

TC-RK3566 Features

TC-RK3566 Highlights 1: High performance CPU & GPU

- New ARM architecture and advanced process brings higher performance and power efficiency

TC-RK3566 Highlights 2: New generation (3rd Gen) Rockchip ISP

- up to 8M@30fps processing power, supporting time-sharing and multiplexing dual camera
- Powerful HDR function makes the image clear under backlight or strong light conditions
- Support dual channel simultaneous zooming output
- Noise cancellation function, so that the image under low light conditions is also delicate
- Support defogging function, can see clearly even in haze
- Support lateral correction of LDCH to remove the distortion caused by the sensor lens

TC-RK3566 Highlight 3: Powerful multimedia decode/encode capability

- Support 4K@60 H.264/H.265/VP9 and other formats HD decoding
- Support simultaneous decoding of multiple video sources
- Support HDR10, excellent performance in color and dynamic range
- Support image post-processing, deinterleaving, denoising, color enhancement, resolution increase
- Support 1080p 60fps H.264 and H.265 format encoding
- Support dynamic bit rate, frame rate, resolution adjustment

TC-RK3566 Highlight 4: Integrated efficient RKNN AI processing unit

- NPU with 0.8TOPs computing power
- Embedded neural network hardware accelerator, support INT8, INT16, FP16 efficient operation
- NPU hardware natively supports technologies such as pre-processing merging, channel quantization, and zero skipping
- Support lossless compression of INT8, INT16, FP16 neural network parameters
- The NPU core supports ordinary convolution, depth separable convolution, deconvolution, hole convolution, fully connected layer and pooling layer
- NPU internal blocks include multiply-add operations, activation, LUT and precision conversion units, and support custom layer construction
- Support one-click model conversion, support Caffe/TensorFlow/TF-Lite/ONNX/PyTorch/Keras/Darknet mainstream framework models

Deeply cultivating core industries for many years

START FROM “ THINK CORE ”

FOCUS ON ELECTRONIC COMPONENT

FOCUS ON VARIOUS ARM CORE PLATFORM OFF-THE-SHELF SUPPLIERS FOR MANY YEARS.



TC - RK3566

PROVIDE RELIABLE QUALITY AND STABLE SUPPLY

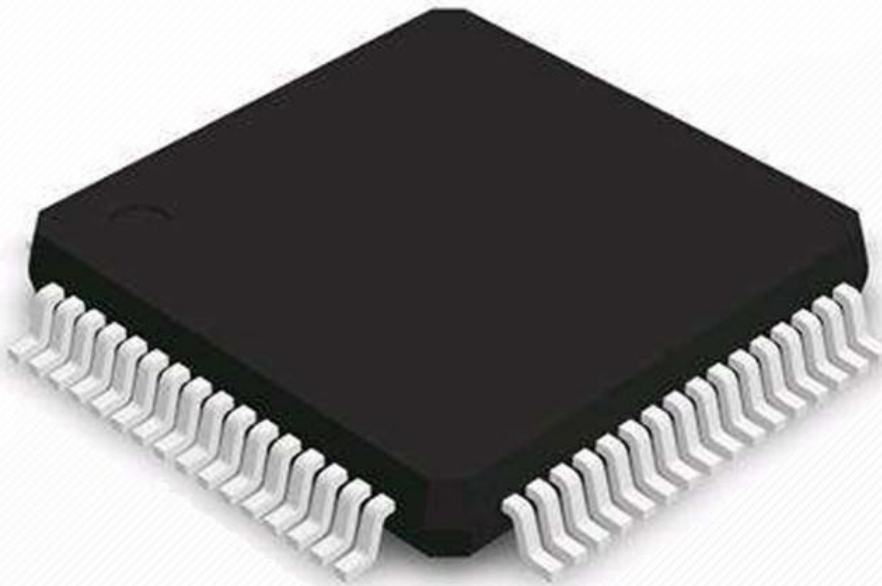
INSIST ON SELLING ONLY BRAND NEW GENUINE CORE BOARDS

EACH CHIP COMES FROM THE ORIGINAL CHANNEL

THE INNER
CORE IS STRONG



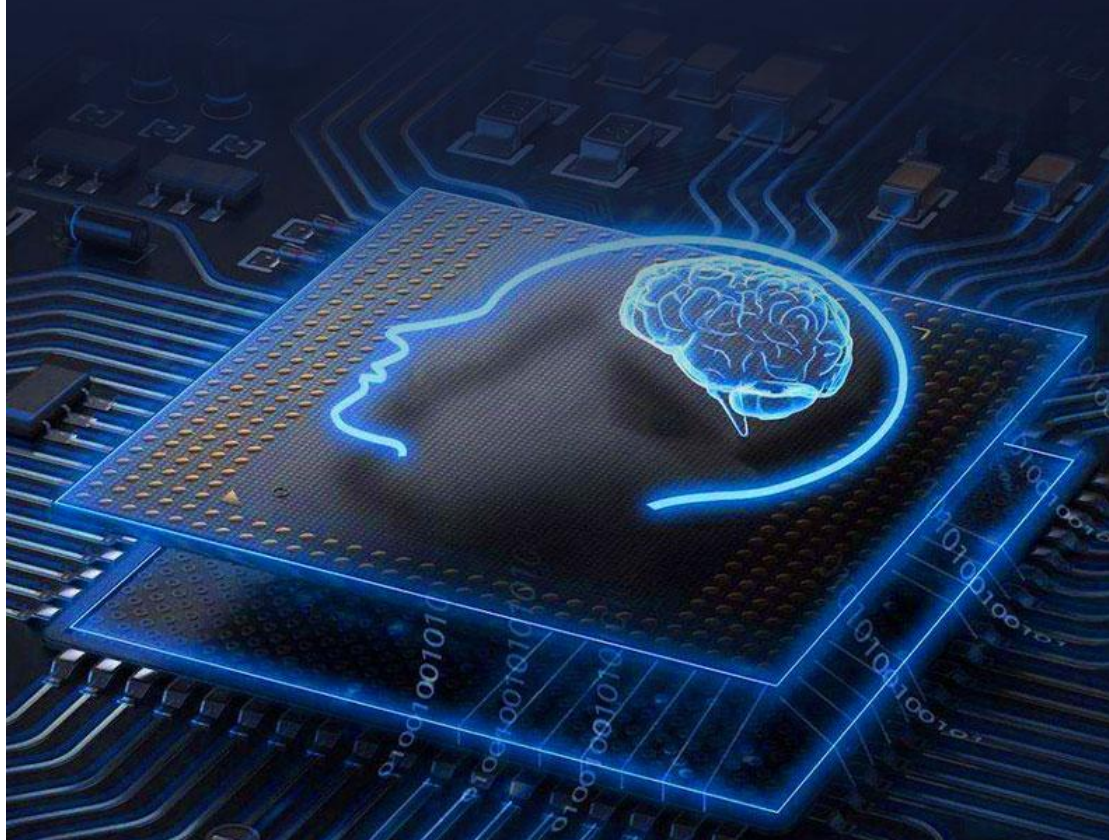
SMALL SIZE, ONLY 69.5*55MM



STABLE AND RELIABLE WORK FOR MASS PRODUCTION



**USE RK809 POWER MANAGEMENT DESIGN
TO ENSURE STABLE AND RELIABLE WORK.**





INTEGRATED CO-PROCESSORS



CPU/GPU

Quad-core 64-bit Cortex-A55, 22nm lithography process, frequency up to 1.8GHz.

ARM G52 2EE GPU; Supports OpenGL ES 1.1/2.0/3.2. OpenCL 2.0. Vulkan 1.1

NPU

Integrated RKNN NPU AI accelerator, 0.8Tops@INT8, supports one-click switching of Caffe/TensorFlow/TFLite/ONNX/PyTorch/Keras/Darknet

VPU

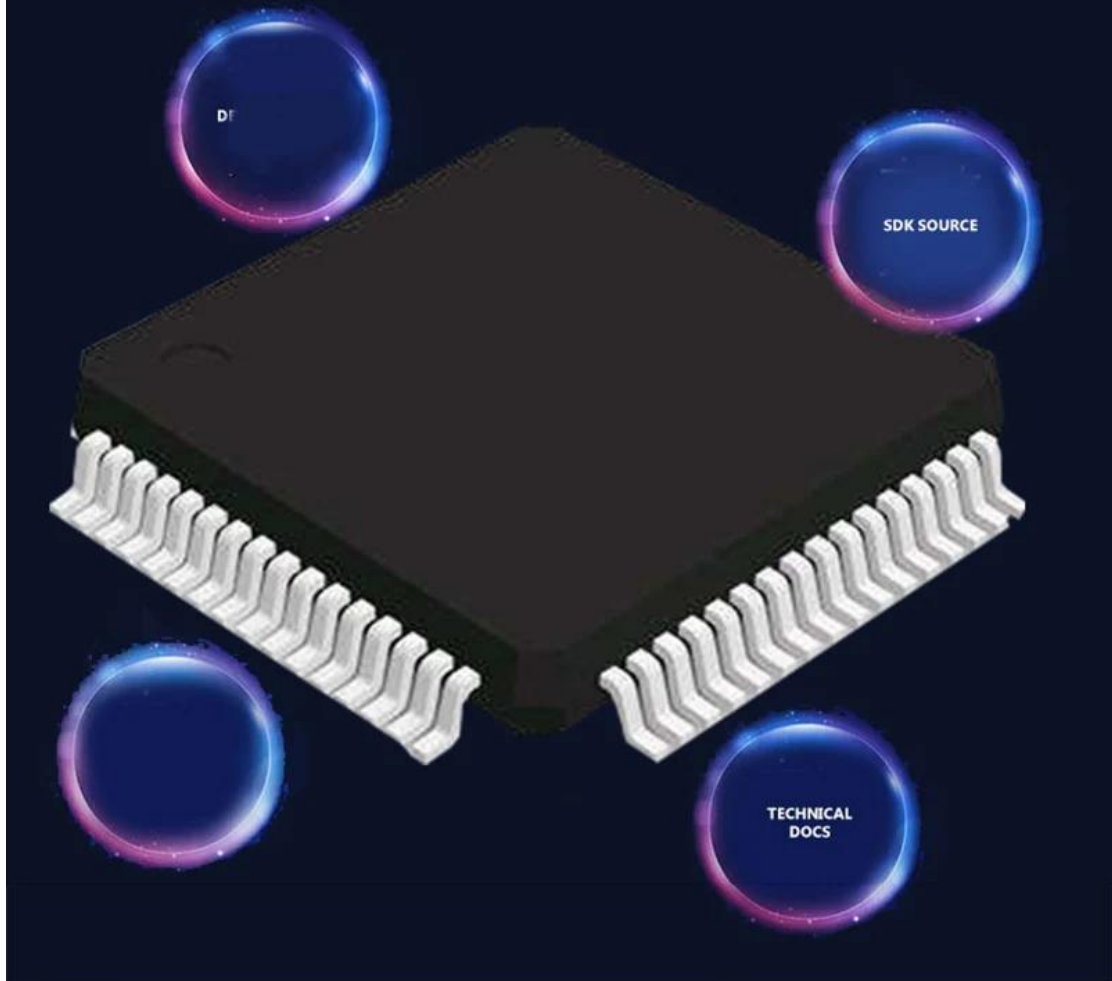
4K@60fps H.265/H.264/VP9 video decoding

1080P 60fps H.265/H.264 video encoding



ABUNDANT RESOURCES FOR CUSTOMIZATION

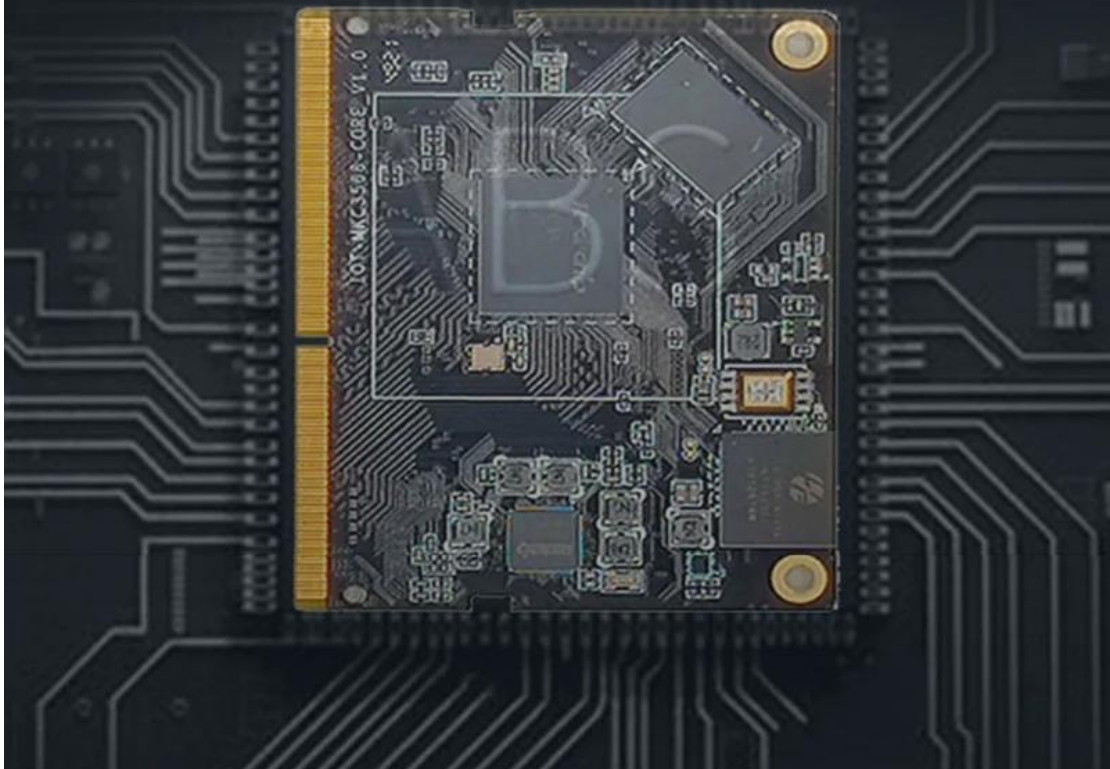
OPEN UP A NEW FREE DEVELOPMENT SPACE FOR CORE USERS





NOT ONLY SMOOTH, BUT FAST EXPERIENCE

BENEFIT FROM ADVANCED MICROCONTROLLER ARCHITECTURE
DESIGN STRENGTH AND WORLD-CLASS MANUFACTURING PROCESS



Product parameters

SOC	RockChip RK3566
CPU	Quad-Core 64 bit Cortex-A55 processor , 22nm manufacturing process , up to 1.8GHz
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
NPU	0.8Tops@INT8 integrated high-performance AI accelerator RKNN NPU Supports one-click switching of Caffe/TensorFlow/TFLite/ONNX/PyTorch/Keras/Darknet
VPU	Supports 4K 60fps H.265/H.264/VP9 video decoding Supports 1080P 100fps H.265/H.264 video encoding
RAM	2GB/4GB/8GB DDR4 32Bit , up to 1600MHz , supports all-data-link ECC
Storage	16GB/32GB/64GB/128GB eMMC Supports SATA 3.0 x 1 Supports TF-Card Slot x1 (Expand with TF card)
Ethernet	Supports Gigabit Ethernet (RJ45.1000 M bps)
PCIe	SupportsPCIe2.0
WIFI	Supports Mini PCIe Expand with 4G LTE Supports WiFi ,Supports BT5.0
Interface	1 × HDMI 2.0 , Supports 4K@60fps output 1 × MIPI DSI , Supports 1920*1080@60fps output 1 × LVDS DSI , Supports 1920*1080@60fps output 1 × eDP1.3 , Supports 2560x1600@60fps output
Audio	1 × HDMI audio output 1 × Speaker output 1 ×Earphone output 1 × Microphone onboard audio input
Camera	Supports MIPI-CSI camera interface
Expand	USB3.0、 USB 2.0、 SDMMC、 SPI、 UART、 I2C、 I2S、 SDIO、 PWM、 ADC、 GPIO
OS	Supports Android 11.0 , Linux , Ubuntu , Debian
Size	69.5 mm × 55mm
Type	Gold finger (SODIMM 260P) , 0.5mm space , Immersion Gold technology
Working temperature	-10°C ~ 60°C
Storage temperature	-20°C ~ 70°C
Storage humidity	10%~ 80 %

Applications

