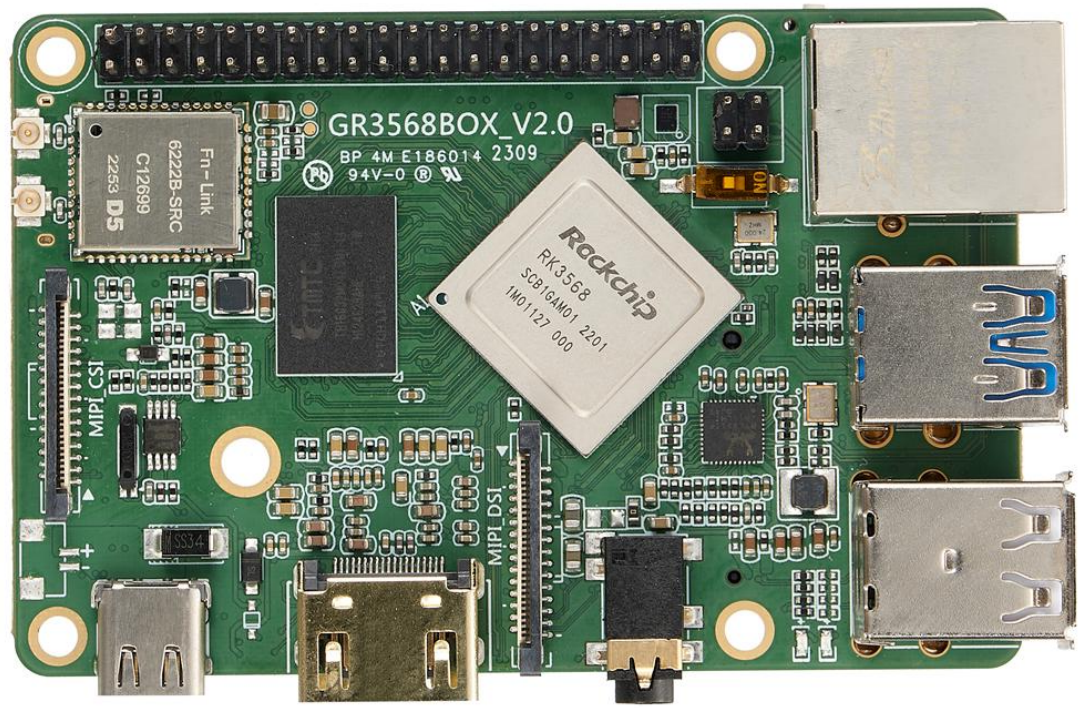


G3568

Single Board Computer



Shenzhen Graperain Technology Co., Ltd.

www.graperain.com

Catalogue

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New Version

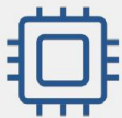
Hardware Version	Updating Date	Author	Description
V2.0	2023-3-20	RXS	Revision

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Introduction

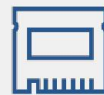
G3568 Single Board Computer

G3568 single board computer take quad-core 64bit Cortex-A55 CPU, and 22nm. Its main frequency max up to 2.0GHz, inbuilt Mali-G52 GPU, 1T NPU, low consumption and high performance. And its DDR max 8GB RAM, more it support M.2 standard interface, 4K 60fps h.265/H.264/VP9 video decoding, and the company would provide you full technology supports and design reference. In this way, the user could develop their products independently.



RK3568 Quad-core A55 CPU

Main Frequency 2.0 GHz
Mali-G52 2EE GPU
22nm



Max 8GB DDR

Meet Large Memory Requirement
MAX 128GB EMMC



M.2 Standard Interface

M.2 2242 solid state Disk



Many Expansion Interfaces

UART、I2C、ADC、PWM、GPIO、
MIPI CSI、MIPI DSI、HDMI、
USB2.0、USB3.0 etc.



Multiple Operating System

Android、Ubuntu、Debian、
Buildroot+QT etc.



Develop Efficiency

Provide technology supports
and sch design reference

Parameters

Basic Parameter

SOC	RockChip RK3568
CPU	Quad-core 64bit Cortex-A55 CPU, 22nm, 2.0GHz
GPU	ARM G52 2EE GPU, support OpenGL ES 1.1/2.0/3.2, OpenCL 2.0, Vulkan 1.1, integrate high-performance 2D hardware engine
NPU	Integrate RKNN NPU AI acceleration engine, 1Tops processing performance Support deep learning frameworks : Caffe/TensorFlow/TF-Lite/ONNX/MXNet/PyTorch/Keras/Darknet
CODEC	4K 60fps H.265/H.264/VP9 video decoder 1080P 100fps H.265, 60fps H.264 video encoder
DDR	2GB/4GB/8GB LPDDR4/LPDDR4X
EMMC	8GB/16GB/32GB/64GB/128GB EMMC

Hardware Parameter

Power	Type-C for the board power, and DC 5V-12
Ethernet	Built-in GMAC Ethernet controller, support 1000Mbps (RJ45)
WIFI	Expandable SDIO WiFi+bluetooth two-in-one module : - support 2.4GHz / 5GHz dual frequency WiFi, 802.11a/b/g/n/ac - support Bluetooth5.0
Display	1 x HDMI2.0, max 4K@60Hz 1 x MIPI DSI, max 1920x1080@60fps
Audio	1 x Phone output (No MIC recording), support dual-channels audio output 1 x HDMI audio output

Camera	1 x MIPI-CSI (Single channel 4 LAN or dual channels),max 8mp camera
USB	USB2.0x2、USB3.0x2
M.2	M.2 2242 Solid state disk
TF Card	1 x TF card slot,max 128GB TF card
Others	3 x UART 1 x Debug uart 2 x ADC 2 x I2C 2 x SPI 12 x PWM 1 x RTC, reserved 2PIN for power supply

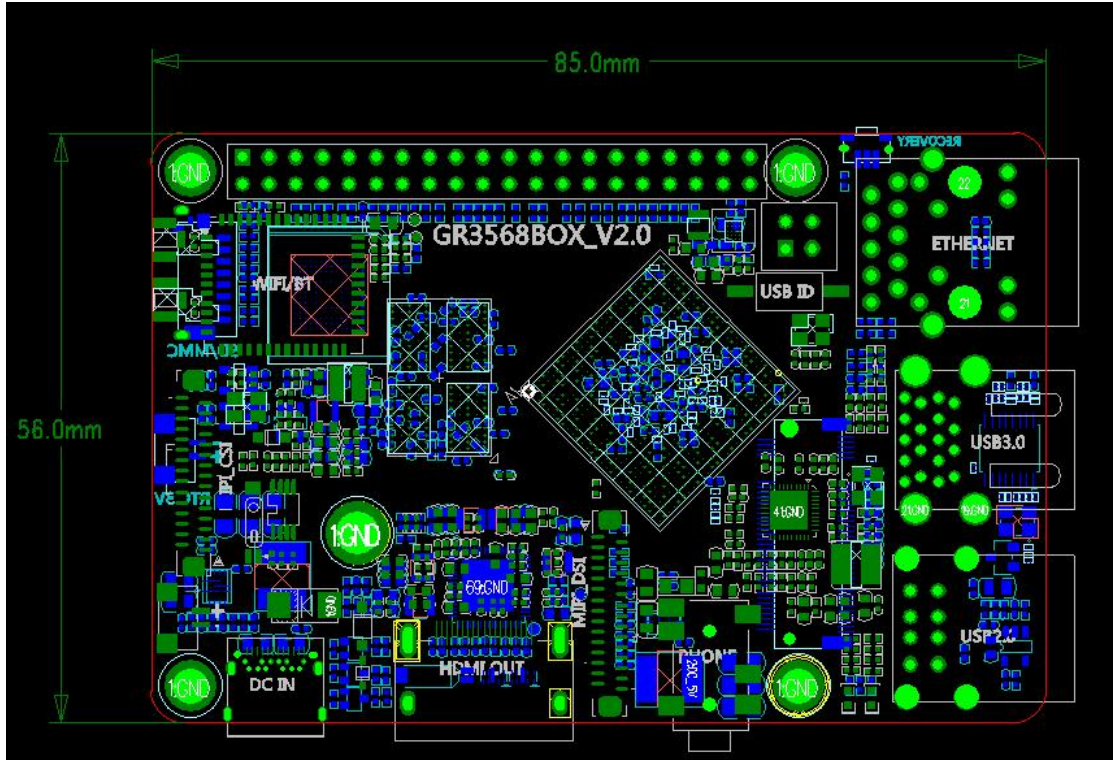
System Software

OS	Android11, Ubuntu, Buildroot+ QT, Debian OS etc.
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Other Parameter

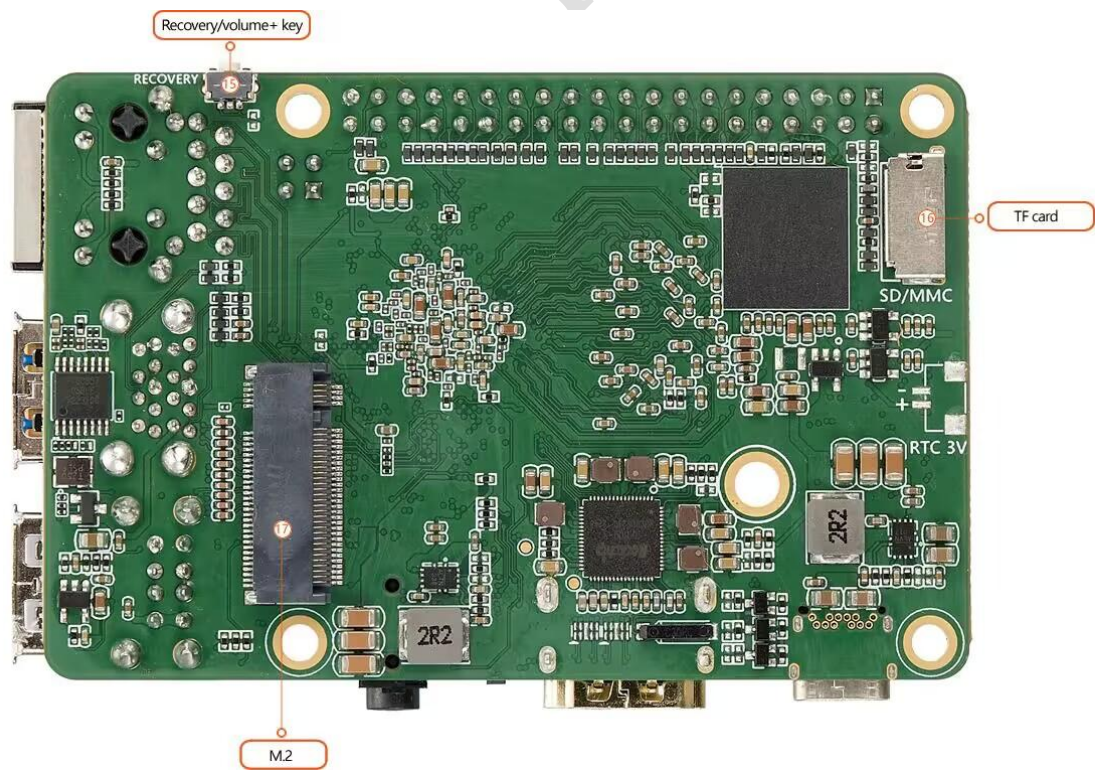
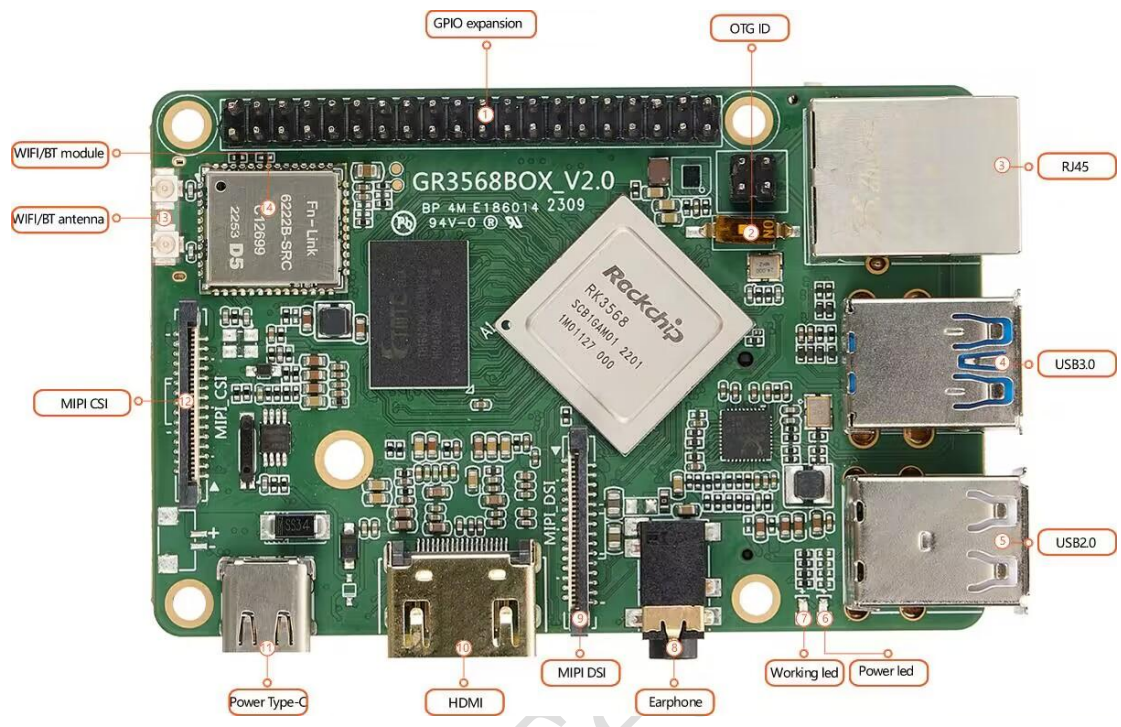
Size	85mm x 56mm
Environment	Working Temperature: -20℃- 80℃ Storage Temperature: -30℃- 80℃ Storage Humidity: 10%~80 %

Size



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Interfaces



G3568 Single Board Computer Hardware Introduction		
No.	Name	Station
【1】	GPIO expansion	GPIO
【2】	OTG ID	OTG ID PIN ON/OFF key
【3】	RJ45	RJ45 gigabit Ethernet port
【4】	USB3.0	USB3.0 HOST
【5】	USB2.0	USB2.0 HOST
【6】	Power led	Power LED
【7】	Working led	LED indicator
【8】	Earphone	Earphone audio output
【9】	MIPI DSI	MIPI DSI display port
【10】	HDMI	HDMI TYPE-A output
【11】	Power Type-C	5V-12V Type-C power supply
【12】	MIPI CSI	MIPI camera interface
【13】	WIFI/BT antenna	WIFI,BT antennae port
【14】	WIFI/BT module	WIFI,BT module
【15】	Recovery/volume+ key	Upgrade/Vol+ key
【16】	TF card	TF card slot
【17】	M.2	M.2 solid state disk

Graperrain Technology

Company Introduction

GraperaIn is a solution company dedicated to ARM platform development. 80% of our employees are senior engineers with bachelor degree or above, who have been engaged in embedded technology development for many years. Based on the 64-bit ARM processor, which is widely used in the embedded industry, we have streamlined the circuit design and strictly controlled the hardware cost, combined with the popular Linux, Ubuntu, Android and other operating systems. Graperain launched a series of solutions to provide system on modules +hardware customization + software development + OEM/ODM services to provide quality support services for manufacturers and R&D institutions.

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