



# Full-colour Active Deterrence AI Solution TiOC

Full-colour 24/7 Monitoring & Surveillance



**3-in-1  
Solution**  
Powerful  
**industry-leading**  
technology



**Full-colour  
Monitoring**  
Enhanced **24/7**  
full-colour  
performance



**Active  
Deterrence**  
Warn off intruders with  
**enhanced two-way audio**  
and red/blue light



**Artificial  
Intelligence**  
False alarm rate **<2%** &  
target search efficiency  
improved by **98%**



**AI  
Coding**  
Save disk space with  
**90%** lower bitrate  
than H.264



**TiOC**  
Full-colour Active  
Deterrence AI Solution

## Overview

Currently available in 2MP and 5MP variations, this new **industry-leading TiOC (3-in-1)** camera offers Full-colour, Active Deterrence and AI, all-in-one smart innovative solution. With false alarm rates less than **2%**, a significantly improved search function and built in AI coding delivering a **90%** reduction in disk space required this new addition to Dahua's range can help improve the efficiency and cost of running your CCTV system.

## Solution

Video evidence is greatly enhanced by full-colour images of any suspect. The combination of Dahua's industry-leading Full-Colour technology with powerful AI functions and Active Deterrence warnings will help reduce false alarm rates, improve target search efficiency and generally make your CCTV system more efficient, reducing your operation costs.



**3-in-1 Solution** – Powerful **industry-leading** technology



**Full-colour Monitoring** – Enhanced **24/7** full-colour performance



**Active Deterrence** – Warn off intruders with **enhanced two-way audio** and red/blue light



**Artificial Intelligence** – False alarm rate **<2%** & target search efficiency improved by **98%**



**AI Coding** – Save disk space with **90%** lower bitrate than H.264



## 3-in-1 Camera

Dahua, an **industry-pioneer** of smart surveillance devices, is the first to market with this powerful **3-in-1** solution.

This proactive system features a bright LED light, warning siren and built-in speakers to warn off intruders, all of which can be remotely triggered before any crime has been committed.

- 2MP/5MP** resolution (8MP coming soon)
- Illumination Distance: **20m (2.8mm)/30m (3.6mm)/40m (6mm)**
- 11** different voices built-in by default or full voice customisation
- Red & blue lights** emit a strong warning signal



**No Colour Detail**  
After a burglary has occurred, although there is CCTV evidence, there's no colour image of the suspect, making identification more difficult.



**Too Many False Alarms**  
Too many false alarms cause meaningless work for the alarm receiving centre. Sometimes only 50 genuine positives out of 3000 alarms.



**Storage Costs Too High**  
CCTV evidence must be stored for a minimum of 3 months (e.g. for banks, etc.) Hardware, including HDDs and recorders is prohibitively high.

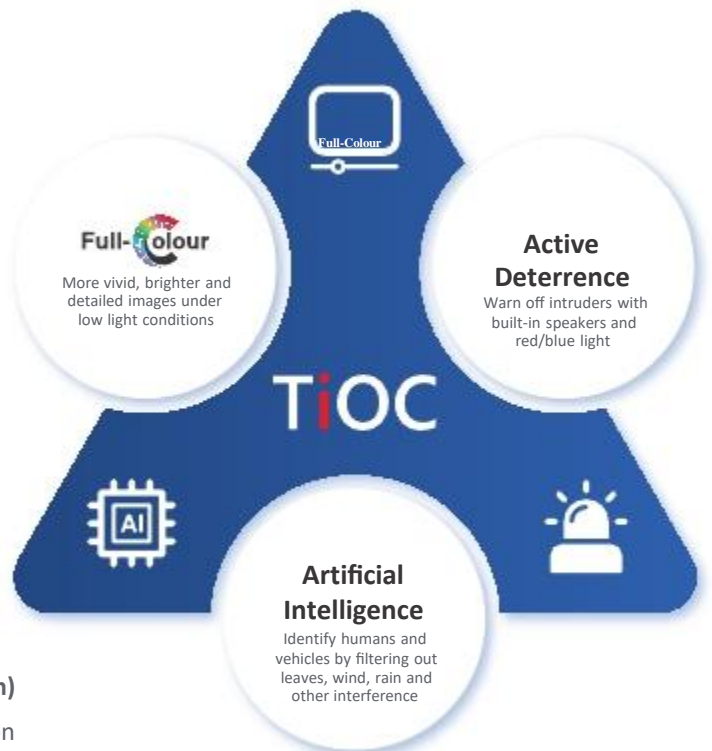


**Low-Efficiency Video Search**  
Large volumes of video data has to be manually examined by the police or control room, taking up a huge amount of time.



**Response Time Too Slow**  
For warehouses with extensive perimeters, stopping intruders from breaking in is difficult even with security guards patrolling or a CCTV system.

### Customer Challenges





## Full-colour



**Large Aperture Lens**  
Max. aperture **F1.0**  
**2.5 times** the amount of light compared with F1.6



**High Performance Sensor**  
**30%** photosensitive capacity increase



**Advanced ISP**  
Dahua **ISP 4.0** technology



**Warm Light**  
Radiance **40%** below the EU standards

## ActiveDeterrence



### Red and Blue Light

- Noticeable even in dense fog and heavy rain.
- More eye-catching in daytime than white light.

### Enhanced Speaker

- >110 dB speaker.
- Deeper voice with lower frequency sound.



## AI | Artificial Intelligence



**Smart Motion Detection 2.0**  
SMD 2.0 detection distance increased by more than **185%**.  
False alarm rate is the same as daytime, less than **2%**.



**Perimeter Protection**  
Filters out leaves, light and other interference. False alarm rate is the same as daytime, less than **2%**.



**AI Search**  
Based on human and vehicle classification, target search efficiency improved by **98%**.



**AI Coding**  
AI coding dynamically allocates bit rate, providing clear target images while saving more than **90%** bitrate compared with H.264.



Increased detection distances help reduce false alarms.



B: Background T: Target

## Example Applications



Education



Houses/Apartments



Fire exits



Farm

### Advantages

**Colour Monitoring:** Displays colour alarm videos and captures vivid detail in low light conditions.

**Fewer False Alarms:** The inbuilt AI function focuses on vehicles and humans reducing the number of false alarms.

**Active Deterrence:** Red and blue light and upgraded audio enhances deterrence.

**APP Alarm Push:** Push alarm notifications in real-time, with one-button arming and disarming.

## System Topology



## Recommended Products



IPC-HFW3449T1-AS-PV  
IPC-HFW3849T1-AS-PV

4MP/8MP resolution  
Built-in warm illuminator, illumination distance: 20m (2.8mm), 30m (3.6mm)  
Built-in Mic and speaker  
11 pre-recorded announcements or customised recording  
Red & Blue LED's as a powerful warning signal  
SMD, Perimeter Protection



IPC-HDW3449H-AS-PV  
IPC-HDW3849H-AS-PV

4MP/8MP resolution  
Built-in warm illuminator, illumination distance: 20m (2.8mm), 30m (3.6mm)  
Built-in Mic and speaker  
11 pre-recorded announcements or customised recording  
Red & Blue LED's as a powerful warning signal  
SMD, Perimeter Protection



NVR4000-I series

Decoding capability: 2-ch 8MP@30fps, 8-ch 1080P@30fps  
Up to 4-ch Perimeter Protection  
Up to 2-ch video stream Face Recognition  
8-ch picture stream Face Recognition (with FD camera)  
Up to 12 face pictures /sec processing  
Up to 10 face databases with 20,000 face images in total  
1-8 PoE Ports support ePoE and EoC



NVR5000-I series

Decoding capability: 4-ch 8MP@30fps, 16-ch 1080P@30fps  
Up to 16-ch Perimeter Protection  
Up to 4-ch video stream Face Recognition  
16-ch picture stream Face Recognition (with FD camera)  
Up to 24 face pictures /sec processing  
Up to 20 face databases with 100,000 face images in total  
1-8 PoE Ports support ePoE and EoC

Design and specifications are subject to change without notice.

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