

## PIXIM REVIEW

# Perimeter Security

## Pixim-Powered Cameras Meet the Unique Challenges Posed by Perimeter and Border Applications

Today perimeter security increasingly depends on security cameras operating 24/7. These cameras are designed to keep a constant, vigilant watch over borders and facility perimeters and, most importantly, detect and record when any unauthorized person tries to move from one side of the perimeter to the other side, where he or she is not permitted. Unfortunately, most security cameras don't perform equally well at all times of the day, under all lighting conditions, or in all temperatures.

Common security camera problems for perimeters include:

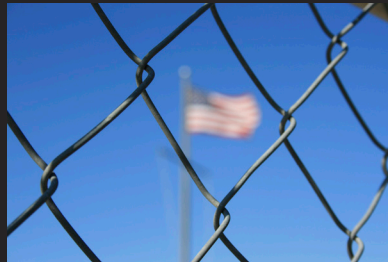
- › Lack of facial detail and distinguishing features
- › Inconsistent clarity in bright or low light, or in high-contrast lighting situations
- › No image when there's strong glare
- › Color inaccuracies in varying lighting conditions
- › Poor image stabilization of telephoto lenses
- › Low-quality Digital Video Recorder (DVR) recordings

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### At-A-Glance:

Pixim Digital Pixel System<sup>®</sup> (DPS) Technology

- › Widest Dynamic Range (WDR): Captures up to 1024 times more data (dynamic range) than standard CCD cameras
- › Signal-to-noise ratio (SNR): >50 dB (max)
- › Sensitivity: <0.5 lux (CMY) minimum illumination f/1.2, 50 IRE
- › Resolution: 540 horizontal TV lines (HTVL) equivalent



## Pixim-Powered Cameras Meet the Unique Challenges Posed by Perimeter and Border Applications [continued]

Pixim's Digital Pixel System® (DPS) ultra-wide dynamic range technology, a true breakthrough in imaging technology, delivers unprecedented image quality in all lighting conditions. Cameras powered by Pixim's specialized image processing chipsets can significantly enhance perimeter and border security through the following capabilities:

- › **Widest dynamic range:** Captures highlight and shadow detail in the same scene.
- › **Highest total resolution:** Makes it easy to distinguish fine image features and details.
- › **Superior color rendering:** Accurately displays color even in difficult lighting such as bright sunlight, glare, and high-contrast lighting.
- › **No "sun blindness":** "Sun blindness" is common in east-facing CCD cameras in the morning and in west-facing CCD cameras in the afternoon.
- › **No "camera blindness":** Eliminates the vertical smear, pixel blooming, and other image artifacts commonly encountered in high-contrast scenes.
- › **High image compression:** Improves image quality with smaller file size – allowing DVRs to record with higher frame rate or higher resolution, or both, while maintaining the same total recording time.
- › **Less need for DC auto iris:** Saves money and greatly improves camera reliability.

Security cameras based on Pixim technology make it possible to record and review high-resolution, clear images of intruders, loiterers, escapees, or anyone else attempting to cross a secured perimeter without permission. In this way, they can help border and perimeter security to be more effective. And because Pixim-Powered cameras rarely need the DC auto iris feature of traditional cameras, it actually costs perimeter and border security officials less money to deploy higher-quality and more reliable security cameras.

Texas has launched a virtual border patrol with video surveillance.



› Significant loss of information in strong backlight

› Superior image quality despite harsh lighting conditions

Of the 43 ports of entry along the U.S. border with Mexico, 18 are in Texas – and the Texas border with Mexico stretches more than 1,200 miles. The Texas Border Patrol placed remote video surveillance systems at 29 strategic locations along the Rio Grande, with both day and night cameras that are monitored 24/7 for any illegal activity.

source: U.S. government websites

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