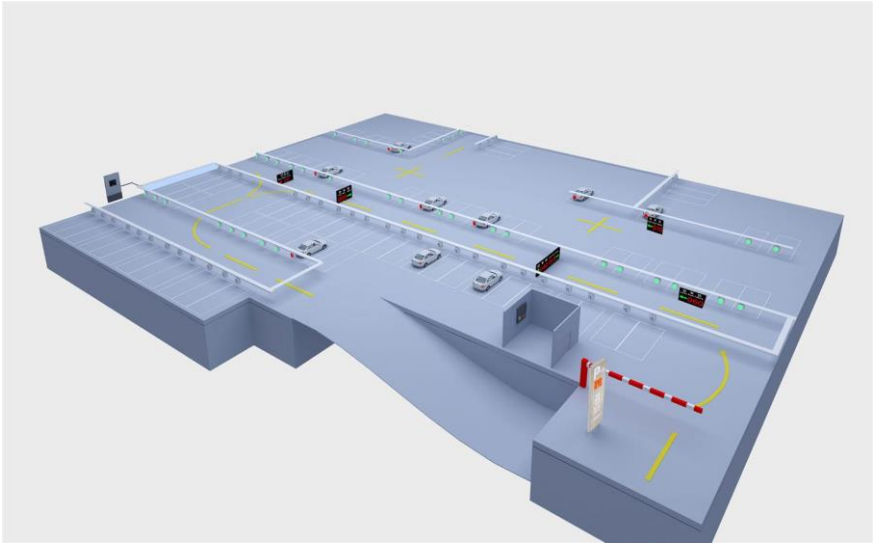
Smart Video Parking Space Camera Specification

Model: TD-PB-401



Basic Information.

Video parking camera is an intelligent device used in parking guidance and reverse car search system to detect the presence and absence of vehicles in parking spaces. The camera integrates vehicle status indicator lights and can display seven colors of red, green, yellow, blue, cyan, purple and white in real time. Red light indicates that there is a vehicle, green light indicates that there is no vehicle, and yellow light indicates abnormal occupancy. The equipment is widely used in underground parking lots and ground parking buildings and other complex ambient light scenes, which can effectively solve the problem of parking difficulties and finding cars. Video parking space cameras have two series of cameras, which are single-lens series parking space cameras that support two parking spaces and three parking spaces, and dual-lens series parking space cameras that can support three parking spaces and six parking spaces. Using advanced video image processing technology, parking space status processing and license plate recognition can be performed on captured parking space image information, realize the comprehensive function of capturing vehicle pictures, identifying license plate numbers and determining the status of parking spaces.

Features.

- 4 million high-definition resolution, equipped with high-precision parking detection and license plate recognition algorithm, recognition accuracy, recognition speed industry-leading, comprehensive recognition rate of more than 99.8 percent.
- Adopt deep learning CNN algorithm to greatly improve the accuracy of unlicensed car recognition (support front/rear)
- Support custom voice broadcast, drive away, effectively solve the problem of inconvenient operation control of the parking lot, support Bluetooth control lock, camera direct control ground lock, no wiring
- Support foreign body occupation alarm, provide alarm inspection function for foreign body occupation such as ice cream cone
- Support the anti-blocking function of parked vehicles, effectively solving the frequent state changes caused by the parking vehicles being blocked by obstacles
- Wide voltage design (DC8-48V), can support POE power supply, power supply adaptability
- Support optional Ibeacon module, can realize Bluetooth indoor navigation
- Support 3-way external IO indicator lights, can realize one car and one light, using bright energy-saving LED luminous tube, high brightness, low power consumption, support 7-color indicator lights
- Network hand in hand design, support multiple camera network series
- Using the industry's first-class manufacturers of devices, the hardware solution is mature, stable, high reliability, high protection level.
- Equipped with low illumination sensor, suitable for all kinds of low light and reverse light environment, and can ensure better effect

Hardware Parameters

Name	**4 million video parking space detection cameras**
Processor	**ARM license plate recognition chip**
Calculation force	**0.5T**
Sensor Type	**1/2.7" CMOS Image Sensor**
Minimum illumination	**0.1Lux**
Number of vehicles supported	**Monocular 3 parking spaces, binocular 6 parking spaces**
Lens	**2.8mm (standard) /3.6mm/6.0mm**
Parking Lights	**7 species, red, yellow, blue, green, cyan, purple, white**
license plate recognition rate	**≥ 99.8%**
Variable lamp accuracy	**≥ 99.8%**
Types of License Plate Recognition	**Blue, yellow, new military police, Guangdong-Hong Kong/Guangdong-Macao, embassies and consulates (old/new), old-fashioned non-reflective, Coach car, civil aviation, new energy (size car), emergency license plate**
Unlicensed vehicle identification	**Support front and rear identification**
Other Functions	**Supports Vehicle occlusion prevention, Foreign Body Occupant Alarm, Personnel detention alarm.**
Video Resolution	**Maximum 2560*1440**
Picture resolution	**Maximum 1440P**
Video compression format	**H.264, H.265**

Electronic Parameters

Network Interface	10/100M network adaptive, RJ45 adapter * 2 channels, support hand in hand
External control light interface	3.81 terminal * 3 way
iBeacon/control lock	Support (optional)
Voice broadcast	Support (optional)
485 interfaces	3.81 terminal * 1 way
POE power supply	Support POE + (optional) power supply pin 45 + 78-
Bypass	Support
Power	5.08 terminals * 1, standard DC12V, support DC8-48V wide voltage power supply
Power consumption	No IO external control lamp ≤ 4W, including IO external control lamp ≤ 8W
Working temperature	-20 °C ~ 60 °C
Dimensions	φ118*124mm
Weight	450g
Installation	Ceiling bridge installation method

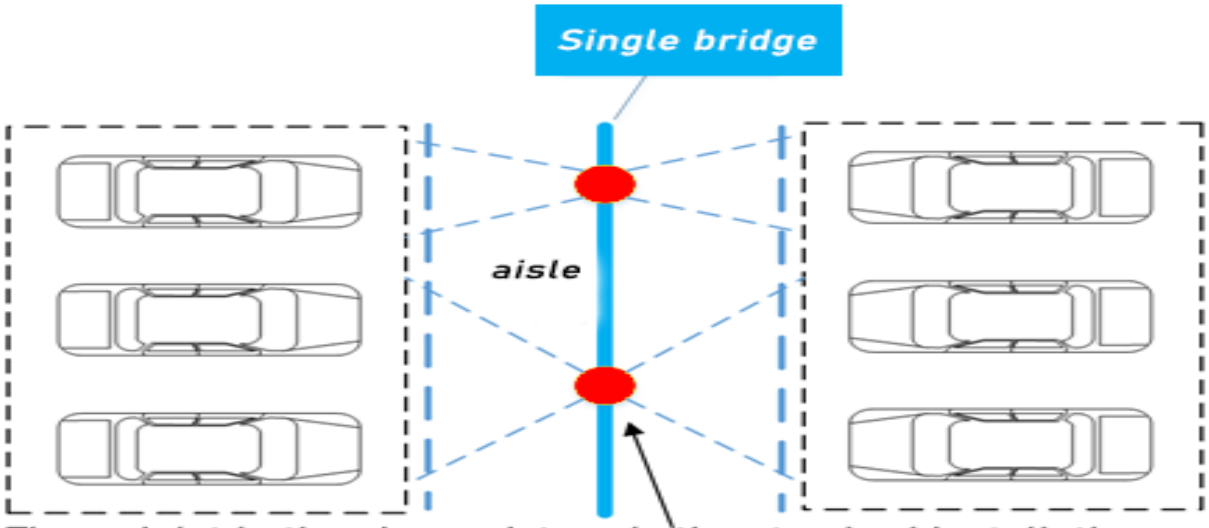
Camera Installation.

- The installation distance of the three parking spaces (2.8mm lens) (camera ground-parking line in front of the parking spaces) is 2.5-4.0 meters.
- The installation distance of the three parking spaces (3.6mm lens) (camera ground-parking line in front of the parking spaces) is 4.0-6.0 meters.
- The installation distance of the three parking spaces (6mm lens) (camera ground-parking line in front of the parking spaces) is 6.0-8.0 meters.

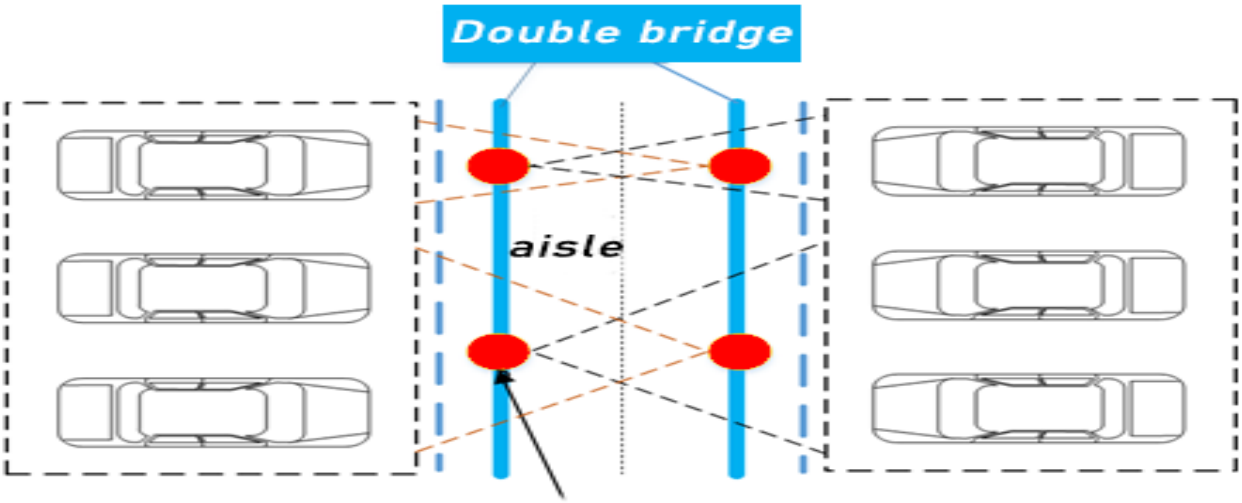
Camera Type	Lens model	Installation distance (horizontal distance of camera from parking line)	Installation height (height of parking space camera from the ground)
Three-car camera	2.8mm (standard shipping lens)	2.5-4.0m	2.0-3.5m
	3.6mm	4.0-6.0m	2.0-3.5m
	6mm	6.0-8.0m	2.0-3.5m

Caution: ***Try to make the license plate face the camera direction.***

Suggestion: The cameras are installed alternately to enable the remote-control light function (as shown in the figure below)



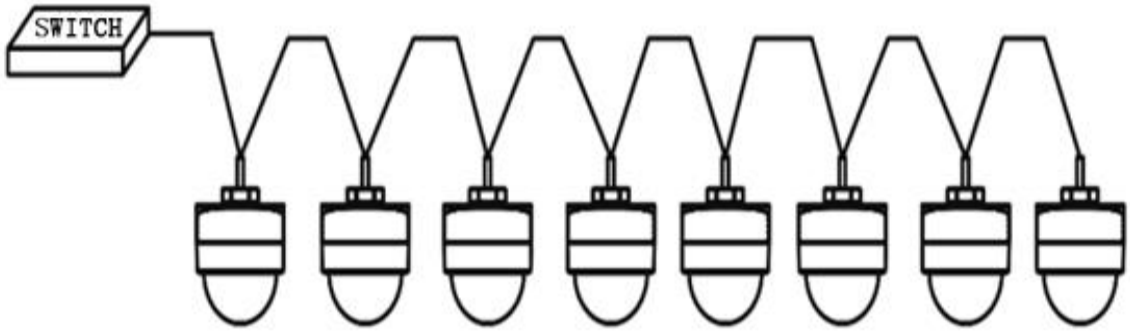
The red dot in the above picture is the standard installation method of the 3-parking camera in a Single bridge scenario



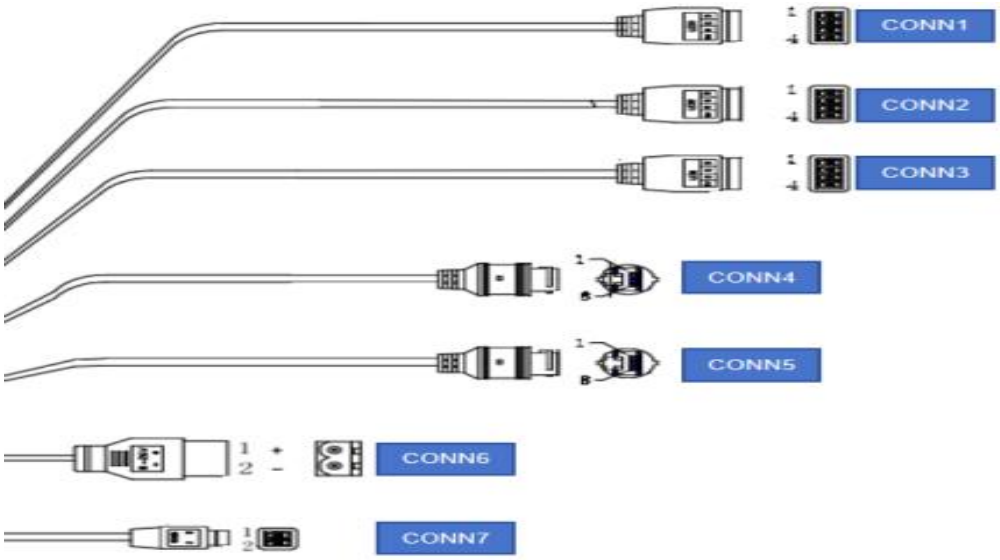
The red dot in the above picture is the standard installation method of the 3-parking camera in a double bridge scenario

Camera connection

"Use principle" hand in hand



Camera interface description, use dual network port serial mode for network connection.

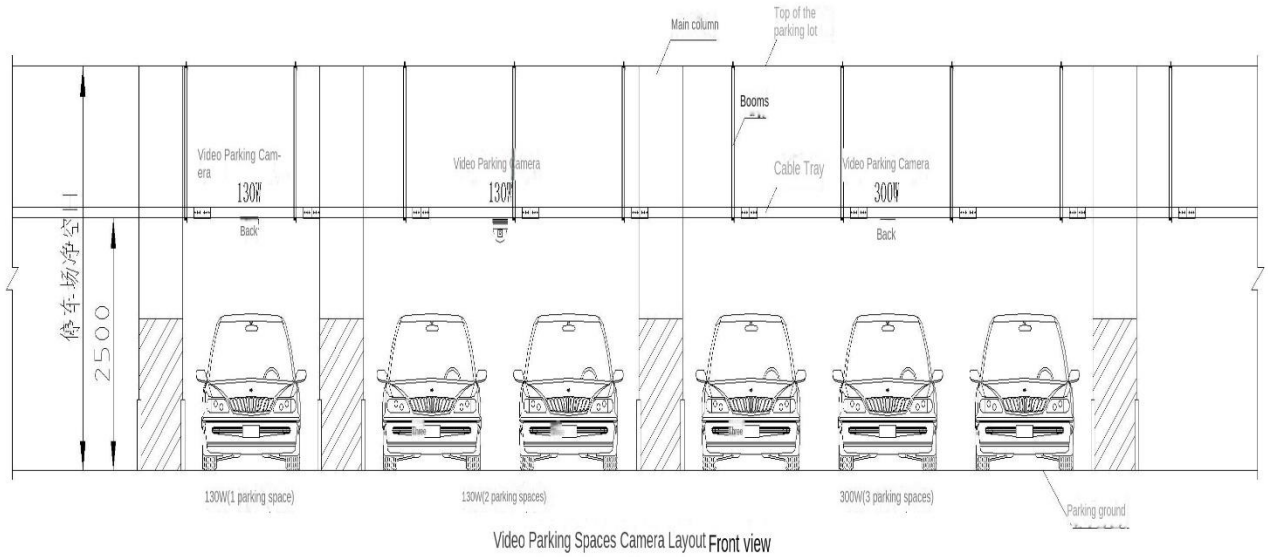


Notes:

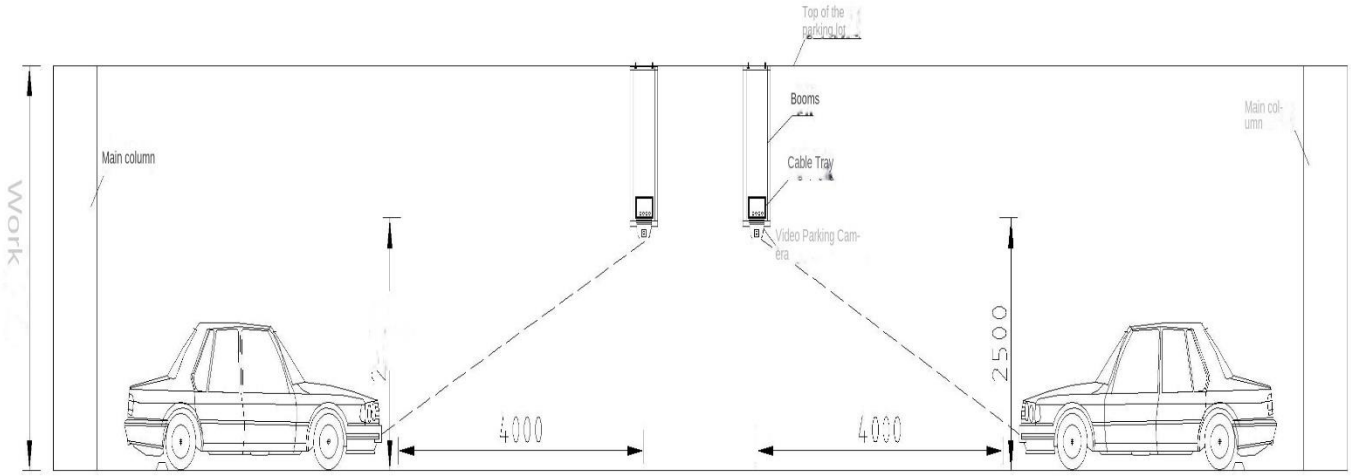
① A +/B-pole identification on RS485 terminal and power supply terminal to avoid reverse connection.

② IO external lamp terminal has distinguished external indicator light sequence LED1, LED2, LED3.

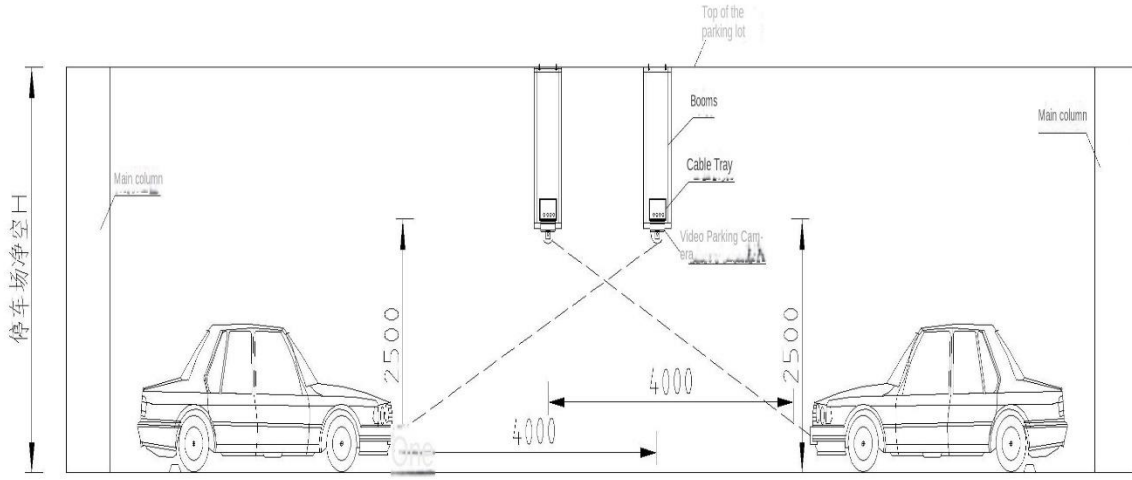
③ IO external lamp function is optional



Video Parking Spaces Camera Layout Front view



Video Parking Spaces Camera Layout Side view



Video Parking Spaces Camera Layout (Cross Control) Side view

Video parking camera installation instructions:

(1): Video parking space camera installation height is 2.3m ~ 2.8m.

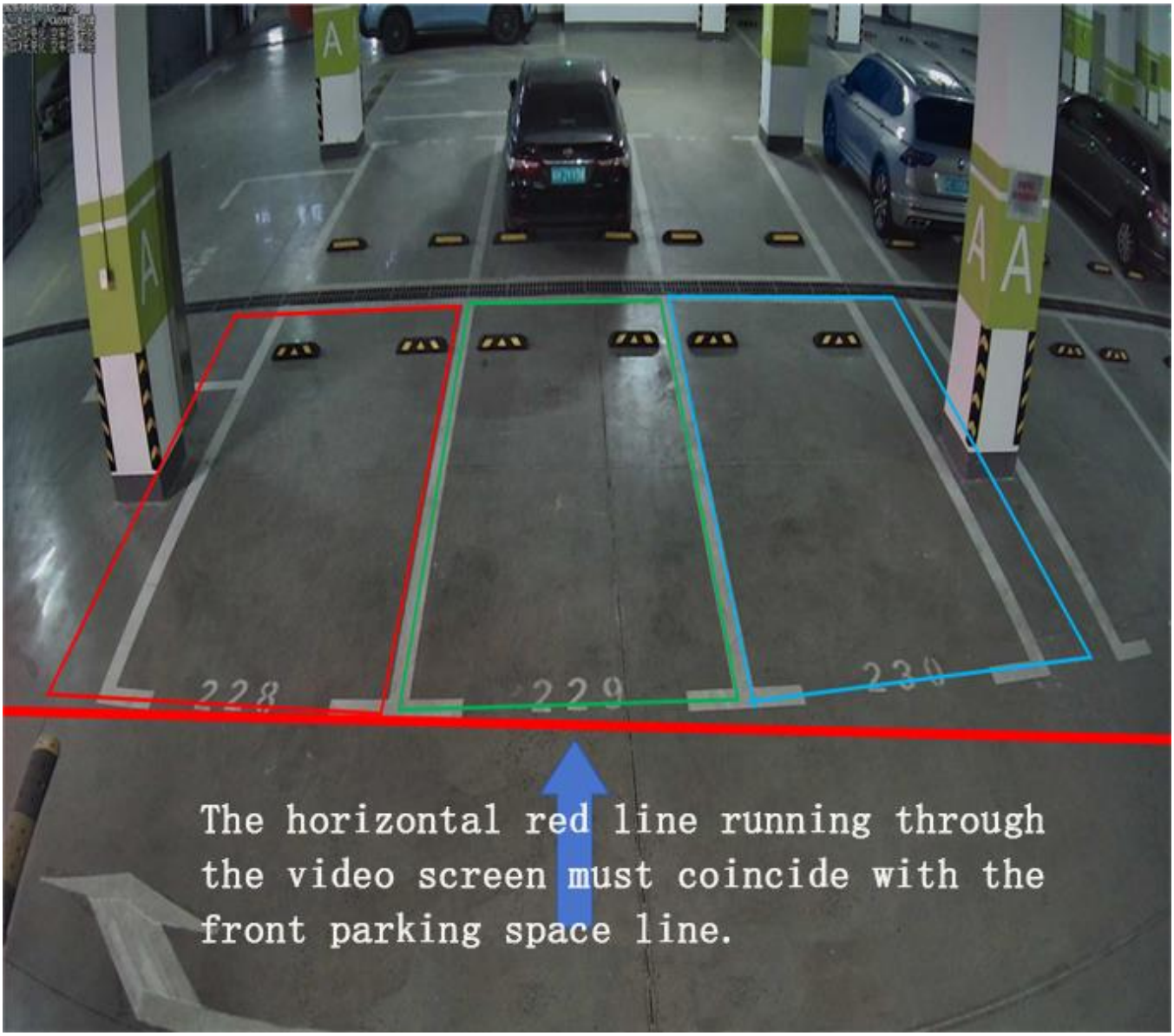
(2): The horizontal distance between the video parking camera and the parking line is 4 meters. If the conditions are limited, the adjustable range is as follows:

1.3 million (f = 4mm):2.4m ~ 4.5m.

3 million (f = 4mm):3.8m ~ 7.5m.

(3): Video parking space cameras and parking space indicator lights should be centered in the area covered by their field of view.

(4): 1.3 million pixel video parking space camera covers 1~2 parking spaces, 3 million pixel video parking space camera covers 1~3 parking spaces; The parking space indicator is integrated on the video parking space camera.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The horizontal red line running through the video screen must coincide with the front parking space line.