NanoPi NEO Air

Features

CPU: Allwinner H3, Quad-core Cortex-A7 Up to 1.2GHz

RAM: 512MB DDR3 RAM

Storage: 8GB eMMC

WiFi: 802.11b/g/n

Bluetooth: 4.0 dual mode

MicroSD Slot x 1

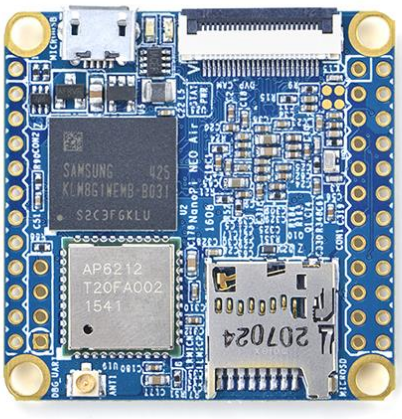
GPIO: 2.54mm pitch 24pin. It includes UART, SPI, I2C, IO etc

PCB Size: 40 x 40mm

Power Supply: DC 5V/2A

OS/Software: u-boot, UbuntuCore

Weight: 7.5g(WITHOUT Pin-headers); 9.7g(WITH Pin-headers)



Vertical View (Front)

Vertical View (Back)

Applications of NanoPi NEO Air

Linux

Boot OS from TF Card

UbuntuCore

GPIO Pin Spec

Pin#	Name	Linux gpio	Pin#	Name	Linux gpio
1	SYS_3.3V		2	VDD_5V	
3	I2C0_SDA		4	VDD_5V	
5	I2C0_SCL		6	GND	
7	GPIOG11	203	8	UART1_TX/GPIOG6	198
9	GND		10	UART1_RX/GPIOG7	199
11	UART2_TX/GPIOA0	0	12	PWM1/GPIOA6	6
13	UART2_RTS/GPIOA2	2	14	GND	
15	UART2_CTS/GPIOA3	3	16	UART1_RTS/GPIOG8	200
17	SYS_3.3V		18	UART1_CTS/GPIOG9	201
19	SPI0_MOSI/GPIOC0	64	20	GND	
21	SPI0_MISO/GPIOC1	65	22	UART2_RX/GPIOA1	1
23	SPI0_CLK/GPIOC2	93	24	SPI0_CS/GPIOC3	67

USB/Audio/IR Pin Description

NanoPi-NEO-AIR			NanoPi-NEO-AIR		
Pin#	Name	Description	Pin#	Name	Description
1	VDD_5V	5V Power Out	1	VDD_5V	5V Power Out
2	USB-DP1	USB1 DP Signal	2	USB-DP1	USB1 DP Signal
3	USB-DM1	USB1 DM Signal	3	USB-DM1	USB1 DM Signal
4	USB-DP2	USB2 DP Signal	4	USB-DP2	USB2 DP Signal
5	USB-DM2	USB2 DM Signal	5	USB-DM2	USB2 DM Signal
6	GPIOL11/IR-RX	GPIOL11 or IR Receive	6	GPIOL11/IR-RX	GPIOL11 or IR Receive
7	SPDIF-OUT/GPIOA17	GPIOA17 or SPDIF-OUT	7	SPDIF-OUT/GPIOA17	GPIOA17 or SPDIF-OUT
8	MICIN1P	Microphone Positive Input	8	PCM0_SYNC/I2S0_LRC	I2S/PCM Sample Rate Clock/Sync
9	MICIN1N	Microphone Negative	9	PCM0_CLK/I2S0_BCK	I2S/PCM Sample

		Input			Rate Clock
10	LINEOUTR	LINE-OUT Right Channel Output	10	PCM0_DOUT/I2S0_SDOUT	I2S/PCM Serial Bata Output
11	LINEOUTL	LINE-OUT Left Channel Output	11	PCM0_DIN/I2S0_SDIN	I2S/PCM Serial Data Input
12	GND	0V	12	GND	0V

Debug Port（UART0）

Pin#	Name
1	GND
2	VDD_5V
3	UART_TXD0
4	UART_RXD0

Note:

1. SYS_3.3V: 3.3V power output
2. VVDD_5V: 5V power input/output. When the external device’s power is greater than the MicroUSB's the external device is charging the board otherwise the board powers the external device. The input range is 4.7V ~ 5.6V
3. All pins are 3.3V, output current is 5mA