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Streamax
锐明

股票代码 002970

M960C53

Product Specification

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1. Product Introduction

M960C53 is an intelligent IPC for detecting pedestrians or cyclists in blind spots of large vehicles. Its AI detection scenes could meet the provisions of the European standard R151. It is suitable for a variety of large- and medium-sized freight vehicles, can be connected to an external AHD camera for vehicle head blind zone position monitoring, and could be used to provide early warning to persons outside the vehicle and the driver through external display and audible & visual alarm inside and outside the vehicle. The product features high quality, reliability, easy installation, simple usage and high cost-efficiency.

2. Functional Features

- Super wide angle lens over roads, supporting 1080P HD video
- Rear view road telephoto lens, supporting 1080P HD video
- Built-in 6-axis gravity sensor, supporting rapid acceleration, rapid deceleration, rapid turning and collision detection
- Supporting the expansion of one AHD camera for blind spot monitoring in front of the vehicle
- Supports one AHD 720P LCD display
- Support one CAN line access
- Support external access to the GPS module
- Support minimum illumination 1LUX effective safety alarm tips
- With independent AI, pure vision solution, simple installation, effective and accurate detection of targets in any blind spot
- Supporting semantic segmentation algorithm, effectively filtering road edges, pavement edges, railings and other isolation facilities
- Supporting alarm blocking algorithm, and effective detection of contaminants in the lens to ensure driving safety
- Supporting relative motion trend analysis algorithm to reduce invalid alarms

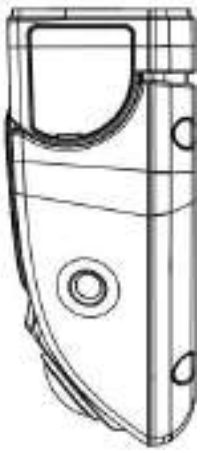
3. Product Parameters

Product Model: M960C53	
System	Embedded Linux
Language	Chinese and English
Video	
Video recording	2 lines of videos with 1 expanded AHD
Maximum resources	2*1080P@30fps+1080P@30fps(AHD)
Image setup	Brightness, chroma, contrast, color saturation, sharpness can be adjusted
Video coding	H.264/H.265 optional, default H.264
CBR/VBR	VBR/CBR optional, default VBR
Overhead road camera parameters	
Sensor type	1/2.8" 2.0 megapixel CMOS sensor
Shutter speed	1/30s-1/100000s
Lens	Focal length 1.9mm HFOV: 175°: VFOV: 92°; error: ±5°
Minimum illumination	Color: 0.05Lux/F1.2
Lens interface type	Camera built-in lens
Wide dynamic range (WDR)	Digital wide dynamics
Backlight compensation	Support
Signal-to-noise ratio (S/N)	≥45dB
Rearview mirror camera parameters	
Sensor type	1/2.8" 2.0 megapixel CMOS sensor

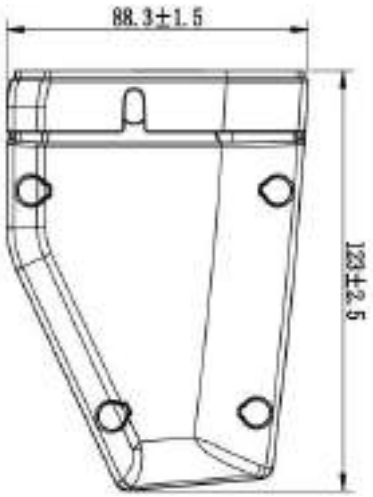
Shutter speed	1/30s-1/100000s
Lens	Focal length 6mm HFOV: 56°: VFOV: 31°; error: ±5°
Lens interface type	Camera built-in lens
Wide dynamic range (WDR)	Digital wide dynamics
Backlight compensation	Support
Signal-to-noise ratio (S/N)	≥45db
Sensor	
Six-axis sensor	Supporting rapid acceleration, rapid deceleration and rapid turning detection
Interface	
RS232	1 line
RS485	1 line
IO interface	3 line
Speed interface	2 line
AHD interface	1 line
MDVR interface	1 line
AHD video output interface	1 line
CAN	1 line (supporting standard J1939 protocol)  Warning: Since vehicle manufacturers will customize some data fields, the final data used in actual test shall prevail. If the required data is not supported, protocol can be provided for integrated development
Protocol	

Network protocols	HTTP, TCP, ARP, UDP, FTP, DHCP, DNS, IPV4, NTP
Power Supply	
Power supply	9-36V
Power consumption	Typical power consumption: 4.2 W Full-load power consumption: 6 W
Environment	
Working temperature	-40℃~+75℃（-40℉~+167℉）
Humidity	15% - 90%
IP rating	IP69K
Dimension and Weight	
Dimension	Standard：L123mm*W88mm*H53mm Extended：L237mm*W124mm*H55mm Error ±2mm
Weight	Net weight: 365g Gross weight: 1120g Error ±10mm

4. Dimension Diagram （Unit: mm)

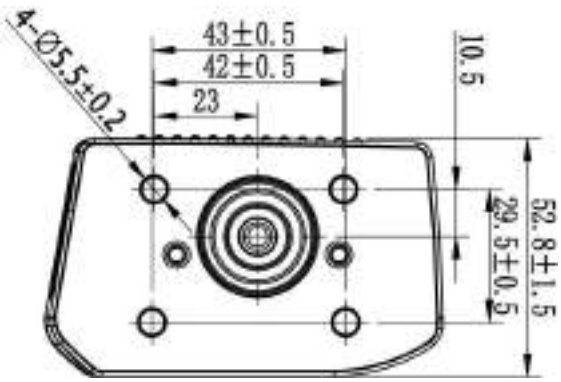


Left view



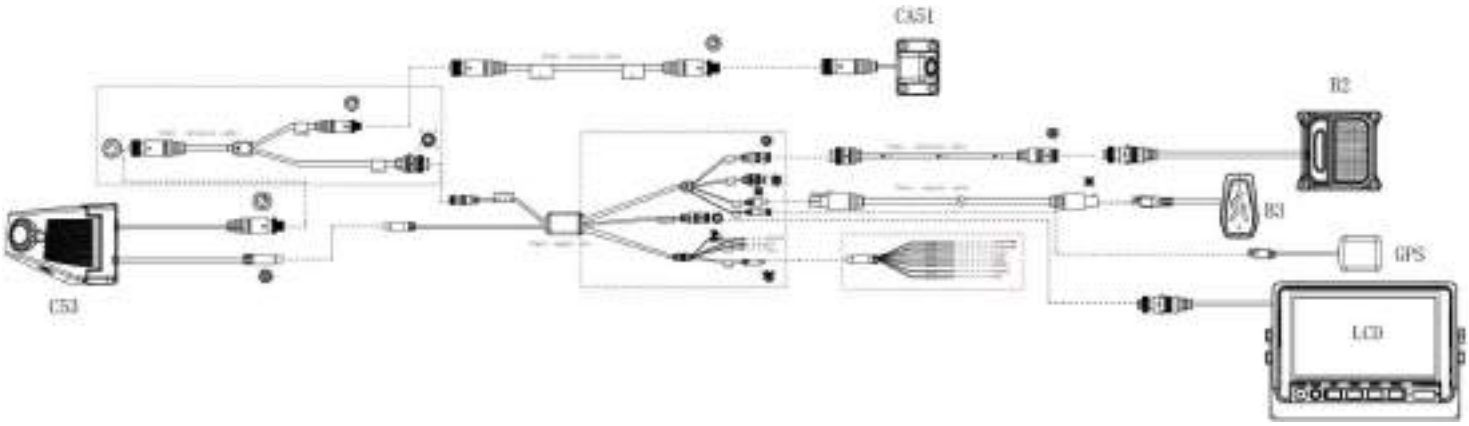
Front view

Right view

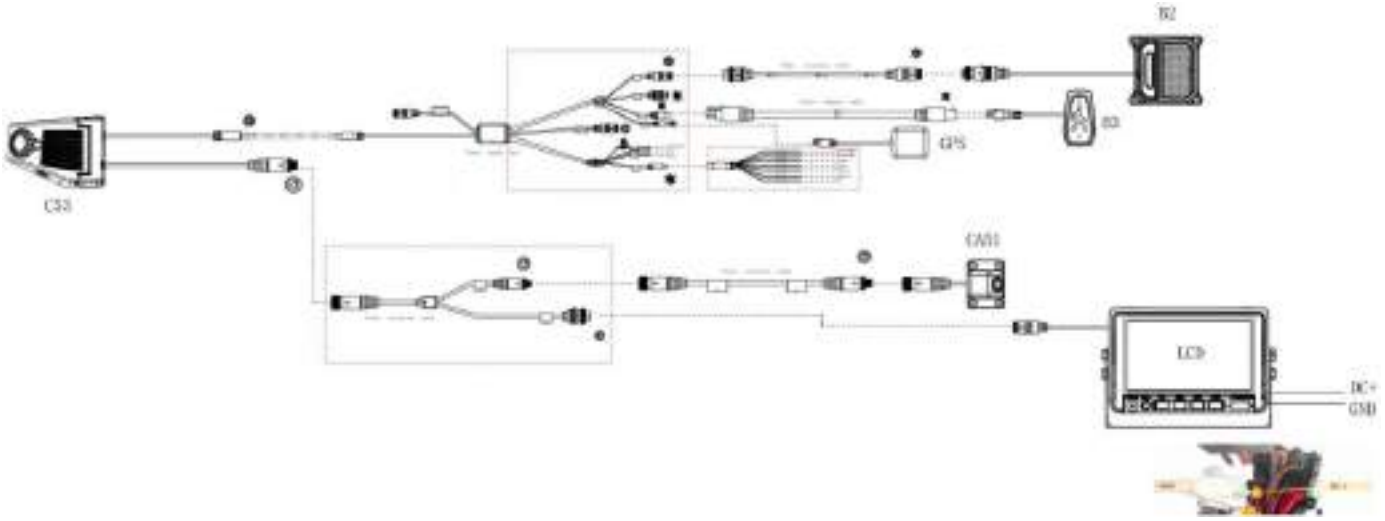


Rear view

5. System connection diagram



Note: C53 device provides power to the screen.

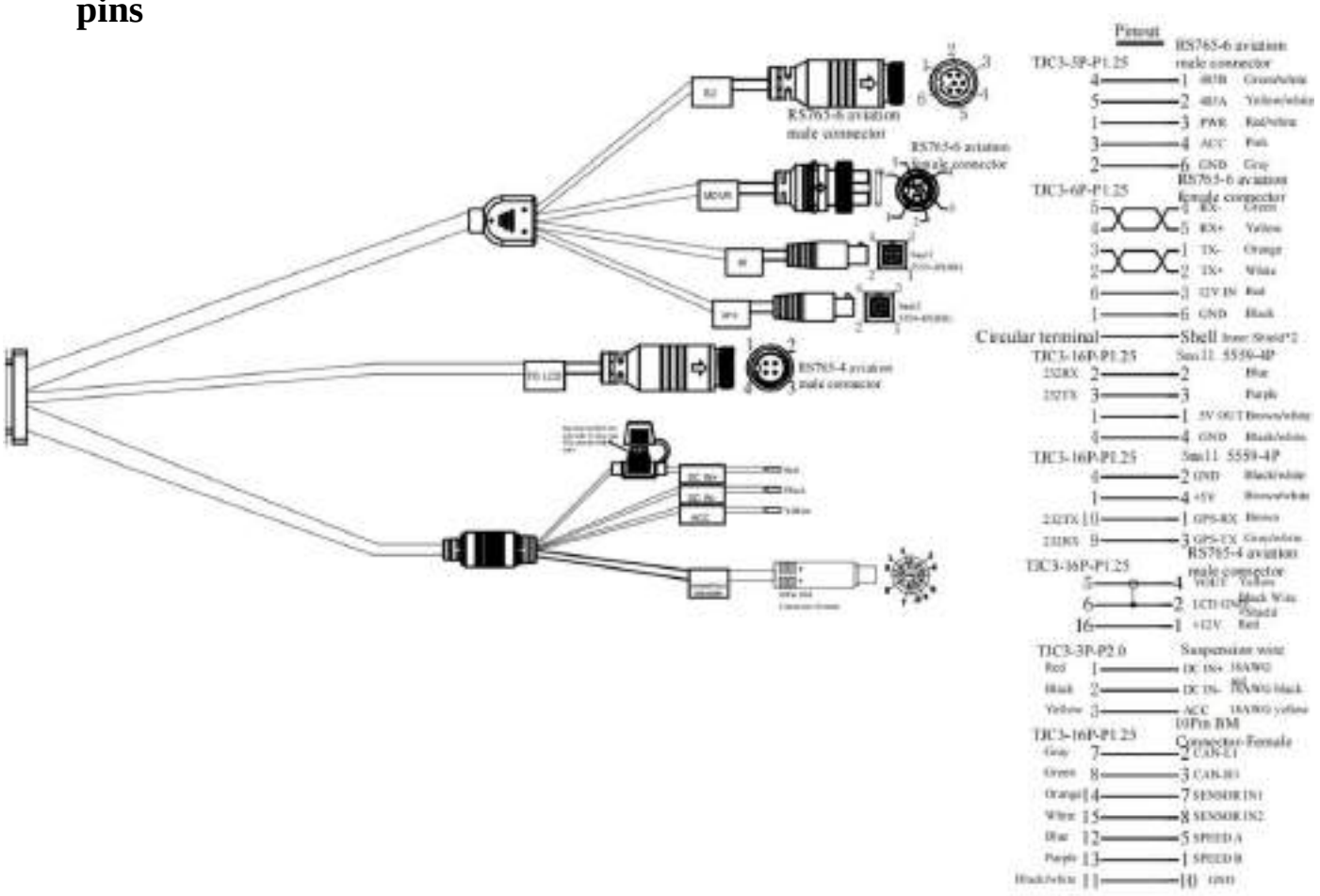


Note: The screen is independently powered.

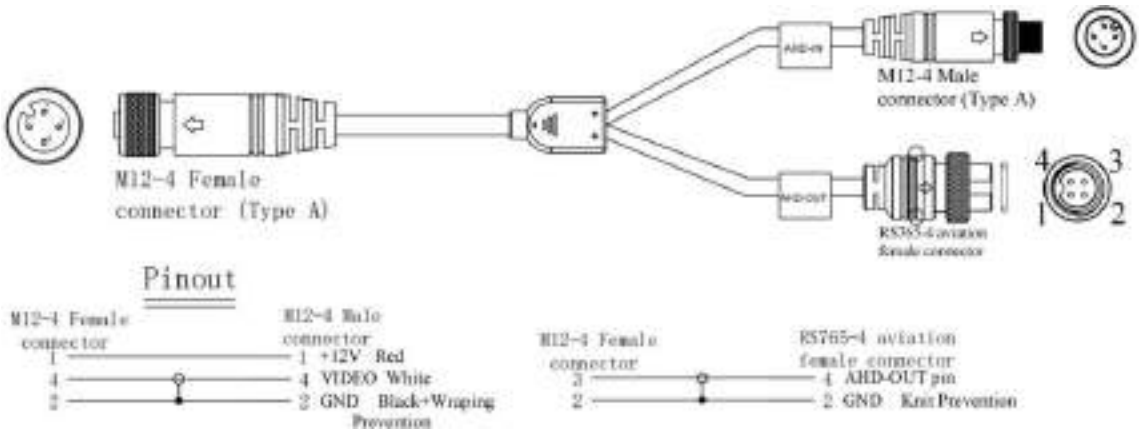
5.1Pin illustration of wire connector

1）Video output and power cable

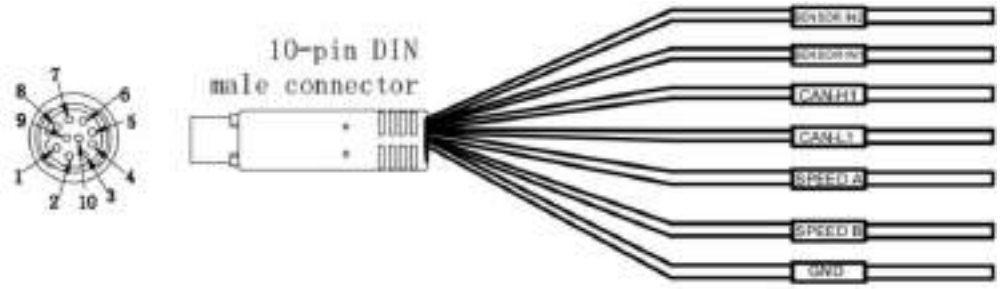
pins



2） AHD video input and output extension lines



3） Function pins of equipment



Pinout

10-pin DIN male connector

1	SPEED B	Gray
2	CAN-L1	Green
3	CAN-H1	Yellow
5	SPEED A	Blue
7	SENSOR IN1	Green/black
8	SENSOR IN2	Green/yellow
10	GND	Black

6. Special Notes

1) This product shall be installed by professionals, otherwise there is a risk of falling off
2) The surface temperature of the product may exceed 60℃ under direct sunshine during operation. Do not touch it to prevent burning injuries.