

TINKER BOARD R2.0

Quad-core Arm processor, 2/4GB onboard memory, HDMI, GbE LAN, Multiple USB

Features

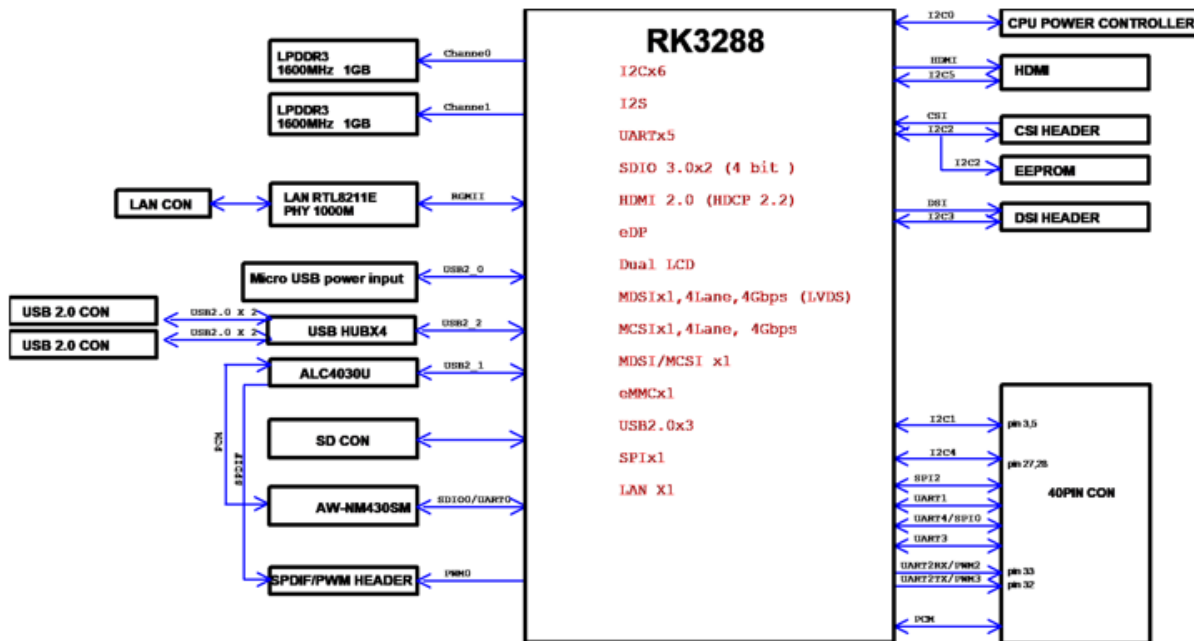
- Extensive OS Support (Debian 10/Android 11)
- Energy Efficient, Fanless Design
- Name card Sized, Powerful Edge Device



Specifications

Processor	SoC	Rockchip RK3288-CG.W
	CPU	4 x Arm® Cortex®-A17 @ 1.8 GHz
	GPU	Arm® Mali™-T760 MP4 GPU @ 600 MHz
Memory	Technology	Dual-CH LPDDR3 On-board
	Size	2/4GB
Storage	Memory Card	1 x Micro SD (TF) card slot (push & pull)
Ethernet	Speed	10/100/1000Mbps
	Controller	1 x Realtek RTL8211E-VB-CG (A version) or RTL8211F-CG (B version)
Wireless	Speed	802.11 b/g/n & BT 4.2 + EDR
	Module	1 x Realtek RTL8723DS
	Antenna Connector	1 x I-PEX MHF® 4 (extendable)
Display	HDMI	1, Supports up to 3840x2160 @ 30 Hz
	MIPI DSI	1, Supports 2 lane up to 2 Gbps, 1280 x 720 @ 60 Hz (15-pin)
	Multi Display	HDMI+MIPI DSI
Camera	MIPI CSI-2	1, Supports 2 lane up to 2 Gbps (15-pin)
Audio	3.5 Audio Jack*	1, Realtek ALC4030U Codec *Supports audio jack plug-in detection
	HDMI Audio	1
	I2S	1, in 40-pin header
	S/PDIF	1, contact points
Rear I/O	USB 2.0 Type-A	4
	Ethernet	1
	3.5 Audio Jack	1
	HDMI	1
Internal I/O	40-pin header	- up to 28 x GPIO pins - up to 2 x SPI bus - up to 2 x I2C bus - up to 4 x UART - up to 2 x PWM - up to 1 x PCM/I2S (master/slave) - 2 x 5V power pins - 2 x 3.3V power pins - 8 x ground pins
	2-pin Contact Point	1 x PWM signal 1 x S/PDIF signal
	Power-on Header	1 (2-pin)
	Recovery Header	1 (2-pin)
	Power	Power Input
Environment	Operating Temperature	0~60°C
	Storage Temperature	-40~85°C
	Relative Humidity	0 to 85% (non-condensing)
Others	Operating System	Linux Debian 10, Android (AOSP) 11
	Dimensions	3.37" x 2.125" (85 x 56 mm)

Block Diagram



Ordering Information

PN	Model Name	Description
90ME03D1-*	TINKER BOARD R2.0/A/2G	QUAD-CORE PROCESSOR, ARM-MALI T760 MP4 GPU, 2GB DUAL CH MEMORY, HDMI CEC, GB LAN, Wi-Fi B/G/N, BLUETOOTH

Packing List

Item#	Description
1.	1 x Heatsink
2.	1 x Quick Start Guide

Optional Accessories

Item#	Description
Power Adapter 15W	DC 5V/3A (Micro USB)
Fanless Case	Aluminum Fanless Case
MIPI Convert Board	MIPI to LVDS/eDP converter board

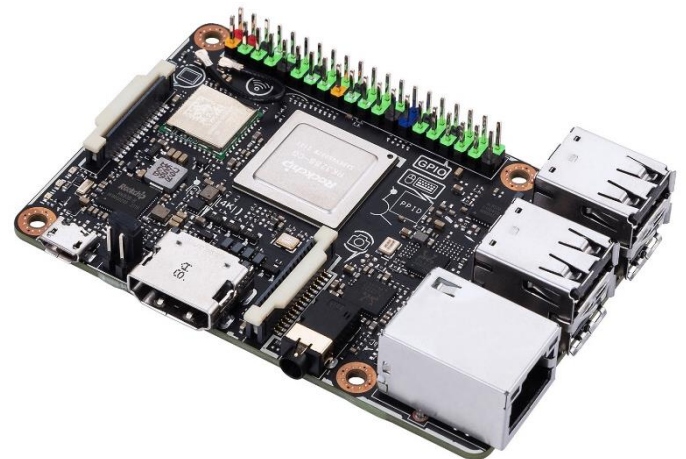
*Accessories will be shipped separately

TINKER BOARD S R2.0

Quad-core Arm processor, 2/4GB onboard memory & 16/32GB eMMC, HDMI, GbE LAN, Multiple USB

Features

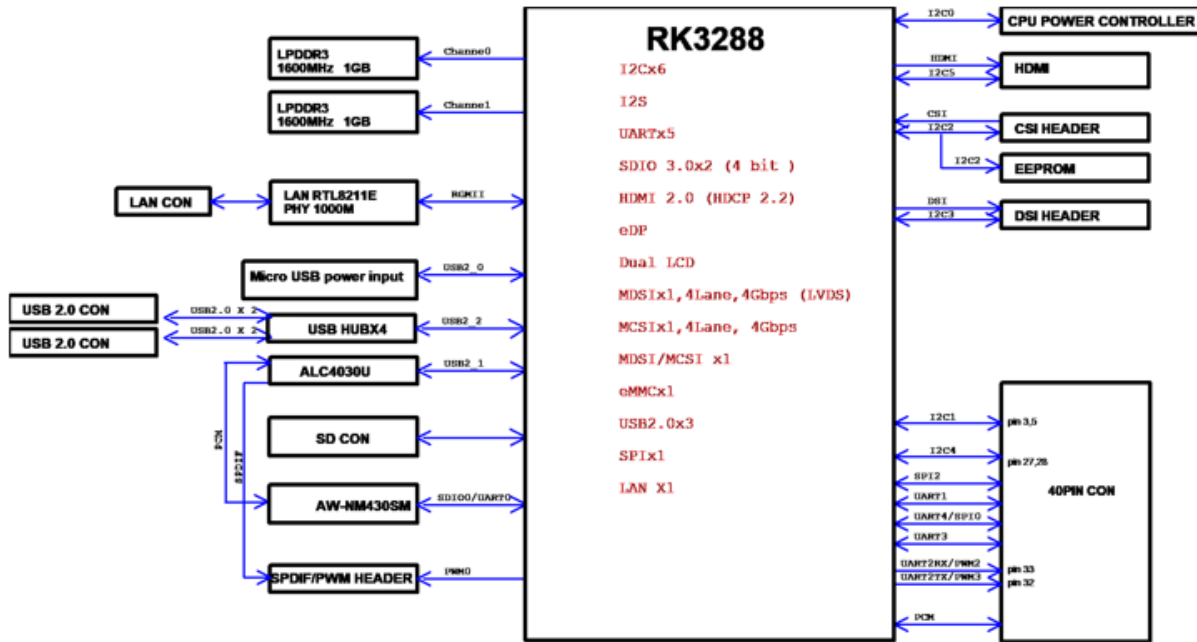
- Fully Embedded Design
- Extensive OS Support (Debian 10/Android 11)
- Energy Efficient, Fanless Design
- Name card Sized, Powerful Edge Device



Specifications

Processor	SoC	Rockchip RK3288-CG.W
	CPU	4 x Arm® Cortex®-A17 @ 1.8 GHz
	GPU	Arm® Mali™-T760 MP4 GPU @ 600 MHz
Memory	Technology	Dual-CH LPDDR3 On-board
	Size	2/4GB
Storage	eMMC	16/32GB On-board
	Memory Card	1 x Micro SD (TF) card slot (push & pull)
Ethernet	Speed	10/100/1000Mbps
	Controller	1 x Realtek RTL8211E-VB-CG (A version) or RTL8211F-CG (B version)
Wireless	Speed	802.11 b/g/n & BT 4.2 + EDR
	Module	1 x Realtek RTL8723DS
	Antenna Connector	1 x I-PEX MHF® 4 (extendable)
Display	HDMI	1, Supports up to 3840x2160 @ 30 Hz
	MIPI DSI	1, Supports 2 lane up to 2 Gbps, 1280 x 720 @ 60 Hz (15-pin)
	Multi Display	HDMI+MIPI DSI
Camera	MIPI CSI-2	1, Supports 2 lane up to 2 Gbps (15-pin)
Audio	3.5 Audio Jack*	1, Realtek ALC4030U Codec *Supports audio jack plug-in detection
	HDMI Audio	1
	I2S	1, in 40-pin header
	S/PDIF	1, contact points
Rear I/O	USB 2.0 Type-A	4
	Ethernet	1
	3.5 Audio Jack	1
	HDMI	1
Internal I/O	40-pin header	- up to 28 x GPIO pins - up to 2 x SPI bus - up to 2 x I2C bus - up to 4 x UART - up to 2 x PWM - up to 1 x PCM/I2S (master/slave) - 2 x 5V power pins - 2 x 3.3V power pins - 8 x ground pins
	2-pin Contact Point	1 x PWM signal 1 x S/PDIF signal
	Power-on Header	1 (2-pin)
	Recovery Header	1 (2-pin)
	Power	Power Input
Environment	Operating Temperature	0~60°C
	Storage Temperature	-40~85°C
	Relative Humidity	0 to 85% (non-condensing)
Others	Operating System	Linux Debian 10, Android (AOSP) 11
	Dimensions	3.37" x 2.125" (85 x 56 mm)

Block Diagram



Ordering Information

PN	Model Name	Description
90ME03H1-*	TINKER BOARD S R2.0/A/2G/16G	QUAD-CORE PROCESSOR, ARM-MALI T760 MP4 GPU, 2GB DUAL CH MEMORY, 16GB EMMC, HDMI CEC, GB LAN, Wi-Fi B/G/N, BLUETOOTH

Packing List

Item#	Description
1.	1 x Heatsink
2.	1 x Quick Start Guide

Optional Accessories

Item#	Description
Power Adapter 15W	DC 5V/3A (Micro USB)
Fanless Case	Aluminum Fanless Case
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