# DS03P Vehicle Intelligent Video Terminal

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● DS03P is a new generation of driver status monitor, which uses professional camera to monitor driver's abnormal driving behavior such as fatigue driving, driving phone call, yawning, driving smoking, left and right looking in real time, and can be connected with various types of vehicle terminals through serial port, etc.to transmit driver abnormal driving behavior data to monitoring platform.

● Extensible access camera supports vehicle proximity, lane departure, forward collision alarm, pedestrian collision alarm functions.

● Scalable access cameras support blind zone vehicle and pedestrian alarms.

● Support driver face comparison and verification. The equipment supports 9-36V wide voltage input, protection level reachesIP66, and supports open cockpit outdoor use.

● Application: It can be used independently or as an on-board accessory to monitor the driving state of taxis, buses, school buses, forklifts and other vehicles.

Product Appearance Description
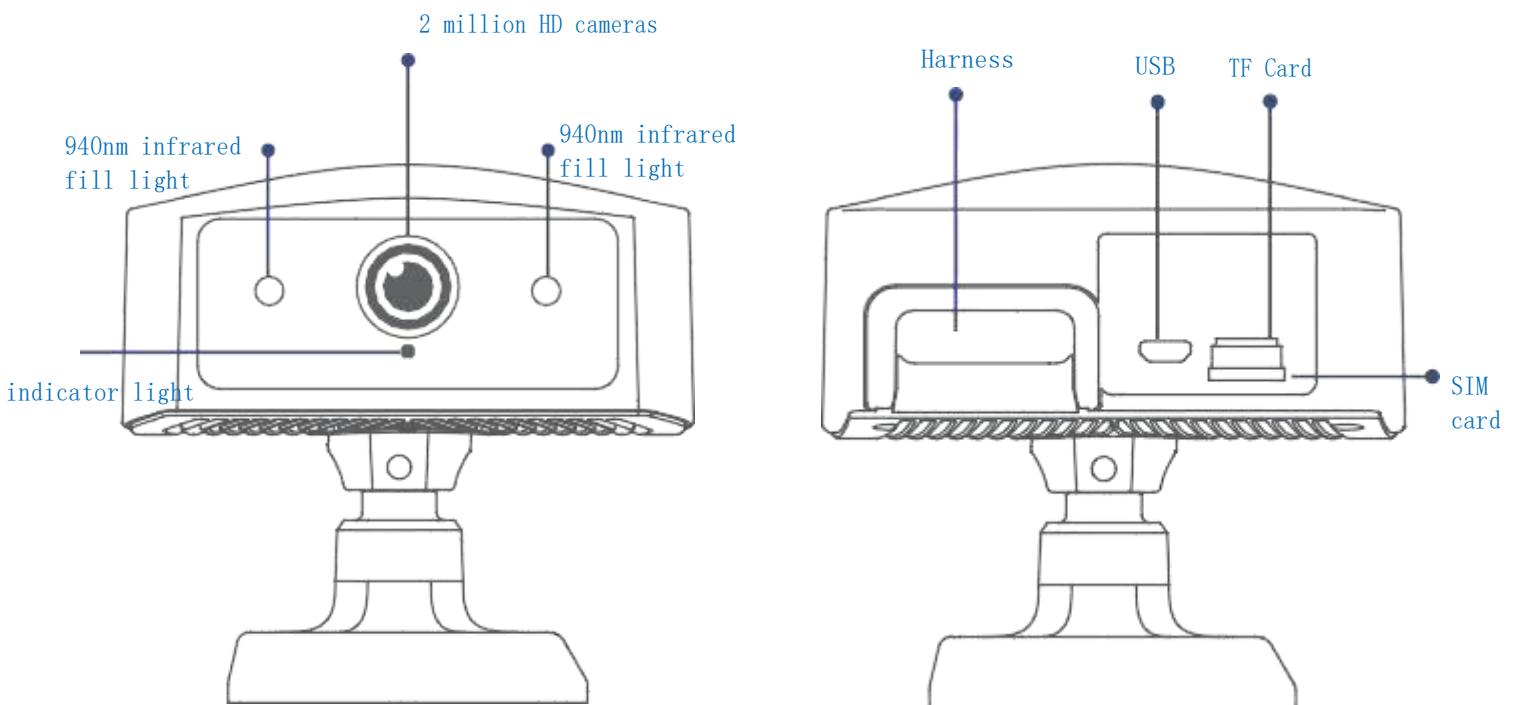
Functional

function	explain
dual stream	Aiming at the situation of low bandwidth and unstable network condition of wireless network, dual-stream technology of real-time video and network transmission coding is adopted to improve the control ability of wireless network transmission.
video	Each channel realizes independent real-time video recording, network monitoring, video query, video download, etc., so as to view the accurate time of event occurrence, and switch video recording.
remote platform	Remote real-time monitoring, platform viewing alarm accessories, driving trajectory,etc.
4G,Wi-Fi network	Adopt the latest wireless network communication technology to improve the manageability of equipment
GPS positioning	The equipment is equipped with positioning information record, query driving track
TF card	Equipment has TF card,TF card space is insufficient,TF card error and other alarm mechanisms
date settings	Support setting time zone, daylight saving time
Capture Settings	Support driver catch, check driver status
OSD information overlay	Time, geographical location, alarm information, etc.
system upgrade	Support OTA delivery upgrade system

Product Specification

project	parameter	specification
scheme	master chip	quad-core chip
	memory	1GB
	EMMC	8GB
camera	pixel	1080P
	focal length	6mm
	infrared lamp	940nm
	working distance	50-100cm
	operating conditions	Day, night
video	coding	H.264
hashrate	hashrate	2Tops
voice	trumpet	Support 1way 3W
	microphone	Support 1-way G.276/PCM/AMR
behaviour of electricity	working voltage	DC 9-36V, ACC support
	working current	≤500mA@12V
	power supply output	DC12V/1A For AHD
work environment	operating temperature	-20°C~+70°C
physical properties	storage temperature	-40°C~+85°C
	texture	Metal, plastic
	size	92.8*85.5*102（mm）
level of protection	waterproof and dustproof	IP66
port	port	Power positive, power ground, ACC IO input: 9-36V input IO output: support 12V output RS232 (USB option), 1 AHD output, 2 channels AHDinput
communication	4G	Support full Netcom /GSM LTE -FDD BI/B3/B5/B7/B8; LTE-TDDB34/B38/B39/B40/B41: WCDMA BI/B8: TD-SCDMAB34/B39: EVDO/CDMA BCO:GSM 900/1800MHz
	Bluetooth	support
	WiFi	Support 802.1b/g/n
location	GPS	GPS/Beidou/GLONASS, accuracy <10m
storage	TF card	Format support FAT32, maximum support 512GB
file	file storage	Real-time video and alarm file storage
	files upload	Alarm video, pictures, categories real-time upload
else	RTC	support
	G-sensor	6-axis
	indicator light	Support, forward 1 lamp, RGB tricolor lamp

DMS is a technology designed to monitor a driver's state, including fatigue, distraction, and other factors that may affect driving safety. It mainly includes the following picture display functions:

Fatigue detection


Distraction detection

Smoking detection

Phone call detection

Unfastened seat belt detection

Driver out of position detection
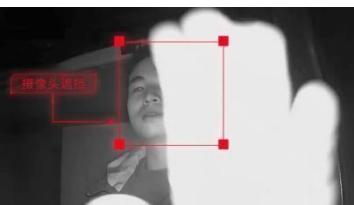
Occlusion camera detection

Infrared blocking alarm

serial number	alarm type	Alarm conditions and precautions
1	fatigue detection	The driver yawns and closes his eyes for more than2 s; 1. Report once every5 seconds
2	distraction detection	The driver heads up, heads down, heads left and heads right continuously for more than3 s; 1. Report once every5 seconds
3	driver anomaly	The driver is out of position, and the face cannot be detected for more than3 s; 1. Report once every5 seconds
4	Phone call detection	The driver holds the phone to his ear for more than2 s; 1. Report once every5 seconds
5	Smoking detection	The driver keeps the cigarette in his mouth for more than2 s; 1. Report once every5 seconds
6	Occluding the camera	The driver covers the camera image with hands or other objects for more than3 s; 1. Report once every5 seconds
7	infrared blocking	The driver wears infrared blocking sunglasses, which affects the recognition of the driver's face by the camera for more than3 s; 1. Report once every5 seconds
8	unfastened seat belt detection	The driver does not wear the seat belt for more than3 s; 1. Reportonceevery5 s;(interval time adjustable)

Product Features

FACEID is a technology for Face Recognition, which uses the principles of deep learning and computer vision to identify and verify the facial features of users. The system uses cameras or sensors to capture facial images of users, effectively identifying users and protecting their privacy and security.
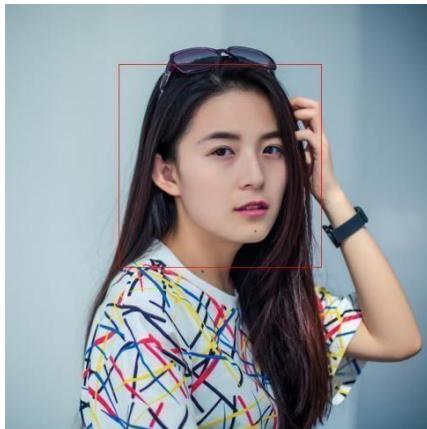
Face Detection

Face Recognition

serial number	type of function	functional description
1	face detection	The driver's face is facing the camera, which can quickly and accurately identify the face.
2	Face Recognition	The driver faces the camera, automatically recognizes the identity of the person in the picture and camera, and logsor unlocks it.
3	face tracking	The driver's face is facing the camera, and real-time face tracking is realized in the real-time video stream.

Product Features

ADAS algorithm can identify vehicles, pedestrians and lane lines ahead in real time, detect the distance, orientation and relative speed between the vehicle and the preceding vehicle or pedestrian, as well as the position of the vehicle in the lane, and make early warning decisions, thus providing assistance for safe driving.

Pedestrian Collision Alarm

Forward Collision Alarm
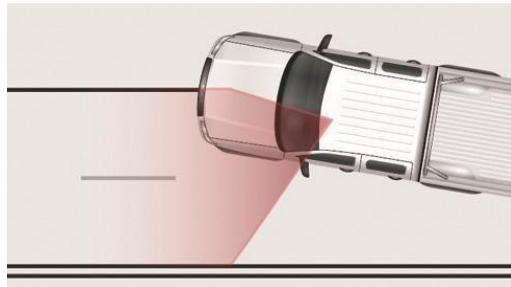
Lane departure alarm
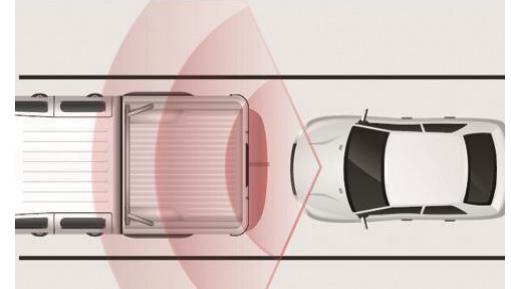
Vehicle close call

serial number	alarm type	functional description
1	Pedestrian collision alarm	When potential risks are detected at a distance from pedestrians, alarm prompts are given.
2	Forward Collision Alarm	When the collision time is detected to be within the potential danger range, an alarm prompt is given.
3	lane departure warning	When lane deviation is detected, alarm prompt is given according to vehicle speed and deviation degree.
4	Close distance alarm	When the distance between the monitor and the preceding vehicle is less than the safe range, an alarm prompt will be given.

Warming