

## Isolated CAN Transceiver Module

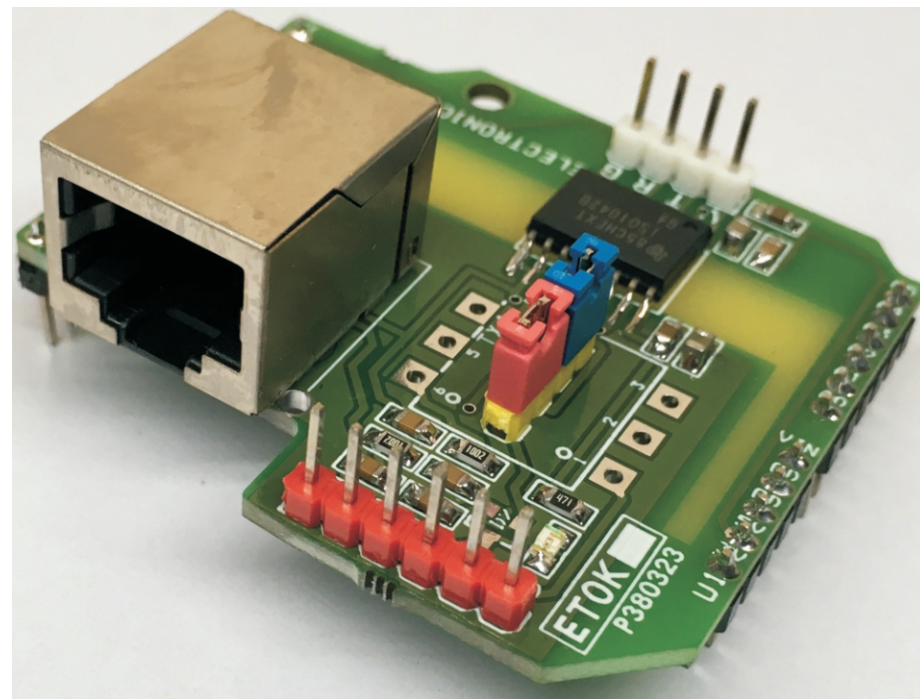
The module described here is an isolated CAN Transceiver module, the module can be used as standalone module or as Arduino Uno shield. A controller area network is a two wire high speed serial network typically used to provide data communication between host and nodes. The high-speed controller area network transceivers offer, integrated isolation, high ESD and high fault protection. Project built using ISO1042 IC from Texas Instruments. The project required 5V supply from host side (Arduino) and 5V separate from node side for isolation. The project supports up to 5-MBPS data rate in CAN FD mode allowing much faster transfer of payload compared to classic CAN. D1 Power LED, CN1 Can bus communication, CN3 RJ45 CAN Communication.

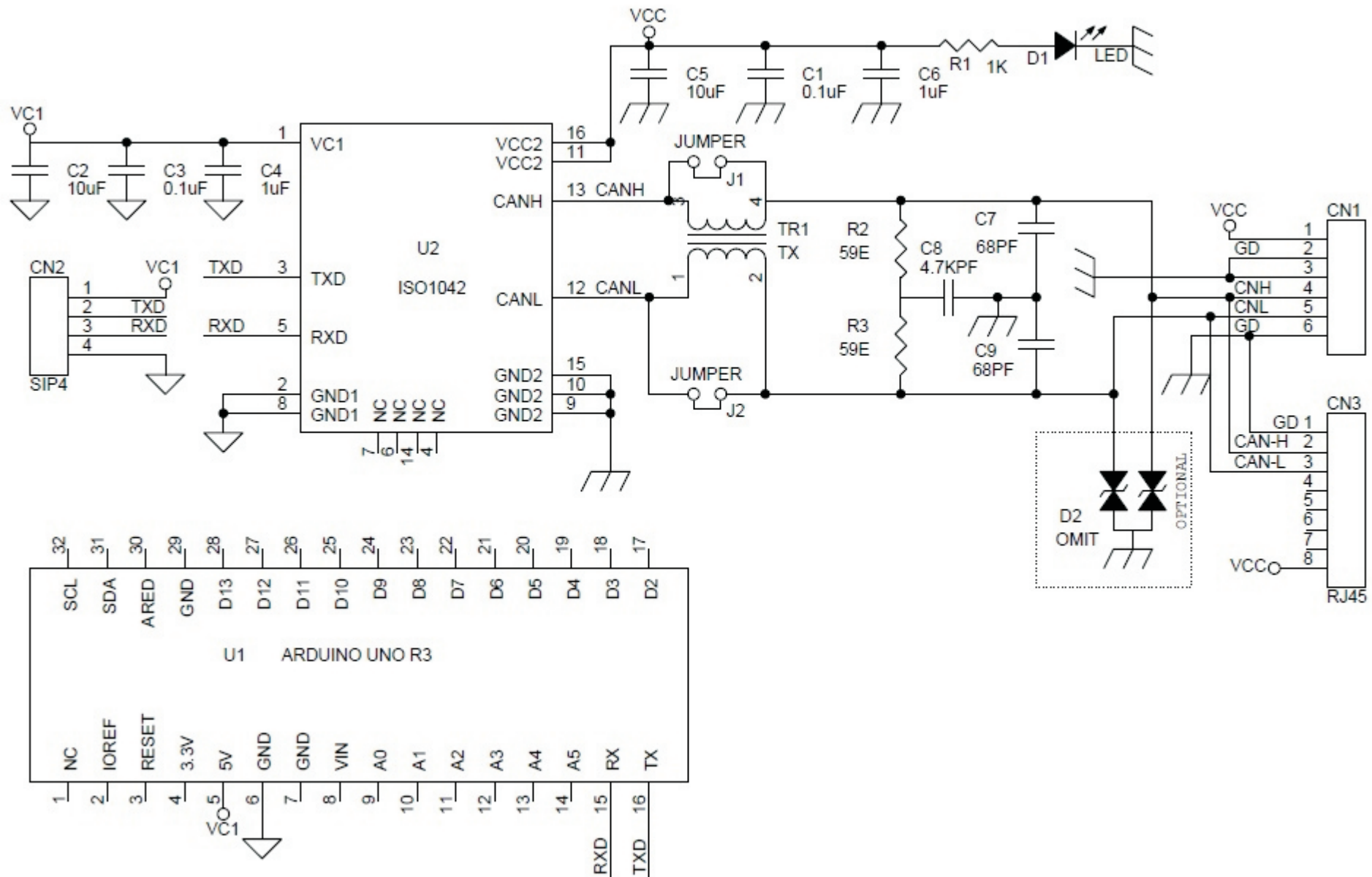
**The ISO1042** device is a galvanically-isolated controller area network (CAN) transceiver that meets the specifications of the ISO11898-2 (2016) standard. The ISO1042 device offers  $\pm 70$ -V DC bus fault protection and  $\pm 30$ -V common-mode voltage range. The device supports up to 5-Mbps data rate in CAN FD mode allowing much faster transfer of payload compared to classic CAN. This device uses a silicon dioxide (SiO<sub>2</sub>) insulation barrier with a withstand voltage of 5000 VRMS and a working voltage of 1060 VRMS. Electromagnetic compatibility has been significantly enhanced to enable system-level ESD, EFT, surge, and emissions compliance. Used in conjunction with isolated power supplies, the device protects against high voltage, and prevents noise currents from the bus from entering the local ground.

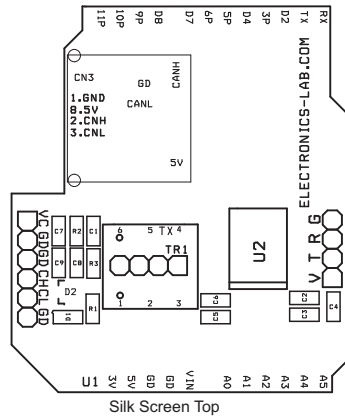
Note: Don't populate TR1 CM choke. CM choke required when device is used in harsh EMC environment, it is 51uH 0.2A coupled inductor. J1 / J2 jumpers to be closed for normal operations.

### Features

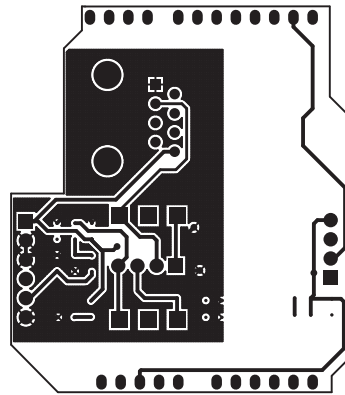
- Supply 5V DC Host (Arduino)-VC1
- Supply 5V DC Node Side
- Data Transfer Speed 5-Mbps



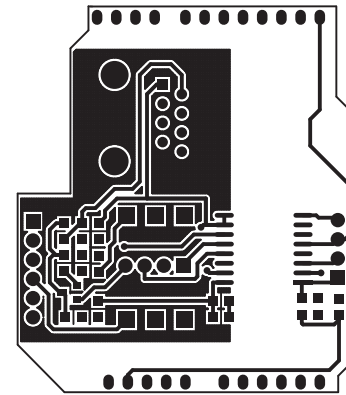




Silk Screen Top

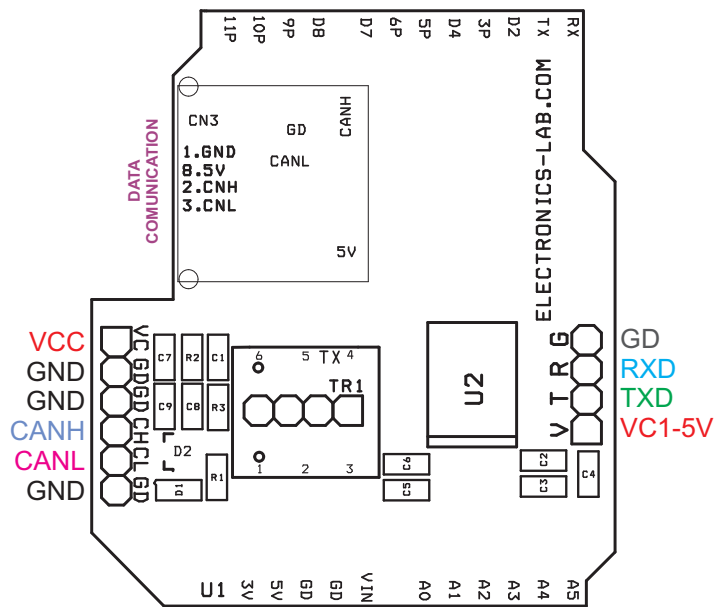


Bottom Layer



Top Layer

PCB DIMENSIONS 45 X 51 MM



BOM			
SR.	QNTY	REF.	DESC.
1	1	CN1	6 PIN MALE HEADER CONNECTOR
2	1	CN2	4 PIN MALE HEADER CONNECTOR
3	2	C1,C3	0.1uF SMD 0805
4	2	C2,C5	10uF/10V SMD 0805
5	2	C4,C6	1uF/10V SMD 0805
6	2	C7,C9	68PF/100V SMD 0805
7	1	C8	4.7KPF 25V SMD 0805
8	1	D1	LED SMD 0805
9	1	D2	OMIT
10	2	J1,J2	JUMPER
11	1	R1	1K SMD 0805
12	2	R2,R3	59E SMD 0805
13	1	TR1	OMIT
14	1	U1	ARDUINO UNO
15	1	U2	ISO1042

