

Provision-ISR cameras OSD term dictionary:

Here you will find all the important terms appearing in the OSD Menu of Provision-ISR cameras. This will help you understand better the technical terms and the features that the different cameras are giving you in order to get the best performance out of your camera.

- 1) **Address:** The address is the “name” of the camera. The Address distinguish between the different cameras so you will be able to control one a specific camera without affecting other cameras.
- 2) **AGC (Automatic Gain Control):** AGC is an adaptive system found in many electronic devices. The average output signal level is fed back in order to adjust the gain to a higher level. (Digitally amplifying the image). AGC if effective in Night mode only. Higher AGC will result in brighter image, but it will also significantly increase the image noises.
- 3) **Analytics:** Available in selected models of IP cameras only. An advanced video processing algorithm that allows to detect special occasions and scenarios.
- 4) **ATR:** See D-WDR value
- 5) **Baud-rate:** Defines the speed at which the camera receives the information from the control device over RS-485 Protocol. It will usually be 2400-9600. The key to ensuring proper functionality with the camera’s controls is to make sure that all of your selections match up with the device controlling it.
- 6) **BLC (Backlight Compensation):** Strong/large sources of light coming from behind the main subject (such as a person indoors that is in front of a window) cause the light meter to underexpose for the main subject. This is because the light meter is programmed to average the light, and the backlight shifts the exposure calculated by the meter cause underexposure. Backlight compensation will increase the exposure by a predetermined amount causing the front subject to be well exposed. In most cases it will make the background appear too bright.
- 7) **CoC (Control over Coax):** CoC protocol is used to transmit commands to the camera together with the video signal. The CoC removes the need to communication infrastructure that was used for RS-485 control and therefore also allows quick upgrade of static cameras to PTZ cameras. (CoC needs to be supported by both the camera and the DVR)
- 8) **Color Space:** Available in HD-SDI cameras. Defines how the camera will calculate the RGB (Red/Green/Blue) colors. Changing between the different modes (HD-CbCr/YUV/SD-CbCr) will result in changes on the way that colors will appear on the monitor. For Digital output (HD-SDI), the best option is HD-CbCr. For Analog output the best option is SD-CbCr.
- 9) **Cruise / Tour:** (For PTZ cameras). Creating a program for the PTZ dome to move between different presets with different dwelling durations.
- 10) **CVBS / System:** Changing the Analog output method (PAL/NTSC)
- 11) **Day → Night:** Defining when the camera should change from day to night mode.
- 12) **Defect Det:** Detecting dead pixels and making them unnoticeable.
- 13) **Defog:** Defog can be used to help improve the captured image in poor weather conditions such as smog, fog, or smoke by digitally enhancing the contrast and reducing the brightness.

- 14) **DISS (Digital Image Stabilizer):** (For PTZ cameras). Once active, the DIS will crop the picture to a 90% factor so the edges of the actual picture will disappear. The camera processor will then calculate moves and vibration and use the information from the image that was cropped out in order to compensate for the vibration and making it less noticeable.
- 15) **DNR/3DNR/2DNR/NR/SSNR:** 2D DNR finds noise and refers to neighboring pixels to compensate it. This method is effective to noise reduction of video sequence of a moving object, but may produce limited resolution by smudged or blurred pixels for fixed portions of the image, such as background. 3D DNR employs inter-frame reduction which refers to the previous and next frame's pixel values for noise processing. By its nature of referencing multiple frames for noise reduction, this method is very effective to noise reduction on a fixed subject such as background, but may produce blurred or afterimage like effects to the moving object in the video sequence.
- 16) **DSS/Sense up:** An image processing technology that allows the camera to use digital slow shutter speeds in order to allow extra light into a camera thereby providing higher sensitivity in low light conditions. High DSS values will result significant blur on moving objects.
- 17) **D-WDR / ATR / SDR:** The digital version of WDR: The image sensor will not cause over exposure for as much as it can. After that, the image processor will digitally adjust the dark area to be brighter.
- 18) **E/D. Zoom:** Digital zoom is accomplished by cropping an image down to a centered area with the same aspect ratio as the original, and usually also interpolating the result back up to the pixel dimensions of the original. It is accomplished electronically, with no adjustment of the camera's optics, and no optical resolution is gained in the process. This enlargement of the pixels also creates a pixilation/mosaic effect in the image.
- 19) **Flip / V-Rev:** Flipping the image vertically (Top to bottom)
- 20) **Hardware ID:** (For PTZ cameras). Setting an address by a physical DIP switch on the body of the camera.
- 21) **HFR:** (High Frame Rate): For IP Cameras. Enabling HFR will double the FPS rate from 1-25/30 to 1-50/60. This is used for locations with high speed motion. Doubling the collection speed to 50/60 frames per second removes the motion blur and strobing of fast-moving images. While HFR is on, WDR turns from True WDR to D-WDR. Also, the highest resolution for HFR is 1080P (Even for 3/4MP Cameras). In order for HFR to work, both the camera and the collection device (CMS, NVR Etc.) must support this feature. At the moment only our IPC support it. The next step will probably be the CMS and then the NVRs. It is very hard for the human eye to notice the difference between 25fps and 50fps. The brain essentially processes 40 "moments" in time every second, even if the eye can technically perceive about 66 frames per second. It is claimed that the brain can easily distinguish 25 fps from reality but can't do the same for 50 fps. As a result, the HFR is used more in order to have a better recording and playback experience when less blur when trying to pause on and catch a single frame. It is less noticeable in live view.
- 22) **H-Rev:** See "Mirror"
- 23) **HD Format:** Either 1080P or 720P. Make sure that the recording/displaying device connected to camera is supporting the selected resolution.

- 24) **HLC / HLBC / HSBC / Eclipse (Headlight Compensation)**: The camera will partly ignore bright lights in the scene so the rest of the scene will be more visible. In some cases, the camera will digitally reverse bright points in the picture to black. HLC improves the ability to view the scene while the camera is blinded by strong lights.
- 25) **Image Range**: Available in HD-SDI cameras. FULL/COMP defines whether the camera will transfer the full bandwidth of digital image signal (FULL) or compress it (COMP) in order to reduce the signal weight. Compressing the signal will result in a loss of image details.
- 26) **Lens Distortion Correction**: Available in IP cameras. This digital effect will improve the “Fish Eye” effect caused by wide angle lenses. The “Fish Eye” effect will cause straight lines and surfaces to look bent or curved. The distortion correction will make a correction straightening these lines.
- 27) **Mirror / H-REV**: Mirroring the image horizontally (Left to right)
- 28) **Motion**: Once on and defined, the camera will recognize and display “movement marker” when movement is detected. Should be used when the camera is connected directly to a monitor since all DVRs are supporting this feature.
- 29) **Night → Day**: Defining when the camera should change from night to day mode. Will usually have 4 options: Day – Constant day mode. Night – Constant night mode. Auto – Automatic mode defined by the image sensor (should not be used with CMOS sensors) and EXT – Automatic mode defined by an external source – usually the CDS light sensor (Default in CMOS Cameras)
- 30) **NR**: See DNR.
- 31) **OSD**: On Screen Display.
- 32) **Park Action**: (For PTZ cameras). Will define which action the camera should take after a certain time in idle state.
- 33) **Pattern**: (For PTZ cameras). Setting a customized movement for the camera including movement, zoom and focus settings.
- 34) **Power Up action**: (For PTZ cameras). Will define which action should the camera take in case of unplanned reset.
- 35) **Privacy**: Digitally covering areas in the scene that shouldn't be seen by the operator.
- 36) **Protocol**: The “Language” that the camera/control device will use in order to communicate.
- 37) **ROI (Region of Interest)**: This feature relates to IP Cameras only. ROI feature will allow you to choose areas on the picture that are more important to you and change to correlation of data between the ROI selected areas and non-ROI areas. This will cause the ROI area to be sharper with more details (Because of less compression) and the non-ROI areas to lose some details due to more aggressive compression.
- 38) **RTC (Real-Time Clock)**: (For PTZ cameras). The RTC term is referring to the internal clock of the camera and will allow you to create a schedule according to that time.

- 39) **Shading:** Vignette correction. Lens shading correction adds an electronic correction to the image to flatten out any tendency the lens has to go dark in the corners of frame.
- 40) **Shutter:** While in “Manual” – will allow defining the digital shutter speed manually.
- 41) **Smart IR:** Smart IR feature will allow the camera to automatically adjust the infrared light required in a scene as the subject moves closer to or further away from the camera, resulting in a clear image that is not washed out or too dark.
- 42) **Software ID:** Setting an address by digitally changing the address parameter via the camera OSD.
- 43) **SSDR** (Samsung Super Dynamic Range): See “D-WDR”
- 44) **SSNR** (Samsung Super Noise Reduction): See “DNR”
- 45) **System:** See “CVBS”.
- 46) **Tour:** See “Cruise”.
- 47) **UTC (Up the Coax):** UTC technology is used to give the installers a simpler solution for adjusting picture parameters of the OSD menu. The UTC came to replace the old “on cable” OSD controller and the necessity of RS-485 cable for configuration from a remote location. With UTC the installer can connect the special UTC controller on the DVR side and make all necessary adjustments while viewing the effect on the main screen.
- 48) **V-Rev:** See “Flip”
- 49) **WDR (Wide Dynamic Range):** While WDR is on, the image sensor will take 2~4 image samples using different shutter speeds from slow to fast. The slow shutter will keep details in dark areas. The fast shutter will keep details in bright area. Then image processor will merge the 2~4 samples to get a new picture which will keep details in both dark and bright areas.
Please note: in HD-SDI/AHD cameras, while WDR is on – Analog output is disabled.
- 50) **White Balance:** White balance (WB) is the process of removing unrealistic color casts, so that objects which appear white in person are rendered white in your photo. Proper camera white balance has to take into account the "color temperature" of a light source, which refers to the relative warmth or coolness of white light. Our eyes are very good at judging what is white under different light sources, but digital cameras often have great difficulty with auto white balance (AWB) — and can create unsightly blue, orange, or even green color casts.