

# Sarix with SureVision – Delivering the Best Image Quality in Low-light Conditions

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Make the most of your energy



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The ability to see detail and color in the dark is one of the most important aspects of a security camera as bad things tend to happen in the dark. Perfect lighting is a luxury, largely absent in the video security industry.

Low-light performance for a video security camera refers to the ability to resolve objects at extremely low light levels. There are many technical factors that influence this ability, such as sensitivity of the image sensor, speed of the lens and the applied image processing. In the final analysis what matters to most users of security cameras, is how well a camera preserves image detail and color information.

In the example to the right, you can see the relative low-light performance of SureVision (on the bottom) and another camera in a scene at 2.0lux. Both cameras were running at 30fps with equivalent settings. The image sensor, a key component of SureVision technology, has excellent low-light sensitivity. Further, a proprietary imaging pipeline, which has been optimized to preserve detail and color, delivers images even at extremely low light levels.



Relative low-light performance of another camera and SureVision (on the bottom), at 2.0 lux.



# The Megapixel Myth

It is a common myth that more megapixels alone deliver better security video. For low-light applications, an increase in megapixel count is actually detrimental to image quality. For a given sensor size, more megapixels implies smaller pixel size and a lower ability to gather light. The imager's low light sensitivity is very dependent on pixel size. Customers who have a need to put pixels on target in low-light applications may actually be doing themselves a disservice by choosing a high megapixel camera. A high megapixel camera does not help resolve image content in low-light situations if all of its pixels are black.



SureVision (on the bottom) exhibits superior WDR automatically, over the SMP camera.

# Watch the Exposure Time

When evaluating cameras, care must be taken to compare apples-to-apples. All cameras can improve their low-light performance by extending their exposure time. This allows more light to be gathered over time, however if the exposure time is extended too far, frame-rate will drop and motion artifacts (blur) will increase. Some manufacturers will extend exposure time and drop frame-rate in low-light conditions without notifying the user. SureVision conforms to the maximum exposure times defined by the user for both day and night modes.

SureVision technology delivers outstanding low-light performance down to 0.1 lux in Color mode at 33ms exposure. With a movable mechanical IR cut filter, SureVision technology can deliver B&W low-light performance at 0.05 lux. With a longer 500ms exposure, these cameras can deliver usable security video down to 0.0013 lux.

In summary, SureVision has been engineered to provide excellent low-light performance without compromising dynamic range, and for high definition video resolutions up to 1.2MP. Many manufacturers require the user to choose between low-light performance or WDR performance. SureVision has been engineered to optimize both of these critical use-cases... without requiring user intervention to change settings in order to keep up with changing lighting conditions.

**Schneider Electric**

One High Street  
North Andover, MA 01845 USA  
Phone: +1 978 975 9600  
Fax: +1 978 975 9674  
<http://www.schneider-electric.com>

