

PIXIM REVIEW

Airport Security

Pixim-Powered Cameras – A Powerful Ally in Airport Security

Anyone who's taken a flight knows that airport security is tighter than ever before. And anyone who works in an airport is aware of the expanding list of rules and regulations with which they must comply. Security cameras play an increasingly important role in overall airport security, both inside passenger terminals and in cargo areas. Cameras participate in the security checks that are an integral part of modern airline activities. They record and monitor the passage of people, luggage, and cargo in outdoor drop-off points, in transit to planes, and in final exit from the carriers. They also monitor airplane hangars, cargo storage areas, and taxiways. Airport terminals generally include large windows, skylights, and lots of metal, which makes it

challenging for traditional security cameras to operate effectively.

Common security camera problems for airports include:

- › Lack of detail in high-contrast and backlight conditions, under fluorescent lights, or outdoors
- › Low clarity in shadows
- › Image washes out due to glare and reflections from glass and metal
- › Color inaccuracies in varying lighting conditions
- › Low-quality Digital Video Recorder (DVR) recordings

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At-A-Glance:

Pixim Digital Pixel System[®] (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 – A Powerful Ally in Airport Security [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 security at airports through the following capabilities:

- › **Widest dynamic range:** Captures highlight and shadow detail in the same scene.
- › **Highest total resolution:** Makes it easy to distinguish image features and details, even in highly variable lighting conditions.
- › **Superior color rendering:** Accurately displays color even in difficult lighting such as backlight, mixed indoor/outdoor scenes, glare, reflection, and fluorescent lighting.
- › **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.

Security cameras based on Pixim technology enable airport security officials to clearly capture details of passengers, luggage, cargo, and airport and airline employees, even in variable and challenging lighting conditions and despite poor-quality DVRs. In the case of a security incident or theft, the accurate images made possible by Pixim DPS technology help airport officials to identify people or objects of interest, including suspected perpetrators. In addition, the cameras can be used to thwart potential threats, for instance identifying people going the wrong direction in a terminal, behaving suspiciously, or stealing. Cameras can even be used to recognize luggage left unattended for too long. The images captured by Pixim-Powered security cameras can be used to reconstruct the flow of people and cargo before, during, and after an incident, helping both to prevent problems and to prosecute criminals. Additionally, the cameras can act as supplemental security officers, enabling fewer people to more effectively monitor an entire airport.

East-facing CCD cameras cannot be relied upon in the morning, and west-facing CCD cameras cannot be relied upon in the afternoon.



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|--------------------------------|---------------------------------------|
| › Loss of detail | › Superior image quality |
| › Camera blindness | › See details |
| › Washed out plane tail number | › See lights and darks simultaneously |

With Pixim-Powered cameras, you can be assured that you will not encounter "sun blindness."



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SHANGHAI AIRPORT AUTHORITY