

### Camera Output

Tip - Shutter  
Ring - Focus  
Sleeve - GND

AudioJack

J2

U3  
PS2501-1

U5  
PS2501-1

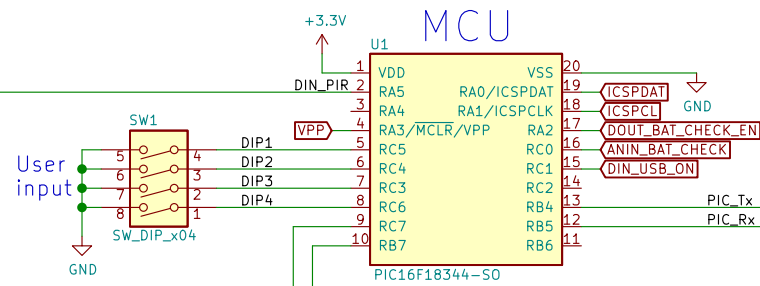
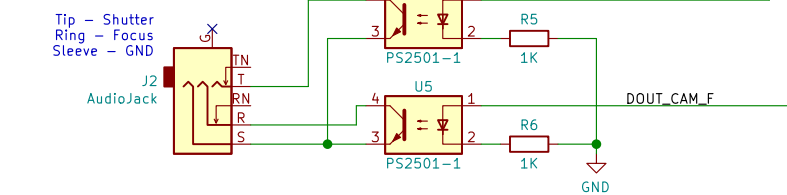
R5  
1K

R6  
1K

DOUT\_CAM\_S

DOUT\_CAM\_F

GND



# USB to Serial

The diagram illustrates a USB to Serial converter circuit. The main components are the CH340G IC (U2) and the IP4220CZ6 IC (U4).

**CH340G IC (U2) Pin Connections:**

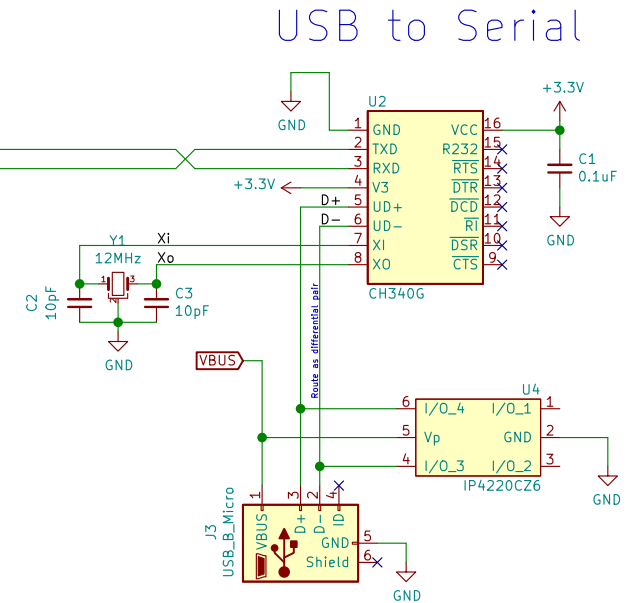
- Pin 1: GND
- Pin 2: TXD
- Pin 3: RXD
- Pin 4: V3
- Pin 5: D+
- Pin 6: D-
- Pin 7: UD-
- Pin 8: XI
- Pin 9: XO
- Pin 10: CTS
- Pin 11: VCC
- Pin 12: R232
- Pin 13: RTS
- Pin 14: DTR
- Pin 15: DCD
- Pin 16: RI

**IP4220CZ6 IC (U4) Pin Connections:**

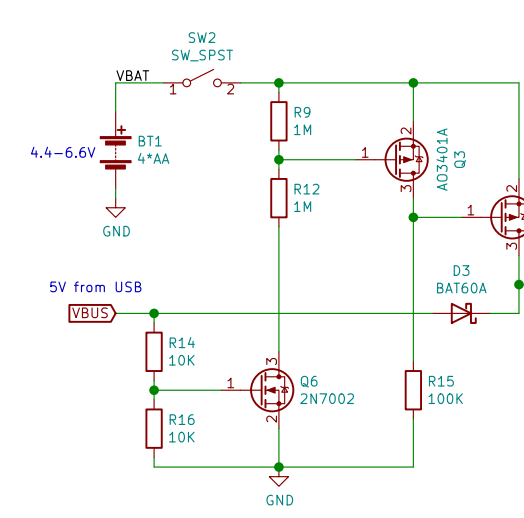
- Pin 1: I/O\_4
- Pin 2: I/O\_1
- Pin 3: GND
- Pin 4: I/O\_3
- Pin 5: I/O\_2
- Pin 6: Vp

**Other Components and Connections:**

- Power Supply:** +3.3V and GND are connected to the VCC pins of both ICs.
- Crystal Oscillator:** A 12MHz crystal (Y1) is connected to the XI and XO pins of the CH340G. It is also connected to GND through capacitors C2 (10pF) and C3 (10pF).
- Capacitors:** C1 (0.1uF) is connected to the +3.3V supply. C2 (10pF) and C3 (10pF) are connected to the crystal oscillator circuit.
- USB Connector (J3):** The USB\_B\_Micro connector is connected to the D+ and D- pins of the CH340G. The VBUS pin is connected to the Vp pin of the IP4220CZ6. The ID pin is connected to GND. The Shield pin is connected to GND.
- Signal Routing:** The TXD pin of the CH340G is connected to the I/O\_4 pin of the IP4220CZ6. The RXD pin of the CH340G is connected to the I/O\_3 pin of the IP4220CZ6.

[illegible]

Power supply must be able to manage battery voltage 4.4 → 6.6V  
Must not supply any battery voltage to VBUS (USB port)



VBUS Monitor

+3.3V

R7 10K

MCU input with built in weak pullup

DIN\_USB\_ON

R8 1K

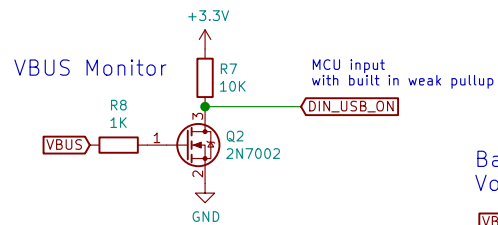
VBUS

1

Q2 2N7002

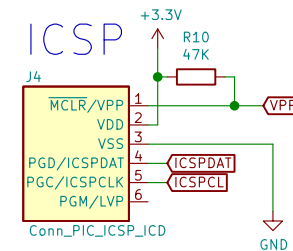
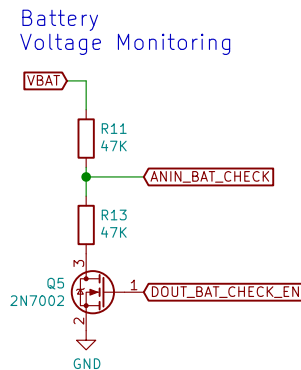
2

GND



## Battery Voltage Monitoring

The diagram illustrates a battery voltage monitoring circuit. It features a 2N7002 MOSFET (Q5) with its gate connected to a green line labeled 'ANIN\_BAT\_CHECK'. The drain of the MOSFET is connected to a green line labeled 'DOUT\_BAT\_CHECK\_EN'. The source of the MOSFET is connected to ground (GND). Two resistors, R11 and R13, both labeled '47K', are connected in series between the VBAT line and the gate of the MOSFET. The VBAT line is shown as a green line with a red box labeled 'VBAT' at the top. The GND is represented by a green line with a red triangle symbol at the bottom.



A schematic diagram of a 4-pin header. It consists of a vertical green line with four green circular nodes. To the right of each node is a red circular symbol representing a mounting hole. Labels are placed to the right of each mounting hole: 'H1' and 'MountingHole\_Pad' for the top hole, 'H2' and 'MountingHole\_Pad' for the second hole, 'H3' and 'MountingHole\_Pad' for the third hole, and 'H4' and 'MountingHole\_Pad' for the bottom hole. At the bottom of the vertical line is a red triangle pointing downwards, labeled 'GND'.

