



Video Solutions **Built for Stadiums**



Hanwha Vision is a proud Gold Medal partner of





Video Solutions Built for **Stadiums**

From the parking lots, loading docks, gates, and staff areas, to concourses, fan shops, concessions, and the seating bowl, Hanwha can provide customized surveillance solutions that result in an enhanced fan experience, increased levels of employee productivity, and amplified safety and security.

▲ Specialty Cameras

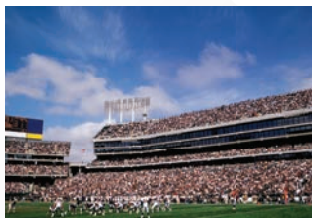
Wisenet Multi-sensor/panoramic and Ultra-high resolution cameras like the 8K TNB-9000 are capable of providing more than 60PPF in seating areas, giving you the ability to see more with fewer cameras and less cable runs.



▲ Advanced Analytics Technology

Create custom zones and event-based alarms using Wisenet AI analytics with attribute extraction, IVA camera analytics, and business and audio analytics.

- ✓ Wisenet AI Analytics with attribute extraction
- ✓ Intelligent Video Analytics
- ✓ Wisenet Business Analytics
- ✓ Sound Classification Analytics
- ✓ WiseStream video compression



Stadiums / Arenas



Convention Centers



Concert Halls



Amphitheaters

Cost Saving Multi-sensor IP Cameras

Hanwha Vision multi-sensor IP camera solutions eliminate the need for complex and costly multi-camera installations. Each multi-sensor IP camera can be installed with a single cable and utilized with most VMS systems using just a single device recording license.

Multi-directional Camera



*High resolution and Wisenet AI enabled models available

Multi-sensor Panoramic Camera

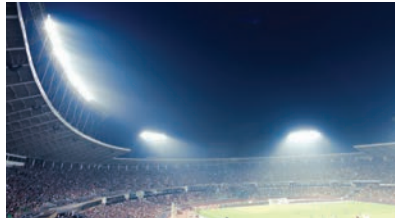


*High resolution and Wisenet AI enabled models available

8K Ultra-high Resolution Cameras

Created specifically for use in stadiums, airports, and other large spaces - the TNB-9000 shines where multi-camera installations may prove to be impractical or cost prohibitive. The use of EF (Electro Focus) mount lenses with remote focus also gives you exceptional flexibility in lens options and low light performance.

Ideal for:



Stadiums / Arenas



Parking Lots



Aiports

The 8K TNB-9000 IP camera utilizes a full size 36mm CMOS sensor to deliver true 8K performance at up to 15fps. Capturing ultra-high resolution images provides you with the ability to digitally zoom into any area of an image without losing detail, a powerful alternative to traditional multi-camera installations.



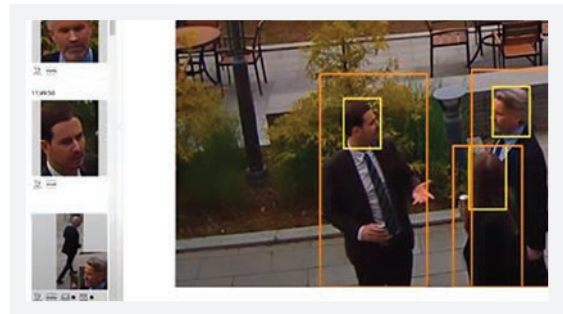
Wisenet AI Cameras

Cameras equipped with AI-based analytics with attribute extraction can accurately identify both humans and vehicles. Being able to differentiate and identify objects in real time leads to faster and more efficient forensic searches as well as a reduction in bandwidth and storage through metadata tagging.



The BestShot Camera Feature

All extracted attributes are presented in real time via Hanwha Vision's BestShot feature, which displays a still image of a detected object for easy identification along with any attributes detected.



Detected Objects	Attribute Category	Supported Attribute Items
 Person	Gender	Female, Male
	Upper garment	(Up to 2 colors simultaneously)
	Lower garment	Black, Gray, White, Red, Orange, Yellow, Green, Blue, Purple
	Bag	Carries a bag, does not carry a bag
 Face	Gender	Female, Male
	Age	Young/Adult/Middle/Senior
	Glasses	Wearing glasses, not wearing glasses
	Face mask	Wearing mask, not wearing mask
 Vehicle	Type	Car (sedan/SUV/van/etc.), bus, truck, motorcycle, bicycle
	Color	(Up to 2 colors simultaneously) Black, Gray, White, Red, Orange, Yellow, Green, Blue, Purple
 License plate	License plate	Presence of a license plate

License-free Advanced Camera 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*

License-free Business Analytics

Hanwha Vision's license-free business analytics help you to gain deeper insights into your business's performance with customizable analytics zones and event-based alarms.



People counting – Provides statistical information based on individuals detected entering or exiting pre-defined areas.

High Frequency



Low Frequency



Heat Map – Evaluates retail traffic based on visitor density and length of stay.



Queue Management – Alleviates long check-out lines by alerting staff when customers are waiting for longer than user-defined amounts of time.

WiseStream III Compression Technology

Using edge-based AI object detection to identify humans and vehicles, Hanwha Vision's WiseStream III video compression technology ignores motion created by non-human and non-vehicle objects detected in the camera's field of view. This results in substantially decreased data transmission sizes from the camera over traditional motion detection based compression technologies, without losses in video quality.



Portions of video of and around objects detected as humans will remain crisp and clear.

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