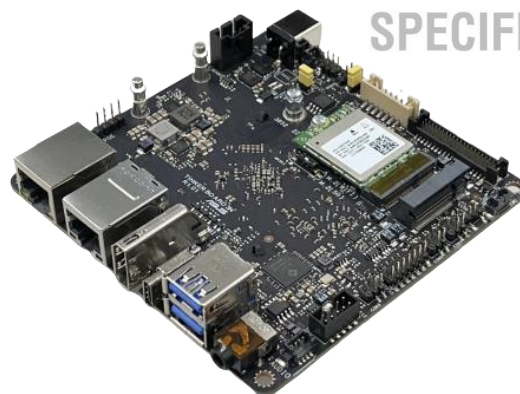


TINKER BOARD 3N

Arm SBC, Rockchip RK3568 Quad-core, LPDDR4X RAM, eMMC, HDMI, LVDS, eDP, Dual Lan, POE, RS-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 Debain 11, Yocto, Android 12 supported

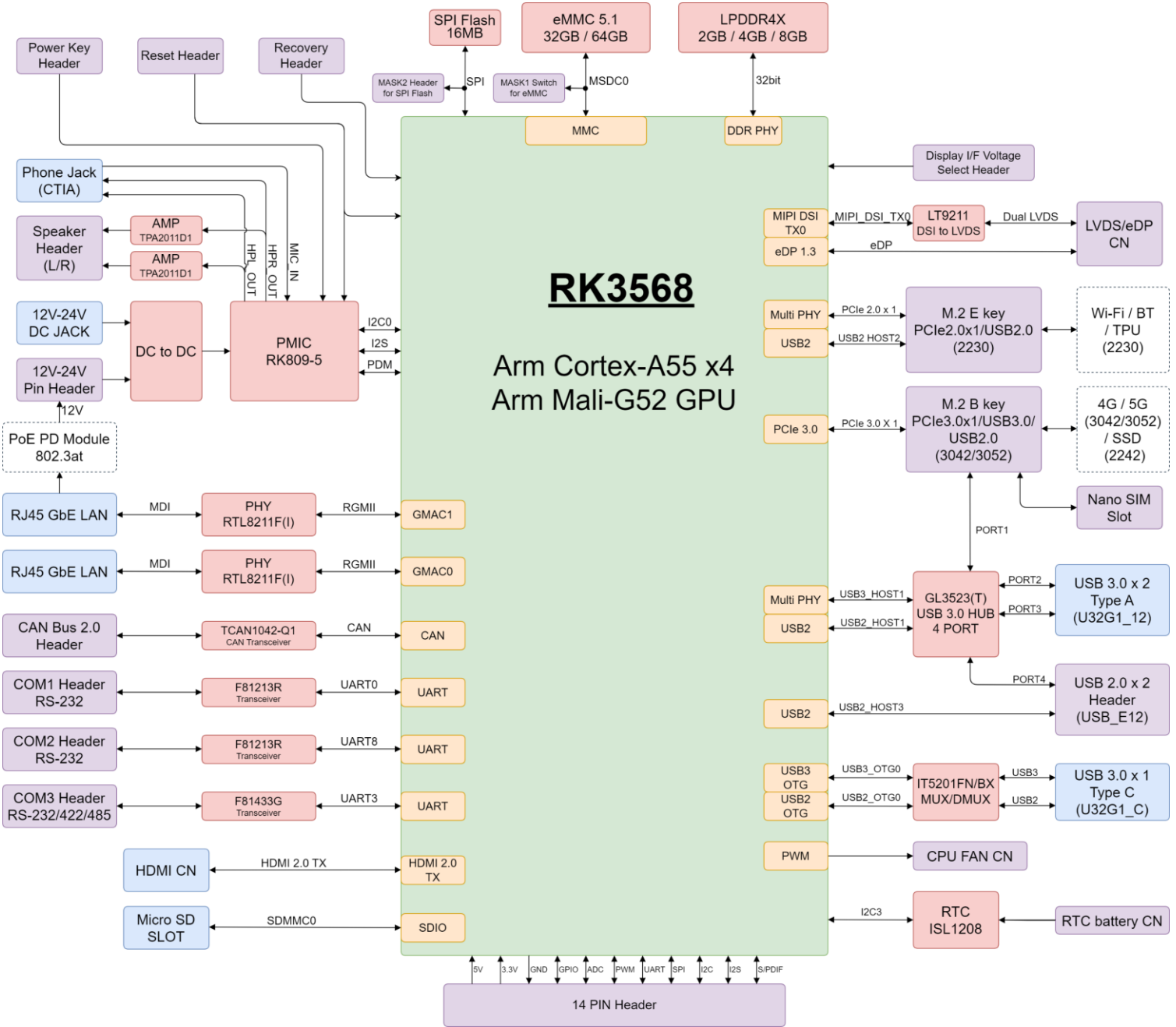
Specifications

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), 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	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		
	Environment	Operating Temperature	-40 ~ 85°C	0 ~ 60°C
Storage Temperature		-40 ~ 85°C		
Relative Humidity		10 ~ 85% (non-condensing)		
Others	Operating System	Linux Debain 11, Yocto, Android 12		
	Dimensions	4" x 4" (100 x 100 mm)		

*Spec by SKU

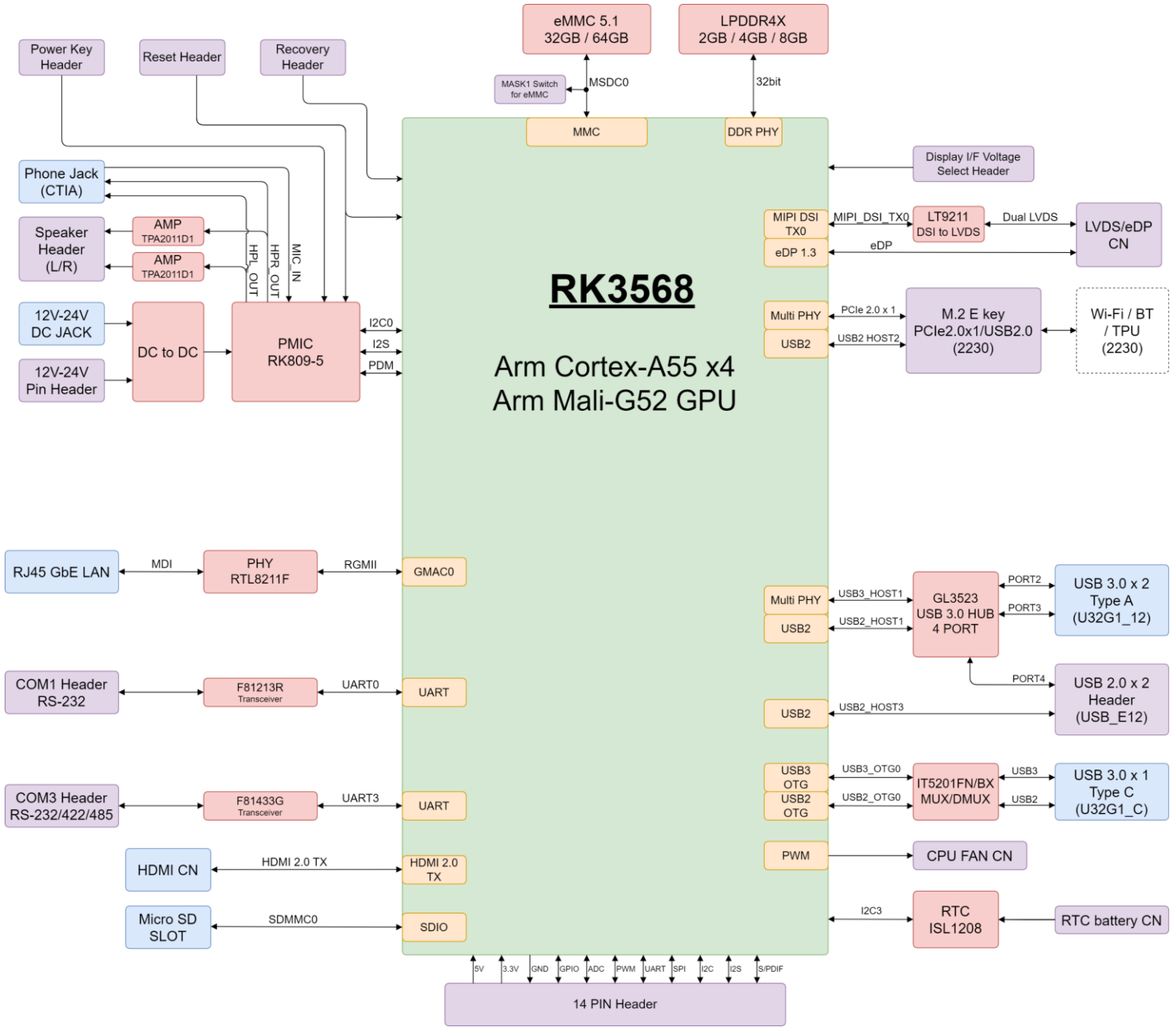
Block Diagram

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