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Wikisource has the text of the 1905 New International Encyclopedia article "Hang-chow". Hangzhou Government website Arts Crafts Museum Hangzhou in Google Cultural Institute EN.GOTOHZ.COM Archived July 3, 2020, at the Wayback Machine – The Official Website of Hangzhou Tourism Commission TRAVELWESTLAKE[usurped] – The Official Travel Guide of Hangzhou TRAVELZHEJIANG – The Official Travel Guide of Zhejiang Province Geographic data related to Hangzhou at OpenStreetMap Preceded byKaifeng Capital of China (as Lin'an) 1127–1279 Succeeded byDadu (present Beijing) Retrieved from " In this guide, we will show the recommended video settings for Hikvision cameras in the most common scenarios. This will help you increase the performance and efficacy of the camera while getting the best image and optimizing the storage. The Hikvision video settings come in three types: Main Stream: This is the stream that is recorded on the hard drive. The values need to be set higher. Sub Stream: This is the stream that you access when viewing the cameras remotely on the phone. It doesn't get recorded. Main Stream (Event): This one is used when you record based on events. Leave the default values and you should be okay. The suggestions shown here are valid for Hikvison logo cameras and their OEM versions that are sold under third-party brand names. Actually, these suggestions can be used for any security camera system, regardless of the make and manufacturer. The logic and relations between the settings are universal in surveillance systems. Recommended Video Settings for Hikvision cameras Before you start you need to understand this important relationship between the video settings. The higher the value of these settings, the more space will be occupied in the internal hard drives or your system (which means fewer recording days). Try to find the right balance. Access the Video Settings by navigating to Configuration > Video&Audio > Video. Recommended Main Stream Video Settings Mainstream is the primary video feed that the camera transmits to the recorder. Mainstream provides the highest video quality and is the stream the DVR/NVR uses when saving footage to the internal hard disk drives. As such, the Main Stream settings need to be adjusted properly so you have a high picture quality and optimizing the storage as well. Below we will show the balance that works in most common situations. Mainstream settings can be adjusted to increase or decrease the Recording Resolution, FPS (Frames per Second), and Bitrate, Bitrate Type. These settings will impact recording file size and available recording time. The lower these settings, the more recording days, and the lower the image quality. You may need to go lower, but just not too low. Recommended Main Stream FPS (Frames Per Second) FPS indicated the number of images used by the system to create the motion video. 15 FPS means that the system will use 15 photos per second to create one second of video. The lower this number, the choppier and more robotic the image will be. The higher the FPS, the smoother the image. For example, for license plate reading you need to set the highest FPS. Recommended Main Stream Bit Rate Bit rate is the amount of bandwidth used by the system to create/store the footage. The higher this value, the more information is transmitted, but more storage space will be used on the hard drive. You need to balance these settings to fit your situation. Recommended Sub Stream Video Settings Substream will mainly be used when viewing from a mobile device including tablets. The parameters of the Sub Stream are way lower than Main Stream, otherwise, the phone will struggle to show all the cameras on their highest settings. Sometimes when using substream on your phone you may notice a lag in the video, or it may not show up at all. If this happens you may need to adjust the Frame Rate, I-frame Rate, and the Max Bitrate accordingly. Another thing to know, Sub Stream feed doesn't get recorded, it's just for remote viewing, so don't get concerned about the feed's image quality. Sub Stream relies mostly on the upload speed in the camera system's location. If the upload speed is low or not reliable, you may have trouble seeing the cameras remotely. Make sure your internet service can handle all the cameras. Usually, the recommended upload speed is 2Mbps per camera. Recommended Sub Stream Bit Rate Recommended Main Stream (Event) Settings As the other setting explained above, Main Stream (Event) settings can vary from one scenario to another. In most cases, they can be left at default values for the best performance and efficiency. However, in some cases such as recording Events only or recording a mixture of Continuous and Event you may set the settings slightly higher depending on the scene. If the scene is important, set them at higher values. For example, let's say when something moves into the field of view of the camera it needs to use more resources to capture the movement accurately due to any changes in the scene. If there's no motion under the camera, then it's recommended to set the event settings on the lower side. After all, no important event will happen on a spot where the motion is not detected. Recommended Main Stream (Event) Bitrate Conclusion The above video settings are recommended for most common situations. There's a line where increasing the bitrate won't improve the image quality, but just waste the resources. Try to follow the guidelines and link your camera's resolution to the recommended bitrate. Another thing to consider is the FPS (frame rate). Don't go too low on this setting otherwise, the picture may be choppy or robotic and that's the last thing you want. Older CCTV systems used to run on 1-2 FPS, on modern surveillance systems you should never go lower than 15 FPS. Additionally, you need to take advantage of your system's compression codec and use the one that saves you more bandwidth (such as H.265). If you intend to purchase a new security camera system, take a look at our guide: 10 Best IP Security Camera Systems 2021. All the systems recommended are affordable and quite high-end.