



**Safety and Reliable Detection
for Critical Infrastructure**
Hikvision Dual Lens Thermal Cameras



Facilities that house and process energy, oil, precious materials, telecommunications, and other critical infrastructure assets require continuous, reliable video surveillance. These sites need 24/7 protection regardless of poor lighting or weather conditions.



Traditionally, thermal cameras have helped to provide additional details for detection purposes, but other standalone CCTV cameras have always been required for visual footage. This setup has created higher total costs for installation, maintenance, and operations.

Hikvision's innovative dual lens thermal cameras combine thermal imaging with visual imaging. Equipped with onboard video analytics, the high-quality thermal imager thrives in long-range object detection regardless of harsh air conditions or total darkness environments. The visual imager captures vivid, high-resolution HD video of any moving objects and offers more details for post-event investigations.

Thermal Imager



- VOX Uncooled Detector
- 384x288 resolution
- Up to 25/30fps
- 25mm/50mm fixed lens
- Vehicle detection distance of up to 3067 meters (50mm lens)
- Human detection distance of up to 1000 meters (50mm lens)

Visual Imager



- 1/3" CMOS sensor (PTZ)
- 1/1.8" CMOS sensor (Bullet)
- 1920x1080 resolution
- Up to 25/30fps
- 4.3~129mm Vari-focal lens (PTZ)
- 23/40mm lens (Bullet)
- IR range up to 150 meters (PTZ)/120 meters (Bullet)

DS-2TD4035D



Dual
Lens

SMART
Detection

150m
IR

SMART
Tracking

Thermal Imager:

- VOX Uncooled focal plane detector
- Main stream: 25/30fps at 384 x 288 resolution
- Sub stream: 25/30fps at 384 x 288 resolution
- NETD < 50mk
- 25mm lens, FoV: 21.7° or 50mm lens, FoV: 11°
- Smart Tracking: Panorama tracking, Event tracking, Multi-scene Patrolling
- Smart Detection: Intrusion detection, Line Crossing detection, Region Entering/Exit detection, Audio Exception detection, Hot Spot detection.

Visual Imager:

- 1/3" progressive scan CMOS
- Main stream: 25/30fps at 1920 x 1080 resolution
- Sub stream: 25/30fps at 704 x 576/480 resolution
- High-performance IR arrays, up to 150m IR range
- Pan: 360° endless; tilt: -15° ~ 90°
- 4.3 ~ 129mm lens, 30x optical zoom, 16x digital zoom
- Auto focus, WDR, 3D DNR, Defog, HLC, EIS
- ROI (Region of Interest) codec

General

- Support on-board storage, Micro SD/SDHC/SDXC (card no included)
- Audio I/O: 1/1; Alarm I/O: 7/2
- Support analog signal output
- IP66 protection, built-in heater
- AC24V, max 50W
- -40 °C ~ 65 °C working temperature

DS-2TD2235D

DARKFIGHTER ✨



Dual
Lens

SMART
Detection

120m
IR

120dB
WDR

Thermal Imager:

- VOX Uncooled focal plane detector
- Main stream: 25/30fps at 384 x 288 resolution
- Sub stream: 25/30fps at 384 x 288 resolution
- NETD < 50mk
- 25mm lens, FoV: 21.7° or 50mm lens, FoV: 11°
- Smart Detection: Intrusion detection, Line Crossing detection, Region Entering/Exit detection, Audio Exception detection, Hot Spot detection.

Visual Imager:

- 1/1.8" progressive scan CMOS
- Darkfighter Ultra low light
- Main stream: 25/30fps at 1920 x 1080 resolution
- Sub stream: 25/30fps at 704 x 576/480 resolution
- High-performance IR arrays, up to 120m IR range
- 23mm/40mm fixed lens
- WDR, 3D DNR
- ROI (Region of Interest) codec

General

- Support on-board storage, Micro SD/SDHC/SDXC (card no included)
- Audio I/O: 1/1; Alarm I/O: 1/1
- Support analog signal output
- IP66 protection, built-in heater
- AC24V, max 40W
- -40 °C ~ 65 °C working temperature

DS-2TD2035-HZ



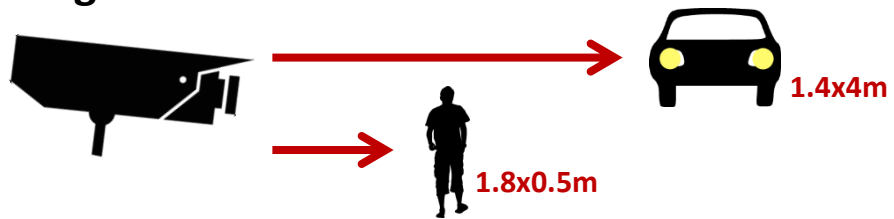
Thermal Imager:

- VOX Uncooled focal plane detector
- Main stream: 25/30fps at 384 x 288 resolution
- Sub stream: 25/30fps at 384 x 288 resolution
- NETD < 50mk
- 9.6mm/25mm/40mm/75mm fixed lens
- Smart Detection: Intrusion detection, Line Crossing detection, Region Entering/Exit detection, Audio Exception detection, Hot Spot detection.

General

- Support on-board storage, Micro SD/SDHC/SDXC (card no included)
- Audio I/O: 1/1; Alarm I/O: 3/3
- Support analog signal output
- IP66 protection *external housing required
- AC24V, max 40W
- -30 °C ~ 60°C working temperature

Detection Range



| Focal Length | 9.6mm | 25mm | 40mm | 50mm | 75mm |
|------------------------|-------|--------|--------|--------|--------|
| Horizontal FoV | 60.2° | 21.7° | 15.6° | 11° | 7.3° |
| Human Detection | 192m | 500m | 800m | 1,000m | 1,500m |
| Human Recognition | 48m | 125m | 200m | 250m | 375m |
| Human Identification | 24m | 63m | 100m | 125m | 188m |
| Vehicle Detection | 589m | 1,533m | 2,453m | 3,067m | 4,600m |
| Vehicle Recognition | 147m | 383m | 613m | 767m | 1,150m |
| Vehicle Identification | 74m | 192m | 307m | 383m | 575m |

• This recommended range table is according to Johnson's criteria and for reference only. The actual performance ranges may vary based on different weather conditions.

Johnson's criteria:

Human detection: 4 pixels/m; human recognition: 16 pixels/m; human identification: 26 pixels/m.

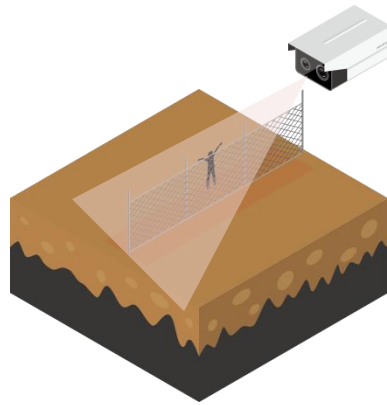
Vehicle detection: 2 pixels/m; human recognition: 8 pixels/m; human identification: 14 pixels/m.

Perimeter Protection

- Increases physical protection around the perimeter
- Decreases human patrolling
- Effective in dimly lit and total darkness environments

Applications:

Power plants, petrochemical/oil utilities, ports, prisons, etc.

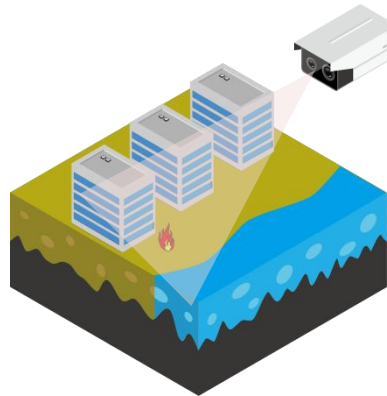


Border Protection

- Detects intruders from long distances
- Auto-detects fires
- Triggers alarms for prompt response
- Effective in harsh weather conditions

Applications:

Maritime, border patrol, etc.

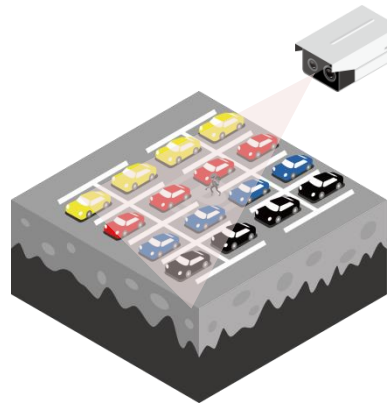


High-value Area Protection

- Effectively detects intruders
- No light pollution
- Avoids false alarms

Applications:

Parking lots, car dealerships, precious materials warehouses, etc.



Fire Hazard Detection

- Detects fumes or flames in wide areas
- Triggers alarm for prompt response
- Helps to pinpoint fire origin
- Increase efficiency for firefighters

Applications:

Forest protection, amusement parks, etc.

