides transmission speed up to 100 megabits per second.

Extranet

A private network. It uses the Internet Protocol to securely share part of business information with suppliers, vendors or others

FCC

Federal Communications Commission; controls also wireless camera system as one of the commercial broadcasting systems.

FFL

Fixed Focal Length Lens

Fiber-Optic Cable

One of the video transmission ways, being used for a long distance transmission up to miles. [More details...](#)

Field

One video frame is composed of two fields; one field consists of the odd numbered lines in the frame and the other field consists of the even numbered lines.

Field Frequency

The number of fields per second.

Field Of View

FOV. The width, height or diameter of a scene to be monitored. Usually determined by the focal length of a lens, the sensor format and the distance to the objects. [More details...](#)

Firewall

A set of programs that protects the resources of a private network from outside users.

FL

Focal Length. The distance from the center of a lens (or, the secondary principal point, if it has) to the focal point (sensor). The longer the focal length, the narrower is the angle of view. [More details...](#)

Flange-back Adjusting Ring

Some models of CCTV cameras have built-in Flange-back Adjusting Ring, which adjusts the back-focal distance or picture focus. A C-Ring (5mm spacer ring) is not required when a C-Mount lens is to be mounted to a camera that has built-in Flange-back Adjusting Ring.

Flash Memory

Or flash RAM (Random Access Memory). A type of constantly powered nonvolatile memory that can be erased and reprogrammed in units of memory called blocks.

f-number (f-stop)

Optical or lens speed. Smaller f-number means faster lens. [More details...](#)

Focal Length

FL. The distance from the center of a lens (or, the secondary principal point, if it has) to the focal point (sensor). The longer the focal length, the narrower is the angle of view. [More details...](#)

FOV

Field of View. The width, height or diameter of a scene to be monitored. Usually determined by the focal length of a lens, the sensor format and the distance to the objects. [More details...](#)

Frame

A whole video image; is composed of two interlaced fields. A CCD chip produces 30 frames per second at NTSC system and 25 frames at PAL.

Frame Frequency

The number of frames per second. The frame frequency is half the field frequency.

FTP

File Transfer Protocol. A way to exchange files between computers on the Internet

Gamma

Degree of contrast in a video picture between output magnitude and input magnitude.

GB

Gigabyte.

Genlock

A device that adjusts the frequency of internal sync to an external data.

Ghost

A shadowy or weak image in the received picture, offset to either the right or to the left of the primary image.

HTML

Hyper Text Markup Language. A set of codes inserted in a file intended for display on a World Wide Web browser page.

HUB

As a network product, a hub may include a group of modem cards for dial-in users, a gateway card for connections to a Local Area Network ([LAN](#)), and a connection to a line.

Hz (Hertz)

Cycles per second.

ICMP

Internet Control Message Protocol. A message control and error-reporting protocol.

Impedance

Electrical characteristic of a system or component, expressed in ohms. [CCTV](#) industry has standardized 75-ohm impedance.

Infrared (IR) Light

Invisible light beyond the 750 nanometers (red end of the visible lights).

INT

Internal sync mode that sets to internal 2:1 interlace.

Intranet

A private network. It may consist of many [LAN](#) and/or WAN.

IP

Internet Protocol. A set of rules to send and receive messages at the Internet address level. [More details...](#)

Iris

An adjustable opto-mechanical aperture built into a camera that controls the amount of lights coming through the lens.

ISDN

Integrated Service Digital Network. A set of standard for digital transmission over ordinary telephone copper wire.

JPEG

Joint Photographic Experts Group. A graphic image file or an image compression algorithm. [More details...](#)

KB

Kilobyte

Kbps

Kilobits per second. A measure of bandwidth.

LAN

Local Area Network. A group of computers and associated devices that share a common communications line. [More details...](#)

LED

Light Emitting Diode.

Lens Mount

The area where a lens is mounted. There are two types; C- or CS-Mount. [More details...](#)

Lens Speed

Optical speed, expressed by f-number. Smaller f-number means faster lens. [More details...](#)

Linux

An UNIX-like operating system. Very efficient and fast-performing system.

LL

Line Lock mode

LNB (Low Noise Block Converter)

The part of satellite dish that hangs off of the arm and looks like a flashlight. It is what captures the digital signal from the satellite.

Lux

Lumens per Square Meter; unit of illumination amount. [More details...](#)

MATV

Multiple Access Television. The method of distributing TV signals by broadcasting them through the air.

MB

Megabyte

Mbps

Megabits per second. A measure of bandwidth.

Mini-DIN

Multi-wire cable with Mini-DIN connectors at both ends. Usually has 4 inner wires. [Pictures of Mini-DIN connectors](#)

Monochrome Signal

Black and White signal.

MOD (Minimum Object Distance)

The closest distance a lens will be able to focus upon an object. Wider angle (shorter focal length) lenses generally have a smaller MOD than larger focal length (narrower angle) lenses.

MOS

Metal-oxide Semiconductor. One of video image chips like [CCD](#), but it produces lower quality video.

Motorized Lens

A camera lens equipped with small electric motor that enables focusing lens, opening or closing the iris diaphragm, or changing the focal length.

MPEG

Moving Picture Experts Group. A standard for a digital video & audio compression. [More details...](#)

Multiplexer (MUX)

Combines two or more video/audio signals into one channel. Usually accepts 10 or 16 video inputs and displays them in various formats.

Network

A series of points or connection points interconnected by communication paths. [More details...](#)

Noise

Undesired signals that corrupt the original video signals and may reduce the image quality.

NTSC

National Television System Committee; formulates standards for American color television system. NTSC system has 525 horizontal scan lines and 30 frames per second.

NVR

Network Video Recorder. A software or computer that records video on the hard disk. Like a DVR, it usually records digitally so the user can instantly search by time, date and camera. It collects video from network camera, network video server or DVR over the network.

Optical Speed

Lens speed, expressed by f-number. Smaller f-number means faster lens. [More details...](#)

Optical Axis

Optical centerline that passes through the center of a lens or mirror, etc.

PAL

Phase Alternating Line system. A color television system used in Europe, Australia, parts of Africa and the Middle East. It has 625 horizontal scan lines and 25 frames per second.

Pan and Tilt

A Camera mounting device that allows movement in both side ways and up or down.

Pan

Rotating or scanning a camera side ways to view an area in a horizontal direction.

Peak-To-Peak

The amplitude difference between the most positive and the most negative excursions of a signal.

Picture Element (Pixel)

Photo sensor site in an image sensor like [CCD chip](#); converts the input light image to an electronic signal.

Pinhole Lens

A lens with a relatively small front opening so it can be used in covert application.

Pixel

Picture Element. Photo sensor site in an image sensor like [CCD chip](#); converts the input light image to an electronic signal.

PPP

Point-to-Point Protocol. For communications between two computers using a serial interface.

PPPoE

Point-to-Point Protocol over Ethernet.

Presets

The pre-positioning of pan, tilt and zoom cameras by the use of potentiometers in the moving parts of the camera head. These allow the control equipment to store and move to a set reference point when the controller dictates or when an alarm exists.

Protocol

A special set of rules (in information technology).

PSTN

Public Switched Telephone Network.

Quad Splitter

Combines up to 4 video inputs into one channel and displays them on one monitor screen split into 4. [More details...](#)

RAM

Random Access Memory. The place in a computer where the operating system, application programs, and data in current use are kept temporarily so that they can be quickly reached by the computer's processor.

RARP

Reverse Address Resolution Protocol. For host machines that don't know their IP address.

RCA

The Radio Corporation of America; conveniently used to describe phono jack and plug, one of the audio/video connectors. [Pictures of RCA Connectors](#)

Resolution

Expressed by TV lines or pixels, it indicates the quality level of video images.

RF

Radio Frequency.

RG59/U Cable

One of coaxial cables suitable for video transmission in CCTV system.

Router

A device on the Internet that determines the next network point to which a data should be forwarded.

RS-232 Port

A communication port with 15 pins.

SECAM

Sequential Couleur A'Memorie, a color television system used in France, Russia and other countries that do not use either the NTSC or PAL system. It has 625 horizontal scan lines and 25 frames per second.

Sequential Switcher

Video Switcher. A device that allows the video signals from multiple cameras to be displayed on a monitor, or recorded on a VCR one at a time in sequence. [More details...](#)

Server

A computer program that provides services to other computer programs in the same or other computers. Or, the computer that a server program runs.

Signal-to-Noise(S/N) Ratio

The ratio between the television signal and the noise; expressed in decibel (dB). The higher the number the better.

SMTP

Simple Mail Transfer Protocol. TCP/IP used in sending and receiving e-mail.

Switcher

Sequential Switcher or Video Switcher. A device that allows the video signals from multiple cameras to be displayed on a monitor, or recorded on a VCR one at a time in sequence. [More details...](#)

SVHS (Super Video Home System)

Super VHS; a higher quality extension of the VHS home videotape format.

S-Video

Transmits luminance and color portions separately, using multiple wires, thus avoiding the color encoding process and its inevitable loss of picture quality.

TCP

Transmission Control Protocol. A set of rules to exchange messages with other Internet points at the information packet level.

TCP/IP

Transmission Control Protocol / Internet Protocol. The basic communication language or protocol of the Internet.

TFT

Thin Film Transistor, a type of LCD flat-panel display screen. The TFT technology provides the best resolution of all the flat-panel techniques, but it is also the most expensive. TFT screens are sometimes called active-matrix LCDs.

Time/Date Generator

Installed between a CCTV camera and a monitor, it generates the information of Date, Time and camera ID.

Time Lapse VCR

A video recorder that can be set to record continuously over long period of time. This can be anything from two hours to 960 hours. [More details...](#)

VHS

Victor Home System; used by most VCRs as the recording medium.

Video Band

The frequency band used to transmit a composite video signal.

Videocassette Recorder (VCR)

A device that accepts signals from a video camera/microphone and records video/audio on magnetic tape in a cassette. The VCR can play back recorded video/audio on a television set or CCTV monitor.

Video Switcher

Switcher or Sequential Switcher. A device that allows the video signals from multiple cameras to be displayed on a monitor, or recorded on a VCR one at a time in sequence. [More details...](#)

WAN

Wide Area Network.

Wavelet

A mathematical function useful in digital signal processing and image compression. In the Internet communications, wavelet has been used to compress images to a greater extent than is generally possible with other methods such as JPEG or MPEG. [More details...](#)

Web Camera (or Web Camera Server)

A CCTV Camera with built-in web server computer. [More details...](#)

Web Server

The computer program (housed in a computer) that serves requested HTML pages or files.

Zoom Lens

A lens of continuously variable focal length.