T-CHIP TECHNOLOGY

Station M2

Geek PC

V1.0

T-CHIP INTELLIGENCE TECHNOLOGY CO.,LTD.

www.t-firefly.com

Update history

Version	Date	Details
V1.0	2021-6-25	Original version

Directory

1. Product Overview

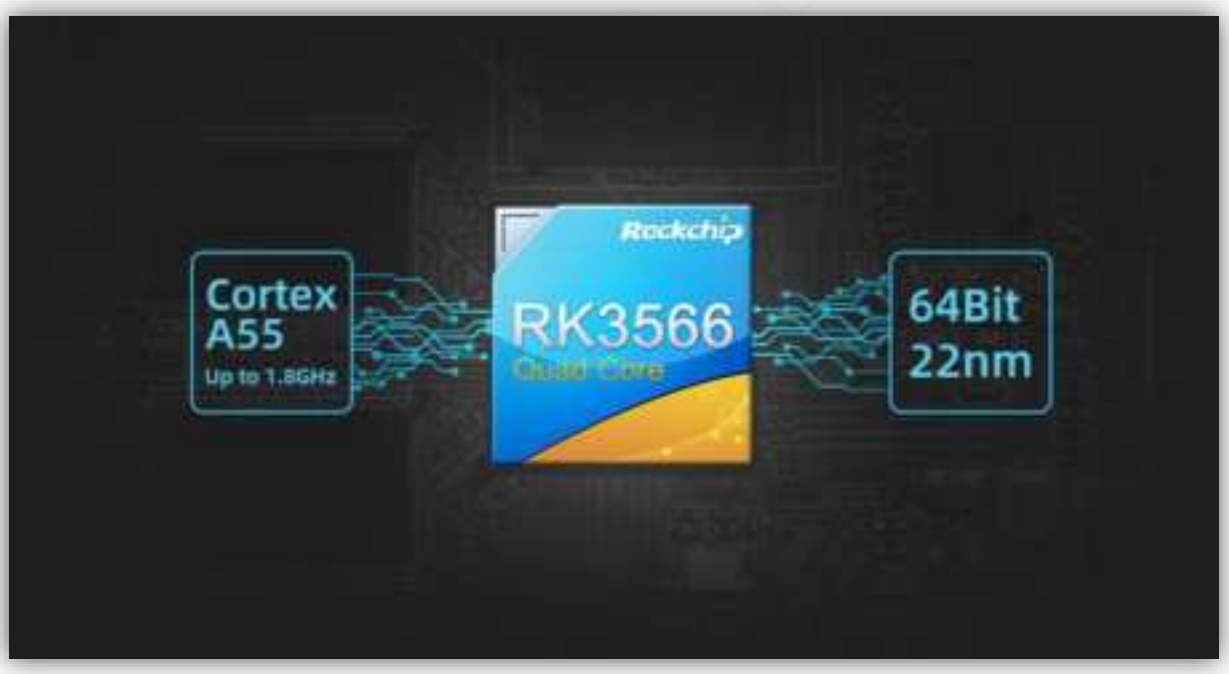
Thin and mini, M2 supports 8GB large RAM. M.2 interface enables expansion with large hard drive. Various systems and boot ways are supported — geek fun is endless. You can remotely control the device through Station app/Wechat mini program, which makes you enjoy playing anywhere.

Mini Geek PC

The size is only 93.8 x 65 x 15.8mm — very thin and in credit card size. You can put it into your pocket whether you are on business or on travel. It is a mini geek PC that can accompany you by your side.

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, all-data-link ECC

It supports up to 8GB RAM with up to 32Bit width, and supports all-data-link ECC, making data safer and more reliable. The large RAM fits the needs of smoothly running apps with large amount of data and high speed requirements.

Integrated co-processors

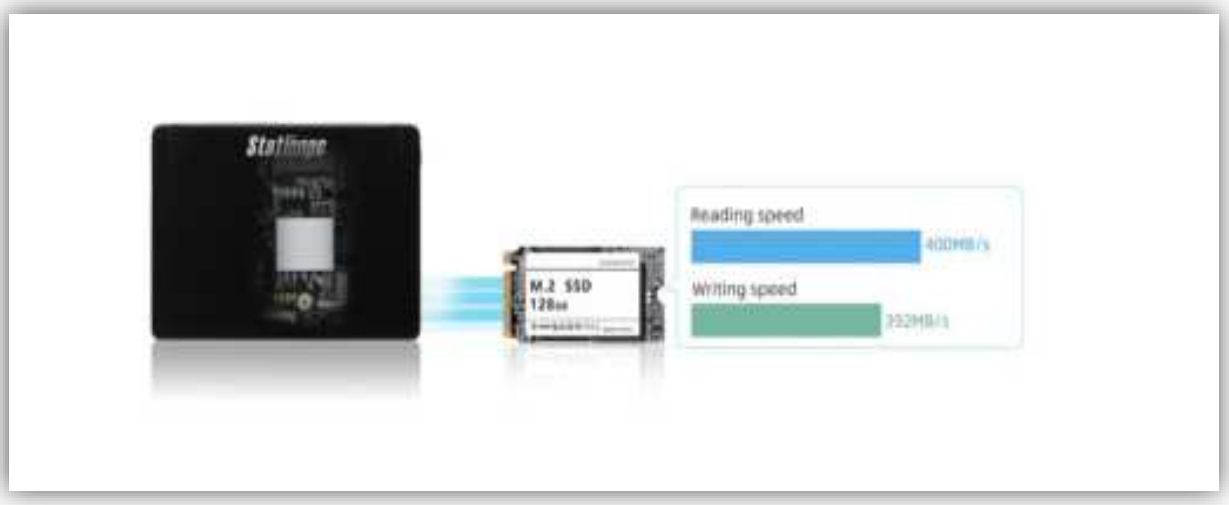
It is integrated with dual-core GPU, high-performance VPU and high-efficiency NPU. The GPU supports OpenGL ES3.2/2.0/1.1, Vulkan1.1. The VPU can achieve 4K 60fps H.265/H.264/VP9 video decoding and 1080P 100fps H.265/ H.264 video encoding. The NPU supports one-click switching of mainstream frameworks like Caffe/TensorFlow.

4K HDR vision

The new video processing engine VPU can easily decode 4K 60fps H.265 / HEVC / VP9 / H.264 and 1080P 100fps H.265/H.264 videos, supports 3840x2160@60Hz ultra-HD output. Powerful hardware decoding capability makes each frame clear and vibrant.

M.2 interface to expand

The onboard M.2 PCIe2.0 interface can be connected with NVMe SSD, owning the advantages of high-speed reading and writing and large storage.



Excellent heat dissipation

Toothed aluminium alloy case in matte black under high-precision CNC machining and with good air flow design makes excellent heat dissipation, even without fans.

Configured with Geek system

Station OS (Firefly Geek System) brings you living room playing experience. Just connect the TV or display at home to build a home entertainment center to enjoy movies and games with high-definition and big-screen viewing.

Various OS & boot ways

Android, Ubuntu, Buildroot+QT, Station OS and other operating systems are available. TF card, U disk, EMMC and more boot ways are supported. Various available systems make entertainment, office work, programming learning, creative development all easy and free.

Station application programs and forums

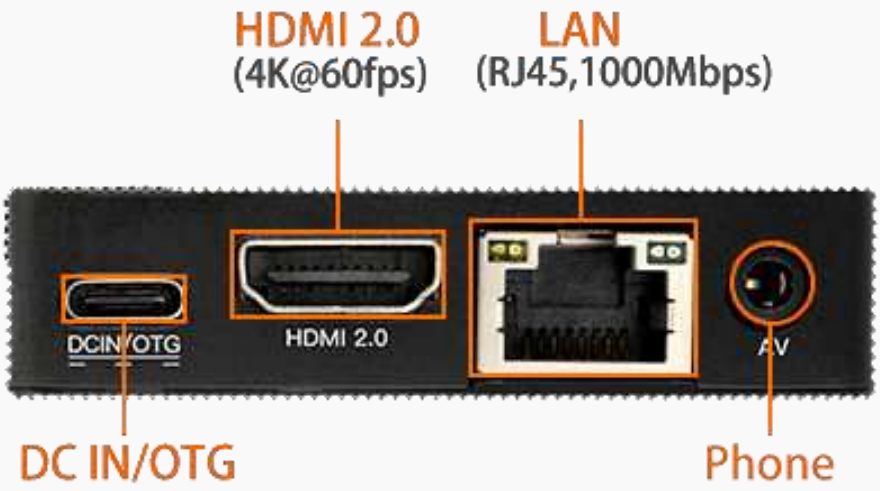
Station application programs, including WeChat mini program, app and website, through which you can play videos, remotely control, remotely download and so on, enable you to play the geek computer anywhere anytime. Besides, forums with tremendous creative ideas and fun are waiting for you.

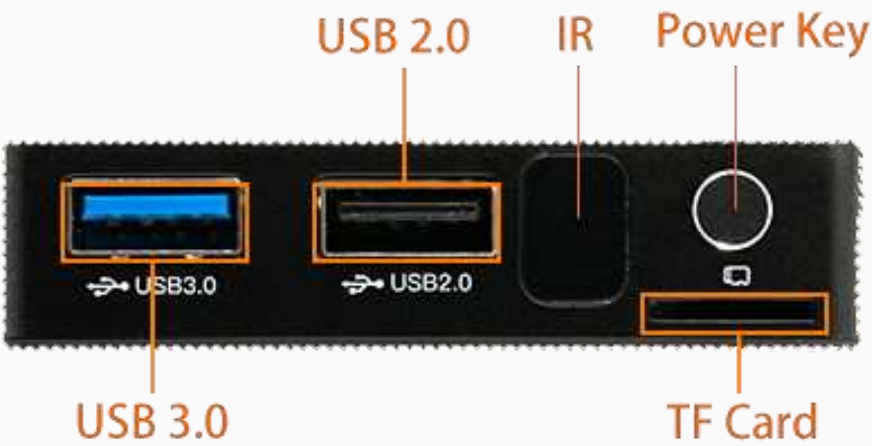
2. Specifications

Basic Specifications	
SOC	RockChip RK3566
CPU	Quad-core 64-bit Cortex-A55, 22nm lithography process, frequency up to 1.8GHz
GPU	ARM G52 2EE Supports 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 Supports 8M ISP
RAM	2GB / 4GB / 8GB LPDDR4 32Bit,supports all-data-link ECC
Storage	32GB / 64GB / 128GB eMMC Supports 2242 NVMe SSD (M.2 PCIe 2.0) TF-Card Slot x1 (Expand with TF card)
Hardware Features	
以太网	Supports Gigabit Ethernet (RJ45, 1000 Mbps)
WiFi	Supports dual-band WiFi (802.11 a/b/g/n/ac) Supports BT5.0
Display	1 × HDMI2.0. Supports 4K@60fps output 1 × MIPI DSI. Supports 1920*1080@60fps output (or dual-channel 2560*1440@60fps)
Audio	1 × HDMI audio output 1 × Earphone output
Power	5V (Via Type-C port)
Interface	HDMI2.0, USB3.0, USB2.0, MIPI DSI, MIPI CSI, I2C, SPI, UART, ADC, PWM, GPIO, PCIe, I2S, etc.
OS / Software	
OS	Supports Android 11.0, Ubuntu 18.04, Buildroot + QT, Station OS
General	
Size	93.8 mm × 65 × 15.8 mm
Temperature	Operating Temperature ： -10℃～60℃ Storage Temperature：-20℃～70℃
Humidity	Storage Humidity ： 10%～80 %

3. Size

4. Interface Description





Company profile

T-Chip Intelligent Technology (Zhongshan) Co., Ltd. , established in 2005, has more than ten years of technological product research and development capabilities, and has nearly 100 patents and software copyrights. As a national high-tech enterprise, we focus on the research and development, production and sales of open source smart hardware, Internet of Things, and digital audio products, while also provide overall solutions with smart hardware products.

T-Chip is an IDH (Independent Design House) officially authorized by Rockchip in Fuzhou, and also a strategic partner of Rockchip, with a close cooperative relationship for more than 10 years.Firefly is a brand established by T-Chip, with open source community and online store. Firefly products include core boards, mainboards, embedded computers, cluster servers, development kits and other products. Currently, we have more than 100,000 users, including more than 10,000 enterprise users such as Arm, Google, Baidu, Tencent and Alibaba.

Firefly team has more than 70 R&D members, with excellent research and development capabilities of schematic design, PCB layout, board mass production, embedded development, system development, application development and so on. We accelerate the research and development process for many technology entrepreneurs and start-ups, and provide professional technical services.

Make technology simpler, Make life smarter - is the idea of Firefly team. We hope that through Firefly's open source products and technical services, the research and development of various technological products will become efficient and simple, and intelligent technology can be integrated into life.

Firefly is committed to providing enterprise customers with long-term stable and reliable industrial products and services, and continuously creating value for customers.

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Contact us

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the followingmeasures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

FCC ID: 2AKCT-SPCM2