



# Optimized Energy Solutions



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Hanwha Vision meets the unique needs of energy-based industries with purpose built IP camera solutions suitable for hazardous and non-permissive environments. This is achieved through a combination of proprietary technologies that include specialized camera devices with the ability to load 3rd party applications through our Open Platform policy and advanced license-free onboard video and audio analytics.

## Explosion-proof cameras for hazardous environments

Our custom fitted explosion-proof housings are capable of operating safely in areas where traditional camera device designs may be unsuitable or pose a risk to safety due to the presence of explosive or flammable gases and material.



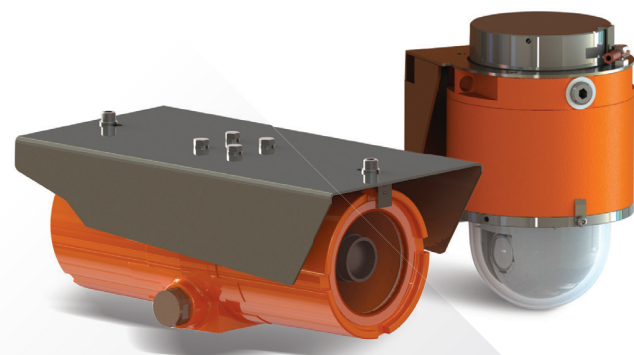
### ✓ 360° endless pan rotation & 255 preset mode

Explosion-proof PTZ cameras feature 360° endless pan and 180° tilt with movement preset to 1~50°/sec. With up to 255 preset positions, users have additional flexibility and functionality.



### ✓ Capture details with 2MP 32x optical zoom

Equipped with 32x optical allows these cameras to see further and capture every moment without losing detail.

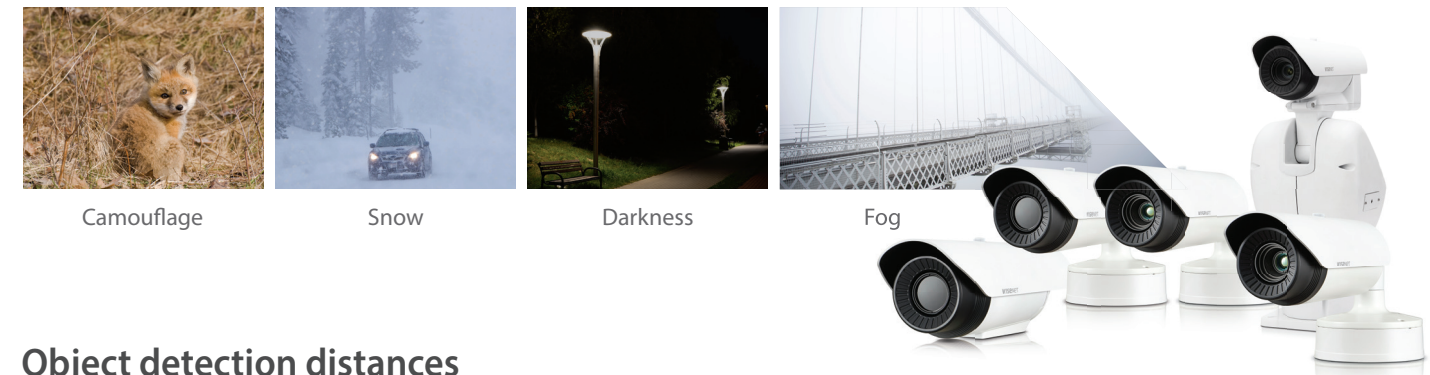


- ✓ 2MP@60fps
- ✓ Sealed 316L stainless steel metal construction
- ✓ IP66/67 ingress protection rating
- ✓ Onboard advanced video analytics
- ✓ Integrated weather resistant window wiper\*
- ✓ Built-in fiber optics module\*
- ✓ Available washer tank and heavy duty mounting accessories\*

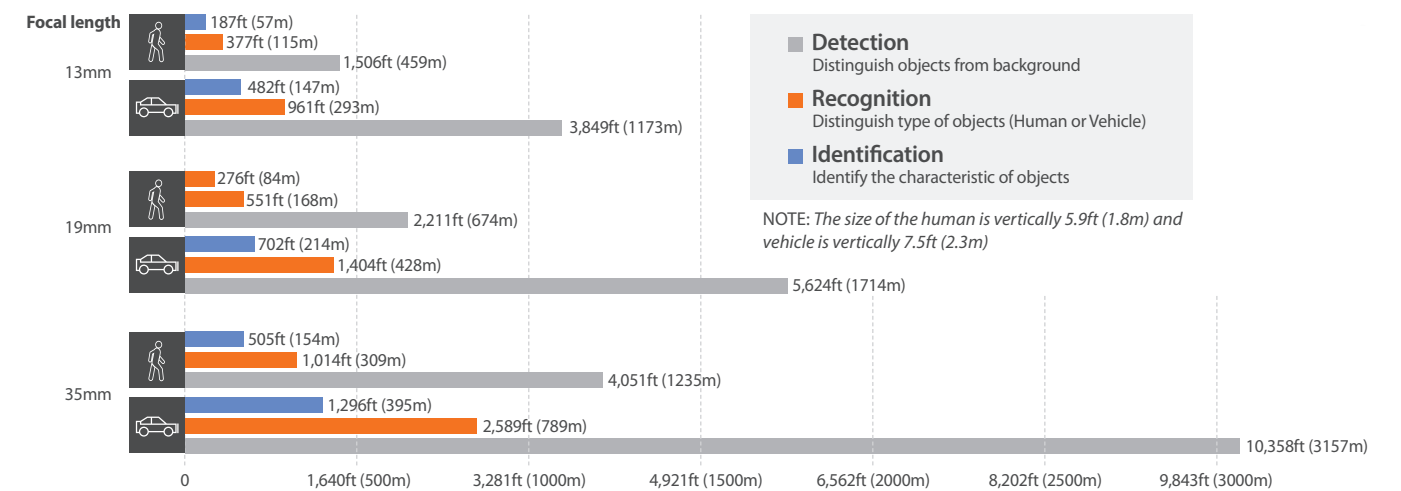
\*Varies by model

## Thermal and radiometric camera devices

Thermal and radiometric camera devices identify objects at distances of up to 1.9 miles (3157m) away in all weather conditions and can monitor facility temperatures for signs of danger with temperature change detection analytics.



### ✓ Object detection distances



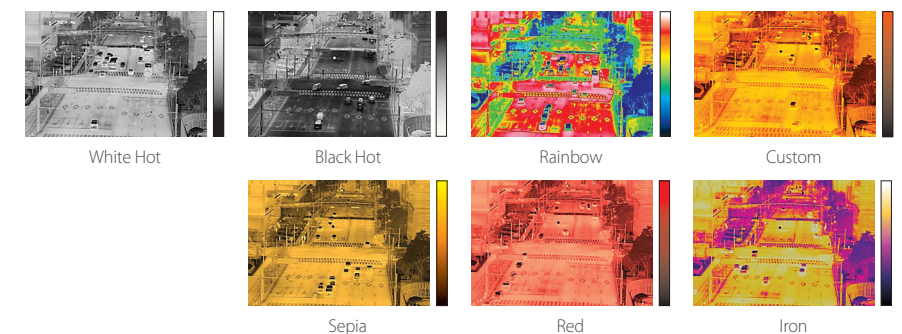
### ✓ Temperature change detection analytics

Enhance personnel safety and give warning to potential hazards in industrial settings with custom temperature monitoring zones.



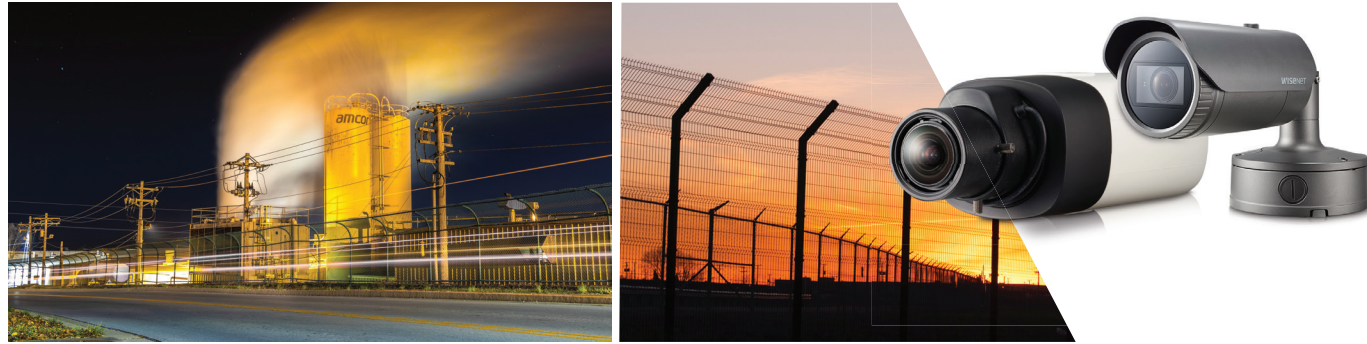
### ✓ Multiple color palettes

Seven color palettes are provided, allowing users to select the best image when monitoring a multitude of environments.



## Low light perimeter security solutions

Hanwha Vision's eXtraLUX and high output uniform IR equipped camera solutions capture clear crisp images in extremely low lighting conditions while multi-directional, multi-sensor devices decrease installation and maintenance costs in the field by replacing several device installations with one. The addition of license-free advanced video and audio analytics and the ability to install 3rd party software applications on the edge allow these camera devices to deliver exceptional performance and utility in perimeter security related tasks.



### ✓ 55x optical zoom with auto focusing IR

The XNP-6550RH camera features the latest technology from Hanwha Vision. Featuring a massive 55x long-range optical zoom and variable focus high output IR emitters, this camera is capable of seeing up to 1,640ft (500m) in all lighting conditions.



## Multi-directional + PTZ

Hanwha Vision's PNM-9320VQP multi-directional + PTZ camera is equipped with four independently targeted sensors and a single center-mounted 2MP PTZ that utilizes a single IP address. The addition of a PTZ camera allows operators to take advantage of Hanwha's exclusive Advanced PTZ Handover and Smartzoom features.



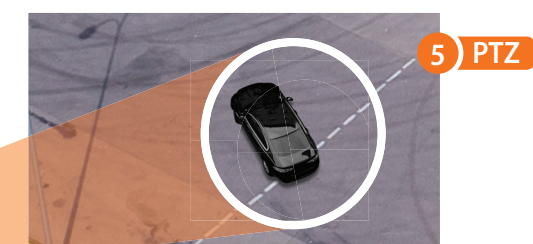
### Smartzoom



Once Smartzoom is fully calibrated, users are able to operate the onboard 2MP PTZ camera by selecting any area visible within any of the four 2MP or 5MP sensors with the click of a button.



### Advanced PTZ Handover



The Advanced PTZ Handover is a quick and simple to program function that triggers camera presets and automatic target tracking based on detected events.

## A simple, scalable, and powerful VMS solution

Wisenet WAVE VMS is a lightweight, feature rich, simple and scalable video management solution capable of supporting up to 128 IP video streams per server and fully integrated with Wisenet NVR and IP camera video and audio analytics.



- ✓ **Easy setup** – complete system install and configuration in minutes
- ✓ **Flexibility** – drag and drop interface with resizable viewing panes for intuitive navigation
- ✓ **Compatibility** – full integration with SUNAPI 2.0 Wisenet device features and advanced analytics and other popular 3<sup>rd</sup> party security solutions
- ✓ **Reliability** – robust server hive architecture ensures continuous system uptime
- ✓ **Portability** – accessible from anywhere via WAVE Sync with mobile client applications
- ✓ **Accessibility** – add an unlimited number of users to a single system, each with custom or preset roles

SUPPORTED BROWSERS	SUPPORTED DESKTOP OS	SUPPORTED MOBILE OS	SUPPORTED SERVER OS

## Hanwha Vision IP camera features and onboard advanced video and audio analytics

Hanwha Vision's license-free intelligent video and audio analytics technology operates on the edge, alerting operators to abnormal activities in real time. This increase in situational awareness can help to prevent or minimize damage or harm during an event by prompting a rapid and efficient response.

### Camera Features

- Tamper detection** - Detects when a camera's direction is changed due to impact, sudden loss of focus, painting or blockage
- Image stabilization** - Cameras can detect shaking or vibration and digitally stabilize the image
- Fog detection** - Cameras can detect the presence of fog or steam and automatically improve image quality
- DIS with gyro sensor** - An internal gyroscopic sensor is used to detect vibration in an image and work to stabilize the affected image
- HLC** - Low light feature that blocks sources of intense light such as vehicle headlights in order to maintain a clear image
- PTZ handover** - Strategically placed cameras can be used to trigger PTZ presets, patrol patterns, and target tracking based on detected events
- Open platform** - This policy allows 3rd party software and applications to run on the edge in parallel with normal camera operations, adding utility to your IP camera device beyond surveillance functions

### Intelligent Video & Audio Analytics

- Face detection** - Identifies key features of a human face and issues an alert when a face is present
- Virtual line crossing detection** - Objects crossing a designated virtual line can be detected
- Loitering detection** - Objects appearing and resting in a designated virtual zone will trigger an event
- Intrusion detection** - Triggers an event when movement is detected in a designated virtual zone
- Appear/disappear** - Detects the presence or loss of an item in a designated virtual zone
- Enter/exit detection** - Detection of objects entering or exiting a designated area
- Audio detection** - Detects and identifies the sound of explosions, gunshot, screams, and breaking glass

Gunshot
 Glass Break
 Scream
 Explosion

*\*Camera features and analytics vary by model*