

DC JACK
220uF/16V

VDD_IN

C4
0.1uF

R1
1.5K

R2
1.5K

U1
AX3101

VCC
3.3V

SW
SW

EN
EN

FB
FB

VSS
GND

L1
220uH

D1
60V

SW
SW

Vout = 3.3V

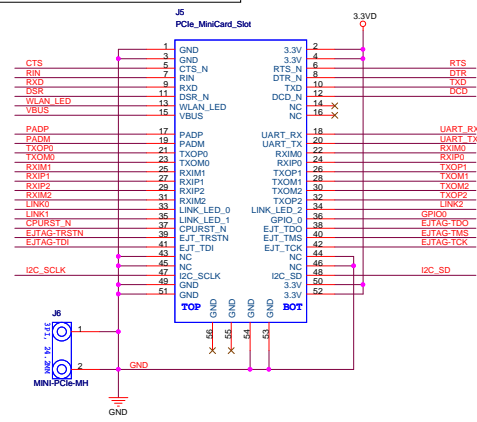
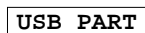
3.3V

R3
4.7K

C2
10uF

R12
1.5K

Vout = 0.8 * (1 + R1/R2)



The schematic diagram illustrates the test setup for the microcontroller. A 3.3V DC supply is connected to a 10K resistor (R43) and a 2.2uF capacitor (C46) in parallel. The output of this network is connected to the CPU_RST_N pin of the microcontroller. The microcontroller has four pins labeled MOUNT-HOLE, each connected to a ground symbol.

The diagram illustrates the wiring for the Raspberry Pi 4B's GPIO pins. It shows a breadboard with a 48-pin header. The top row of pins (pins 1-20) is connected to a 5V power source (labeled 'Power LED'). The bottom row of pins (pins 21-40) is connected to a GND source. The middle pins (pins 41-54) are connected to various LEDs and resistors. The connections are as follows:

- GPIO 1 is connected to DC_SD (pin 41), WLAN_LED (pin 42), LINK2 (pin 43), LINK1 (pin 44), and LINK0 (pin 45).
- GPIO 14 is connected to ETJAG-TXK (pin 46), ETJAG-TDI (pin 47), and ETJAG-TRSTN (pin 48).
- D3 is connected to LED (pin 49).
- D4 is connected to LED (pin 50).
- D5 is connected to LED (pin 51).
- D6 is connected to LED (pin 52).
- D7 is connected to LED (pin 53).
- D8 is connected to LED (pin 54).
- D9 is connected to LED (pin 55).
- D10 is connected to LED (pin 56).
- D11 is connected to LED (pin 57).
- D12 is connected to LED (pin 58).
- D13 is connected to LED (pin 59).
- D14 is connected to LED (pin 60).
- D15 is connected to LED (pin 61).
- D16 is connected to LED (pin 62).
- D17 is connected to LED (pin 63).
- D18 is connected to LED (pin 64).
- D19 is connected to LED (pin 65).
- D20 is connected to LED (pin 66).
- D21 is connected to LED (pin 67).
- D22 is connected to LED (pin 68).
- D23 is connected to LED (pin 69).
- D24 is connected to LED (pin 70).
- D25 is connected to LED (pin 71).
- D26 is connected to LED (pin 72).
- D27 is connected to LED (pin 73).
- D28 is connected to LED (pin 74).
- D29 is connected to LED (pin 75).
- D30 is connected to LED (pin 76).
- D31 is connected to LED (pin 77).
- D32 is connected to LED (pin 78).
- D33 is connected to LED (pin 79).
- D34 is connected to LED (pin 80).
- D35 is connected to LED (pin 81).
- D36 is connected to LED (pin 82).
- D37 is connected to LED (pin 83).
- D38 is connected to LED (pin 84).
- D39 is connected to LED (pin 85).
- D40 is connected to LED (pin 86).
- D41 is connected to LED (pin 87).
- D42 is connected to LED (pin 88).
- D43 is connected to LED (pin 89).
- D44 is connected to LED (pin 90).
- D45 is connected to LED (pin 91).
- D46 is connected to LED (pin 92).
- D47 is connected to LED (pin 93).
- D48 is connected to LED (pin 94).
- D49 is connected to LED (pin 95).
- D50 is connected to LED (pin 96).
- D51 is connected to LED (pin 97).
- D52 is connected to LED (pin 98).
- D53 is connected to LED (pin 99).
- D54 is connected to LED (pin 100).

Each LED is connected to a 330Ω resistor. The LEDs are labeled: Power LED, System(RUN), Wireless ACT LED, LAN2 Port LED, LAN1 Port LED, WAN Port LED, WPS, UART1, and UART2.

The schematic diagram illustrates the internal circuitry of the LAN1 module, which consists of two identical channel sections, CH-GND1 and CH-GND2, connected to LAN1 and LAN2 respectively. Each channel section includes a transformer (L5, L6 for LAN1; L9, L10 for LAN2), a matching network (C3, C4 for LAN1; C3, C4 for LAN2), and a termination network (C2, C5). The diagram shows connections for TXOP, TXOM, RXIP, RXIM, and RD lines, as well as power and ground connections.

LAN1 Section:

- TXOP1, TXOM1:** Connected to L5 (MMZ1005D330C) and L6 (MMZ1005D330C).
- RXIP1, RXIM1:** Connected to L7 (MMZ1005D330C) and L8 (MMZ1005D330C).
- Matching Network:** C3 (10pF) and C4 (1.2nF) are connected to the transformer outputs.
- Termination Network:** C2 (0.1uF) and C5 (1nF / 2KV) are connected to the transformer inputs.
- Power and Ground:** CTAB, GND, and L4 (MPZ1608S121) are connected to the transformer inputs.

LAN2 Section:

- TXOP2, TXOM2:** Connected to L9 (MMZ1005D330C) and L10 (MMZ1005D330C).
- RXIP2, RXIM2:** Connected to L11 (MMZ1005D330C) and L12 (MMZ1005D330C).
- Matching Network:** C3 (10pF) and C4 (1.2nF) are connected to the transformer outputs.
- Termination Network:** C2 (0.1uF) and C5 (1nF / 2KV) are connected to the transformer inputs.
- Power and Ground:** CTAB, GND, and L4 (MPZ1608S121) are connected to the transformer inputs.

Connections:

- TXOP1, TXOP2:** Connected to P3 and P4.
- TXOM1, TXOM2:** Connected to P3 and P4.
- RXIP1, RXIP2:** Connected to P3 and P4.
- RXIM1, RXIM2:** Connected to P3 and P4.
- RD1, RD2:** Connected to P3 and P4.
- CH-GND1, CH-GND2:** Connected to P3 and P4.