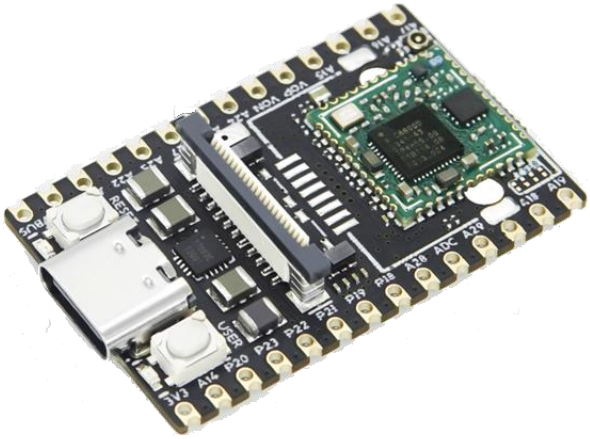
LicheeRV Nano

Specification v1.0



Update record of this document

Version	Release note
V1.0	Edited on January 25, 2024. Original document.

1. Overview

1.1 Hardware overview

Component	Hardware specification
LicheeRV Nano	SOC: SOPHGO SG2002 - P-CORE: 1x 1GHz RISC-V C906 / ARM A53 (Pick 1 of 2) - E-CORE: 1x 700MHz RISC-V C906 - LP E-CORE: 1x 25~300MHz MCS-51 - NPU: 1TOPS INT8 with BF16 support
	Memory: SIP 2Gbit (256MByte) DDR3
	Storage: microSD Card/SD NAND (Pick 1 of 2), up to 1TB
	Display: MPI DSI x2, 31P 0.5mm Pitch FPC Conn., with additional CTP 6P FPC Conn.
	Audio: - Record: 1-Ch MEMS Mic, SNR=55dB(A), Typ. Sensitivity Range= -42dB - Play: Onboard 1W Audio PA
	Network: - Dual band Wi-Fi 6 with Bluetooth 5.4 (W/WE Edition) - 100Mbps Fast Ethernet (E/WE Edition)
	USB: 1x USB-C OTG (USB2, up to 480Mbps)
	IO Pins: 2x14P 2.54mm Pitch, spacing 800mil, breadboard support
	Peripherals: 1x Power LED, 1x USR LED, 1x RST button, 1x BOOT button
	System: Buildroot Linux, Debian/Fedora(porting)
	Size: 22.9mm x 35.6mm (±0.5mm)

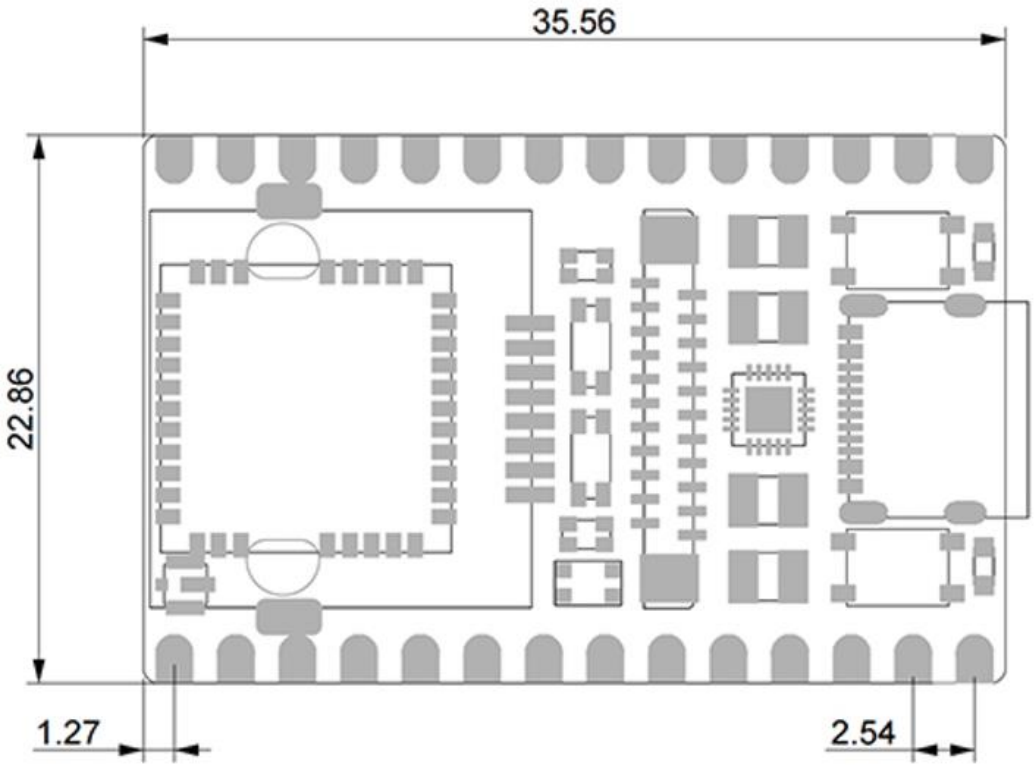
1.2 Working conditions

Item	Description
Power	Voltage: 3.6~5.5V Current: Depending on actual operating conditions, maximum 1A
Tempera√和× rise	< 50K
Operating tempera√和×	0℃ ~50℃

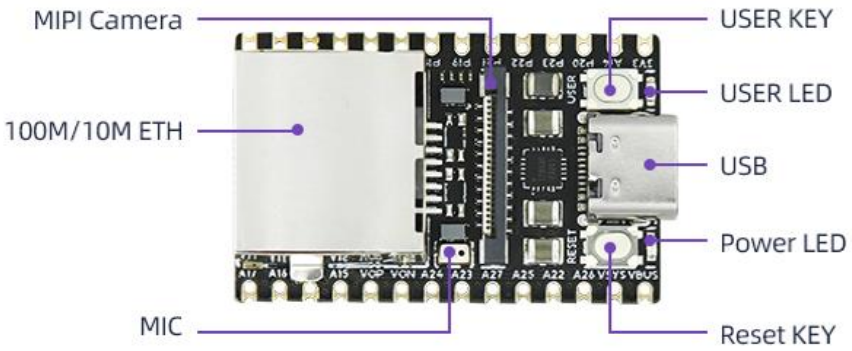
2. Appearance

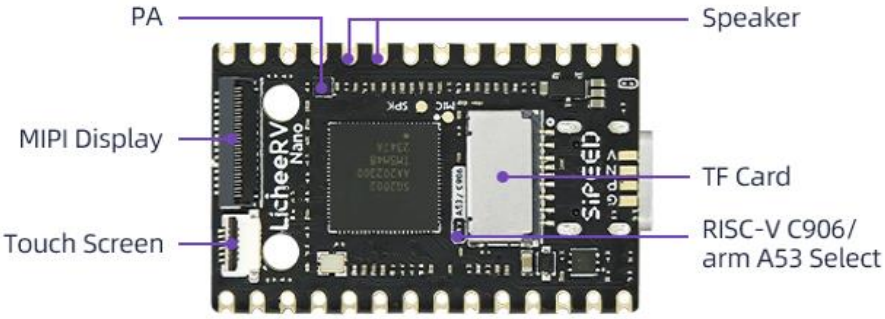
2.1 Size of LicheeRV Nano

Item	Description
Length	22.9 mm
Width	35.6 mm
Thickness	3.9 mm

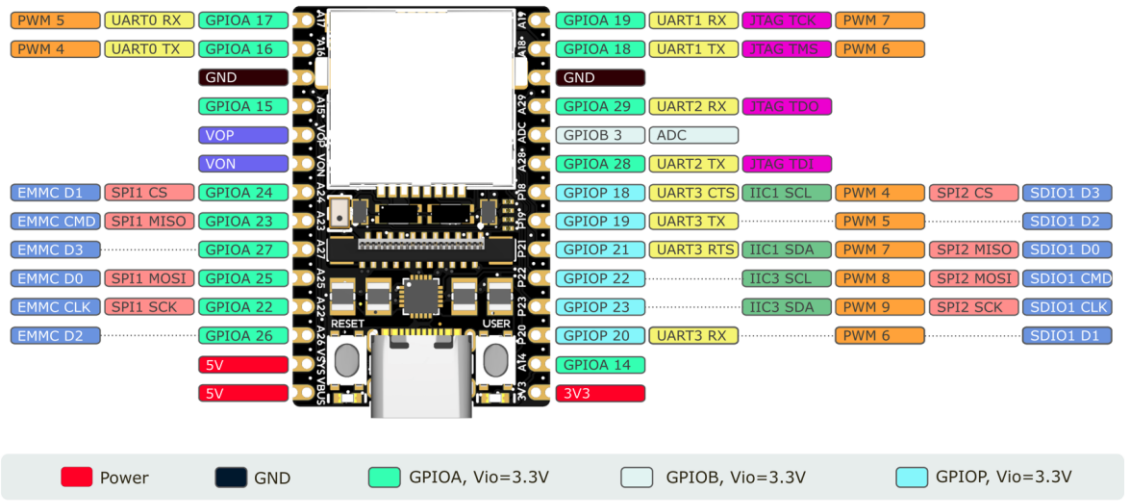


2.2 Functional Annotation





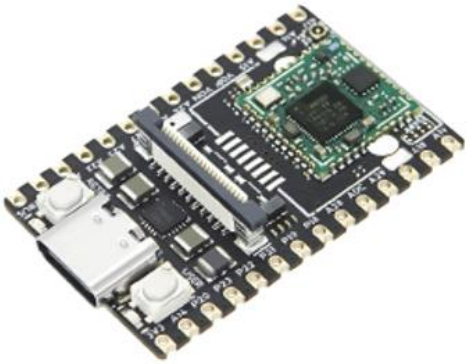
2.3 Pin Map



2.4 Suffix Information

LicheeRV-Nano-B

LicheeRV-Nano-E



LicheeRV-Nano-W

LicheeRV-Nano-WE

Model	Basis	Audio	Ethernet	Wi-Fi/BT
LicheeRV-Nano-B	√	√	×	×
LicheeRV-Nano-E	√	√	√	×
LicheeRV-Nano-W	√	√	×	√
LicheeRV-Nano-WE	√	√	√	√

4. Attentions

Item	Description
ESD protection	Please pay attention to avoid static electricity hitting PCBA. Please release the static electricity from the handle before contacting PCBA
Tolerance voltage	The working voltage of each GPIO has been marked in the schematic. Please do not let the actual working voltage of GPIO exceed the rated value, otherwise it will cause permanent damage to PCBA
Avoid short circuit	Please avoid any liquid or metal touching the pads of components on PCBA during power on, otherwise it will cause short circuit and burn PCBA

5. Resources

item	Address
Official website	www.sipeed.com
Github	https://github.com/Sipeed
BBS	http://bbs.sipeed.com
Wiki	wiki.sipeed.com
Sipeed Model platform	https://maixhub.com/
SDK /HDK	https://dl.sipeed.com/
E-Mail (Technical support and business cooperation)	support@sipeed.com