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 4KP60 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

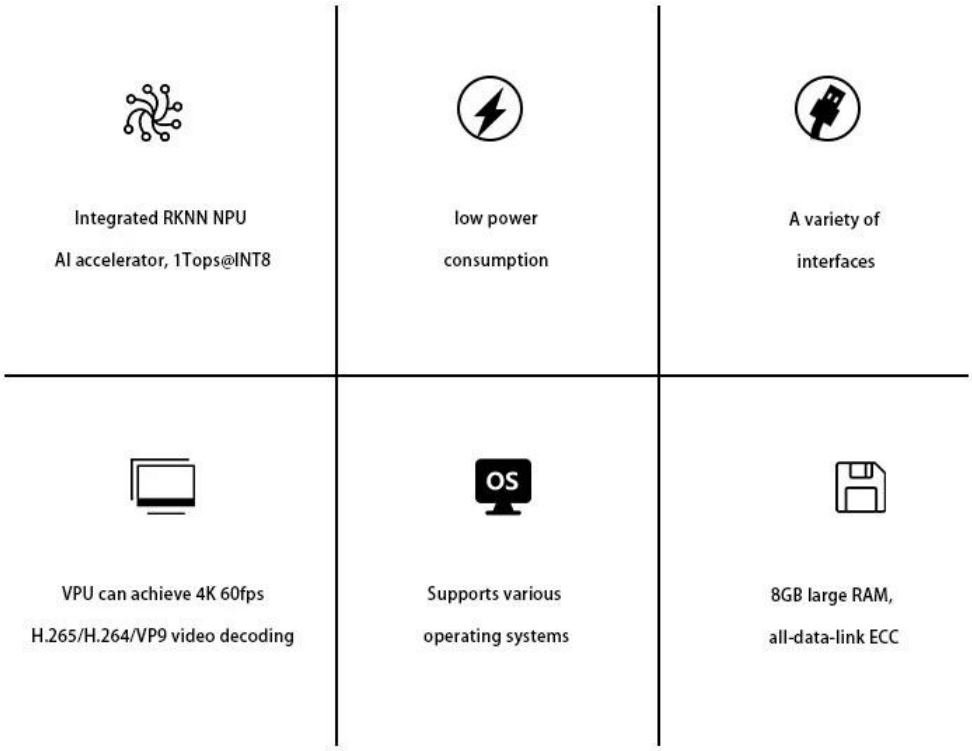
TC-RK3566 Highlight 4: Integrated efficient RKNN AI processing unit

- 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

RK3566

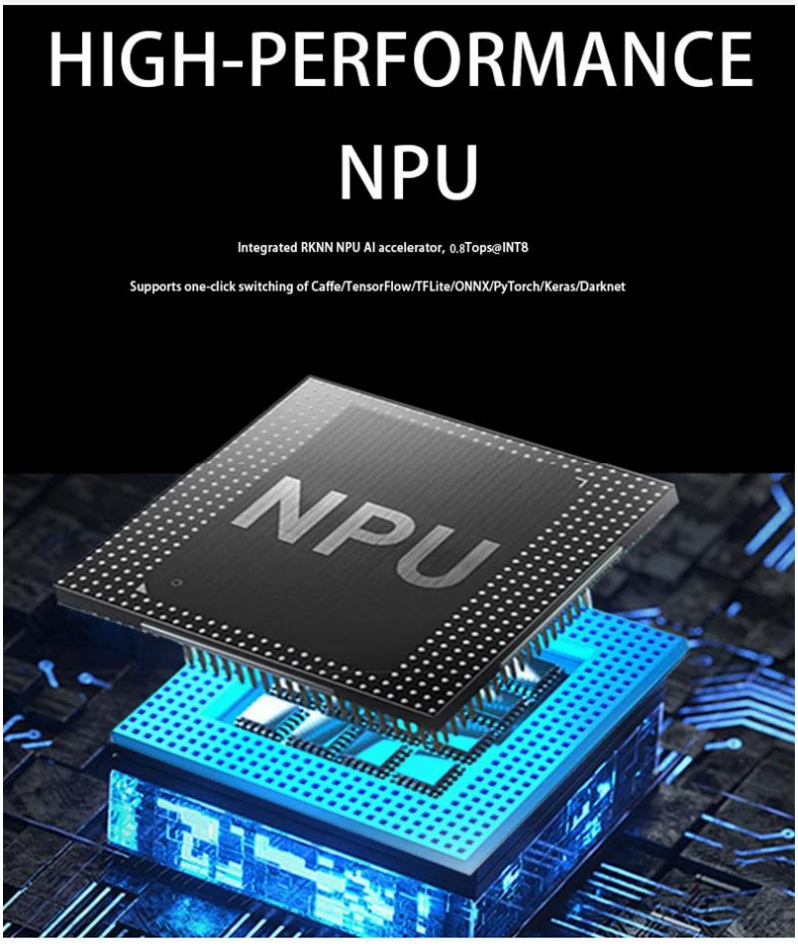
Powerful smart chip

ROCKCHIP RK3566 COTEX-A55 QUAD CORE 64 BIT


Integrated RKNN NPU
AI accelerator, 1Tops@INT8
low power
consumption
A variety of
interfaces
VPU can achieve 4K 60fps
H.265/H.264/VP9 video decoding
OS
Supports various
operating systems
8GB large RAM,
all-data-link ECC

RK3566 QUAD-CORE
64-BIT PROCESSOR
RK3566 Quad-core 64-bit Cortex-A55 processor has frequency up to 1.8GHz.
With 22nm lithography process, it features low power consumption and high performance.
Rockchip
RK3566

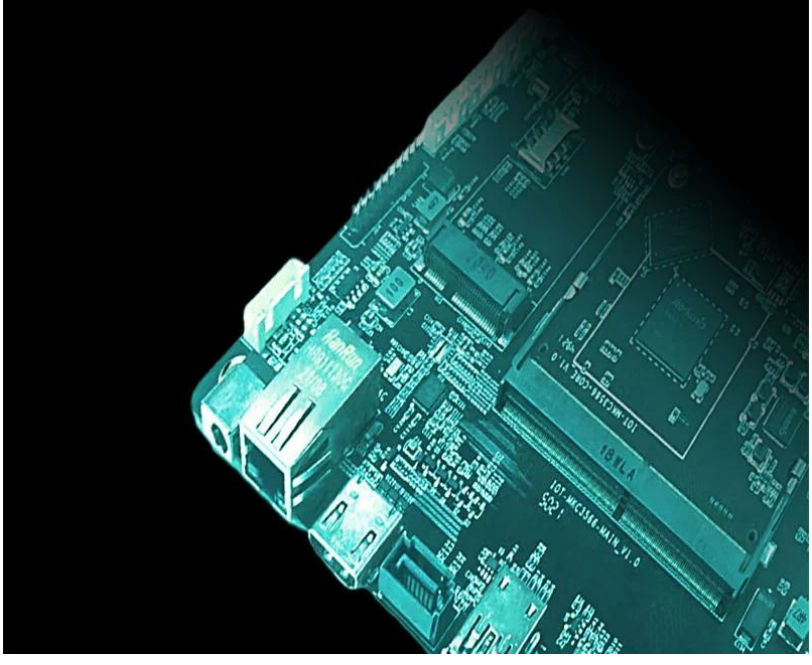
Small and lightweight
Ultra-thin design, motherboard thickness of 13mm, can be applied to a variety of equipment with ultra-thin needs
Thin•Light•Simple


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

SATA 3.0 HIGH-SPEED INTERFACE

Expand the standard 7-core data cable interface of the ultra-large capacity onboard standard SATA hard disk, and support the expansion of the SATA hard disk,

It has the advantages of high-speed read and write and mass storage.



Applications

Smart home device

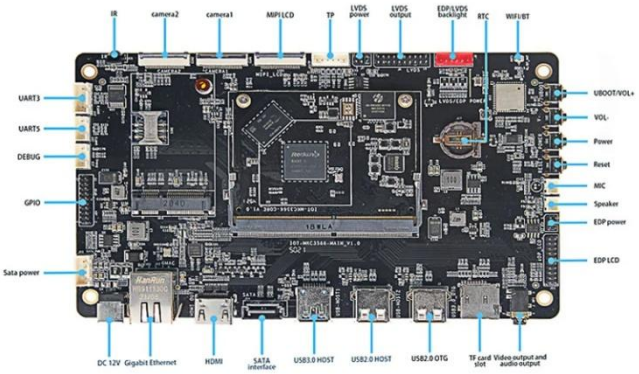
Healthcare kiosk

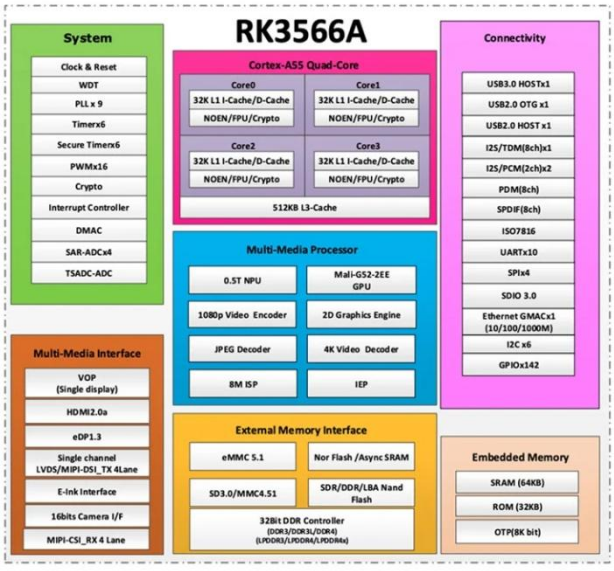
Fitness equipment

Vending machine

To form high-performance mainboard

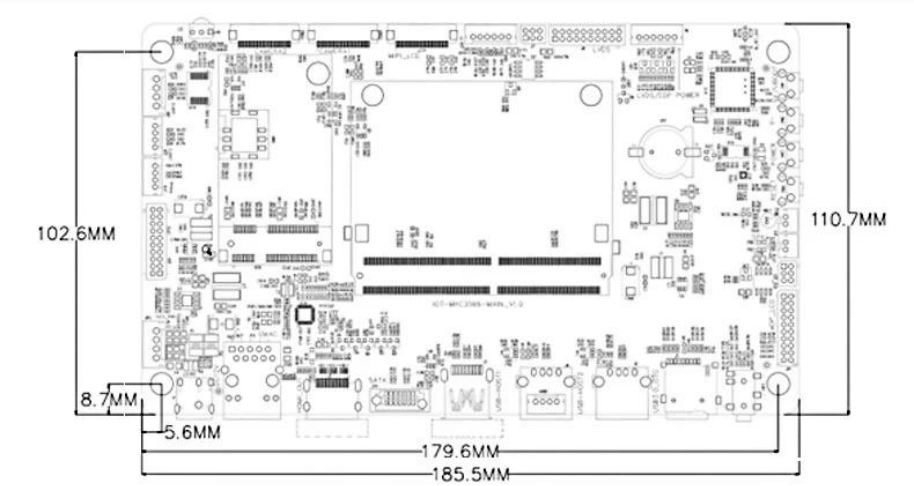
The core board with SODIMM 260P interface can be combined with a backplane to form a complete high-performanceIndustrial mainboard delivering more powerful performance, which can be directly applied to various smart products to accelerate the product development process.





Abundant resources for customization

A complete SDK, development documents, examples, technology documents, tutorials and other resources are provided for users to make further customization.

Supports various operating systems

It supports Android, Ubuntu Buildroot+QT, OpenWRT, Debian and other operating systems, stable and reliable.