

Datasheet

ASUS IoT

Tinker Board 3N, 3N Plus, 3N Lite

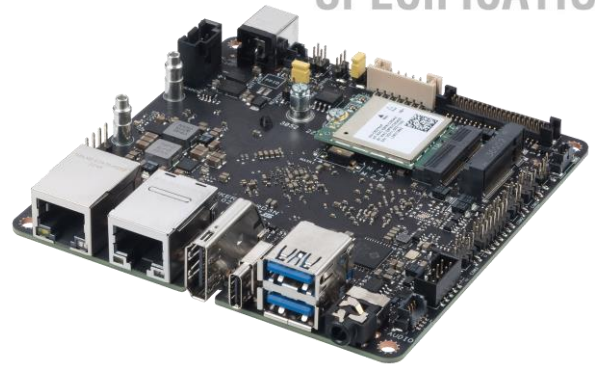
TINKER BOARD 3N

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

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 Debain 11, Yocto, Android 12 supported

Specifications



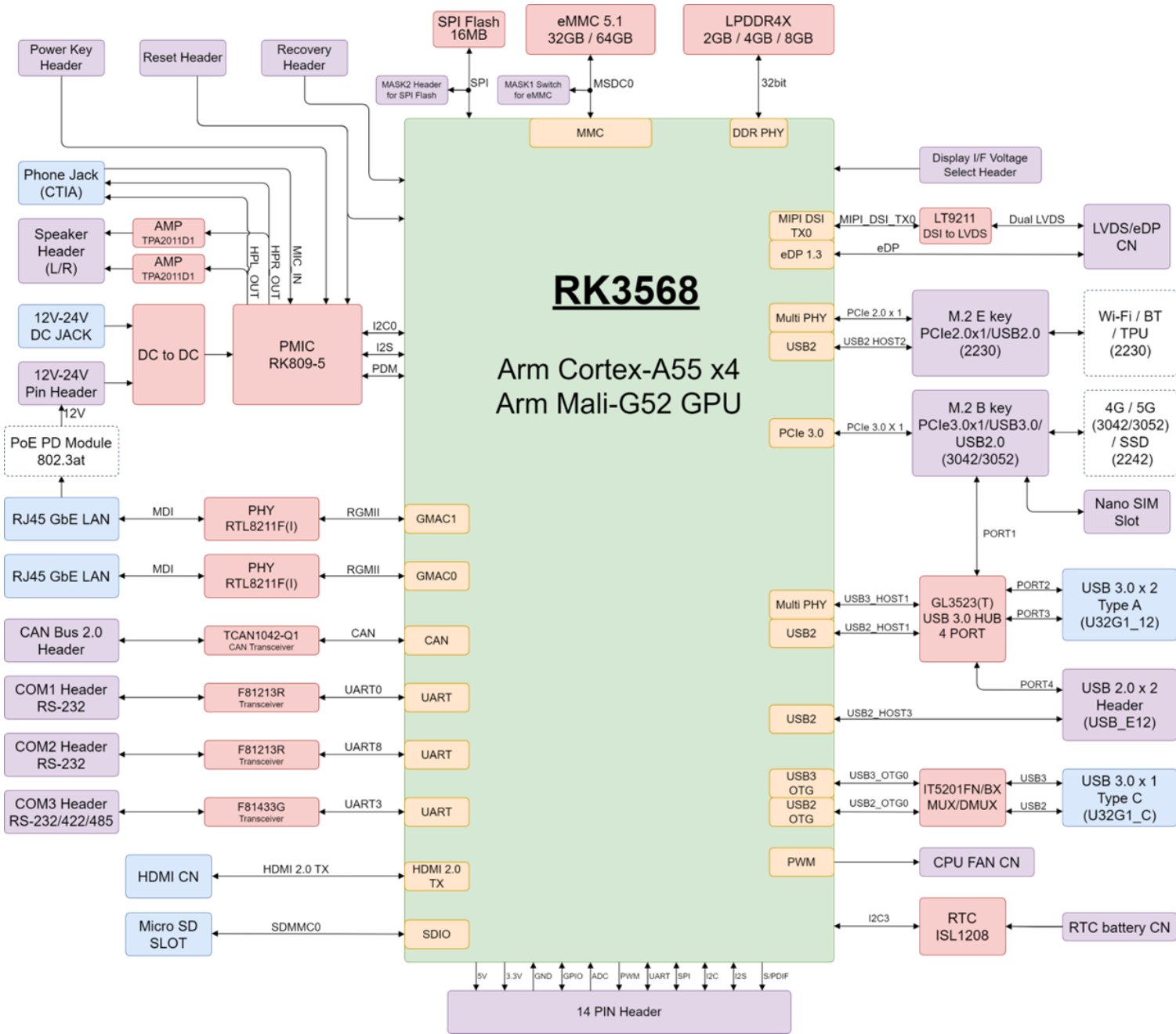
SPECIFICATION

	SKU Type	3N PLUS	3N	3N LITE
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	2GB / 4GB / 8GB	
Storage	Memory Card	1 x Micro SD (TF) card slot (push & pull)		
	eMMC*	none / 32GB / 64GB		
	SPI Flash	16MB	n/a	
Ethernet	Speed	10/100/1000 Mbps		
	Controller	2 x Realtek RTL8211		1 x Realtek RTL8211
	POE PD	1 x one LAN support POE via module card, 802.3at 25W (separate)		n/a
Wireless	Wi-Fi / BT*	1 x Wi-Fi 5 & BT 5.0 (2T2R), default occupied M.2 E key		
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)		n/a
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	1 x 3-Pin header		n/a
	COM RS232 (w/ flow control)	2 x 5-Pin header		1 x 5-Pin header
	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), up to 11 x GPIO, up to 1 x I2C bus, up to 2 x UART, up to 1 x SPI bus (2 select), up to 4 x PWM, up to 1 x I2S bus, up to 1 x S/PDIF		
	Debug UART	1 x 3-pin header		
	Power-on & Reset	1 x 4-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		n/a
	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		
	Operating Temperature	-40 ~ 85℃	0 ~ 60℃	
Environment	Storage Temperature	-40 ~ 85℃		
	Relative Humidity	10 ~ 85% (non-condensing)		
	Operating System	Linux Debian 11, Yocto, Android 12		
Others	Dimensions	4" x 4" (100 x 100 mm)		

*Spec by SKU

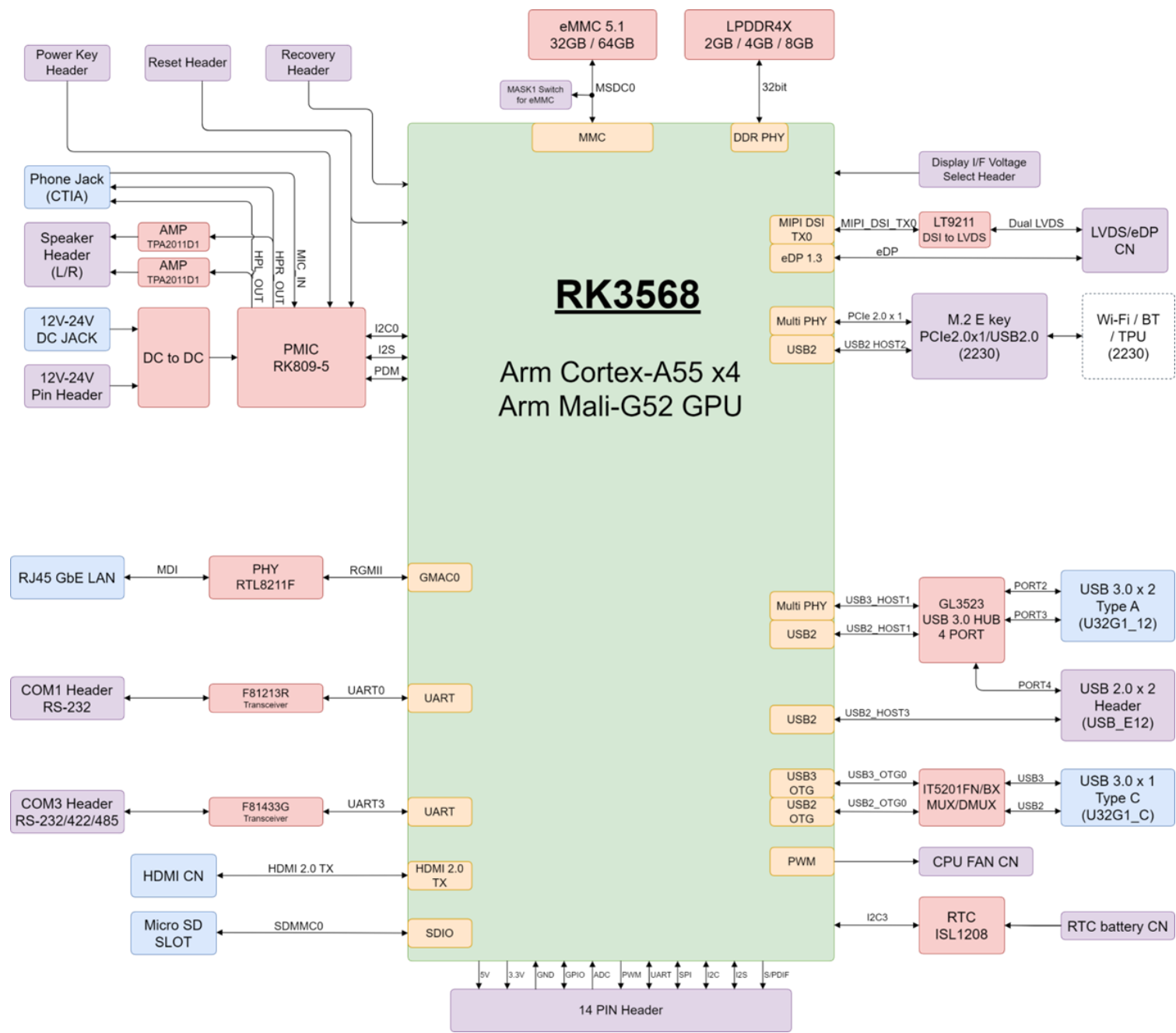
Block Diagram

Tinker Board 3N Plus
Tinker Board 3N



Block Diagram

Tinker Board 3N Lite



Ordering Information

SPECIFICATION

PN	Model Name	Description
90ME06K0*	TINKER BOARD 3N PLUS/4G/32G	Arm SBC, RK3568 Qual-core, 4GB RAM, 32G eMMC, SPI, M.2 B, 2xLAN, 3xCOM, CAN, 12~24V, -40~85°C
90ME06K1*	TINKER BOARD 3N/4G/32G	Arm SBC, RK3568 Qual-core, 4GB RAM, 32G eMMC, SPI, M.2 B, 2xLAN, 3xCOM, CAN, 12~24V, 0~60°C
90ME06K2*	TINKER BOARD 3N LITE/2G/32G	Arm SBC, RK3568 Qual-core, 2GB RAM, 32G eMMC, LAN, 2xCOM, 12~24V in, 0~60°C

Packing List

Item#	Description
1.	1 x WiFi Antenna

Optional Accessories

Item#	Description
90AN00C*	Power Adapter 65W
90ME08B*	PoE Board 802.3at
90ME08A*	Backlight Board 5V to 12V

*Accessories will be shipped separately apart from PoE Board and Backlight Board

Our company network supports you worldwide with offices in Germany, Austria, Switzerland, the UK and the USA. For more information please contact:

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