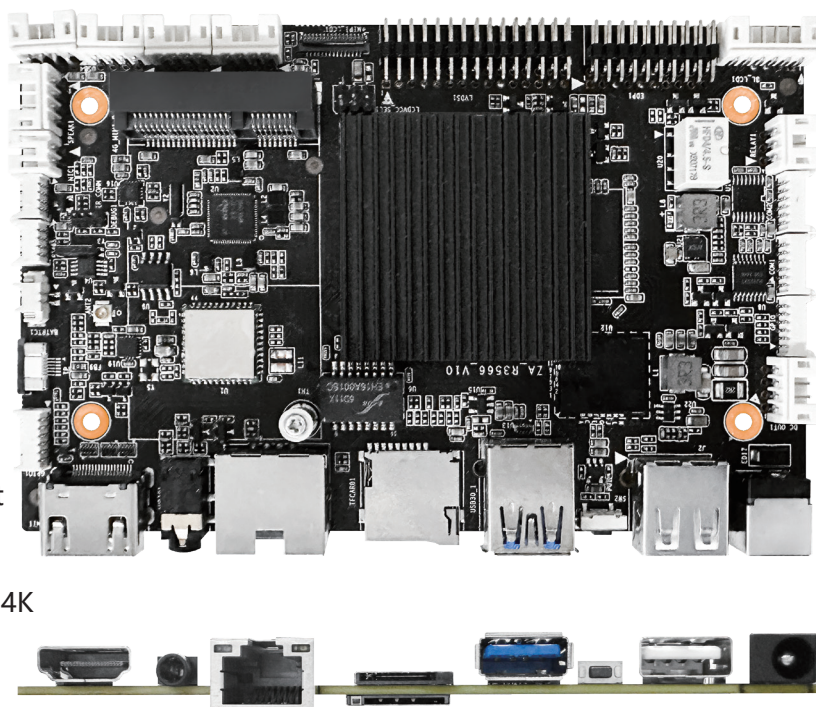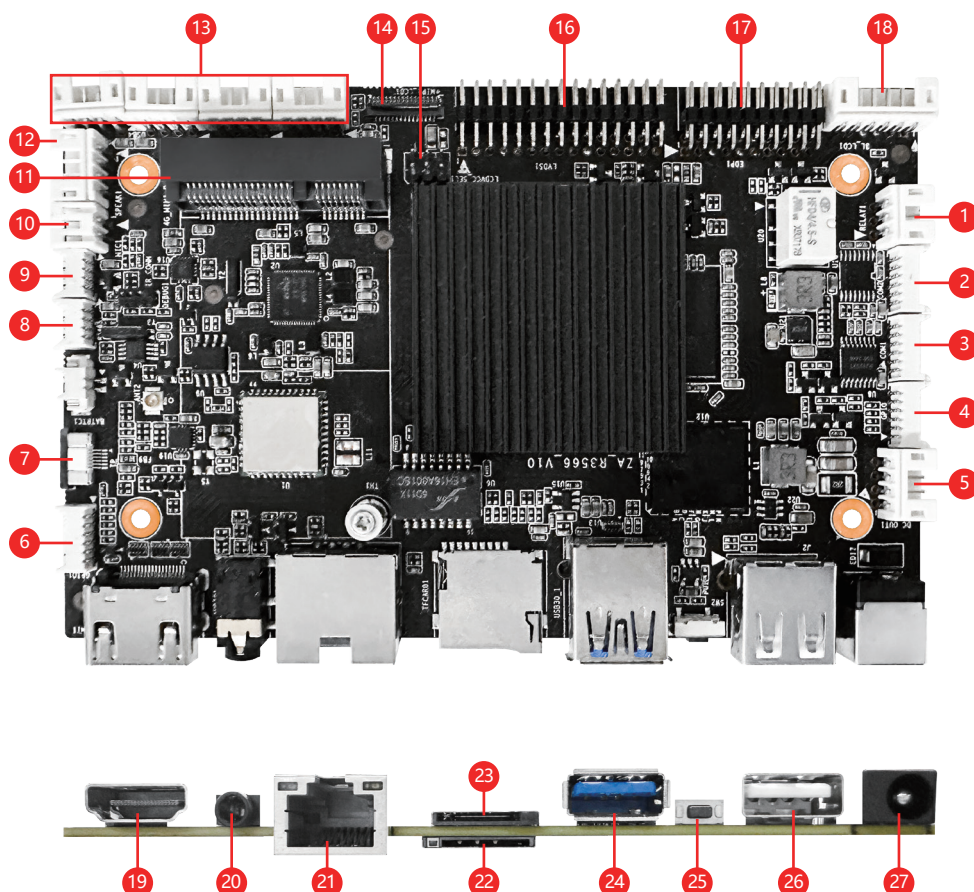# ZA-R3566_V10 Motherboard

Product features:

■ RK3566 high-performance AI processor, Neural Network Processor NPU, Android 11.0 operating system, RK3566 is based on a quad-core A55 architecture using a new 22nm process of ARM v8.2-A, featuring a quad-core 64-bit CPU with a high frequency of up to 1.8GHz, providing strong general computing performance. The GPU uses ARM G52 2EE, with an internal AI Neural Network Processor NPU that has a computing performance of up to 1.0 TOPS, supporting various AI development tools and interfaces. It supports LVDS interface 1080P output, eDP and MiPi display interface output, HDMI-4K output, and supports Ethernet, WiFi, USB expansion/serial port expansion/IO expansion/I2C expansion.

ZA-R3566_V10 Motherboard Specifications

Size	124mm*80mm
CPU	Rockchip RK3566 (22nm process technology) ARM quad-core 64-bit processor, with a maximum frequency of 1.8GHz.
Graphics Processor	The ARM G52 2EE GPU supports OpenGL ES 1.1/2.0/3.2, OpenCL 2.0, Vulkan 1.1, and features embedded high-performance 2D acceleration hardware.
Neural network processor	Built-in neural network processor NPU, 1.0 TOPS @ INT8 performance. Supports models such as Caffe/Mxnet/TensorFlow/TF Lite/ONNX/Darknet, etc. Provides AI development tools: supports rapid model conversion.
RAM	LPDDR4 2GB (4G/8G optional, supports up to 8G)
Built-in storage capacity	EMMC 32G
LAN	Supports Ethernet 10/100M, supports Ethernet.
	Supports 2.4GHz with Wi-Fi 802.11b/g/n/ac protocols. 5GHz dual-band WiFi (optional)
	Supports Bluetooth functionality, V2.1 EDR/Bluetooth 3.0/3.0 HS/4.1/BLE (optional)
Image rotation	Supports manual rotation at 0 degrees, 90 degrees, 180 degrees, and 270 degrees, and supports gravity sensing automatic screen rotation function (optional)
Display interface	1*EDP interface (EDP 1.3 supports 1920*1200 60fps output), supports 3.3V power supply
	1*LVDS interface (single channel/dual channel, 6-bit/8-bit), supports 1080P 60fps output, supports 3.3V/5V/12V power supply
	1*HDMI 2.0 supports 4K 60fps output
	1*MiPi interface (supports MiPi 2560*1600 60fps output)
Onboard backlight control	12V backlight power supply
Audio	1*Speaker output (2*3W 8R)
	1*Microphone Input
Touch screen	1*I2C interface (supports multitouch resistive touch, multitouch capacitive touch). Supports USB multipoint infrared touch, multipoint capacitive touch, multipoint nano film touch, multipoint acoustic touch, multipoint optical touch, etc.
Camera	Support for USB interface cameras
USB	5*USB2.0, 1*USB3.0
Infrared	1*Infrared receiver base, supports infrared remote control function.
Key	1*Upgrade key
Serial port	2*RS232,2*UART,1*RS485
IO	4*IO port, supports input or output
Power input	DC12V/5.5mm inner core 2.1mm DC head 2A to 5A (surge voltage requirement is less than 18V, ripple voltage is less than 100mV), supports self-starting when powered on or starting with the power button when powered on.
Working temperature	-10-70 degrees
Storage temperature	-20-70 degrees
Storage humidity	10%-80%

1	RELAY Pin
2	COM2 Pin(inside has 2*UART)
3	COM1 Pin(inside has 2*RS232)
4	GPIO2 Pin
5	DC_OUT Pin
6	GPIO1 Pin
7	TP interface
8	RS485 Pin
9	IR_CONN Pin
10	MIC Pin
11	Mini Pcie 4G Module slot
12	SPEAKER Pin
13	USB Pin(1-4)
14	MIPI_LCD interface
15	LCDVCC_SEL jumper
16	LVDS Pin
17	EDP Pin
18	BL_LCD Pin

19	HDMI interface	24	USB3.0 interface
20	AUDIO interface	25	SW Upgrade key
21	LAN interface	26	USB2.0 interface
22	SIM slot	27	DC 12V interface
23	TF slot		