Introducing the World's 1st 3 MP 30 FPS HDR Cameras

Application Notes

Surveon
Complete Megapixel Solutions
Technical Support Team

When it comes to megapixel surveillance, the HDTV standard has been widely adopted in the surveillance market. The HDTV standard means cameras can deliver 30 frames per second in a 1920 x 1080 resolution. Conventionally, the 30 FPS can only meet the 2 MP resolution due to the limitation of codec performance and the poor low light quality of the higher resolution sensor. Surveon's leading technology has overcome this barrier, releasing the first 3 megapixel cameras at 30 FPS supporting not only the low light sensitivity but also the ultra HDR functionality.

Surveon's ultra HDTV, 3 megapixel camera series has some unique features to stand out in the market. Firstly it can deliver the higher FPS with 3 MP resolution. Secondly it produces the real time performance with a 1.5 times larger monitoring area for the standard HDTV cameras. Thirdly compared to 2 MP cameras, it can provide more details in the same field of view. Fourthly its performing capability can produce high quality video at a lower bit rate. The H.264 high profile encoding engine and the ROI encoding technology make it possible for a 3 megapixel video to have the same bit rate as 2 megapixel cameras do. Fifthly the 100DB+ true HDR brings the excellent balance for complicated lighting environments. And the cameras can still deliver 3 MP resolution at 30 FPS. With the 2 MP mode, the cameras can support at least 50 FPS under the HDR mode.

1. **More details in time aspect**

As you can see from the two pictures below, the left one cannot show the license plate when pausing the video. But in the right one you can easily freeze the video and see the details even with slow shutter speed in the evening.

3MP 15FPS **3 MP 30FPS**

2. **More details in resolution aspect**

When cameras are deployed on the highway, the numbers of lanes the cameras can monitor is related to the numbers of cameras installed. In the picture below, we can easily see the 2MP at 30 FPS camera can only cover three lanes while the 3MP at 30FPS camera can cover five lanes. By using 3MP at 30FPS cameras you can save about 2/5 costs for projects like this.

3. **More details when focusing on the same spot**

Compared to 2M cameras, Surveon 3M 30FPS cameras can get greater details in the same field of view. As you can see in the picture below, the right shot taken by a 3 MP 30 FPS camera can show the price tag and the bar code distinctly, while the left one taken by a 2MP camera cannot.

4. **High quality with lower bit rate**

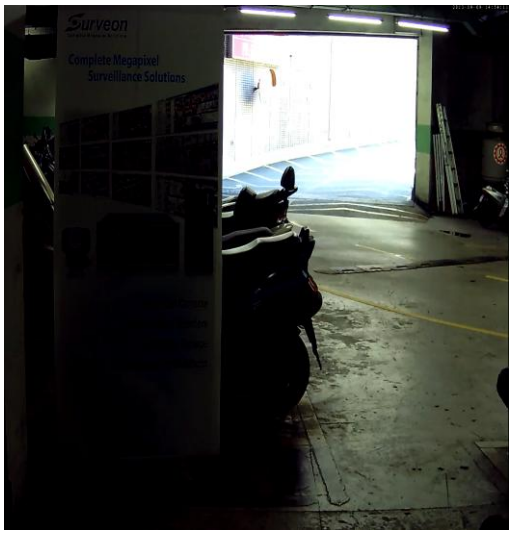
Usually a higher resolution would require a higher bit rate to ensure the good video quality. However a high bit rate also consumes the higher bandwidth and larger storage capacity. To solve this issue, Surveon's camera uses the high profile codec to compress the videos for good quality and a lower bit rate. The below picture is a snapshot from the 3MP at 30FPS in 2Mbps recording with lots of movements and traffic; even so the image is still clear and shows details.

Furthermore, Surveon utilizes a special feature called ROI (Region of Interesting). High and low quality can be applied for different areas on the same image. This feature is very useful when maintaining crucial areas with high image quality but the overall bit rate is insufficient. In the picture below, the video was recorded with 3M at 30FPS in 2Mbps. The left area (ROI region) was set to high quality and the right area (Non ROI region) low quality. The tree leaves and store banner circled here can be seen clearly even when there is a moving object in the scene.

5. **More details in the dynamic light scene under HDR**

Generally speaking most cameras provide digital WDR to enhance the visibility of the video in the wide dynamic range scene. However the video quality does not get much better since the digital WDR can only cover 70Db. Surveon 3M 30FPS cameras, equipped with the HDR (High Dynamic Range) functionality cover 100Db. The effect is very significant in the low light or dynamic light scenes. Compared to the D-WDR IP camera (left), the image (right) with HDR is much more clear, even the wordings on the poster can be read.

Digital WDR (70Db)



HDR (100Db)

Surveon latest premium models not only can deliver 3 MP resolution at 30 FPS but also can provide HDR with 100Db to fulfill the dynamic light scenes. Visit our web site to learn more about our premium models.

CAM2441

CAM3471

CAM4471