

G3399 Single Board Computer Introduction



Shenzhen Graperain Technology Co., Ltd.

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Release Note

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Chapter 1 G3399 Single Board Computer Introduction

1.1 Brief Introduction

G3399 SBC is based on Rockchip RK3399, 64 bit 6-core, work-station-level processor. It's Dual-core Cortex-A72 up to 2.0GHz, Quad-core Cortex-A53 up to 1.5GHz and almost 100% performance up than A15/A17/A57.

Integrating with ARM Mali-T860 MP4, it supports OpenGL ES1.1/2.0/3.0/3.1, OpenVG1.1, OpenCL, Directx11, AFBC. With such powerful GPU, RK3399 can be applied in a lot of areas, such as computer vision, learning machine, 4K 3D etc. It also supports H.265 HEVC, VP9, H.265 encoder and 4K HDR.

Interfaces: Dual MIPI-CSI, dual ISP, PCIe, USB3.0, USB2.0, TypeC etc.

G3399 SBC uses RK3399, 2GB/4GB DDR3, 8GB/16GB/32GB eMMC, independent power management system, Ethernet, variable interfaces. It supports Android7.1, Linux and Debian.

G3399 SBC takes 8-layer immersion gold process. With its best electrical and anti-interference performance, G3399 is stable. And the size is only 120mm*88mm.

G3399 SBC specifications:

- Size: 120mm*88mm
- Power Management: RK808 PMU
- Supports different brands eMMC, default 8g eMMC.
- Single channel DDR3, default 2GB, can be custom to 4GB
- Supports power sleep/wake up
- Android7.1, Linux+qt , Debian

1.2 Specifications

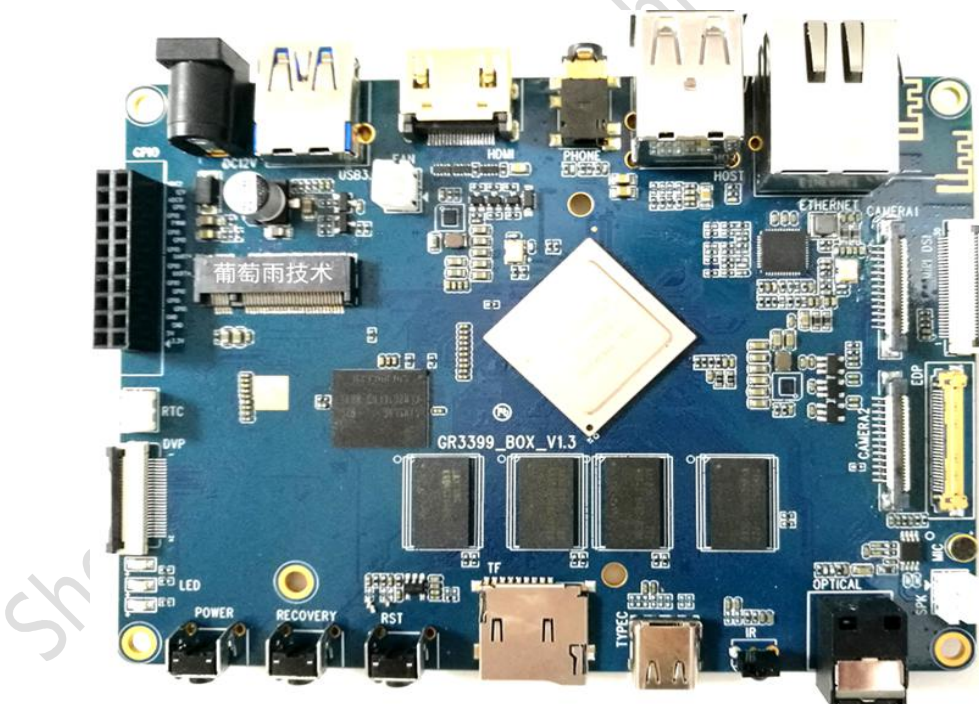
Parameters	
Out appearance	Single board computer
Size	120mm*88mm
Layer	8

System Configuration	
CPU	Rockchip RK3399
Frequency	Cortex A53 quad core1.4GHz +dual core A72 (2GHz)
RAM	standard 2GB, can be custom to 4GB
eMMC	4GB/8GB/16GB/32GB eMMC optional, standard8GB
Power IC	RK808, dynamic frequency modulation

Graphic and video	Mali-T860 MP4, quad core GPU Supports OpenGL ES 1.1/2.0/3.0/3.1, Openvg1.1,OpenCL, Directx11 Supports 4K VP9, 4K 10bits H265/H.264 video endocer, up to 60 fps 1080P multi-form video encoder 1080P video encoder, H.264, VP8
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Electrical characteristics	
Input Voltage	12V/2A
Output Voltage	12V, 5V, 3.3V
Storage temperature	-30~80 degree
Working temperature	-20~70 degree

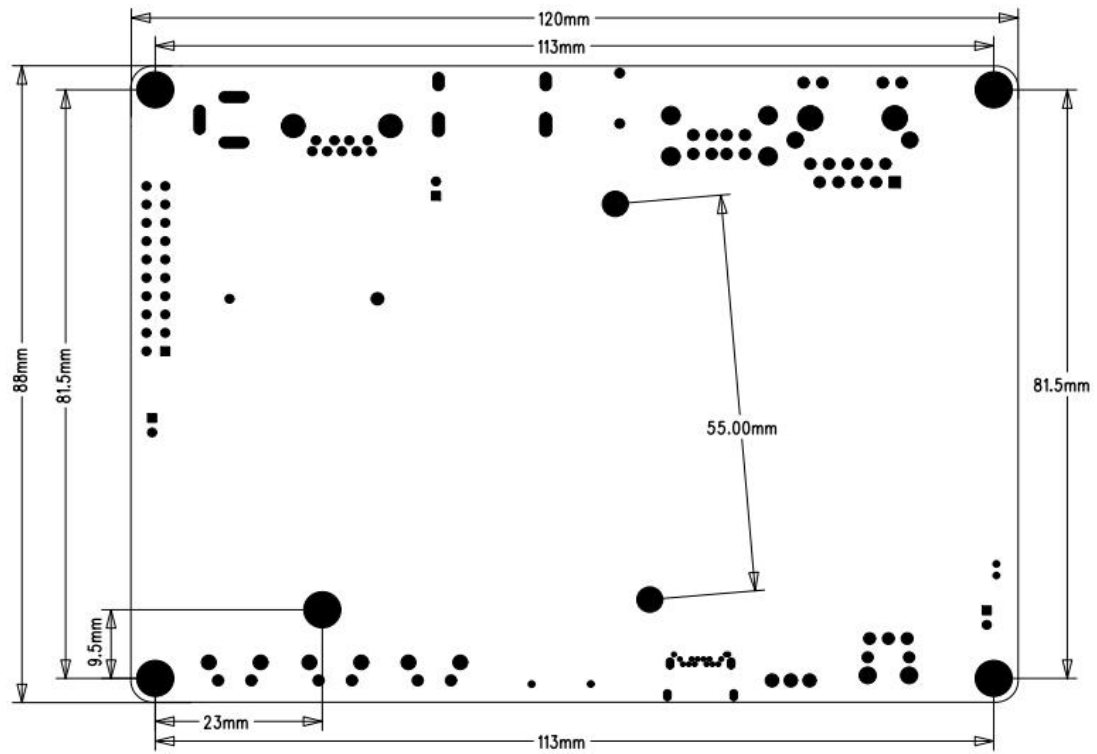
1.3 Board appearance



Front side

1.4 Board structure

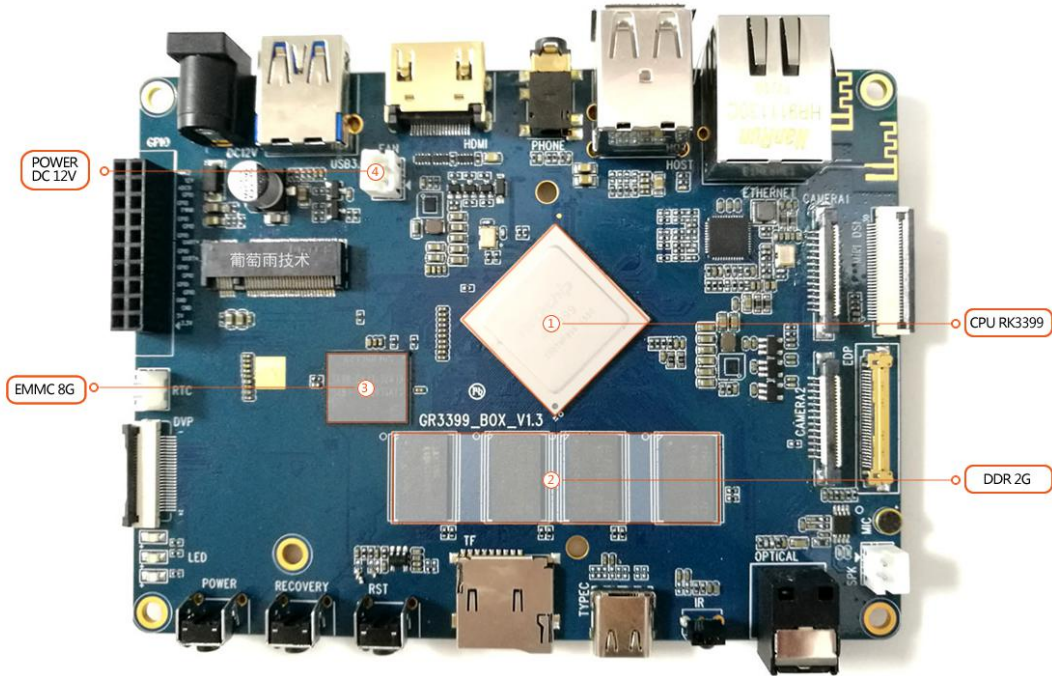
Size



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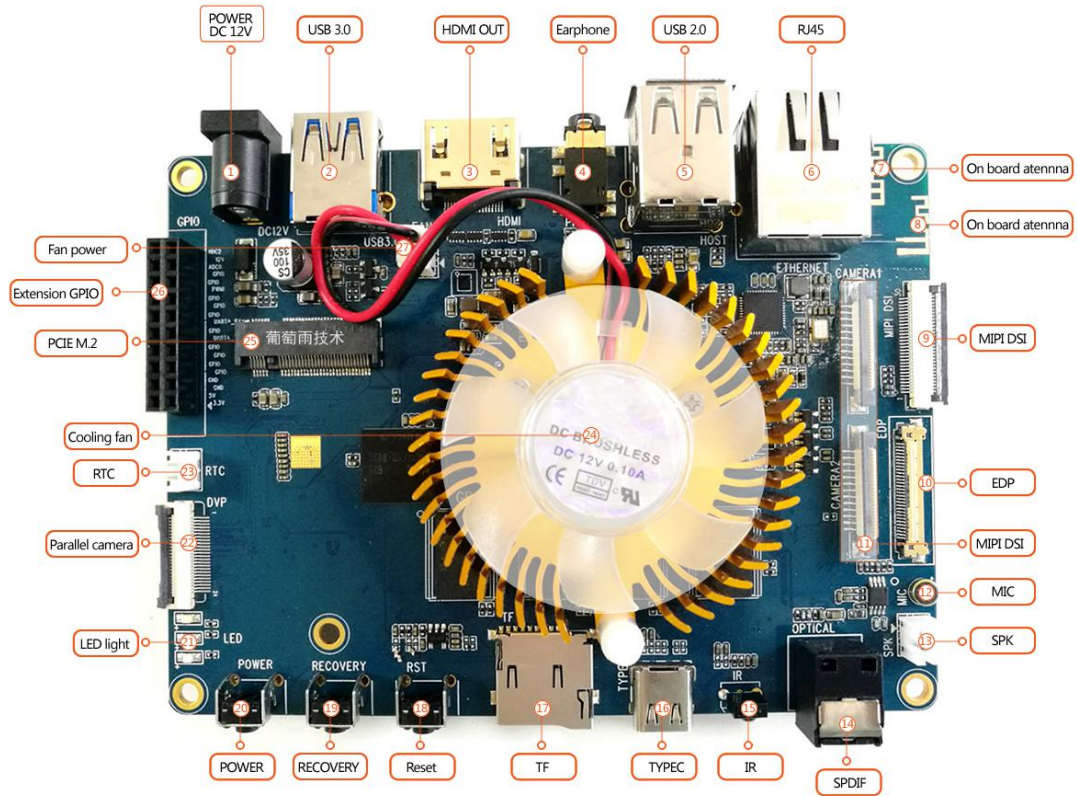
Chapter 2 Hardware Features

2.1 Hardware interfaces description

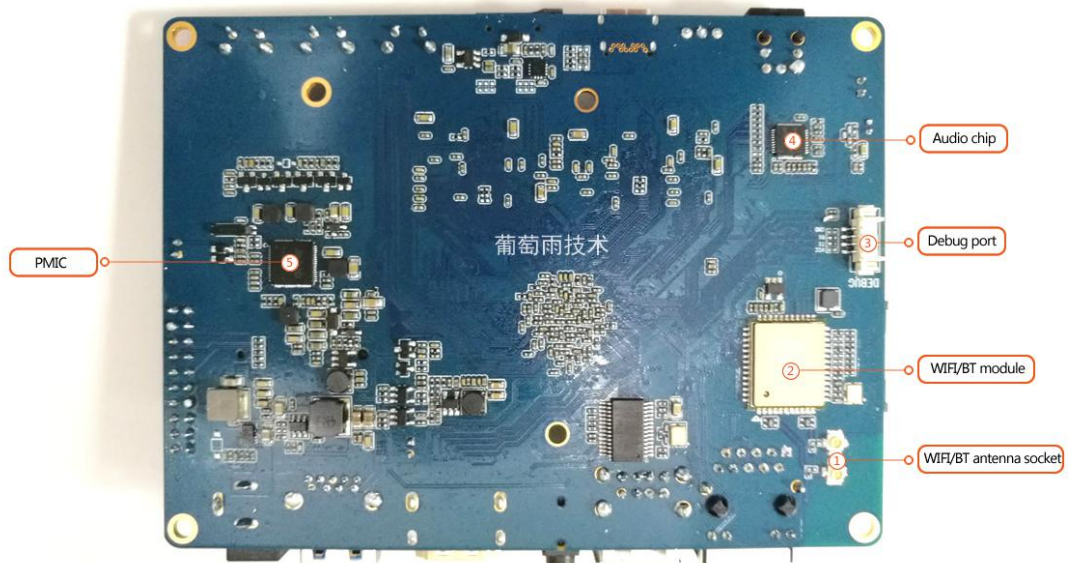


GR3399 SBC front side 1

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G3399 SBC front side 2



G3399 SBC back side

G3399 SBC front side 1		
Number	Name	Description
1	CPU	RK3399

2	DDR	Default 4pcs 2GB, optional 4GB
3	EMMC	Default 8GB, optional 16GB
4	Fan power port	12V output
G3399 SBC front side 2		
Number	Name	Description
1	POWER	DC 12V input
2	USB3.0	USB3.0
3	HDMI OUT	HDMI output
4	Earphone	Audio earphone output
5	USB2.0 * 2	USB2.0 double-layer
6	RJ45	Gigabit ethernet
7, 8	On board atennna	WIFI/BT on board atennna
9	MIPI DSI	MIPI
10	EDP	EDP
11	MIPI CSI	MIPI camera
12	MIC	Mic recording
13	SPK	Speaker
14	SPDIF	Audio optical
15	IR	IR receive
16	TYPEC	TypeC, for debug and upgrade
17	TF	TF
18	RST	Reset
19	RECOVERY	upgrade/return key
20	POWER	Power key
21	LED light	LED light
22	Parallel camera	Parallel camera
23	RTC	RTC
24	Cooling fan	Cooling fan
25	PCIE M.2	PCIE M.2, to connect hard disk etc.
26	Extension GPIO	GPIO extension
27	Fan power	12V output
G3399 SBC back side		
Number	Name	Description
1	WIFI/BT antenna socket	To connect external WIFI/BT antenna
2	WIFI/BT module	WIFI/BT AP6354
3	Debug port	Debug port
4	Audio chip	Audio chip ALC5651
5	PMIC	Power management IC

Chapter 3 Product Portfolio

3.1 System on Module Series

G4418 SOM (Samsung S5P4418)
G6818 SOM (Samsung S5P 6818)
G3288 SOM (Rockchip RK3288 stamp hole)
G3288 SOM (Rockchip RK3288 Immersion Gold MXM)
G3128 SOM (Rockchip RK3128 Immersion Gold MXM)
G3399 SOM (Rockchip RK3399 Immersion Gold MXM)
M9 SOM (Qualcomm 8916)

3.2 Development Board Series

G4418 development board (Samsung S5P4418)
G6818 development board (Samsung S5P 6818)
G3288 development board (Rockchip RK3288 stamp hole)
G3288 development board (Rockchip RK3288 Immersion Gold MXM)
G3399 development board (Rockchip RK3399 Immersion Gold MXM)

3.3 Single Board Computer (SBC) Series

G4418 single board computer (Samsung S5P4418)
G6818 single board computer (Samsung S5P 6818)
G3288 single board computer (Rockchip RK3288)
G3399 single board computer (Rockchip RK3399)

Instructions: More information of specifications and other products, please pay attention to website and contact us directly.

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