

# WAFER-RK3588

3.5" SBC supports Rockchip RK3588 Processors with 8GB LPDDR4x memory & 32GB eMMC NAND FLASH on board default, single HDMI™ input and dual HDMI™ out, 2.5GbE LAN, GbE LAN, USB 3.2 GEN 1, USB 2.0, 0°C ~ 60°C and RoHS



## Features

- » 3.5" SBC with Quad-core Cortex-A76 and quad-core Cortex-A55, up to 2.4GHz
- » Built-in AI accelerator NPU with processing performance of up to 6.0 TOPS, supports int4/int8/int16/FP16/BF16/TF32
- » Built-in 4 core GPU Mali G610 (4x256KB L2 Cache) supports OpenGL ES 3.2/OpenCL 2.2/Vulkan 1.1
- » Multi-channel input output: 4K HDMI™ input, 8K HDMI™ output, MIPI, LVDS, MIPI\_DSI and Camera MIPI\_CSI input
- » Rich I/O: 2.5GbE, GbE RJ45, USB 3.2 GEN 1, USB 2.0
- » Expansion slot: PCIe 3.0 x2, M.2 B/M key, M.2 A/E key
- » Optional WiFi5/WiFi6/BLE 5.0
- » OS supports Android 13 / Debian 11 (Linux Kernel 5.10)

## Specifications

Form Factor	
Form Factor	3.5" SBC
System	
CPU	» Processor: Rockchip RK3588 (Quad core Cortex A76 + Quad core Cortex A55) » GPU: ARM Mali-G610 MP4 » NPU: 6TOPS supports int4/int8/int16/FP16/BF16/TF32
Memory	On-board 8GB LPDDR4x
Supported OS	Android 13, Linux Debian 11
Physical Characteristics	
Dimensions (LxWxH) (mm)	146 x 102
Storage	
Storage	1 x SATA : 3.0 up to 6 Gb/s eMMC : 32GB NAND Flash for OS and IEC's boot loader
I/O Interface	
Display Output	2 x HDMI™ - 1 x HDMI-output up to 8K@60Hz 1 x HDMI-output up to 4K@60Hz 1 x LVDS 1 x MIPI DSI
Ethernet	2 x LAN - 1 x GbE LAN 1 x 2.5 GbE LAN
Audio	Description: Pin header to Mic-in / line-out jack 2 x Speaker (2pin header)
I/O Interface	2 x External USB 2.0 (Type A) 3 x Video - 1 X HDMI-input up to 4K@60FPS 1 x HDMI-output up to 8K@60Hz 1 x HDMI-output up to 4K@60Hz

	2 x External USB 3.2 Gen1x2 - 1 x USB 3.2 GEN 1 Type C with DP (OS update) 1 x USB 3.2 GEN 1 Type A
	UART (2x9pin header)
Expansion	2 x M.2(NGFF) -
	1 x M.2 2230/2280 B/M key (PCIe 3.0 x2)
	1 x M.2 2230 A/E key (PCIe 2.0 x1)
	1 x PCIe (PCIe 3.0 x2)
<b>Wireless</b>	
Wi-Fi	Support Wi-Fi 5/6 (board to board IEI module optional)
Bluetooth	Bluetooth V5.0 optional
<b>Other Features</b>	
Camera	Support MIPI CSI
<b>Power</b>	
Input	12V DC
<b>Environment</b>	
Operating Temperature	0°C ~ 60°C with air flow
Storage Temperature	-20°C ~ 60°C
Humidity	5% ~ 95% relative humidity, non-condensing
<b>Certifications</b>	
Safety & EMC	EMC Class B

## Ordering Information

WAFER-RK3588-D/CE-R10	3.5" SBC supports Rockchip RK3588 Processors with 8GB LPDDR4 memory & 32GB eMMC NAND Flash, Debian platform
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## Packing List

1 x WAFER-RK3588 single board computer	1 x QIG
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