Advanced Ai Dashcam System

--- User Manual---

Product Model ： TTC-CV-P450

Content

1. Main feature

- Using H.264 or H.265 encoding and decoding;
- P450 is support 1x 1080p +1x 720P+ 2x 720p camera input
- When P450 have AI function, Front cam is ADAS Camera, Cabin cam is DMS camera,
- Support 1 TF card for storage, with a maximum capacity of 1TB per card;
- Support 1 SOS emergency alarm button;
- Support 1 channel of I/O alarm output;
- Support 4 I/O alarm inputs;
- Built in functions such as 4G, WiFi, and GPS;
- Built in 3W speaker and microphone, supporting bidirectional voice intercom between devices and platforms;
- Support mobile apps and platform software to preview videos and configure parameters;
- 1.0T computing power, optional AI intelligent algorithms: ADAS, DMS, driver facial recognition;
- Supports 2 RS232 channels, 1x5V and 1x12V output;
- Optional configuration with 1 channel CAN;
- Optional 1-channel speed sensor.

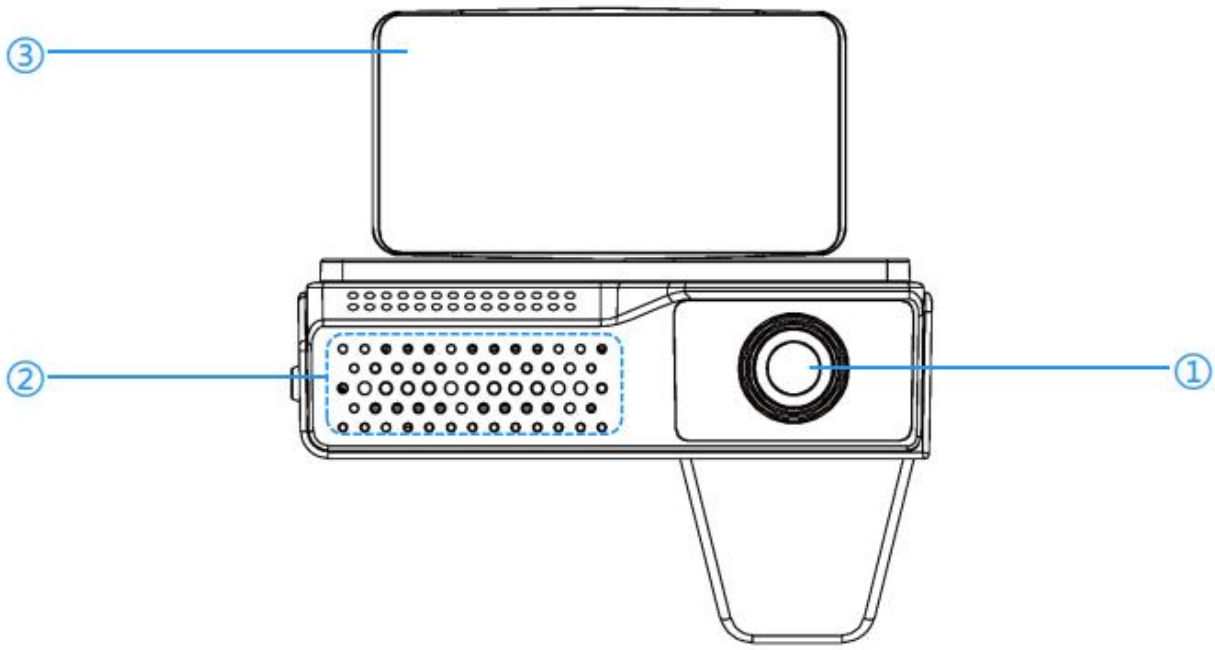
2.P450 Specifications

ITEM		Parameters
System	Language	English/Portuguese/Spanish/Russian/Vietnamese/Mongolian/Thai/Pakistani/French/Korean/Hindi
	Operating system	Linux
	Menu	Mobile app: Auto Defend APP
Processor	CPU	ARM Dual-Core processor@1.2GHz，1.0 TOPS computing power
	Memory	Built in DDR 2Gb
	Flash	2Gb
Video	Video Input	Front (built-in) 1080P, supports WDR, D:125° H:106° V:58°
		Rear (built-in) 720p, supports WDR, D:148° H:122° V:63°

		P450 can pull out 2 channel 720P AHD camera
	Video output(option)	supports 1 channel AV output
	Format	H.264/H.265
	Resolution	1080P, 720P, D1 optional
	Quality	Levels 1 to 4
	Record Mode	Default boot recording, supporting ignition recording, alarm recording, etc
Audio	Audio Input	1 channel audio with built-in digital MIC
	Audio output	1 channel, built-in power amplifier, built-in 3W speaker with sound chamber
	Format	G. 711A
WiFi		Built in WiFi
GPS		Built in BD/GPS/GLONASS module
G-Sensor		Built in accelerometer
SOS alarm button		Support
Alarm In		Support 4 alarm inputs
Alarm output		Support 1 channel of alarm output
Power output		Support 1 channel of 5V output and 1 channel of 12V output
Serial port		Support 2-channel RS232. Can be connected to oil level sensors, RFID card readers, alcohol sensors, etc
CAN port		Optional configuration with 1 channel CAN
Speed sensor		Optional 1-channel speed sensor
Port	Upgrade	Support TF card upgrade and FTP remote automatic upgrade
	USB Port	Type-C
	SIM Card	Supports 1 Nano SIM card
AI algorithm	ADAS	FCW, LDW, HMW, PCW
	DSM	Smoking, making phone calls, yawning, dozing, distracted, driver not detected, blocking cameras, sunglasses identification, seat belts
	FR	Driver facial recognition
Power	Power management	Adaptive broadband power input with protection functions such as overload, undervoltage, short circuit, and reverse connection; Supports timed on/off and delayed shutdown functions.
	Input voltage	DC:+9V ~ +36V
	Consumption	Normal working state < 5W (without peripherals)
Environment	Temperature	-20℃ to +70℃
	Humidity	20% to 80%
Management	Password	Two level management of user passwords and administrator passwords

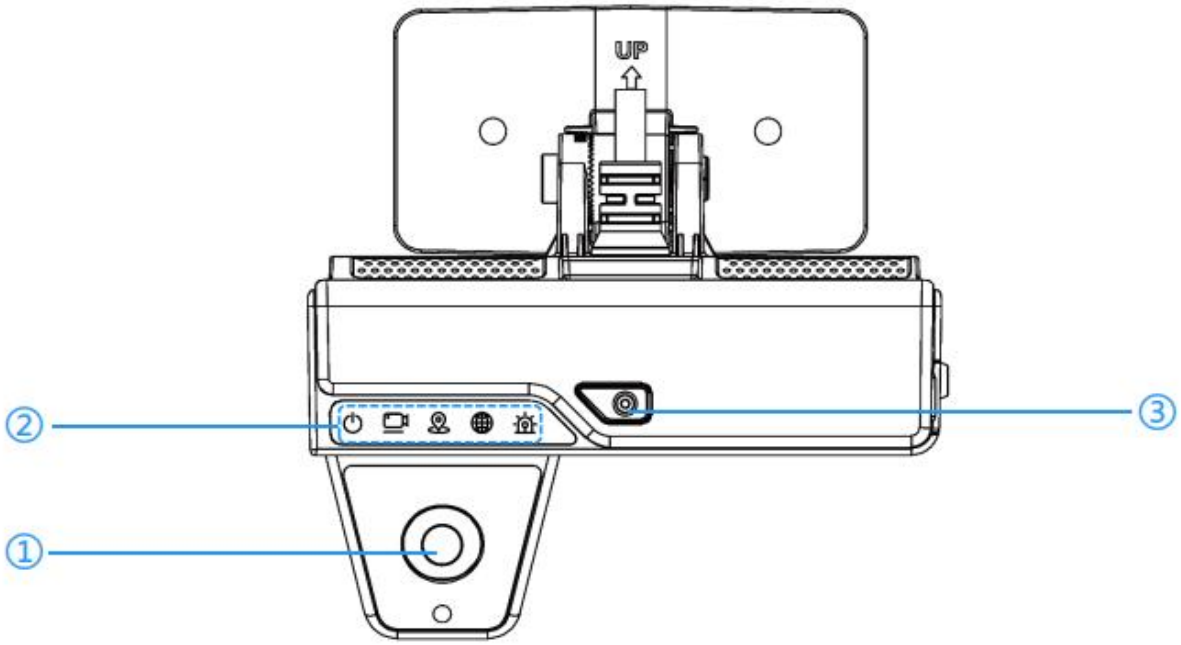
	access	
Platform access		JT/T808-2013, JT/T808-2019, JT/T1076-2016, JT/T1078-2016
		CMSV6、Wialon、Uffizio
Dimension		114mm*65mm*69mm

3. Front description



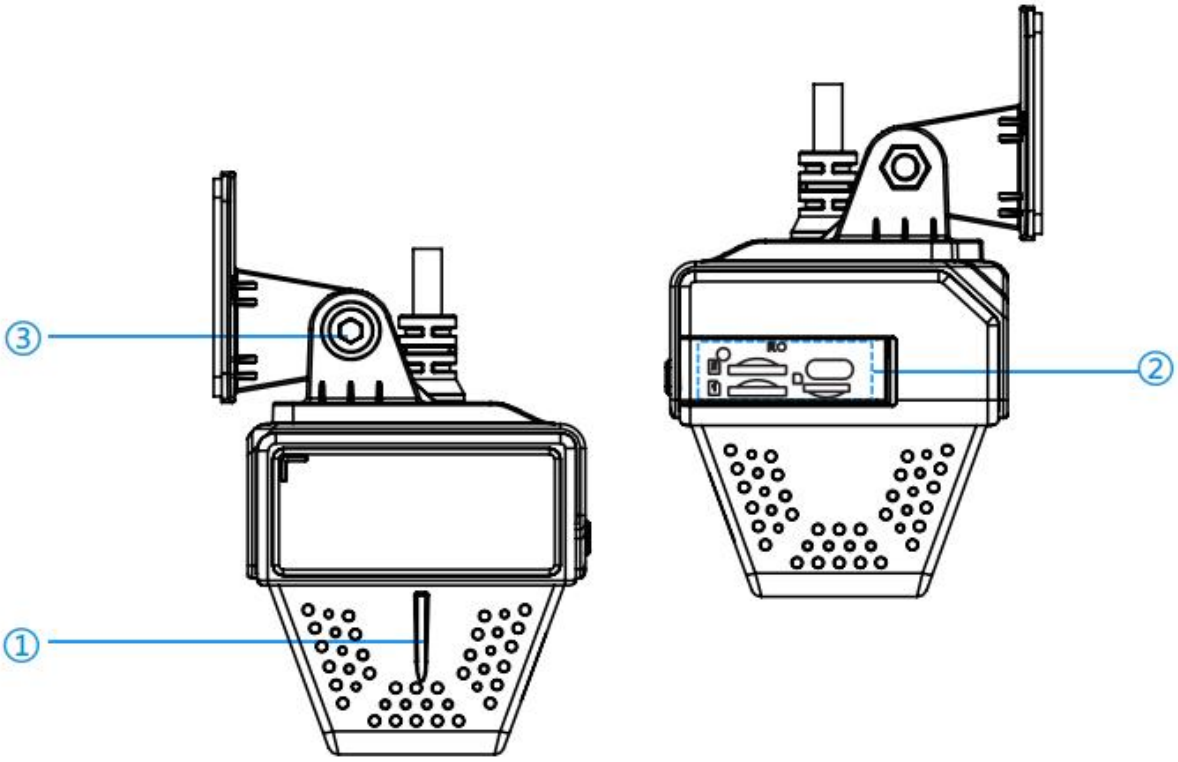
Serial	Name	Describe
①	Front camera	Monitor the camera in front of the vehicle, 1080p
②	Heat dissipation hole	Lead out the heat inside the device
③	Automotive Bracket	Paste Dashcam onto the front windshield of the car

4. Back Panel



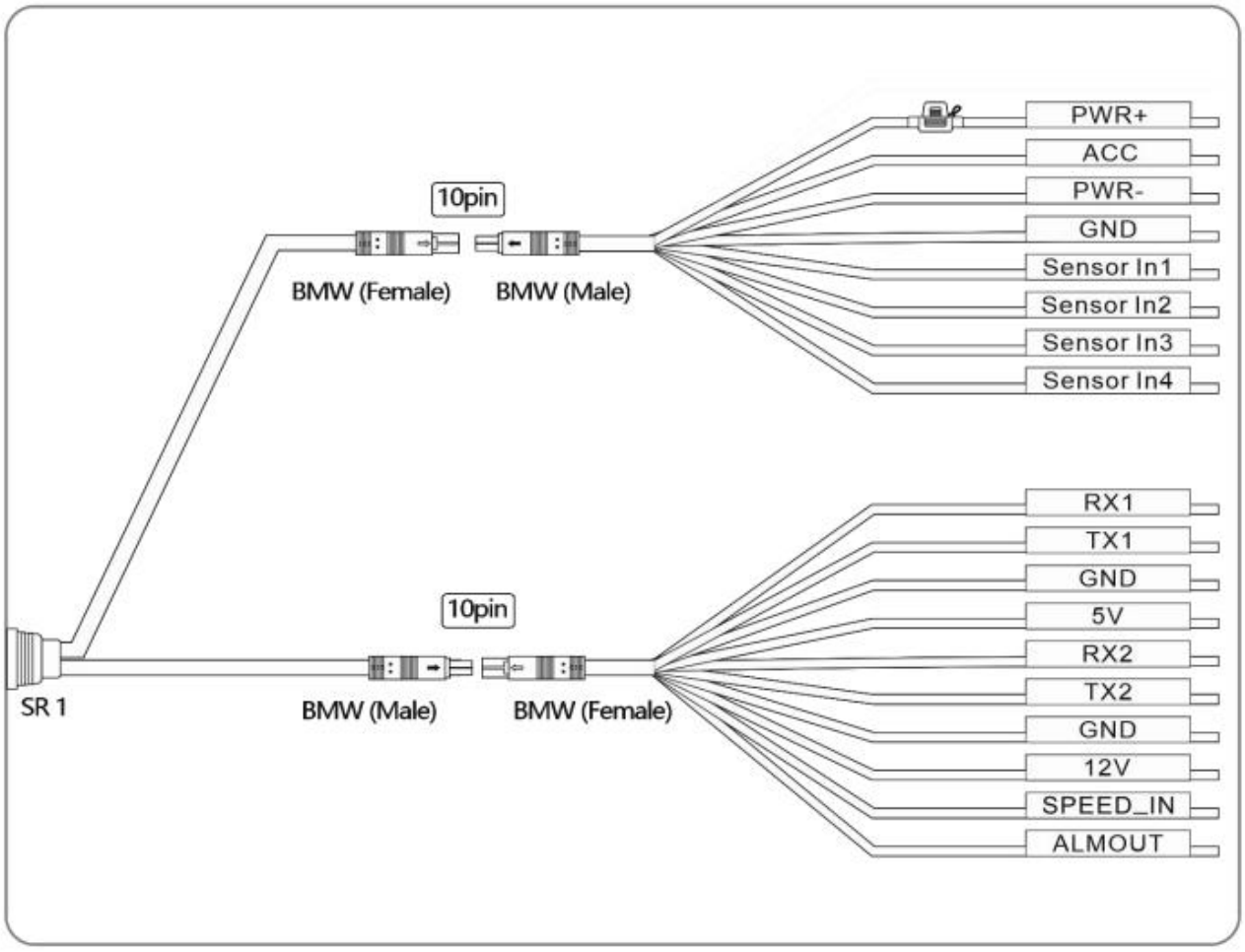
Serial	Name	Silk Print	Describe
①	Rear camera		Monitor the cameras inside the vehicle
②	LED indicator light		Power indicator light. ON: Power on; OFF: Power off.
			Record indicator light. ON: TF card exists; Flash: Recording; OFF: TF card does not exist.
			GPS status indicator. ON: GPS is working; Flash: GPS is present, but there is no signal; OFF: GPS not detected.
			Network status indicator. ON: Network connection successful; Flash:Network not connected; OFF: No network module (4G and WiFi) or all network module functions have been turned off.
			Alarm indicator light. ON:generates alarm; OFF: No alarm generated.
③	Button		Parameter configuration button. Press this button to enter the parameter configuration options.

5.Side Description



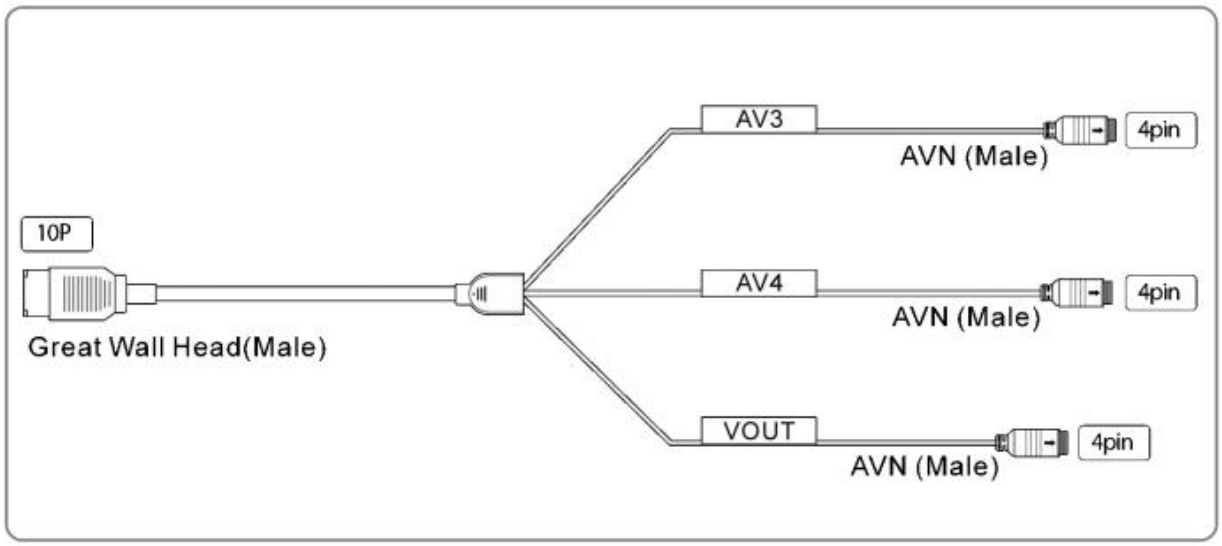
Serial	Name	Describe
①	MIC	Sound input
②	TF card Reset button	Open the screws, 1 TF card,or press the reset button to restore the factory configuration
③	Fixed bracket screws	Screw for fixing bracket

6. P450 Cable Description



- PWR+:connect to the Battery wire in the car
- ACC:connect to the ACC(always the yellow one) wire
- PWR-:connect to GND black one wire
- Sensor1~4:it is the trigger input,it depends on what function you require.
- RX&TX:it is communication port,can add the peripheral,such Ai WATCH
- 5V&12V:it is voltage output,can be additional power
- ALMOUT:it is for the buzzer

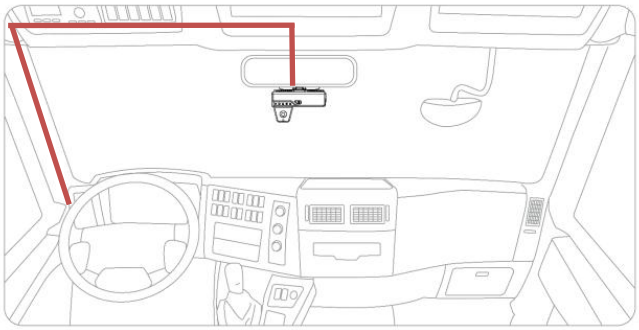
6.1. P450 Power Cable Description(Optional)



7.Installation

7.1. Dash cam installation

1: Select the installation position and wipe the installation position (windshield) clean with a cloth. Suggestion: Install small sedan cars on the left side of the interior rearview mirror;



Logistics van truck vehicle installation diagram

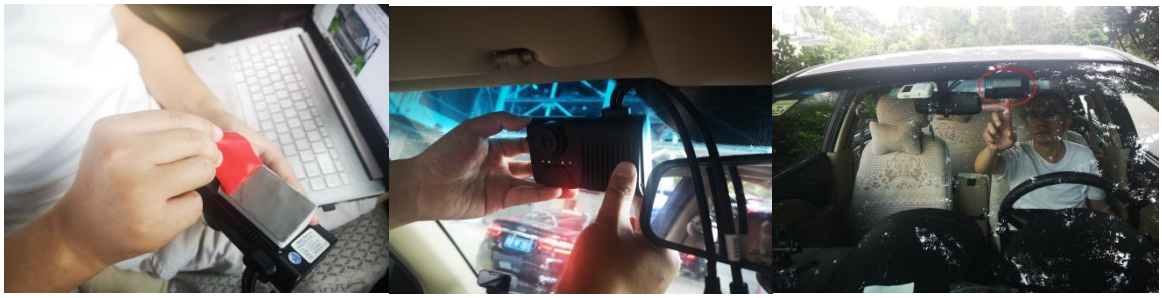
2: Determine installation location. Drive to the middle of the double tracks on a level road, and the road ahead is clearly visible. Determine the installation position of the windshield outside the vehicle (for large vehicles, if the horizontal center is occupied by other cameras, the allowable deviation for Dash cam installation in the left and right directions is ± 5cm).

Vehicle parking location(ADAS camera perspective)

3: Pre-installation. Clean the Dash cam bracket attachment position.

First, wipe the interior area of the car with a damp tissue, and then dry it with a dry tissue to ensure that the area is clean.

Gently attach the bracket to the windshield. Be careful not to press tightly(the adhesive must not be stuck tightly in this step). If the position is incorrect, it can be adjusted.



Effect picture of ADAS pre installation

4: ADAS installation. Enter the Autodefnd APP "ADAS Calibration" page. Adjusting the front camera: 1. Ensure that the green cross "vertical line" in the picture is as close as possible to the middle of the two lines on the road; 2. Ensure that the green cross "horizontal line" overlaps with the horizon as much as possible.After adjusting, please use a hexagonal screwdriver to lock the front camera.

(standard calibration is as in blow image, Green cross sign overlay red line and blue line.)

7.2. ADAS calibration.

Centerline adjustment: If the **blue** centerline of the vehicle on the screen is not in the middle of the two lane routes, Accurate adjustments can be made by pressing the [ ] button on the screen.

If the **red** horizontal line on the screen does not coincide with the horizon line, you can adjust it slightly by pressing the [ ] on the screen.

When the green cross sign canot overlay with red line and blue line.

Under this situation.Most importantly: the red line and blue line must be cross in the horizon line.

FCC Caution:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception,which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different

from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.