

TINKER BOARD 3N

Arm SBC, Rockchip RK3568 Quad-core, LPDDR4X RAM, eMMC, HDMI, LVDS, eDP, Dual Lan, POE, COM 232/422/485, CAN Bus

SPECIFICATION



Features

- Quad-core ARM Cortex-A55 SoC
- Multiple displays support HDMI / LVDS / eDP
- COM RS-232/422/485, CAN Bus 2.0
- Wide range DC power 12V~24V and O.P. temperature up to -40~85°C
- Linux Debian 11, Yocto, Android 12 supported

Specifications

*Spec by SKU

Processor	SoC	Rockchip RK3568		
	CPU	Quad-core Arm® Cortex®-A55		
	GPU	Arm® Mali™-G52 GPU		
Memory	Technology	Dual-CH LPDDR4X On-board		
	Size*	2GB / 4GB / 8GB		
Storage	Memory Card	1 x Micro SD (TF) card slot (push & pull)		
	eMMC*	none / 32GB / 64GB		
	SPI Flash*	16MB	(optional)	
Ethernet	Speed	10/100/1000 Mbps		
	Controller*	2 x Realtek RTL8211	1 or 2 x Realtek RTL8211 (optional)	
	POE PD*	1 x one LAN support POE via module card, 802.3at 25W (separate)		
Expansion	M.2 E key 2230	1 x for Wi-Fi 5/6 & BT (PCIe 2.0 x1, USB 2.0) Default for 1 x 802.11 a/b/g/n/ac wireless & BT 5.0 (2T2R)		
	M.2 B key 3042/3052* with nano-SIM slot*	1 x for 4G/5G/SSD (PCIe 3.0 x1, USB 3.0, USB 2.0, SIM)	(optional)	
Display	HDMI	1 x Supports up to 4096 x 2160 @ 60 Hz		
	LVDS	1 x Supports up to 1920 x 1080 @ 60 Hz (Dual-link)		
	eDP	1 x Supports up to 2560 x 1600 @ 60 Hz		
	Multi Display	HDMI + LVDS or HDMI + eDP		
Audio	Audio Out	1 x 3.5 Phone Jack with Mic-in		
	Speaker Out	1 x 4-pin stereo, 4ohm, 2 x 3W		
	S/PDIF	1 x 1-pin in GPIO header		
USB	USB 3.2 Gen1	1 x Type-C® OTG		
	USB 3.2 Gen1 Type-A	2 x Type-A		
	USB 2.0	1 x 9-pin header (2 ports)		
Serial Interface	CAN Bus 2.0B FD*	1 x 3-Pin header	(optional)	
	COM RS232 (w/ flow control)*	2 x 5-Pin header	1 or 2 x 5-Pin header (optional)	
	COM RS232/422/485	1 x 5-Pin header		
Other Internal I/O & Header	14-pin GPIO	1 x 5V 1 x 3.3V 1 x GND 2 x ADC (8 bit) 1 x I2C bus up to 4 x PWM up to 2 x UART up to 1 x SPI bus (2 select) up to 1 x S/PDIF		
	Debug UART	1 x 3-pin header		
	Power-on & Reset & Power LED	1 x 6-pin header		
	DC Fan Connector	1 x 4-pin		
	RTC Battery	1 x 2-pin		
	Recovery	1 x 2-pin header		
	Maskrom (SPI Flash)*	1 x 2-pin header		
	Maskrom (eMMC)	1 x DIP switch		
	IR Receiver	1 x 3-pin		
	LED side view	3 x Power, Disk, Reserve		
	Power	Power Input (12 ~ 24V)	1 x DC Barrel Power Input Jack (5.5/2.5 mm) 1 x 4-Pin Power In Header (also for POE module)	
		Environment	Operating Temperature*	-40 ~ 85 °C
	Storage Temperature		-40 ~ 85 °C	
	Relative Humidity		10 ~ 85% (non-condensing)	
Others	Operating System	Linux Debian 11, Yocto, Android 12		
	Dimensions	4" x 4" (100 x 100 mm)		