

HYPER-RK3566

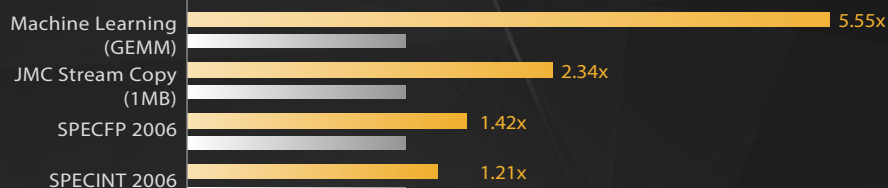
PICO-ITX SBC with RK3566, 2/4GB LPDDR4/4X, 16/32GB eMMC, HDMI2.0, MIPI DSI, LVDS, 1x1GbE RJ45, 1xUSB3.0, 3 x USB2.0, 2x (RS-232+RS-485), Options: WIFI5/6+BT, 12V DC IN, Debian10/Android12, RoHS

Introduction to the RK3566 platform

CPU ▶ 4-Core 4xA55, Frequency 1.8GHz

Cortex-A55
performance
relative to
Cortex-A53

- Cortex-A55
- Cortex-A53



GPU ▶ Mali-G52

Mali-G52
performance

Mali-G52: Premium Experiences on Mainstream Devices
Efficiently supporting growing graphics & ML complexity

30%

More Performance
density

15%

Better energy
efficiency

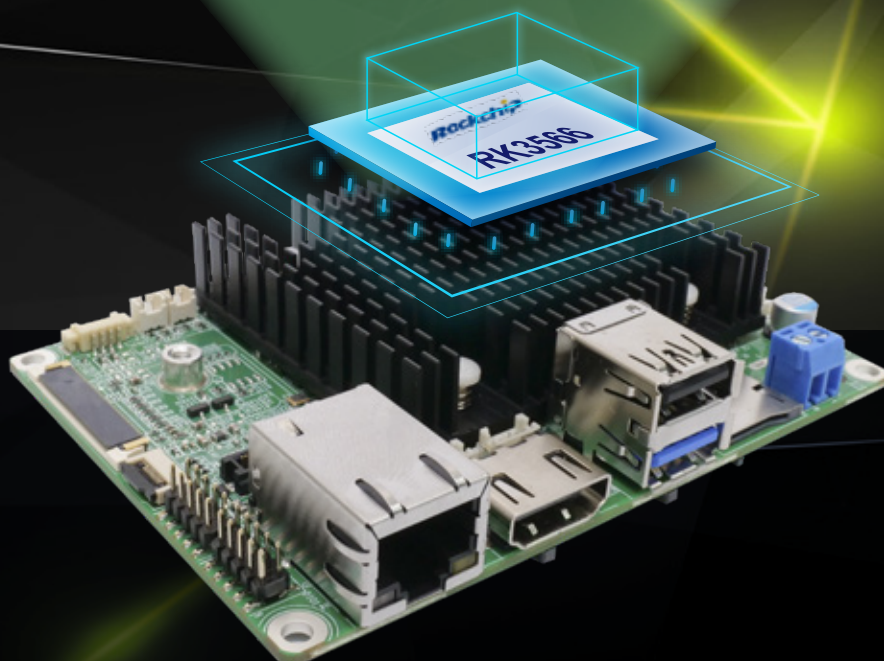
3.6x

ML
improvements



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

Support framework such as

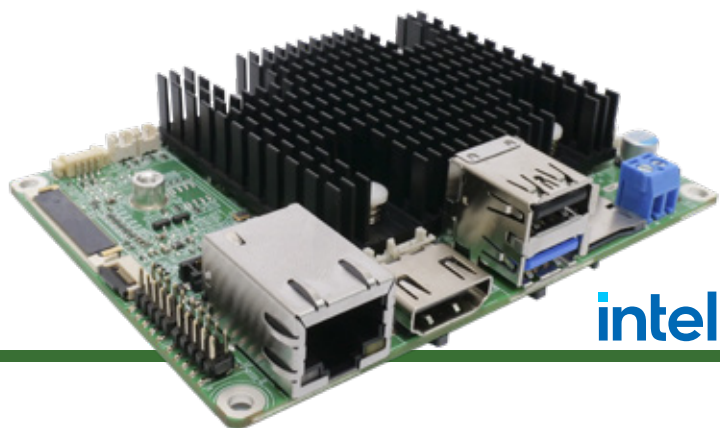


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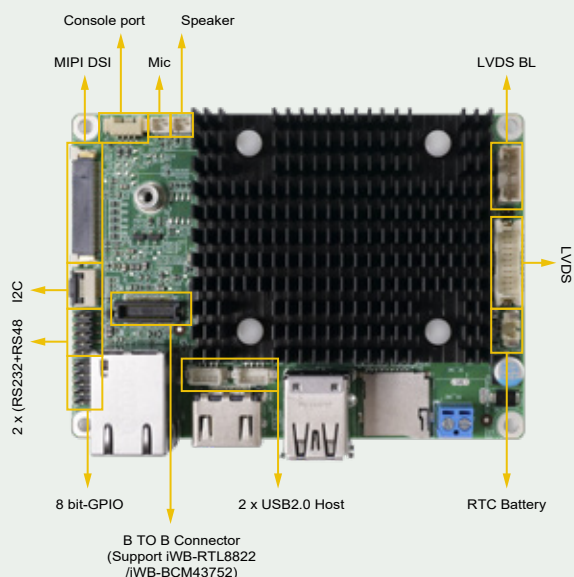
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intel



Support Rockchip 3566

Quad A55, Up to 1.8 GHz, A55 is 20% more efficient than A53



Medium computing power

22nm process
4 x A55 CPU

G52 GPU
0.8T NPU



Multimedia capabilities

4K 60 Video decoding
1080P 60 video coding



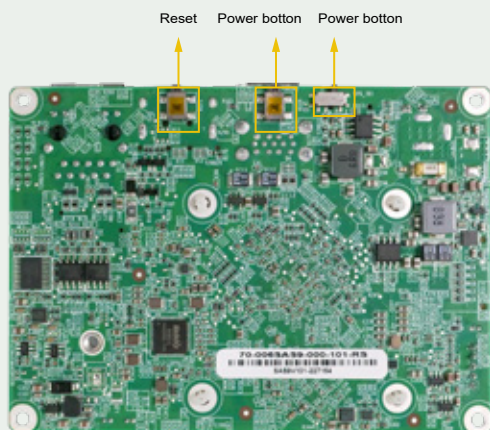
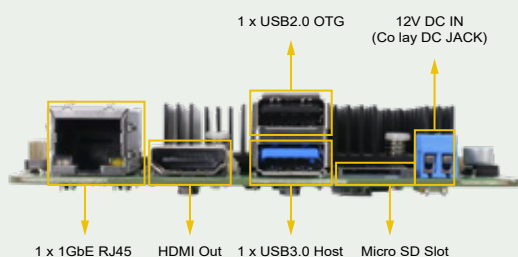
Display capability

Android OS Support Dual-screen display of the same content
Debian OS Support Single screen display
Display Interface Support HDMI/MIPI DSI/LVDS

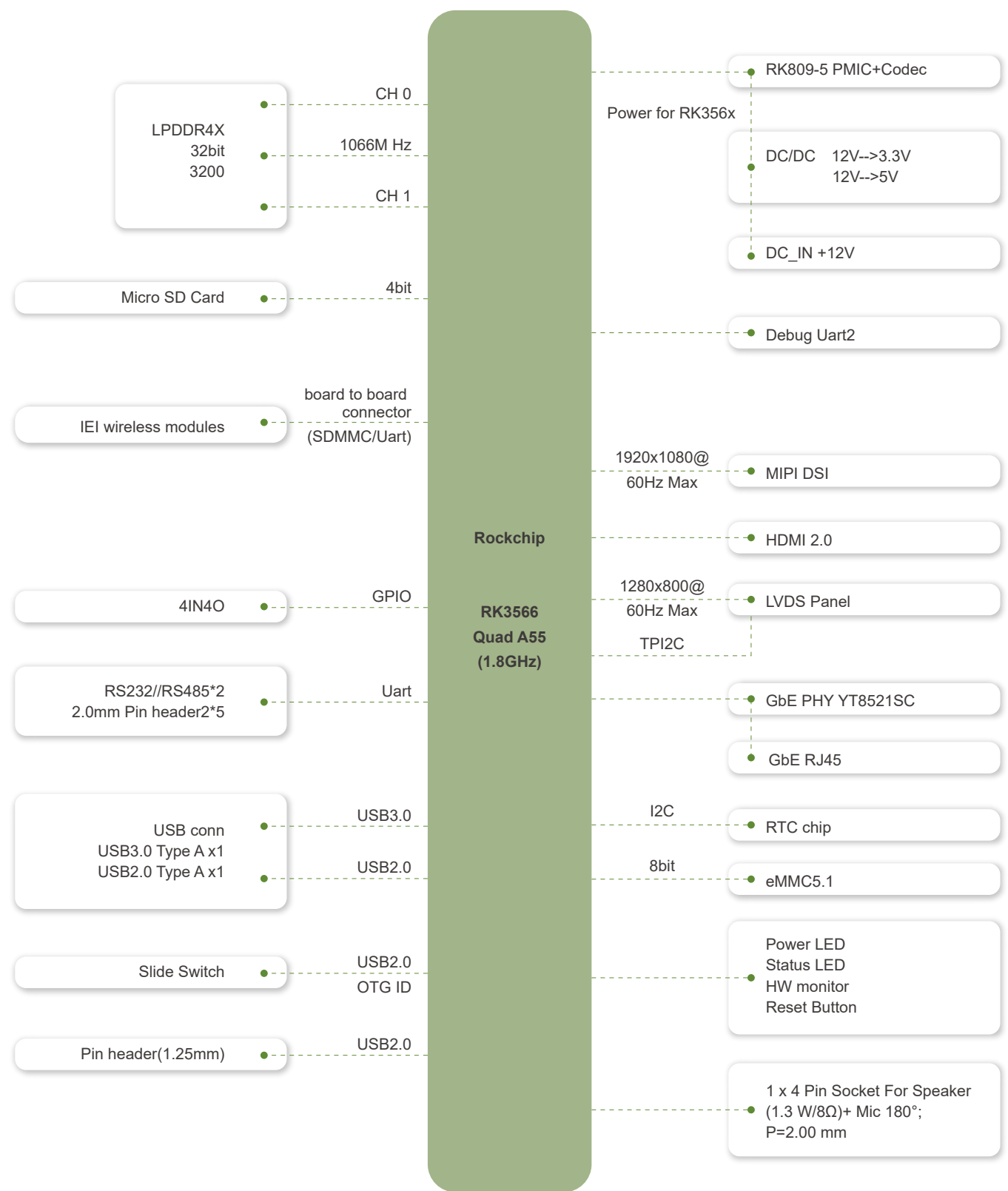


I/O Interface

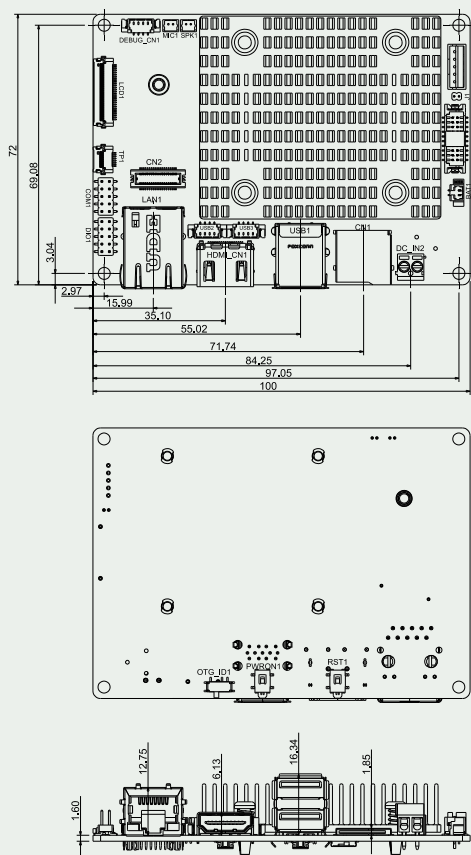
1 x USB3.0 TypcA Host
3 x USB2.0 (1x Type A OTG, 2x Connector Host)
1 x GbE RJ45 Port
1 x HDMI Out Port
2 x (RS232+RS485)
8bit-GPIO
board to board connector(Only supports IEI wireless modules)



HYPER-RK3566 Block Diagram



Dimensions



Specifications

Model Name		HYPER-RK3566
Dimension	Dimensions (WxHxD)	100mm x72mm
Motherboard	CPU	Rockchip RK3566 (Quad-code Cortex-A55 Up to 1.8Ghz)
	Sytem Memory	2/4GB LPDDR4/4X,Up to 8GB ^{*1}
Storage	SD Card	1 x Micro SD Slot
	Flash	16/32GB Emmc NAND FLASH ^{*1}
I/O Interfaces	COM Port	2 x RS-232 and 2 x RS-485 (2 x 5Pin Pin header)
	Ethernet	1 x GbE RJ45 by YT8521
	GPIO Port	8-bit (4 in/4 out, 2 x 5 pin header)
	USB3.0	1 x USB 3.0 Type-A Host
	USB 2.0	1 x USB 2.0 Type-A OTG 2 x USB2.0 (1 x 4 Pin header)
	Display ^{*2}	1 x HDMI2.0 Type A 1 x LVDS (SMD;30PIN;180°;P=1.25MM) 1 x MIPI DSI 4 Lanes (ZIF FPC; SMD;40PIN;180°, P=0.5mm,)
	I2C	1 x I2C (8pin 2.0mm FPC)
	Console port	1 x Console port
	Audio	1 x 1.3W speaker connector (1 x 2 Pin header) 1 x mic connector (1 x 2 Pin header)
	Expansion	1 x board to board connector (Only supports IEL wireless modules)
Audio&Button	Button	1 x Reset Key
	LED Indicator	1 x Power 1 x Reserved (Programmable)
Power	Power input	12V DC IN
Reliability	Operating Temperature	0°C ~ 60°C with air flow
	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

^{*1} 2GB memory and 16GB storage only support Linux

^{*2} Android OS Supports Dual-screen display of the same content, Debian os supports single-screen display

Packing List

1x HYPER-RK3566 Single board compute

Optional accessories



Ordering Information

HYPER-RK3566-R10	PICO-ITX SBC with RK3566, 4GB LPDDR4/4X, 32GB eMMC, HDMI2.0, MIPI DSI, LVDS, 1x1GbE RJ45, 1xUSB3.0, 3 x USB2.0, 2x (RS232+RS485), Options:WIFI5/6+BT, 12V DC IN, Debian10, RoHS
HYPER-RK3566-2/16GB-R10	PICO-ITX SBC with RK3566, 2GB LPDDR4/4X, 16GB eMMC, HDMI2.0, MIPI DSI, LVDS, 1x1GbE RJ45, 1xUSB3.0, 3 x USB2.0, 2x (RS232+RS485), Options:WIFI5/6+BT, 12V DC IN, Debian10, RoHS
HYPER-RK3566-A-R10	PICO-ITX SBC with RK3566, 4GB LPDDR4/4X, 32GB eMMC, HDMI2.0, MIPI DSI, LVDS, 1x1GbE RJ45, 1xUSB3.0, 3 x USB2.0, 2x (RS232+RS485), Options: WIFI5/6+BT, 12V DC IN, Android12, RoHS

Optional

Power Adapter	3040-010060-200-RS	Adapter Power; FSP060-DHAN3;Vin:90~264VAC;60W;Dim:6 2.0*110*31.5mm; Cable=1500mm;Vout:12VDC;Φ2.5/Φ5.5
USB Cable	32001-027800-100-RS	Round cable; USB cable; 2;200mm; 28AWG
WIFI Module	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 6 antenna, FCC/CE/ TELEC/NCC
RS-232/485 Cable	19800-000200-100-RS	RS-232/485 cable, 300mm, P=2.00, with bracket