

TP4 2.0 Product Spec



Foreword

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Read this manual before use to ensure proper operation and functionality.



Warning: May involve situations that could endanger the safety of equipment users or cause injury to equipment users.



Special Note: May involve situations that could compromise data integrity or damage device firmware and hardware



Note: Additional explanations, definitions of terms, etc.

Content

1. PRODUCT INTRODUCTION..... 1

2. FUNCTIONAL FEATURES 1

3. SPECIFICATIONS 2

4. DIMENSION DIAGRAM (UNIT: MM) 6

5. SYSTEM CONNECTION DIAGRAM..... 6

6. OPTIONAL AHD CAMERA SPECIFICATIONS 7

7. SPECIAL NOTES..... 12

List of Abbreviations:

Abbreviation	English Explanation	Chinese Explanation
1080P	Resolution ratio 1920×1080	Resolution 1920×1080
720P	Resolution ratio 1280×720	Resolution 1280×720
ADAS	Advanced Driver Assistance Systems	Advanced Driver Assistance Systems
DSC	Driving Safety Cockpit	Safety Driving Cockpit
DMS	Driver Monitoring System	Driver Monitoring System
VBR	Variable Bit Rate	Dynamic Bit Rate
CBR	Constant Bit Rate	Fixed Bit Rate
CAN FD	CAN with Flexible Data Rate	CAN with Flexible Data Rate

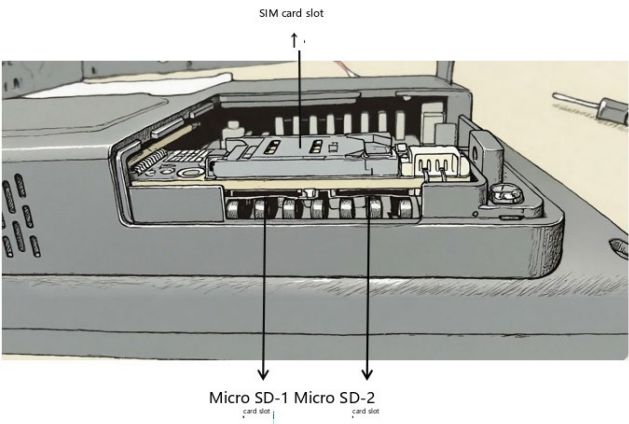
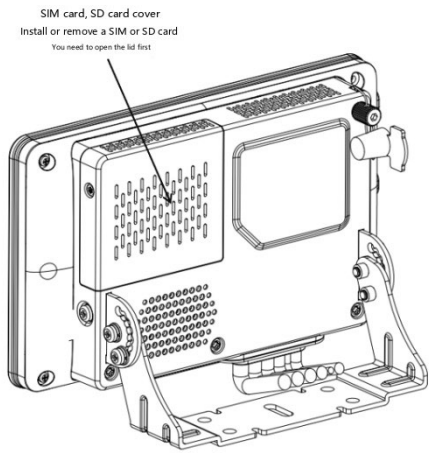
1. Product Introduction

TP4 2.0 is an Android smart display designed for Commercial vehicles. It integrates Android OS, Navigation, Video recording, Storage, AI Capabilities, and Display functionality. Supporting GPS and 4G networks, it comes standard with multiple protocols including N9M, 905 (China Protocol), and 1078 (China Protocol). Real-time vehicle location, historical routes, live video feeds, and alarm evidence chains can be monitored remotely, enhancing operational efficiency and driving safety. Featuring a compact, aesthetically pleasing 7-inch HD full-screen display and a wide voltage range of 9-36V, it accommodates installation requirements for most vehicle models.

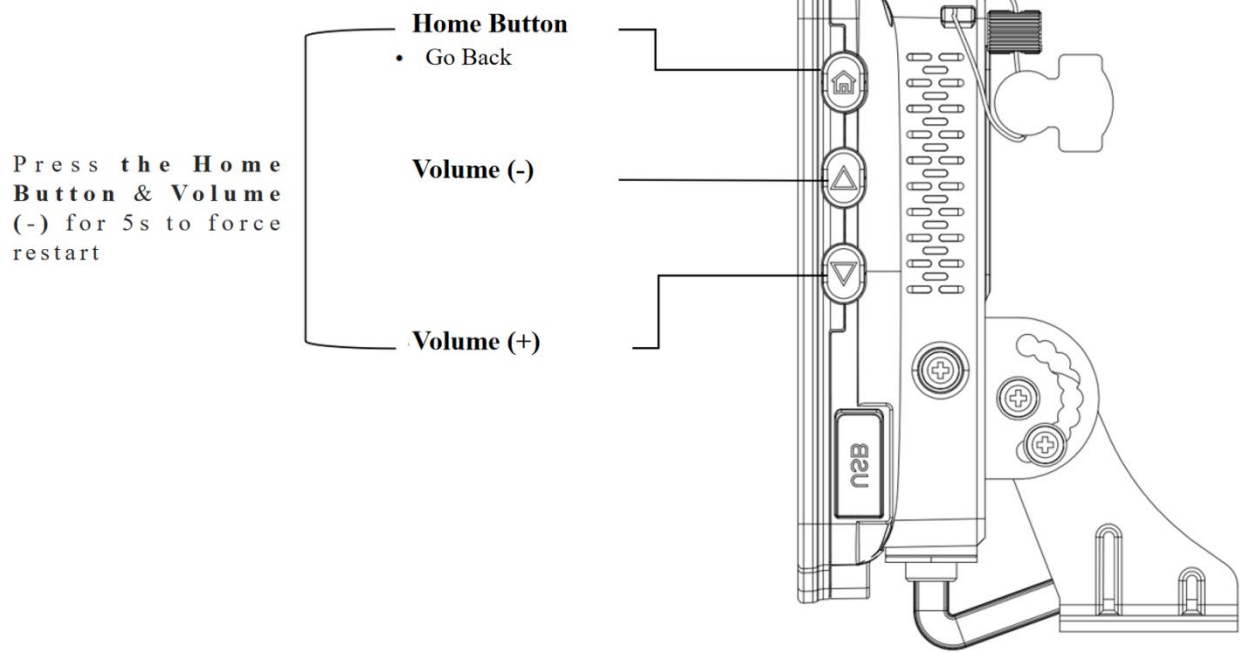
2. Functional Features

- Highly integrated hardware and software combining fare calculation, recording, storage, AI intelligence, display, networking, and positioning functions;
- Supports 4 AHD camera inputs, expandable to 3 AI analysis channels;
- Supports one POE network port for IPC expansion;
- Supports 4G full-network connectivity and GPS positioning, with optional WiFi and six-axis sensors;
- Supports dual TF card recording storage with maximum 512GB capacity and anti-theft functionality;
- Supports physical lead seals, dynamic fare calculation, and remote fare adjustment;
- Supports satellite, pulse, and CAN FD speed sources.

➤ Button and Interface Description



➤ Button Function Guide



3. Specifications

Product Model: TP4 2.0	
CPU	Quad-core A53 1.8GHz

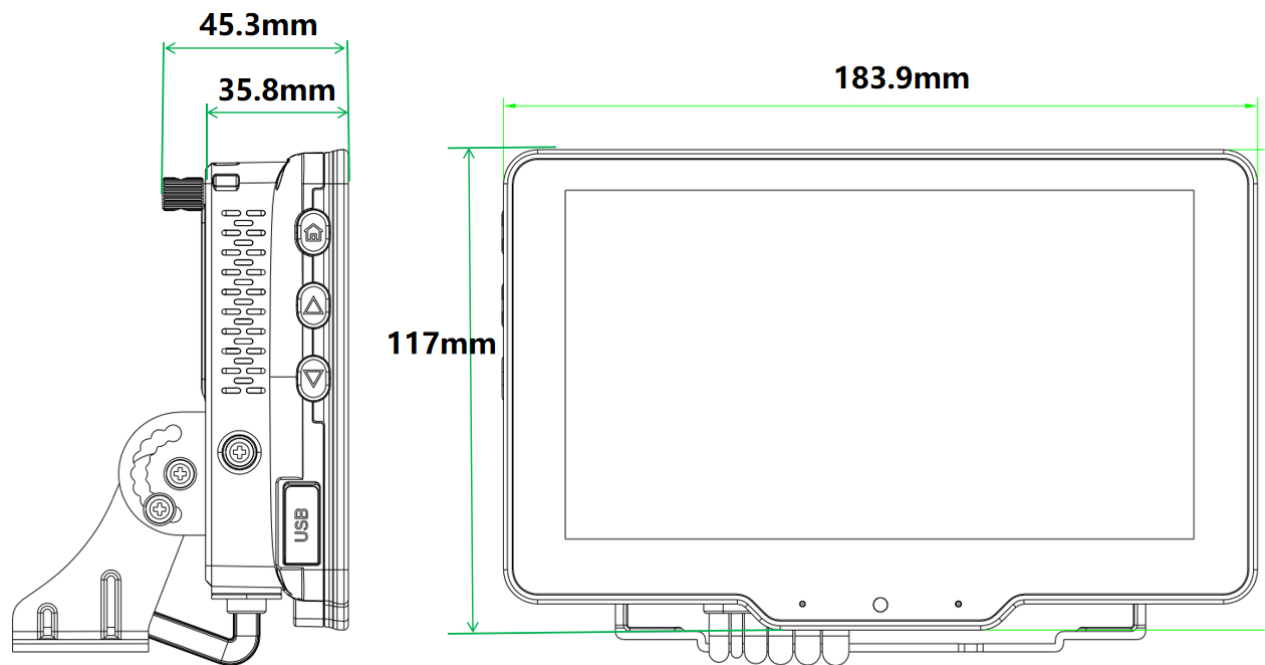
NPU	1 TOPS
System	Android 11.0
RAM	Standard 2GB, expandable to 4GB or 8GB
ROM	Standard 16GB, expandable to 32GB, 64GB, 128GB
Structure	
Physical buttons	3 physical buttons: Home button, Volume Up, Volume Down
Display	7-inch, 1024×600 resolution; supports multi-touch
Physical Tamper-Evident Seal	Supports physical seal
Video/Audio	
Video Input	4 AHD channels + 1 IPC channel
Audio Input	2 built-in array silicon microphones
Maximum Encoding Resources	Main Stream: 1*1080P@25fps + 3*720P@20fps
Image Settings	Adjustable brightness, chroma, contrast, color saturation, and sharpness
Video Encoding	H.264/H.265, default H.265
Audio Compression Format	ADPCM/G.711/G.726 (default: G.711)
CBR/VBR	Supported: Default VBR, configurable CBR
Power Amplifier	Built-in 5W
Storage	
Micro SD card	Supports 2 * Micro SD-Card×1, (32GB/64GB/128GB/256GB/512GB) Minimum read/write speed requirement: Class 10. Class 10 or higher

	recommended.
Sensors	
Six-axis sensor	Optional
Interface	
IO	Emergency Alarm Button: 1 channel Sensor input: 4 channels Sensor Out: 2 channels
Serial Port	RS232: 3 channels RS485: 1 channel
Network port	Supports 1 POE network port with 12V power supply
Pulse	Supports 1 channel pulse signal input
CAN	Supports 1 channel CAN FD
USB	Supports 2 USB ports: One port integrated at the bottom left corner of the device, Type-A interface, for maintenance purposes, standard configuration. One port via tail cable output, Farka interface, for screen mirroring, optional
Debug Serial Port	Supports one 4-pin connector for retrieving device print information.
SIM Card	Default configuration uses a standard SIM card.  Warning: It is recommended to use SIM cards with an operating temperature range of -40° C to 105° C.
Network	
WIFI	Supports 2.4GHz (IEEE Std.802.11a/IEEE Std.802.11b/IEEE Std.802.11g/IEEE Std.802.11n)

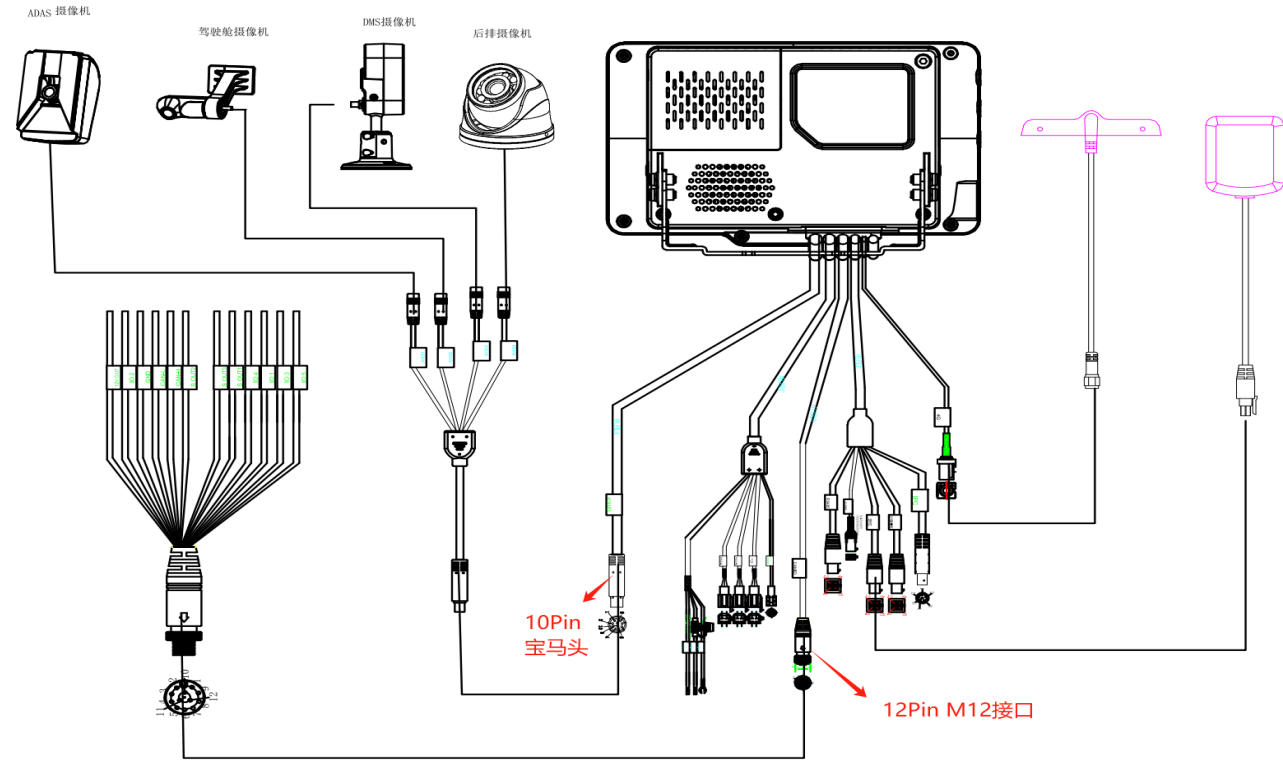
4G	CAT4 Module LTE FDD: B1/B3/B7/B8/B20/B28A WCDMA: B1/B8 GSM: B3/B8
Positioning	
Satellite Positioning	Supports single BDS.
Power-related	
Power	Voltage Range: 9~36V Nominal Voltage: 12V
Power Consumption	Without peripherals: 6W Maximum Load: 30W
Environment	
Operating Temperature	-30° C to +70° C
Storage Temperature	-40° C to +85° C
Operating Humidity	0% - 90% non-condensing
Storage Humidity	0% - 90% non-condensing
Protection Rating	IP4X *Main unit is not waterproof
Dimensions and Weight	
Dimensions L×W×H	183.9 × 117 × 35.8 (mm)

Weight	To be confirmed
*Actual dimensions and weight may vary depending on configuration, manufacturing process, and measurement method	
Package Contents	
TP4 2.0 Main Unit*1, 4G Antenna*1, G-Mouse*1, 4*AHD Video Cable*1, Sensor Cable*1	
*Configurations may vary by region; final contents subject to actual unboxing results	

4. Dimension Diagram (Unit: mm)



5. System Connection Diagram



System Connection Diagram

6. Optional AHD Camera Specifications

6.1 Cab-in Camera

6.1.1 CA26 (Cockpit Camera)

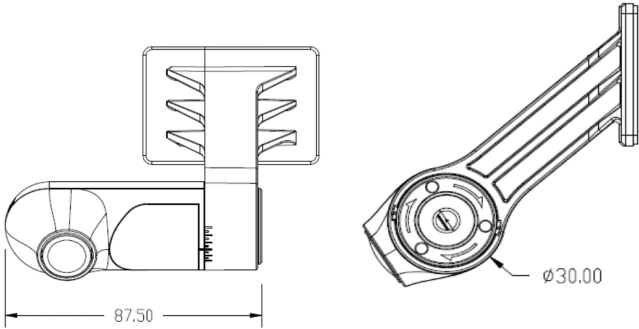
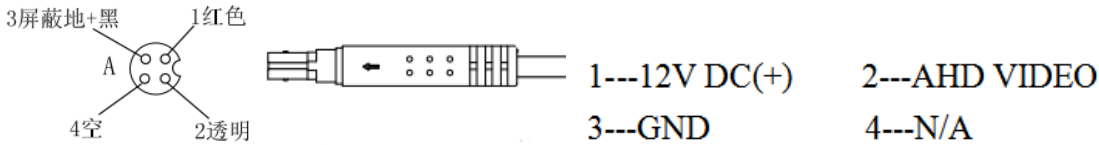
Product Image	Product Features	
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- 1/4-inch 1.3M pixel CMOS
- Resolution: 1280H*720V
- Minimum Illumination: Color: 0.05Lux; Monochrome: 0Lux (IR LED ON)
- Auto electronic shutter, auto exposure, auto white balance
- Supports 50° angle adjustment
- Installs with 3M adhesive to front windshield; sleek, stylish design; easy installation
- 0.2m 4-pin BMW connector tail cable, DC12V, black housing

Technical Specifications

Product Model	CA26	
Imaging Sensor	1/4-inch 1.3M pixel CMOS	
Resolution	1280H*720V	
System	P-system / N-system	
Minimum Illumination	Color: 0.05Lux; Monochrome: 0Lux (IR LED ON)	
Electronic Shutter	Auto shutter 1/30 sec to 1/10000 sec	
Synchronization System	Internal synchronization	
Scanning System	Progressive Scan	
Signal-to-noise ratio	≥ 48dB	
Lens	1.8 mm lens; HFOV: 122°	VFOV: 68°
	2.6 mm lens; HFOV: 110°	VFOV: 58°
White Balance	Auto White Balance	
Infrared Range	3 meters	
Auto Gain	Supported	
Backlight Compensation	Supported	

3D Noise Reduction	Supported
Gamma correction	0.45
Video Output	AHD Coaxial HD Standard, 4-pin BMW Connector
IR-CUT	Supported
Power	DC 12V± 10%
Power Consumption (Max)	165mA/DC12V ± 5%
Operating Temperature	-40° C to 70° C
Operating Humidity	Humidity <90% (non-condensing)
Product Dimensions	
	
Video Output Cable Interface	
	

6.2 DMS Camera

Product Images	Product Features	
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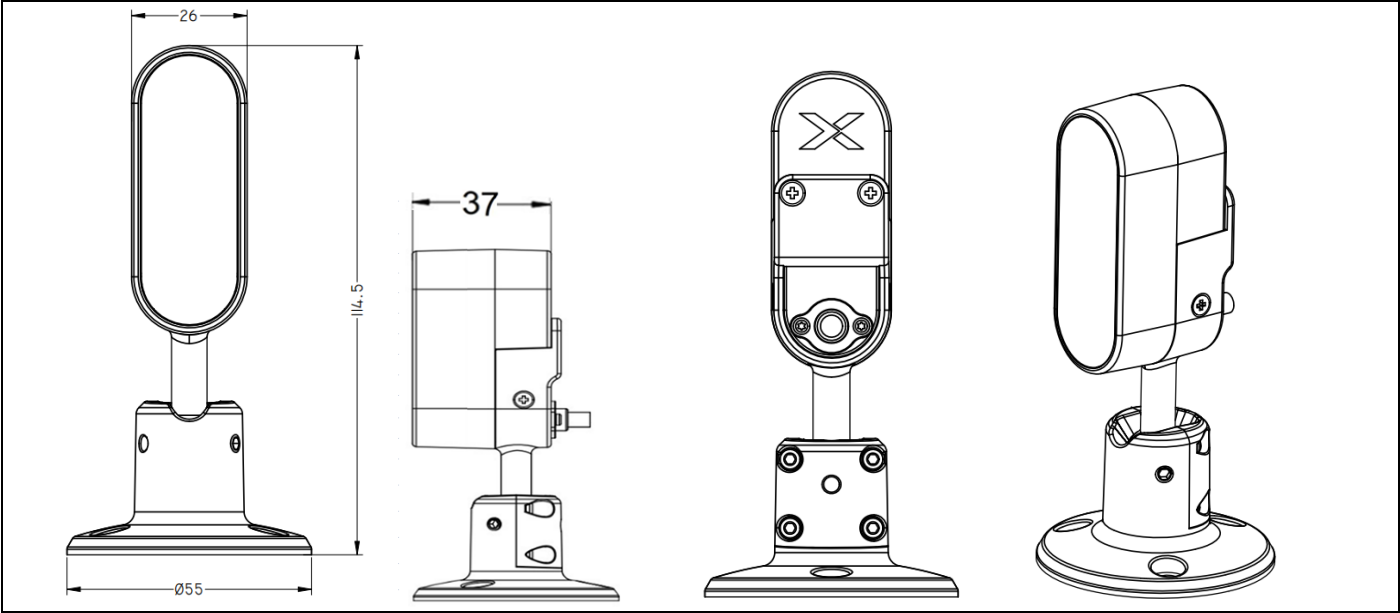
- 1/3-inch 1.3M pixel CMOS
- Resolution: 1280H*720V
- Auto electronic shutter, auto exposure, auto white balance
- Compact design suitable for installation on A-pillars and center consoles in small vehicles, meeting vehicle vibration resistance requirements
- Features an imported high-power single LED illuminator, designed for scenarios where the distance from the A-pillar or center console to the face exceeds 60cm
- Output images unaffected by ambient light, meeting 24/7 surveillance requirements. No red exposure, capable of penetrating sunglasses

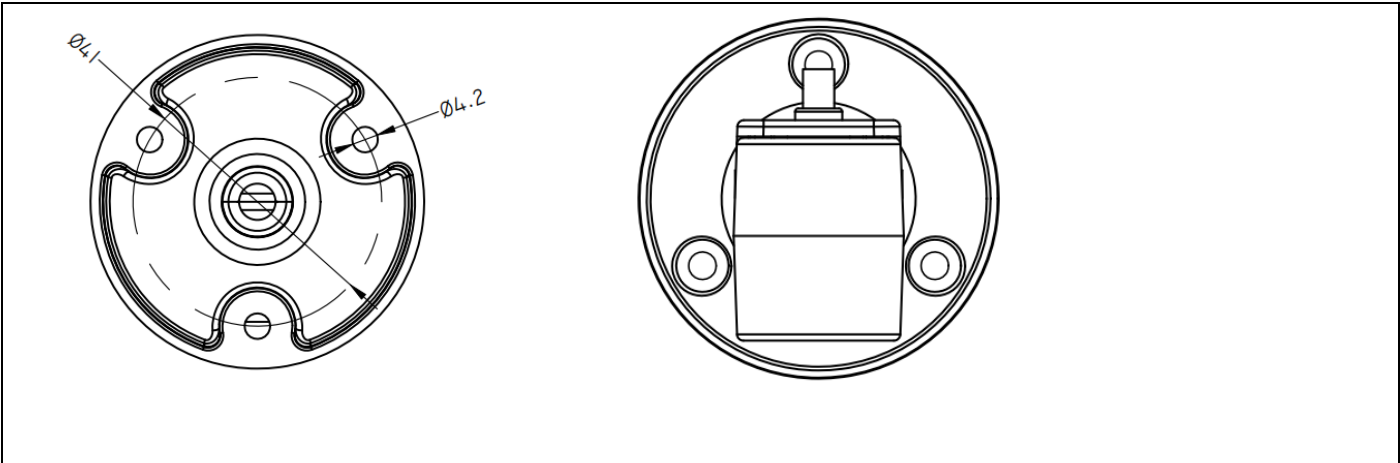
Technical Specifications

Product Model	SVT-A6410R	
Imaging Device	1/3-inch 1.3M pixel CMOS	
Resolution	1280H*720V	
System	P-system/N-system	
Minimum Illumination	0.01 lux (IR ON)	
Synchronization System	Internal Synchronization	
Scanning System	Progressive scan	
Signal-to-noise ratio	Greater than 50dB	
Lens	6mm HFOV: 45°	VFOV: 33°
Electronic shutter	Auto	
Exposure Mode	Auto	

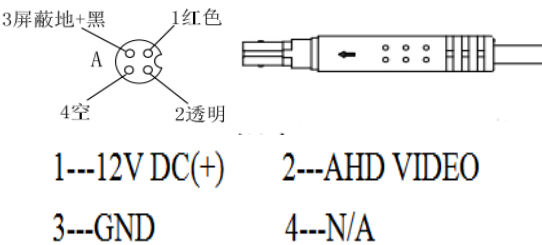
Auto Gain	Supported
3D Noise Reduction	Supported
Color to Black	Black-and-White Mode (Default monochrome images)
Image aspect ratio	Portrait orientation when mounted on left A-pillar Aspect ratio 3:4
Gamma Correction	0.45
Infrared	Features one high-power 940nm dot-matrix infrared lamp
Effective Infrared Range	Up to 0.8 meters No noise during long-distance shooting
Video Output	AHD coaxial high-definition standard, 4-pin aviation connector
Power	DC12V ±10%
Power Consumption (Max)	120mA ± 20mA
Operating Temperature	-40° C to 70° C
Product Dimensions	55mm × 26mm × 114.5mm (L × W × H)
Product Net Weight	Approx. 150g

Product Dimensions





Video Output Cable Interface



7. Special Notes

- 1) This product requires professional installation. Failure to do so may result in electric shock, damage to vehicle wiring, impaired AI functionality, or device detachment.
- 2) When exposed to direct sunlight, the surface temperature of this product may exceed 60° C. Do not touch the sun-exposed surface to avoid burns.

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