

# Raspberry pi & Arduino

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Serial Communication between Rpi and Arduino using PIN Tx&Rx

Raspi	Arduino
8 (Tx)	0 (Rx)
10 (Rx)	1 (Tx)
6 (GND)	GND

Note: configure serial on both devices using same Baudrate (ex 9600)

Case Study:

Reading Analog sensor using arduino and show the result on Rpi.

- Create app on Arduino to read analog sensor

Ex arduino app:

```
void setup() {
    serial.Begin(9600);
}

Void loop() {
    int SENSOR = analogRead(A0);
    serial.println(SENSOR);
    delay (10);
}
```

Rpi:

Activate serial interface from menu rpi-preferences

Ex Rpi App:

```
import serial
Import time

S = serial.Serial('/dev/serial0', 9600)
# S = serial.Serial('/dev/ttyACM0', 9600)
S.readline()

SENSOR = S.readlin()
print("SENSOR : {}".format(SENSOR))

# while 1:
    SENSOR = S.readlin()
    print("SENSOR : {}".format(SENSOR))
    Time.sleep(0.01) # 10ms
```

