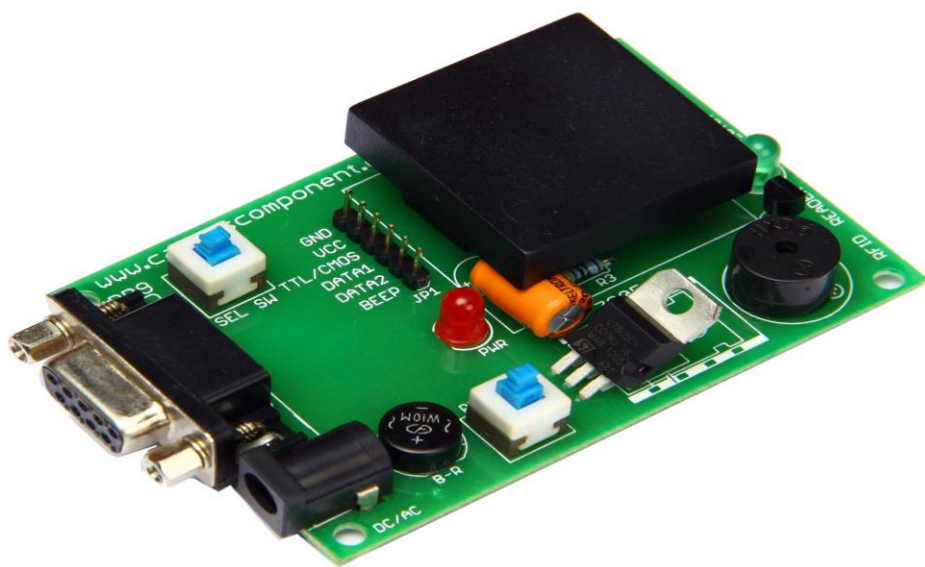


EM-18 RFID Module



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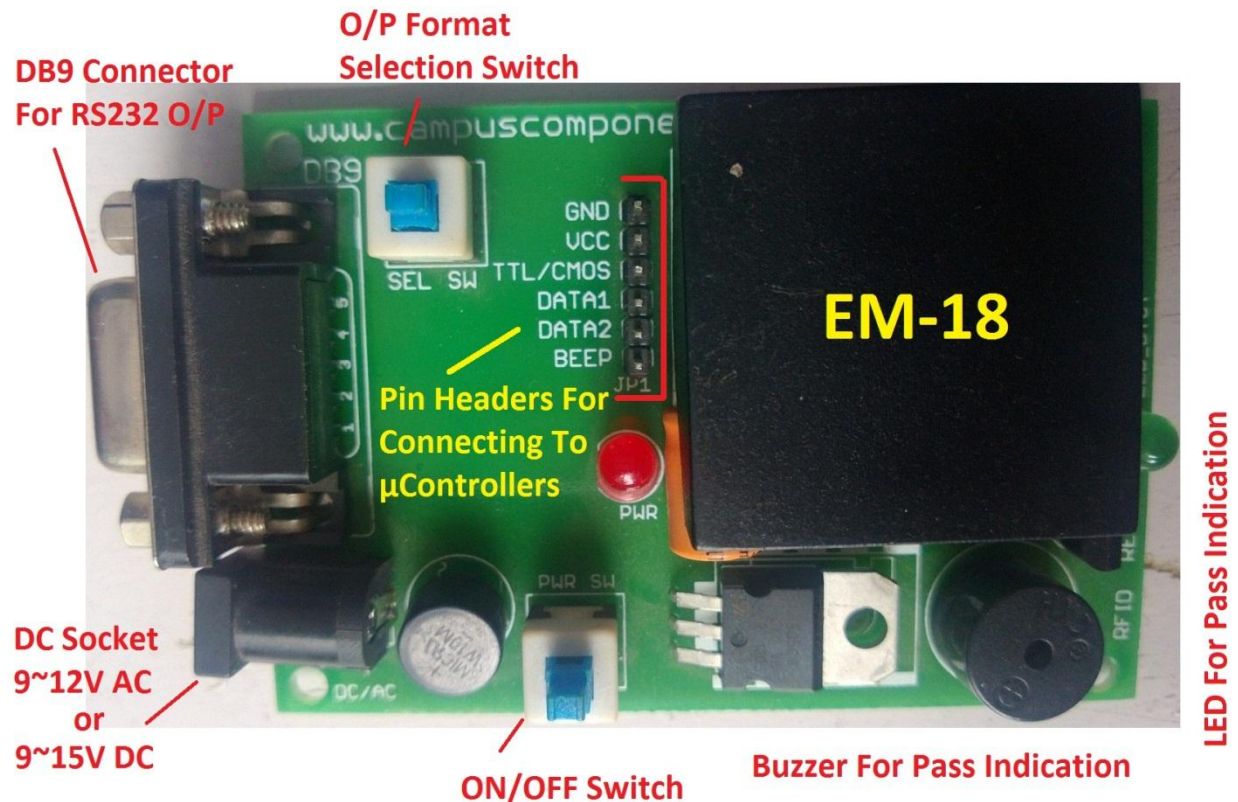
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RFID Reader Module



This board is based on the EM-18 RFID Module. Using the board with microcontrollers to read a card's data is very simple and requires just a serial connection. The board has a bridge rectifier and 5V voltage regulator so it can be powered by 9~12V AC as well as 9~15V DC adaptor. Module can also be powered through header wires (+5V & GND) from other interfacing board.

The board has an onboard power switch (Labeled PWR SW), power indication LED (Labeled PWR) and to indicate the detection of Card/Tag, it has a LED (Labeled DTCT) and Buzzer. Selection Switch (Labeled, SEL SW) is used to switch between two output formats:-

- Serial O/P from TTL/CMOS Pin (Microcontroller Compatible) and RS232 O/P from DB9 Female Connector. (Note:- Data is available at both TTL/CMOS and DB9 simultaneously.)
- Weigand26 O/P from **ONLY DATA2** (It is DATA0 pin of EM-18) & **DATA1** (It is DATA1 pin of EM-18) Pins. (Note:- This is a different mode which uses different protocol, so if selected data can't be read using SERIAL Protocols, Like on UART or HyperTerminal.)

If even after all proper connections data is still not available at **DB9** connector (**RS232 Logic**) or **TTL/CMOS** pin (**TTL Logic**), it may be because **SEL SW** is in Weigand26 mode and in this condition data is only flowing to **DATA1 & DATA2** Header Pins. Press the switch to select **SERIAL** mode and check data again.

All the IO pins are brought out to standard clearly labeled header pins, which reduce prototyping time and effort. The board can also be used to output data in Wiegand26 format. It can detect cards in the range of 6-10 cms.

Features:

- Low-cost method for reading passive RFID transponder tags.
- 9600 bps serial interface.
- 125 KHz Operating Frequency.
- Reads EM4100 compatible transponders. 64bit Read Only (Manchester 64-bit, Modulus64).
- Read Distance up to: 6~10cm for cards, and 5cm for key-tags.
- On board LED (Green) for Pass indication.
- On board Buzzer for Pass indication.
- Integrated RFID Coil Antenna.
- Serial UART out from pin headers (TTL/CMOS) and RS232 (DB9).

Technical Specification:

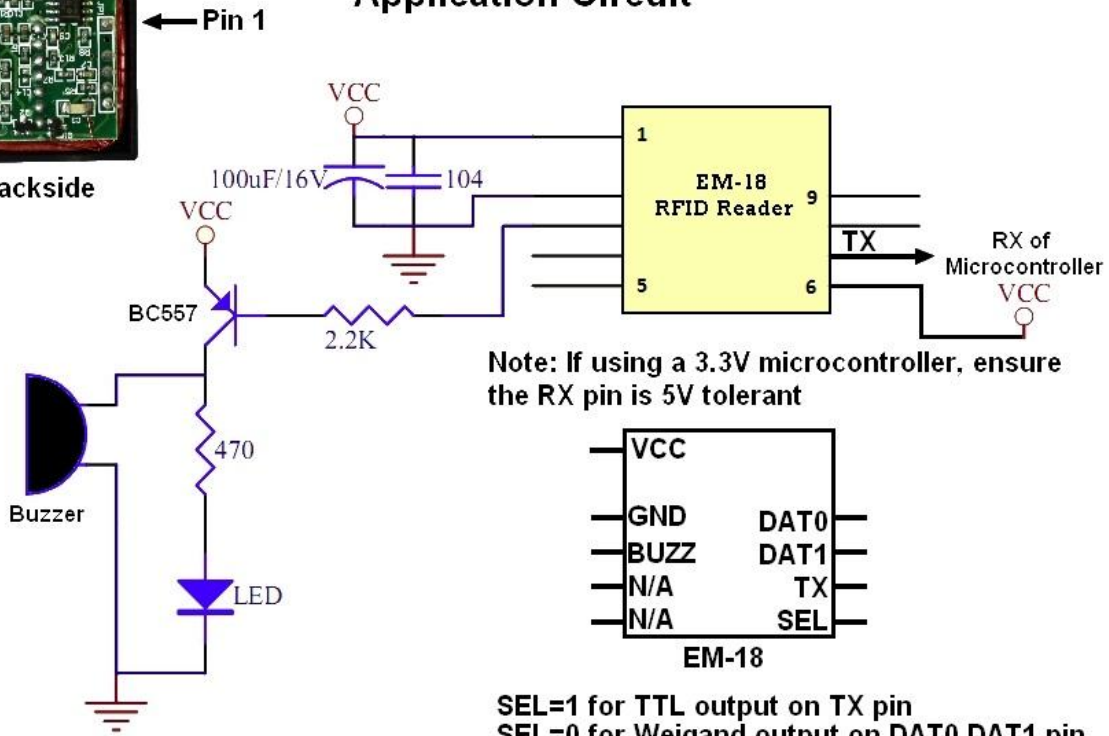
Supply Voltage	4.6 V to 5.4 V DC
Current	65mAmp
Card/Tag Format	EM4001 or Compatible
Frequency	125KHz
Encoding	Manchester 64-bit, Modulus64

Operating Temp.	0° to 85° Celcius
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Backside

Application Circuit



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Location Map

