Installation and Configuration Guide for Dual-lens People Counting Camera

Content

Chapter 1. Brief introduction

DS-2CD6810F/C, dual-lens camera, based on the binocular stereo vision technology, adopting 3D head detection and 3D tracking, can obtain accurate real-time trajectory of all moving objects within the monitoring scope, analyze the trajectory data and achieve high-precision people counting. It is very suitable for places where people counting is needed, such as shopping mall, supermarket, chain store, the scenic spot, subway station, bus station, exhibition hall, etc. Meanwhile together with iVMS-4200, platform or server, solutions with comprehensive data analysis and query system can also be established.

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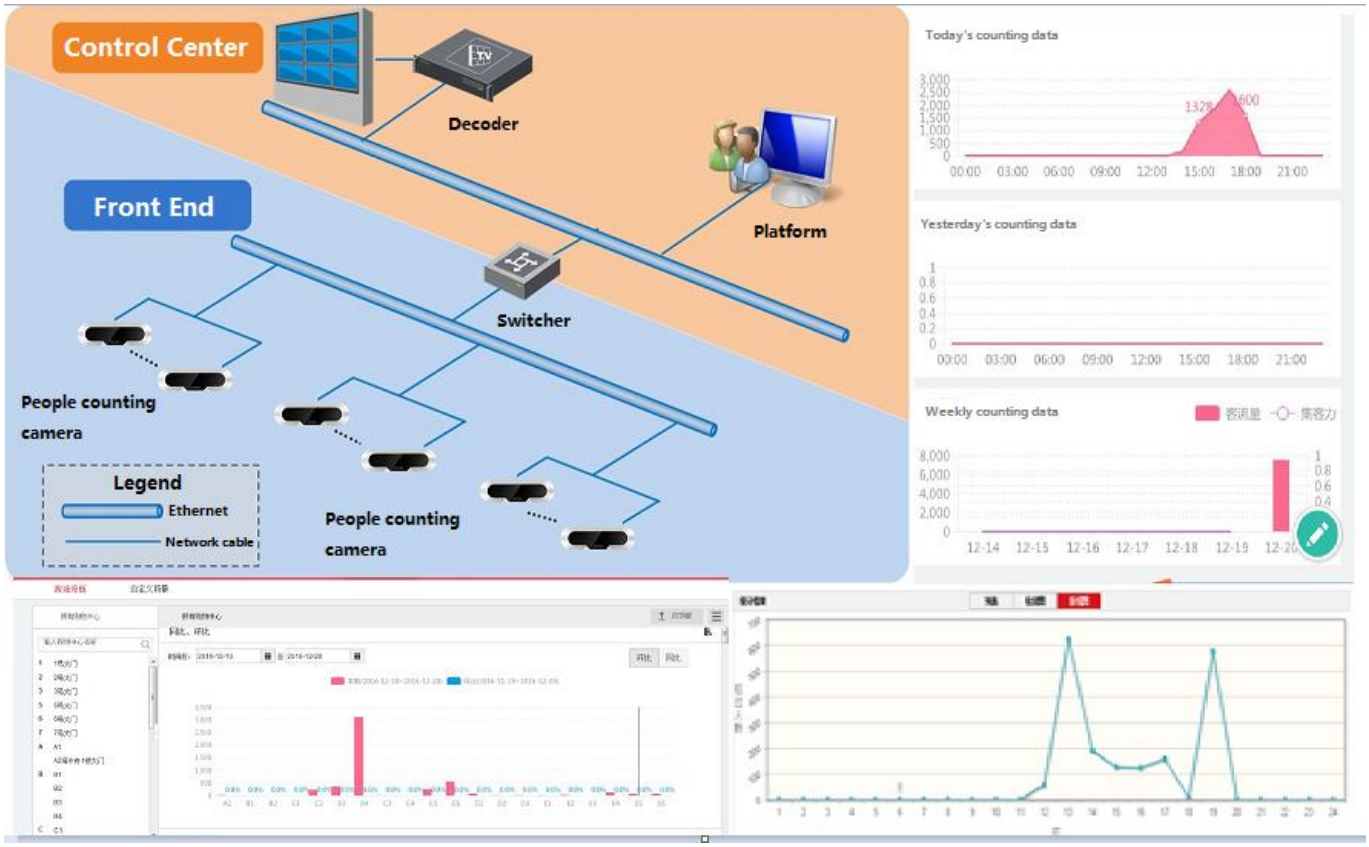


Chapter 2. Installation specification

2.1 Focal length and counting width

The counting width depends on the installation height. The recommended installation height for dual-lens camera is less than 4.0m (13.1ft). The specific corresponding relation shown below:

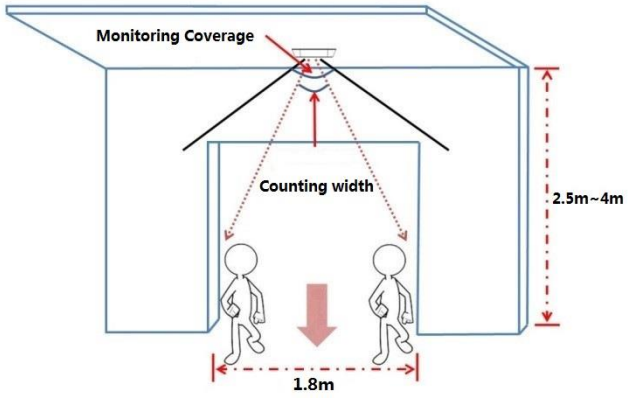
Focal length (mm/ft)	Installation height （m/ft）	Max. counting width （m/ft）	Without doorframe	With doorframe
2/0.066	2.5/8.2	1.8/5.9	Placed in the middle	**0.68m(2.2ft)** to door Placed in the middle
	3.0/9.8	2.9/9.5	Placed in the middle	**1.1m(3.6ft)** to door Placed in the middle
	3.5/11.5	4.0/13.1	Placed in the middle	**1.52m(5.0ft)** to door Placed in the middle
2.8/0.082	3.0/9.8	2.2/7.2	Placed in the middle	**0.85m(2.8ft)** to door Placed in the middle
	3.5/11.5	3.1/10.2	Placed in the middle	**1.17m(3.8ft)** to door Placed in the middle
	4.0/13.1	4.0/13.1	Placed in the middle	**1.5m(4.9ft)** to door Placed in the middle
4.0/0.13	4.0/13.1	2.8/9.2	Placed in the middle	**1.05m(3.4ft)** to door Placed in the middle
	4.5/14.8	3.4/11.2	Placed in the middle	**1.28m(4.2ft)** to door Placed in the middle
	5.0/16.4	4.0/13.1	Placed in the middle	**1.5m(4.9ft)** to door Placed in the middle

2.2 Accessaries

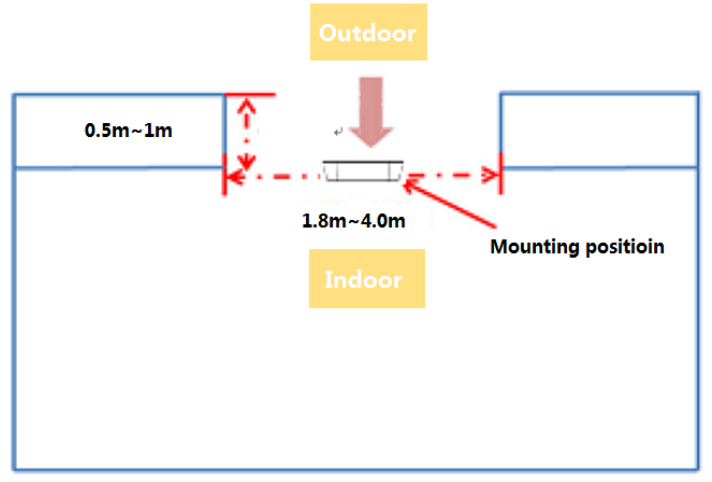
	Dual-lens Camera
	Base Mount base first, then snap on the camera
	L-type wall mount bracket 302701659 DS-2102ZJ, where there ceiling mount is not available or there is doorframe
	Screws
	Quick guide

2.3 Installation steps

Please pay great attention to the mounting position. Inappropriate mounting position may cause loss of accuracy. The recommended mounting position is shown below:



Horizontal sketch map of mounting position



Vertical sketch map of mounting position

Effect picture after installation

- Keep “HIKVISION” logo in the same direction as the “Front” arrow, see picture below:


“Front” arrow and “HIKVISION” logo

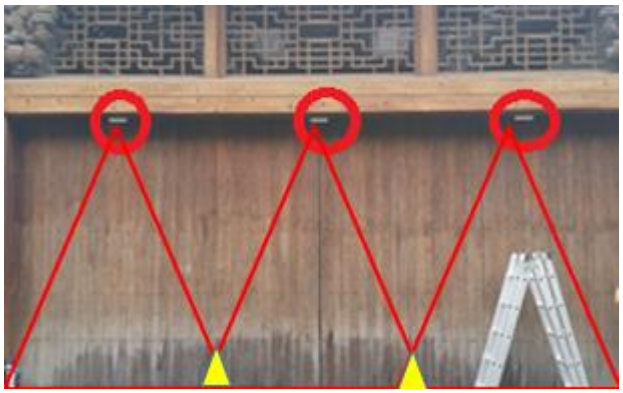
- Make sure camera mounted vertically above the passenger flow(90°vertical by the ground), see picture below:


Passenger flow （perpendicular to the door）

- For some scenarios where there are multiple cameras, mount the cameras according to two rules.

  Rule one: If there are turnstiles, each camera should be mounted to monitor certain turnstile

Rule two: If there is no turnstile, at first, mount the cameras in one line, and make sure the cameras have the same focal length. Then, keep a proper distance between each camera according to the overlap (see the yellow area below) of the adjacent two cameras’ counting width. The suggested overlapping length is between 0.2-0.5m.



Sketch map of multiple cameras installation

Notice

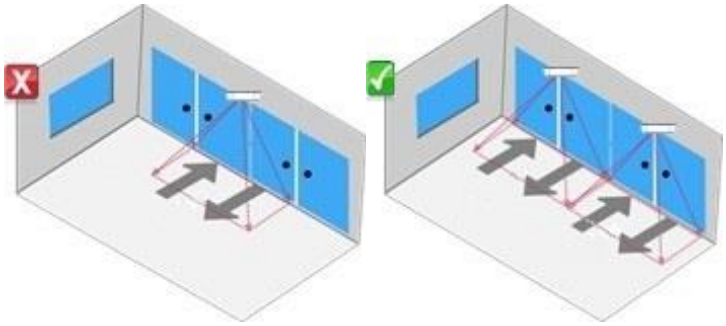
1) People flow should be in vertical up-and-down direction

Passenger flow in horizontal direction (wrong)

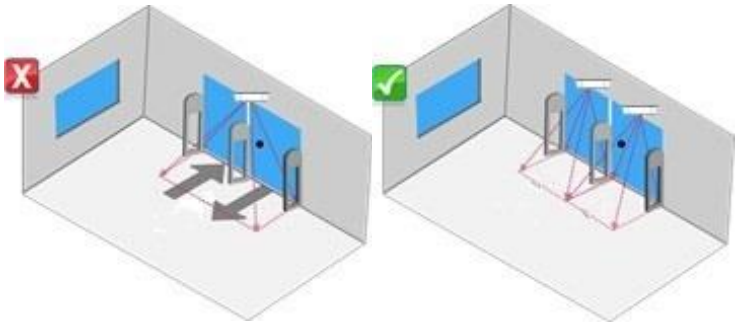
Passenger flow in slant direction (wrong)

Passenger flow in vertical up-and-down direction (right)

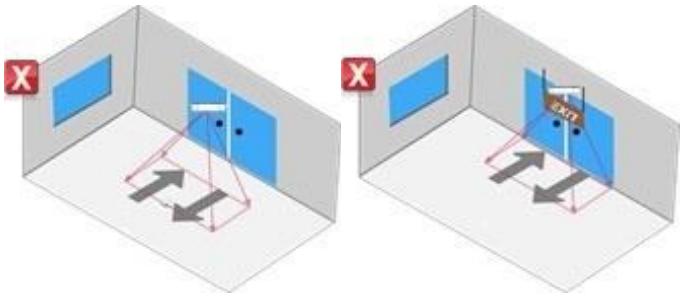
2) Passageway width should be within camera's counting width



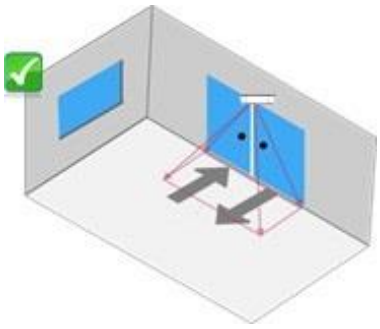
3) Avoid obstacles such glass door, shield door and turnstile that block the camera. For Each divided passageway, mount one camera right above



4) The camera should be mounted as close as possible to the passageway without obstacle. Remove the obstacle or adjust the camera mounting position if there is obstacle below the camera. Meanwhile, to prevent miscounting, if there's sliding door onsite, make sure the trajectory of sliding door not overlap the detection line. Otherwise, the counting number may be misled by the door opening and closing



Too far away from the door/Obstacle below camera



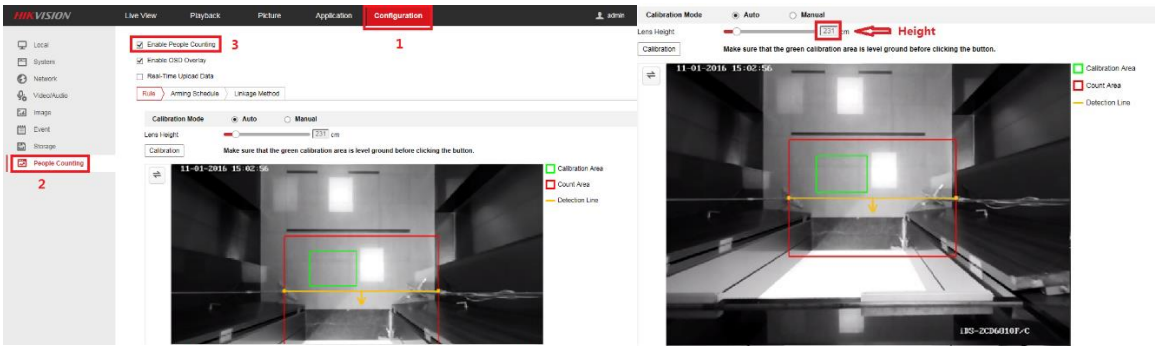
Recommended installation

2.4 Counting configuration

Configuration for single camera

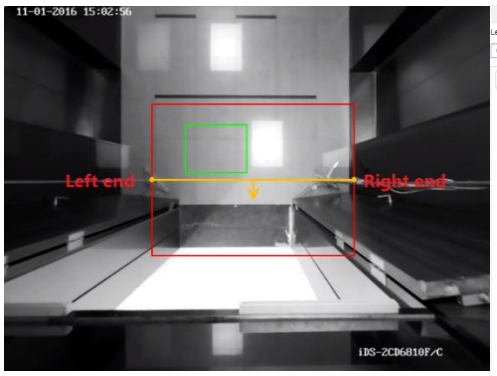
Step 1. Enable People Counting: check [Configuration]-[People Counting]-[Enable People Counting]

Step 2.Calibration: Select the green box, drag it to proper location and click [Calibration]. After this, “Height” in the configuration page will refresh (close to the real height). A red box, which means the counting scope, and yellow detection line will turn up. The arrow shows the direction of entering. See picture below:



Notice: If auto calibration fails, switch to [Manual] and input the measured “Height”, then click [Calibration].

Step 3. Detection line: move the detection line to proper location, about 0.5m to the door. Then adjust the length of detection line to the real door’s width by dragging detection line’s two ends. See picture below:



Step 4. Save configuration and test: after configuration, click [save] and test. If miscounting happens, slightly adjust the detection line's location and length.

Configuration for multiple cameras

Step 1. Do configuration for each camera following the steps above

Step 2. Move each camera's detection line and connect the ends of adjacent lines. Some objects could be placed on the image border for reference. See picture below:

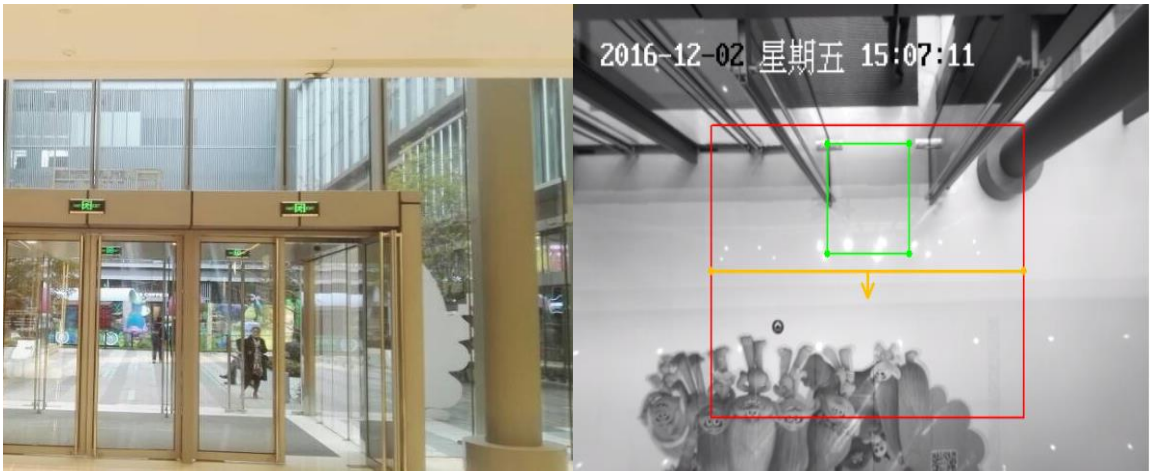
Configuration of each detection line

2.5 Parameter description

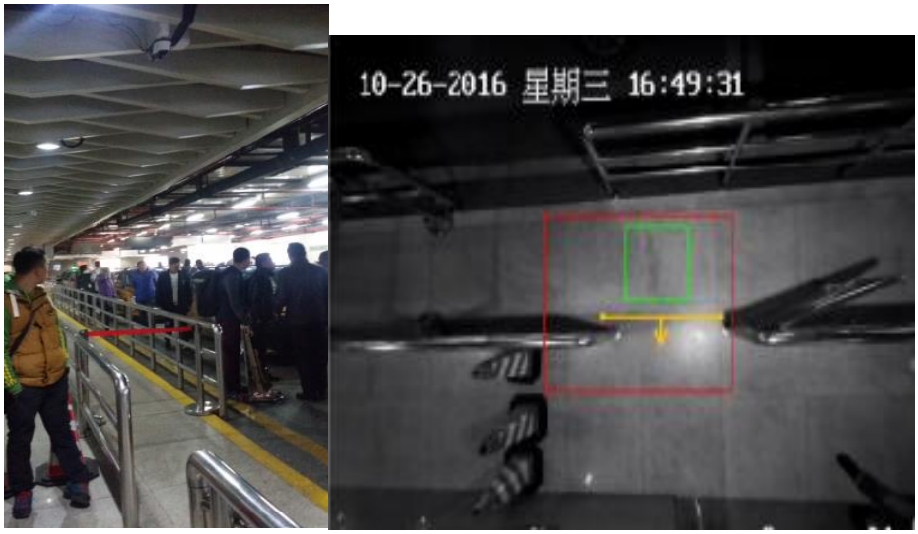
- Real-time data upload: For every second, counting data will be uploaded to the center and bitrate will increase when this function is enabled. This function is recommended to be disabled.
- Advanced parameter: Support data cleanup. By enabling the height filtration function, obstacle lower than the filtration height could be filtered.

Chapter 3. Application scenario

The application scenario and the mounting position are very important to the people counting accuracy. Usually the camera is mounted above the passageway and the door. Below shows the mounting position and configuration for two typical examples:



Mounting position and configuration for supermarket



Mounting position and configuration for subway