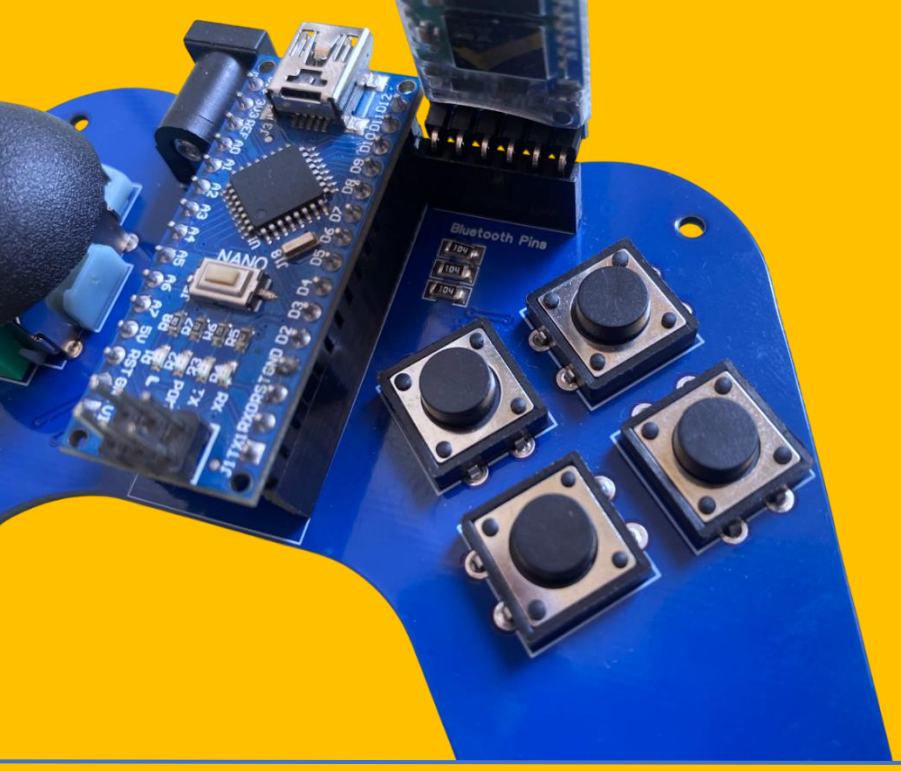
TECHDOM

Your Learning Partner

DomStick: Bluetooth Game Controller PCB Based on Arduino Nano



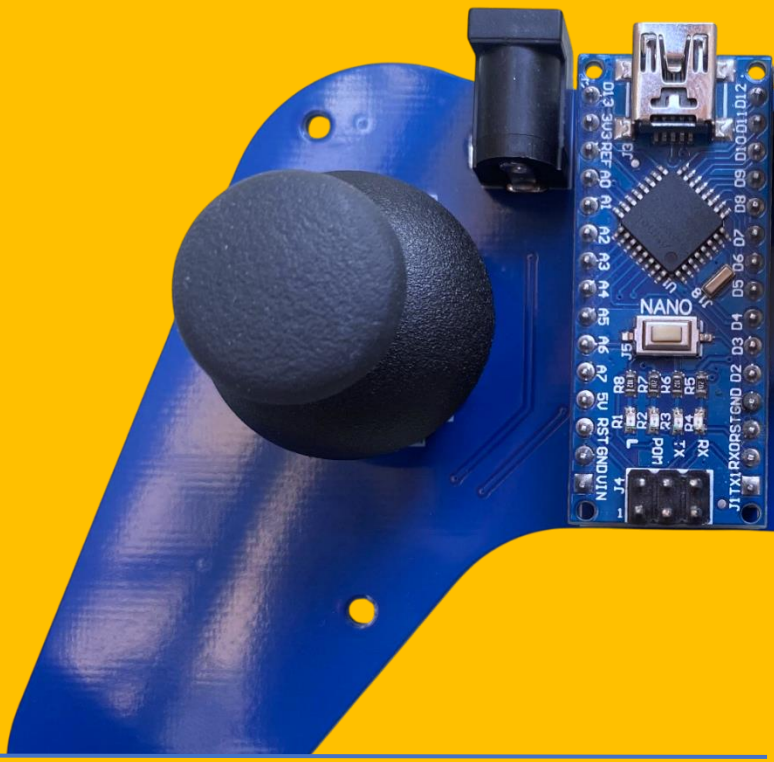
Buttons

The buttons are connected directly to Ground without any external pull-up resistors, so you need to enable the Arduino's internal pull-up resistors on the input pins.

Pins Connections:

Top Button	**D5**
Bottom Button	**D3**
Left Button	**D2**
Right Button	**D4**

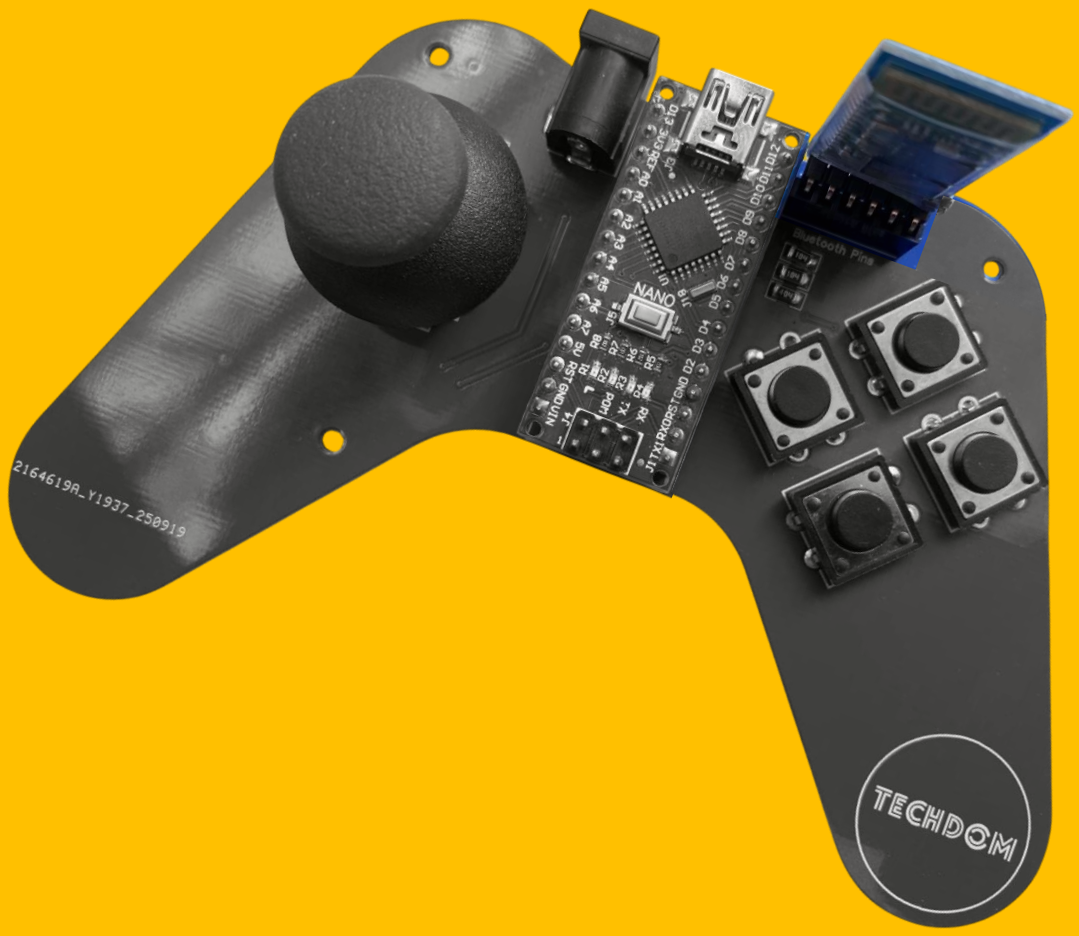
Joystick



The joystick includes two axis-controlled variable resistors (X and Y axes) and a push button. Since the push button is not connected to an external pull-up resistor, you need to enable the Arduino Nano's internal pull-up resistor for its input pin.

Pins Connections:

X-Axis →	**A1**
Y-Axis ↑	**A2**
Push Button	**D8**



Bluetooth

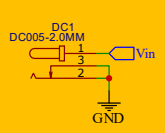
The Bluetooth module used is the HC-05, which can be configured to operate in Master-Slave mode. This allows it to establish a wireless connection between the DomStick and your robot.

To protect the HC-05's 3.3V RX pin, a voltage divider with three resistors is used to step down the Arduino's 5V TX signal to a safe 3.3V level.

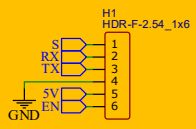
Pins Connections:

Tx	**D10**
Rx	**D9**
State	**D7**
Enable	**D6**

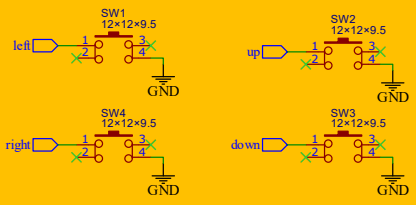
Schematic



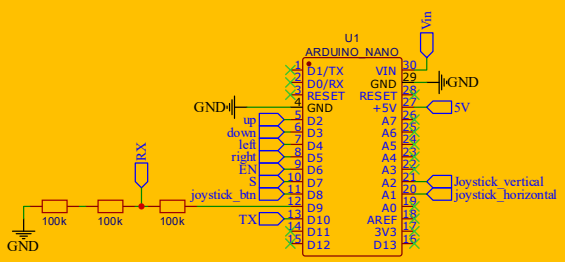
DC Power jack



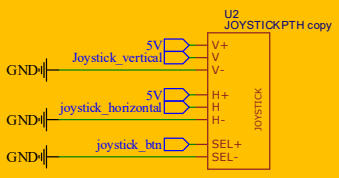
Bluetooth Header



Push Buttons

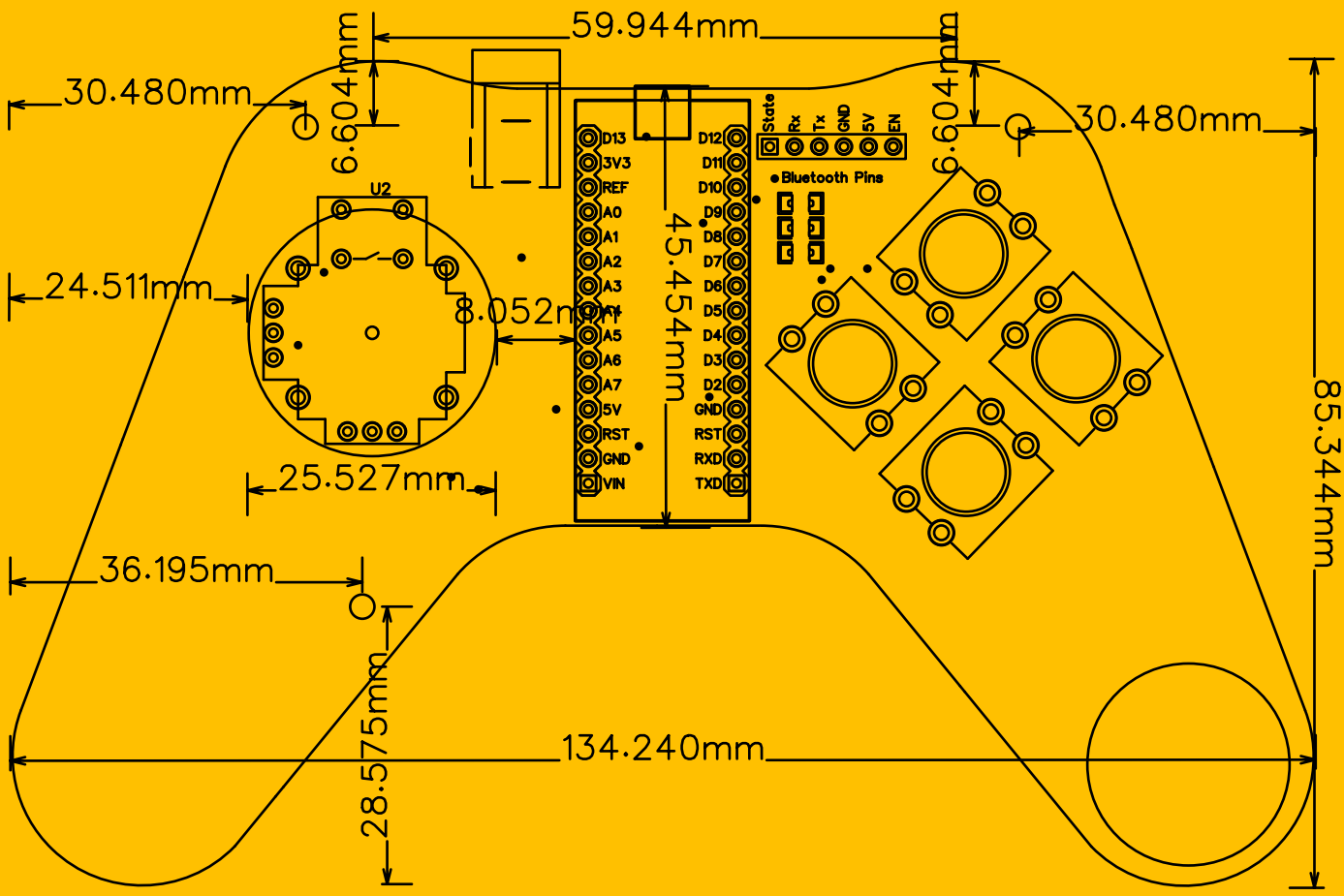


Arduino Nano Board



Joystick

Dimensions


59.944mm
6.604mm
6.604mm
30.480mm
30.480mm
U2
24.511mm
8.052mm
45.454mm
25.527mm
36.195mm
85.344mm
28.575mm
134.240mm
D13
3V3
REF
A0
A1
A2
A3
A4
A5
A6
A7
5V
RST
GND
VIN
D12
D11
D10
D9
D8
D7
D6
D5
D4
D3
D2
GND
RST
RXD
TXD
State
Rx
Tx
GND
5V
EN
Bluetooth Pins