
What is Surveon P-Iris?
Application Notes



Technical Support Team

Iris control is one of the main factors in the surveillance cameras, especially its influences on the low light sensitivity, focus and the depth of the image. For example, the small iris opening makes a longer depth of field, keeping the security camera focused both near and far. The common DC-drive Iris cameras tend to keep their iris opening big to increase the low light sensitivity but the DC-Iris can only be controlled by DC voltage. Thus most of the surveillance cameras are poor in iris opening and images of depth in the applications.

P-iris is designed to make a more precise iris opening control, which allows users to define the size of the iris opening and its range for keeping the image focused by request. Surveon P-Iris cameras adapt this precious benefit with its own algorithm for better controls over iris opening and steps. In addition, two different modes, auto and manual are presented for users to adjust the cameras to fit the security objective.

Auto mode

The auto mode is to auto adjust the iris opening size in the range of its predefined iris level, as shown in the Figure 1. It responses and defines sensitivity when the lighting changes. For example, when installing the camera outdoors or in a complex lighting environment, you need to set a lower sensitivity level to avoid any changing in the aperture and the depth of the field. In the indoor environment, set the sensitivity level higher for the iris opening to react fast since the indoor light source is fixed; only two conditions, lamps turn on and off.

In the P-Iris setting, it will display the current F-value. From the Figure1, it shows the current value is F7.5. You can setup minimum and maximum F-value in P-Iris Level to limit the aperture range. If the depth of field is required at least F6.6, you can setup the Max F-value at F6.6; whether the environment is dark or not, the camera will limit its aperture to the set Max F-value and try to compensate the brightness by other parameters such as gain, shutter speed, etc. This solution ensures the image of depth is in focus.

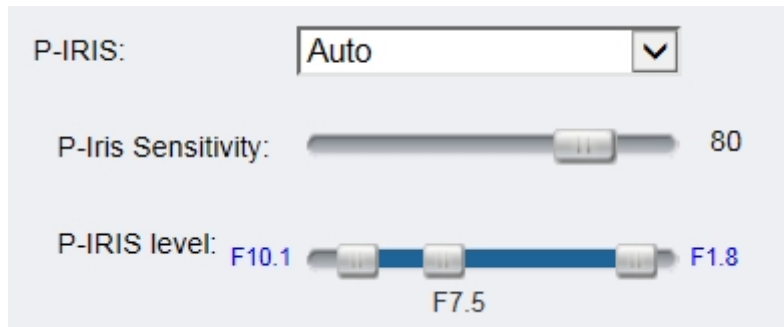


Figure 1, P-IRIS Setting in Auto Mode

Manual mode

The manual mode is to adjust the aperture size manually. It is useful for some projects when a fixed depth of image is required on the monitoring object.



Figure 2, P-IRIS Setting in Manual Mode

A comparison between a smaller and a larger aperture

Condition	Wider depth of field	Narrower depth of field
Parameter	P-Iris Level: 30 (Smaller aperture)	P-Iris Level: 100 (Larger aperture)
Example		

Table 1, Depth of Fields

Surveon P-Iris not only handles wider depth of field scenario, but also obtains a higher contrast and sharper image quality. When a project requires full controls over iris opening or depth of image, a good choice will be Surveon P-Iris cameras series, featured with advanced ISP, AE value control, 2D, 3D auto denoise and the sharpness control to maintain the focus number, low light sensitivity, sharpness and so on.

Cameras with Surveon P-Iris are listed below.

CAM2331P	CAM2441P	CAM3471MP	CAM4471MP
			