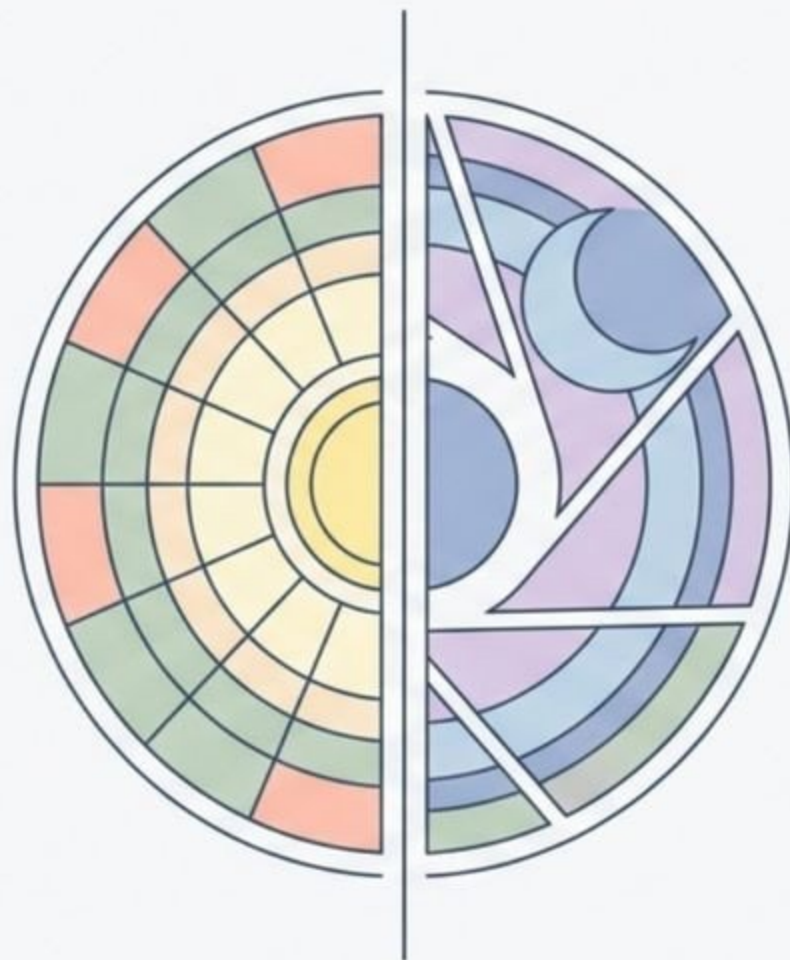


Wide Dynamic Range

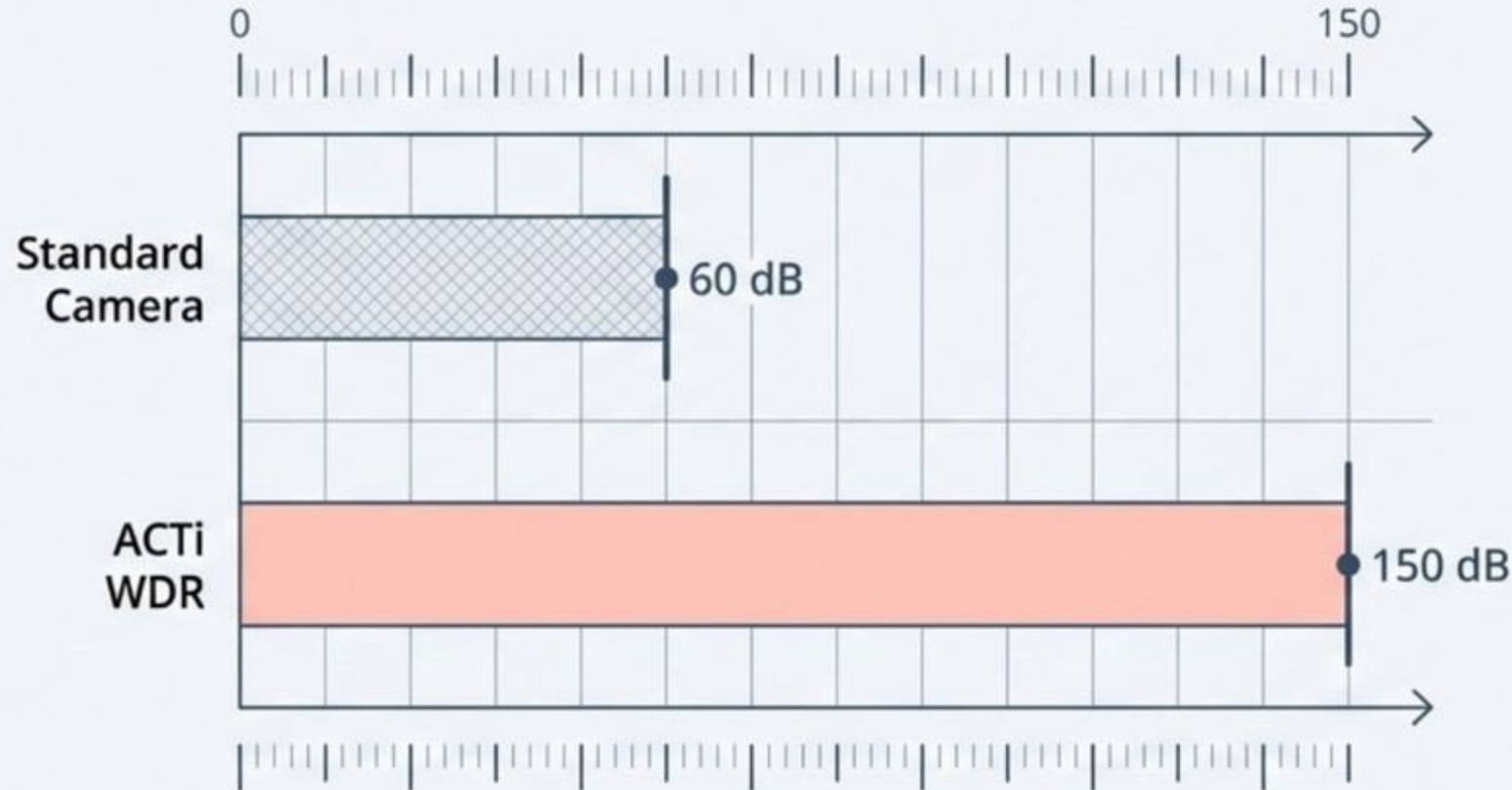


Advanced Imaging for High-Contrast Environments

Overview



The Challenge:
Modern environments like airports and banks present lighting extremes—bright sunlight and deep shadows—that render details invisible.

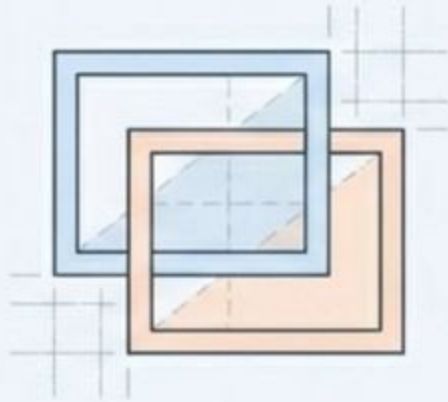


The Solution:
WDR balances bright and dark areas simultaneously. ACTi's top WDR cameras provide dynamic range up to 150 dB.



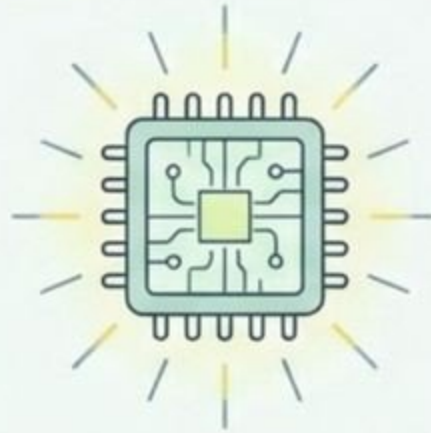
Definition: Dynamic range is the ratio between the brightest and darkest parts of a scene.

Features



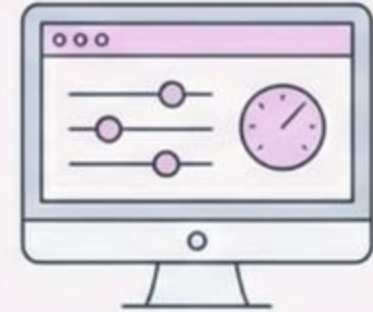
True WDR (Multi-Exposure)

Hardware-based solution. Captures multiple exposures (short for highlights, long for shadows) and combines them into balanced images in real time. Superior to Digital WDR.



Sensor-Level Innovations

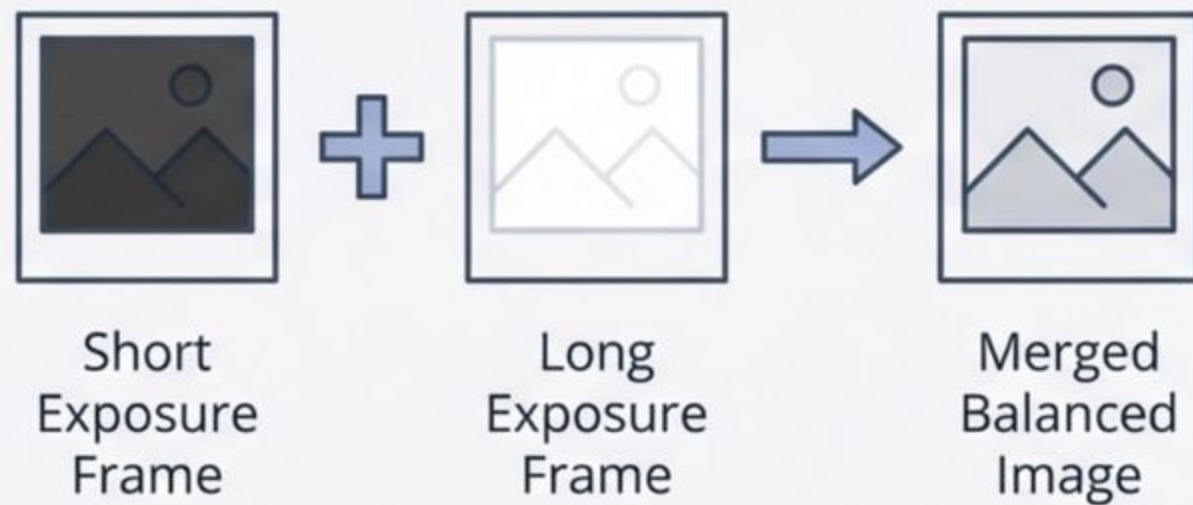
Backside-illuminated (BSI) sensors for improved light sensitivity. Dual-gain readout enhances capture in high-contrast scenes. Trend toward 120 dB+ sensors.



Digital WDR

Software-based image correction. Adjusts brightness and contrast digitally. Cost-effective but limited in extreme conditions.

Architectures



Applications



Banks & Retail

Cameras facing entrances.
Captures faces clearly against
strong backlight or sunlight.



Traffic Monitoring

Nighttime license plate
recognition. Visibility despite
blinding headlights and
streetlights.



Warehouses & Factories

Dim interiors contrasted with
bright skylights or open bays.

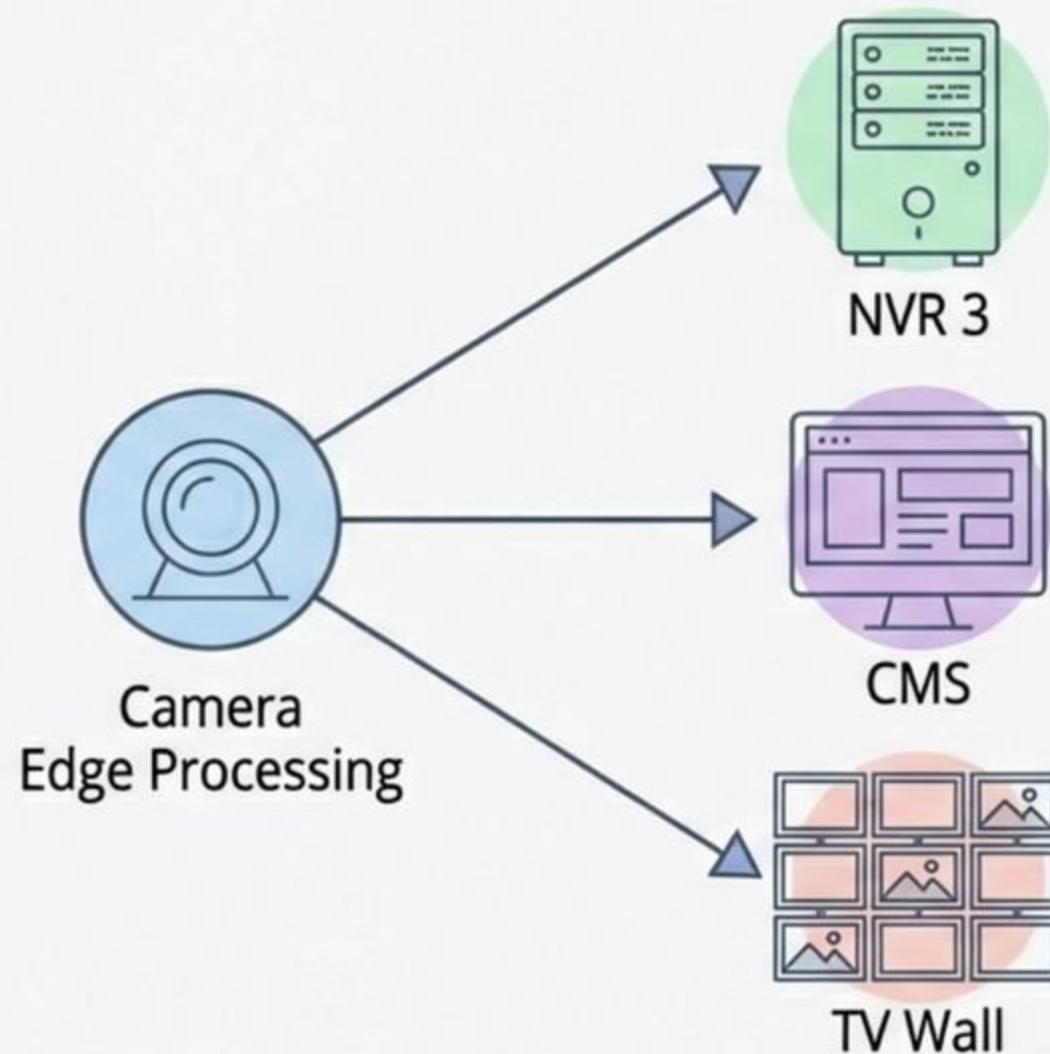


Airports & Train Stations

Travelers moving from outdoor
to indoor areas. Visibility during
lighting transitions.

Solutions

- Fully VMS Agnostic
 - WDR processing is managed entirely inside the camera.
 - Does not affect VMS solutions or require server-side processing.
 - Compatible with NVR 3, CMS, TV Wall, and third-party systems.
 - Zero additional bandwidth or storage overhead.



Product Introduction

Product Matrix – Bullet & Box Cameras

Model		Type	Resolution	WDR Level	Key Feature
A314		Bullet	6MP	Extreme WDR	Fixed Lens, Analytics
A421		Bullet	8MP	Extreme WDR	Zoom, Adaptive IR
A214		Box	5MP	Extreme WDR	40x Optical Zoom
Z318		Bullet	8MP	Extreme WDR	Adaptive IR
A371		Bullet	4MP	Superior WDR	Thermal, Adaptive IR
Z412		Bullet	2MP	Superior WDR	4.3x Optical Zoom
A432		Bullet	9MP	Basic WDR	3.6x Optical Zoom
E33A		Bullet	5MP	Basic WDR	Fixed Lens

Product Introduction

Product Matrix – Dome & Turret Cameras

Model		Type	Resolution	WDR Level	Key Feature
A711		Dome	12MP	Extreme WDR	Outdoor Hemispheric
A817		Dome	8MP	Extreme WDR	Zoom, Adaptive IR
Z56		Turret	8MP	Extreme WDR	Outdoor Fixed
Z64		Turret	8MP	Extreme WDR	4.3x Optical Zoom
A570		Turret	4MP	Superior WDR	Thermal, Outdoor
Z72		Turret	4MP	Superior WDR	Outdoor Fixed
E54		Dome	5MP	Basic WDR	Indoor Fixed
B64		Dome	1.3MP	Basic WDR	Outdoor Zoom

Product Introduction

Product Matrix – PTZ & Speed Domes

Model		Type	Resolution	WDR Level	Optical Zoom
A955		PTZ	5MP	Extreme WDR	40x Zoom
K954		PTZ	5MP	Extreme WDR	42x Zoom
Z953		PTZ	8MP	Extreme WDR	40x Zoom
A972		PTZ	4MP	Superior WDR	32x Zoom (Thermal)
A972		PTZ	4MP	Superior WDR	32x Zoom (Thermal)
K9001		PTZ	32MP	Superior WDR	42x Zoom (Multi-Imager)
Q992		PTZ	8MP	Superior WDR	42x Zoom (Multi-Imager)
Q992		PTZ	8MP	Superior WDR	41x Zoom (Positioning)

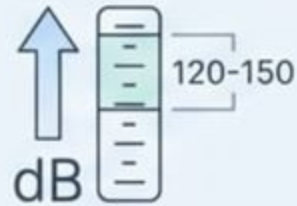
Product Introduction

Product Matrix – Specialty Cameras (Fisheye, Cube, Intercom)

Model		Type	Resolution	WDR Level	Description
A711		Fisheye	12MP	Extreme WDR	Outdoor Hemispheric
B511A		Fisheye	12MP	Extreme WDR	Indoor Hemispheric
Q84		Fisheye	20MP	Extreme WDR	4-Sensor 360° Dome
E19		Cube	5MP	Extreme WDR	Fixed Cube
Q950		Intercom	6MP	Extreme WDR	Outdoor Door Station
Q115		Covert	5MP	Basic WDR	Indoor Covert

Comparison

Dynamic Range (dB)



Higher is better. (120 dB - 150 dB is ideal for outdoors).

Frame Rate Impact



Consider FPS reduction in high WDR modes for fast traffic.

Color Fidelity



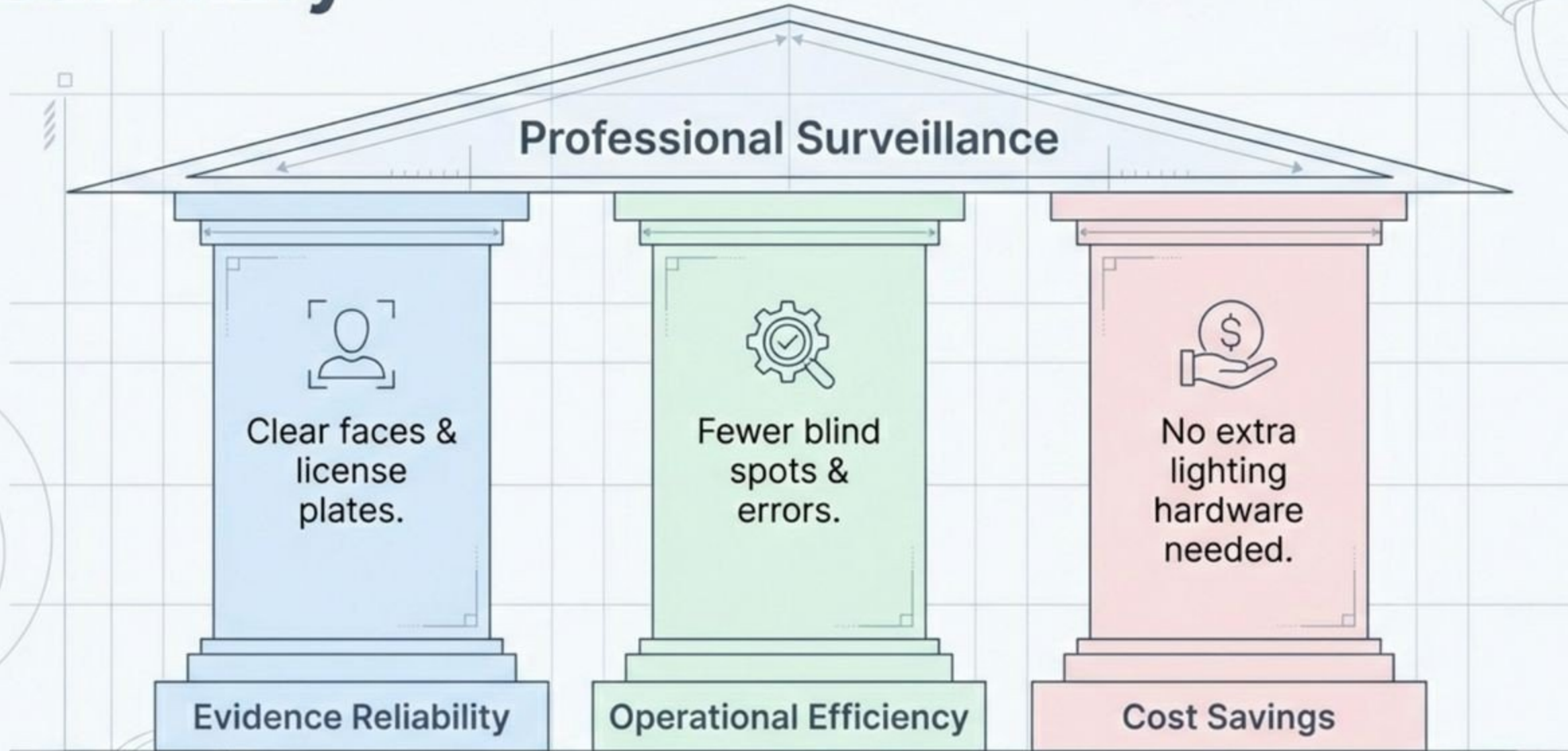
Maintains natural color vs. washed out grey tones.

Noise Levels



Balances exposure without introducing grain in shadows.

Summary



WDR delivers better security outcomes and long-term financial value.

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