

Product Manual

3D People Counter

HX-CCD22 (Retail Version)



1 2 3

Smart Counter Provider

POE

AI



out +1

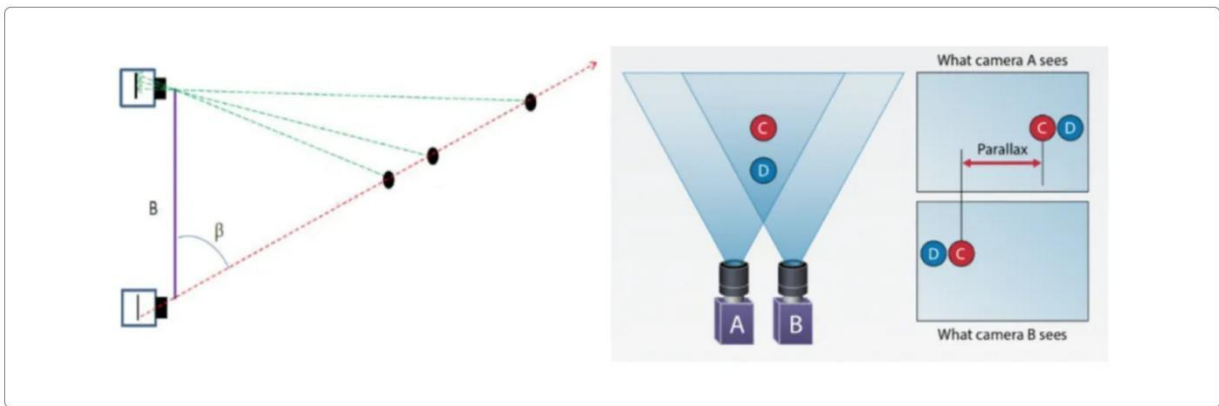
in +1

POE

Core Technology

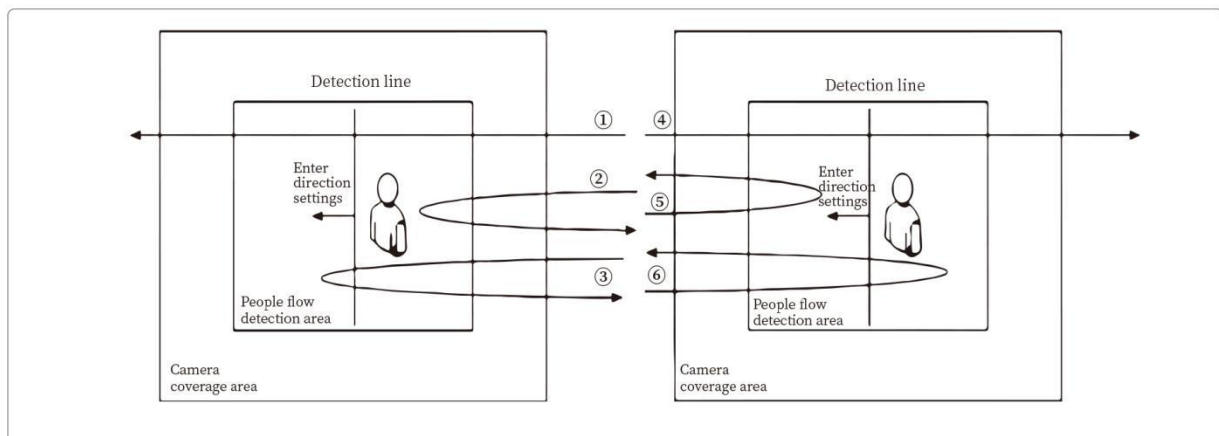
3D Binocular Vision

3D Binocular vision technology, as an important branch in the field of three-dimensional vision, is deeply inspired by bionics. It simulates the visual mechanism of human binoculars and captures and fuses three-dimensional image information of the surrounding environment through two lenses facing the same direction. This technology is based on the principle of triangulation and obtains the three-dimensional information of the object by constructing triangles between the observed object and the image planes of the two lenses. In a binocular vision system, as long as the relative position relationship between the two lenses and the coordinates of the object in the left and right images are known, the three-dimensional size of the object in the common field of view and the spatial position of the coordinate feature points can be calculated. Therefore, a typical binocular vision system usually consists of two lenses and corresponding image acquisition equipment.



People Counting Based on Head and Shoulder Detection

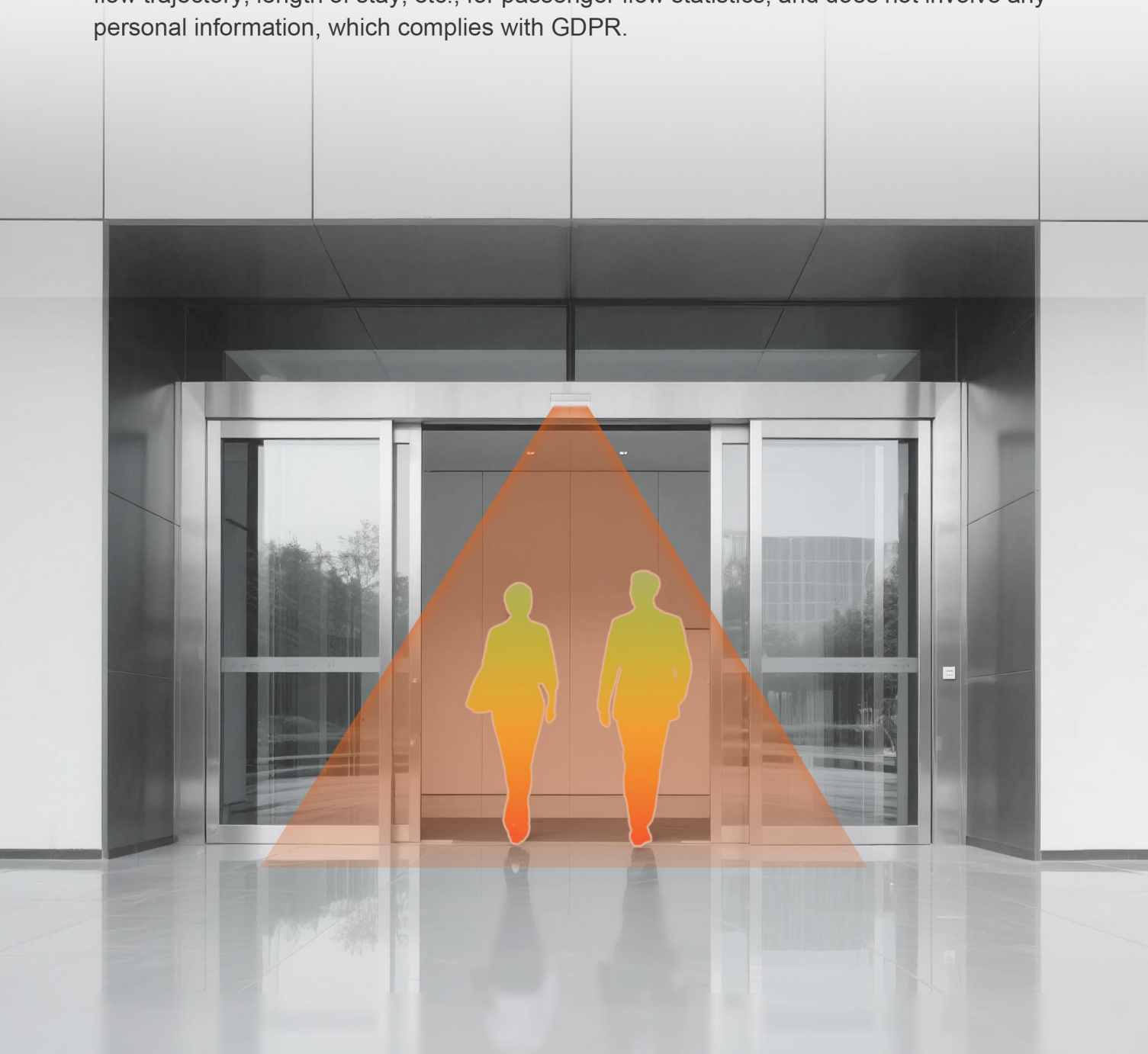
The head and shoulders are used to detect and track human figures. When the center point of the head and shoulders crosses the pre-determined line segment, the passenger flow count is increased; as shown in the figure, action ① is entering, action ④ is leaving, action ②③ is passing, and action ⑤⑥ is turning back. It can also count the number of people staying in the passenger flow detection area in real time.



■ Privacy Protection

This 3D people counter, relying on stereo vision technology, is deployed in public places, focusing on accurate passenger flow statistics, and providing data support for efficient operation of the venue.

The device adheres to the bottom line of privacy protection, does not collect face recognition data, and only collects anonymous passenger flow data, such as personnel flow trajectory, length of stay, etc., for passenger flow statistics, and does not involve any personal information, which complies with GDPR.



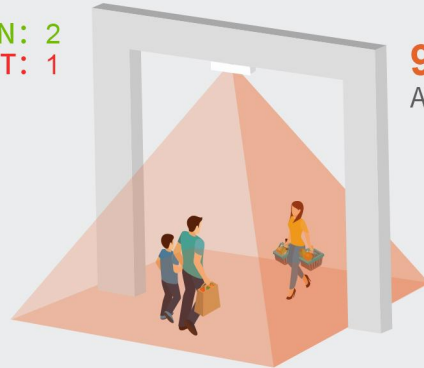
Product Features

Real-time and Accurate Statistics



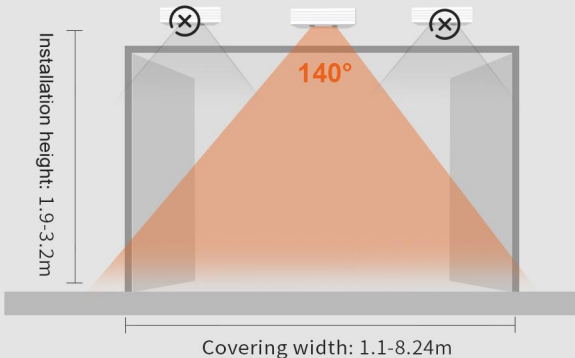
Real-time and accurate human identification, with an accuracy rate of up to 98%, accurately filtering out children and other large objects. With built-in fill light, the fill light is automatically turned on at night with low brightness, and the accuracy is not affected.

IN: 2
OUT: 1



98% ↑
Accuracy

Installation height: 1.9-3.2m



Covering width: 1.1-8.24m

Wide Coverage



3D people counter has a large 140° field of view, which can cover a wider area. It is especially suitable for places with limited ceiling installation space and spacious door areas.

Data Upload Timeliness



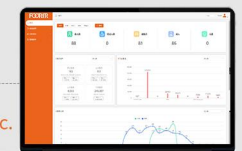
The data upload server time can be customized to support real-time, 1 minute, 5 minutes, 30 minutes, etc.



HX-CCD22



Real-time,
1 / 5 / 30 minutes, etc.



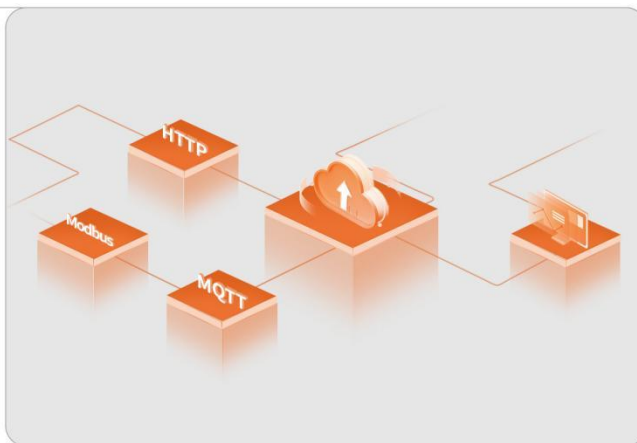
People Counting System

Product Features

Multi-protocol Support



3D people counter transmits data to the server via HTTP POST/HTTPSPPOST/Modbus-RTU/Modbus-TCP/MQTT protocol, supporting secondary development and data docking. Users can log in to the WEB interface through a browser to enter the management platform to view or export data.



Rich Open Interfaces



The device integrates various connection methods such as RS485, IO interface and POE power supply, fully adapting to different installation environments and data transmission requirements to ensure efficient and flexible deployment and application.

Network Smart Devices



Supports local computing, no local server required, supports Flash offline storage, supports network disconnection and continued transmission, supports POE power supply, and supports wired/wireless connection.



Functional Mode

Capacity Limitation Mode

When the number of people exceeds the set value, the device sends a signal to the alarm and the alarm sounds.



Child Mode

After setting the height of children, people who are lower than the height will be recognized as children.



Control Mode

equipment works with relay, control a variety of electrical appliances.



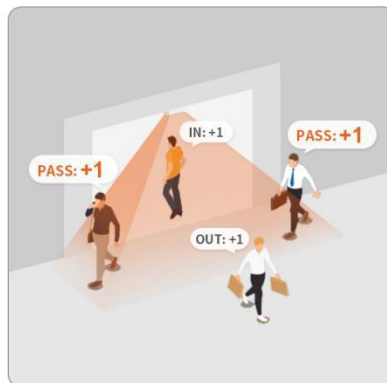
Data Display Mode

The device and the host are matched to visualize the data.



Channel Mode

which can detect the number of people passing by the door and the number of people entering the store.

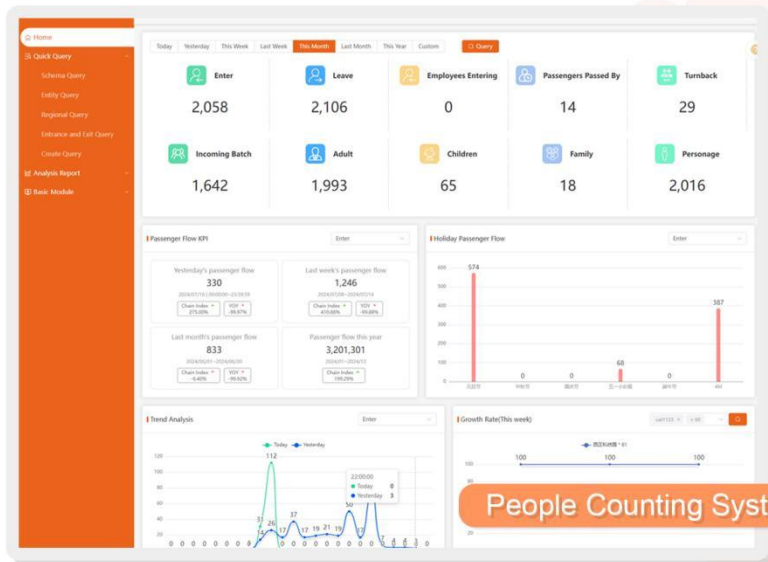


Standalone Mode

The local data of the device can be stored for 90 days, can be exported, and can be used without network.



Data Display



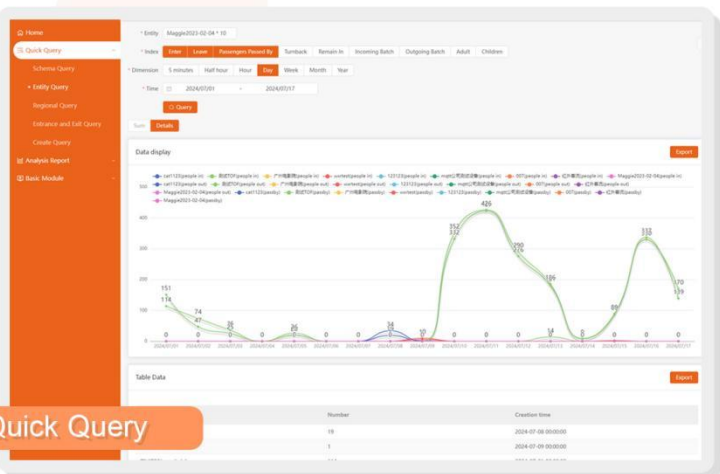
People Counting System

3D people counter data is uploaded to the cloud platform for visual management. The cloud platform provides users with real-time quick query and multi-dimensional analysis reports to help make accurate operational decisions.

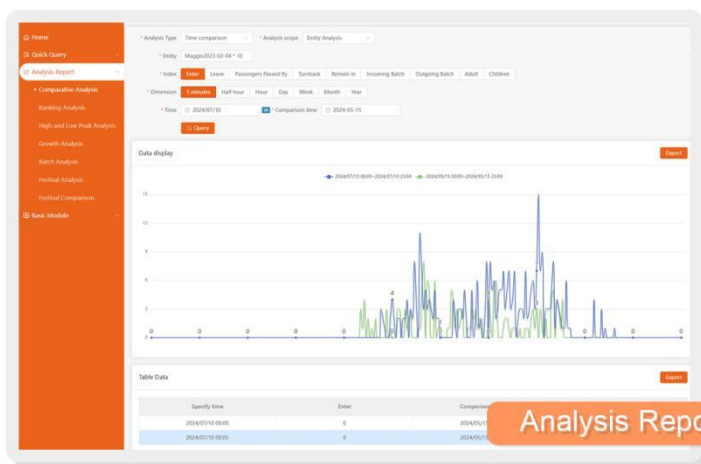
The query indicators include the number of people entering, leaving, passed by, turning back, adult and children, incoming batch, outgoing batch, the number of families and individuals, etc.

Quick query includes schema query, entity query, regional query, entrance and exit query, and users can also create custom queries.

The query dimensions can be selected as 5 minutes, half an hour, hour, day, week, month, year, and can be displayed according to user needs.



Quick Query



Analysis Report

The analysis report covers comparison analysis, ranking analysis, high and low peak analysis, growth analysis, batch analysis, festival analysis and festival comparison, presenting the analyzed passenger flow data in multiple dimensions.

Applicable Scenarios

3D people counter obtains 3D depth information in real time through binocular stereo vision AI sensors, identifies head and shoulder features in complex scenes based on head and shoulder feature algorithms, and achieves accurate people counting statistics through human body tracking algorithms. It is widely applicable to shopping malls, retail stores, buses, scenic spots, libraries, museums, restaurants, factories, supermarkets, parks, buildings, smart toilets, exhibition halls, gyms, etc.



Partners

We provide enterprises with expert teams, technical teams, marketing strategies, training support, product guarantees, and considerate services.

Clients	Public Transport	Retail Business	Exhibitions
1,000+	50+	500+	300+

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