

BIRDVIEW 360°

Bird View Parking System With CAN Decoder

Instruction Manual

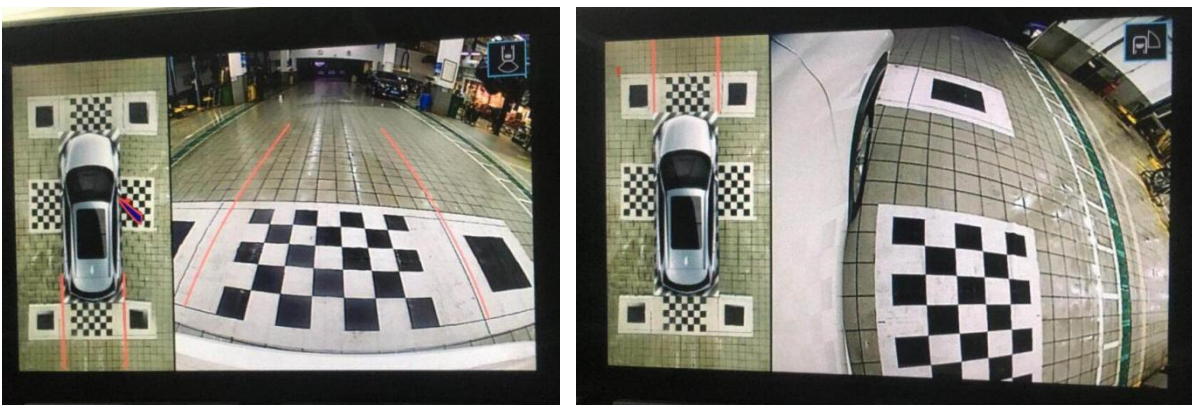
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Product Introduction

Thank you for purchasing and using our product 360° Birdview parking system, the three-dimensional bird view driving auxiliary system. This system can collect the video image all around the vehicle simultaneously by four wide angle field cameras installed in the front/back/left/right part of the vehicle. After the image is processed, split and jointed by the image software, a 360 degree's panoramic plan view is formed and is timely transmitted to the display equipment on the center console. With the help of the three-dimensional bird view driving auxiliary system, the drivers are able to intuitively catch sight of the location as well as the obstacles around just sitting in the vehicle and leisurely operate the parking or the bypass the complex road conditions, which effectively decreases the occurrence of scratch, crash, down throw and other traffic accidents.

360 bird view system with can decoder is the advanced system that not only has the functions of bird view system but also has the function of can decoder. So the system can be connected to the original monitor directly and support the original functions of the car.

Images for rear view and side view



Main Features

***360° around view, seamless splicing, getting rid of blind spots.**

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- *Non destructive installation.
- *Four-channel DVR with HD video output.
- *Support the original vehicle touch control
- *Support the original steering wheel control.

Specification

	Items	description
Camera	1.IC Sensor	Aptina AR0130
	2.Sensor Size	1/3" Color Sensor
	3. SNR	44dB
	4. The Lowest Illuminance	0.1 LUX
	5. Dynamic Range	82dB
	6. Signal Output	AHD 720P
	7.Waterproof	IP67
	8. Angle	Horizontal View Angle>175°
	9. Working Voltage	3.3V
	10. Working Current	<250 mA
Host	1. Working Voltage Range	9-16V
	2. Working Current	<500 mA
	3. Standby Current	<10 mA
	4. Working Temperature Range	-20°C~80°C
	5. Working Humidity Range	40%~80%

Cable Connecting

NOTE: The cameras have to be connected to the extension cable. The cameras cannot be connected to the power cable directly, otherwise they will be broken.

A whole unit includes a host, four specific cameras with housing, extension cable, power cable and LVDS cable.

The can decoder is built in the host, which can connect system to the original monitor directly, making the system working perfectly with the original functions.

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1. Front extension cable : connect to the front camera
 2. Right extension cable: connect to the right camera
 3. Left extension cable: connect to the left camera
 4. Rear extension cable: connect to the rear camera
 5. USB
 6. Infrared Receiver
 7. Host
 8. Power cable
 9. LVDS cable out
 10. LVDS cable in
- (some system only has one LVDS cable)

Installation of Cameras

(1) Rear camera: Specific camera will be installed at the back of the car, higher than 400 mm from the ground, and showing the car body on the monitor will be ok.

(2) Front camera: Specific front camera can be installed at the front of the car, higher than

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400 mm from the ground, and the camera angle has to be adjusted to see the car body through monitor. Due to the high temperature of the engine, extension cable of front camera needs a casing pipe for thermal insulation. And the cable should be avoided going through the high temperature parts.

(3) Left camera: Specific camera with a housing of the left side mirror to take place of the original one.

(4) Right camera: Specific camera with a housing of the right side mirror to take place of the original one.

Calibration for Around View

1.Steps for Calibration

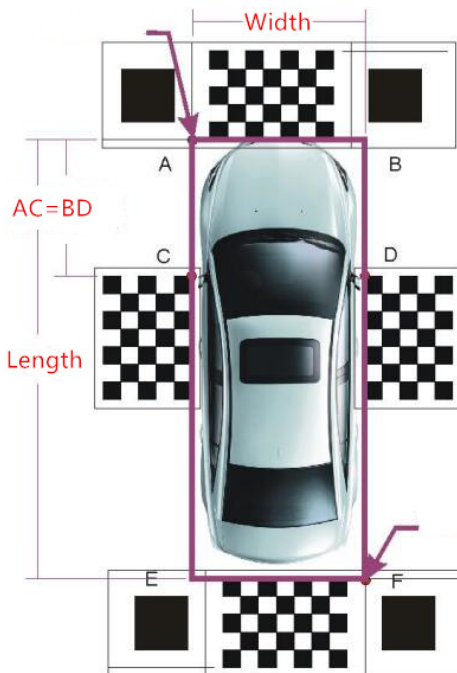
1.1 Preparation

- * four pcs of steel tape
- * open area
- * four pcs of calibration pattern
- * well installed 360 system on the car

1.2 Putting the calibration pattern

Put the calibration pattern as the following picture.

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The size of the rectangle (purple one) has to be adjusted according to different car models and different locations of the cameras.

A. The edge of left & right calibration pattern has to be closed to the car wheels, parallel to the car body.

B. The edge of front and right calibration pattern is about 30 cm to the car.

Adjusting way: if the pattern is shown completely in the single view image, the pattern can be as closed as possible.

C. The rectangle (purple one) is at the edge of the checker, not at the edge of pattern.

1.3 Measurement

* The distance between the left (right) pattern to the front pattern: Left-headed (distance of AC,)

* The length: distance of AE

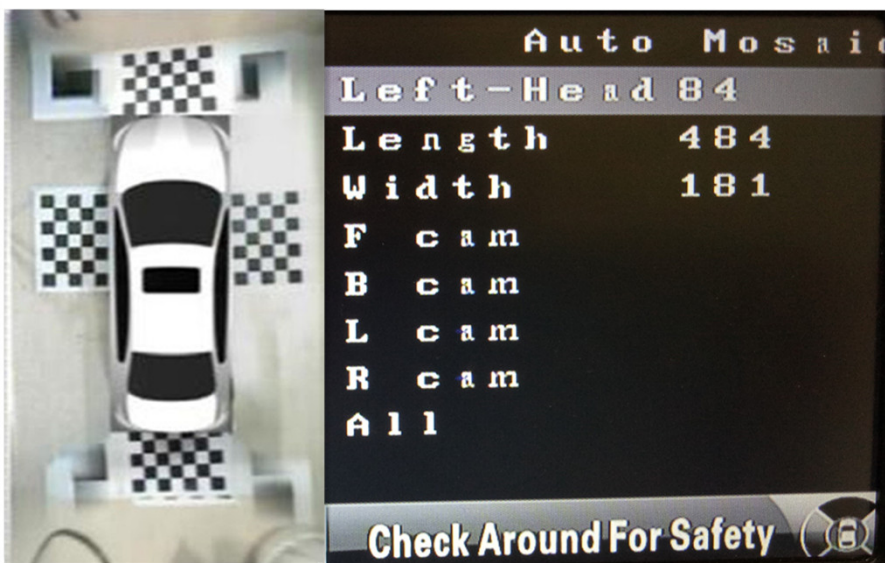
* The with: distance of AB

1.4 Automatic calibration

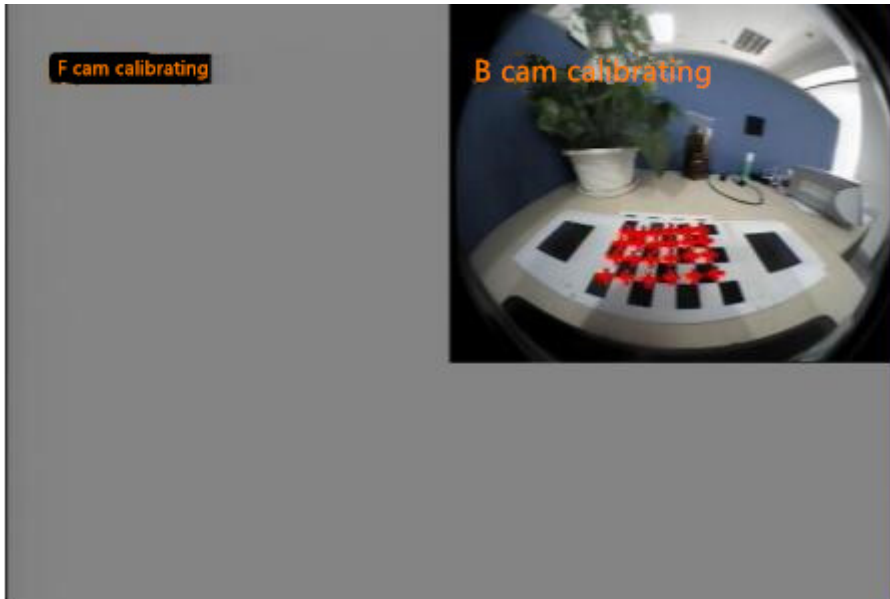
Make sure that the pattern can be seen completely in every single view image.

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- (1) Come to main menu “Bird View Calibration”
- (2) Select the engineering
- (3) Select the auto mosaic, input the measured data.
- (4) Select single way or four-way to calibrate
- (5) Select pattern type
- (6) If calibration failed, please check the calibration pattern putting, then press “ok” on the remote control, come back the main menu to calibrate again.



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FAQ

Problem	Possible Reasons	Solution
1.all cameras cannot be calibrated at one time.	If the monitor shows “ X camera failed”, there is no malfunction on the system.	Press “ok”, make sure that the pattern is put correctly and the input data is accurate, then calibrate it again.
1. Single camera calibration failed	1.The light on the pattern is strong or there	1.avoid the shadow or strong light on the

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	is shadow on it. 2. The pattern didn't show in the single view completely. 3. Camera is installed too low or inclined to left or right; or the inclined angle is almost 0°	pattern. 2. adjust the pattern, make it seen completely in single view image. 3. suggest installing the camera higher than the location of plate number.
2. The pattern looks OK in bird view image, but the splicing is not so good.	The input data is not accurate or wrong measurement.	Check the pattern by point 1.2 in this file. And input the accurate data.