

# TINKER BOARD 2

Arm SBC, Rockchip RK3399 Hexa-core, LPDDR4 RAM, HDMI, MIPI-DSI, MIPI-CSI, 12-19V DC in

## Features

- Arm® big.LITTLE™ A72+A53 Hexa-core SoC
- Multiple MIPI-CSI & DSI / HDMI / Type-C (DP)
- USB 3.0 / Wi-Fi 802.11ac / BT 5.0 / GPIO
- 12V~19V DC-in offers stable power delivery
- Linux & Android supported

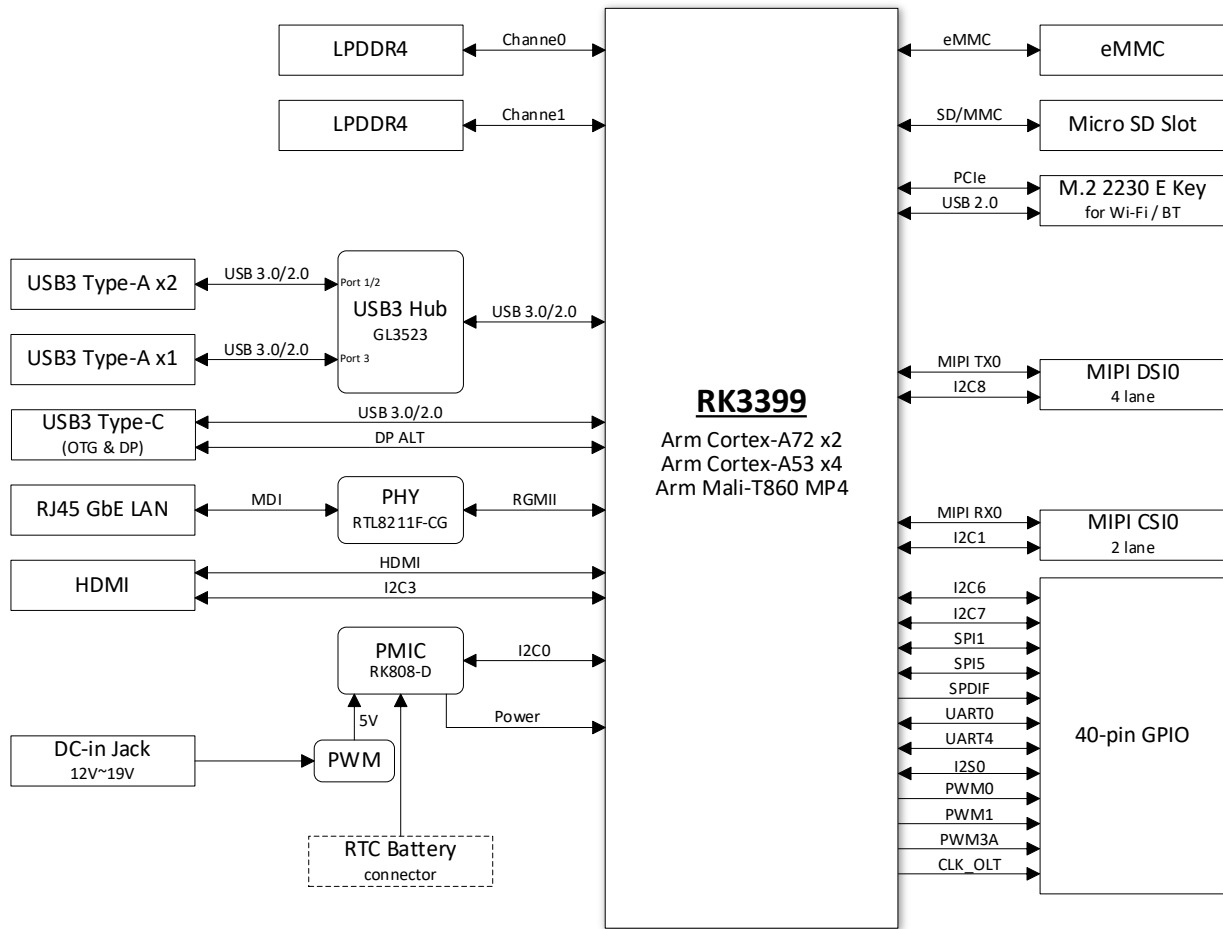


## Specifications

<b>Processor</b>	SoC	Rockchip RK3399
	CPU	2 x Arm® Cortex®-A72 @ 2.0 GHz + 4 x Arm® Cortex®-A53 @ 1.5 GHz
	GPU	Arm® Mali™-T860 MP4 GPU @ 800 MHz
<b>Memory</b>	Technology	Dual-CH LPDDR4 On-board
	Size	2/4GB*
<b>Storage</b>	Memory Card	1 x Micro SD (TF) card slot (push & pull)
<b>Ethernet</b>	Speed	10/100/1000Mbps
	Controller	1 x Realtek RTL8211F-CG
<b>Wireless</b>	Speed	802.11 a/b/g/n/ac & Bluetooth 5.0
	Module	1 x Realtek RTL8822CE (M.2 Socket 1 with E key, type 2230)
	Antenna Connector	2 x I-PEX MHF® 4 (extendable, 2T2R)
<b>Display</b>	HDMI	1, Supports up to 4096 x 2160 @ 60 Hz
	Type-C (DP)	1, Supports DP 1.2 up to 4096 x 2160 @ 60 Hz
	MIPI DSI	1, Supports 4 lane up to 6 Gbps, 1920 x1080 @ 60 Hz (22-pin)
	Multi Display	HDMI+Type-C, HDMI+MIPI DSI, Type-C+MIPI DSI
<b>Camera</b>	MIPI CSI-2	1, Supports 2 lane up to 3 Gbps (15-pin)
<b>Audio</b>	HDMI Audio	1
	I2S	1, in 40-pin header
	S/PDIF	1, in 40-pin header
<b>Rear I/O</b>	USB 3.2 Gen1 Type-A	3
	USB 3.2 Gen1 Type-C OTG	1
	Ethernet	1
	HDMI	1
<b>Internal I/O</b>	40-pin GPIO Header	- up to 28 x GPIO pins - up to 2 x SPI bus - up to 2 x I2C bus - up to 2 x UART - up to 3 x PWM - up to 1 x PCM/I2S (master/slave) - up to 1 x S/PDIF TX - 2 x 5V Power pins - 2 x 3.3V Power pins - 8 x Ground pins
	Recovery Header	1 (2-pin)
	Power-on Header	1 (2-pin)
	Reset Header	1 (2-pin)
	Debug UART Header	1 (2-pin)
	DC Fan Header	1 (2-pin)
	RTC Battery Header	1 (2-pin)
	<b>Power</b>	Power Input
<b>Environment</b>	Operating Temperature	0~60°C
	Storage Temperature	-40~85°C
	Relative Humidity	0 to 85% (non-condensing)
<b>Others</b>	Operating System	Linux Debian 9, Android (AOSP) 10
	Dimensions	3.37" x 2.125" (85 x 56 mm)

\*Spec by SKU

# Block Diagram



# Ordering Information

PN	Model Name	Description
90ME01N0-*	Tinker Board 2/2G	Arm SBC, Rockchip RK3399 Hexa-core, 2GB LPDDR4, HDMI, MIPI-DSI, MIPI-CSI, 12~19V DC in

# Packing List

Item#	Description
1.	2 x Wi-Fi/BT antenna cable
2.	1 x Heatsink
3.	1 x Quick Start Guide

# Optional Accessories

Item#	Description
Power Adapter 45W	DC 19V/2.37A or 19.5V/3.33A (5.5/2.5mm)
Power Adapter 65W	DC 19V/3.42A or 19.5V/2.31A (5.5/2.5mm)
Fanless Case	Aluminum Fanless Case
MIPI Convert Board	MIPI to LVDS/eDP converter board

\*Accessories will be shipped separately

# TINKER BOARD 2S

Arm SBC, Rockchip RK3399 Hexa-core, LPDDR4 RAM, eMMC, HDMI, MIPI-DSI, MIPI-CSI, 12-19V DC in

## Features

- Arm® big.LITTLE™ A72+A53 Hexa-core SoC
- Multiple MIPI-CSI & DSI / HDMI / Type-C (DP)
- USB 3.0 / Wi-Fi 802.11ac / BT 5.0 / GPIO
- 12V~19V DC-in offers stable power delivery
- Linux & Android supported

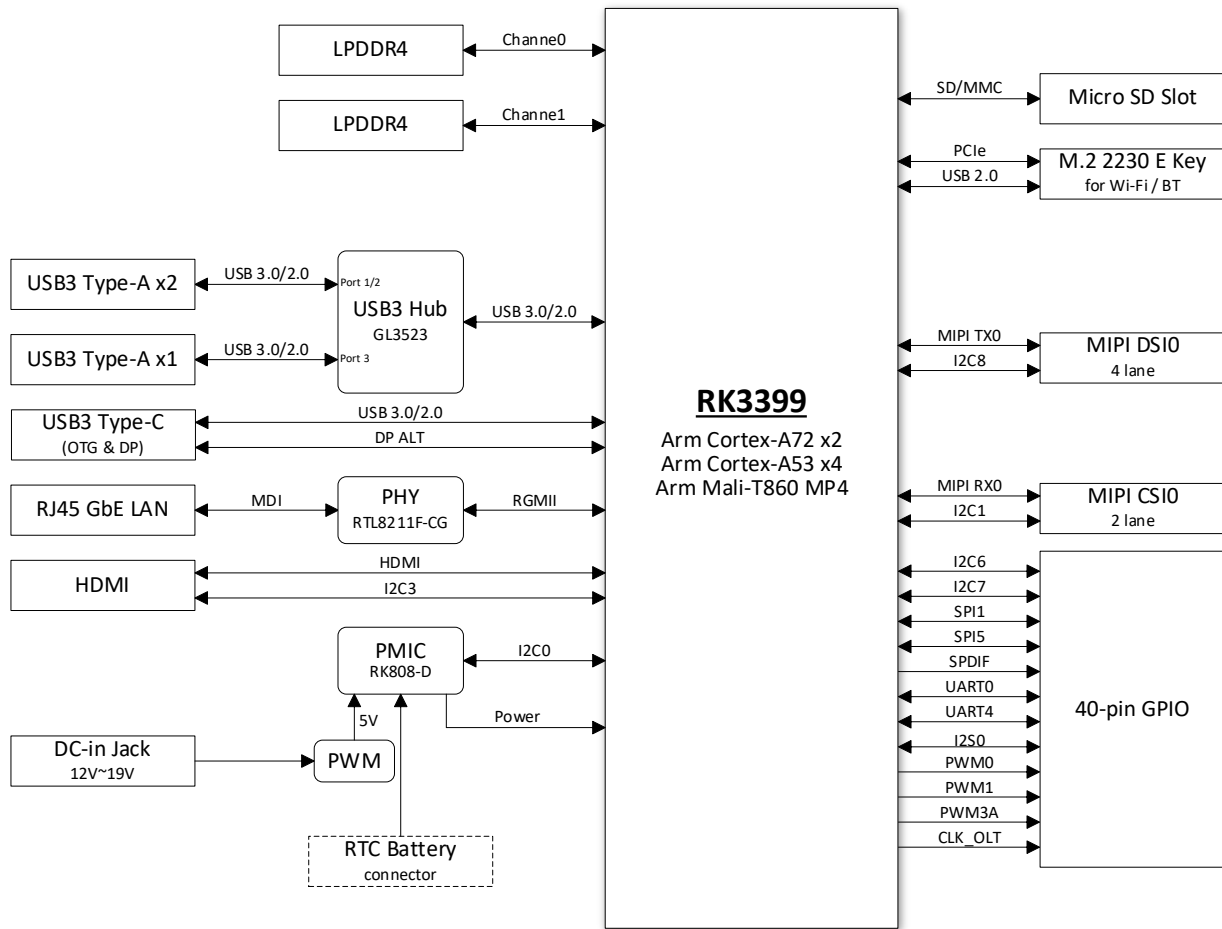


## Specifications

<b>Processor</b>	SoC	Rockchip RK3399
	CPU	2 x Arm® Cortex®-A72 @ 2.0 GHz + 4 x Arm® Cortex®-A53 @ 1.5 GHz
	GPU	Arm® Mali™-T860 MP4 GPU @ 800 MHz
<b>Memory</b>	Technology	Dual-CH LPDDR4 On-board
	Size	2/4GB*
<b>Storage</b>	eMMC	16GB* On-board
	Memory Card	1 x Micro SD (TF) card slot (push & pull)
<b>Ethernet</b>	Speed	10/100/1000Mbps
	Controller	1 x Realtek RTL8211F-CG
<b>Wireless</b>	Speed	802.11 a/b/g/n/ac & Bluetooth 5.0
	Module	1 x Realtek RTL8822CE (M.2 Socket 1 with E key, type 2230)
	Antenna Connector	2 x I-PEX MHF® 4 (extendable, 2T2R)
<b>Display</b>	HDMI	1, Supports up to 4096 x 2160 @ 60 Hz
	Type-C (DP)	1, Supports DP 1.2 up to 4096 x 2160 @ 60 Hz
	MIPI DSI	1, Supports 4 lane up to 6 Gbps, 1920 x1080 @ 60 Hz (22-pin)
	Multi Display	HDMI+Type-C, HDMI+MIPI DSI, Type-C+MIPI DSI
<b>Camera</b>	MIPI CSI-2	1, Supports 2 lane up to 3 Gbps (15-pin)
<b>Audio</b>	HDMI Audio	1
	I2S	1, in 40-pin header
	S/PDIF	1, in 40-pin header
<b>Rear I/O</b>	USB 3.2 Gen1 Type-A	3
	USB 3.2 Gen1 Type-C OTG	1
	Ethernet	1
	HDMI	1
<b>Internal I/O</b>	40-pin GPIO Header	- up to 28 x GPIO pins - up to 2 x SPI bus - up to 2 x I2C bus - up to 2 x UART - up to 3 x PWM - up to 1 x PCM/I2S (master/slave) - up to 1 x S/PDIF TX - 2 x 5V Power pins - 2 x 3.3V Power pins - 8 x Ground pins
	Recovery Header	1 (2-pin)
	Power-on Header	1 (2-pin)
	Reset Header	1 (2-pin)
	Debug UART Header	1 (2-pin)
	DC Fan Header	1 (2-pin)
	RTC Battery Header	1 (2-pin)
	<b>Power</b>	Power Input
<b>Environment</b>	Operating Temperature	0~60°C
	Storage Temperature	-40~85°C
	Relative Humidity	0 to 85% (non-condensing)
<b>Others</b>	Operating System	Linux Debian 9, Android (AOSP) 10
	Dimensions	3.37" x 2.125" (85 x 56 mm)

\*Spec by SKU

# Block Diagram



# Ordering Information

PN	Model Name	Description
90ME01P0-*	Tinker Board 2S/2G/16G	Arm SBC, Rockchip RK3399 Hexa-core, 2G LPDDR4, 16G eMMC, HDMI, MIPI-DSI, MIPI-CSI, 12~19V DC in

# Packing List

Item#	Description
1.	2 x Wi-Fi/BT antenna cable
2.	1 x Heatsink
3.	1 x Quick Start Guide

# Optional Accessories

Item#	Description
Power Adapter 45W	DC 19V/2.37A or 19.5V/3.33A (5.5/2.5mm)
Power Adapter 65W	DC 19V/3.42A or 19.5V/2.31A (5.5/2.5mm)
Fanless Case	Aluminum Fanless Case
MIPI Convert Board	MIPI to LVDS/eDP converter board

\*Accessories will be shipped separately

# Power Adapter 45W

DC 19V/2.37A or 19.5V/3.33A (5.5/2.5mm)

## Ordering Information

PN	Model Name	Description
90AN00D0-M0AAY0	45W ADAPTER/US	United States
90AN00D0-M0BAY0	45W ADAPTER/BR	Brazil
90AN00D0-M0CAY0	45W ADAPTER/CN	China
90AN00D0-M0EAY0	45W ADAPTER/EU	European Union
90AN00D0-M0EAY1	45W ADAPTER/UK	United Kingdom
90AN00D0-M0EAY2	45W ADAPTER/CH	Switzerland
90AN00D0-M0EAY3	45W ADAPTER/ZA	South Africa
90AN00D0-M0EAY4	45W ADAPTER/IL	Israel
90AN00D0-M0IAY0	45W ADAPTER/IN	India
90AN00D0-M0JAY0	45W ADAPTER/JP	Japan
90AN00D0-M0SAY0	45W ADAPTER/AR	Argentina
90AN00D0-M0TAY0	45W ADAPTER/TW	Taiwan
90AN00D0-M0UAY0	45W ADAPTER/HK	Hong Kong
90AN00D0-M0UAY1	45W ADAPTER/AU	Australia
90AN00D0-M0UAY2	45W ADAPTER/KR	Korea

# Power Adapter 65W

DC 19V/2.37A or 19.5V/3.33A (5.5/2.5mm)

## Ordering Information

PN	Model Name	Description
90AN00C0-M0AAY0	65W ADAPTER/US	United States
90AN00C0-M0BAY0	65W ADAPTER/BR	Brazil
90AN00C0-M0CAY0	65W ADAPTER/CN	China
90AN00C0-M0EAY0	65W ADAPTER/EU	European Union
90AN00C0-M0EAY1	65W ADAPTER/UK	United Kingdom
90AN00C0-M0EAY2	65W ADAPTER/CH	Switzerland
90AN00C0-M0EAY3	65W ADAPTER/ZA	South Africa
90AN00C0-M0EAY4	65W ADAPTER/IL	Israel
90AN00C0-M0IAY0	65W ADAPTER/IN	India
90AN00C0-M0JAY0	65W ADAPTER/JP	Japan
90AN00C0-M0SAY0	65W ADAPTER/AR	Argentina
90AN00C0-M0TAY0	65W ADAPTER/TW	Taiwan
90AN00C0-M0UAY0	65W ADAPTER/HK	Hong Kong
90AN00C0-M0UAY1	65W ADAPTER/AU	Australia
90AN00C0-M0UAY2	65W ADAPTER/KR	Korea