Aisafer AI Vehicle Terminal

P9V Product Manual

Product name: 4G 8-CH AI MDVR

Product model: P9V

Version number: V1.0

Speech

Welcome to use **P9** series products. If you encounter any problems or suggestions during use, please contact us in time. We will provide timely support for the problems you encounter during use, and we will gradually optimize your suggestions and express our sincere gratitude to you!

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Product Introduction

1.1 product description

The P9V intelligent vehicle terminal adopts professional high-performance image processing chips and LINUX operating system, complies with national standards 19056 /ministry standards 794/808/1076/115/Suzhou standards/Sichuan standards/Jilin standards/Zhejiang standards/Xiang standards/Guangdong standards and other protocol standards, and has terminal equipment intelligent operation and maintenance functions such as real-time fault tracking and remote parameter query and setting. It is a cost-effective intelligent vehicle terminal integrating satellite positioning, video monitoring and AI intelligent algorithms.

1.2 Features

- In-vehicle intelligent chip, 1.5T computing power NPU, supports multi-channel algorithm operation;
- ADAS, DSM and driver face recognition algorithms are standard, and algorithms for blind spot, closed monitoring, empty and heavy load can be expanded;
- Support 1-channel CVBS/AHD high-definition video output;
- Support 4G full network; support BD/GPS dual-mode high-precision positioning;
- Supports 8-channel 1080P/720P AHD cameras and supports expansion of 2-channel IPC cameras;

- Support IO signal 485/232/USB/CAN bus/Ethernet and other interfaces;
- 9~36V vehicle voltage input, with circuit protection such as brownout/short circuit/reverse connection;
- Supports 2 SD cards/single card 256G storage; supports 1 mechanical hard disk (7/9mm)/solid state drive (maximum 2T);
- Support automatic calibration of algorithms such as ADAS/DSM/BSD;
- Support remote video playback/preview, remote equipment maintenance, real-time fault tracking, remote parameter query and setting, etc.;
- Configurable: SOS-button alarm, voice intercom, forward and reverse, fuel consumption, tire pressure, load, temperature and humidity, lifting, LED screen, etc.;
- Can be expanded to the new national standard GB/T 19056-2021 version; supports expansion of disaster recovery boxes.

1.5 Technical Parameters

Product Specifications		
system	operating system	Embedded Linux operating system
	Operating language	Chinese English
	User Interface	Graphical menu operation interface
	Password security	Two-level management of user password and administrator password
communication	4G	GSM/WCDMA/LTE-FDD/LTE-TDD
	position	GPS/GLONASS/BDS/GLONSS
Audio and Video	Video format	PAL/NTSC
	Compression Standard	H.264 /H.265
	Image Resolution	1080P/ 720P/D1/ HD1 /CIF
	Video quality	1 to 8 levels are available , 1 is the highest quality, 8 is the lowest

	Screen Display	Support 1, 4 , 8 screen display
	Audio Compression	G711A , G726-32K , G726-40K
	Recording method	Synchronous recording of audio and video
Video	Video bitrate	Full frame 8M bps, 8 levels of image quality optional
	Audio Bitrate	8KB/s
	Storage Media	SD card /mechanical hard disk/solid state drive storage
	Video Query	Can search by channel and video type
	Local playback	Playback by file
interface	Audio and video input	8 -channel 1080P aviation head AHD audio and video camera
		2-channel 720P aviation head IPC audio and video camera
	Video Output	1-channel CVBS/AHD video output
	Alarm input /output	8 input signals/2 output signals
	Communication Interface	1 RS485 , 2 RS232 , 2 CAN bus , 1 USB 2.0
	Antenna interface	1 GNSS positioning antenna
		1 4G full network communication antenna
	Intercom interface	1 external speaker/ 1 intercom MIC interface
	Indicator Lights	S, C, F, display
	SIM card	1 medium card
	harddisk	1 mechanical/SSD, up to 2T storage, 7mm/9mm optional
	SD Card	2 SD cards , each with a maximum of 256G
	printer	1 built - in printer
	Device Lock	Device power on/storage media baffle lock 1
other	power input	DC: 9V~36V
	Power Output	12V / 1A , 5V / 0.6A
	Power consumption	Power consumption 19W , voltage 12V /1.6A, voltage 24V /0.8A , sleep 1.2W
	Operating temperature	-20 ～ 70℃
	storage	D1 About 500M /hour/channel , 720P About 1G/hour/channel , 1080P about 2G/hour/channel
	Disaster recovery box	32G disaster recovery box (expandable)
	weig ht	1.14KG
	size	162mm*188mm*58mm
software upgrade	Upgrade Mode	Manual upgrade, automatic upgrade, remote upgrade
	Upgrade Method	USB port, SD card, wireless network

P9V ADAS Camera

2.1 Product Overview

P9V ADAS camera is a high-resolution, low-power AHD video signal in-vehicle camera product with a plastic shell and unique appearance. Fully automatic electronic shutter and automatic exposure effectively ensure the image effect of light/dark environment changes, fast imaging response speed, and low-illumination chip to ensure good image effect in dark environment.

The chip used is a CMOS image sensor, which is used in various vehicle-mounted and security equipment. It has a high-definition 720P (FHD) camera function at 30fps, a 1920x1080 pixel sensor array chip, programmable gain control (PGA) and double sampling (CDS), which can significantly reduce fixed pattern noise (FPN).

The structure can adjust the viewing angle up and down, and adopts 4P micro aviation plug interface, which makes the contact more reliable and firmer. The structure is simple and beautiful, and the installation is convenient. It is suitable for various vehicle installations.

2.2 Technical parameters

【1】P9V ADAS camera specifications	
size	100 X 71 X 40 MM
Pixel	1920H×1080V
Output Format	AHD
Mirror function	Pre-image
Maximum frame rate	30 fps
Audio output	not support
Operating Voltage	DC 12V
Operating temperature	-20℃ ~ 70℃

P9V DSM Camera

3.1 Product Overview

The P9V DSM camera is a recognition camera product that uses pure 940nM non-red burst infrared fill light, high resolution, low power consumption AHD video signal. Automatic exposure control effectively ensures the image effect of light/dark environment changes. Low illumination chip ensures good image effect in dark environment.

It uses CMOS image sensors and is used in various vehicle-mounted and security equipment. It has a 30fps high-definition 720P (FHD) camera function and a 1280x720 pixel sensor array chip. The structure can adjust the viewing angle up and down.

3.2 Technical parameters

【1】P9V DSM camera specifications	
size	114 * 65 * 28 MM
Pixel	1280H×720V
Output Format	AHD PAL
Mirror function	Pre-image
Maximum frame rate	25 fps
Audio output	support
Minimum illumination	940 infrared fill light
Operating Voltage	DC 12V
Operating temperature	-20℃ ~ 70℃

3.3 Structure diagram