

# Chapter 1 Product Overview

## Overview:

The large board of the intelligent industrial all-in-one machine adopts Rockchip RK3588 eight-core chip solution. Support Android 12 system. Enhanced power management circuitry. Support common external devices. Rich interfaces and stable performance. Suitable for intelligent remote network control: industrial, medical, large advertising machines, educational video terminals and other equipment.

### Features :

Support LVDS, MIPI, EDP interface display three-screen simultaneous/different display + HDMI OUT (up to 8K@60FPS), HDMI IN (up to 8K@60FPS).

Various interactive mode interfaces: capacitive touch, infrared touch, USB keyboard and mouse, multi-point optical touch.

Multiple network interfaces: Ethernet (Gigabit), Wireless Wifi (Wifi6), BT 5.0.

Multi-channel USB interface, serial port.

Strong anti-electromagnetic interference and electromagnetic compatibility.

## Basic hardware specifications:

CPU	Rockchip RK3588 octa-core 64-bit size core architecture • 4* Cortex-A76 + 4* Cortex-A55	
Main frequency	The main frequency of the large core is 2.1GHz, and the main frequency of the small core is 1.7GHz	
GPU	ARMMali-G610 MC4	
	OpenGL ES 1.1/2.0/3.1/3.2	
	Vulkan 1.1 • 1.2	
	OpenCL 1.1,1.2,2.0	
	Embedded high-performance 2D image acceleration module	
NPU	6TOPS AI computing power, triple-core architecture, support int4/int8/int16/FP16/BF16/TF32, enabling various AI scenarios	
Memory	4GB/8GB/16GB (Up to 32GB) 64bit LPDDR4/LPDDR4x	
Built-in storage capacity	EMMC 32G/64G/128G/256G (optional)	
Display interface	HDMI OUT (Up to 8K@60FPS)	
	HDMI IN (Up to 8K@60FPS)	
	LVDS display interface	
	EDP display interface	
	MIPI display interface	
Screen voltage	Support 3.3V/5V/12V optional	
Touch screen	Provide I2C interface (can support multi-point resistive touch, multi-point capacitive touch). Support USB multi-point infrared touch, multi-point acoustic wave touch, multi-point optical touch.	
Network	With RJ45 interface, support 10/100/1000M Ethernet.	
	Equipped with AP6275S industrial WiFi-6 module SIDO/PCIE dual-channel BT WiFi module 2T2R 802.11 ax/ac/a/b/g/n Wi-Fi + BT 5.0 Module	
Image rotation	Support 0-degree, 90-degree, 180-degree, 270-degree manual/automatic rotation, support gravity sensing function	
Real Time Clock	Built-in real-time clock powered by battery	
Interface device	Support MIPI interface camera, support 500W pixels	
	3 USB HOST 2.0 (4PIN2.0 spacing connectors)	All support usb camera@500W usb printer, U disk, mouse, keyboard, standard usb peripherals
	2 USB HOST3.0 (standard interface)	
	1 full-featured Type-C interface (OTG)	
	3 sets of serial ports, support external serial device modules (NFC module, printer, card reader, etc.)	
	TF card, maximum support 128GB	
Class D power amplifier: default 3W*2 8 ohms, support microphone		
Audio	MP3, WMA, WAV, APE, FLAC, AAC, OGG, M4A,3GPP Format	
Video	Support H.265/H.264/AV1/VP9/AVS2 video decoding, up to 8K60FPS Support H.264/H.265 video encoding, up to 8K30FPS	
Picture	Support JPG, BMP, PNG and other image formats to browse and support rotation/slide show/image enlargement functions	
Power Adapter	Input: AC100-240V.50-60HZ, Output: DC12V 3A (positive inside and negative outside)	

## Basic Software Specifications:

Operating system	Android 12 and above
Basic software function	Web browsing, web chat, email, e-books, explorer
Sound mode	Clock, Alarm Clock, Calculator, Recording
Language support	Multi-lingual
Recording	Support MP3, WMA format recording
Tools	Calendar
	Alarm Clock
	Calculator
	Note
	Weather + clock
Word processing	recording
Word processing	EPUB, WORD, EXCEL, POWERPOINT, PDF, TXT
E-book	PDF/TXT/CHM/DOC/EXCEL/EPUB/RTF/FB2
Schedule	Calendar
Input method	Standard Android keyboard, optional third-party input method (Chinese, Korean, Japanese, etc.)
Network	Browser -Chrome Lite
	GOOGLEMarket
	Email
	Gmail
	Google talk
System Management	Support OTA remote upgrade, U disk upgrade, SD upgrade (silent installation)
	Original ecological Android system, open root permission, and can carry out product customization development
	Customizable local or remote server management system
	Support multiple third-party Android remote advertising publishing system
	Support multiple serial devices, USB devices, IO control devices