Hongdian H9380S Industrial Android Computer User Guide

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Product overview

The H 9380 S Android IPC industrial computer uses the Cortex microprocessor and the Android operating system design high reliability, high stability intelligent industrial control device. It provides operating environments such as Android 4.4.2 / 5.1 , and urban services and business networking applications APP can run directly in an industrial computer system to provide convenient interactive services for end users. The equipment supports wireless transmission function, rich peripheral interface and reliable security management system can be widely used in urban service and commercial terminal networking, such as intelligent logistics cabinet, self-service terminal, charging pile, intelligent sales, access control management, etc.

Equipment item	Specification
CPU	FreescaleI . MX6D dual-core/I . MX6Q quad-core
Memory	DDR3 2 GB
Built-in storage	eMMC 8 GB ,scalable support 16 GB/32/ 64 GB EMMC
External storage	Support for TF card external storage, up to 64 GB storage
Network standard	The network communication can be realized according to different modules
Operating system	Android 4.4.2 , scalable support for Android 5.1
Image video processing	2D/3D accelerator: OpenVG 1.1 for 2D ; OpenGL ES 2.0 for 3D
	Video codec: H.264 HP, MPEG 4 ASP, MPEG 2 MP
	Image processing: BMP, JPG, PNG, GIF
Power consumption	Power on +12V DC
Working power consumption	Average power consumption (with modules, without other peripherals) in idle state of the device is approximately 550 mA@ + 12V DC

| Equipment item	Specification
	Maximum normal operating power consumption of the device (with modules, without other peripherals) approx . 2A@ + 12V DC
Operating temperature	-20°C + 60 °C
Storage temperature	-40°C + 85 °C
Shell	No fan design to ensure cooling ; Solid shell, anti-drop design Dimensions: 1 70 * 149 * 27 mm

Standard interface	l One 100 megabytes RJ45 gateway l Three DB9 ports, one for RS-232 and RS-485 reuse, default RS-232 ,RS-485 Optional l One power interface l One WiFi antenna interface l Four USB 2.0 ports (4 USB ports with a maximum load of 1.6A in total) l One OTG port Reserve l One HDMI l One 3.54 mm Speaker interface l One TF card interface l A custom button (can be the main APP launch Yu exit, maintenance mode, and so on) l One power switch button l One ground stud
Wifi	802.11 B/G/N WiFi module locations

Equipment item	Specification
Cloud management platform	Support
Other	NTP/RTC clock synchronization support

Structural dimensions and interface definitions

Structural dimension diagram

The structural dimensions are shown in Figure 3-1. The units corresponding to the physical dimensions of the equipment are millimeters.
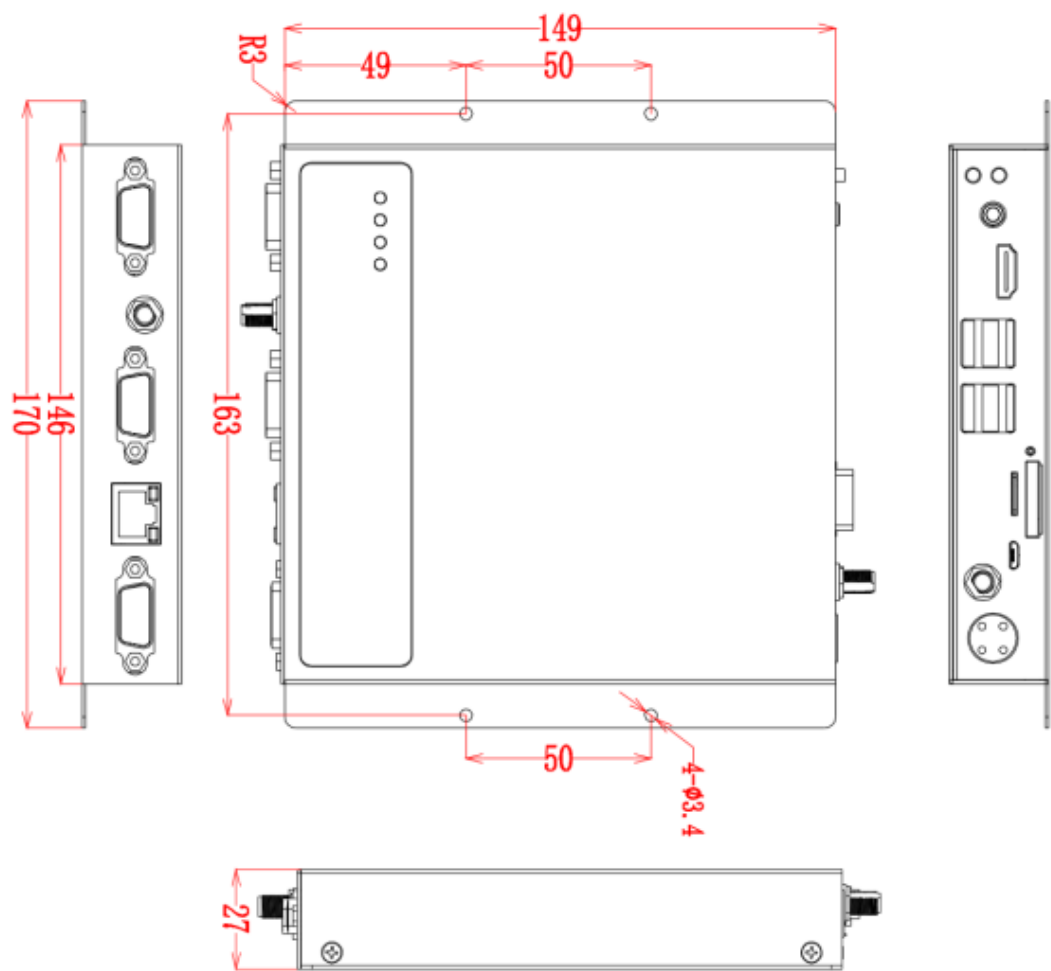
Panel interface diagram

Standard version of the panel interface diagram

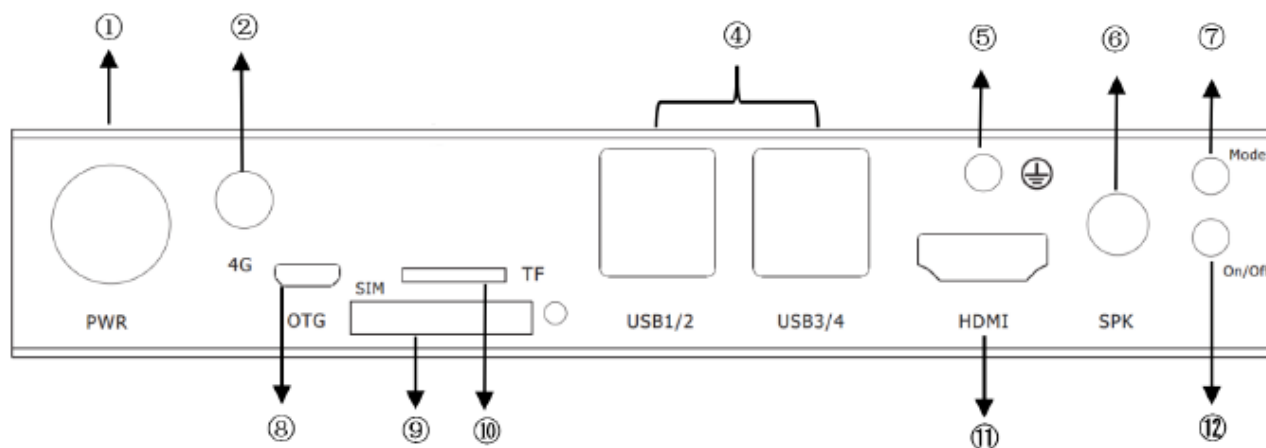The standard version of the interface is shown in Figure 3-2-1, 3-2-2.
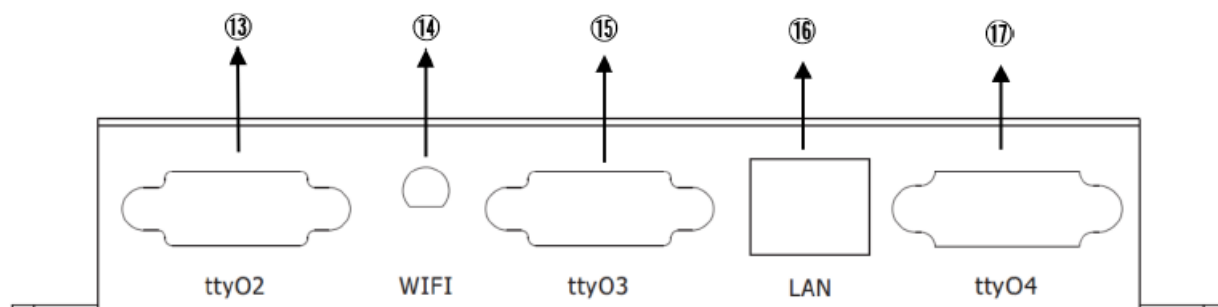
Figure 3-2-1 Front panel interface diagram

Figure 3-2-2 Rear panel interface diagram

Table 3-1 Standard panel interface table

Sequence number	Explain	Sequence number	Explain
①	Four pin power interface		HDMI interface
④	USB interface		Power switch button
⑤	Ground stud		RS 232 Serial Port 2 (configurable as RS

			485 serial port) Reserve
⑥	SPK interface		Wifi antenna interface
⑦	A custom button (can be used as the main APP startup space exit, maintenance mode, etc.)		RS 232 serial port 3 Reserve
⑧	USB OTG interface Reserve		100 megabytes gateway
⑩	TF card interface		RS 232 serial port 4 Reserve

Interface definition

External interface diagram

The DB9 serial port of the H 9380S IPC with the interface pins shown in Figure 3-3-1 below.
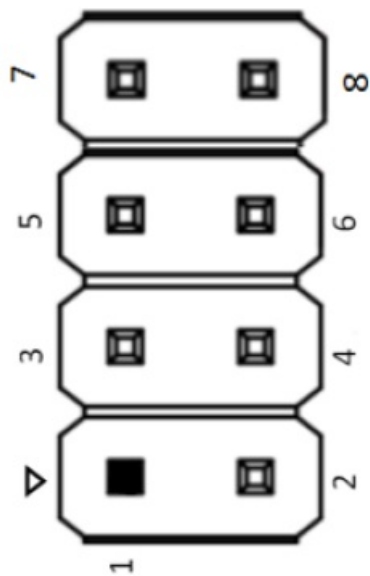

Figure 3-3-1 DB9 Interface Diagram

DB9 pin table

Pin sequence number	Pin definition	Explain	Remark
Pin 1	——	——	——
Pin 2	RS 232 _RX	RS 232 level	ttyO2 corresponds to RS 485 interface B
Pin 3	RS 232 _TX	RS 232 level	ttyO2 corresponds to RS 485 interface A
Pin 4	——	——	——
Pin 5	GND	Signally	——
Pin 6	——	——	——
Pin 7	——	——	——
Pin 8	——	——	——
Pin 9	——	——	——

Internal interface diagram

When using jumper cap connections to select an interface, be sure to wire as follows.

Figure 3-3-2Serialportreuse

Serial port multiplexing interface specification table

Pin sequence number	Pin definition	Explain	Remark
PIN 2, PIN 6	RXD	Rx pin for DB9	
PIN 4, PIN 8	TXD	TX pins for DB2 9	
PIN 1	RS 485 _B	Connect PIN 1 and PIN 2, Unicom RS 485 B	Simultaneous connection to select RS 485
PIN 3	RS 485 _A	Connect PIN 3 and PIN 4, Unicom RS 485 A	
PIN 5	RS 232 _RX	Connect PIN 5 and PIN 6, Unicom RS 232 receives	Simultaneous connection to select RS 232
PIN 7	RS 232 _TX	Connect PIN 7 and PIN 8, Unicom RS 232 send	

LED status table

The H 9380 S Android IPC has four LED indicators that indicate the operating and network status of the H 9380 S Android IPC. The LED status is described in the following table.

LED	Description	Status
Power PWR PWR	Device power-off	Off
	Device power-on	ON
WIiFi/APP Wifi/App lamp WiFi/SYS WiFi/Sys	System startup or system exception with no self-starting APP	Off
	System operating normally, self starting APP normal	Slow flashing (on 0.25 s, off 0.75 s)
	System running normally, self start APP exception	Slow flashing (on 0.25 s, off 1.75 s)
	System is up and running, no self-starting APP	Slow flashing (on 0.25 s, off 3.75 s)
	Open WiFi Station mode and connect successfully	Chang Liang
	WiFi off or WiFi not connected	Off

USB/TF card upgrade status table

During upgrade	Slow flashing of all LEDs except power supply (on 0.25 S, off 1.75 S)
Upgrade successful	All LEDs are solid except power
Upgrade failed	Flash all LEDs except power (on 0.25 S, off 0.25 S)

Product features

Functional class	Functional sub class	Functional description
Android	Application installation	Support for Android Market Application Installation and Autonomic Development Application Installation
	Background service	Support background service mode monitoring application
	Autostart	Enables you to specify application of full screen automatic open and exception automatic recovery
Status statistics	Status statistics	Support each interface module to record diagnostic information (meet the basic requirements of tristate) Support serial port, network and audio/video interface for communication status recording Support peripheral hardware detection Support for app traffic usage logging Support APP operational monitoring (meeting the basic requirements of tristate)
Clock synchronizati on	Clock synchronizatio n	NTP clock synchronization and remote management platform clock synchronization, time zone can be set
Security management	Security management	Lan side secure access control Firewall support
Remote administratio	Upgrading updates	Support remote upgrade system and application components, support remote APP upgrade and rollback

n	State management	Enables cloud platform remote statistical analysis device to escalate operational status Support for cloud platform device failure management
Timing on-off	Timing on-off	Support the user to control the power off completely and protect the power off fully
Audio and video output	Audio output	Supports 3.5 mm headphone interface standard output
	Touch screen interface	Supports both HDMI interface video output
	Touch screen compatible	Supports 10.1 inch resistive touch screen (Huiguanchip), 27 inch, 43 inch infrared touch screen
GPIO port interface Reservation	One way input	Support user input control
	Four-way output	Support for user output control (system instructions)

Equipment USE

Installation check

- Whether the TF card are plugged in tightly.
- Whether the serial port and the gateway on the panel are plugged in tightly.
- Check the audio and video connectors for loose connections.
- Check each USB external connection for loose connections.

Power on and power off of equipment

- Use the power adapter that is specified by the device (standard 12V2A power adapter).
- Check the status of the LEDs when the device is powered on, refer to the LED status table on page 10.
  Observe that the display can open the self-starting APP interface normally and that it can open to start working properly.
- When the device is powered on, power is required to power off the device to prevent damage to the card, TF card, and various peripherals

Power-on operation
Power on the device and the power indicator (PWR) is always on, indicating a successful power-on to the device. After 20-30 seconds, the system/self-starting APP LED (SYS/APP) illuminates every 4 seconds, indicating that the device is operating normally.
Audio and video service
Connecting an HDMI or VGA or LVDS display to your business needs allows you to display the output separately or simultaneously using one screen or both, and to display the output normally means that the audio and video service is norma
PS: If you need to use a customized touch screen, you need to provide the drive of the touch screen, or PID, VID

number to our company, written to the system before the normal use of the touch screen

Self-starting APP service

Monitor an app by configuring one of the apps in Settings-Accessibility-Primary Secondary App, which is set to start the primary app or secondary app from scratch. When the device is powered on, the device will actively set up the main APP as a self-starting APP, automatically start on the display, display in the front, and the secondary APP in the background. A self-starting APP can be displayed normally, meaning that the self-starting APP business is normal. When the device needs to be debugged, you can press the custom button to return to the desktop for debugging, and the self-starting APP will be pulled up again in five minutes.

Serial port peripheral Reserve

If you need to use the serial interface peripheral (such as 2D code scanning head, printer, motor drive board, etc.), you need to keep the serial port node name corresponding to each serial port peripheral and our serial port node name consistent before normal communication.

USB peripheral

If you need to use a universal USB peripheral such as a mouse button disk, you can plug and play ; If you need to use special USB peripheral (such as USB printer, ID card reader, etc.), you need to provide USB drive, or PID, VID number to our company, write to the system before normal use.

Maintenance

- Ensure that equipment is not wet or damaged in the field or in the open air.
- To ensure the insulation between the equipment and the contact body, the live articles shall not be exposed to the equipment.
- No modules and components on the device may be replaced while the device is charged.
- Do not open or remove the equipment without the guidance of our professional staf

FCC STATEMENT

This equipment complies with radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.This equipment should be installed and operated with minimum distance 20cm between the radiator& your body.

SIMPLIFIED EU DECLARATION OF CONFORMITY

The simplified EU declaration of conformity referred to in Article 10(9) shall be provided as follows:

Hereby, [Hongdian Corporation] declares that the radio equipment type [Android IPC, H9380S] is in compliance with Directive 2014/53/EU.

In accordance with Article 10(2) and Article 10(10), this product is allowed to be used in all EU member states.

Use the Android IPC in an environment with a temperature between -20℃ and 60℃.

Risk of explosion if the battery is replaced by an incorrect type. Dispose of used batteries according to the instructions. The device complies with RF specifications when the device used at 20cm from your body.

Manufacturer Hongdian Corporation Address F14-16, Headquarter Economic Center Building, ZhonghaixinScience&Tech Park, Bulan Road, Longgang District, Shenzhen 518112, China. The full text of the EU declaration of conformity is available at the following internet address: **http://www.hongdian.com**

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.This equipment should be installed and operated with a minimum distance 20cm between the radiator& your body.

Documents / Resources

	Hongdian H9380S Industrial Android Computer [pdf] User Guide H9380S, 2ASR8H9380S, H9380S Industrial Android Computer, Industrial Android Computer

References

- **Hongdian Corporation - The leader of M2M communication**