This board uses the EM18 RFID Module. It can be used to read our RFID cards. Using the board with microcontrollers to read a card's data is very simple and required just a serial connection. The board should be powered at 5V, and it requires a direct connection to the microcontroller's Serial Rx pin. The card data is transmitted over the serial line when the card is brought near the module.
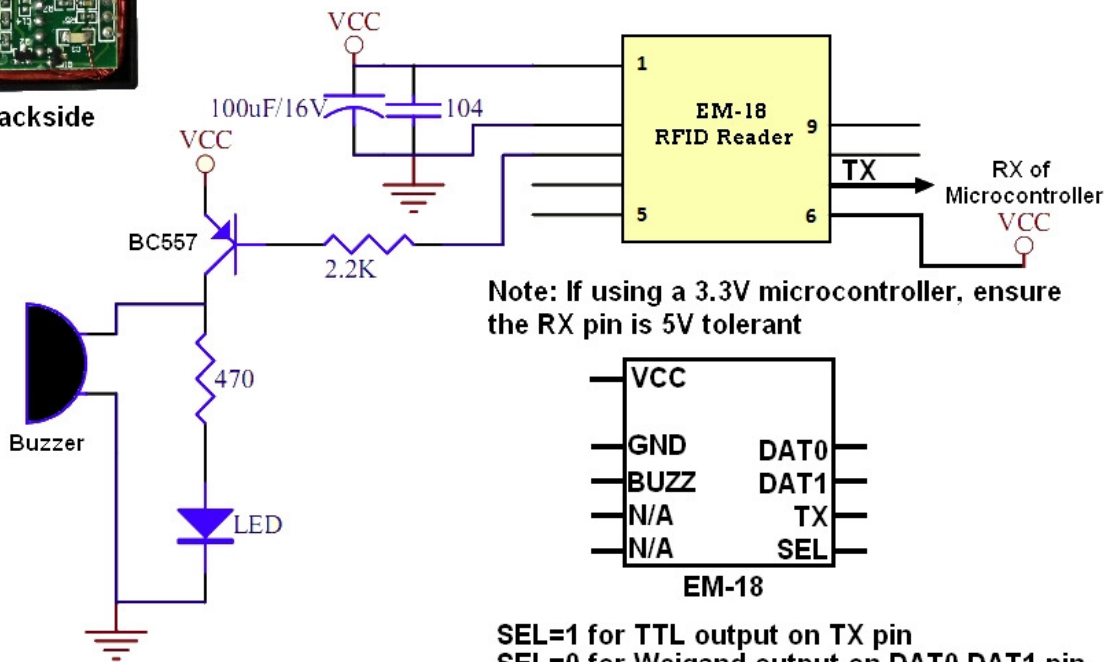
The board has an onboard power indication LED, a LED and Buzzer to indicate the presence of a RFID Card. All the IO pins are brought out to standard clearly labeled header pins, which simplify prototyping time and effort. An output pin (DET) also indicates the presence of a RFID card.. It can detect cards in the range of 8-10cm.

Application Circuit

Backside ← Pin 1

VCC

100uF/16V   104

VCC

BC557   2.2K

470

Buzzer

LED

EM-18 RFID Reader

1

9

5   6

TX → RX of Microcontroller

VCC

Note: If using a 3.3V microcontroller, ensure the RX pin is 5V tolerant

VCC	
GND	DAT0
BUZZ	DAT1
N/A	TX
N/A	SEL

EM-18

SEL=1 for TTL output on TX pin
SEL=0 for Weigand output on DAT0,DAT1 pin

Technical Specification:

- 5V supply
- 125kHz read frequency
- EM4001 64-bit RFID tag compatible
- 9600bps TTL and RS232 output
- Magnetic stripe emulation output
- 100mm read range