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**Surveon Smart IR Technology Introduction**  
**Application Notes**



Technical Support Team

In the night scenario, IR LEDs is usually used to provide static IR lighting for a common IP camera to capture the scene. When an object moves toward the camera or it is located close to the camera, the camera might encounter problems such as not getting clear images for the overexposure object. (Please see the Picture 1 below.)

Surveon provides two methods of Smart IR technology to solve the problem.

**1. Smart IR (Adjust the shutter speed)**

Auto adjust the shutter time to make the image clear without any overexposure issue.

**2. Advanced Smart IR (Adjust the IR lighting intensity)**

Auto adjust the IR lighting intensity to make the image clear without any overexposure issue.

**The comparison table of Smart IR and Smart IR advanced**

Method	Smart IR	Advanced Smart IR
Basic Concept	Auto adjust the Shutter time	Auto Adjust the IR Lighting Intensity
Method Type	Software solution	Hardware solution
Advantage	<ul style="list-style-type: none"> <li>● High speed moving objects are captured without any motion blur.</li> <li>● Applying this technology is easy and quick.</li> </ul>	<ul style="list-style-type: none"> <li>● The image quality and brightness are better than Smart IR.</li> <li>● When there are other sources of illumination, the image's background will not be as dark</li> </ul>
Disadvantage	<ul style="list-style-type: none"> <li>● Even when there are other sources of illumination, the overall image will still be darker.</li> <li>● Most of the IP camera manufacturers use this kind of technology. But compared to the Advanced Smart IR, the image quality of the Smart IR is not any better.</li> </ul>	<ul style="list-style-type: none"> <li>● It can solve most of the IR scenario issues. But if the image contains some moving objects at a high speed, you might see some motion blurs.</li> </ul>

Table 1: The comparison table of Smart IR and Smart IR Advanced

## Examples



Picture 1: **Without Smart IR**

### **Without Smart IR**

When the object moves toward the camera, it will be overexposed on the image.



Picture 2: **Enable Smart IR**

### **Enable Smart IR**

The camera adjusts the shutter time automatically to make the image clear without overexposure issues but the overall image will become darker.



Picture 3: **Enable Advanced Smart IR**

### **Enable Advanced Smart IR**

The camera reduces IR lighting intensity to make the image clear without overexposures on the object or the background; the sources of other illuminations are working well too.

## Conclusion

Surveon Smart IR technology can bring significant benefits, for example, seeing the clear images without any IR overexposures even in a night mode. It is very suitable to capture car license plate in a parking lot or applications that might install cameras at a lower place, and so on.

All of the Surveon IR camera models support Smart IR features but the firmware version must be 2.5 version or later. And Advanced Smart IR is supported on CAM3371EM and CAM3371EV.

Learn more about Surveon Cameras

<http://www.surveon.com/IPcam/index.asp>