

V8 Mobile Dashcam Specification

V1.0



Shenzhen Yuwei Information And Technology Development Co., Ltd.

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Preface

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With the changes in factors such as product batches and production supply, in order to provide product information, features, specifications and parameters as accurately as possible, the company will adjust and modify the text, pictures and other contents in the article from time to time to match the actual performance, specifications, indicators, components and other information of the product. These changes and necessary adjustments may be made without special notice.



FCC Statement

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.

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.

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

This equipment complies with FCC radiation exposure limits set forth for anuncontrolled environment. This equipment should be installed and operatedwith minimum distance 20cm between the radiator and your body.



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Abbreviation

Abbreviation	Full name
1080P	Resolution 1920x1080
720P	Resolution 1280x720
D1	Resolution 720x576
CIF	Resolution 352x288
ADAS	Advanced Driving Assistance System
LDW	Lane Departure Warning
HMW	Headway Monitoring & Warning
FCW	Forward Collision Warning
PCW	Pedestrian Collision Warning
DMS	Driver Monitoring System
BSD	Blind Spot Detection

1. Product Introduction

V8 is a 4G driving recorder with integrated high-definition video recording function. The device adopts an integrated design of front and rear dual cameras to achieve all-round real-time monitoring of the vehicle's internal and external environment. It Support built-in active safety algorithms to monitor dangerous driving events and unsafe driving behaviors of drivers. It reminds drivers to avoid collisions and accident risks in real time through voice, and reports events to the customer management platform to facilitate statistics on the driver's driving behavior standards. It Support uploading the vehicle's real-time location information and historical trajectory to the customer management platform, providing high-definition real-time video and historical video viewing, making management more convenient and efficient.

2. Product Features

- Built-in 4G communication module, Wi-Fi module, GNSS module.
- Built-in starlight-level wide dynamic front-facing camera(HFOV: 106°, DFOV: 139°), Support 1080P HD video recording.
- Built-in 2 million IR-CUT infrared ultra-wide viewing angle internal camera(HFOV: 152°, DFOV: 180°), Support 720P video recording.
- The dual cameras of V8 are both angle-adjustable, providing users with a more flexible and varied experience.
- Support up to 4 channels(including 2 channels of the host) of video recording.
- Support external monitors to view video content in real time.
- Support dual TF cards, with a maximum capacity of 2TB per TF card.
- Support ADAS functions: LDW, HMW, FCW and PCW.
- Support DMS function, which can detect unsafe driving behavior.
- Support face recognition function to achieve effective driver supervision.
- Extended camera Support BSD function to monitor the status of pedestrians or non-motor vehicles in the driver's blind spot.
- The two built-in cameras can continue recording for 1 second when the V8 loses power, to prevent the device from losing the recording due to abnormal power failure.
- Support aggressive driving detection: harsh acceleration, hard braking, and sharp turn detection.

- Support two ultra-low power consumption modes (2mA / 5mA) to achieve instant response of the device.
- Built-in USB interface, Support portable storage device video export function, and convenient data transmission.
- Equipped with CAN interface, it can collect vehicle data in real time.
- Support APP to complete function settings, video playback, download, real-time playback, historical track query and other functions.
- The whole machine is easy to install and compactly designed, and will not block the driver's line of sight.

3. AI

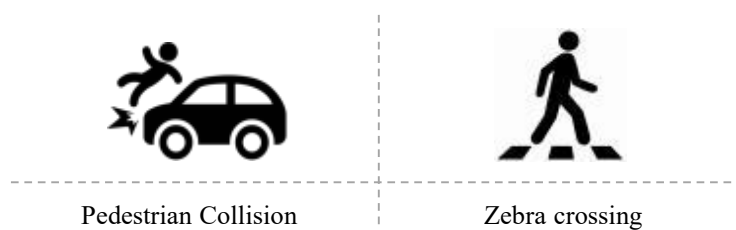
V8 supports ADAS, DMS, face recognition, BSD and aggressive driving detection, which can complete the comprehensive monitoring of vehicle and driver behavior. It reminds drivers to drive safely in real time through voice alarms, and uploads events and alarm attachments to the platform.

⚠ Warning: The AI function must be calibrated and configured strictly according to the installation and operating instructions, otherwise the AI function will not work properly.

3.1 ADAS



3.1.1 PCW



3.2 DMS

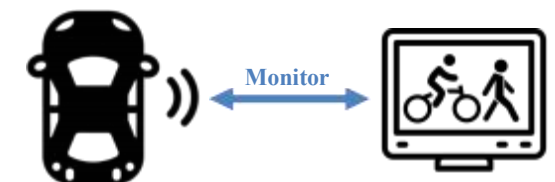
		
Yawn	Close eyes	Distraction
		
Call	Smoke	Infrared glasses blocking
		
Not wearing seat belts	Driver abnormality	Block the camera

3.3 Face Recognition



Face Recognition

3.4 BSD



BSD

3.5 Aggressive Driving

		
Harsh acceleration	Hard braking	Sharp turn

3.6 Warning Tone

Function	Alarm Type	Voice
ADAS	LDW	Lane Departure
	HMW	Keep Your Distance
	FCW	Collision Hazard
PCW	Pedestrian Collision	Caution Pedestrian
	Zebra crossing	Attention. Pedestrian Crosswalk
DMS	Yawn	You Are Already Driving Tired
	Close eyes	Watch Out for Hazards
	Distraction	Please Pay Attention to the Road Conditions
	Call	Please No Phone Call
	Smoke	Please Do Not Smoke
	Infrared glasses blocking	Please Wear Suitable Glasses
	Not wearing seat belts	Please Fasten Your Seat Belt
	Driver abnormality	Driver Abnormally
	Block the camera	Please Do Not Cover
Face Recognition	Face Recognition	Driver Identification Success
		No Driver Information
BSD	BSD	Please Pay Attention to Blind Spot Surveillance

Aggressive driving	Harsh Acceleration	Harsh Acceleration
	Hard braking	Hard Braking
	Sharp turn	Sharp Turn

*Note: The warning tone is based on the product's actual real-time broadcast.

4 . Technical Parameters

Model: V8	
System	Linux
4G	LTE-FDD, LTE-TDD, WCDMA, GSM/ EDGE
Wi-Fi	802.11b/g/n
Storage	
TF card	● TF card *2(maximum support 2TB) ● Patented DXR streaming storage format
Audio/Video	
Audio Input	The host has 1 built-in audio MIC and one external MIC (the 4th channel)
Video Input	● Total 4 video inputs: [Default] Channel 1: Front-facing camera built into the host, supports wide dynamic range and starlight Channel 2: Internal camera built into the host, with IR-CUT infrared fill light [Extended] Channel 3: Optional, using camera AHD standard, installed in the rear row of the vehicle or in the blind spot of the vehicle Channel 4: Optional, using camera AHD standard, installed in the rear or side of the vehicle

Storage resolution	Maximum capability: Channel 1: 1080P@25fps Channel 2: 1080P@25fps Channel 3: 720P@25fps Channel 4: 720P@25fps Recommended configuration: [Main stream] 1080P@15fps(ADAS)+ 720P@15fps(DMS)+ 720P@15fps(AHD)+ 720P@15fps(AHD) [Sub-stream] D1@15fps(ADAS)+ D1@15fps(DMS)+ D1@15fps(AHD)+ D1@15fps(AHD)
Video Output	● Standard video installation cable, including 1 video output channel ● Output format: CVBS ● Can be connected to an external monitor to view real-time video
Video encoding	Available: H.264/ H.265 Default: H.264
Audio encoding	Available: G.711A/ G711U/ G726/ AMR Default: G.711A
CBR/VBR	Available: CBR/ VBR Default: CBR
Parameters of the host's built-in front-facing camera	
Sensor type	1/2.8" 2-megapixel CMOS sensor
Lens	● Focal length: 2.95mm ● HFOV: 115°, VFOV: 61°, DFOV: 137°, Error: ±5°
Resolution	1080P
Signal-to-noise ratio	42dB
WDR	Support
Parameters of the host's built-in inward-facing camera	
Sensor type	1/3" 2-megapixel CMOS sensor

Lens	● Focal length: 2.0mm ● HFOV: 152°, VFOV: 84°, DFOV: 180°, Error: ±5°
Resolution	Default 720P (maximum support 1080P)
Signal-to-noise ratio	37dB
WDR	Not supported
Speaker parameters	
Rated power	2.5W
Sensor	
Six-axis acceleration	● Linear acceleration axis: X, Y, Z ● Angular velocity axis: Yaw, Pitch, Roll
Interface	
USB	type-c USB*1
I/O	● 6 input channels(ACC, Emergency, Left turn, Right turn, 2 reserved channels) ● Left and Right turn: 1. Configurable high input/low input valid (configured through software APP) 2. High-level activation voltage: >6.5V Low-level activation voltage: <1.0V 3. Current: >0.1mA 4. Protection: withstands up to 60V short circuit protection ● 1 output channel (customized models supported)
SIM	Micro SIM
TFcard	2
RS232	1
RS485	Customized model support
CAN	1

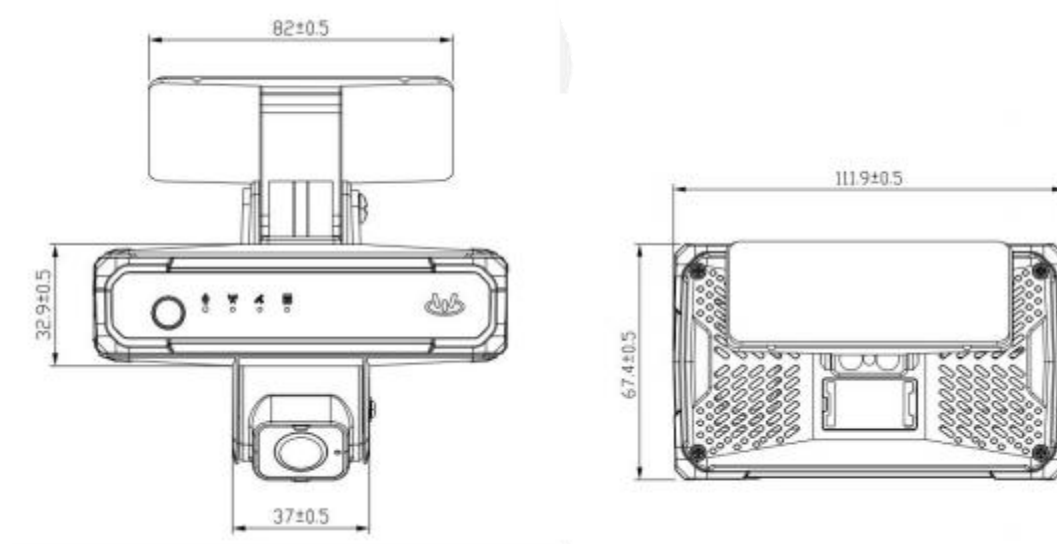
Buttons/Indicator Lights		
Reset	Press and hold for 3 seconds to reset	
Multi-function button	● Lock: Short press for 1 second to lock the current video ● Wi-Fi: Long press for 3 seconds to turn on Wi-Fi (with a "beep" prompt sound)	
Indicator Lights	2 single-color indicator lights, 1 dual-color (red and green) indicator light	
	Light	icon
	Light status description	
	Single color light	
	GPS	 ● Light color: green ● Flash once in 5 seconds: no satellite signal ● Flash twice in 5 seconds: there is a satellite signal, but it does not reach more than 4 satellites, and there is no positioning ● Flash 3 times in 5 seconds: there is a satellite signal, and it reaches more than 4 satellites, and it is positioned ● Always on: GPS antenna is open, check the GPS antenna wiring or it is faulty or disconnected ● Long on for 4 seconds and off for 1 second: GPS antenna is short-circuited, check the GPS antenna wiring fault
	REC	 ● Light color: green ● Flashes 3 times in 5 seconds: normal recording ● Light off: abnormal recording (recording function not turned on/recording card abnormal/camera lost)
	Multifunctional two-color light (red and green)	
	4G	 ● Light color: green ● Flash once in 5 seconds: no signal ● Flash twice in 5 seconds: signal, but not connected to the central server ● Flash 3 times in 5 seconds: signal, and connected to the central server ● Flash 4 times in a row: SIM card not detected, need to re-insert SIM card

	Wi-Fi	● Light color: red ● Flashes twice in 5 seconds: Wi-Fi is turned on ● Light off: Wi-Fi is not turned on
	● Power-on startup phase (device powered on, program ready): 3 indicators are always on ● System preparation phase (program started, peripherals ready): 3 indicators flash at 0.5 second intervals	
Alarm button function	Standard emergency alarm connector	
GPS		
GNSS	● Support: BD / GPS	
Power		
Working voltage	● Original car battery: 12V/24V (auto-adaptive) ● Working voltage range: 9V~36V	
Super capacitor	Built-in super capacitor, with front and rear cameras to support continuous recording for 1 second after the host loses power Purpose: To avoid abnormal power failures causing loss of recording data and damage to the device	
Power consumption	Working current (main unit power consumption, excluding external camera): 12V: 600mA 24V: 300mA	
Environmental		
Working temperature	-20°C~70°C	
Storage temperature	-40°C~85°C	
Working humidity	15%~95% non-condensing	
Storage humidity	15%~95% non-condensing	
Protection level	IP30	

Dimensions and weight	
Dimensions L*W*H	111.9mm*67.4mm*32.9mm (only the middle part of the host, excluding the top mounting bracket and the internal camera below) Error: ± 1 mm
Weight	Net weight (main unit and built-in fixed cable weight only): 317g Error: ± 10 g
*Actual dimensions and weights may vary due to individual product differences, manufacturing processes and testing methods.	
Package Contents	Standard: host, adapter cable, extension cable, emergency alarm button, SIM card sticker, installation L-shaped wrench, external interface cover Optional: video installation cable, DMS camera (camera extension cable is required at the same time), external monitor, 1939 connector cable, OBD connector cable

5. Product Structure Diagram

5.1 Product Appearance Size



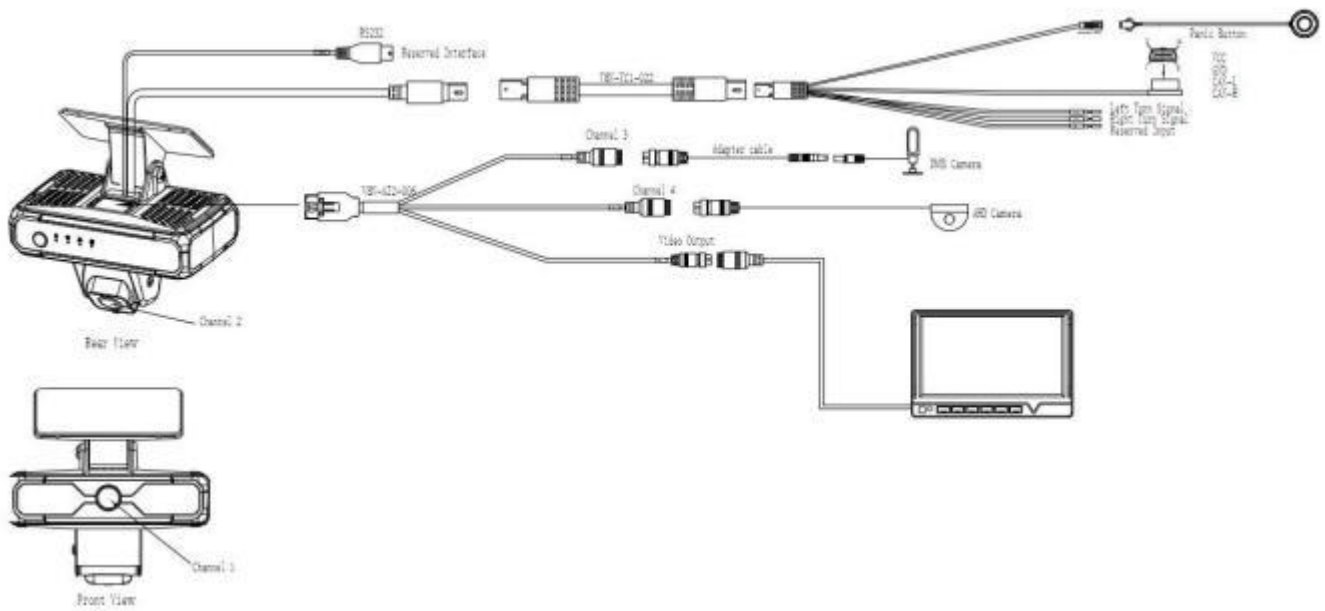
5.2 Indicator Light/MIC/Multi-Function Button



5.3 TF Card/SIM Card/USB Position/Button



6.3 OBD Solution Cable Wiring Diagram (Optional)



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