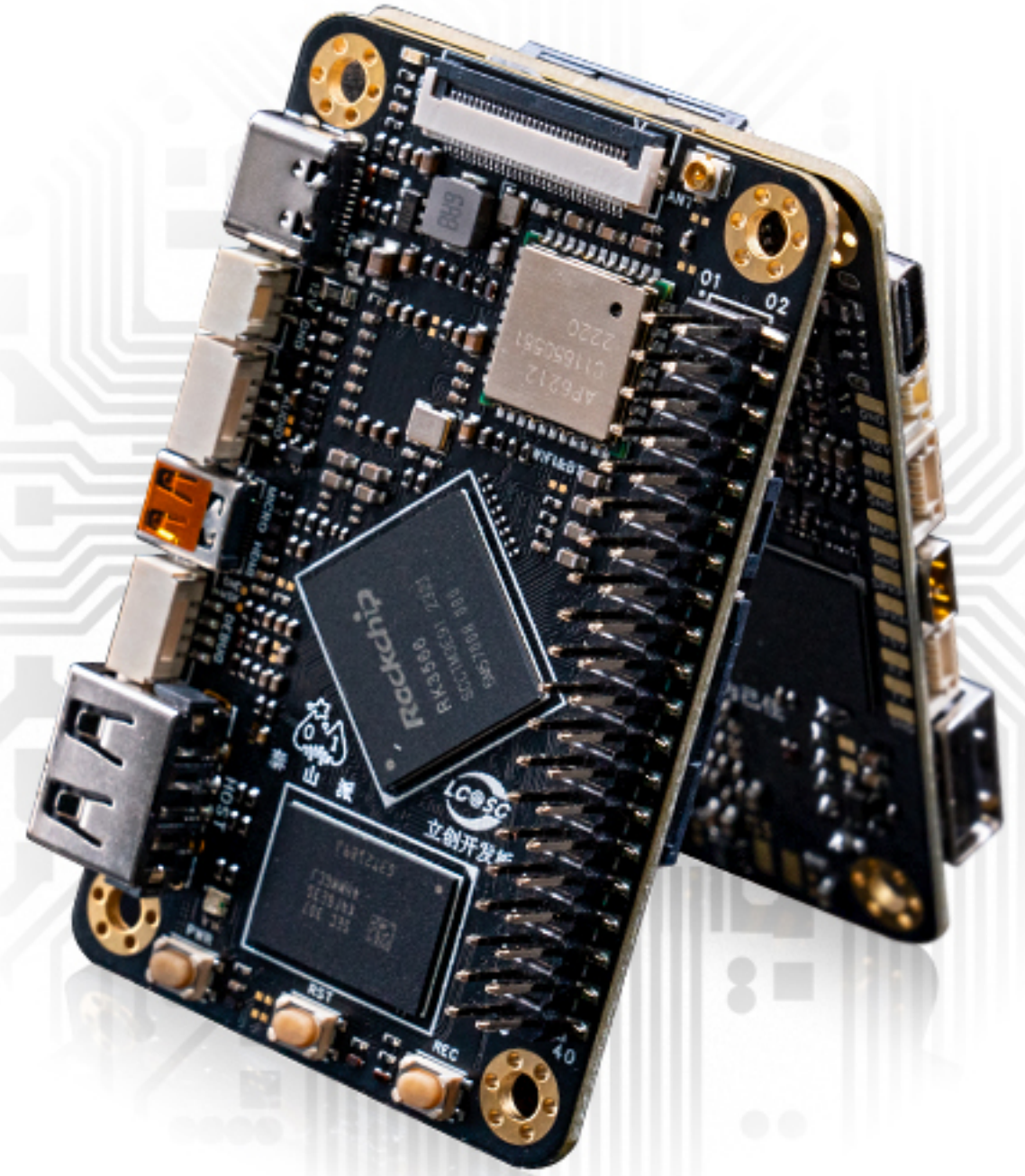


LCSC Taishan-RK3566-Linux Dev Board

Taishan is an open-source card computer, providing fully open-source software and hardware materials. We are committed to promoting technological development and innovation with like-minded partners around the world.

This compact board is equipped with a high-performance processor, rich external resources, and diverse SDKs, giving your creativity unlimited possibilities.

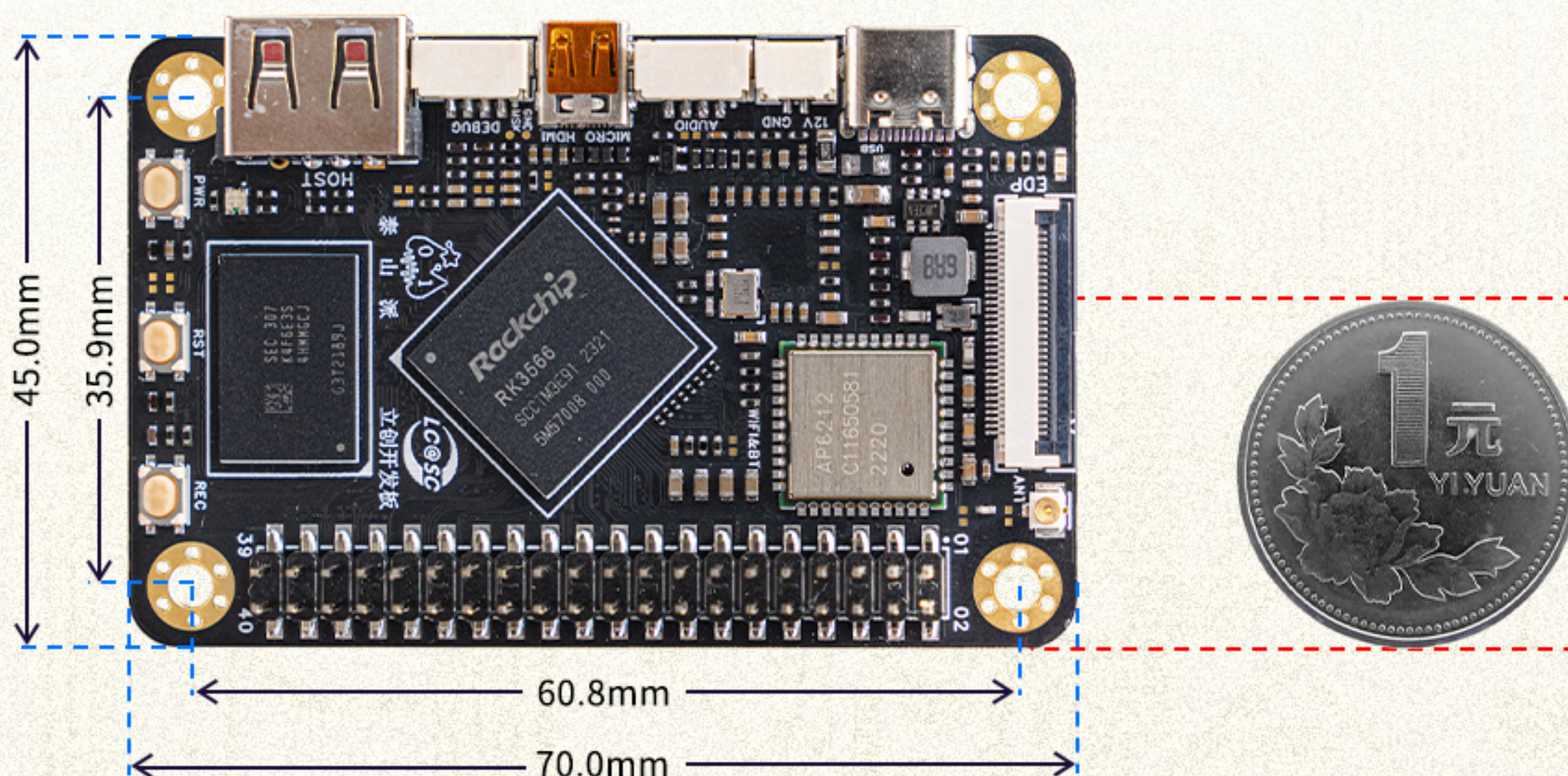
Combined with hardware and software, project-based learning, solving the difficult problem of project landing, and making every idea turn into a reality.



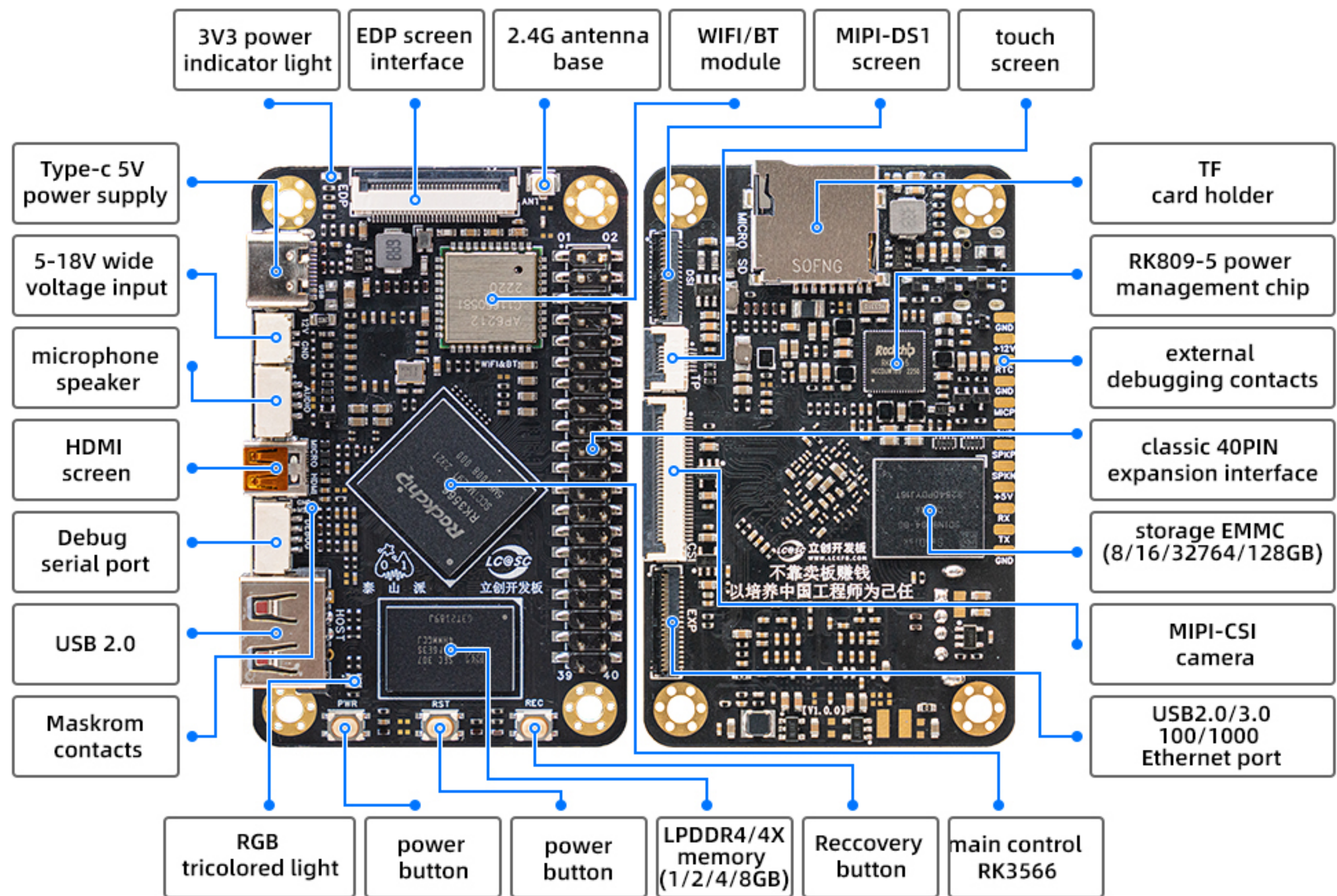
Small but Mighty

70mm X 45mm smaller than a card computer

14 peripheral interfaces, 500 devices and 79 expansion IO ports.



Development board resource annotation diagram



Hardware parameters

Motherboard Resources

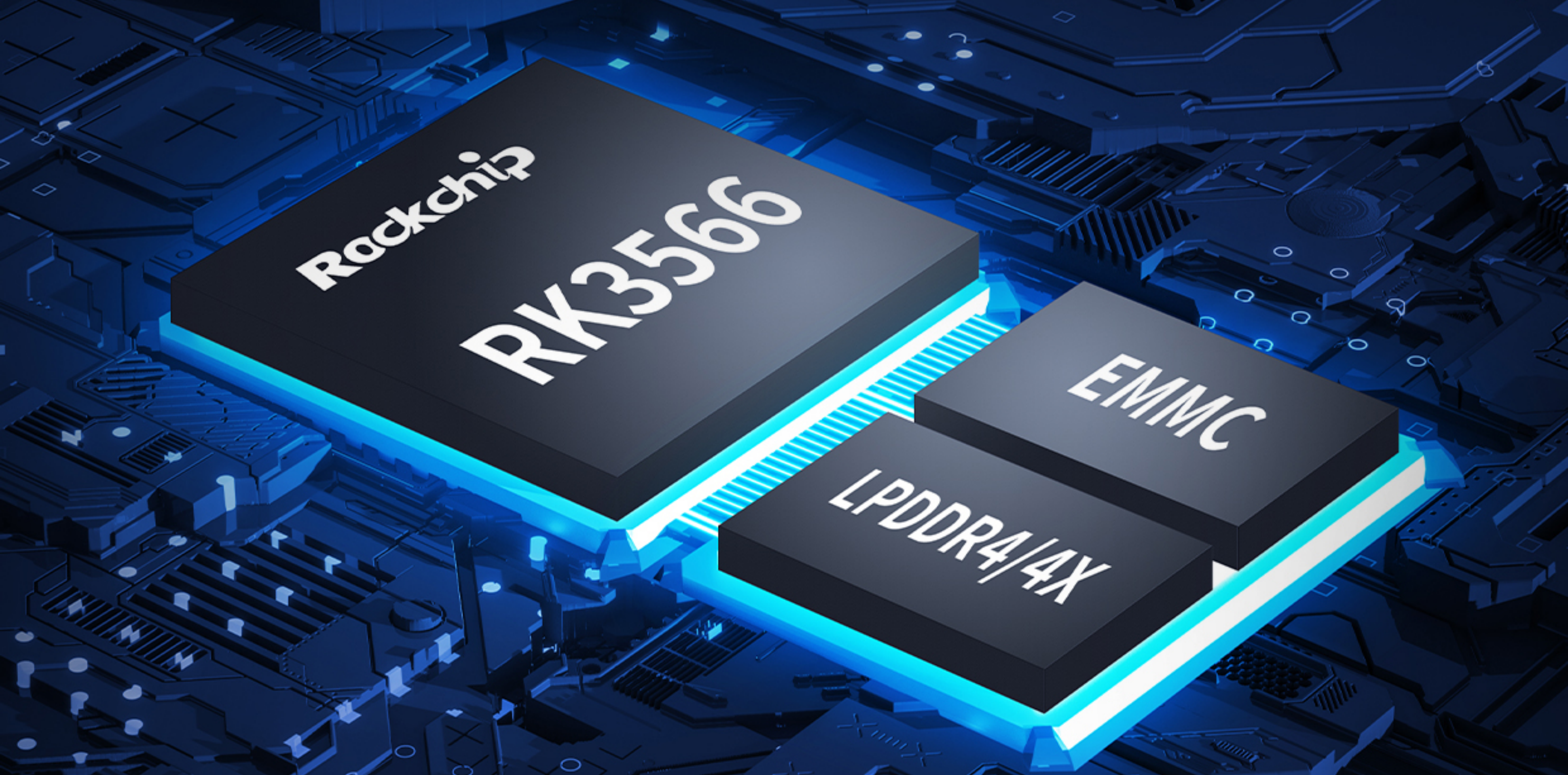
Main Control Chip RK3566	CPU	Adopting quad core Cortex-A55 and dual core Cortex-A75
	GPU	ARM G52 2EE
		Support openGL ES 1.1/2.0/3.2, OpenCL 2.0, Vulkan 1.1
		Embedded high-performance 2D acceleration hardware
	Frequencies	Main frequency up to 1.8GHz
	Manufacturing process	22 nanometers
	NPU	Up to 1.0TOP computing power
	Video decoding	Support 4K 60fps H.265/H.264/VP9
	Video encoding	Support 1080P 60fps H.265/H.264
	ISP	8M ISP、HDR
Memory Chips	LPDDR4/4X	1/2/4/8GB
Memory Chips	EMMC	8/16/32/64/128GB
Power supply method	USB_Type_C	5V3A input
	GH1.25 power supply	12V2A input
Display Interfaces	MICRO HDMI screen interface	1080P@120Hz、4K@60Hz
	EDP screen interface	2560 X 1600@60Hz
	MIPI DSI screen interface	1080P@60Hz
Surveillance camera	MIPI CSI Camera Interface	30PIN 4LING Camera
Communication network interface	USB2.0	Type-A
	WIFI&Bluetooth module	Frequency: 2.4GHz; Transmission power: 16dBm; Receiving sensitivity: 90dBm;
Other interface or module	Debug UART	Debug serial port
	TF card holder	Supports TF card boot system, up to 512GB
	40Pin GPIO	Compatible with classic 40Pin interface,supporting PWM, I2C, SPI, UART, GPIO functions
	Speaker and microphone interface	RK809-5 with built-in 1.3W speaker
		RK809-5 built-in microphone head
	key	RK809 reset button
		System reset button
		Recovery button
	LED	RGB tri color LED light

Master, Memory, Storage

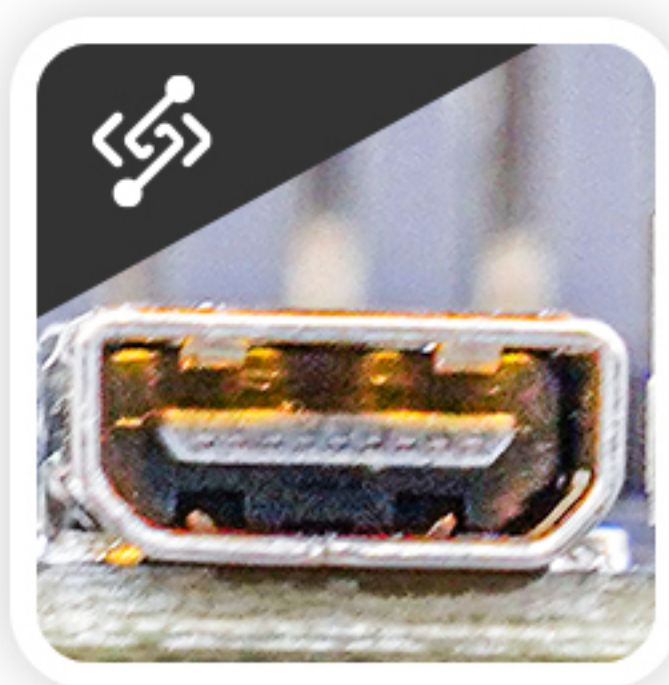
Master: Rockchip RK3566 is a high-end AIOT chip, using 22nm process, 4-core Cortex-A55 64-bit CPU, main frequency up to 1.8GHz; integrated ARM Mali-G52 GPU, support for 4K 60fps decoding, 1080P 60fps encoding, support for 8M ISP and HDR; built-in 1Tops of arithmetic power of AI accelerator NPU; built-in 1Tops of arithmetic power of AI accelerator NPU. AI gas pedal NPU.

Memory: 1/2/4/8GB selectable.

Storage: EMMC (8/16/32/64/128GB) & TF card (supports up to 512GB)

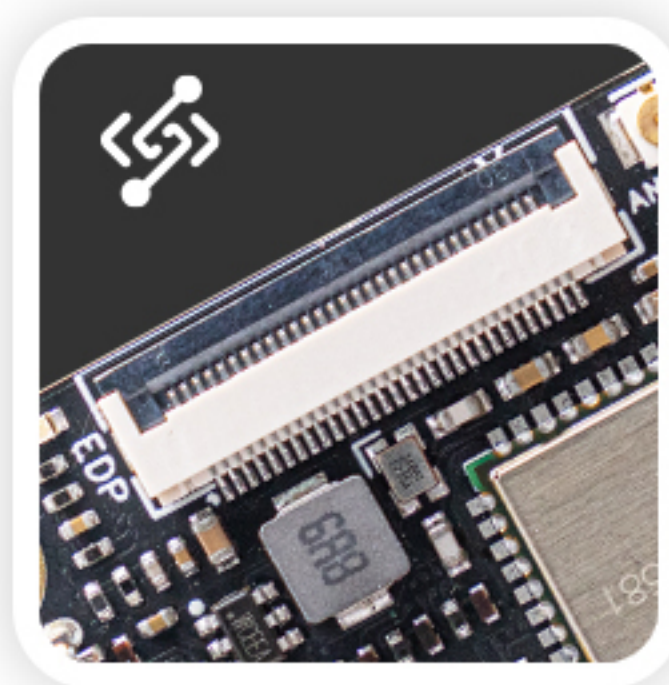


Support 3-screen display + touch



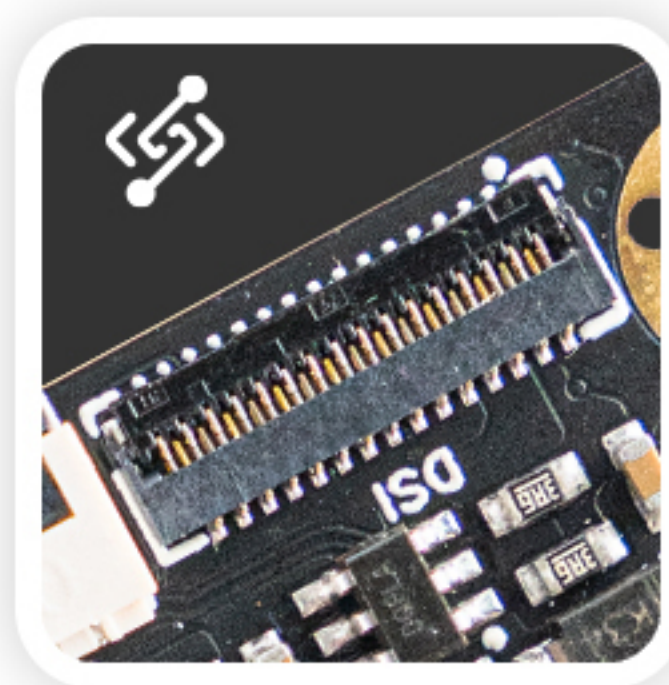
HDMI

4K 60Hz、1080P 60Hz



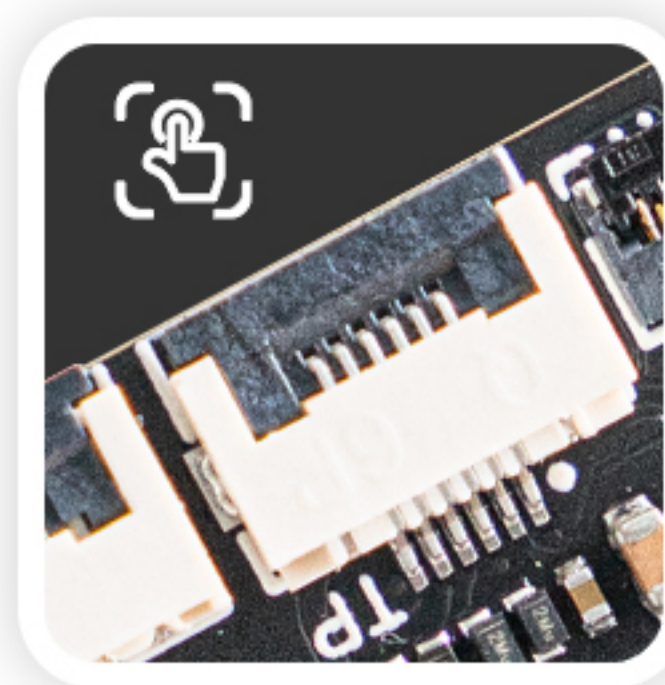
EDP

2560 X 1600 60Hz



MIPI

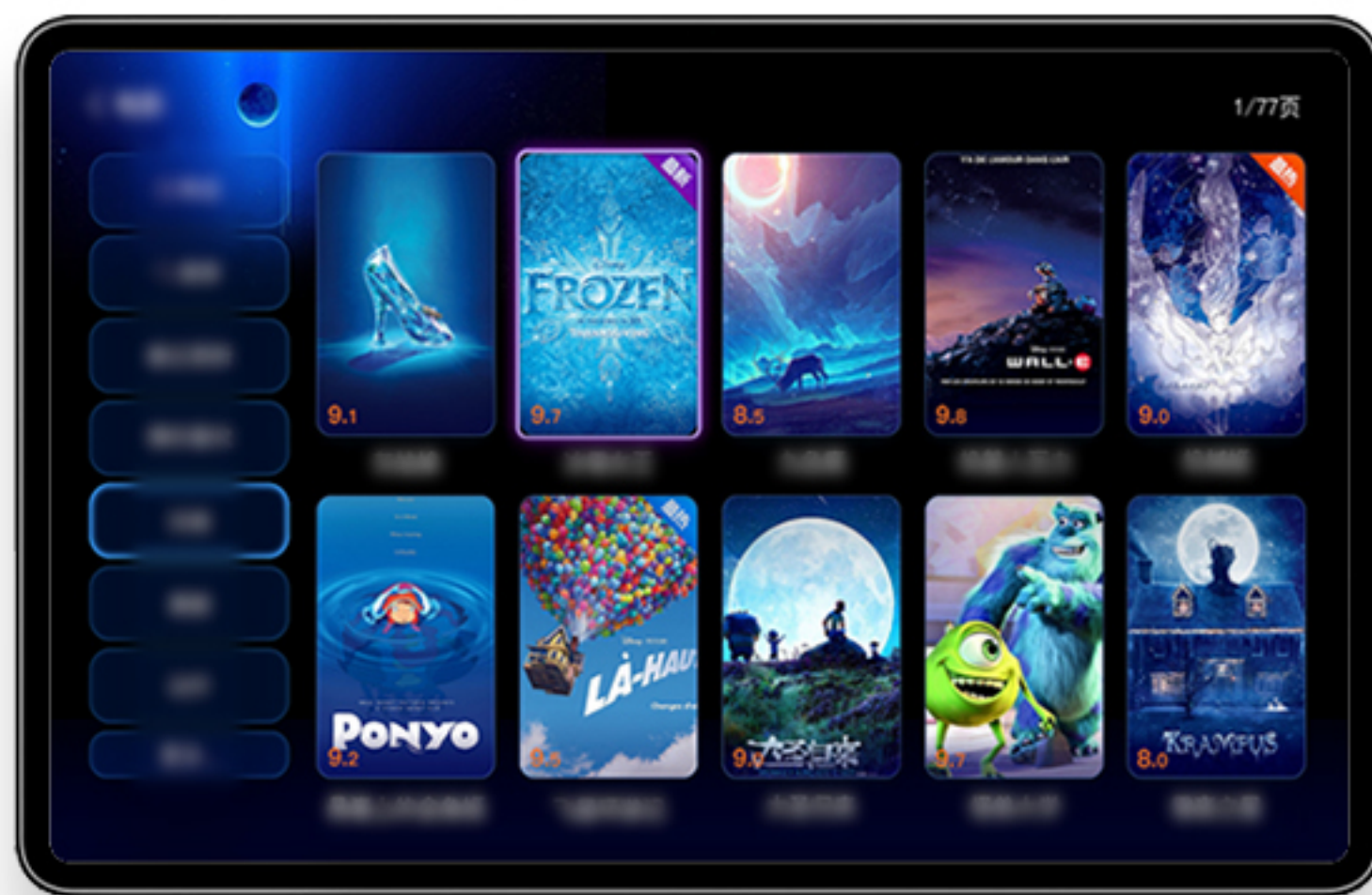
1080P 60Hz



TP

touch Screen

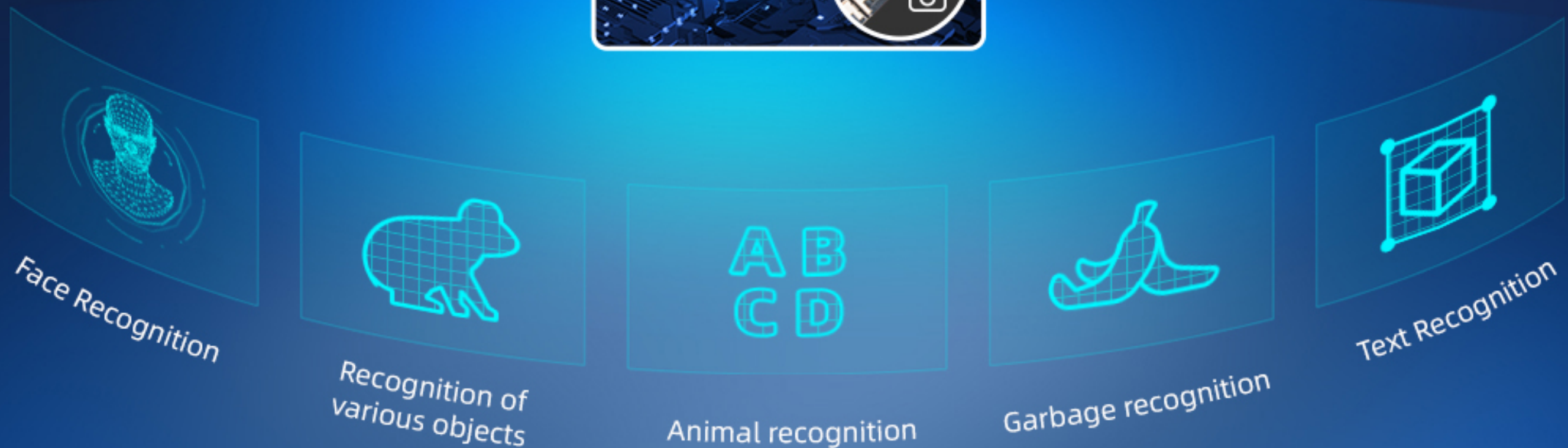
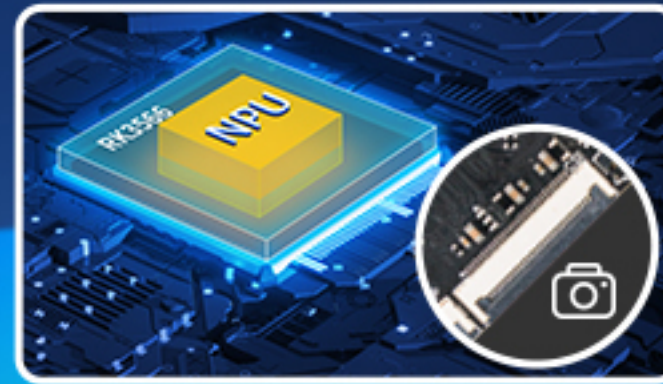
Arbitrary dual-screen simultaneous display



Unlock AI potential, open a new chapter of intelligence

High-definition 4Lane camera input interface

RK3566 built-in NPU computing power up to 1Tops, support a variety of AI computing frameworks, including TensorFlow Lite, Caffe.MXNet and so on. MXNet, etc. It quickly handles face recognition, animal recognition, text recognition, garbage recognition and other AI tasks, making smart devices more intelligent.



Onboard WIFI/Bluetooth

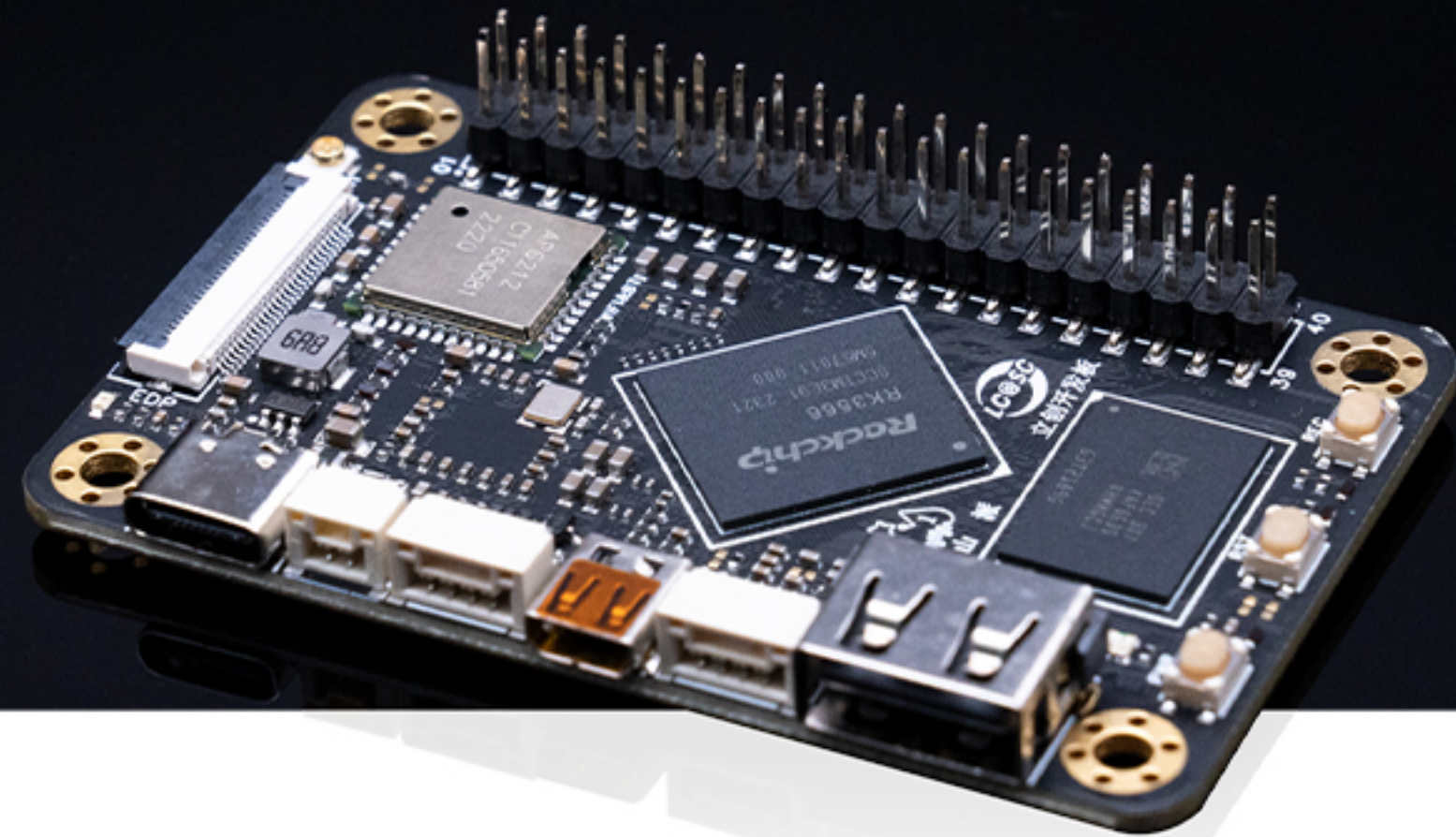
Flexible with on-board WIFI/BT modules

Adapt to a variety of WIFI/BT modules on the market to ensure flexibility and compatibility, to meet the needs of various applications in a comprehensive manner

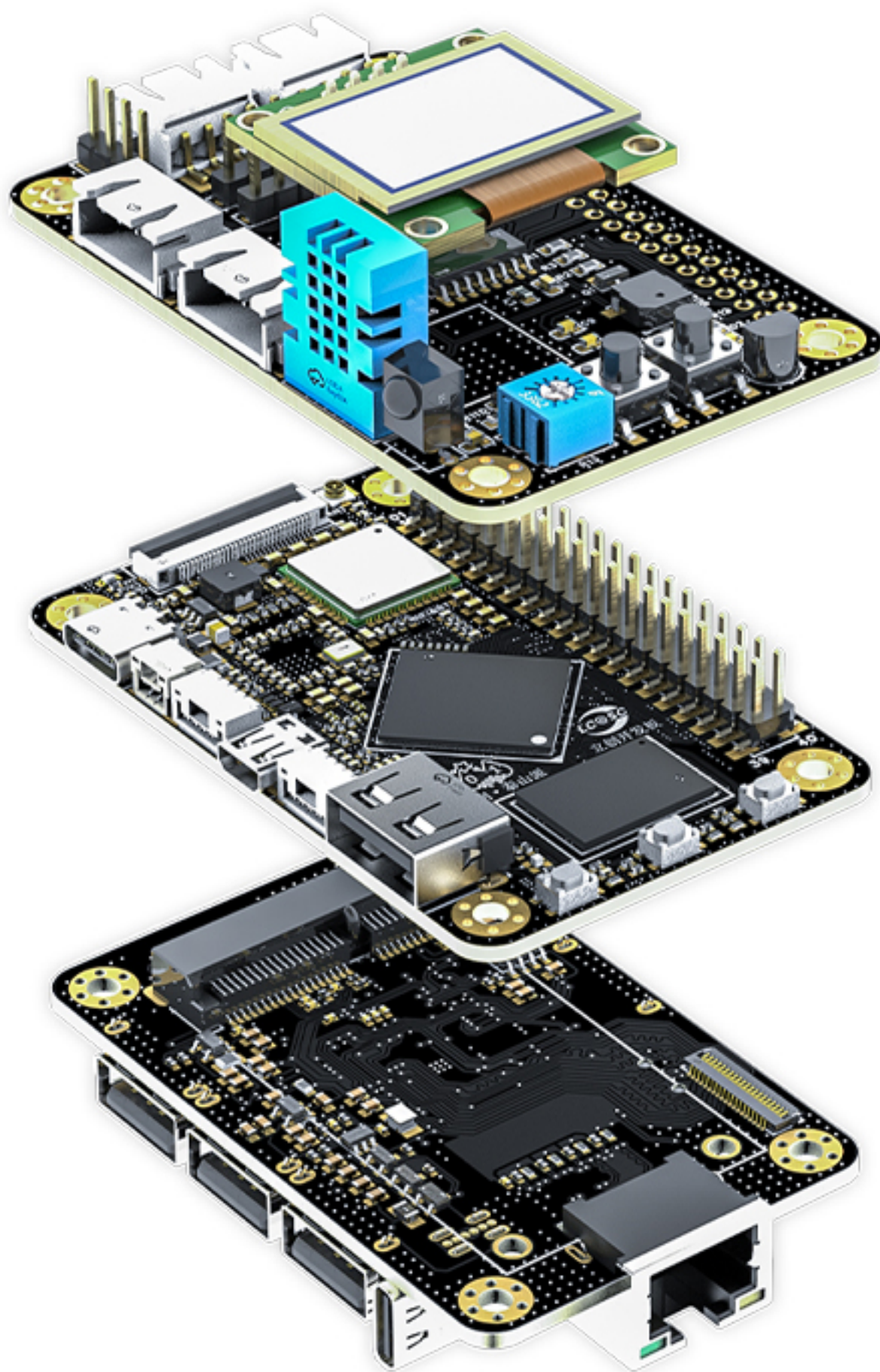


LCSC Taishan is borned for projects

Compatible with classic ecology
to explore new possibilities.



Stacked design, expanding infinite possibilities



Top Level

Classic 40Pin Expansion Interface
(IIC, PWM, CLK, SPI, UART, GPIO, etc.)

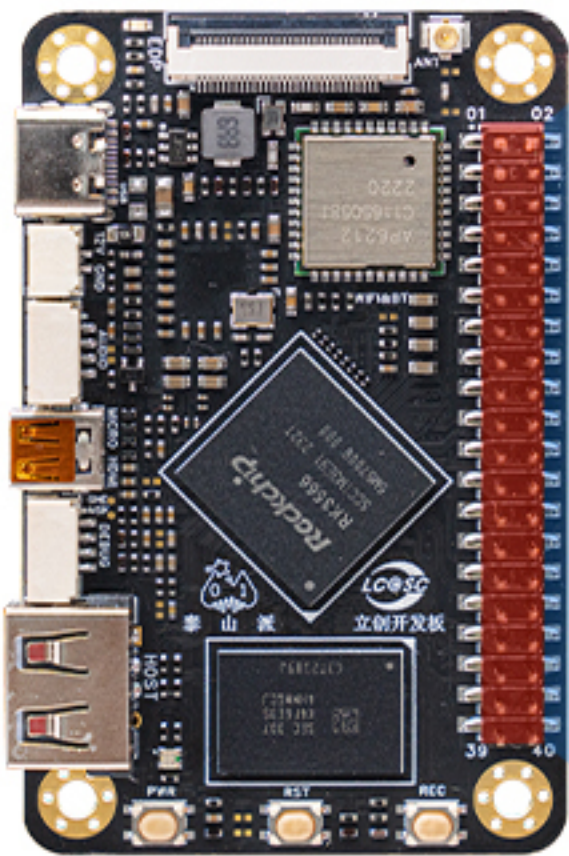
LCSC Taishan-RK3566- Linux Dev Board

Bottom layer

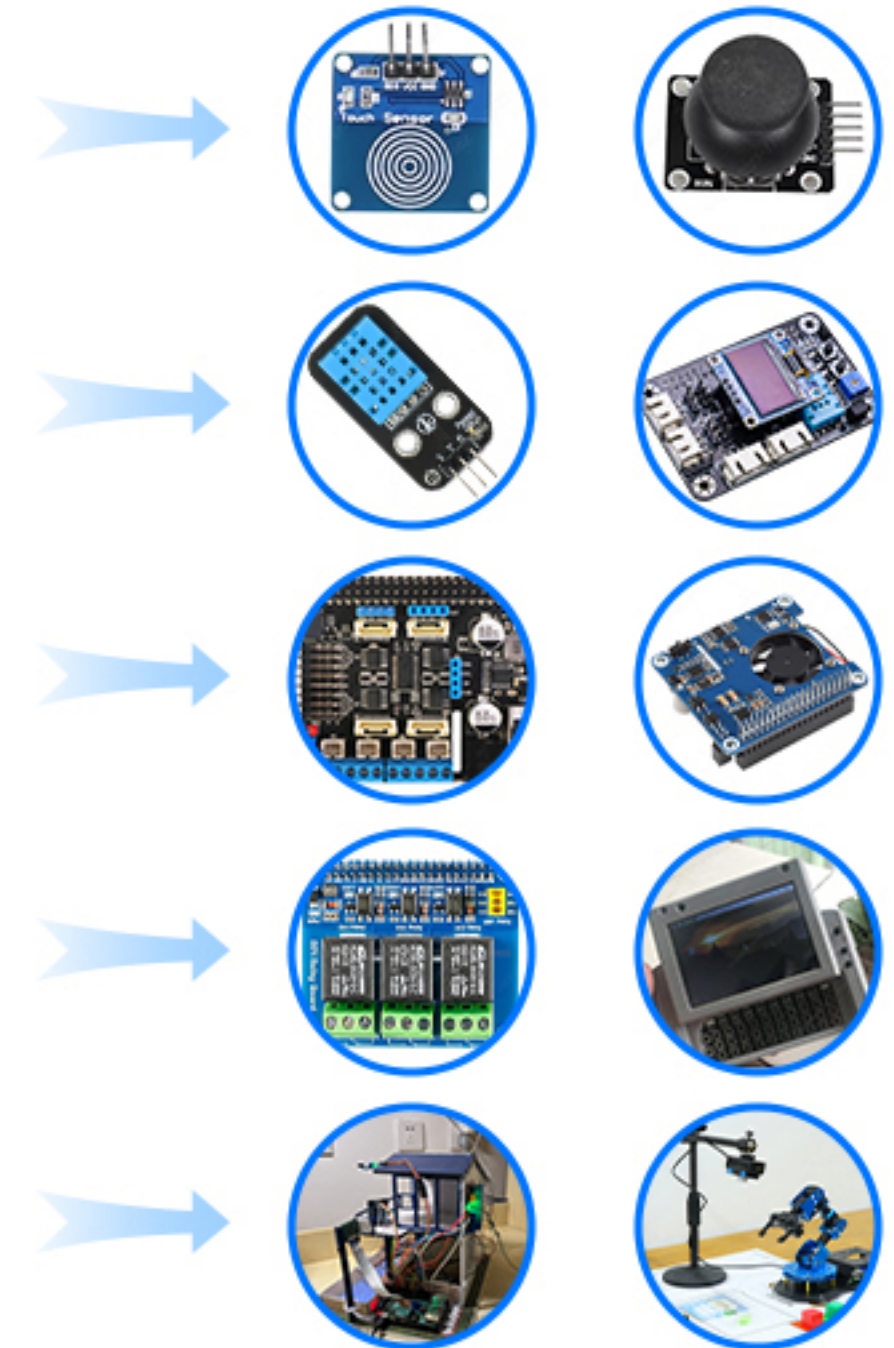
High-speed 39Pin expansion interface
(100/1000 Ethernet port, USB2.0/3.0 SATA,
headset, 4G module, GPS, etc.)

Compatible with the classic 40PIN expansion interface.

Provides a rich variety of input and output interfaces,
including GPIO interface, SPI interface, I2C interface, UART interface and PWM interface.
Meet the needs of various applications, give play to your imagination and realize more possibilities!

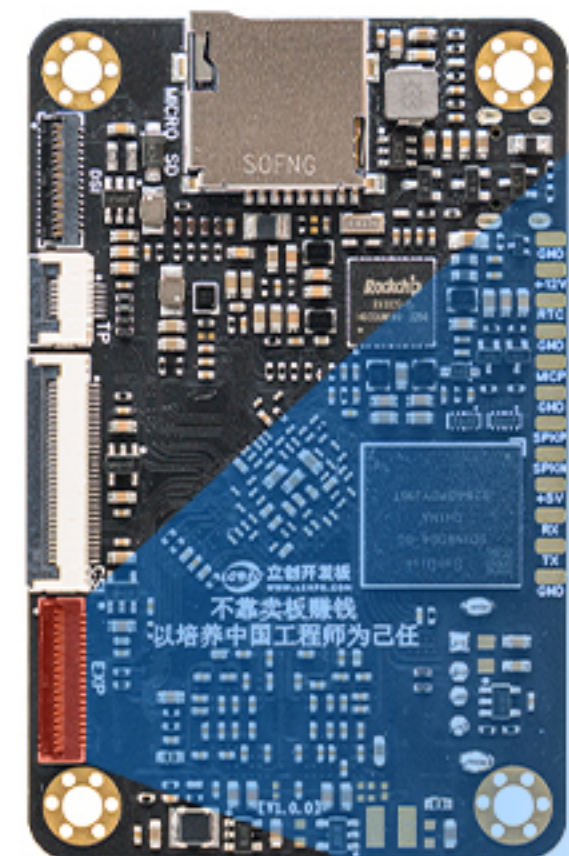


Reuse function	GPIO	Pin number		GPIO	Reuse function
3.3V	3.3V	1	2	5V	5V
I2C2_SDA_M0	GPIO0_B6	3	4	5V	5V
I2C2_SCL_M0	GPIO0_B5	5	6	GND	GND
GPIO	GPIO1_A4	7	8	GPIO3_B7	UART3_TX_M1
GND	GND	9	10	GPIO3_C0	UART3_RX_M1
GPIO	GPIO3_A1	11	12	GPIO3_C4	PWM14_M0
GPIO	GPIO3_A2	13	14	GND	GND
GPIO	GPIO3_A3	15	16	GPIO3_A4	GPIO
3.3V	3.3V	17	18	GPIO3_A5	GPIO
SPI3_MOSI_M1	GPIO4_C3	19	20	GND	GND
SPI3_MISO_M1	GPIO4_C5	21	22	GPIO3_A6	GPIO
SPI3_CLK_M1	GPIO4_C2	23	24	GPIO4_C6	SPI3_CS0_M1
GND	GND	25	26	GPIO3_A7	
I2C3_SDA_M1	GPIO3_B6	27	28	GPIO3_B5	I2C3_SCL_M1
GPIO	GPIO3_B0	29	30	GND	GND
GPIO	GPIO3_C2	31	32	GPIO3_C5	PWM15_IR_M0
PWM8_M0	GPIO3_B1	33	34	GND	GND
PWM8_M0	GPIO3_B2	35	36	GPIO3_C3	GPIO
GPIO	GPIO0_B7	37	38	GPIO3_B3	GPIO
GND	GND	39	40	GPIO3_B4	GPIO

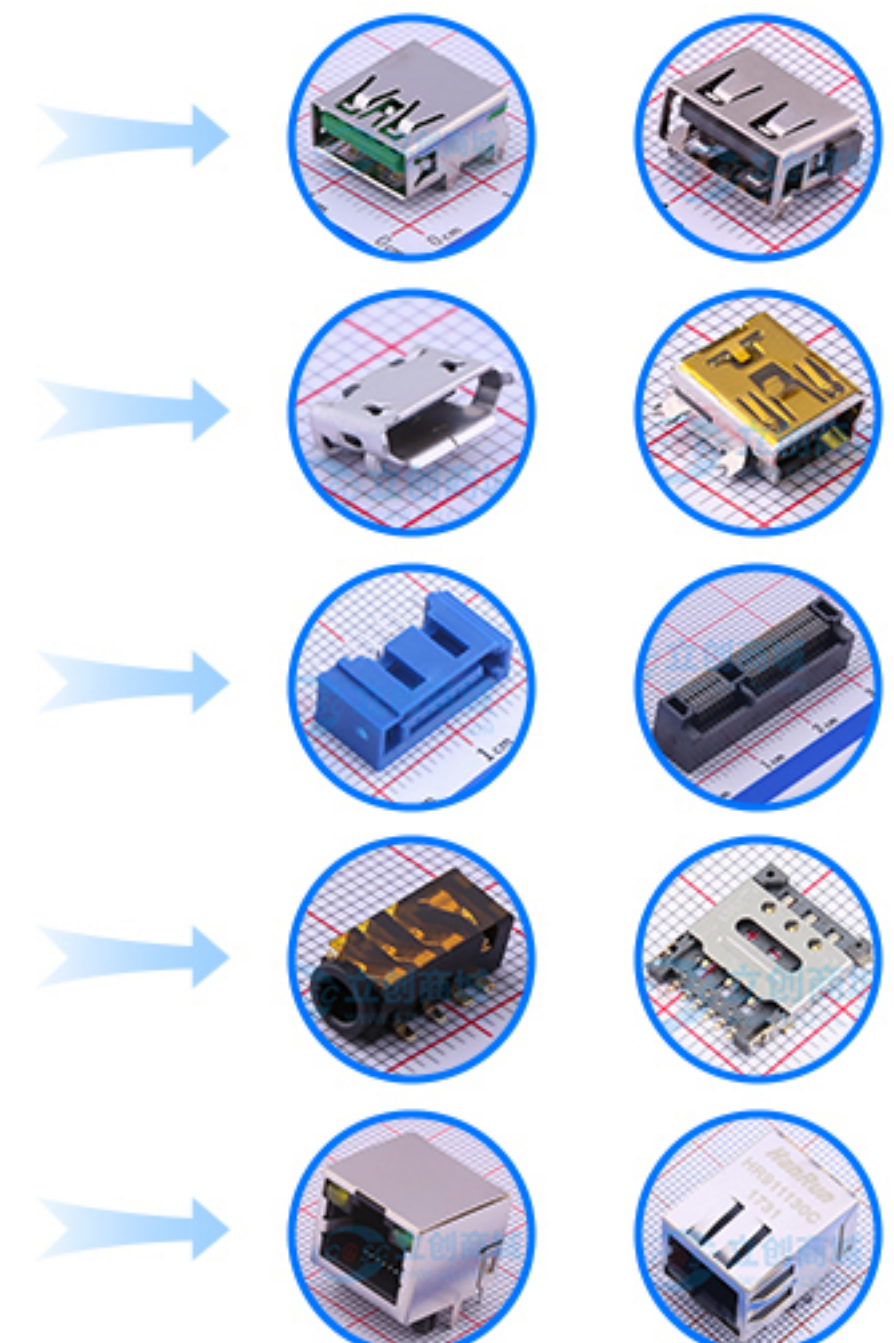


Abundant high-speed interfaces for your bold innovation.

Numerous expansion interfaces to be defined, 100/1000 Ethernet, USB2.0/3.0,
MINI PCIE, SATA, GPS, headset, GPIO interface and more!

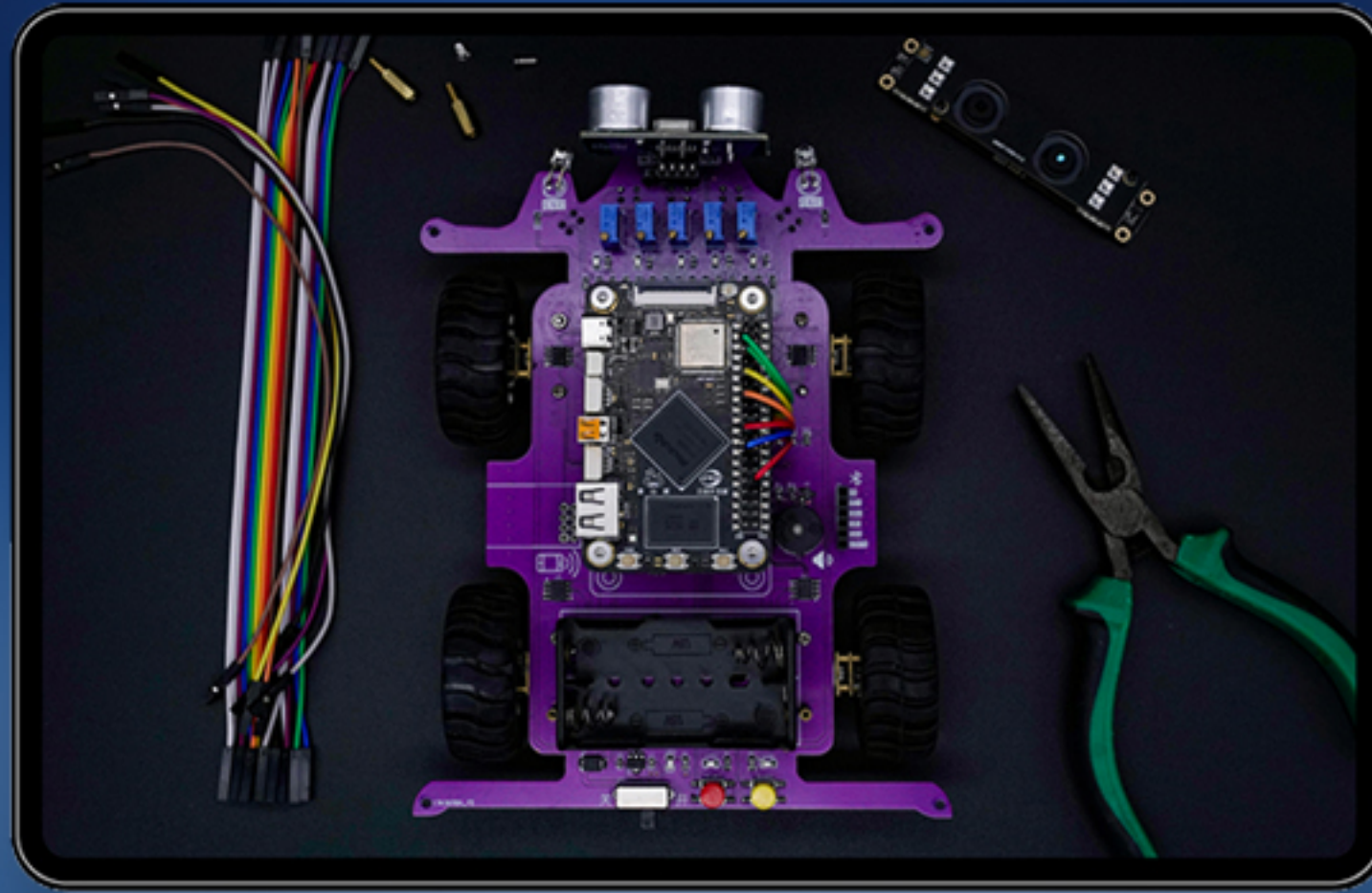


Reuse function	GPIO	Pin number		GPIO	Reuse function
5V	5V	1	2	5V	5V
5V	5V	3	4	5V	5V
PHY_TXD2	GPIO3_D6	5	6	GPIO_D7	PHY_TXD3
PHY_TXCLK	GPIO4_A0	7	8	GPIO4_A1	PHY_RXD2
PHY_RXD3	GPIO4_A2	9	10	GPIO4_A3	PHY_RXCLK
PHY_TXD0	GPIO4_A4	11	12	GPIO4_A5	PHY_TXD1
PHY_TXEN	GPIO4_A6	13	14	GPIO4_A7	PHY_RXD0
PHY_RXD1	GPIO4_B0	15	16	GPIO4_B1	PHY_RXDV
PHY_MDC	GPIO4_B6	17	18	GPIO4_B7	PHY_MDIO
PHY_MCLK	GPIO4_C1	19	20	GPIO0_C6	PHY_INT
PHY_RST	GPIO0_C7	21	22	GND	GND
USB3_DP	USB3_DP	23	24	USB3_DM	USB3_DM
GND	GND	25	26	SATA1_TXP	USB3_SSTXP
USB3_SSTXN	SATA1_TXN	27	28	GND	GND
USB3_SSRXP	SATA1_RXP	29	30	SATA1_RXN	USB3_SSRXN
GND	GND	31	32	HPL_OUT	HPL_OUT
HP_SNS	HP_SNS	33	34	HPR_OUT	HPR_OUT
GND	GND	35	36	GPIO0_C0	UART0_RX
UART0_TX	GPIO0_C1	37	38	GPIO0_A5	GPIO
GPIO	GPIO0_C5	39			

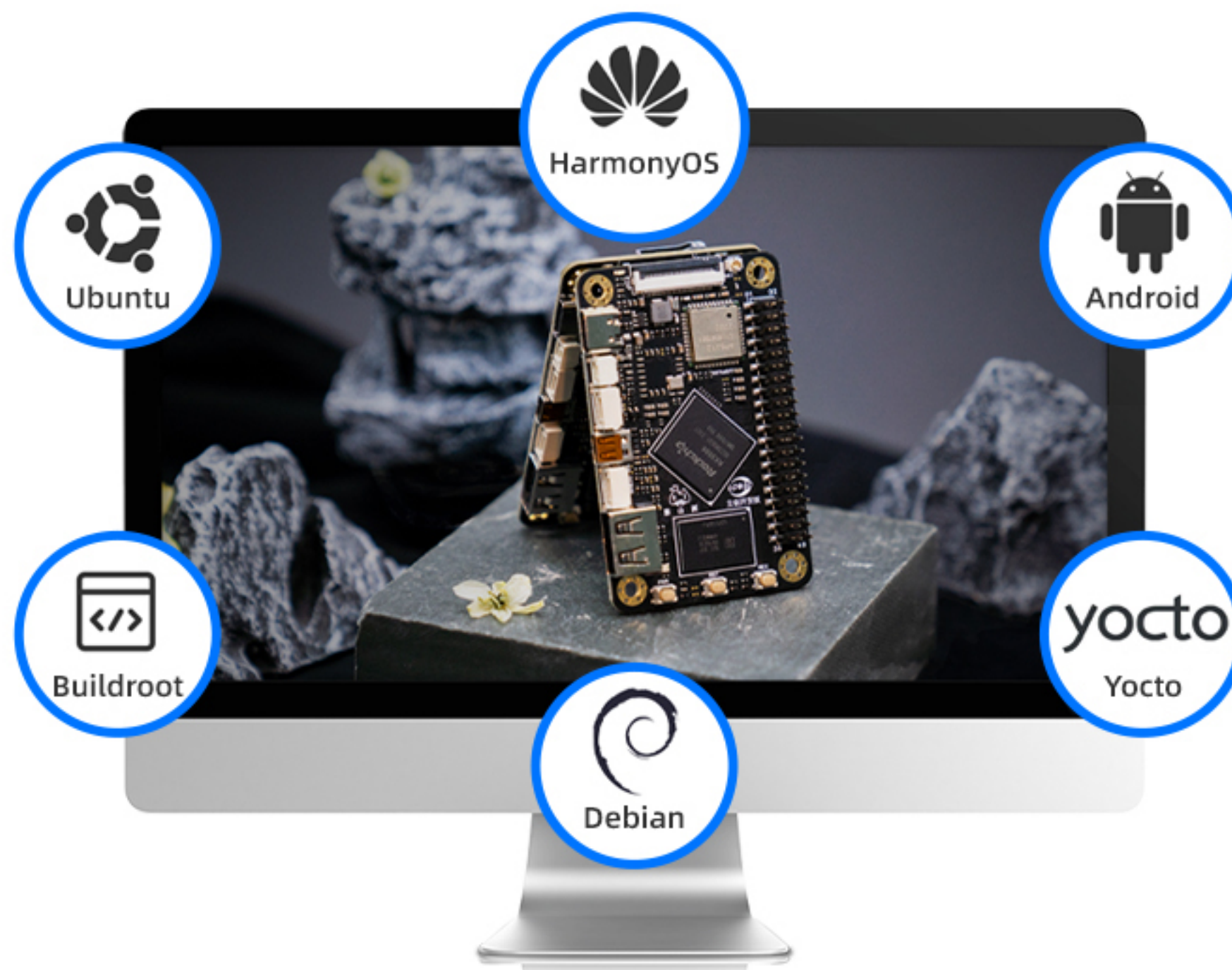


Project-based learning

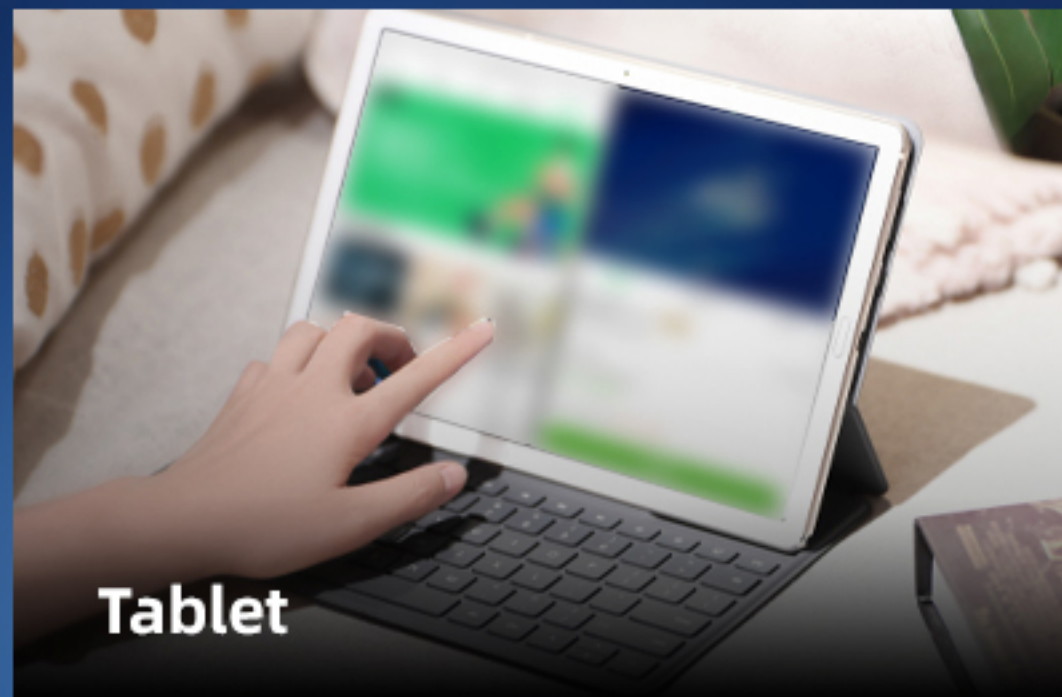
Combination of hardware and software, through personal participation in the demand analysis, hardware design, programming, 3D shell design. You can experience the whole process of the project, to master the project-style development. Solve the difficult problem of project implementation, so your every idea can turn to reality.



Supports multiple operating systems



Wide range of application scenarios



Building an open source ecosystem together

Building an open source ecology together is our goal.

To this end we strive to maximize the cost-effectiveness and value.

At the same time, we fully open SDK, schematic, PCB and other hardware and software information.

Provide communication platforms, free training camps, developer support programs, etc.

so that you can give full play to your talent.

We believe that freedom and customization is the core of the open source ecosystem.

Taishan Dev board is not just a product of the LCSC, it is the result of our joint efforts.

We expect to stimulate more creativity and ideas and are eager to
work with like-minded partners to explore the infinite possibilities.

LCSC Taishan is waiting for you to join us!



Product Showcase

