

# WAFER-RK3568

## 3.5" SBC supports RK3568 processor motherboard

3.5" SBC with RK3568; 2/4GB LPDDR4/4X; 16/32GB eMMC; 2 x 1GbE RJ45; 2 x (RS232+RS485);

2 x USB 3.0 Type A; 3 x USB 2.0 HOST; HDMI2.0; MIPI DSI, Edp and MIPI CSI; M.2 Slot;

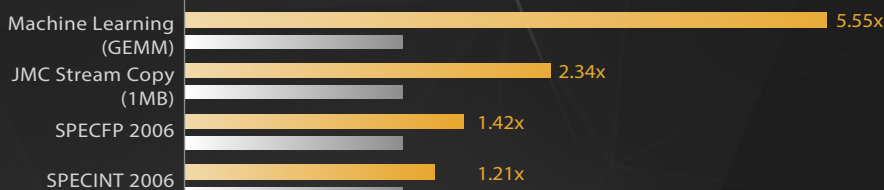
SD Card Slot; DC 12V; Debian10/Android12; RoHS

Provide AI demo kit

### CPU ▶ 4-Core 4xA55, Frequency 2.0GHz

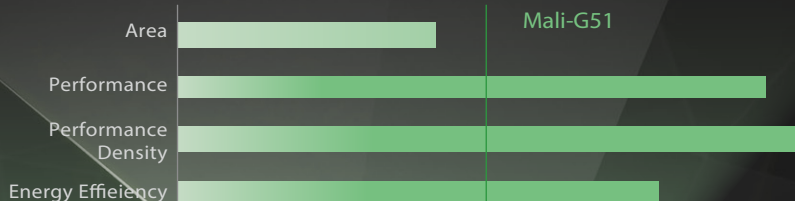
Cortex-A55 performance relative to Cortex-A53

- Cortex-A55
- Cortex-A53



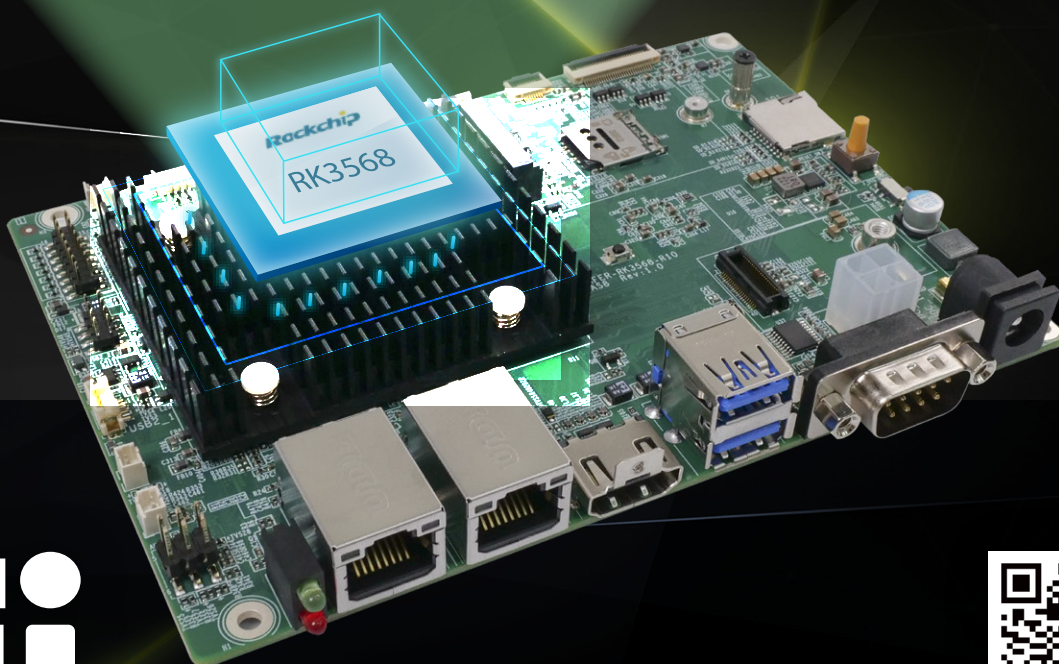
### GPU ▶ Mali-G52

Mali-G52 performance relative to Mali-G51



### NPU ▶ 0.8 Tops Support int8/int16/FP16/BFP16

Support framework such as

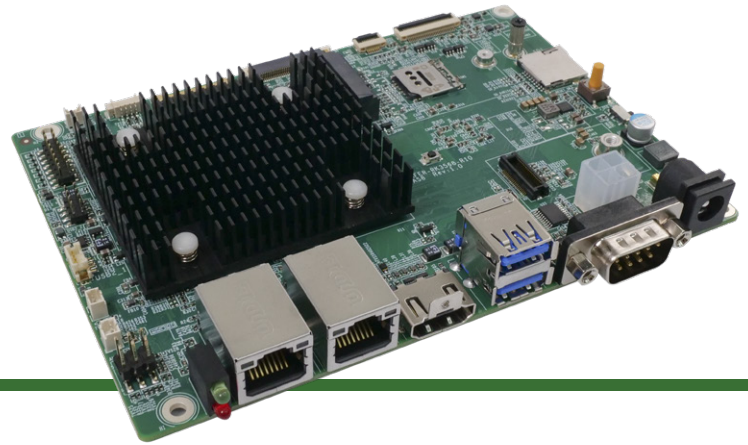


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# WAFER-RK3568

3.5" SBC supports RK3568 with 2/4GB LPDDR4/X, 16/32GB eMMC, Triple display with HDMI, MIPI, eDP, USB3.0x2, Built-In USB2.0x3, ROHS compliant



## Support Rockchip 3568

Quad A55, Up to 2.0GHz, Is 20% more efficient than A53  
Release super performance, can handle multiple tasks at the same time



## Support Mali-G52 GPU

RK self-developed NPU, computing power 0.8Tops  
512 INT8 MAC, 128 INT16/FP16/BFP16 MAC, Up to 800MHz



## Easy to use model transformation Etool RKNN-Toolkit

Support Caffe / Tensor Flow/TF-Lite / ONNX/PyTorch /Keras / Darknet  
One-click transformation of mainstream architectural models  
Continuously update and improve the OP



## Support Motorcomm YT8521S Network control chip

I/O layout 2x1GbE RJ45, Base on Motorcomm YT8521S Network control chip



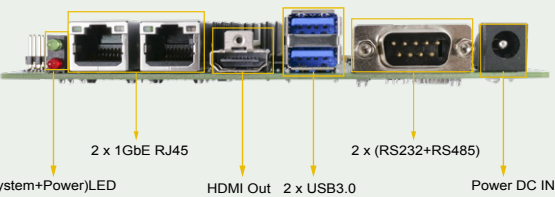
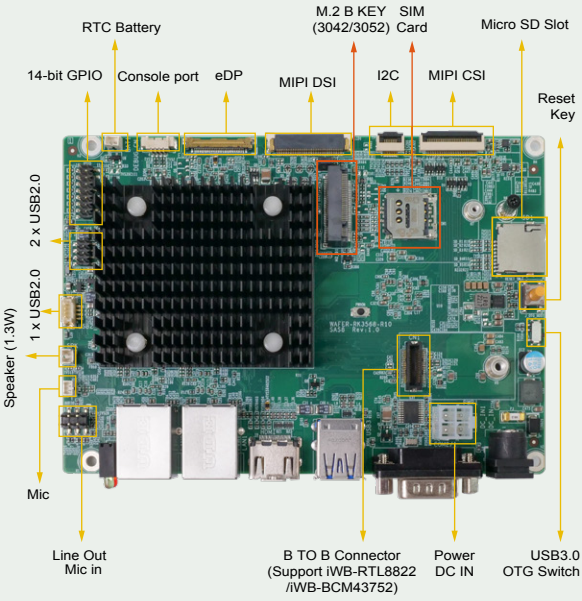
## Rich extension Interfaces

Motherboard support M.2 B key Slot, Installable 3042 4G Module or 3052 5G Module, Also a B TO B Connector to support WIFI5/BT or WIFI6/BT options



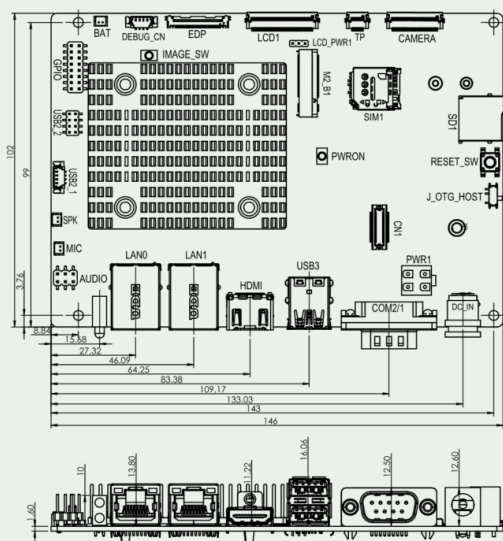
## Display capability

Support HDMI/eDP/MIPI DSI Triple Different Display





Dimensions



(Unit: mm)

Optional accessories



Specifications

Model Name	WAFER-RK3568-R10	
Dimension	Dimensions (WxHxD)(mm)	146mm x102mm
Motherboard	CPU	Rockchip RK3568 (Quad-code Cortex-A55 up to 2.0Ghz)
	Sytem Memory	2/4GB LPDDR4/4X, up to 8GB (2GB Sku only support Linux)
	Flash	16/32GB Emmc NAND FLASH
Storage	SD Card	1 x Micro SD Slot
	COM Port	1 x DB9 Port , 2 x (RS232+RS485 )
I/O Interfaces	GPIO	14-bit (7 in/7 out, pin header)
	Ethernet	2 x 1GbE RJ45 By YT8521
	USB3.0	2 x USB 3.0 Type A (1x OTG,1x HOST)
	USB 2.0	3 x USB 2.0 HOST (1 x 4 pin header, 2 x 4pin header )
	Display	1 x HDMI2.0 Type A, Up to 4K 1 x MIPI DSI 4 Lanes (40Pin 0.5mm FPC 90°) 1 x eDP1.3 (30Pin 0.5mm FPC 90°)
	Camera	1 x MIPI CSI 4 Lanes (30pin 0.5mm FPC)
	I2C Connector	1 x I2C Connector For TP (8pin, 90°, P=0.5mm)
	Console port	1 x Console port
	M.2	1 x 3042/52 B-key (PCIe Gen2 x1, USB2.0) 1 x On-board SIM card socket (hinge type) for M.2 B key 1 x board to board connector (Only supports IEI iWB series wireless modules)
	Audio&Button	Audio
Button		1 x Reset Key
LED Indicator		1 x Power
Power	Power input	12V DC Jack (Colay 2-pin terminal)
	Operating Temperature	0 C ~ 60 C with air flow
Reliability	Storage Temperature	-20°C ~ 70°C
	Humidity	10% ~ 90%,no-condensing
	Safety/EMC	EMC Class A
OS	Supported OS	Android 12.0、Linux Debian 10 (kernel 4.19)
	Watchdog Timer	YES

Packing List

1 x WAFER-RK3568 single board
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Ordering Information

Part NO	Description
WAFER-RK3568-R10	3.5" SBC with RK3568;4GB LPDDR4/4X;32GB eMMC;2× 1GbE RJ45;2x(RS232+RS485);2× USB 3.0 Type A;3× USB 2.0 HOST;HDMI2.0;MIPI DSI、Edp and MIPI CSI;M.2 Slot;SD Card Slot;DC 12V;Debian10;RoHS
WAFER-RK3568-2/16GB-R10	3.5" SBC with RK3568 , 2GB LPDDR4/4X, 16GB eMMC, 2× 1GbE RJ45 , 2x(RS232+RS485), 2× USB 3.0 Type A, 3× USB 2.0 HOST, HDMI2.0, MIPI DSI、Edp and MIPI CSI, M.2 Slot, SD Card Slot, DC 12V, Debian10, RoHS
WAFER-RK3568-A-R10	3.5" SBC with RK3568 , 4GB LPDDR4/4X, 32GB eMMC, 2× 1GbE RJ45 , 2x(RS232+RS485), 2× USB 3.0 Type A, 3× USB 2.0 HOST, HDMI2.0, MIPI DSI、Edp and MIPI CSI, M.2 Slot, SD Card Slot, DC 12V, Android12, RoHS
63040-010060-200-RS	Adapter Power:FSP060-DHAN3;Vin:90~264VAC;60W;Dim:62.0*110*31.5mm; Cable=1500mm;Vout:12VDC;Φ2.5/Φ5.5
32001-027800-100-RS	USB CABLE; 210mm; 28AWG; (A)USB A TYPE 4PIN FEMALE *2; (B)DU PONT 2*4P P=2.0 FEMALE
iWB-RTL8822-EA-R10	WiFi+BlueTooth MODULE, 2T2R capable WLAN baseband,Support Bluetooth 5.0 system, with external WIFI 6E antenna
iWB-BCM43752-EA-R10	WiFi+BlueTooth MODULE,AP6275S,2T2R,802.11 a/b/g/n/ac/ax Wi-Fi + BT 5.0; with external WIFI 6E antenna
iWB-AP6275SDSR-EA-R10	WiFi+Bluetooth Module,AP6275SDSR,2T2R,802.11 a/b/g/n/ac/ax Wi-Fi + BT 5.3; with external WIFI 6E antenna, FCC ID