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CONFIGURATION TUTORIALS

WORLD EYECAM

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ENCODE SETTINGS

WHAT ARE VIDEO SETTINGS

Encode settings are video image quality settings that are set for each camera. This menu includes the video FPS, bitrate, compression rate, and resolution. Setting these settings correctly based on the install site can help save network bandwidth, HDD space, fix network lag, and much more. Each cameras video encode mode should be set up for every job based on how good the locations network is and how much stuff is already on it, and based off how the end user will be viewing the recorder/recordings the most.

FINDING THE VIDEO MENU

WEB BROWSER

1. First open the recorder in Internet Explorer by navigating to the recorders IP address.
2. Login to the recorder (Default login is Username: admin Password: 123456)
3. After logging in navigate to Setup > Camera > Video (Change password now notification may need to be closed in order to find the Setup menu)

RECORDER GUI

1. Right click on the live view and select Menu
2. Login to the main menu (Default login is Username: admin Password: 123456)
3. After logging in Navigate to Camera > Encoding

STORAGE MODE

Storage mode is a setting that can be set for each camera individually. This allows for users to set if the selected camera stores it mainstream to the HDD or if it stores its Sub Stream to the HDD. This can allow users to save HDD space by letting less important cameras recorder and save at a lower quality.

IMAGE FORMAT

Image format allows for users to select the resolution and default frame rate that the cameras mainstream will run and record at. Once the Image format is selected the "Resolution" cannot be set differently under the Mainstream settings.

MAINSTREAM

Mainstream is the highest quality stream that can be used for streaming and recording. This stream will use the most network bandwidth and HDD space. Mainstream is normally used for recording so that way backups always have the best quality, and for viewing cameras on the local network (if a local computer can handle the resolution).

STREAM TYPE

Stream Type has two settings Normal and Event. Normal Encode settings are for when there is no motion being detecting in the camera image, this is regardless of if you are recording motion or not these Normal encode settings will need to be set. The other setting is Event Encodes these encode settings are for when motion is being detected in the image, also for when other events are triggered such as alarms. Event Encodes should normally be set the same as the Normal Encode settings. In some situations where needed or internet speeds are a issue, Normal Encode settings can be set to a very low quality and then the Event Encodes can be set higher. This will allow for more HDD space and less Bandwidth to be used when there is no motion or alarms going off, but customers still need 24-hour recordings.

VIDEO COMPRESSION

Video Compression allow for users to select the type of compression that the camera will use to store on the HDD and for viewing. The two options for compression are H.264 and H.265. H.264 is widely supported on all industry recorders as a standard it is an older technology that can save a small amount of bandwidth. H.265 is the newest compression technology that can be used on Uniview 4MP cameras and is now becoming more and more supported over the security industry. This compression rate can save more bandwidth and HDD space than H.264 and keep a better-quality image when compressing.

RESOLUTION

Resolution is the number of pixels the camera image is displaying at. This also tells you the Mega Pixel of the camera for example 1920x1080 resolution is a 2MP camera and 2592x1520 is 4MP. This setting in Uniview cameras cannot be changed in the Resolution drop down this setting is changed by changing the Image Format option.

BITRATE TYPE

Bitrate Type will be able to be set to VBR or CBR depending on the camera's current Smart Encoding / U-Code setting. U-Code only allows for VBR to be used this option will automatically be set if U-Code is enabled and then be grayed out. VBR stands for Variable Bit Rate this means the cameras streaming bit rate will always be changing, lower bit rates when there is no motion in the image and a higher bit rate when there is motion in the image. CBR is a constant bit rate, this setting will also stream the video at the bitrate that is set in the Bit Rate setting.

IMAGE QUALITY

Image quality can be set to prioritize bit rate and bandwidth usage over image quality. When Bitrate Type is set to CBR the Image Quality is always set to Highest and then grayed out. When Bitrate Type is set to VBR the Image quality can be set to highest, higher, medium, low, lower, and lowest. The lower the setting the lower the image quality but the less bandwidth and HDD space the camera will take when recording / streaming.

BIT RATE

Bit Rate is how much data each camera is using in each packet that it is storing to the HDD and packet that it is sending over the network. Bit Rate is measured in kbps so when looking at the numbers selectable in the drop-down device them by 1024 to get the Mbps that the camera is using. IE. 1024 kbps is 1 mbps and 2048 kbps is 2 mbps. The higher Bit Rate that is set the more data that the camera will send over the network the more bandwidth it will use. The higher the Bit Rate the mode data it will also store on the HDD this means less recording time that can be kept. It is suggested never using more than 4096 kbps on a jobsite with multiple camera for each camera.

FRAME RATE

Frame Rate is how many images are placed into one second of data from the camera. The higher the frame rate the mote times the image is updated in that second. This will make the image flow a lot smoother than a lower frame rate that has less images in one second. Frame rate will affect storage space on the HDD, but it is very minimum at the end of the HDD space. Normally only a couple hours will be lost in the end.

I FRAME INTERVAL

I Frame Interval is how often the background of an image is updated when there is no motion and nothing in the background has changed. This setting is normally set up for double the FPS. IE if the camera is set on 25 FPS the I Frame Interval will be set to 50. On cameras where there is never a lot of motion or changes the I Frame interval can be set to 3 or 4 times the FPS.

SMOOTHING

Smoothing is another option for prioritizing bit rate over quality of the image. If the slider is set more on the Clear side the image quality will be better and more stable but will require more bandwidth and HDD space. If the slider is more on the Smooth side the image will be more pixilated and less stable but require less HDD space and bandwidth.

AUDIO STREAM

Audio Stream check boxes for on and off are to enable audio if the camera that is connected to the channel has a microphone added to it.

SMART ENCODING

Smart Encoding has how U-Code is turned on. There are normally two options Basic and Advanced. Basic Mode will save about 75% of bandwidth and HDD space used and will work the best when using Uniview cameras on a 3rd party recorder. Advanced mode will save up to about 85% of bandwidth and HDD space and will sync well with Uniview recorders. Please see our U-Code tutorial / paper for a more in-depth description about U-Code and how it works.

SUB STEAM / THIRD STREAM

Sub Stream is a secondary stream on cameras that are normally set to a very low bit rate and resolution and are used when viewing the camera remotely on a wireless data connection. This will allow for cameras to steam a lot smoother with less lag and save data on user's wireless plans. This feature will also help when viewing remotely from a web browser or computer software. If the recorders location has a slow network or upload speed viewing the camera in sub stream remotely can help get the camera to display live video with less lag.