恒天伟业
HCC GROUP

Rockchip RK3568

Android

RK3568 Android HMI specifications

Product Specification

（RK3568 Series）

Brief

RK3568 is a high-performance, low-power quad-core application processor specifically designed for personal mobile Internet devices and AIoT devices. We provide a number of embedded powerful hardware engines to optimize the performance of high-end applications. The built-in NPU supports INT8/INT16/FP16/BFP16 mixed operations. In addition, due to its strong compatibility, network models based on a series of frameworks.

Advantages

☑ Android operating system, compatible with 99% of the industry applications, support independent design APK program installation

☑ Support WIFI/4G/Ethernet and other networking methods to enable remote data transmission, upgrade and update

☑ Supports multi-channel RS232, RS485 and other different serial port communications to achieve communication with external devices

☑ Support USB3.0, support NPU 1TOPS

☑ Support voice and video play 1080p@60fps

☑ Industrial-grade capacitive touch solution, stronger anti-interference, widely used in a variety of complex industrial scenarios

☑ Industrial embedded installation design for various industries

☑ Passed CE/ROHS certifications and has stable and reliable guarantee

Industry Applications

Industrial control

Power device

New Energy Charging & Switching

Medical device

Industrial handheld

Security equipment

Vending machines

Smart Home

Government Smart Terminal

Access Control System

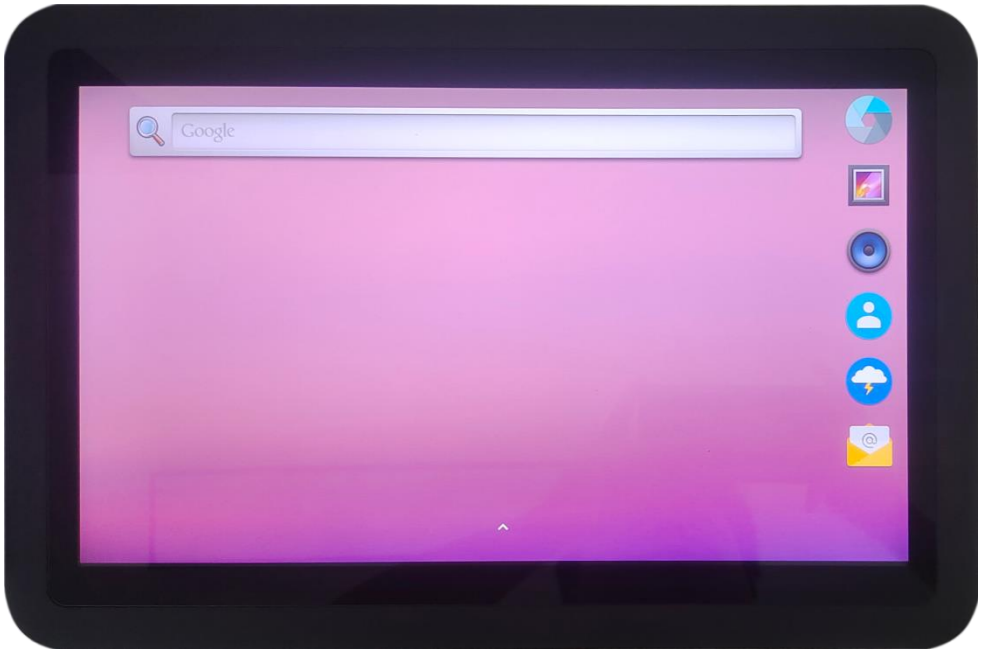
Instrumentation

Robots

3D Printing

Product illustration

Product diagram



Product Parameters

Screen and size parameters	Data	Description
Screen size type	13.3 inches	Screen ratio 16:9
Resolution	1920*1080 pixels	16.7M true color display
Color	16.7M colors	-
Display size (A.A.)	293.6(L)*165.3(W)	-
Size of the whole machine		Total height from the touch screen to the highest RJ45 network port
Backlight brightness	350 nit	Screen brightness adjustment
Perspective (CR>10)	Full perspective	Panel type： IPS
Backlight life (hours)	30000Hrs	LED backlight

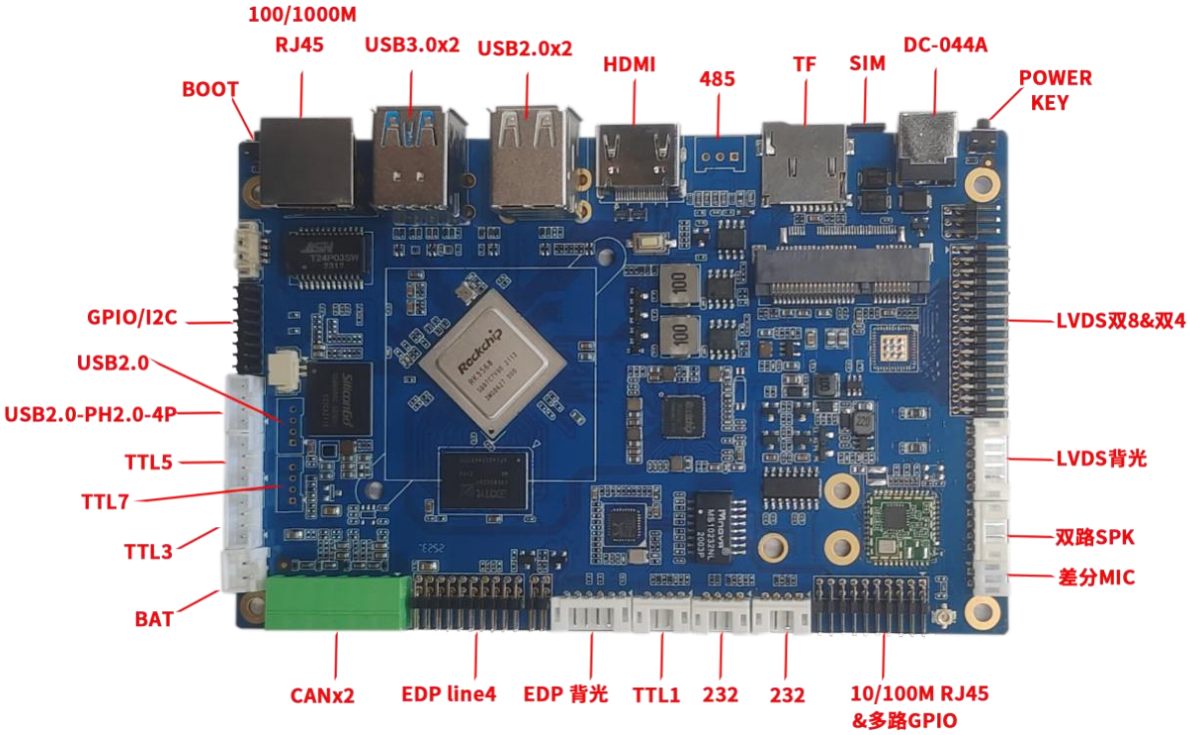
Motherboard core parameters	Data	Description
CPU processor	Rockchip RK3568	4-core A55 1.8GHz
Operating system	V11	Android
Running memory	4GB	1*4GB, LPDDR4
EMMC	32GB	EMMC5.1
Touch form	5-point capacitive type and single-point optional	-
TP surface hardness	7	Mohs hardness
TP light transmittance	> 85	-
Operating voltage and current	12V（Typical value）700mA	Minimum 8V, maximum 24V, recommend 12V 1A or more DC regulated power supply
Power interface	DC005；	

Interface parameters	Data	Description
Interface	Default first interface：RS232	Interface 0, port number：USBttyS0
	Default second interface：RS232	Interface 2, port number：ttyS2
	Default first interface:RS485	Interface 3, port number：ttyS3
	Default second interface：RS485	Interface 0, port number：ttyS0
	Maximum baud rate:115200	
USB	HOST*4, OTG*1	Supports 2 megapixels if connected to a USB camera
Audio	1 channel mono MIC/dual channel HPO (3.5mm earphone), 2 channels mono SPK (4Rx3W)	
TF card	1 road	Maximum 64G
Ethernet	1 road	10/100M adaptive network interface
WIFI	1 road	IEEE 802.11Bb/g/n 2.4G；
Blue tooth	1 road	V5.0
4G module	Full Netcom	*Optional*
CAN	1 road，CANH, CANL	*Optional*
GPIO port	5 road, default 3.3V supply, 3.3V level bidirectional IO	

Environmental parameters

Type	Category	Parameters
Working temperature test parameters	Storage temperature	-30 ~ 80℃
	Working temperature	-20 ~ 70°C
	Relative humidity	10~90% RH
Reliability parameters	EMC	Class B， EN55032
	ESD	Level 3

Hardware Diagram



Terminal	Terminal Screen Printing	Definition	Description	Remarks
DC005	DCIN	-	Min 8V, Max 24V, Typical 12V 700mA	
2EDG-3.81-10P	RS232-TX0	TX0	Software Identification	Default interface 0 output at RS232 level; can also be changed to RS485 level by changing the BOM
	RS232-RX0	RX0	Port：ttys0	
	GND	GND	Place of external export	
	RS232-TX3	TX3	Software Identification	Default interface 3 output at RS232 level; can also be changed to RS485 level by changing the BOM
	RS232-RX3	RX3	Port：ttys3	
	GND	GND	External 12V GND output	
	RS232-TX2	TX2	Software Identification	Default interface 3 output at RS232 level; can also be changed to RS485 level by changing the BOM
	RS232-RX2	RX2	Port：ttys2	
	RS232-USBTX0	USB-TX0	Software Identification	Default interface USBTTL0 is output at RS232 level; it can also be changed to RS485 level by changing
	RS232-USBRX0	USB-RX0	Port：USBTTL0	
CAN Terminal	CANH	CAN High		-
	CANL	CAN Low		-
	GND	GND		
Control IO terminals	GND	GND	Interface	
	DIO	D10	3.3V level bidirectional IO	
	DI1	D11	3.3V level bidirectional IO	
	DI2	D12	3.3V level bidirectional IO	
	DI3	D13	3.3V level bidirectional IO	
	DI4	D14	3.3V level bidirectional IO	

Audio Part

Terminal	Terminal Screen Printing	Definition	Description	Remarks
Horn left	L	Left channel horn positive	4 ohm 3W horn	PH2.0MM-2 P Terminal
	L	Left channel horn positive		
Horn left	R	Right channel horn positive	4 ohm 3W horn	PH2.0MM-2 P Terminal
	R	Right channel horn positive		

4G SIM Card Holder

Terminal	Terminal Screen Printing	Definition	Description	Remarks
4G Card Holder	-	Standard large card	Flip-top	Can support

Burning Key

Terminal	Terminal Screen Printing	Definition	Description
Burning Key	BOOT	-	After installing the Phoenix tool on the computer and installing the driver with the 360 mobile assistant; press and hold the BOOT button, connect to the power supply, and release the button after 3 seconds; insert the MINI USB burning cable to burn the firmware

MIC Interface

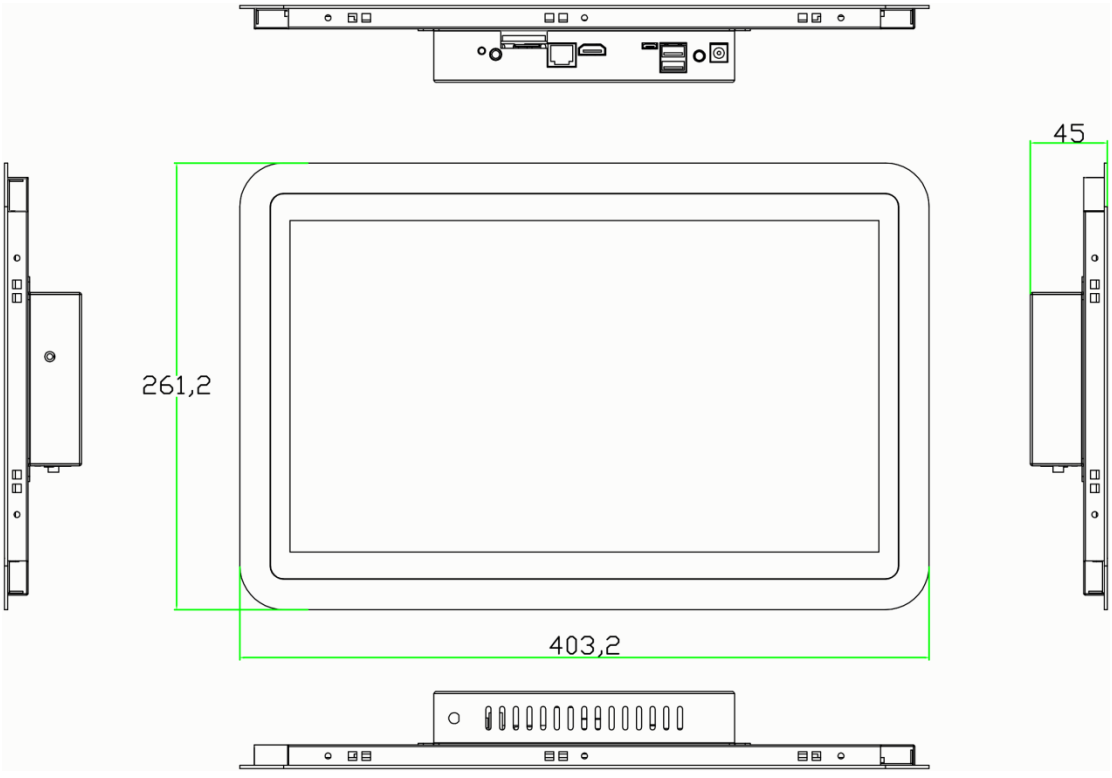
Terminal	Terminal Screen Printing	Definition	Description	Remarks
Microphone Interface	MIC	-	Condenser electret microphone	SH1.25MM-2P Terminal

USB

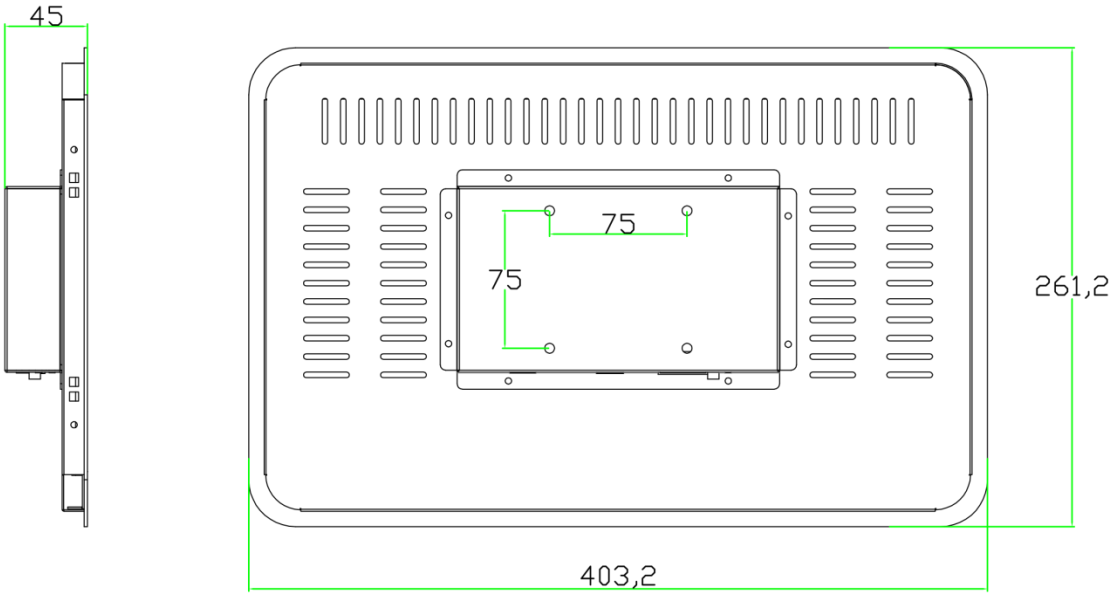
Terminal	Terminal Screen Printing	Definition	Description	Remarks
Double Layer USB port	USB	USB-A	USB2.0 Interface	-
		USB-A	USB2.0 Interface	-
USB3.0			USB3.0	

Product Size Diagram

Front view



Back view



Technical support

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