



**10-inch 8-channel 360° System**

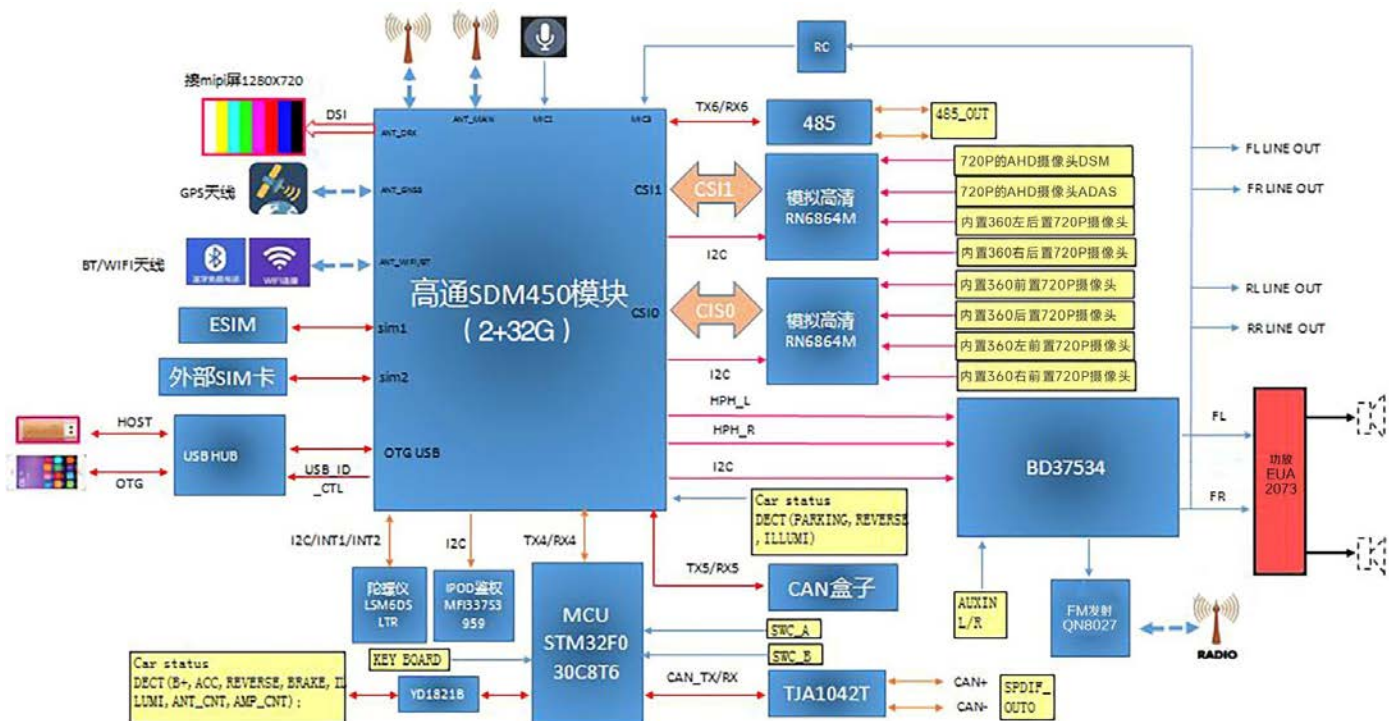
# **ME360**

## Product functions and features:

1. Main control processor: Qualcomm SDM450 eight-core 1.8G main frequency (single-core 1.8G, eight-core up to 2.4G)
2. Memory LPDDR3 and EMMC FLASH configuration: 2G+32G/3+32G
3. Embedded microprocessor: STM32F072R8T6
4. Software operating system: Android9.0
5. Full global network connectivity, supporting network frequency bands: supporting LTE Cat 6 and 2x20MHz carrier aggregation, maximum downlink speed The rate can reach 300Mbps and supports a total of six modes: GSM (2G), WCDMA (China Unicom 3G), TDD-LTE (4G), FDD-LTE (4G), and CDMA2000 1X/EVDO Rev.A (Telecom 3G).
6. Video input: Eight-channel high-definition AHD720P video input, supporting 360 panorama (Four Road)+DMS+ADAS+2 channel monitoring.
7. Video output: MIPI screen compatibility design.
8. Built-in 360 panorama: Qualcomm has the strongest GPU performance in the industry and achieves the best 3D panoramic effect.
9. Use QN8027 high-performance, low-power, full-function single-chip stereo FM transmitter from QUINTIC Company.
10. Multimedia formats: supports all audio and video formats.  
Music: AAC, MP3, MP2, WAV, WMA, OGG, AU, FLAG, M4A, M4R, MKA, MMF, APE, AIFF, AC3, DTS, AMR, WAV Pack, MID, RA, AIF, DSD  
Video: 3GP, ASF, AVI, DAT, F4V, FLA, MKV, MOV, MP4, MPG, RM, RMVB, TRP, TS, VOB, WMV, 3G2, 3GPP, MPEG, WEBM, AVI\_DIVX, AVI\_XVID
11. Bluetooth: supports three-party calls, Bluetooth music supports APTX
- 12.4G communication: Qualcomm chip has the best real-time communication effect in the entire industry
13. Interactive integration: When switching themes, the background and foreground of each interface will change accordingly.
14. Touch screen interface: supports capacitive touch screen interface
- 15.SIM card interface: supports built-in ESIM chip

- 16.USB interface: default one USB2.0 interface; one SD card
- 17.GPS antenna: 3.0V power supply, 50 ohm antenna impedance matching
18. Built-in WiFi/BT antenna: 50 ohm antenna impedance matching
19. Built-in 4G antenna: 50 ohm antenna impedance matching
20. Power input interface: power input 12V-32V (with overvoltage and undervoltage protection functions)
21. Serial communication: 1 channel 485 communication interface (radar)
22. Car detection line: ACC detection, reversing detection, brake detection, headlight detection, square control detection and power amplifier control line
23. Driving record: supports external driving recorder and built-in driving recording algorithm
24. Internet of Vehicles: Road Recorder

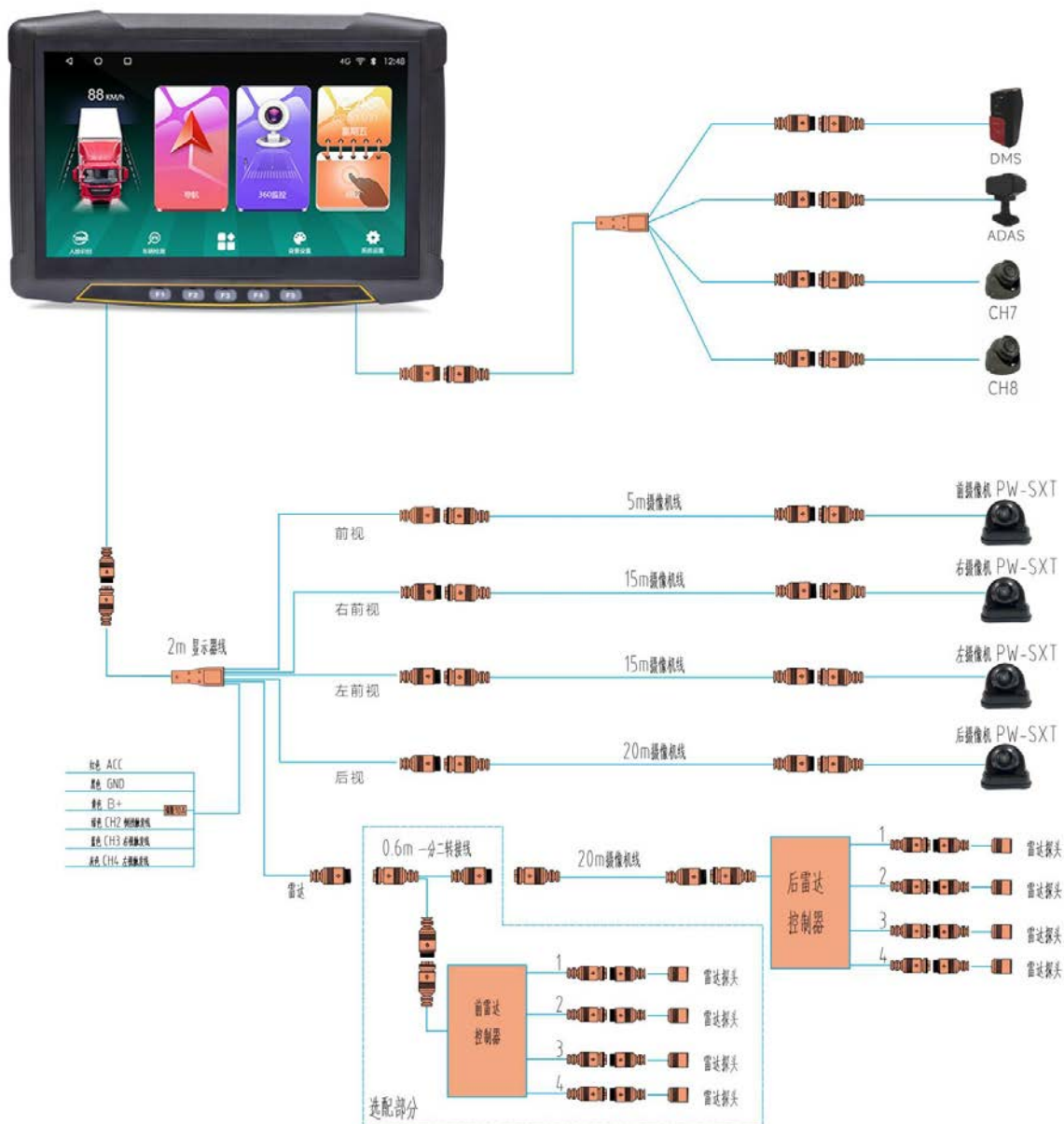
## 1.4 Principal Block Diagram



## 1.5 Structure Diagram



## 1.6 Circuit Diagram



### skills requirement:

1. Those not marked are all four-core aviation plugs.
2. Each video cable is configured according to the length of the vehicle.
3. Optional front and rear radar package

## 1.7 Function Description

Product number	QH-ME360-AI-008
screen size	10.1 inches, resolution 1280*720
Amplifier power	Built-in digital amplifier and speakers
Targeting	GPS+Beidou/GLONASS/Galileo/Japan Quasi-Tianxiang
extensions	Can open environment for customers to develop APP
tire pressure	Support tire pressure monitoring (need to install third-party APP)
Camera	Support AHD, TVI, CVI, PVI high-definition, 720/1080P ultra-clear formats
GPU	Using Qualcomm AdrenoTM 506 GPU, supporting 64-bit addressing, working frequency 600MHz SC200T
CPU	Eight-core 64-bit ARM Cortex-A53 processor, clocked at 1.8GHz, two 4-core processors with 512KB L2 cache
Serial communication	1 channel 485 communication interface (radar), 1 channel 232 communication interface
video input	Eight channels of high-definition AHD video input, supporting 360 panoramic view (four channels) + 2 channels of monitoring + DMS + ADAS (optional)
USB interface	Supports USB3.0 super-speed/USB2.0 high-speed mode, with a maximum speed of 5Gbps (USB3.0)/480Mbps (USB2.0); supports USB OTG for AT command transmission, data transmission, software debugging and software upgrade, etc.

Product number	QH-ME360-AI-008
360 plan description	360 panoramic car models can be customized according to customers
Memory LPDDR3 and EMMC FLASH configuration	2G+32G/3G+32G (optional)
Product size available (size)	10.1 inches
Operating system (includes version notes)	Android 9.0 system
Camera clarity (SD/HD)	AHD720P
Working voltage UEE	12V-36V
Undervoltage detection	UEE≤10V, when t≤350ms
Serial communication port baud rate topology	RS-232 serial port maximum 115200 bits/s point-to-point
processor	Cortex A53 high performance MCU
Device monitoring	Undervoltage monitoring
storage	Type Capacity DDR3 2Gbit Flash 4Gbit FRAM 256kbit
status indication	1 LED status light (user-defined)
GPS	Support GPS/GLONASS/BeiDou/Galileo/QZSS
4G communication	Supported frequency bands: LTE FDD: B1/B3/B8 LTE TDD: B38/B39/B40/B41 TDSCDMA: B34/B39 WCDMA: B1/B8 GSM: 900/1800

<b>Product number</b>	<b>QH-ME360-AI-008</b>
Test standards and specifications	
Electromagnetic Compatibility	GB/T 17626.4-2008/IEC61000-4-4:2004 /Test level: 4 GB/T 17626.5-2008/IEC61000-4-5:2005 /Test level: 4 GB/T 17626.2-2006/IEC61000-4-2 :2001/Test Level:3
certified product	<b>CE</b>

## Chapter 3 Working Environment and Electrical Characteristics

### Product Environmental parameters:

E n v i r o n m e n t a l   p a r a m e t e r s	
Product Size	252mm(L)*166mm(W)*67mm(H)
range of working temperature	-20°C-70°C
Storage temperature range	-30°C-80°C
Working humidity range	45% -80% RH
Storage humidity range	30% -90% RH



## Camera Parameters



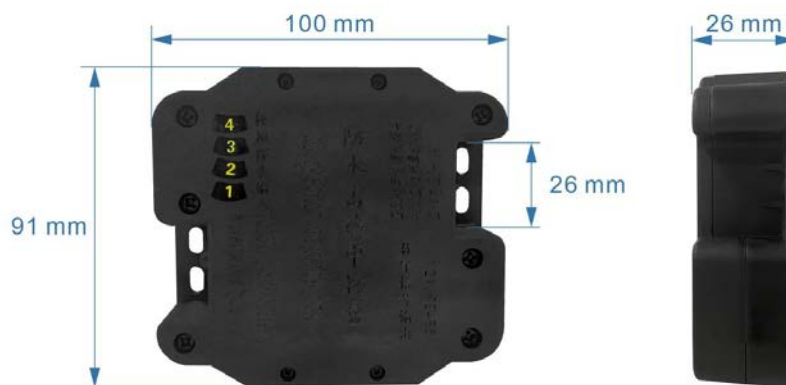
No.	project	describe	
4.1	Image Sensor	1/2.9"CMOS(XC5321+GC2053)	
4.2	Video format	PAL	
4.3	Sensitive pixels	1280(H) x 720(V) / 1920(H) x 1080(V)	
4.4	Effective Pixels	2.0MP	
4.5	day and night mode	color	
4.6	video signal	AHD	
4.7	Explosion control	Auto	
4.8	gain control	Auto	
4.9	electronic shutter	Auto	
4.10	Auto white balance	ATW	
4.11	Minimum illumination	0.5Lux	
4.12	field of view	level	205°
		vertical	135°
4.13	Image properties	Just like no standard	
4.14	Rated working voltage	12V	

4.15	Rated operating current	55mA
4.16	Working voltage range	9~16VDC
4.17	Operating temperature	-25~+75°C
4.18	storage temperature	-30~+80°C
4.19	Image quality assurance temperature	-20~+65°C
4.20	ambient temperature	90%RH
4.21	Protection level	IP67 (camera part)

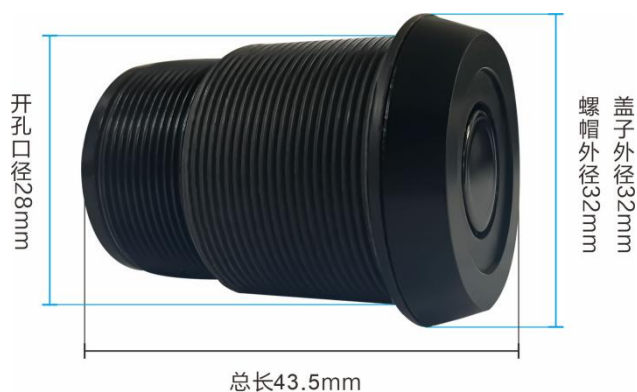
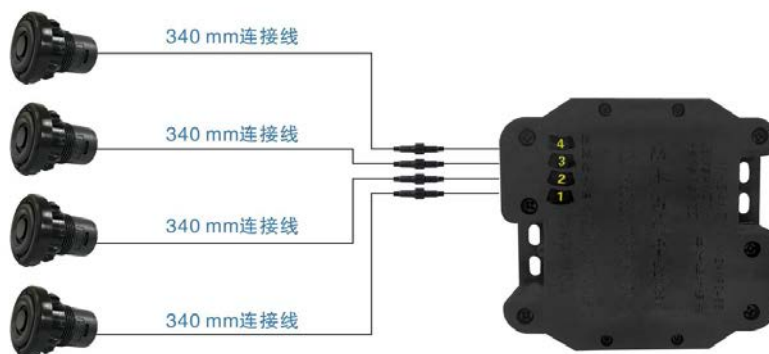
### Probe Parameters

Probe Size

Host Box Size



### Radar system connection diagram



Operating Voltage	8-16V	Probe interface voltage	
working principle	ultrasound		
working frequency	40K/HZ		
Detection angle	70 degrees	Error +-10%	
Detection accuracy	2CM	Temperature 25 degrees	Standard atmospheric pressure
scanning frequency	3 times/second		
Transfer Protocol	RS485		
Wiring	Single line series connection		

waterproof level	IP69K		
Opening diameter	28mm		
Detection distance	5M	0.5 square obstacles	Error +-10%
Detection distance	3.5M	human obstacle	Error +-10%
Blind area distance	20CM		Error +-10%
Detection sensitivity	_90db		
shell material	Aluminum alloy		
Pinout interface	0.6m aviation head		
Operating temperature	-20~85 degrees		

### ADAS Parameters



project	Technical Parameters
Imaging element:	FH8536H + 1/4.5 " SC1345 CMOS
Signal System:	PAL
Effective Pixels:	1280(H) x 720(V)
Minimum illumination:	0.01Lux@ ( F1.2, AGC ON ) , 0LUX with IR

shutter:	AUTO
Day and night mode:	external control
Synchronously:	internal synchronization
Video output:	720P
Noise reduction:	3DNR/2DNR
Signal to noise ratio:	38dB
Sensitivity:	4800mV/Lux.s
Viewing angle:	104.04°(D) 87.49°(H) 46.96°(V)
Aperture value:	F2.0
focal length:	4mm
distortion:	-35.90%
Lens structure:	1G4P+1IR
Fill light mode:	Infrared 940nm fill light
Number of fill lights:	2 pieces
Operating Voltage:	DC12V±20%
Working current:	Normally about 285mA
Data cable length:	2500mm±50mm
Protection level:	IP33
Audio:	none
Mirror function:	mirror
Operating temperature:	-30°C~70°C

Storage temperature:	-40°C~80°C
size:	L: 88*W: 50*H: 98mm
net weight:	About 0.195 kg

### **DSM Camera Parameters**



project	Technical Parameters
Imaging element:	FH8536H+ SC2239 1/2.8 " CMOS
Signal System:	PAL
Effective Pixels:	1280(H)x720(V)
Video output:	1080P
Minimum illumination:	0.001Lux@(F1.2,AGC ON), 0LUX with IR
shutter:	AUTO
Day and night mode:	external control
Synchronously:	internal synchronization
Frame rate:	1080P@25fps
Noise reduction:	3DNR/2DNR
letter Noise ratio:	38dB
Sensitivity:	6400mV/Lux.s
Viewing angle:	60.8°(D) 53°(H) 30°(V)
Aperture value:	F2.0
focal length:	6mm
distortion:	-3.10%
Lens structure:	4G+1IR
Fill light mode:	none
Number of fill lights:	none
Operating Voltage:	DC12V±20%



Working current:	Normally about 45mA
Data cable length:	2960mm±50mm
Protection level:	IP12
Audio:	none
Mirror function:	original image
Operating temperature:	-30°C~70°C
Storage temperature:	-40°C~85°C
size:	L:102.6*W:58*H:44.6mm
net weight:	About 0.169 kg