

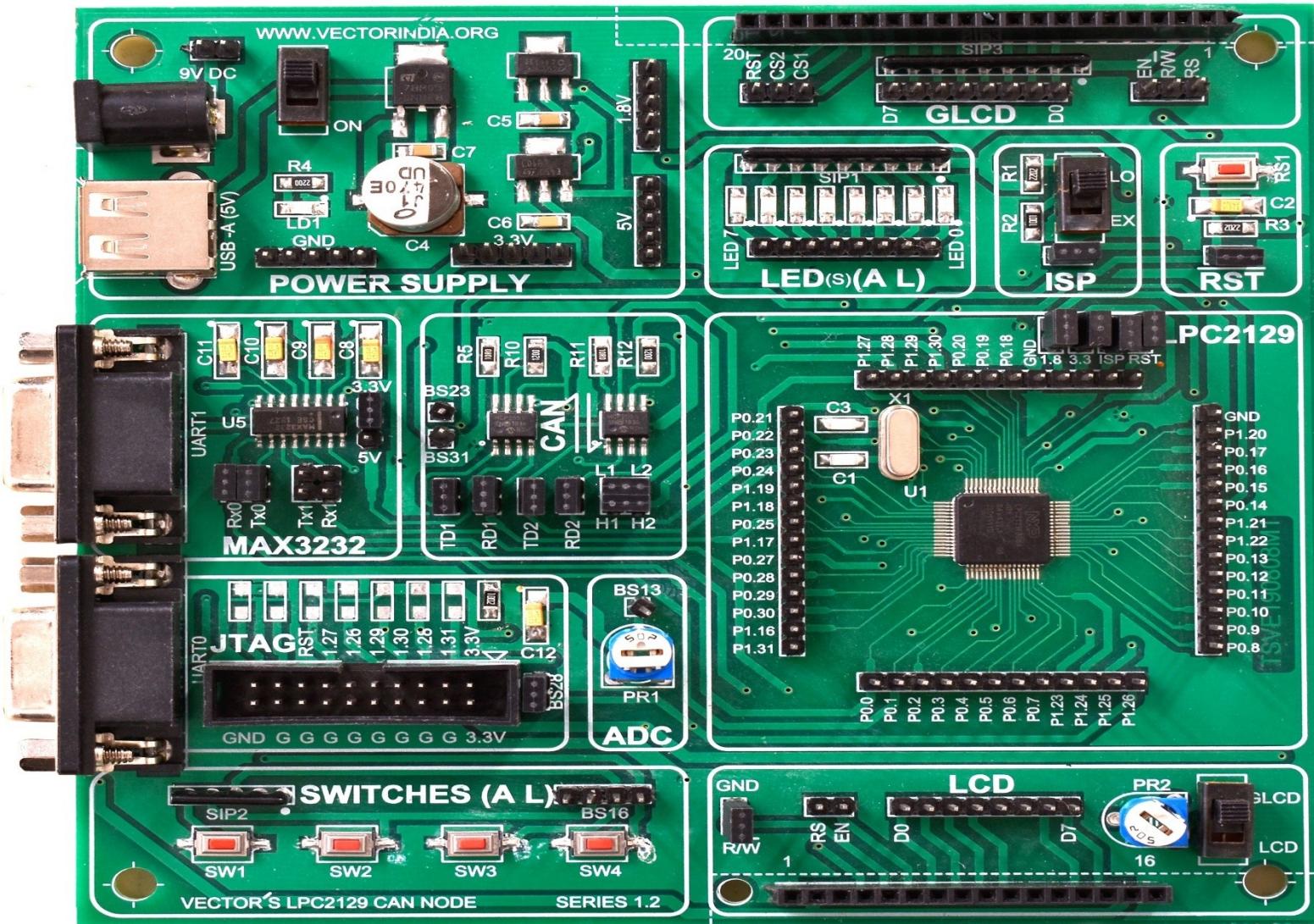
**VECTOR'S    LPC2129**

**CAN**

**DEVELOPMENT**

**BOARD**

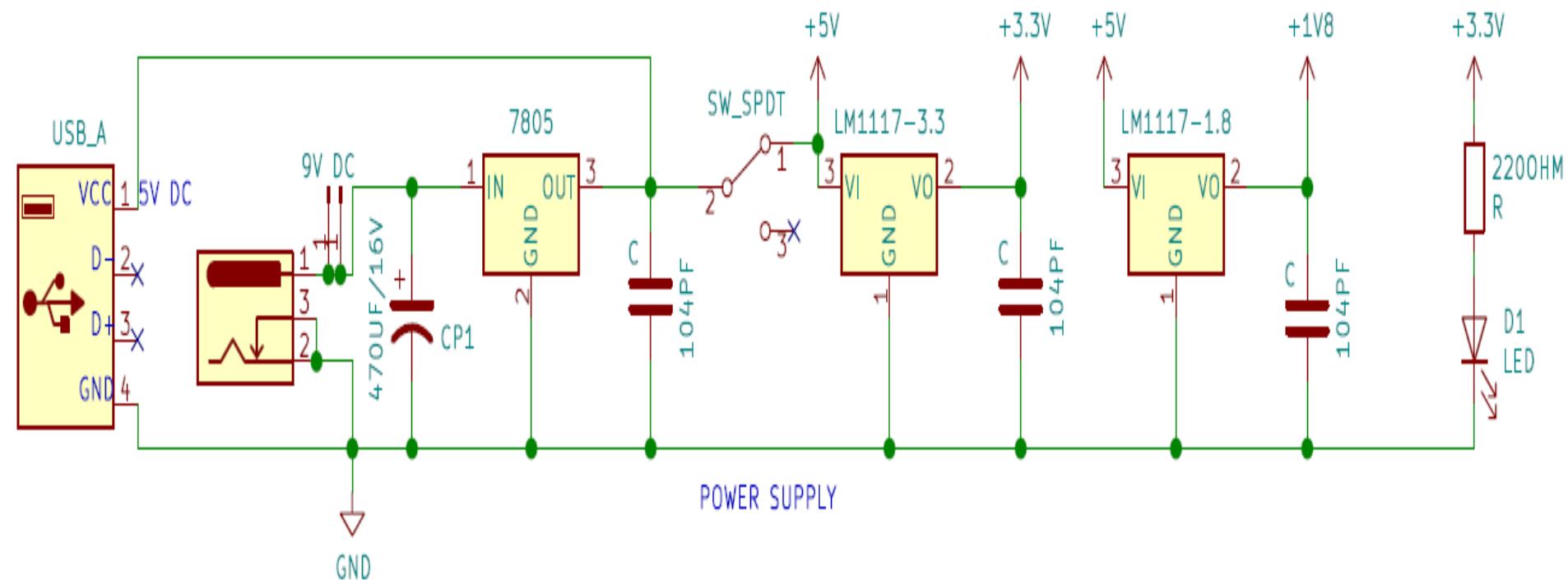
# LPC 2129



## POWER SUPPLY



## POWER SUPPLY



## **FEATURES**

**1.8 V DC ---SUPPLY FOR INTERNAL CIRCUITARY**

**3.3 V DC---SUPPLY FOR I/O PORTS**

**5 V DC ---FOR LCD AND GRAPHICAL LCD**

**46 GPIO(P0.0----P0.30 & P1.16----P1.31)**

**In-System Programming (ISP) and In-Application Programming (IAP)  
via on-chip boot-loader software**

**IAP is used for debugging while application is running**

**IAP is just used to correct the logic of code while running the application  
instead of reflashing the program**

**32-bit ARM7 microcontroller in a tiny LQFP64 package.**

**16 kB on-chip Static RAM.**

**256 kB on-chip Flash Program Memory.**

**Two interconnected CAN interfaces**

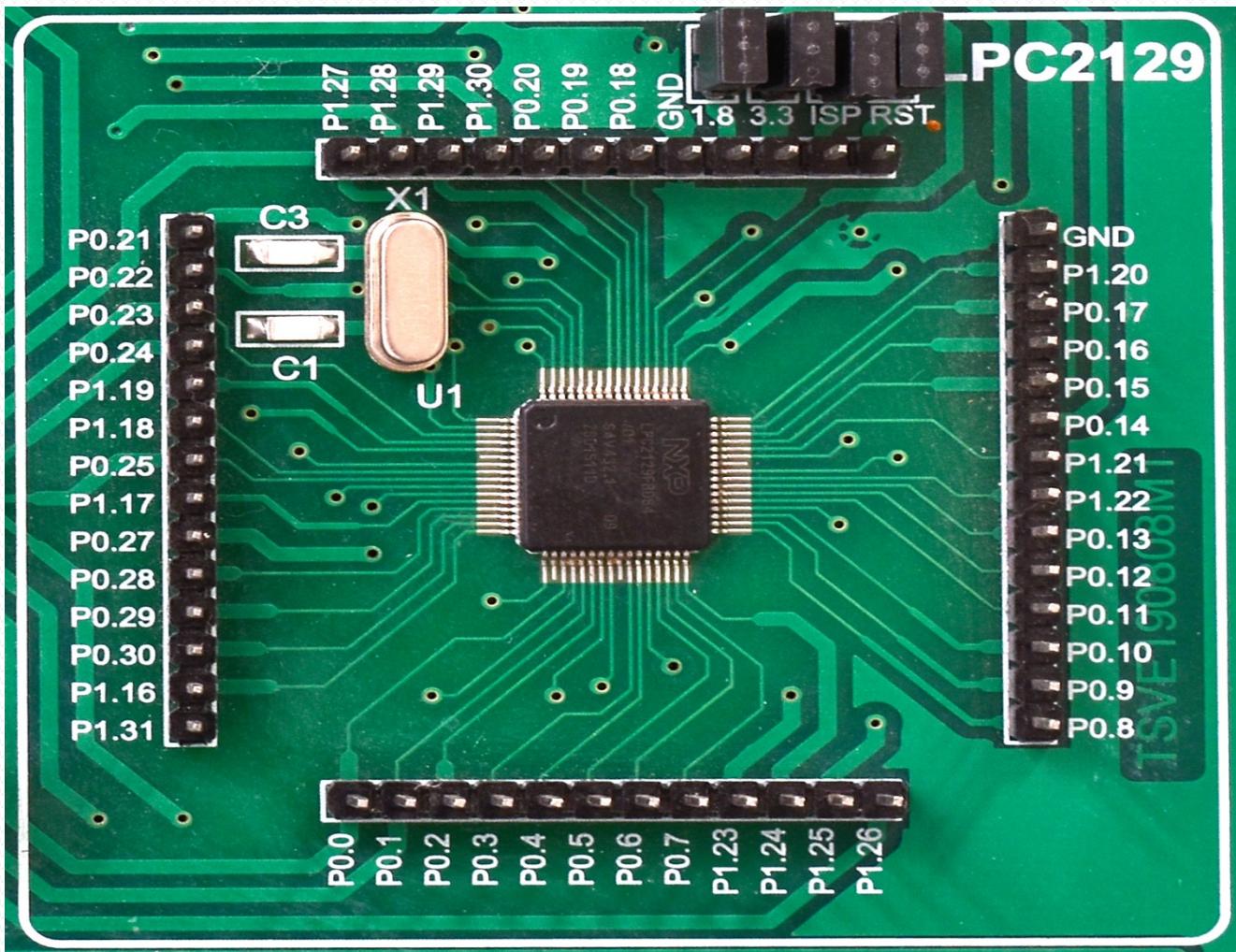
**Two UARTs, Two SPIs,I<sub>2</sub>C**

**Four channel 10-bit A/D converter**

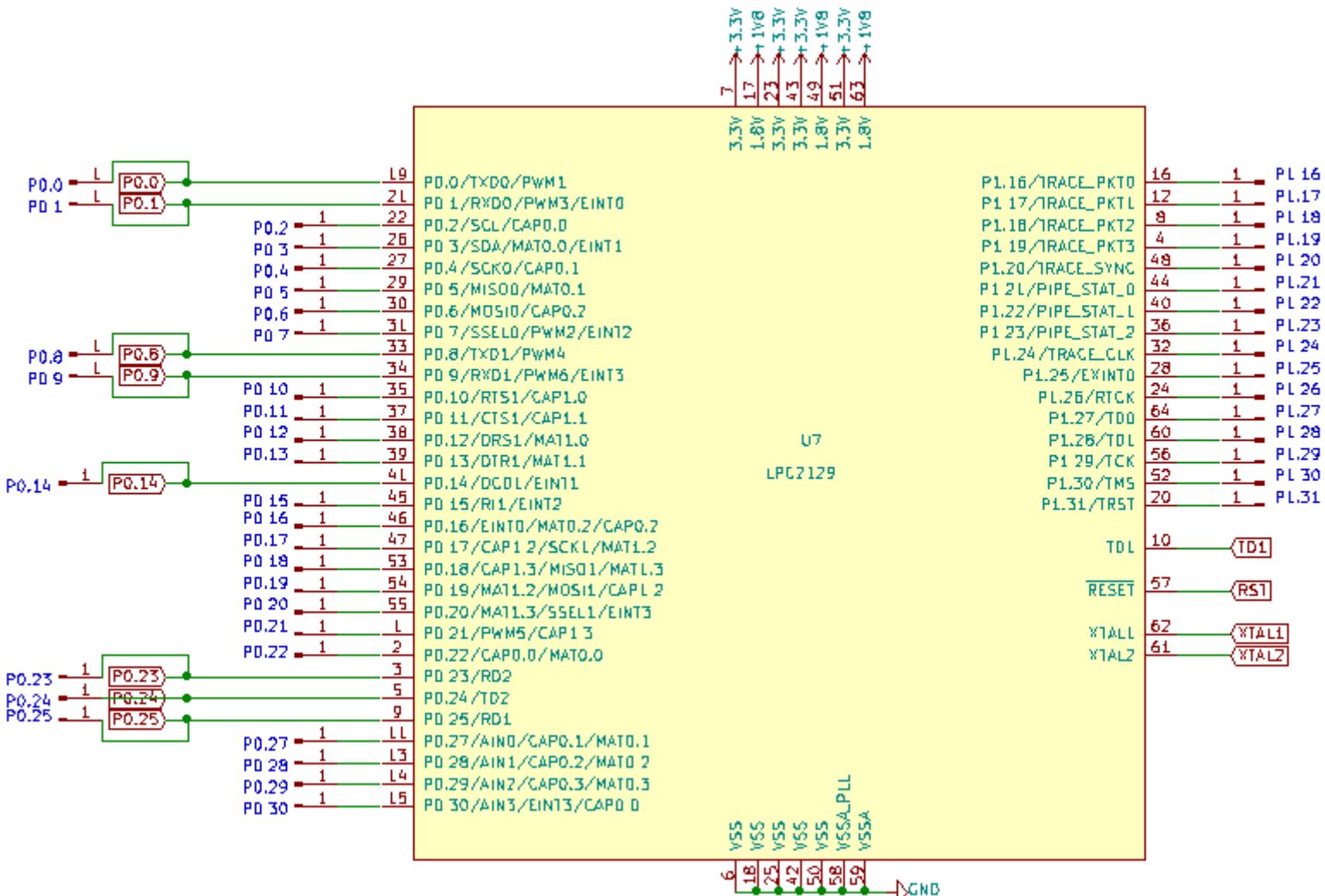
**Six PWM Channels**

**Nine external interrupts**

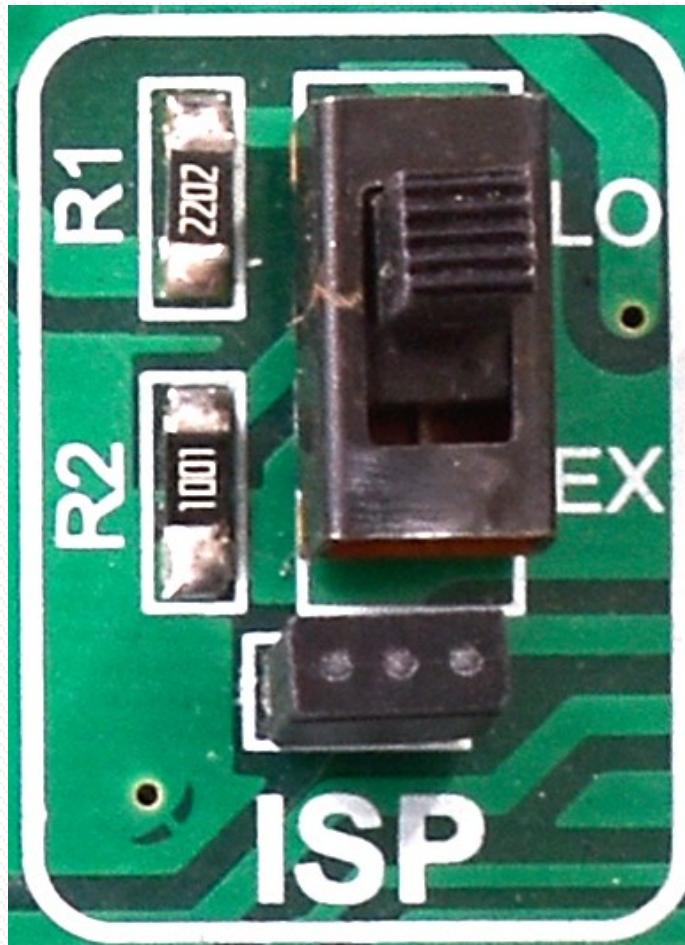
## LPC 2129



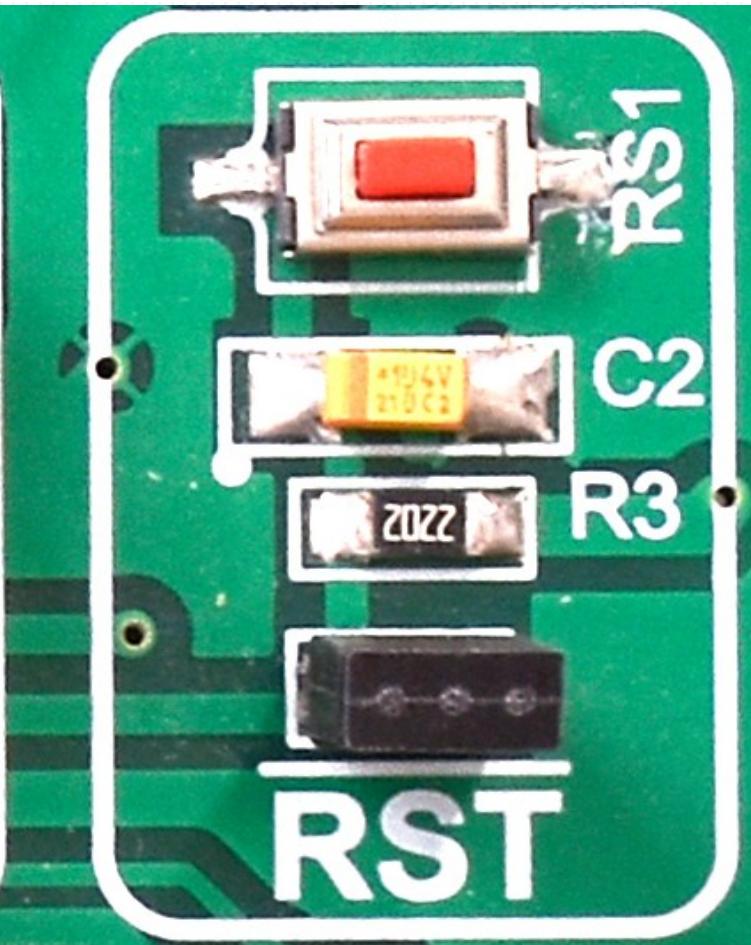
# LPC 2129



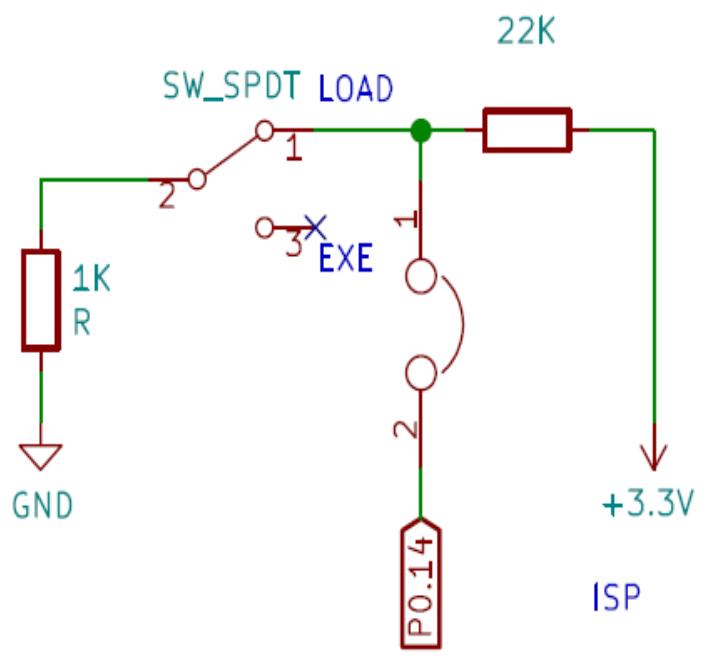
**ISP**



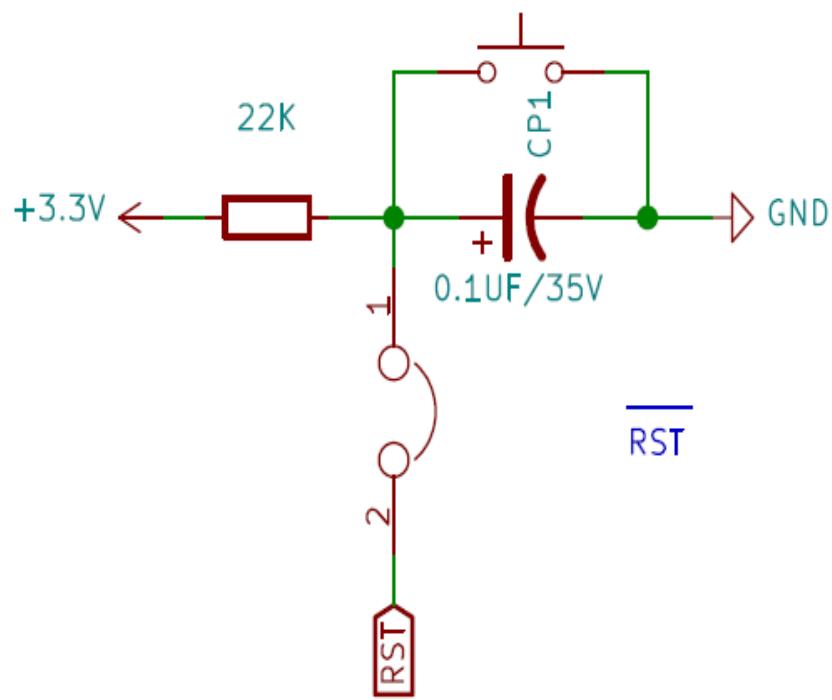
**RESET**



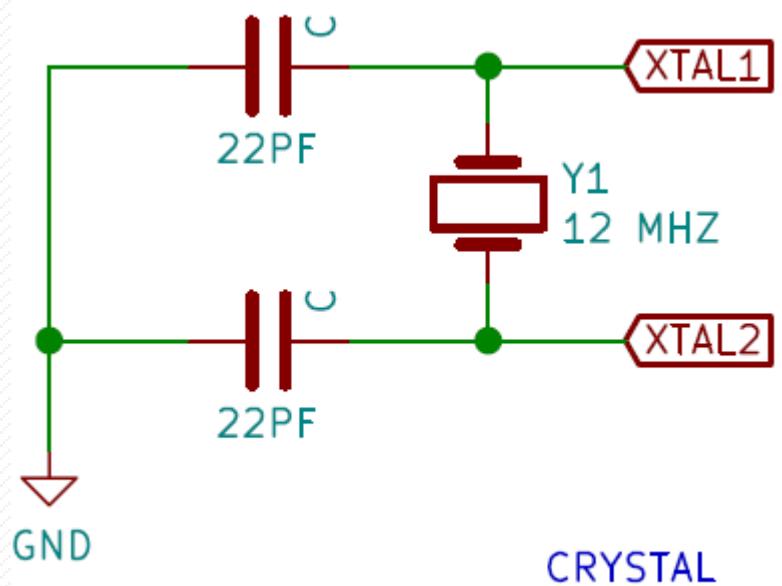
## ISP



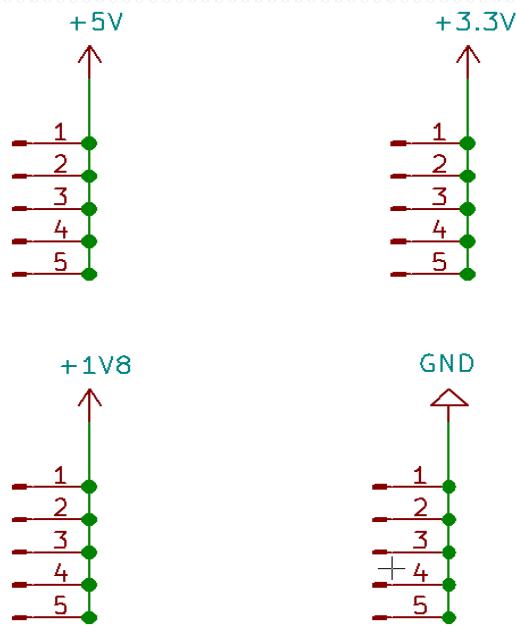
## RESET



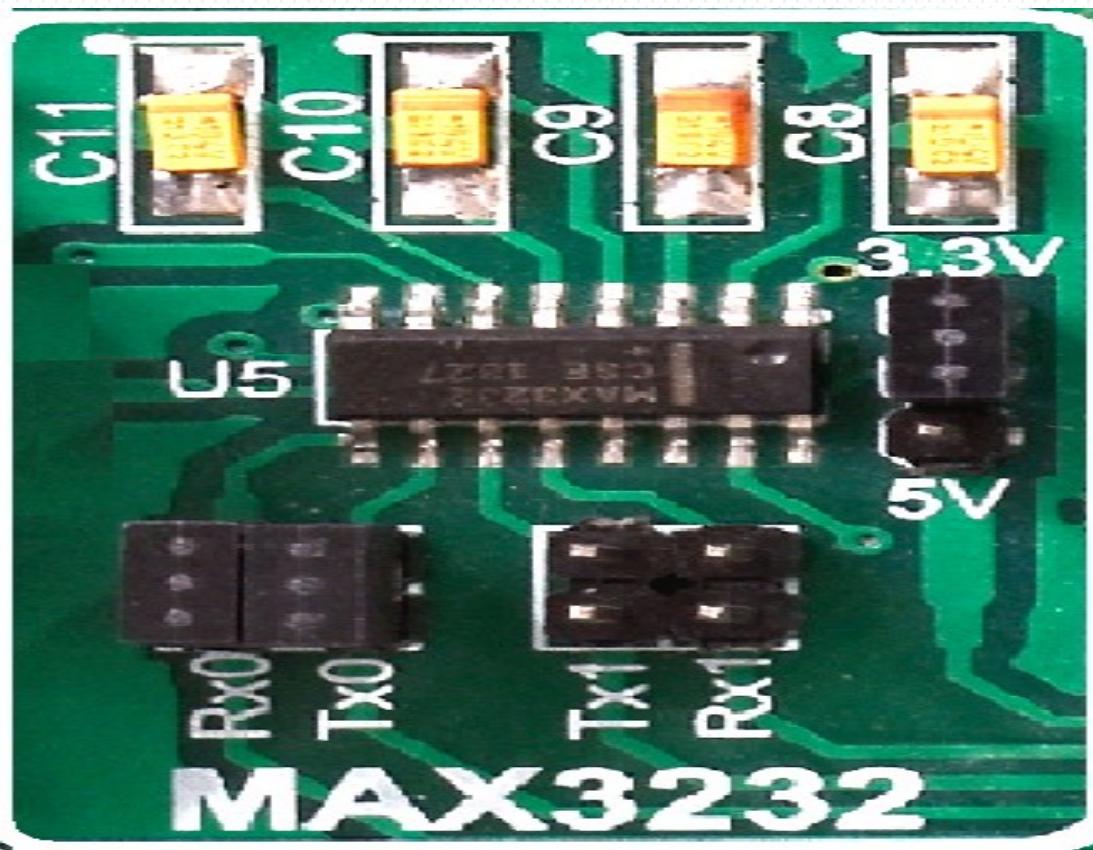
## CRYSTAL



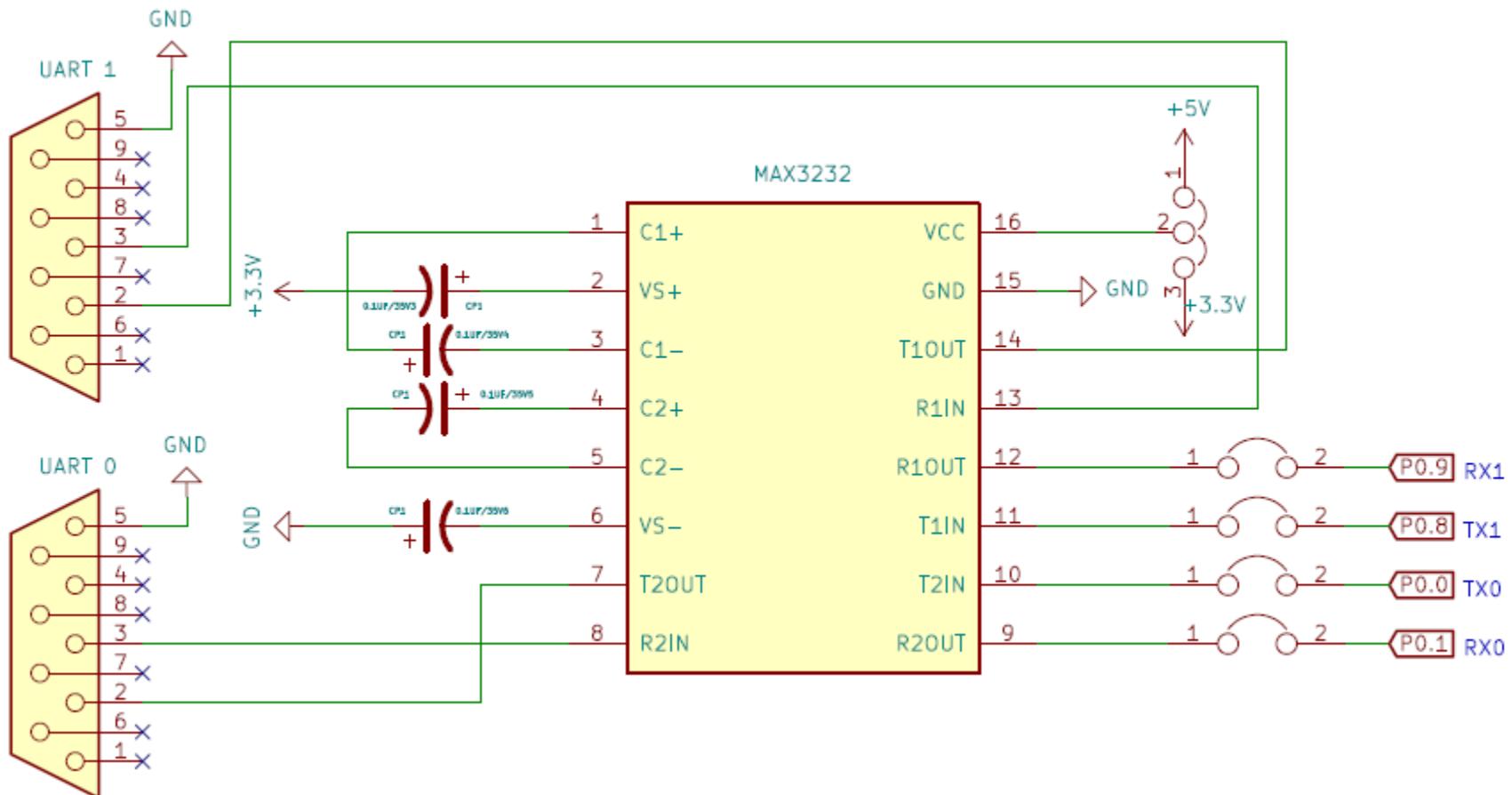
## CONNECTORS



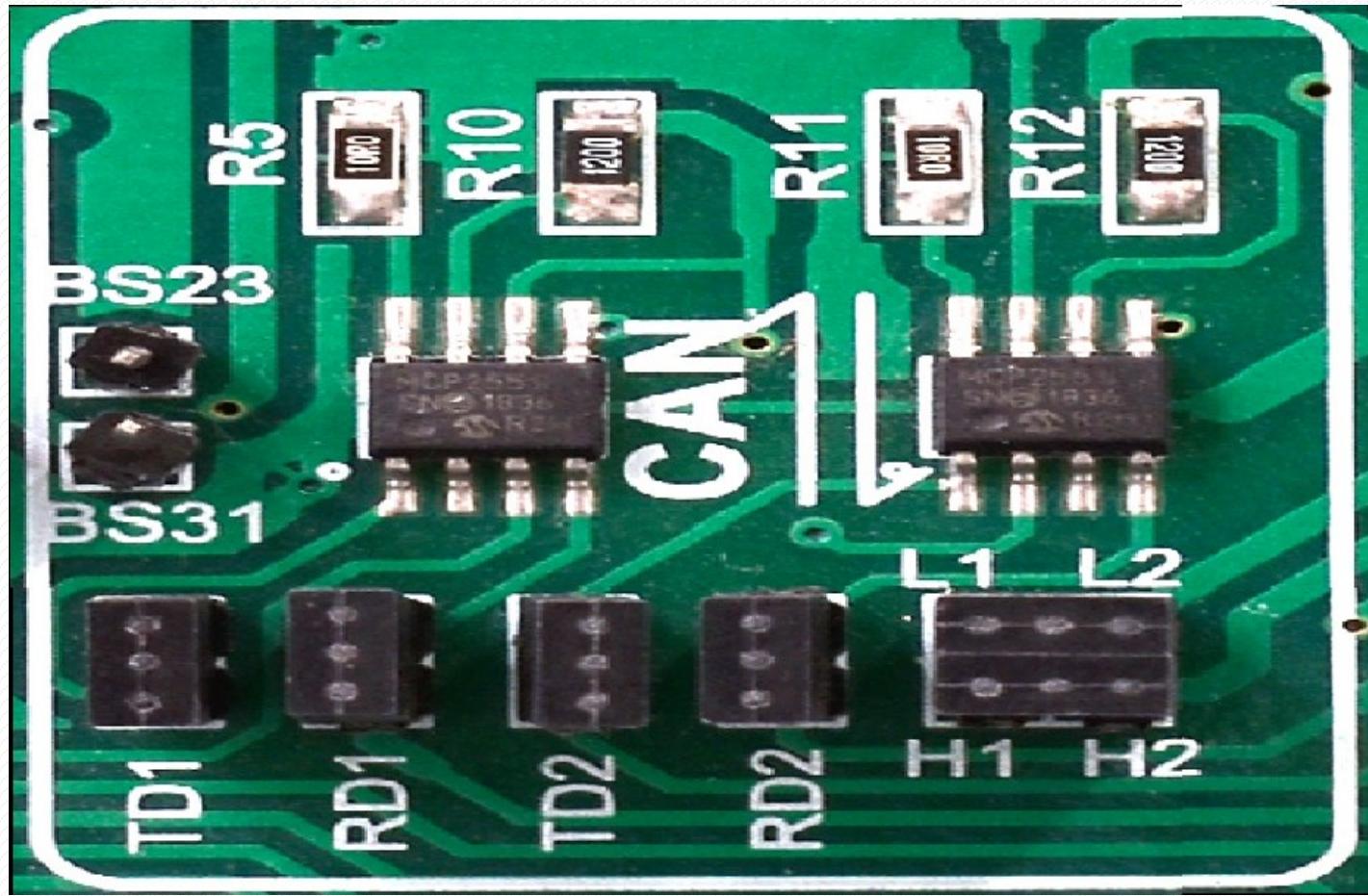
## MAX 3232



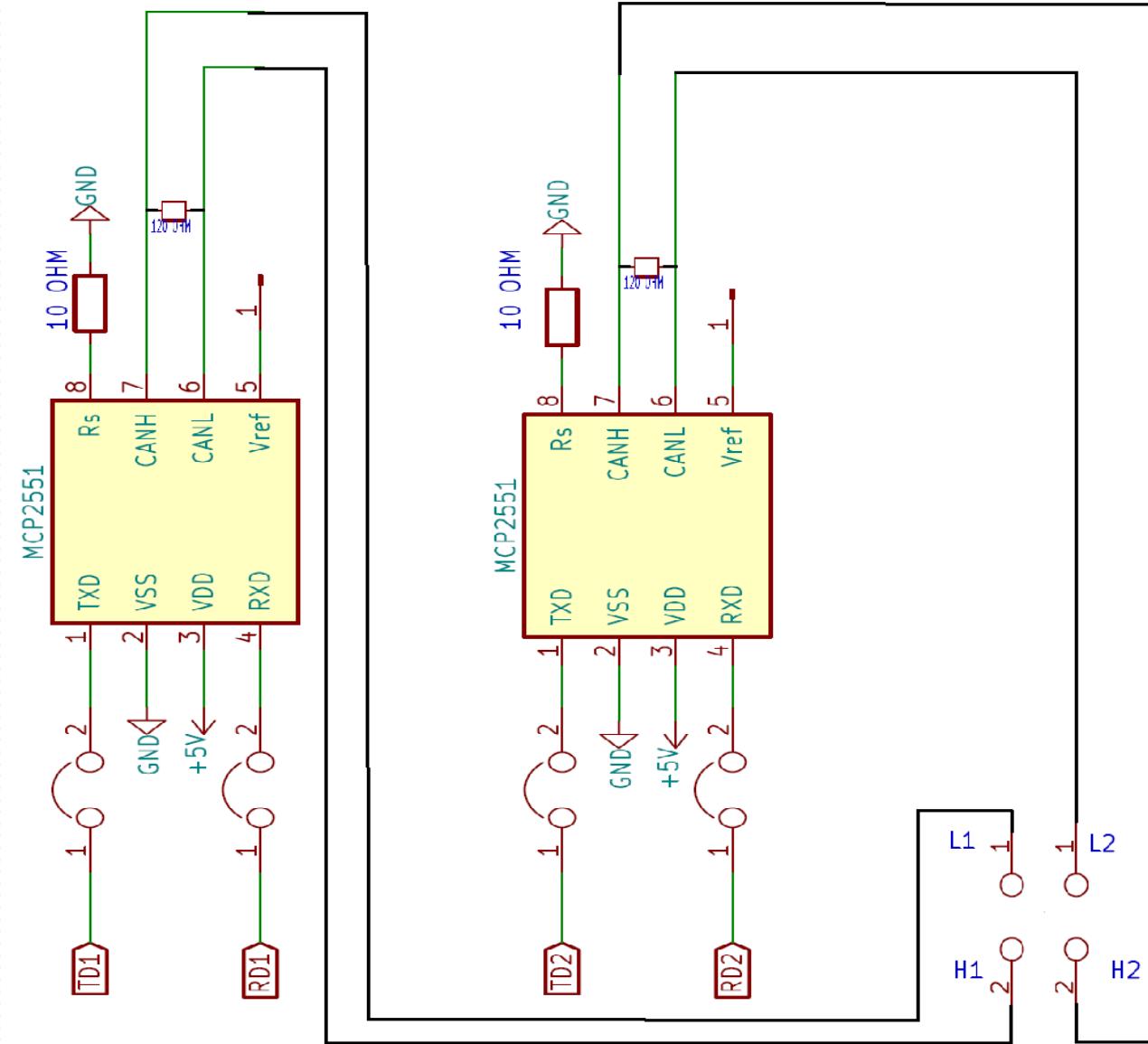
## MAX3232



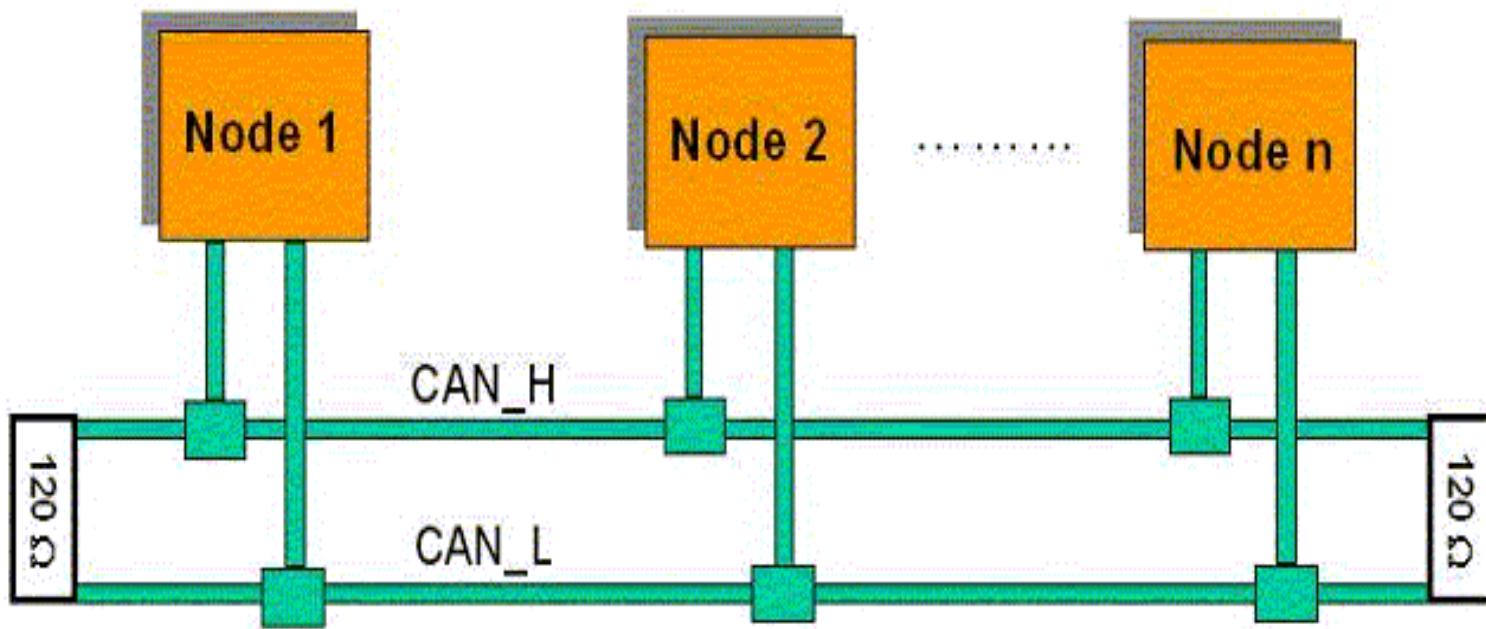
CAN



# CAN TRANSCEIVERS



## CAN BUS



Converts digital signals to differential signals

Digital signals communicates very short range.

Differential signals communicates up to 40 meters

## **2551 PINS**

**TD<sub>1</sub> — CAN<sub>1</sub> transmitter output.**

**RD<sub>1</sub> — CAN<sub>1</sub> receiver input.**

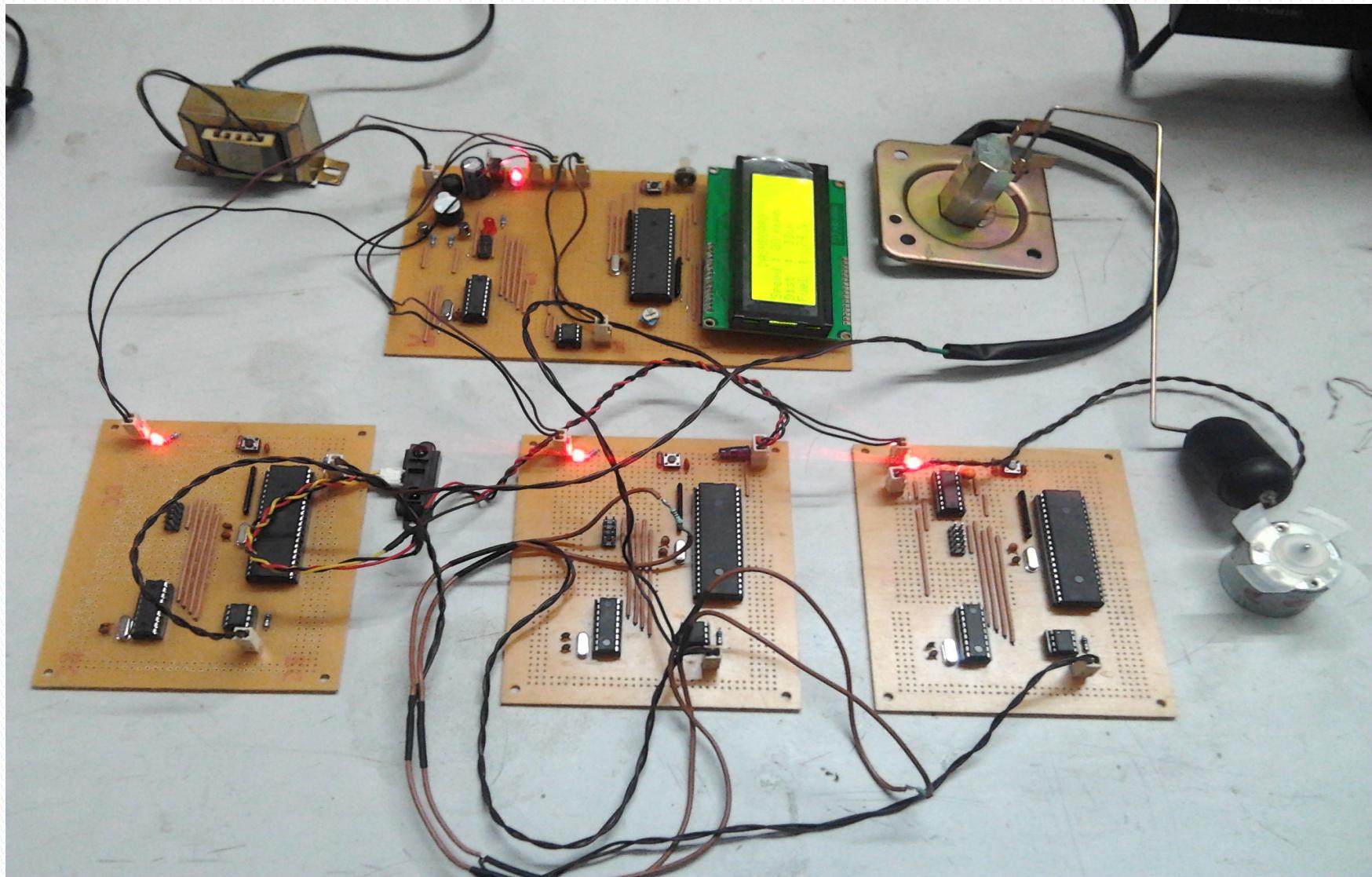
**TD<sub>2</sub> — CAN<sub>2</sub> transmitter output.**

**RD<sub>2</sub> — CAN<sub>2</sub> receiver input.**

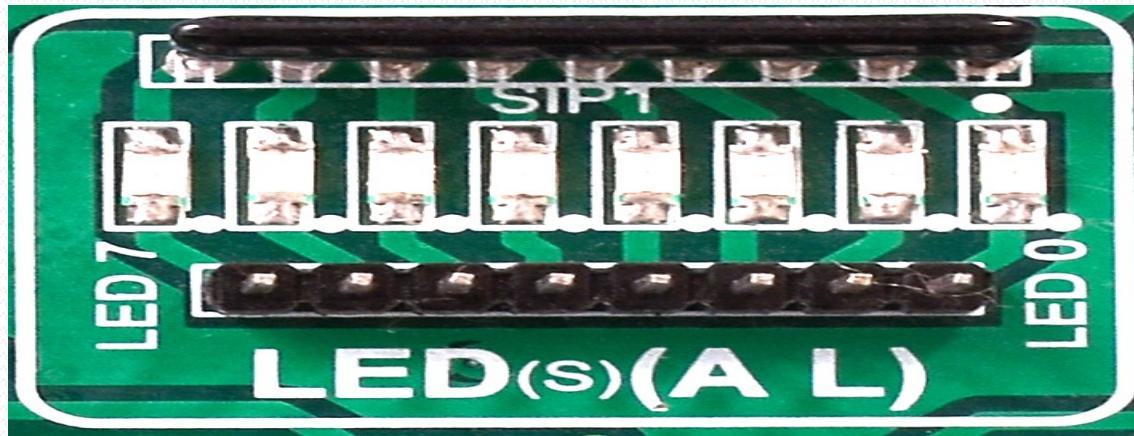
**RS--** slope resistor input, it used to select high-speed,  
slope-control.

The terminating resistor should match with the Characteristic  
Impedance of the transmission line to avoid reflection.

# DASH BOARD DESIGN USING CAN BUS



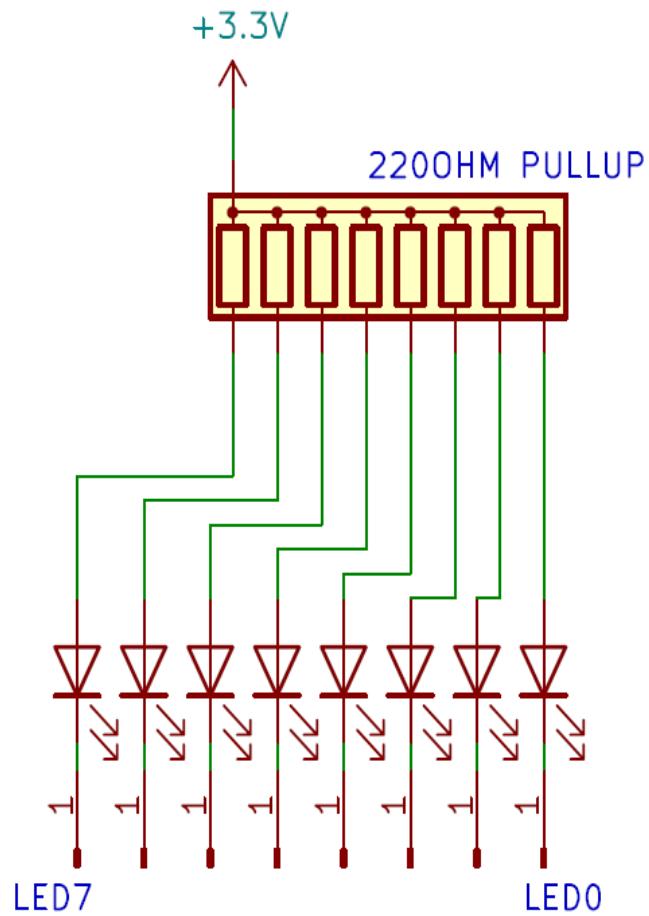
## LED'S



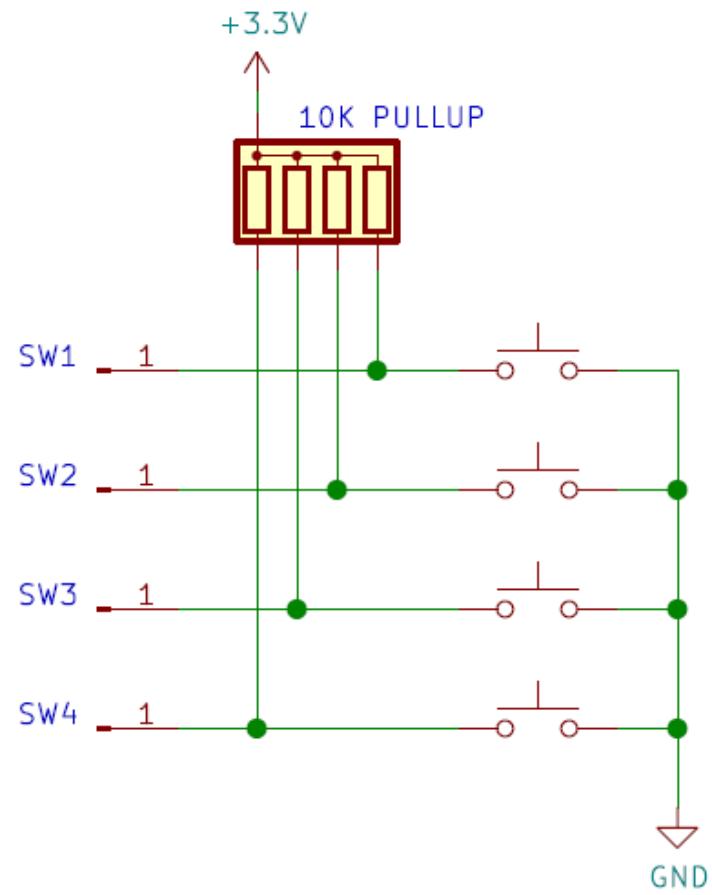
## SWITCHES



## LED'S



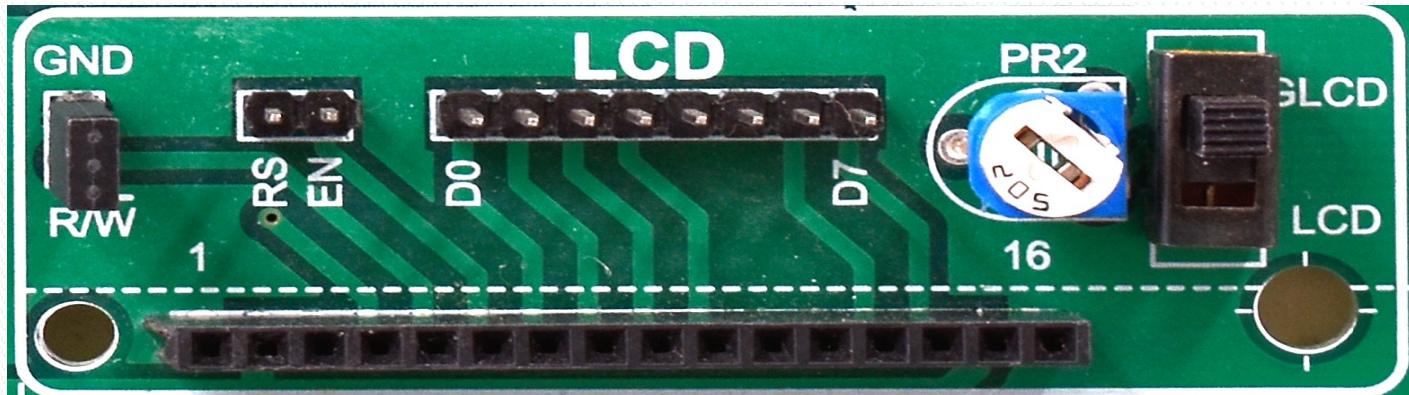
## SWITCHES



LCD

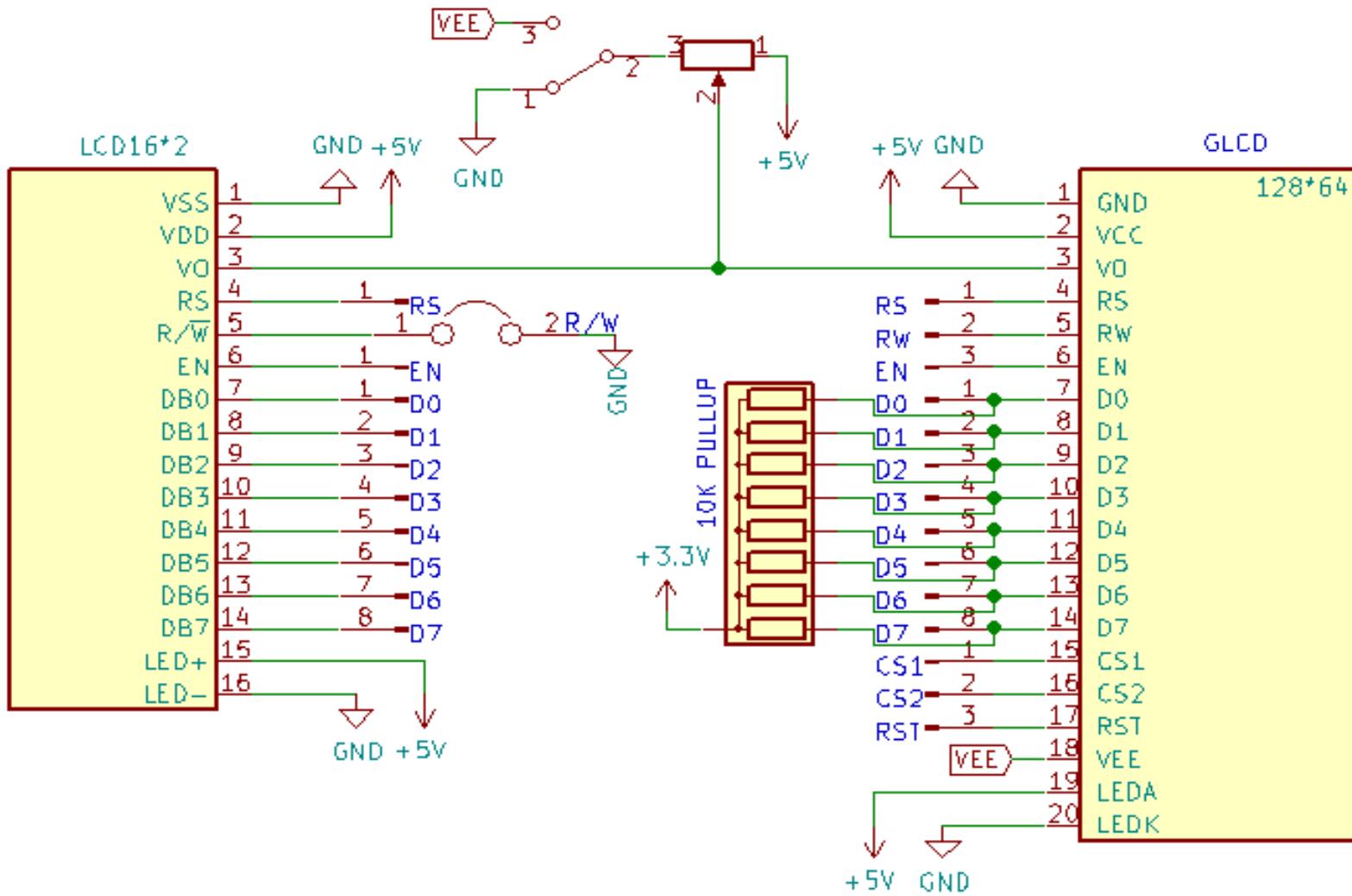


GRAPHICAL LCD

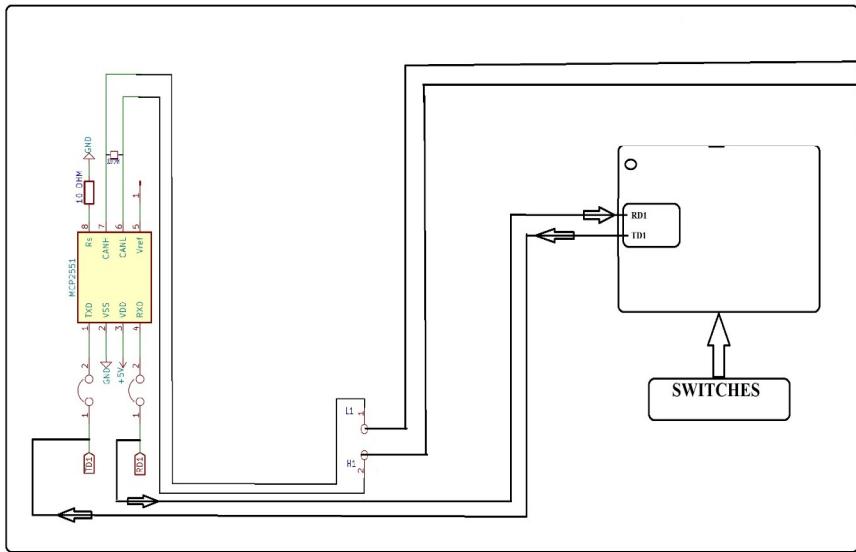


## LCD

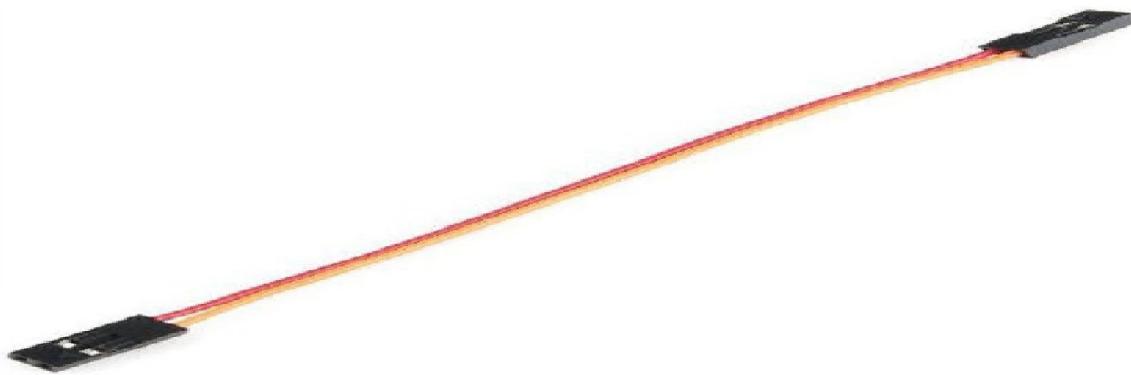
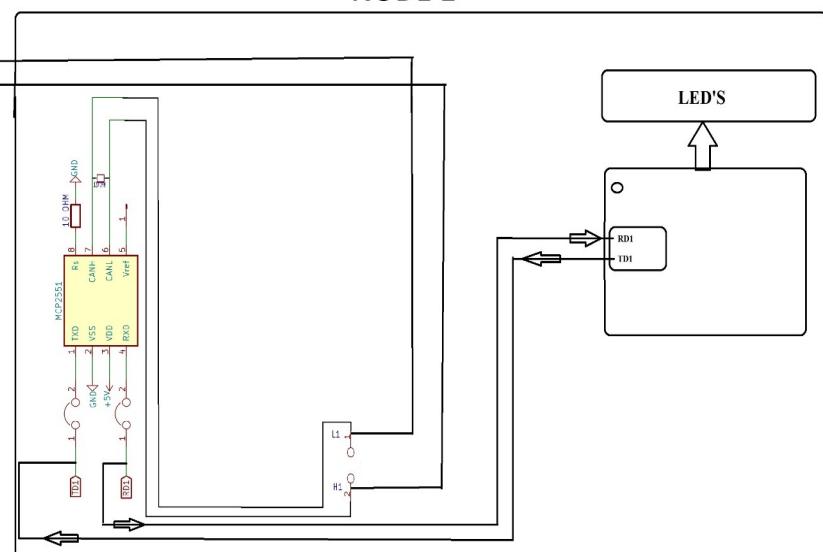
## GRAPHICAL LCD



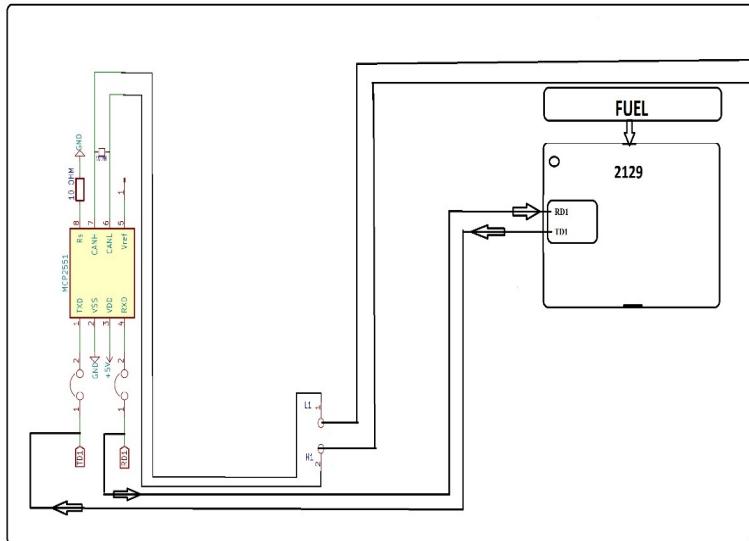
**NODE 2**



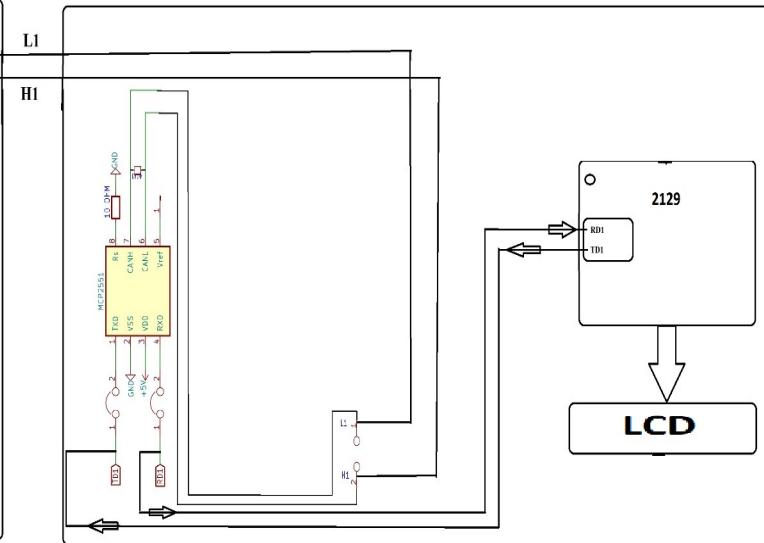
**NODE 1**



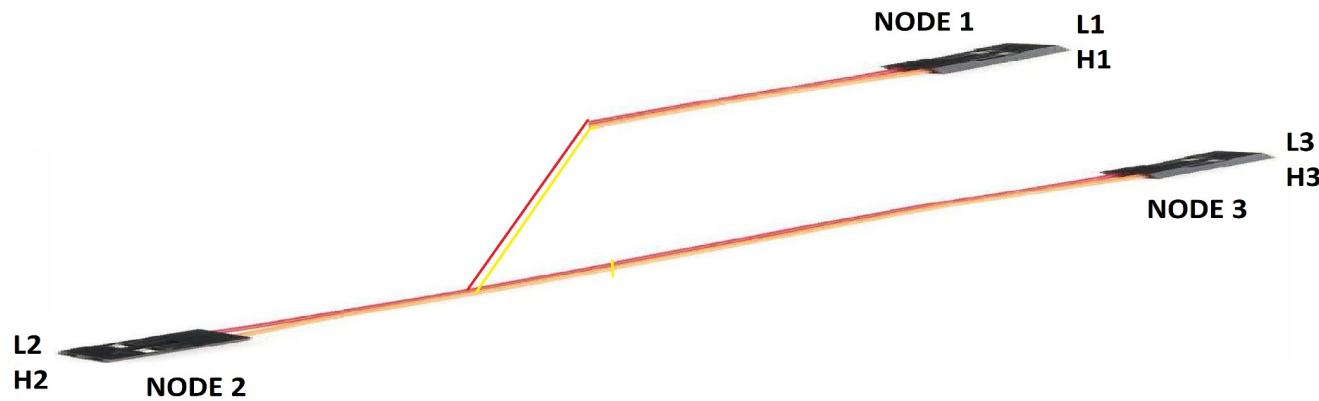
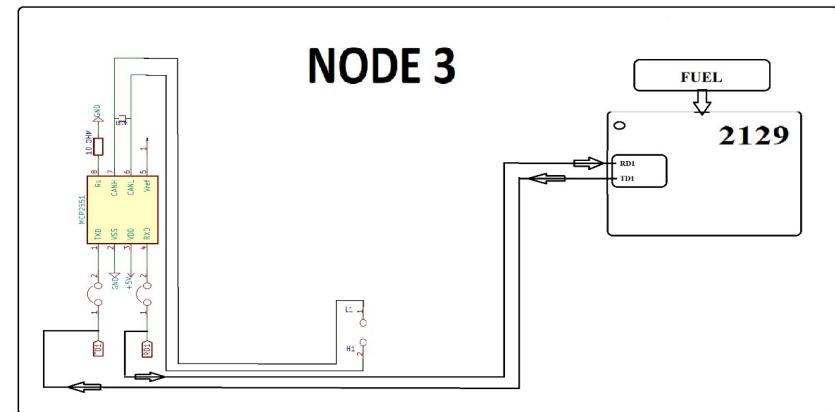
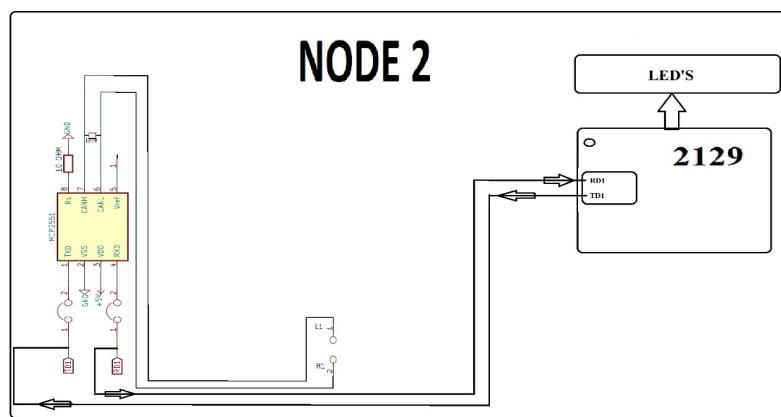
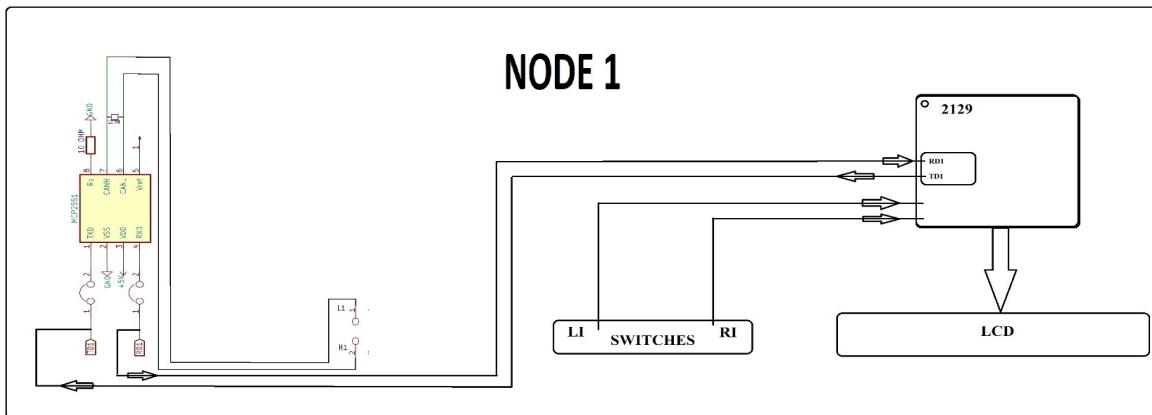
## NODE 3



## NODE 1

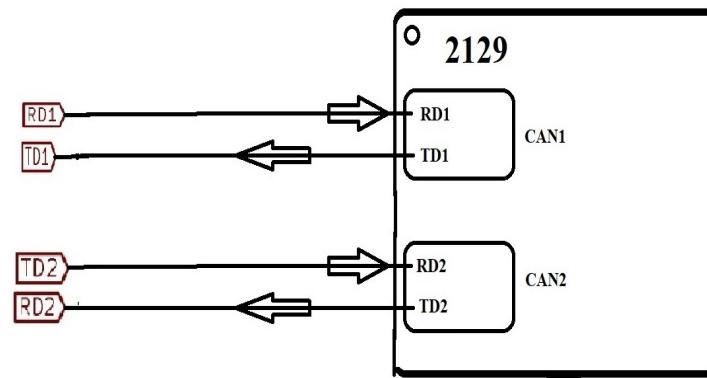
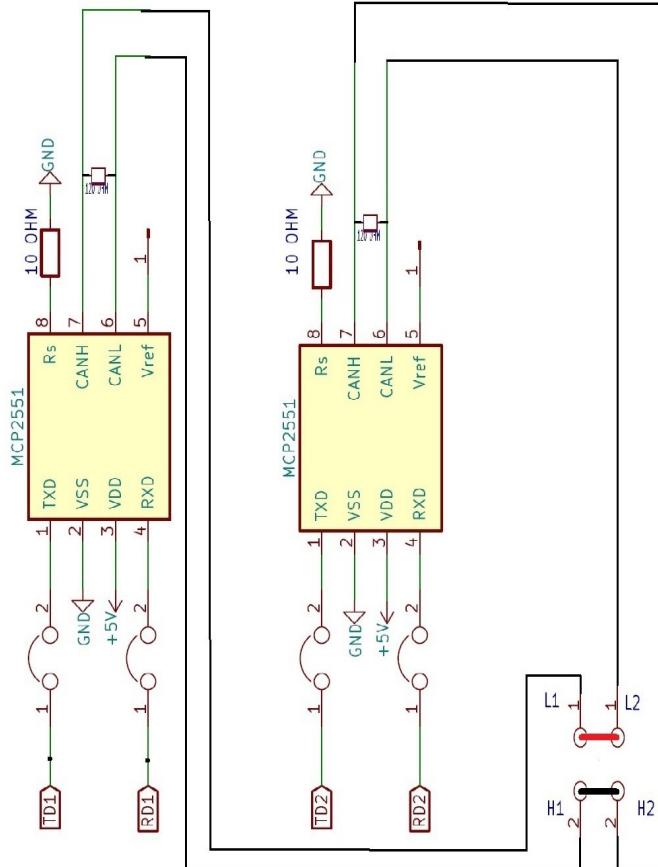


## PROJECT

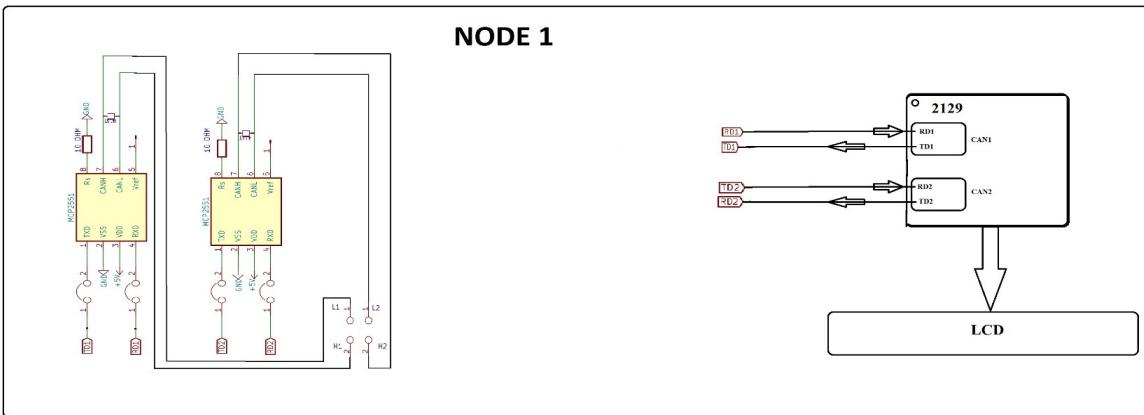
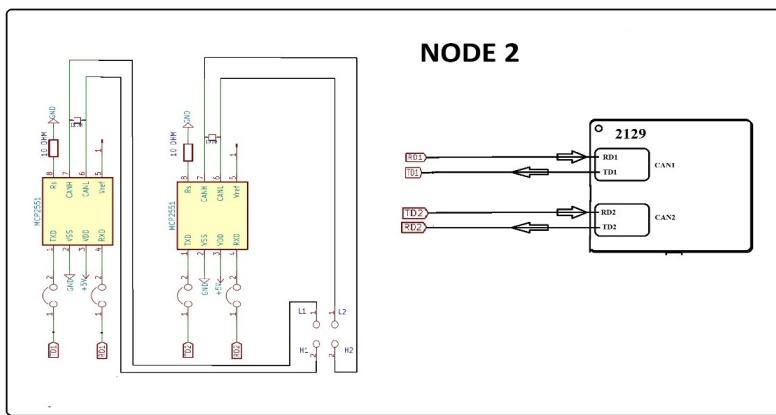
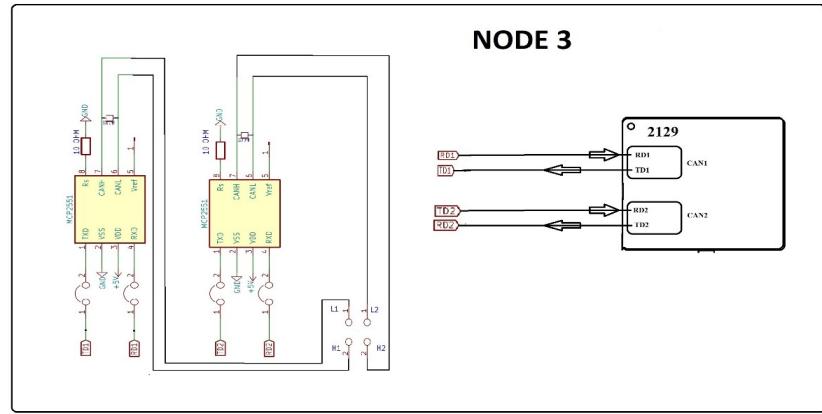


# LOOP BACK

## NODE 1



LED'S

**NODE 1****NODE 2****NODE 3****NODE 1**