

# Hardware

- [Debug-UART](#)
- power-on: hold power-switch 10 seconds, without power-switch: [Forum](#)
  - solder bridge next to power switch. Can cause problems since poweroff-feature. To fix this blacklist pmic-keys-module or uninstall acpid package see [issue 35](#)
  - input 5V to OTG
- poweroff (4.14.53+) needs acpid package for power-button (command works without it)
  - <http://forum.banana-pi.org/t/bpi-r2-already-has-an-on-board-rtc/5347/31>
- emmc: [Forum](#)
  - emmc on v1.2 is maybe from vendor SEC which needs different pinctrl setting (pu/pd) in uboot to be recognized: [forum](#) issue was introduced in u-boot 2022.04 and fixed with patch from daniel (for 2023.07)
- wifi-chip onBoard: MT6625 [Forum](#) (dev) [Forum](#) (usr)
- Switch-Chip onBoard: MT7530 [Forum](#)
- [GPIO](#)



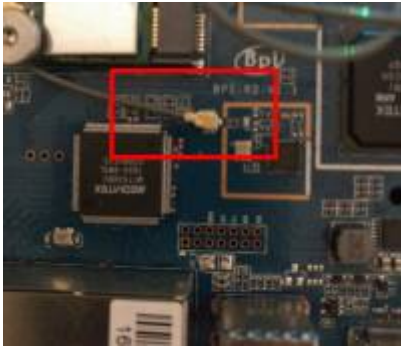
## additional hardware

- Power-supply: 12V/2A recommended, plug coaxial: 2,1 x 5,5 mm [Reichelt](#)
- microSD-card ( $\geq 8$ GB): Sandisk Ultra 32GB
- WLAN-antennas: 5dBi mit rp-SMA auf IPEX/u-FL Kabel
- PCIe wifi-card: [Forum](#)  $\Rightarrow$  [MT76](#)
- case:
  - official: [alu-case](#), [acrylic case](#)
  - unofficial [files for 3D Printer](#)
- heatsinks:
  - mt7623: 20x20mm
  - mt7530: 14x14mm (like rpi soc)

## cables

### wifi

- rp-SMA to IPEX/u-FL cable for wifi-antennas



## SATA

- 2,54mm XH 2pin/4pin for SATA power or 2-Pin combined with SATA



it works with GND next to power (1+2,3+4). 12V is yellow, 5V is red

both jacks near sata-connector have voltage, also if R2 is „halted“, the fan-jack (near IR-receiver) had no direct-current output in my tests (4.14), this seems my gnd there is broken...with another gnd i have the 5V output

## battery

- 1,25mm SH 6pin for battery [AliExpress](#), no circuit known battery-connector does not work [see here](#)

## mount

- wifi mPCIe-card bolted with M2x10 screws and knurled nut + 2 x washers of Polyamid (isolation+protection of the board)

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