

Technical Specification

H9380P Intelligent Embedded
Computer



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1. Product Overview

H9380P Android IPC embedded computer is a highly reliable and stable intelligent IPC device designed with Cortex microprocessor and Android operating system. It provides running environment such as Android 7.1.2, supports 4G full network pass real-time communication, city services and business networking application APP can run directly in the IPC system to provide convenient interactive services for end users. Its rich peripheral interfaces and super image processing capability can be widely used in urban services and new retail areas, and can meet the needs of many industry applications such as face payment smart vending machines, smart coffee machines, smart delivery cabinets, robots , IoT fields, vehicle control, and medical classes.

2. Product Specifications

Equipment items	Specification
CPU	Rexchip RK3399 Hexa-Core 64-bit (Dual-Core Cortex-A72 + Quad-Core Cortex-A53)
Memory	2GB
Built-in storage	eMMC 16GB
External Storage	Support TF card external storage, maximum support 64GB storage
Network standard	4G Full Network Access
Operating System	Android 7.1.2
Image Video	2D/3D Accelerator

Equipment items	Specification
Processing	Video encoding: H.264/H.265, MVC and VP8
	Video decoding: MPEG-1, MPEG-2, MPEG-4, H.263, H.264, H.265, VC-1, VP9, VP8, MVC
Power consumption	+12V DC power supply
Operating power consumption	Average power consumption in idle state (with module, without other peripherals) about 550mA@+12V DC Maximum power consumption for normal operation of the device (with module, without other peripherals) is about 1.5A@+12V DC
Operating temperature	-20°C~+70°C
Storage temperature	-40°C~ +85°C
Housing	Fanless design to ensure heat dissipation; solid housing and drop-proof design. Size: 170*150*27mm

Equipment items	Specification
Standard Interface	<ul style="list-style-type: none"> ● 1 Gigabit RJ45 network port ● 3 DB9 type male socket serial ports, 1 of which is for RS-232 and RS-485 multiplexing, default RS-232 RS-485 optional (must be factory configured) ● 1 x 3 PIN RS485 interface ● 1 power connector ● 1 4G antenna interface, reserved for a 4G sub-antenna interface (optional additional sub-antenna, subject to factory configuration) ● 1 WiFi antenna interface ● 4 USB 2.0 ports, 2 USB 3.0 ports ● 1 OTG port ● 1 HDMI port ● 1 TF card interface ● 1 SIM card interface ● 1 custom button (can do the main APP start and exit, maintenance mode, etc.) ● 1 power on/off button ● 1 grounding stud
Cloud Management Platform	Support
Other	Support NTP/RTC clock synchronization

Note: The size of the product communication power consumption is affected by the network signal strength and the module network standard.

3. Structure size and interface definition

4.1 Structural dimensional drawings

The structural dimensions are shown in Figure 4-1, corresponding to the physical dimensions of the equipment in millimeters.

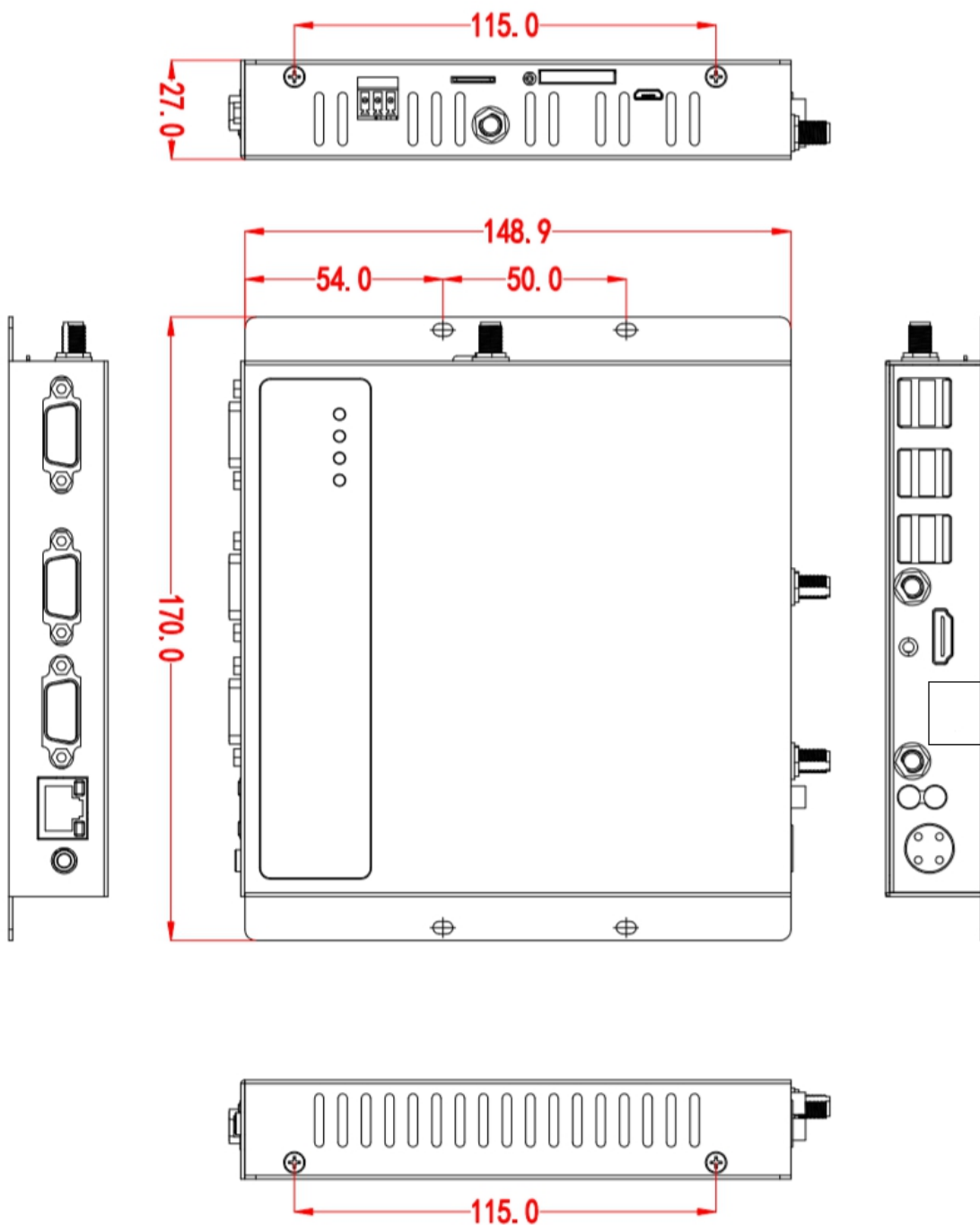


Figure 4-1 Structure dimension diagram

4.2 Panel Interface Diagram

The panel interface diagrams are shown in Figures 4-2-1, 4-2-2, and 4-2-3.

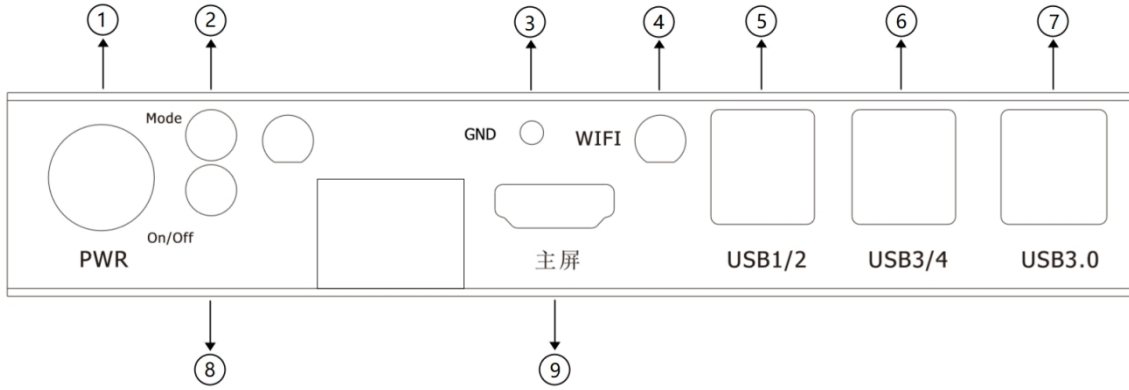


Figure 4-2-1 Front panel interface diagram

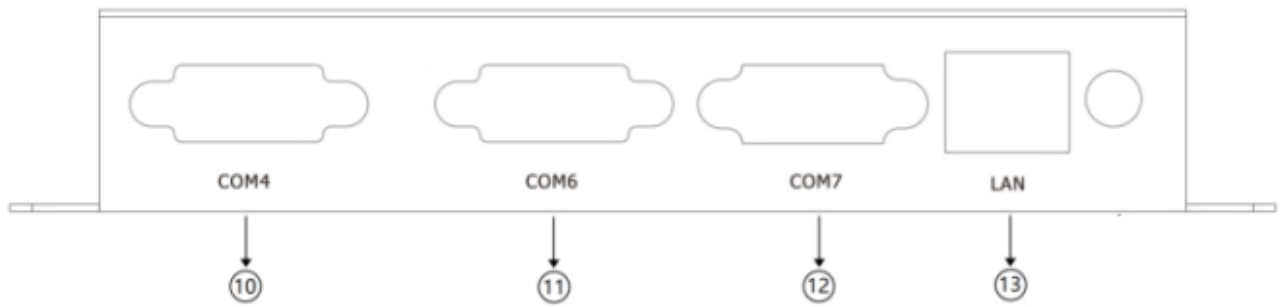


Figure 4-2-2 Rear panel interface diagram

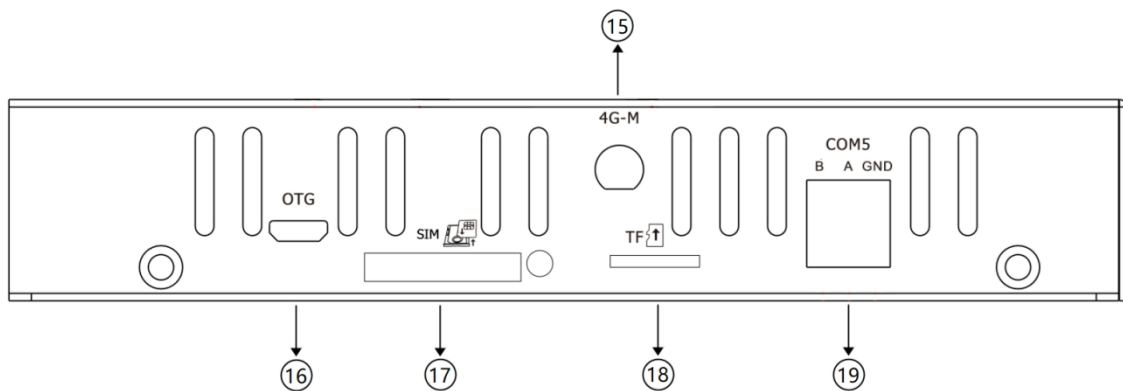


Figure 4-2-3 Side panel interface diagram

Table 4-2-1 Panel Interface Table

Serial number	Description	Serial number	Description
①	4PIN aviation head power connector	No display	DB9 RS232 serial port
②	Mode button	⑫	DB9 RS232 serial port
③	Ground studs	⑬	Gigabit RJ45 network port
④	WiFi Antenna	15	4G main antenna
⑤	USB2.0 1/2 interface	⑰	OTG interface
⑥	USB2.0 3/4 interface	⑱	SIM card slot
⑦	USB3.0 interface	⑲	TF card slot
⑧	On/Off button		1*3 PIN plug-in terminal block (RS485 serial port)
⑨	Main screen interface (HDMI)		
⑩	DB9 RS232/RS485 serial port (default 232)		

4.3 Interface Definition

4.3.1 DB9 interface diagram (COM4)

The DB9 serial port of H9380P 4G IPC, the interface pins are shown in Figure 4-3-1 below.

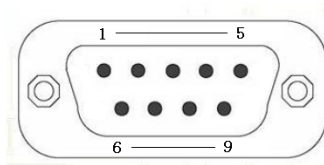


Figure 4-3-1 DB9 interface diagram

Table 4-3-1 DB9 pinout table

Pin	Signal	Pin	Signal
1	RS485_A	2	RS232_RX (default)/RS485_
3	RS232_TX	4	NC
5	GND	6	NC
7	NC	8	NC

9	NC		
J15 jumper cap connected to pins 1-2, 3-4, COM4 for RS485 interface; J15 jumper cap connected to pins 5-6, 7-8, COM4 for RS232 interface			

4.3.2 DB9 interface diagram (COM6, COM7)

The DB9 serial port of H9380P 4G IPC, the interface pins are shown in Figure 4-3-2 below.

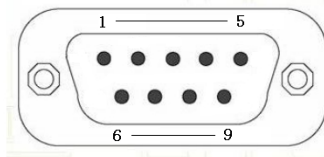


Figure 4-3-2 DB9 interface diagram

Table 4-3-2 DB9 pinout table

Pin	Signal	Pin	Signal
1	NC	2	RS232_RX
3	RS232_TX	4	NC
5	GND	6	NC
7	NC	8	NC
9	NC		

4.3.3 1*3 PIN plug-in terminal block Interface diagram (COM5)

The H9380P 4G IPC has 1*3 PIN plug-in terminals with interface pins as shown in Figure 4-3-3 below.

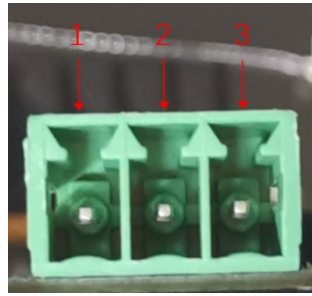


Figure 4-3-3 1*3 PIN plug-in terminal block interface diagram

Table 4-3-3 1*3 PIN plug-in terminal block pinout table

Pin	Signal	Pin	Signal
1	RS485_B	2	RS485_A
3	GND		

4.3.5 S terminal airline head Interface diagram

The H9380P 4G IPC has an S terminal airline header with interface pins as shown in Figure 4-3-5 below.

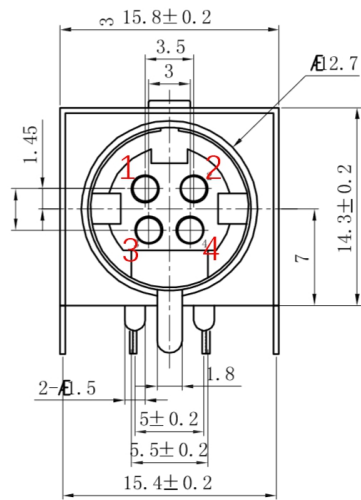


Figure 4-3-5 S terminal airhead interface diagram

Table 4-3-5 S terminal airhead pinout table

Pin	Signal	Pin	Signal
1	+12V	2	+12V
3	GND	4	GND

4. Product Features

Functional categories	Functional subcategories	Function Description
Android	Application Installation	Support Android market application installation and self-developed application installation
	Back Office Services	Support background service way to monitor applications
	Auto Start	Support full-screen auto-open and abnormal auto-resume for specified applications
3G/4G	Smart Dialing	Support 4G auto-dial Support APN Adaptive Dialing Support 4G network link self-detection and self-maintenance mechanism, fast automatic recovery from abnormalities Support independent dial-up process guarding and dial-up optimization to ensure real-time 3G/4G communication
Graphics Processing	Image Recognition	Multi-camera working simultaneously; support 5-way 1280x960, 720P resolution USB cameras to display and take pictures simultaneously
Clock synchronization	Clock synchronization	NTP clock synchronization and remote management platform clock synchronization, time zone can be set
Security Management	Security Management	LAN-side security access control Support firewall function
Remote	Upgrade	Support remote upgrade system and application components,

Management	Updates	support remote APP upgrade and rollback
	Status Management	Support remote statistical analysis of equipment reported operating status on cloud platform Support cloud platform equipment fault management
Timed switch on/off	Timed switch on/off	Support the user external for the overall shutdown control, to achieve full protection of power down
Audio and video output	Touch screen interface	Support HDMI interface video output
	Touch Screen Compatible	Support capacitive, infrared touch screen (need to add driver or add PID / VID)

6. Panel indicator status

The H9380P Android IPC has four LEDs that indicate the operating status and network status of the H9380P Android IPC. The indicator status descriptions are shown in the table below.

Indicator light	Description	Status
PWR light	Equipment power up	Extinguished
	Equipment power off	Perpetual extinction
4G Light	No number dialed (module not found/module is dialing)	Extinguished
	4G/3G/2G dial-up success	Always bright
SYS light	Normal operation of equipment	Slow flash (light 0.25s, out 0.75s)
	Equipment abnormalities	Extinguished
WIFI Light	Turn on WiFi station mode and connect successfully	Always bright
	WiFi off or no WiFi connection	Extinguished