
ASUS TINKER BOARD

DREAM, INVENT, INSPIRE

The 1st ARM-based Motherboard from ASUS

What's ARM?

ARM(Advanced RISC Machine) is a company develops the CPU with RISC(reduced instruction set computing) architectures. Compared with X86 processor, ARM processor has below benefits due to its simple instruction architecture.

- Lower power consumption
- Fewer heat generation
- Smaller processor package size (larger space for key function design)

Our advantages in this field?

Not like the other MB makers, ASUS has rich product lines, including smart phone and tablets developed by ARM processor. The accumulated experience offers us the confidents to create this product, and make it to the best in this industry.

Designing Concept

- For EDUCATION

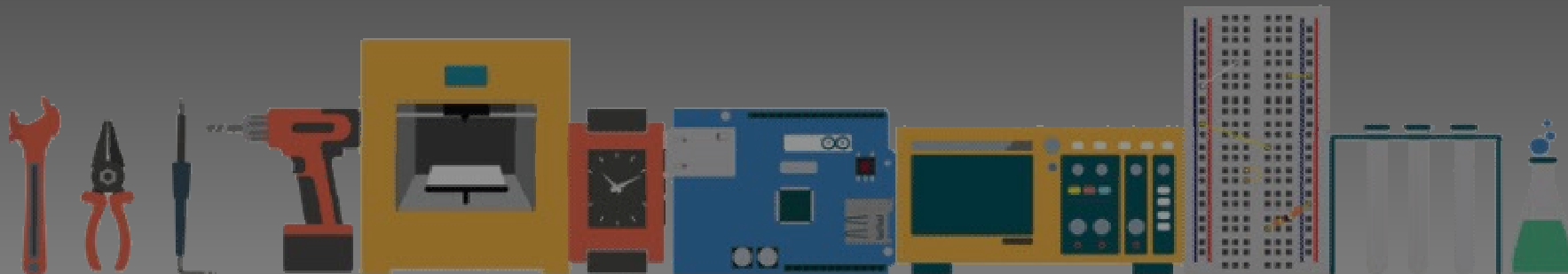
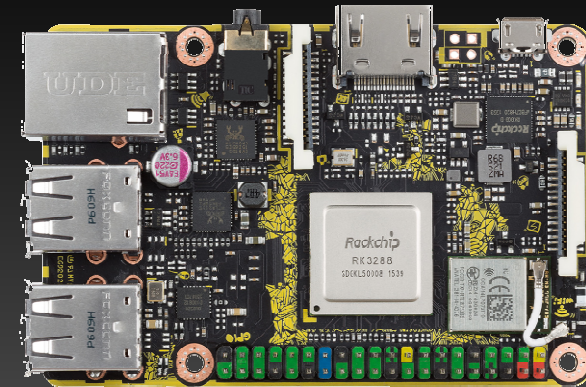
- Electronics learning
- Programming/coding study

- For MAKER

- A powerful board that highly compatible with current solution and peripherals available in the market

- For IoT/Industrial application

- Low power consumption with high performance platform



Usage Scenarios



LAPTOP



PHONE



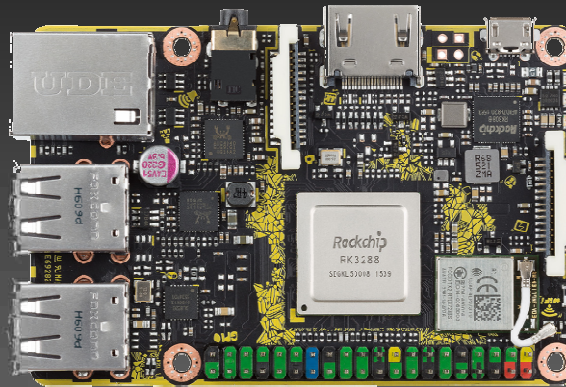
PORTABLE GAME
CONSOLE



TIME-LAPSE
CAMERA



Mini PC



ARCADE GAME

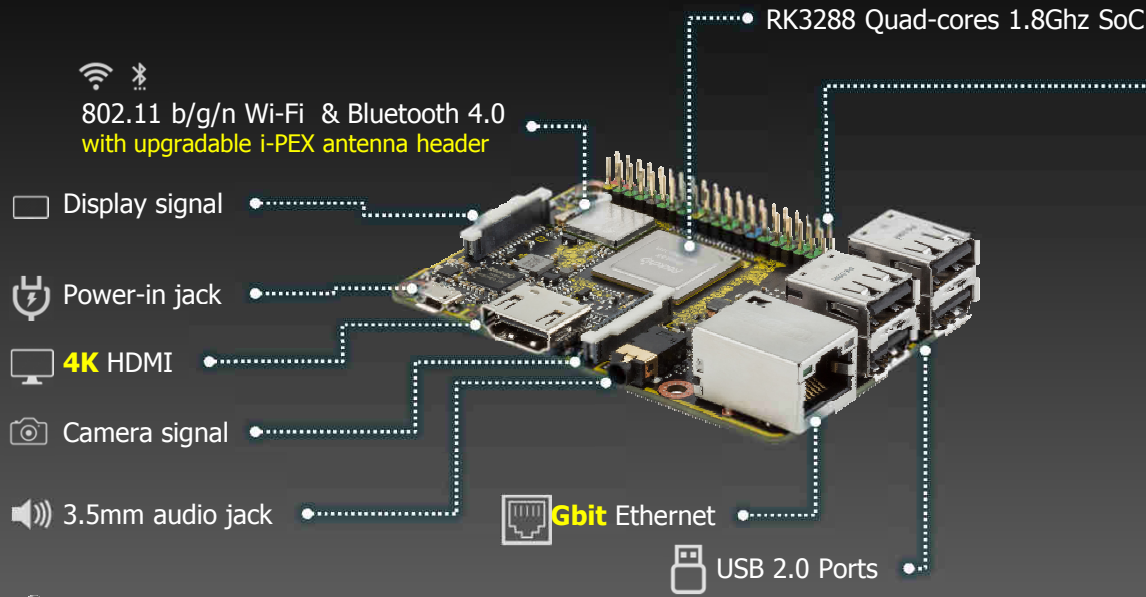


RC PRODCUTS



DIGITAL
WALL CALENDAR

Product Overview

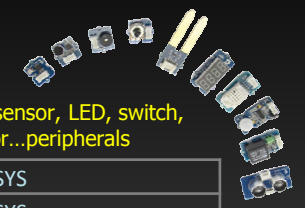


Other Package Contents:

- Color Box
- Quick start guide
- ESD shielding bag

40-pins GPIO header

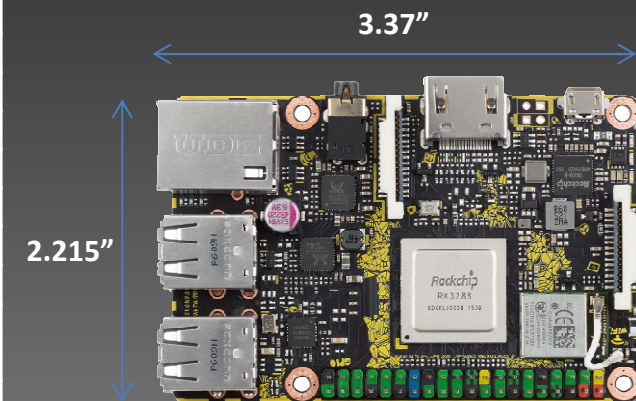
Reserve for sensor, LED, switch, button, motor...peripherals






VCC33_IO	1	2	VCC_SYS
GP8A4_I2C1_SDA	3	4	VCC_SYS
GP8A5_I2C1_SCL	5	6	GND
GP0C1_CLKOUT	7	8	GP5B1_UART1TX
GND	9	10	GP5B0_UART1RX
GP5B4_SPIOCLK_UART4CTSN	11	12	GP6A0_PCM_CLK
GP5B6_SPIO_TXD_UART4TX	13	14	GND
GP5B7_SPIO_RXD_UART4RX	15	16	GP5B2_UART1CTSN
VCC33_IO	17	18	GP5B3_UART1RTSN
GP8B1_SPI2TXD	19	20	GND
GP8B0_SPI2RXD	21	22	GP5C3
GP8A6_SPI2CLK	23	24	GP8A7_SPI2CSN0
GND	25	26	GP8A3_SPI2CSN1
GP7C1_I2C4_SDA	27	28	GP7C2_I2C4_SCL
GP5B5_SPIOCSN0_UART4RTSN	29	30	GND
GP5C0_SPIOCSN1	31	32	GP7C7_UART2TX_PWM3
GP7C6_UART2RX_PWM2	33	34	GND
GP6A1_PCM_FS	35	36	GP7A7_UART3RX
GP7B0_UART3TX	37	38	GP6A3_PCM_SDI
GND	39	40	GP6A4_PCM_SDO

Product Specification

	TINKER BOARD/1GB	TINKER BOARD/2GB
Processor	Rockchip RK3288 Cortex-A17 Quad-core 1.8GHz	
GPU	ARM Mali-T764 GPU supports Support OpenGL ES1.1/2.0/3.0, OpenVG1.1, OpenCL, DirectX11	
Display	1 x HDMI supports up to 4K display 1 x 15-pin MIPI DSI supports up to 1080P	
Memory Size	LPDDR3 1GB	LPDDR3 2GB
Storage	Micro SD(TF) card slot	
Connectivity	1 x GB LAN 1 x wireless 802.11 b/g/n & BT 4.0	
Audio	RTL HD Codec with 1 x 3.5mm audio jack	
USB	4 x USB 2.0 ports	
Internal Headers	1 x 15-pin MIPI CSI slot for camera 1 x 40-pin headers for I2C/SPI/PWM/I2S/UART/SPDIF module extension	
Power Connector	Micro USB	
OS Support	Linux	
Dimension	3.37" x 2.125"	



SPEC Comparison

	 ASUS Tinker Board	Raspberry Pi 3 Model B
Core Processor (SoC)	Rockchip RK3288 Quad-Core 1.8Ghz* 	Broadcom BCM2837 Quad-Core 1.2Ghz* 
RAM	1 GB/2GB	1 GB RAM
Display	HDMI with 4K resolution	HDMI with HD resolution
NIC	Gb LAN	100M LAN
Wi-Fi	Yes, Wi-Fi 4.0	Yes, Wi-Fi 4.0
Software Compatibility	Linux – Debian	Linux – Debian

*The selected processor on Tinker Board is much faster than RPi3, for the quick understanding, you could image our product is the 2nd gen ZENPHONE, and RPi3 is the 1st gen ZENPHONE.

Thank You!