



The advertisement features a night scene of a modern house with a person sitting on a wooden fence in the foreground. A security camera in the top left corner projects red and blue laser beams across the scene. A large, stylized 'C' icon is positioned to the left of the main title. The background is dark, with the house's interior lights visible through the windows.

3-in-1 Camera **TI0C 2.0**

Your Effective Deterrent Against Intruders



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01 Current Active Deterrence Pain Points

02 TiOC 2.0 Overview

03 Key Features

- Smart Dual Illuminators
- VoiceCatcher Technology
- Better Image
- Ecosystem
- AI Features

04 Application Scenarios

- Public Areas
- Private Places

Current Active Deterrence Pain Points



Single Illumination mode

At present, most products in the market only have IR light, and do not generate full-color image at night. Using white light at night can increase light pollution.

01



Poor image quality under low illumination

Limited by hardware specifications, resulting to poor image quality at night.

03



02

Limited pickup performance

Too much background noise causes interference; Short pickup distance and limited mic function.



04

Complicated integration with alarm system

It's complicated to integrate with current alarm systems, which can affect user experience.



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TiOC 2.0 Overview: Multiple Technological Breakthroughs



With its foundation from the previous generation of TiOC, a variety of new innovative technologies are introduced in the latest TiOC 2.0 for the first time, achieving breakthroughs and quality improvements in illuminators, audios and images. At the same time, TiOC 2.0 can be integrated with alarms through software upgrades. It provides better ecosystem that offers more convenient operation and better user experience.

Recommendation:

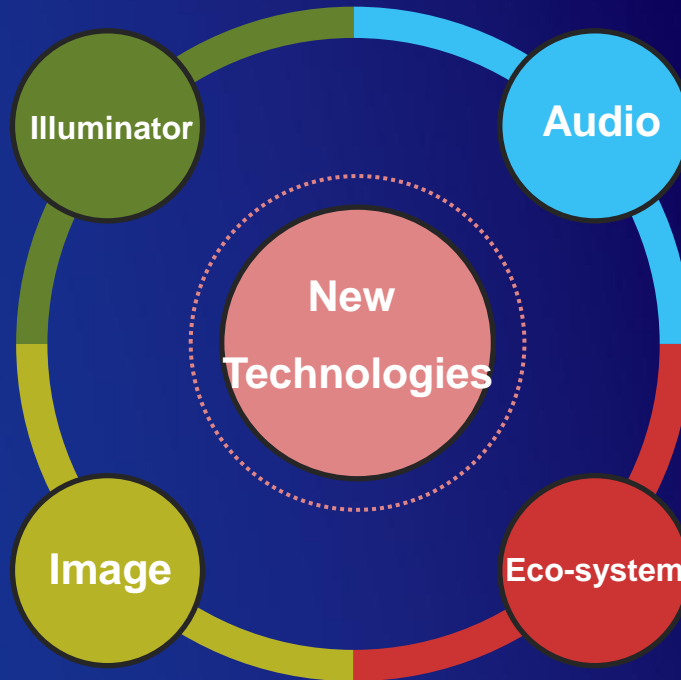


Flexible illumination mode, which can not only record full-color events, but also minimize white light pollution.

Recommendation:



Its **OPC Technology** enables brighter and clearer IR images using Dahua IPC with F1.0 aperture lens. It's the first of its kind in the market.



Recommendation:



Powered by Dahua **VoiceCatcher** Technology to achieve longer pickup distance and less noise

Recommendation:



Integrated with alarms system
Easy Operation
Better User Experience

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TiOC 2.0: Key Features



Smart Dual Illuminators

Flexibly switch between Full-color and IR mode

01



VoiceCatcher Technology

Further pick-up distance; Less noise

02



Better Image

Brighter & clearer IR Image; 4K real-time image

03



Eco-system

Easily integrates with alarm systems

04



AI Features

SMD 3.0 Perimeter Protection

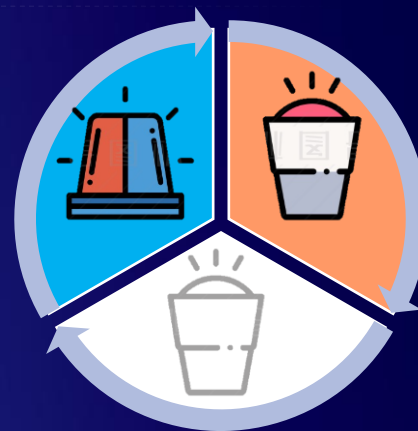
05

Smart Dual Illuminators: The Most Comprehensive Illumination Method



SMART DUAL ILLUMINATORS

Flexibly switch between full-color and IR mode



I

Smart Illumination (default): Switch between IR Mode and white light when target is detected.

II

IR Mode: Only IR illuminator is ON. It is suitable for scenes where supplementary white light is not required, thus reducing light pollution.

III

White Light Mode: Only the white light is ON. It is suitable for scenes that require color video footages.

Smart Illumination Mode: Switch Illuminators Through AI



Smart Illumination Mode adopts deep learning algorithm to detect targets.

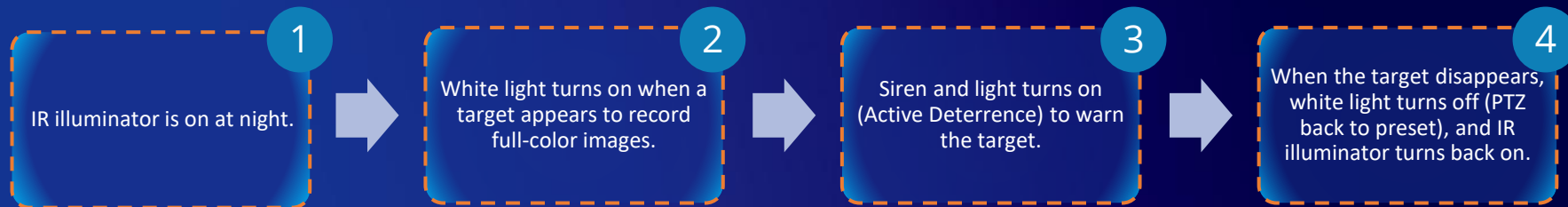


Figure 1



Figure 2

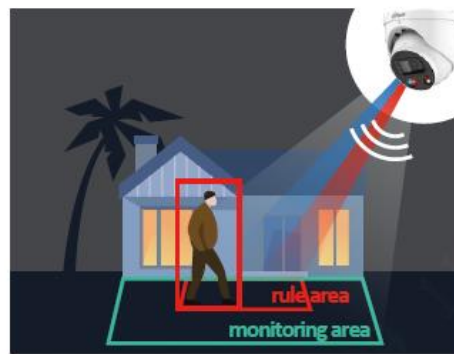


Figure 3



Figure 4

Smart Dual Illuminators: The Most Comprehensive Illumination Method



Three different Illumination methods to meet the needs of various application scenarios:

Smart Illumination



IR Mode



White Light Mode



AI algorithm; intelligent switching
Color event video; less light pollution



IR illuminator throughout the whole process
Environment friendly, and reduces light pollution



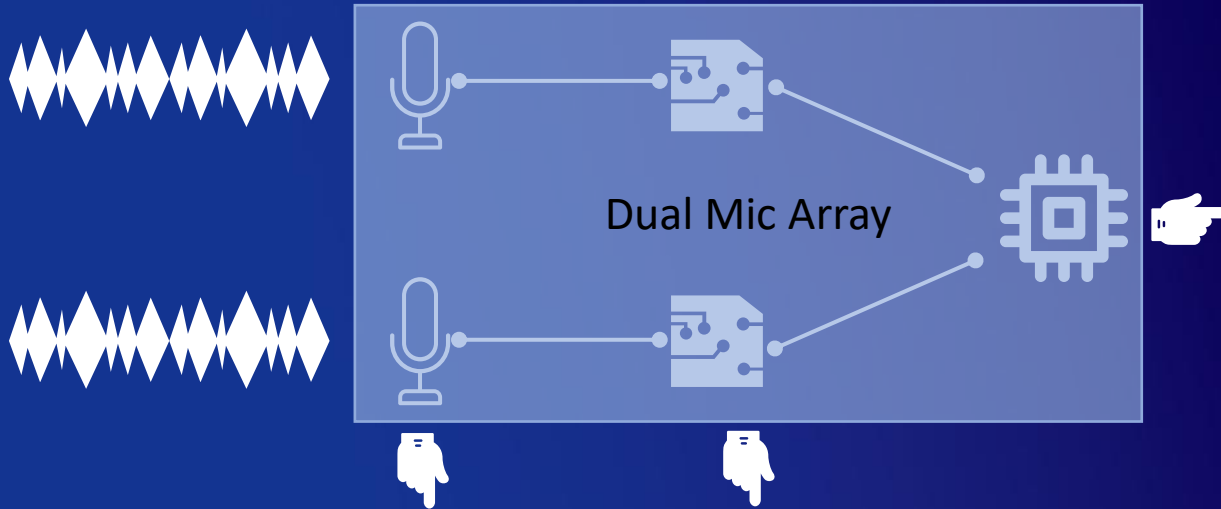
White illuminator throughout the whole process
Records full-color video and captures event details

VoiceCatcher: Purer Voice, Farther Distance



Outdoor sound-picking surveillance cameras often encounter wind noise or environmental sounds that obscure human voice audios, which can affect user experience.

The Dahua VoiceCatcher technology is equipped with dual mic array that greatly improves the sound pickup quality of the camera.



- 3. Dahua self-developed noise reduction algorithm
- 4. Equipped with high-performance SOC that can realize further noise reduction optimization

- 1. High sensitivity dual mic array offers longer pickup distance

- 2. The newly designed audio acquisition circuit can intercept the external circuit interference of the board

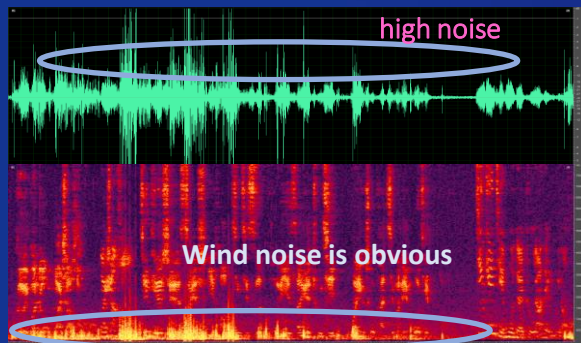
VoiceCatcher: Purer Voice, Farther Distance



In a laboratory environment, the previous generation of TiOC (single mic) and TiOC 2.0 with dual mic array were simultaneously tested to pick up the same sound source. The findings are as follows:

- I. TiOC 2.0 dual mic array can greatly reduce noise and extract useful audio signals, while single mic TiOC gets high noise.
- II. TiOC 2.0 pickup distance increased by **7** meters (note: 65 dB is the normal volume when a person speaks)

Single Mic Sounds



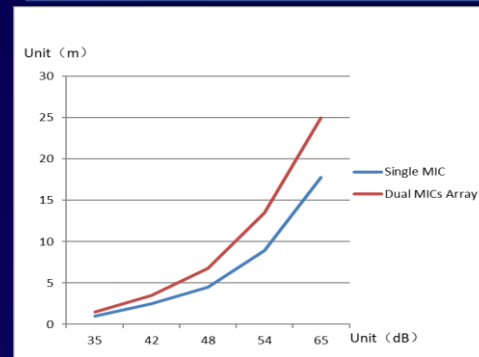
High noise affects sound quality

Dual Mic Array Sounds



Filters out noise and realizes purer sound quality

Pickup Distance

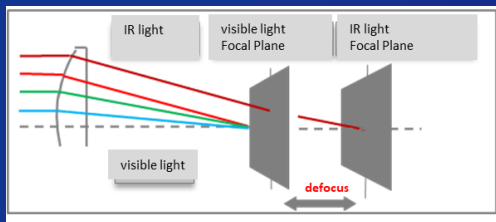


Farther sound distance

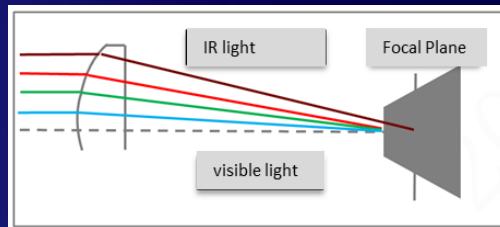
Better Image: New Low-light Image Experience



Powered by OPC (Optical Path Compensation) technology, the camera can correct the angle of refraction of different light rays, allowing Dahua IPCs to output brighter and clearer black & white images with F1.0 large aperture lens. It is the first of its kind in the market.



Focus for visible light and IR light cannot be achieved on the same plane when using F1.0 large aperture.



Focus for visible light and IR light can be achieved on the same plane.



With OPC Technology



The details of the tree are fuzzy;
The edges of the picture are dark.



The details of the tree are clear;
The edges of the picture are bright.

Better Image: New Low-light Image Experience



IR cameras on the market mostly have F1.6 aperture. Dahua innovatively adopts F1.0 super large aperture which greatly improves the image quality.

IR Image with F1.6 Aperture



IR Image with F1.0 Aperture



Compared with F1.6 aperture, F1.0 aperture presents better image:

1. The whole image is sharper and brighter.
2. Edge details are clearer.

Better Image: Brighter and Smoother 4K Images



- F1.0 large aperture collects 1.96 times the amount of light compared with the F1.4 aperture of the previous generation of TiOC, producing more light and brighter images.
- 25/30 fps real-time video even when AI is enabled (the previous generation of TiOC only offers 20fps).



◆ Max. 4K (3840 × 2160) @25/30 fps output even when AI is enabled.

Ecosystem: Arming/Disarming Through Alarm-in Port



The TiOC 2.0 camera can be connected to traditional alarm systems. It offers one-tap arming/disarming through the alarm-in port. It allows usage of existing systems for alarm linkage and control, providing a better user experience.

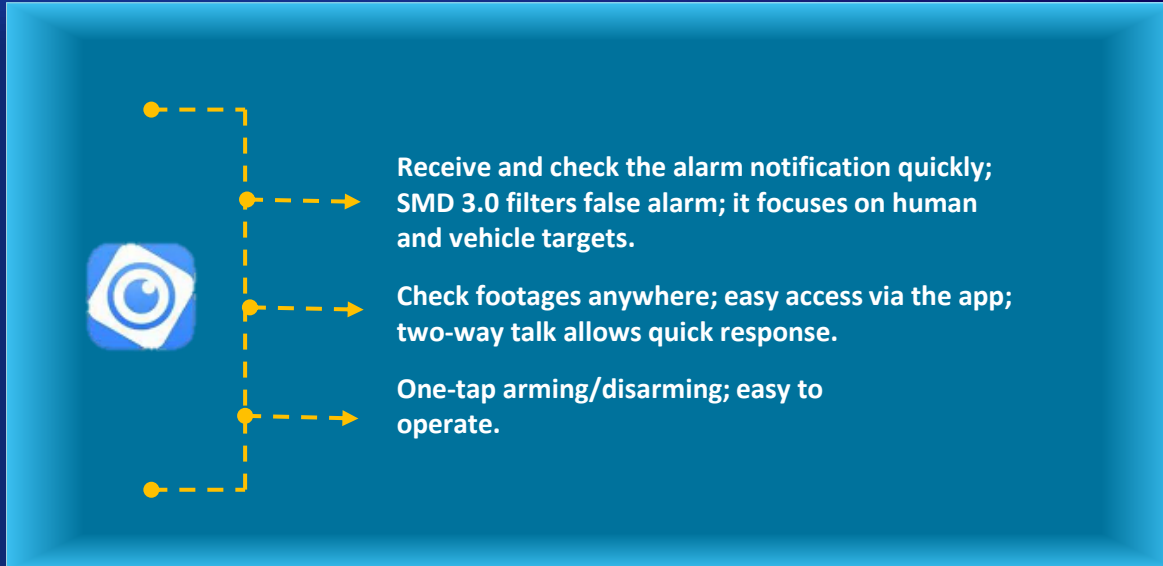


Option 1: Arming/Disarming through an alarm button, which is connected with the camera's alarm-in port.



Option 2: Arming/Disarming via the DMSS

Ecosystem: Connect with DMSS

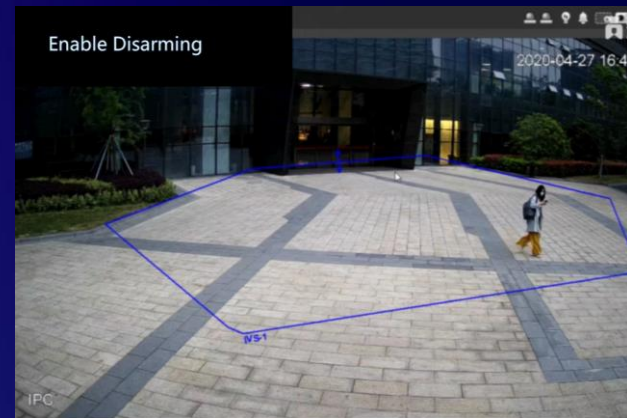
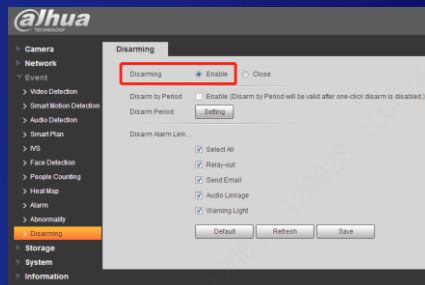
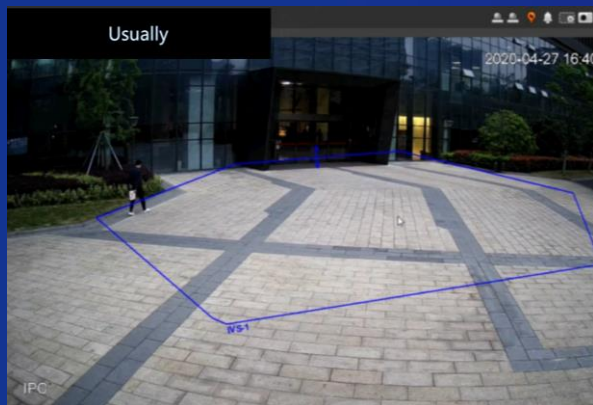


Operation Video

Ecosystem: By WEB/NVR



The Dahua one-tap arming/disarming function offers convenience and easy operation. Customers can disable and recover events through the WEB/NVR, which meets the needs of various scenarios.



AI Features: SMD 3.0

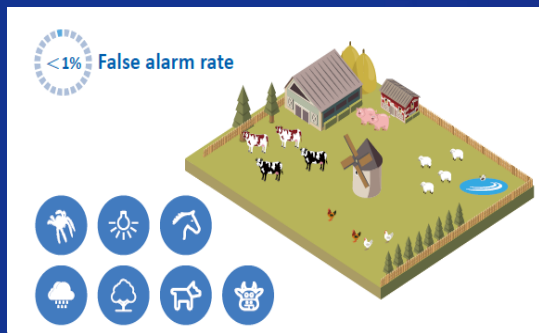


With the continuous in-depth application of SMD in the industry and constant optimization based on actual scenarios, we proudly launched SMD 3.0. Compared with SMD Plus, this new version offers more optimized features:



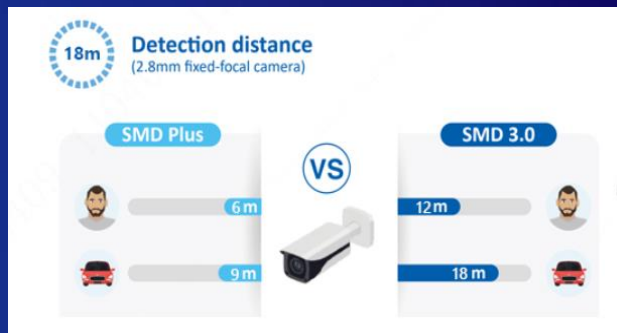
Reduced False Alarms

Through the upgrading of its AI capacities, false alarms caused by animals, leaves, lights, etc. are significantly reduced.



Longer Detection Distance

By constantly improving its AI capacities, the detection range of the same device has increased by as much as **50%**.



Higher Detection Accuracy

Through the upgrading of its AI, the maximum detection accuracy for human and vehicle targets can reach up to **99%**.



AI Features: Perimeter Protection



Powered by deep learning algorithm, Dahua's Perimeter Protection technology can accurately recognize human and vehicle targets. In restricted areas (e.g. pedestrian area and vehicle area), false alarms in intelligent detection based on target type (e.g. tripwire, intrusion) are greatly reduced.



Accurate Detection

False alarm rate: **< 1%**



Target Classification

Focuses on **human** and **vehicle**



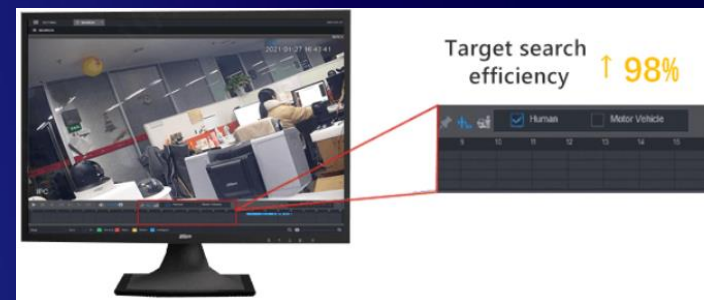
Quick Target Search

Target search efficiency: **↑ 98%**



Remote Monitor

Alarm push notification sending time: **< 1s**



Product Review



TiOC 2.0

VS

TiOC

Smart Dual Illuminators
Active Deterrence
AI

Full-color
Active Deterrence
AI

IR and White Light

Illuminator

White Light

Dual Mic Array

Audio

Single Mic

4K @25/30 fps even when AI is enabled

4K @20 fps when AI is enabled

4K Image with F1.0 Aperture

Image

4K Image with F1.4 Aperture

IR Image with F1.0

Without IR Image

Supports Alarm-in Port

Disarming

Doesn't support Alarm-in
Port

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Application Scenarios: Public Areas



Description

Fire exits or emergency exit lanes must be kept clear at all times. If there are motor vehicles or pedestrians blocking these areas, they will be warned.

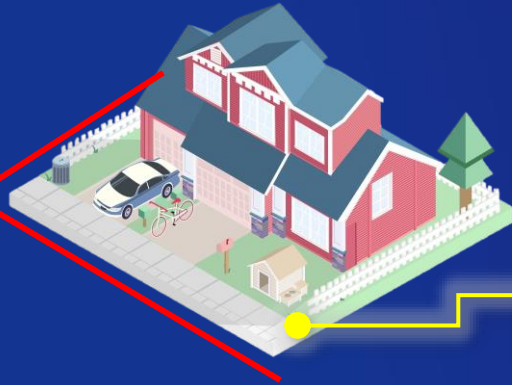
Application location

- **Fire Exits:** When the exit is blocked, the camera will flash its red & blue lights and turn on its siren to warn the vehicle to leave.
- **Emergency Exits:** Warn the people or vehicles within the restricted area. Customized alarm sounds can also be used depending on the scene. The camera's white light can also provide supplementary lighting for emergency exits at night.

Advantages

- **Colorful monitoring:** Color monitoring for better event extraction.
- **Active Deterrence:** Customized alarm sound and red & blue light to warn people and vehicle drivers.

Application Scenarios: Private Places



Description

Full-color cameras can capture the color information of the event. It can also warn off and deter intruders, which can help prevent potential security incidents.

Application Location

- **Wall Side:** Full-color cameras can capture the color attributes of intruders, and can deter them through the Active Deterrence function.
- **Garage Door:** Full-color cameras can capture vehicle's color and plate color details. It can also provide supplementary lighting when parking cars.

Advantages

- **Colorful monitoring:** Presents color alarm videos and captures vivid details of the villa yard at night.
- **Active Deterrence:** Deters intruders and informs the owner regarding the situation.
- **Two-way Talk:** Supports mobile app operation. No need for extra mics and speakers. Its dual mics help improve the audio quality.

ENABLING A SAFER SOCIETY AND SMARTER LIVING