360 panoramic instruction

Notes before installation:

1) Confirm whether the accessories are complete. 2) Do not unplug all the plugs of this product with electricity. 3) When matching with decoder, large screen navigation and original car host, please test whether the functions are normal before installation. 4) Please set the time correctly after the installation is completed.

一、Product kit

No.	Kit name	Quantity	Description
1	panoramic host box	1	main board, hardware shell
2	main cable	1	including ACC, B+, GND, track box (RX,TX), AV/AHD/VGA video output, four-way camera input, reverse detection, CAN cable, remote control. Reverse detection, CAN cable, remote receiver head, etc.
3	Camera	4	Front (bracket), rear (bracket), left (small umbrella cap), right (small umbrella cap) (small umbrella cap)
4	extension cable	4	front view 3P black-400cm long rear view 4P yellow-600cm long left view 4P red-400cm long
5	Remote control	1	for interface operation

二、 Kit Legend

【Front view】

【Left view】

【Right view】

【Back view】

【Front View Extension】

(with bellows)

【Left View Extension】

(with turn signal detection)

【Right View Extension】

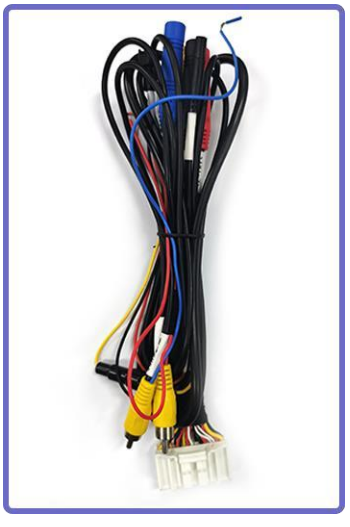
(with turn signal detection)

【Back View Extension】

((with reversing detection)

【360 host】

【main wire】



【remote control】

Third, the camera installation introduction

Front view camera recommended installation location: the front of the network location, using special molds or paste screw fixing method

Note: It is recommended to contact a professional master installation

Rear view camera recommended installation location: the rear license plate above the slot location (license plate light location), and does not affect the switch tailgate

Note: It is recommended to contact a professional master to install

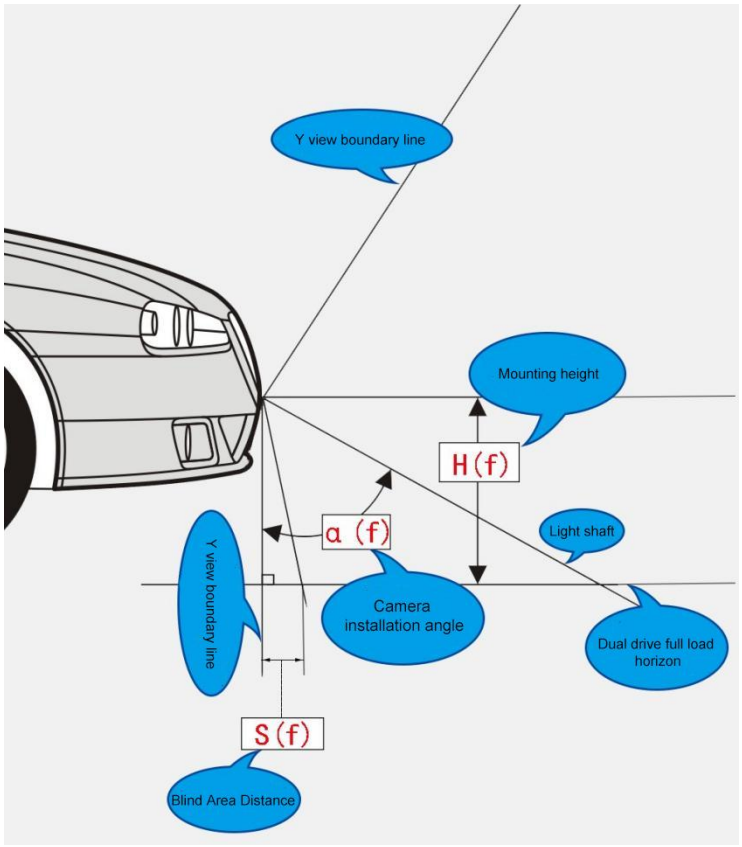
Left-view camera recommended installation location: the bottom of the left rearview mirror position, using a special mold or punching installation method.

Note: hole punching installation need to rotate the lens angle to the level of the body to protect the image screen integrity
Note: It is recommended to contact professional master installation

Recommended installation position of right view camera: the bottom position of the right rear view mirror, using special molds or punching installation method, note: punching installation need to rotate the lens angle to the level of the body, to ensure the integrity of the image screen

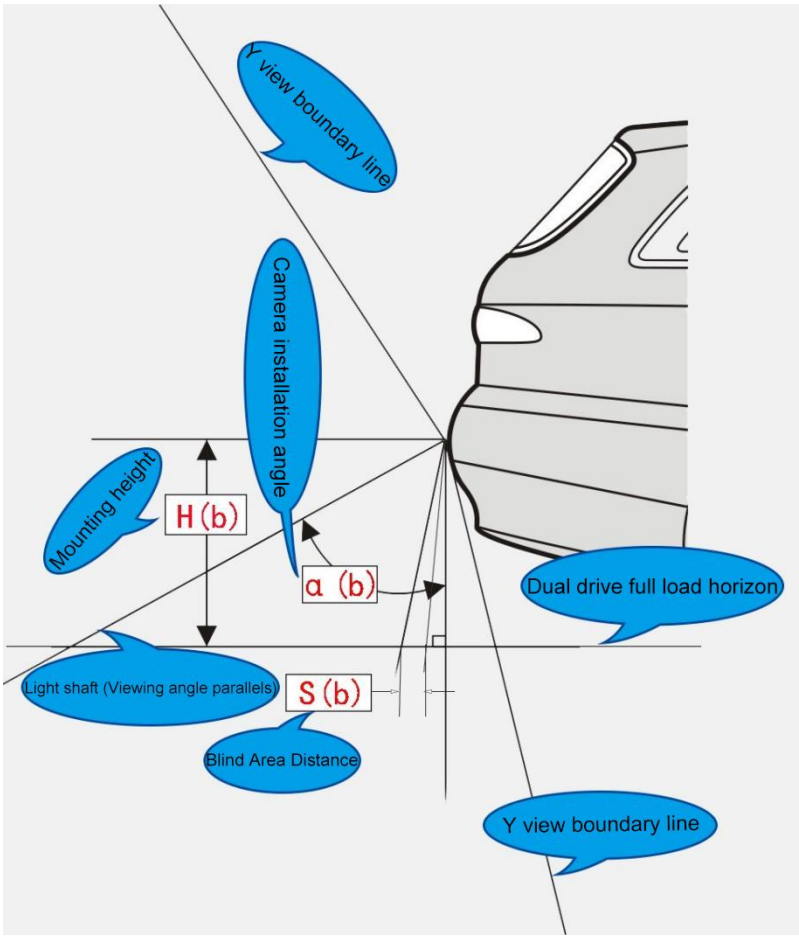
Note: It is recommended to contact professional master installation

Front view camera installation parameters recommended.



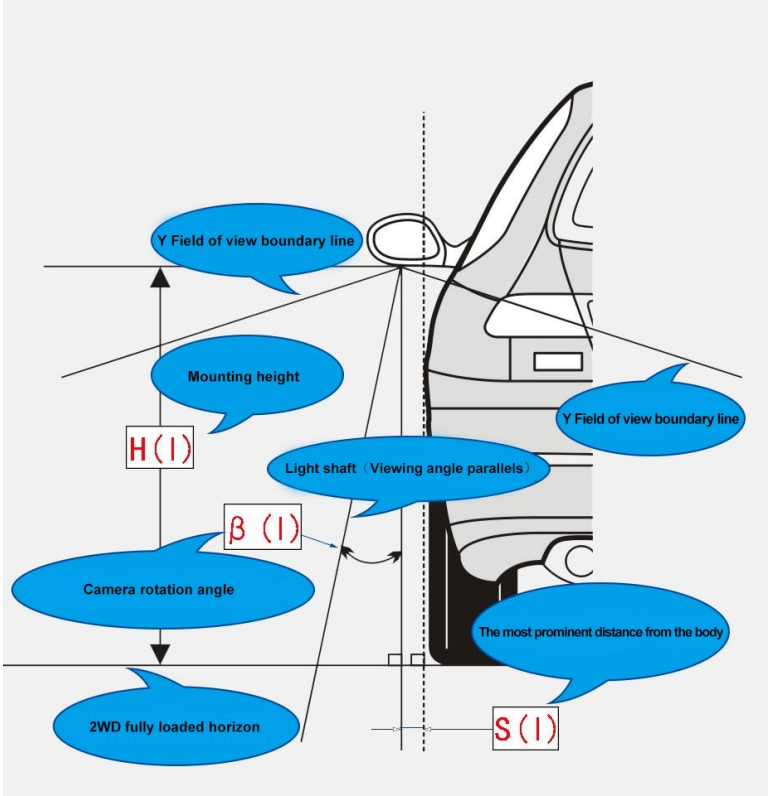
Parameter definition	Parameter range
Camera height	600~800 ㎜
Distance between camera optical axis and ground focal point and body	1000~2000 ㎜
Body ratio	10%~20%
Blind area distance	< 250 ㎜
Deviation from the center axis	0~10mm
Visibility index: 1200mm objects are visible at 1000mm directly in front	

Rear view camera installation parameter recommendation.



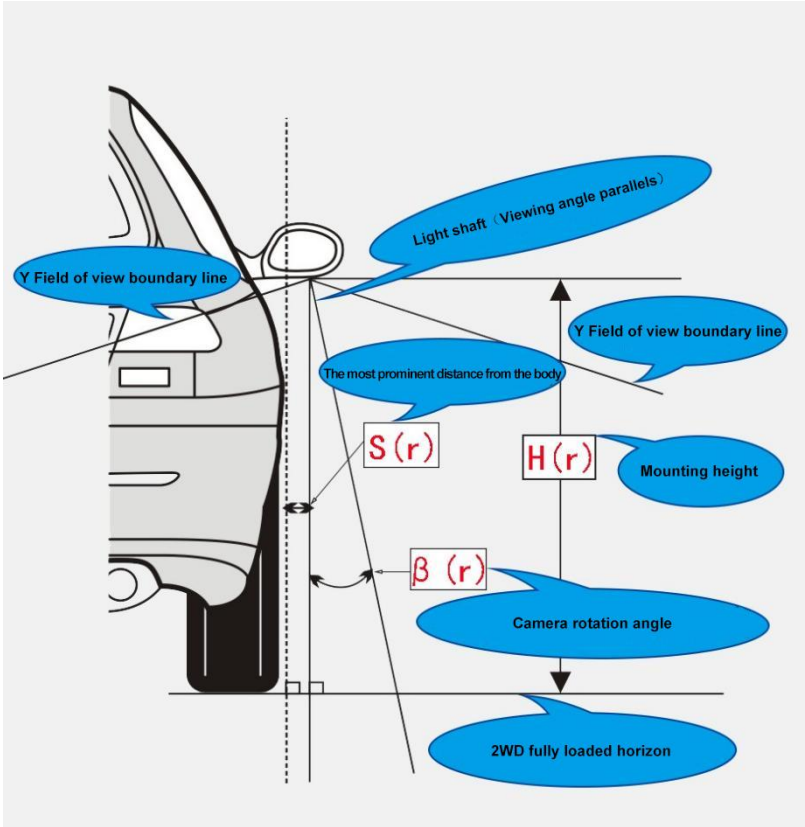
Parameter definition	Parameter range
Camera height	600~900 ㎜
Distance between camera optical axis and ground focus from body	1000~2000 ㎜
Body proportion	10%~20%
Blind zone distance	< 250 ㎜
Deviation from the center axis	0~100mm
Visibility index: 1200mm objects are visible at 1000mm directly in front	

Recommended parameters for left-view camera installation.



Parameter definition	Parameter range
Camera height	800~1100 ㎜
Distance between camera optical axis and ground focus from body	1000~2000 ㎜
Body proportion	10%~20%
Blind spot distance	< 250 ㎜
Interference between camera view sector and rearview mirror shell	No interference
Visibility index: 1200mm objects are visible at 1000mm in front	

Right-view camera installation parameters are recommended.



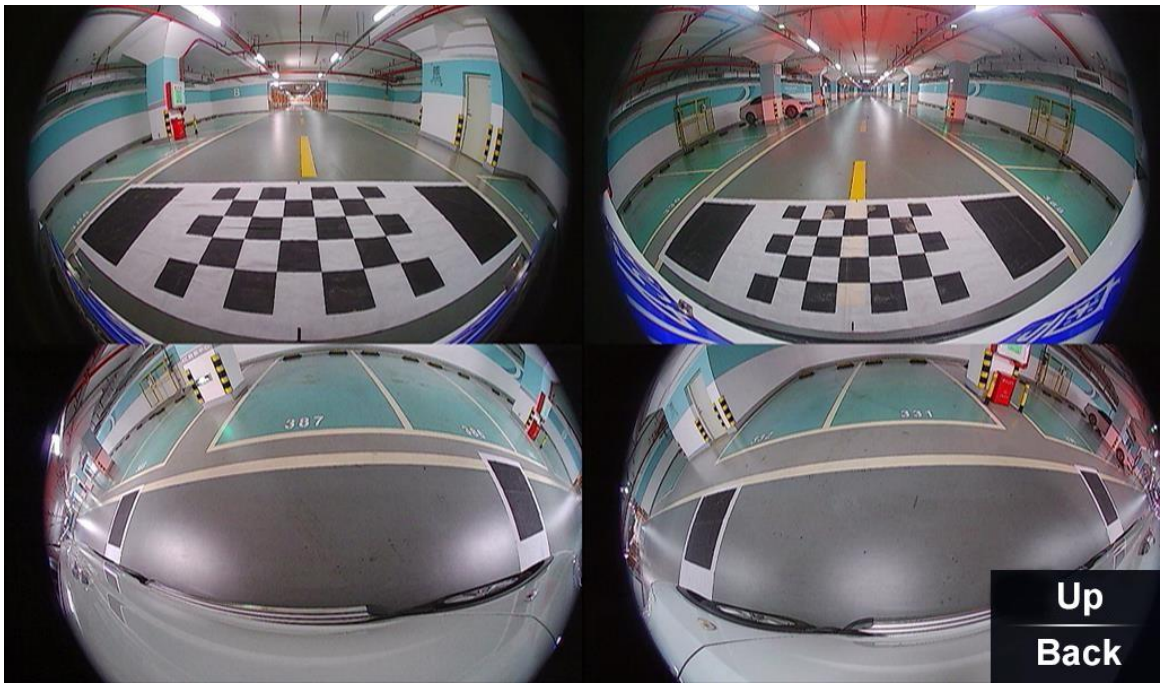
Camera height	**800~1100 ㎜**
Distance between camera optical axis and ground focus from body	1000~2000 ㎜
Body proportion	10%~20%
Blind spot distance	< 250 ㎜
Interference between camera view sector and rearview mirror shell	No interference
Visibility index: 1200mm objects can be seen at 1000mm directly in front	

After installation, the front and rear camera screens retain 5%-10% of the body information, and ensure that the screen is facing the corresponding direction.

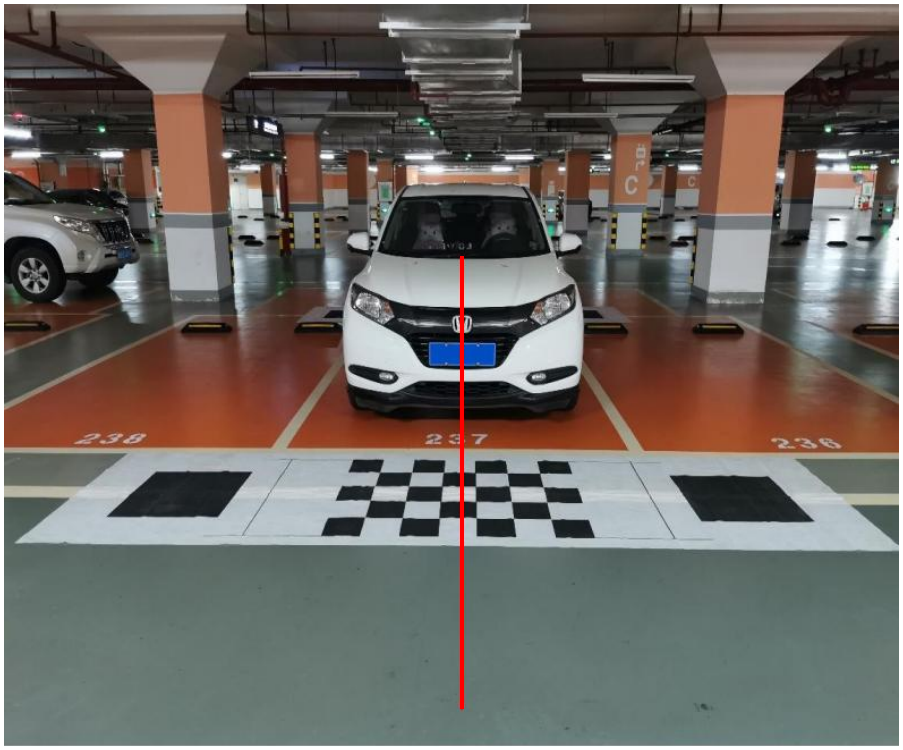
Legend：

Four, calibration cloth placement instructions

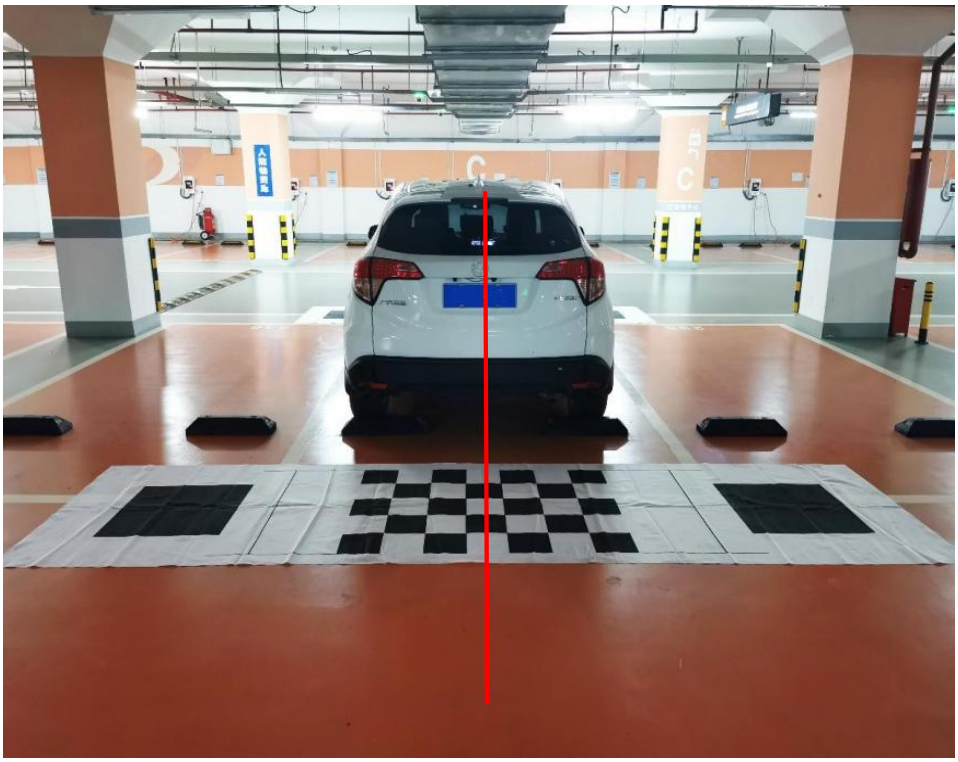
Calibration cloth placement example: image order: front, back, left, right (horizontal viewing)



The center of the front calibration cloth is aligned with the center of the vehicle
The front calibration cloth is parallel to the front of the vehicle



The center of the rear calibration cloth is aligned with the center of the vehicle

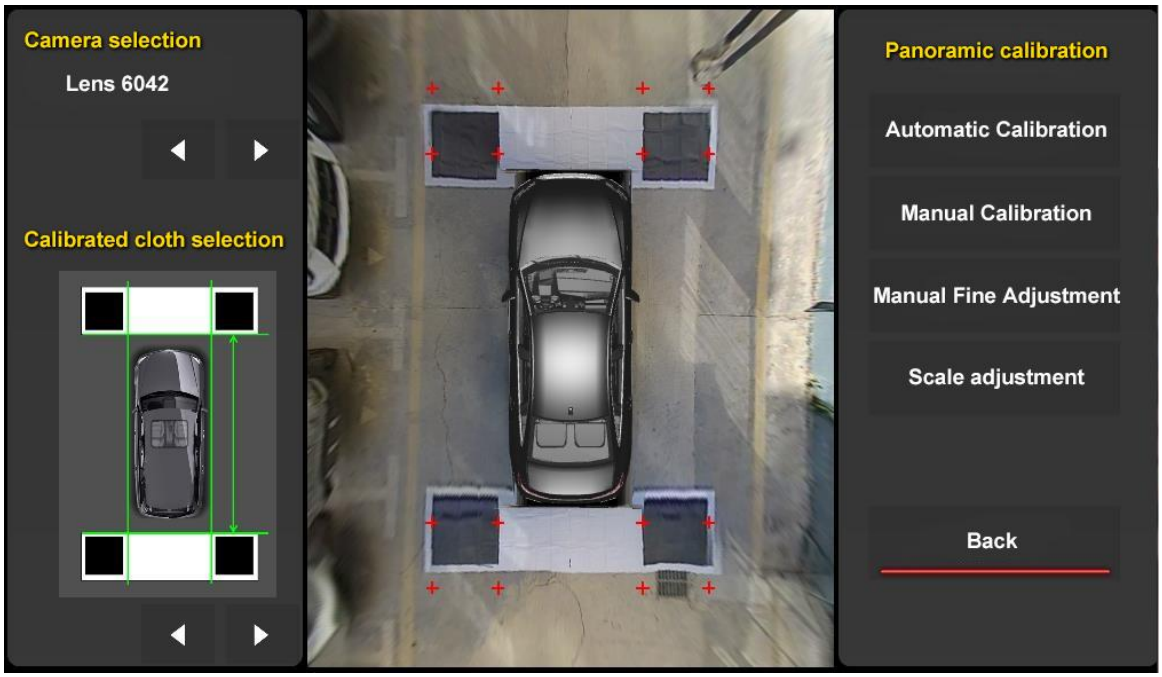


The rear calibration cloth is parallel to the rear of the vehicle

V. Calibration instructions：

1. Please make sure the calibration cloth is complete and clearly visible before calibration.

2. Do not calibrate under the sun or light with serious reflection, or in a place with mixed shadows.



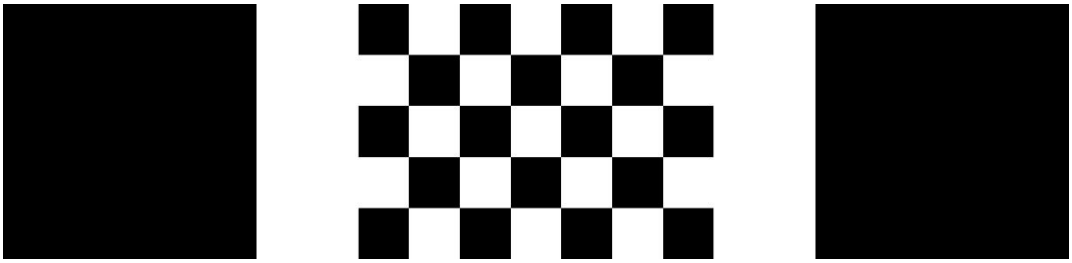
Calibration support lens format as follows.

1000、1002、1005A、3019、9013、9015，8255、6042、6047、6048、TY9003、TY9057

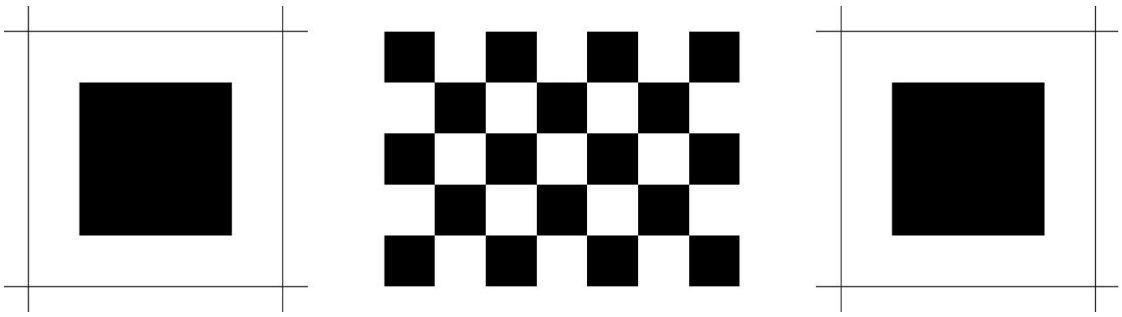
Note: According to the manufacturer's configuration camera lens model to set, this configuration can not be arbitrarily set, otherwise it will affect the calibration results

Calibration cloth supports the following.

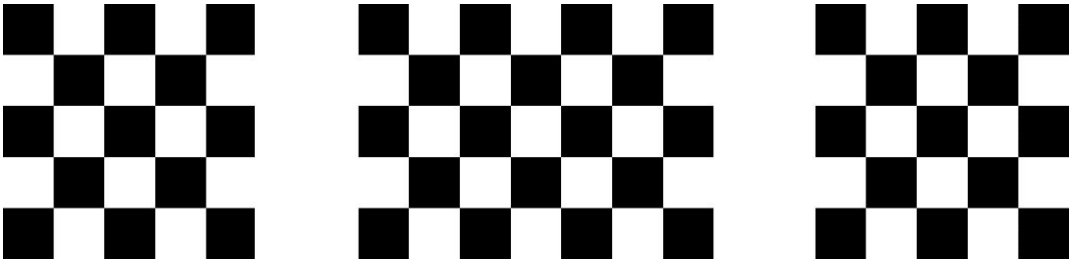
1、1, two/four calibration cloths (four calibration cloths include two small cloths on the left and right)



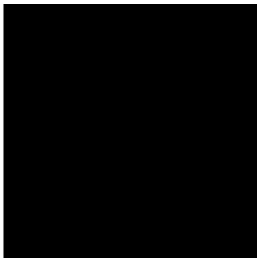
2、Two/four calibration cloths (four calibration cloths including two small cloths on the left and right)



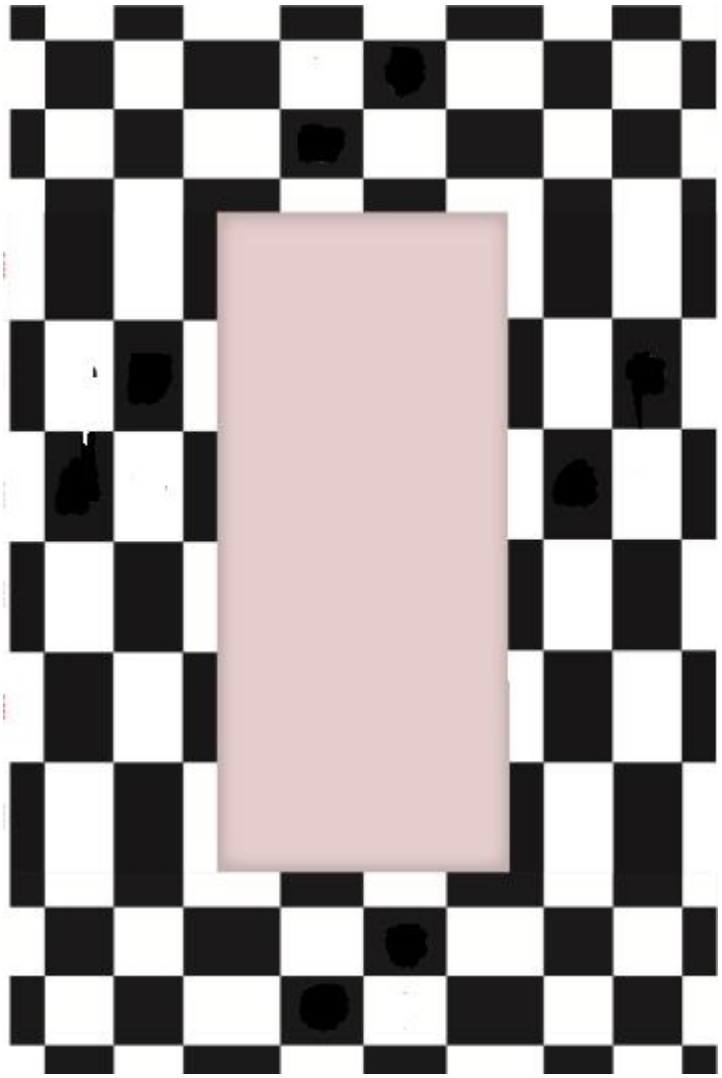
3、Four pieces of calibration cloth, including the left and right two small cloths



4、Two calibration cloths



5、Other calibration cloths



Automatic calibration:

a。 After laying the calibration cloth, measure the distance (CM) between the calibration cloth and the calibration cloth, and input it into the ruler adjustment. After calibration, the distance will be more realistic

Automatic calibration.

a. After the completion of laying the calibration cloth, measure the distance between the calibration cloth and the calibration cloth (cm), input to the scale adjustment, the sense of distance will be more realistic after calibration

b. Select the corresponding lens model c. Select the corresponding calibration cloth

d. Click on the calibration screen of the automatic calibration can

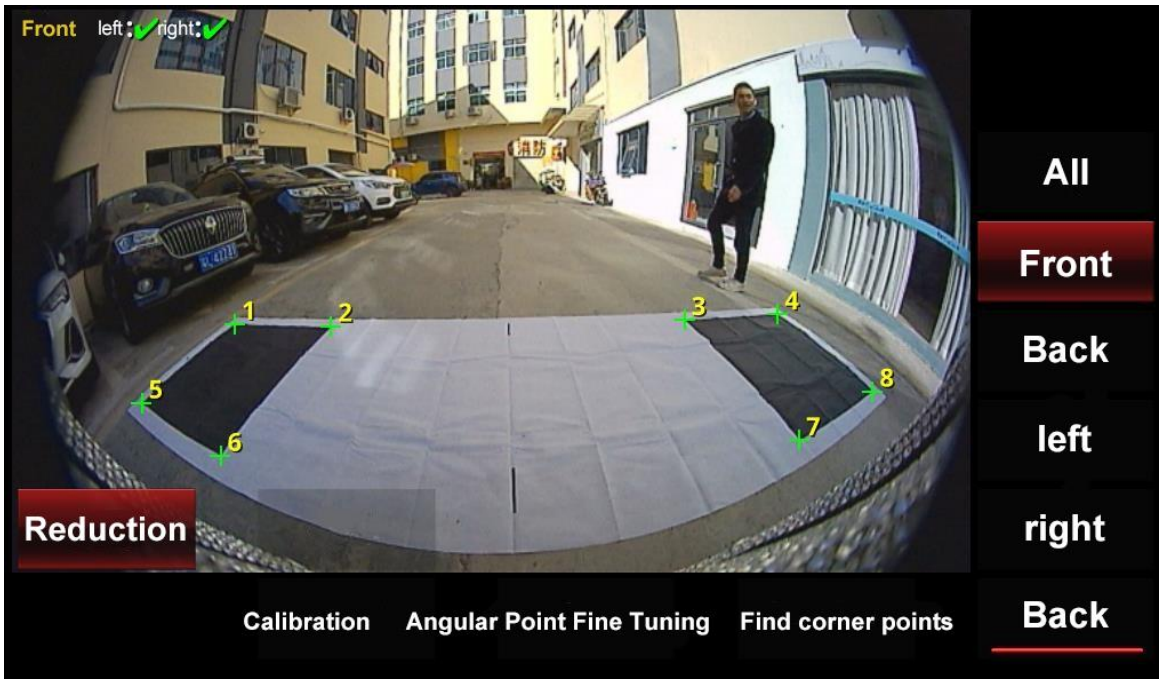
Note: In order to reflect the calibration results more accurately, you need to input the measurement parameters into the software

Manual calibration

Manual calibration includes the functions of finding and tracing points. In the case of poor light or poor environmental factors, when automatic calibration is not possible, the corner points can be traced manually for tracing point calibration.

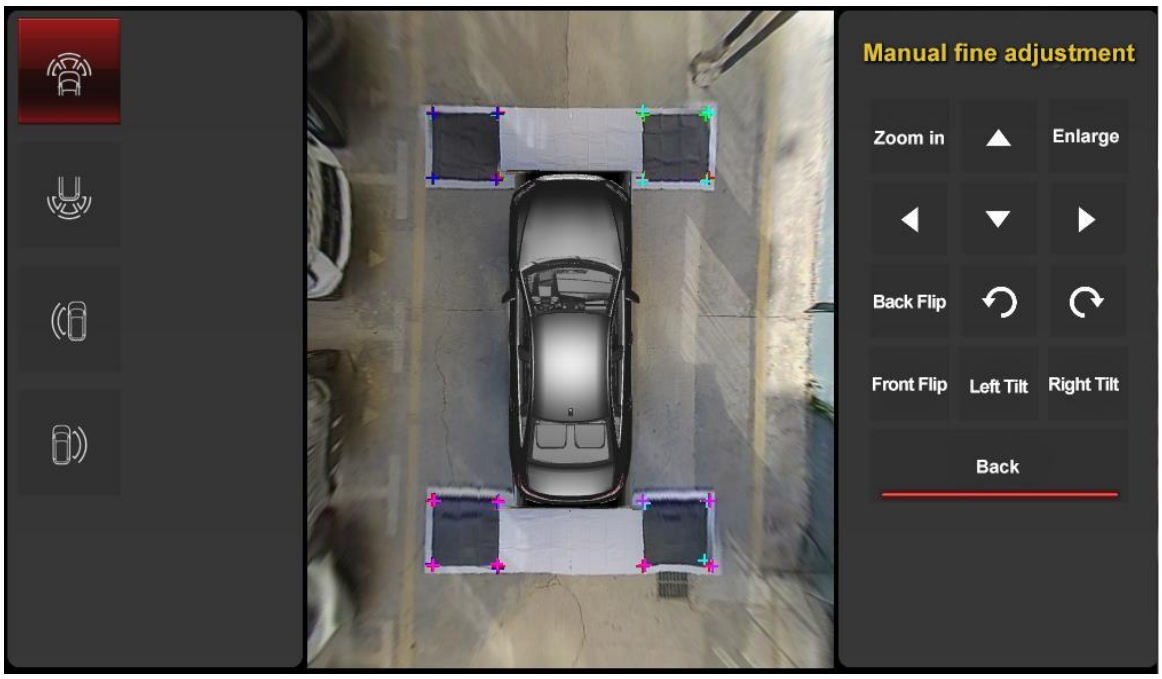
Manual fine adjustment

When the calibration result has a small need to adjust the content, you can adjust the stitching effect through the fine-tuning function, the left side to select the corresponding lens, the right side according to the need to adjust the content to adjust



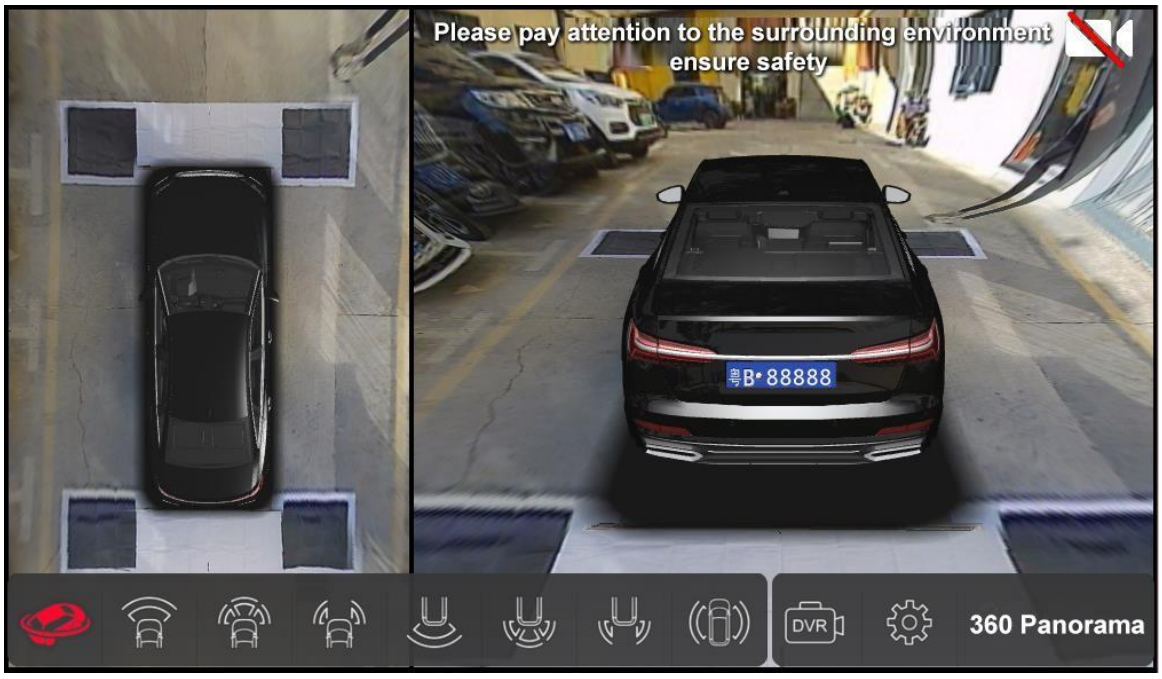
Zoom in/out: refers to the corresponding single view zoom up/down/left/right: refers to the position of panning calibration screen

Rotate/flip forward/flip back/left/right: refers to the single view rotation tilt, can be adjusted when needed



Seven, software description: Main interface：

Main interface display information includes: Left: 2D bird's eye panorama



Main interface display information includes:
Left: 2D bird's eye panorama
Right side: 2D/3D image view

Status in the upper right corner： 

indicates that the video is being recorded

indicates that the U disk has been inserted,


but the video is not turned on indicates that the U disk is not inserted

Note: If you insert a new USB flash drive, you need to format it once in the software settings, please pay attention to save the files in the USB flash drive:

1、3D rotation: the remote control can operate the model rotate to any angle to observe the corresponding scene
2、2D front view: default into the 2D front view with track view interface, when there is agreement data can display the track and perspective with the movement
3、Streaming media front view: default into the streaming media front view (i.e.: front view with large wide angle) view interface
4、Front wheel narrow channel mode: default to enter the front wheel left and right body narrow channel mode view interface
5、2D rear view: default into the 2D rear view with track view interface, when there is agreement data can display the track and perspective with the movement
6、Streaming media rear view: default into the streaming media rear view (i.e.: rear view large wide angle) view interface
7、Narrow lane mode: default to enter the narrow lane mode view interface
8、2D body mode: default to enter the narrow body mode, you can intuitively observe the front and rear wheel view screen situation
9、Video playback: enter the video playback interface
10, setting keys.
Model selection: set the shape of the model, model color license plate settings: set the license plate number
View camera: preview camera screen, including single view preview and screenshot display margin adjustment: when the screen display is not full, adjust in this page

About: software version information, MCU version information, protocol version information, etc., including the corresponding upgrade function

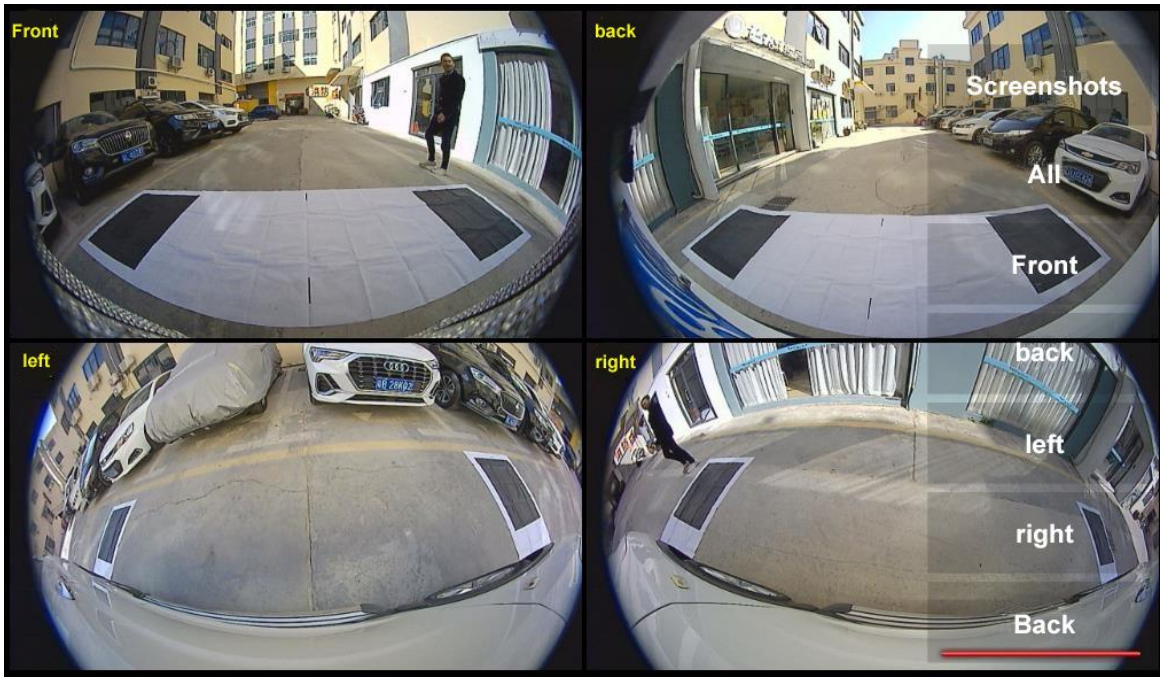
Model selection：

This page can select the car model, the right side can directly select the car model, press OK key to select.
When entering the color selection, remote control OK key to select the color, click OK key again on the selected color to exit the color selection.

License plate setting

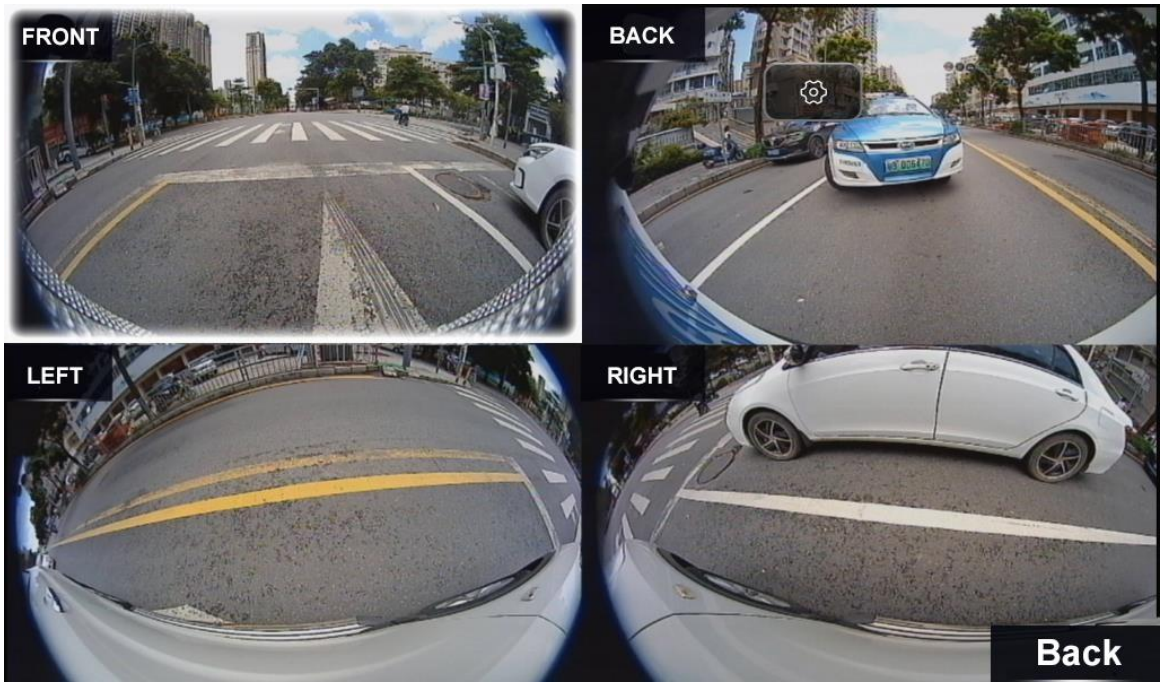
Enter the license plate setting and choose your license plate number, click save directly after you finish inputting, and provide the return button in the upper left corner to exit the license plate setting after you finish saving.

View Camera

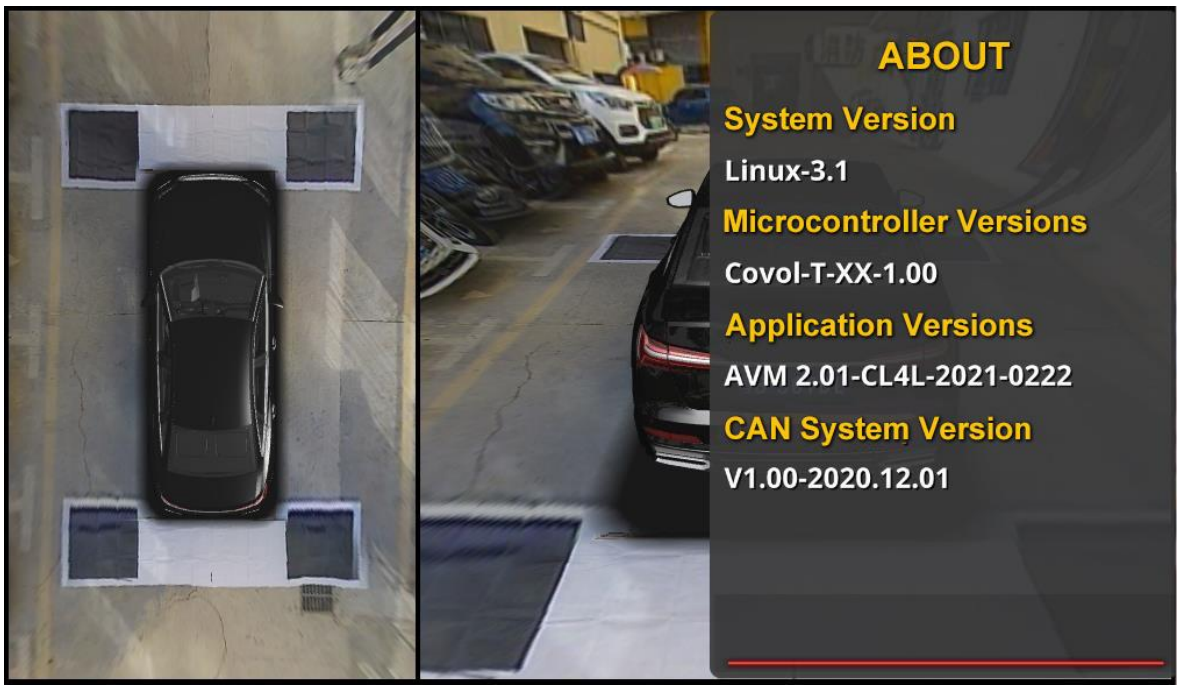


This page can view the camera installation angle and other information, if necessary, you can save the picture to U disk by screenshot button.
disk
Video Playback

The left part of the video playback page is date classification, under different dates, the content of the file under the corresponding date is displayed.
Operation method: After selecting the date by knob operation, click the confirmation button of the knob to enter the list of files under the date, and there are buttons for play, lock, delete and return in the corresponding files.
Play: Enter the play page and play the file Lock: The file cannot be deleted automatically after locking Delete: Delete the file
Back: return to the file selection list



When playing, you can select the front view, back view, left view, right view and zoom in on a single screen through the knob.
System Information



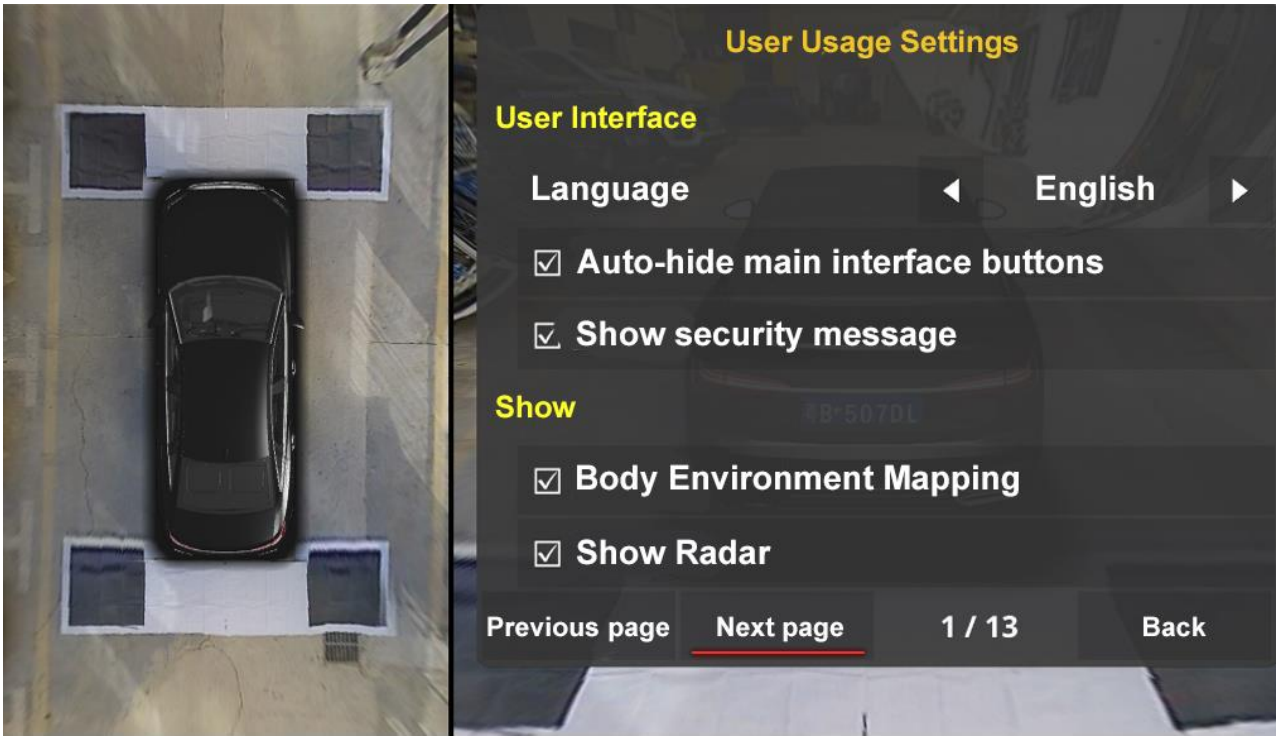
System information page contains the system version number, application version number, microcontroller version number upgrade instructions: 1. Create a folder in the U disk, named update

2. Copy the update file to the update directory. Note that the name should not be modified. The application upgrade name is covol_app_update.bin The microcontroller upgrade name is covol_mcu_update.bin. Note that WeChat will send the file with (1) after the file name, so you need to delete the extra name.

3. Upgrade the corresponding program in Settings - About

User settings

Include language setting, function setting, screen setting, calibration correction, time setting, protocol setting and other functions, according to the need to



Hardware configuration example

MAIN WIRE

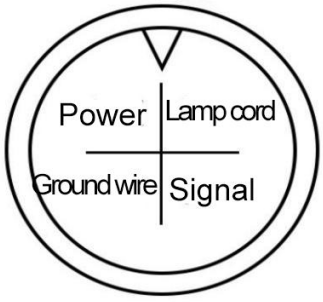
(From the wire end)

1	17	1	Yellow	CVBS_VIDEO_OUT	17	Yellow	AHD_VIDEO_OUT
2	18	2	Black	VIDEO_AGND	18	Black	CAM_F_AGND
3	19	3	Black	CAM_B_AGND	19	Yellow	CAM_F_VIDEO
4	20	4	Yellow	CAM_B_VIDEO	20	Red	CAM_F_VCC
5	21	5	Red	CAM_B_VCC	21	Black	CAM_L_AGND
6	22	6	Black	CAM_R_GND	22	Yellow	CAM_L_VIDEO
7	23	7	Yellow	CAM_R_VIDEO	23	Red	CAM_L_VCC
8	24	8	Red	CAM_R_VCC	24	Red	BACK SIG OUT
9	25	9	white	RIGHT-TURN SIG IN	25	white	IR_IN
10	26	10			26	Black	IR_DGND
11	27	11	Black	DATA_IN	27	Red	IR_5V_VCC
12	28	12	Black	DATA_OUT	28	Green	CAN H+
13	29	13	white	LEFT-TURN SIG IN	29	Green	CAN L
14	30	14	white	REVERSE SIG IN	30		
15	31	15	Red	ACC	31		
16	32	16	Yellow	VBAT+	32	Black	AGND

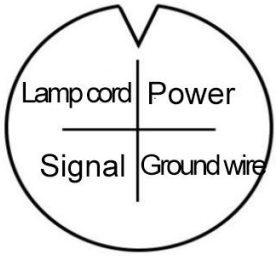
CAMERA DEFINITION

(View from the female end of the main wire)

Female head

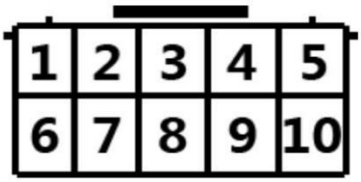


Male



DUAL CAN SOCKET DEFINITION

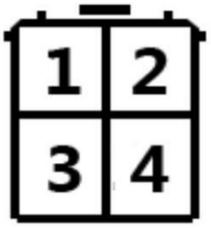
(View from the cable jack end)



1	2	3	4	5
	CAN_2_L	CAN_2_H		GND
6	7	8	9	10
	CAN_1_L	CAN_1_H		VBAT+

USB SOCKET DEFINITION

(View from the cable jack end)



1	2
DP	DM
3	4
5V	GND

DIAL CODE DEFINITION