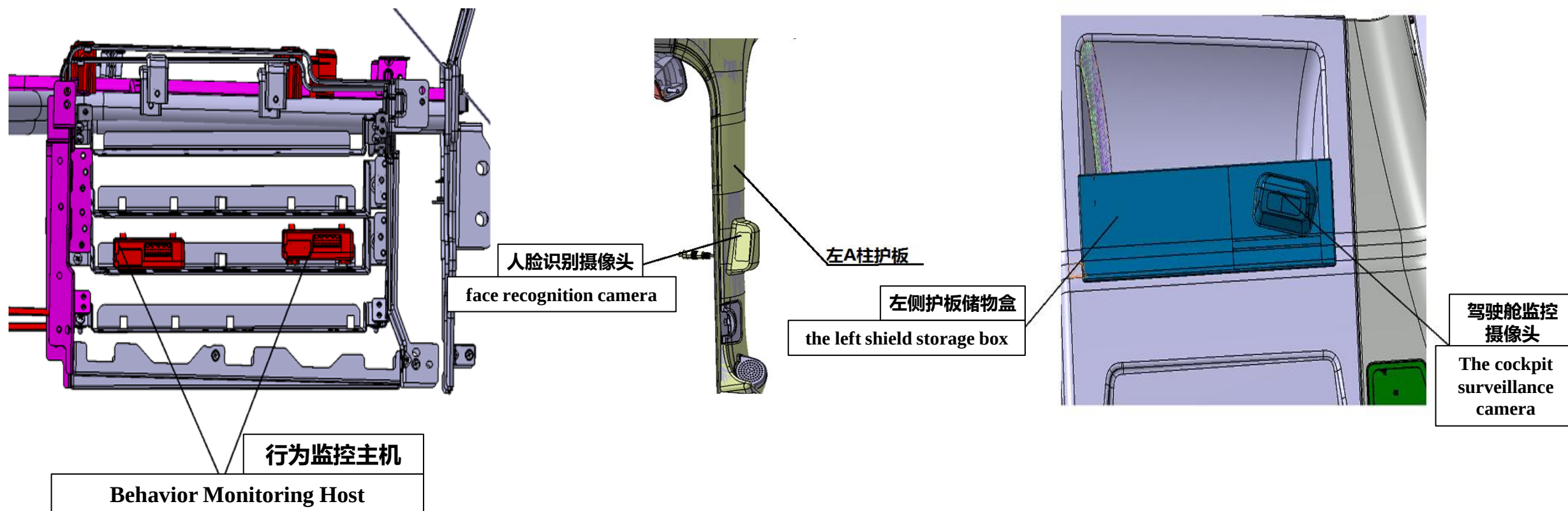


3、 Driver Behavior Monitoring System 驾驶员行为监测系统

◆ Assembly Introduction 装配介绍

1) **Behavior monitoring mainframe** is mounted on the mainframe at the second level of the controller mounting bracket under the dashboard. **行为监控主机**安装在主机安装在仪表板下方控制器安装支架第二层位置处。



3、 Driver Behavior Monitoring System 驾驶员行为监测系统

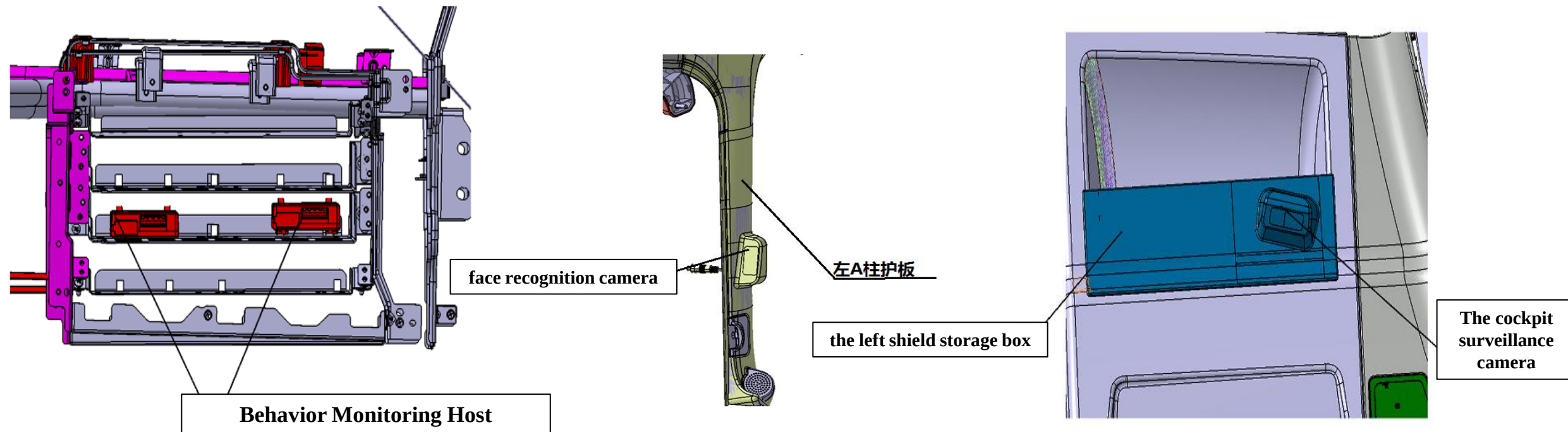
◆ Assembly Introduction 装配介绍

- 2) The face recognition camera is mounted on the inner side of the left A-pillar guard using bolts.

人脸识别摄像头安装于左A柱护板内侧采用螺栓固定。

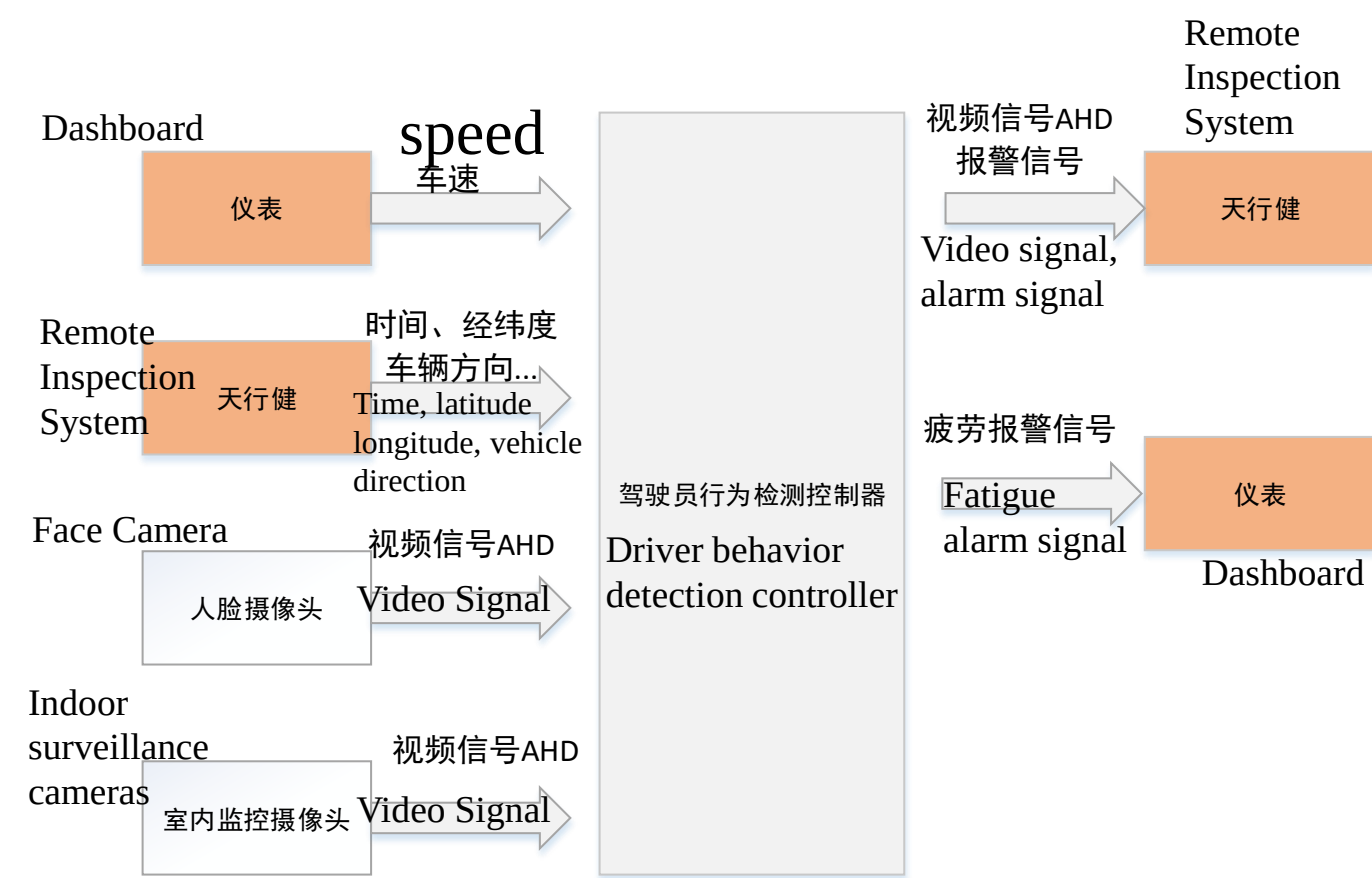
- 3) The cockpit surveillance camera is mounted inside the left shield storage box cover assembly.

驾驶舱监控摄像头安装于左侧护板储物盒盖总成内部。



3、 Driver Behaviour Monitoring System 驾驶员行为监测系统

◆ Functional schematic 功能原理图

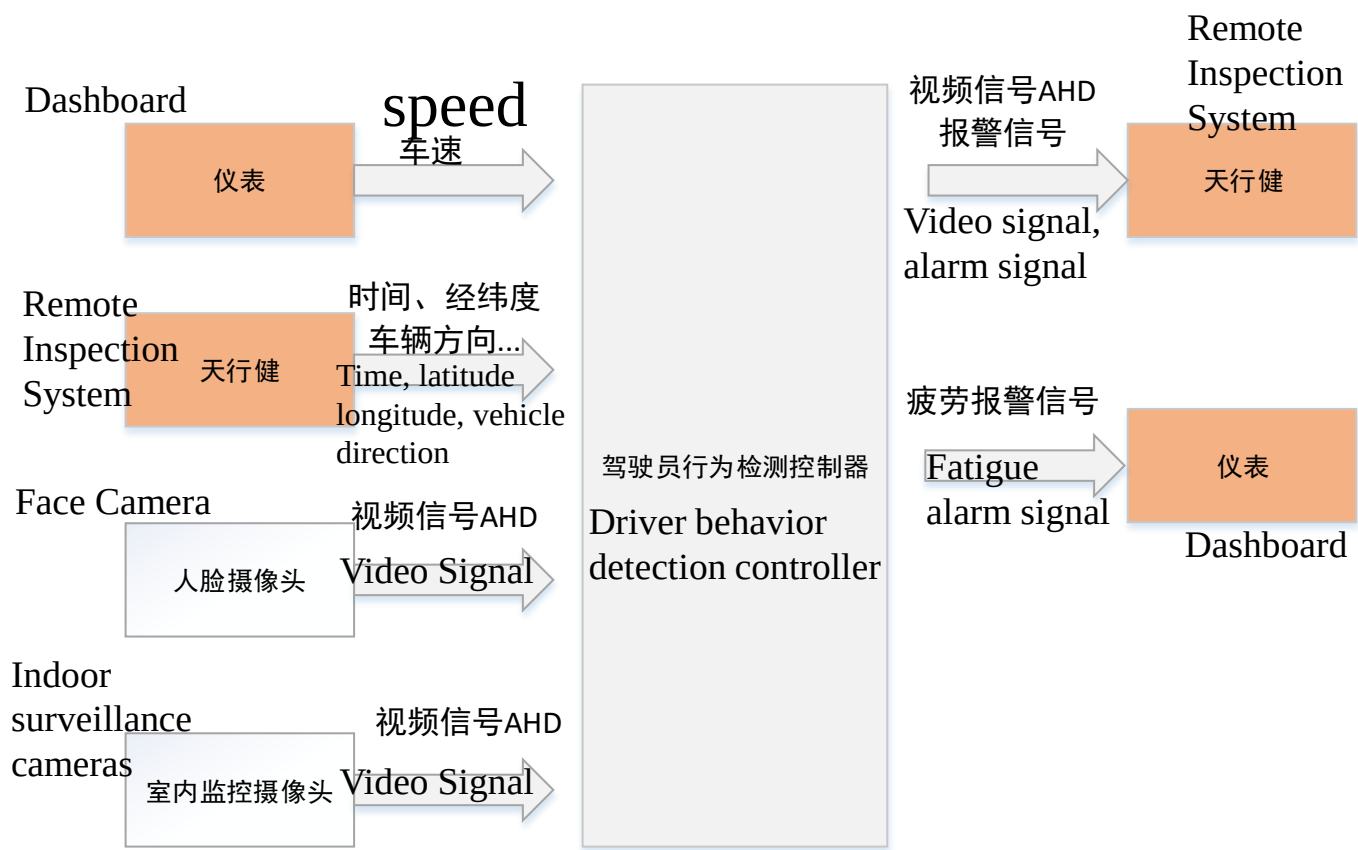


Driver behavior monitoring system consists of 2 cameras and one mainframe, **one camera is arranged on the left side of the cab A-pillar**, mainly collecting the driver's face range image, used for **face recognition, driver distraction reminder, yawning, smoking, talking on the phone** and other bad driving behavior alarm;

驾驶员行为监测系统由2路摄像头一个主机组成，**一路摄像头布置于驾驶室左侧A柱**，主要采集 驾驶员脸部范围图像，用于**人脸识别、驾驶员分神提醒、打哈欠、抽烟、打电话**等不良驾驶行为报警

3、 Driver Behaviour Monitoring System 驾驶员行为监测系统

◆ Functional schematic 功能原理图



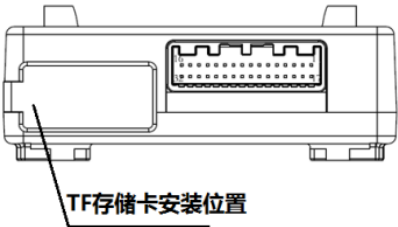
The other camera is arranged on the top left of the cab, mainly collecting seat belt, steering wheel, driver's hands, co-driver information, etc. For hands off the steering wheel, not wearing seat belts, playing with cell phones while driving bad driving behavior monitoring and monitoring of the cockpit. When the bad driving behavior of the driver is detected, the alarm signal is output.

另一路摄像头布置于驾驶室左上方，主要采集安全带、方向盘、驾驶员双手、副驾驶员信息等，用于双手脱离方向盘、未系安全带、行驶时玩手机不良驾驶行为的监测及驾驶舱的监控。当检测到驾驶员存在不良驾驶行为后，输出报警信号。

3、 Driver Behaviour Monitoring System 驾驶员行为监测系统

◆ Definition

针脚定义:



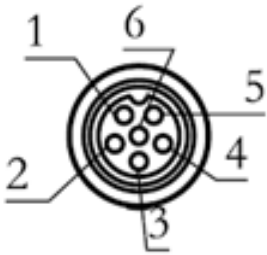
行为监控主机
Behavior
Monitoring Host

插接器	针脚	定义	备注
适配端型号: DZ9M25912211 9	1	DC 24V/30+	I
	2	15+	I
	3		
	4	人脸摄像头+	0
	5	驾驶室摄像头+	0
	6	CAN_H	
	7	人脸摄像头视频输入	I
	8	驾驶室摄像头视频输入	I
	9		
	10		
	11	显示屏视频输出	0
	12	显示屏视频输出信号地	0
	13	天行健视频输出	0
	14	天行健音频输出	0
	15	音频输入	I
	16	扬声器+(预留)	0
	17	GND	0
	18		
	19		
	20	人脸摄像头 GND	0
	21	驾驶室摄像头 GND	0
	22	CAN_L	
	23	人脸摄像头视频屏蔽地	I
	24	驾驶室摄像头视频屏蔽地	I
	25		
	26		
	27	显示屏视频输出屏蔽地	0
	28	天行健视频输出信号地	0
	29	天行健视频输出屏蔽地	0
	30	天行健音频输出屏蔽地	0
	31	音频地	0
	32	扬声器 GND(预留)	0



人脸识别摄像头
Face Recognition Camera

插接器	针脚	定义	备注
4 芯母 头:DZ9M259122169	1	DC 24V	摄像头电源
	2	GND	摄像头电源地
	3	摄像头屏蔽地	图像信号屏蔽地
	4	Video_IN	摄像头视频输入

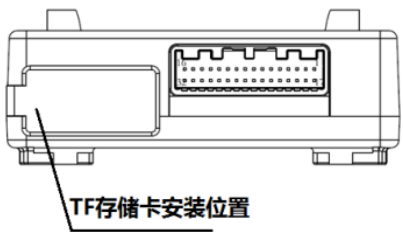


驾驶室监控
摄像头
Cab Cameras

插接器	针脚	定义	备注
6 芯母头、RS765	1	DC 24V	摄像头电源
	2	GND	摄像头电源地
	3	摄像头屏蔽地	图像信号屏蔽地
	4	Video_IN	摄像头视频输入
	5	麦克风 MIC+	
	6	麦克风 MIC-	

3、 Driver Behaviour Monitoring System 驾驶员行为监测系统

◆ Definition 针脚定义:



Behavior Monitoring Host

Adaptor type: DZ9M25912119

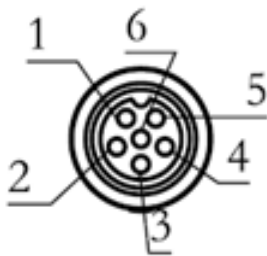
Pins	Definition	Remarks
1	DC 24V/30+	I
2	15+	I
3		
4	Face Camera+	0
5	Cab Cameras+	0
6	CAN_H	
7	Face Camera Video Input	I
8	Cab Camera Video Input	I
9		
10		
11	Display video output	0
12	Display video output signal place	0
13	TXJ video output	0
14	TXJ audio output	0
15	Audio Input	I
16	Speaker + (reserved)	0
17	GND	0
18		
19		
20	Face Camera GND	0
21	Cab Camera GND	0
22	CAN_L	
23	Face camera video shield place	I
24	Cab camera video shield place	I
25		
26		
27	Display video output shield	0
28	TXJ video output signal place	0
28	TXJ video output shield place	0
30	TXJ audio output shield place	0
31	Audio place	0
32	Speaker GND (reserved)	0



4-pole female connector : DZ9M259122169

Plugging	Pins	Definition	Remarks
	1	DC24V	Camera power supply
	2	GND	Camera power place
	3	camera shield place	Image signal shield place
	4	Video_IN	Camera video input

人脸识别摄像头
Face Recognition Camera



6-pole female connector : RS765

Plugging	Pins	Definition	Remarks
	1	DC24V	Camera power supply
	2	GND	Camera power place
	3	camera shield place	Image signal shield place
	4	Video_IN	Camera video input
	5	MIC +	
	6	MIC -	

驾驶室监控
摄像头
Cab Cameras

3、 Driver Behaviour Monitoring System 驾驶员行为监测系统

◆ Fault cases - no image input from face camera 故障案例——人脸摄像头无影像输入

Fault impact: Affects the safe driving of the vehicle and reduces the customer's experience of using it.

故障影响：影响车辆的安全驾驶，降低客户使用体验。

Verification method 排查方法：

No image from a single camera.单个摄像头无影像：

Step 1: Please check whether the camera has been installed, if it has been installed, follow step 2.

步骤1：请检查摄像头是否已经安装，若已安装，按照步骤2；

Step 2: Please check whether the camera harness is connected in place, if it is in place, down the on gear power, after an interval of 3s on gear power again, observe on the meter whether there is still the fault, if there is no such fault code, this fault is fixed, if there is the fault, perform step 3.

步骤2：请检查摄像头线束是否连接到位，如果到位，下on档电，间隔3s后重新上on档电，在仪表上观察是否还有该故障，如果无该故障码，此故障修复，如果有该故障，执行第3步；

3、 Driver Behaviour Monitoring System 驾驶员行为监测系统

◆ Fault cases - no image input from face camera 故障案例——人脸摄像头无影像输入

Step 3: If the installation and wiring harness are okay, the camera is faulty, replace the camera.

步骤3：若安装及线束均没问题，则摄像头故障，更换摄像头；

No image from all cameras :

所有摄像头无影像：

Step 1: Please check if the harness at the DMS controller end is connected; if the harness is connected correctly, replace the controller.

步骤1：请检查DMS控制器端线束是否连接；线束连接无误，更换控制器。

3、 Driver Behaviour Monitoring System 驾驶员行为监测系统

◆ Parts removal and replacement 零部件拆卸及更换

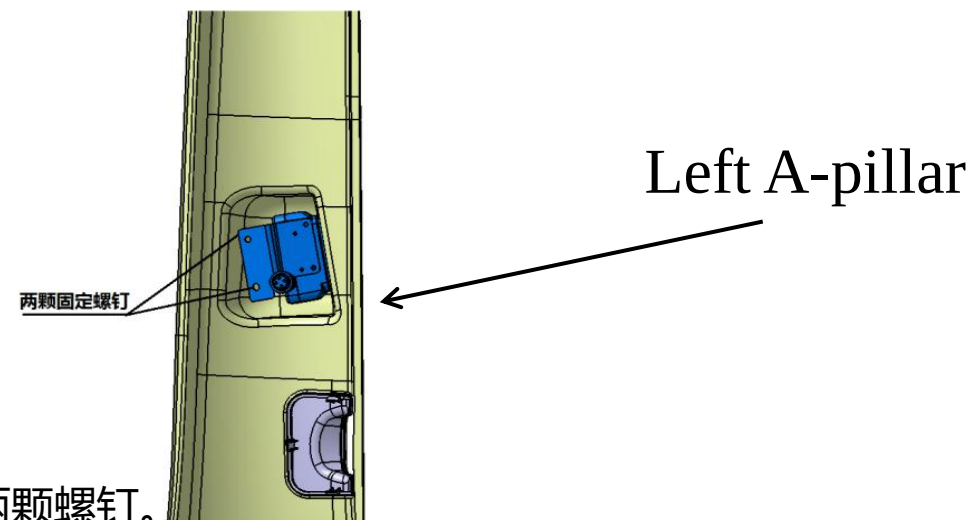
Disassembly of behavior monitoring mainframe 拆卸行为监控主机

Remove the passenger side dashboard lower bezel and locate the behavior monitoring mainframe on the controller mounting bracket as shown. With both hands, press the environmental monitoring host inward until the snap pops out, locate the spring-loaded snap position, and pull the controller out with both hands.

拆开副驾驶室仪表台下挡板，在控制器安装支架上找到行为监控主机，如图所示。双手用力向内按压环境监控主机至卡扣弹出，找到弹簧卡扣位置，双手将控制器拔出。

Face camera disassembly 人脸摄像头拆卸

- 1) Removal of the left A-pillar guard. 拆除左A柱护板；
- 2) Removal of the baffle under the main driver's instrument panel.
拆除主驾驶员仪表板下方挡板；
- 3) Unplugging the airhead connector. 拔掉航空头接插件；
- 4) Remove the two screws that hold the camera in place. 拆掉固定摄像头的两颗螺钉。



3、 Driver Behaviour Monitoring System 驾驶员行为监测系统

◆ Parts removal and replacement 零部件拆卸及更换

Cockpit surveillance camera disassembly 驾驶舱监控摄像头拆卸

- 1) Removal of the left side shield storage box assembly that snaps onto the inner liner.

拆除卡接在内衬上的左侧护板储物盒总成；

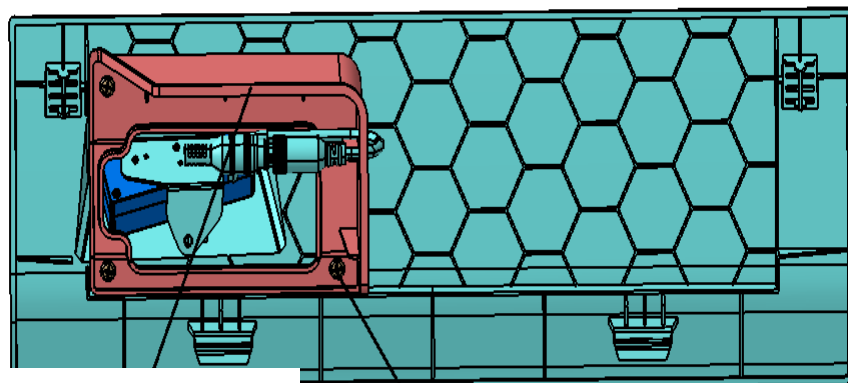
- 2) Dialing the aerial head to the insert. 拨开航空头对插件；

- 3) Remove the four set screws securing the storage box baffle and remove the storage box baffle.

拆除固定储物盒挡板的4颗固定螺钉，拆除储物盒挡板；

- 4) Remove the two screws securing the camera and remove the surveillance camera.

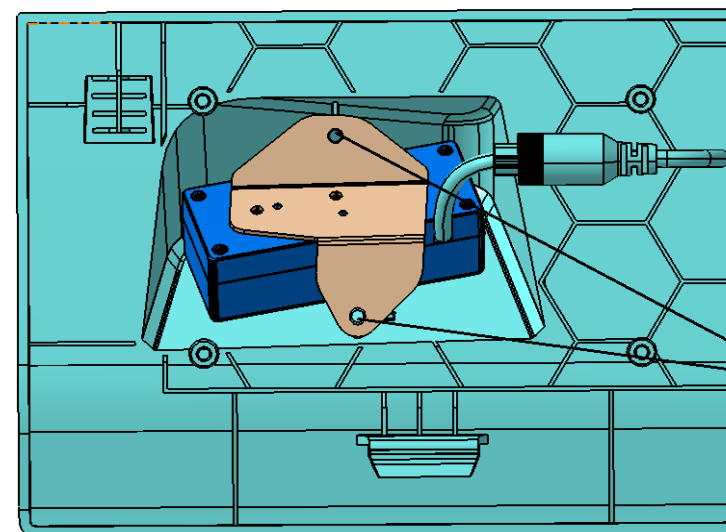
拆除固定摄像头的两颗螺钉，取出监控摄像头。



Storage box flap

储物盒挡板

4颗固定螺钉 4 set screws



2 set screws

2颗固定螺钉