EC-R3566PC

Quad-Core 64-bit Embedded Computer

V1.2 2024-9-30

T-CHIP INTELLIGENCE TECHNOLOGY

Product features

RK3566 quad-core 64-bit processor

RK3566 quad-core 64-bit Cortex-A55 processor has frequency up to 1.8GHz – the efficiency is greatly improved. With 22nm lithography process, it features low power consumption and high performance.

8GB large RAM

It supports up to 8GB RAM with up to 32Bit width, making data safer and more reliable, and meeting the requirements of running large-memory products application.

Integrated co-processors

It is integrated with dual-core GPU, high-performance VPU and high-efficiency NPU. The GPU supports OpenGL ES3.2/2.0/1.1, Vulkan1.1. The VPU can achieve 4K@60fps video decoding and 1080P@60fps video encoding. NPU computing power of 1TOPS@INT8, supporting one click switching of mainstream architecture models such as Caffe/TensorFlow.

M.2 interface to expand

The onboard M.2 PCIe2.1 interface can be connected with NVMe SSD, owning the advantages of high-speed reading and writing and large storage.

Product features

High-quality metal enclosure

Equipped with high-quality metal shell, efficient heat dissipation, dustproof and shockproof, the main unit size is 93.5mm× 82mm×20mm, small and portable, and can be flexibly embedded in various smart devices.

Various systems and boot ways supported

It supports to upgrade to Android, Ubuntu, Buildroot+QT, Station OS and other systems, and supports to boot the system via TF card, U disk, EMMC, etc. Diverse supporting systems make entertainment, work, programming learning, creative development all easy.

A variety of interfaces

With HDMI2.0, Type-C, USB3.0, USB2.0, TF Card, 3.5mm Audio jack and other interfaces, it can be directly used for external device control and expansion.

Wide range of application scenarios

This computer can be widely used in smart NVRs, cloud terminals, IoT gateways, industrial control, edge computing, face recognition gates, NASs, etc.

Specifications

Specifications		
Basic Specifications	SOC	Rockchip RK3566
	CPU	Quad-core 64-bit Cortex-A55, 22nm lithography process, frequency 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	1Tops@INT8, integrated high-performance AI accelerator RKNN NPU Supports one-click switching of Caffe/TensorFlow/TFLite/ONNX/PyTorch/Keras/Darknet
	VPU	Video decoding: 4K@60fps H.265/H.264/VP9, 1080P@60fps VC-1, VP8, MPEG-1/2/4 Video encoding: 1080P@100fps H.265, 1080P@60fps H.264
	ISP	Support 8M ISP
	RAM	2GB/4GB/8GB LPDDR4, 32Bit
	Storage	32GB/64GB/128GB eMMC
	Storage Expansion	1 × TF Card, 1 × M.2 PCIe2.1(Support 2242 NVMe SSD)
	OS	Android, Ubuntu, Buildroot+QT, OpenWRT, Debian, Station OS
	Power	DC 5V/2A(Power supply through Type-C port, voltage tolerance ± 5%)
	Power consumption	Normal: 1.5W(5V/300mA), Min: 0.02W(5V/4mA), Max: 5W(5V/1000mA)
	Weight	≈215g
	Size	93.5mm × 82mm × 20mm
	Environment	Operating Temperature: -20℃ ~ 60℃, Storage Temperature: -20℃ ~ 70℃, Storage Humidity: 10% ~ 90%RH(non-condensing)
Interface Specifications	Internet	Ethernet: 1 × RJ45(1000Mbps) WiFi: Support 2.4GHz/5GHz dual-band WiFi, 802.11 a/b/g/n/ac protocol, support BT5.0
	Video output	1 × HDMI2.0(4K@60Hz)
	Audio output	1 × HDMI audio output 1 × 3.5mm Audio jack(Supports MIC recording, American standard CTIA)
	USB	1 × USB3.0(Max: 1000mA), 1 × USB2.0(Max: 500mA), 1 × Type-C(USB3.0 OTG/DC IN 5V/2A)

Interface description

HDMI2.0
4K@60Hz

3.5mm Audio jack
Support Mic recording, CTIA

Type-C
USB3.0 OTG/
DC IN 5V/2A

Gigabit Ethernet
RJ45/1000Mbps

Power button

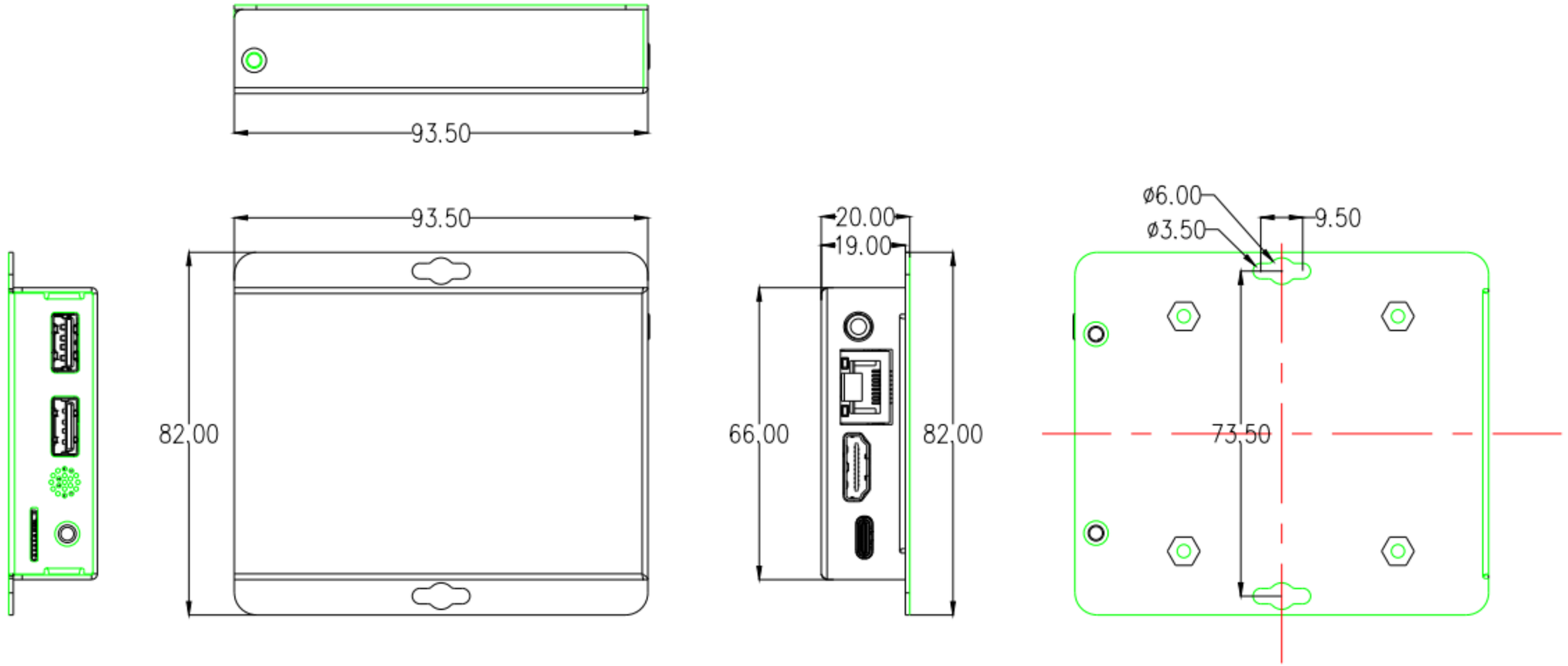
WiFi antenna

USB3.0
Max: 1000mA

USB2.0
Max: 500mA

TF Card

Dimension



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