

The RFID reader reads EM4100 family transponder tags that are brought in proximity to the reader and output the unique tag identification number through RS232 serial port @9600 bps. The reader output 12 byte including one start, stop byte and 10 unique data byte.The start byte and stop byte are used to easily identify that a correct string has been received from the reader (they correspond to a line feed and carriage return characters, respectively). The middle ten bytes are the actual tag's unique ID. Vertical and horizontal parity checking has been done in card reading algorithm to ensure data integrity. One status LED is provided to indicate card detection.  
RFID (radio frequency identification) systems use data strings stored inside RFID tags or transponders) to uniquely identify people or objects when they are scanned by an RFID reader. These types of systems are found in many applications such as passport protection, animal identification, inventory control systems, and secure access control systems, robotics, navigation, inventory tracking, payment systems, and car immobilization. Because passive tags require a strong RF field to operate, their effective range is limited to an area in close proximity to the RFID reader.

**Product Features**

* Low-cost method for reading passive RFID EM4100 family transponder tags
* Reading Distance 10-15CM of the reader (Depend card shape)
* 125kHz read frequency
* 9600 baud RS232 serial interface
* Standard 2.54mm Pitch Bergstrip connector
* Bread Board compatible
* Low power Requirement 7-9V @ 100mA
* Small Size
* Built in Antenna
* No components at PCB bottom side ( easy to stick to any surface like wood,glass etc)
* Status LED for card detection
* On-Board Power LED

**Key Specifications:**

* Power requirements     :  7-9VDC
* Current Requirement    :  <110mA
* Communication            :  RS232 Serial at 9600 baud (8N1)
* Dimensions                  :  63mm x 98mm x 5 mm
* Operating temp range   : -40 to +185 °F (-40 to +85 °C)



This is a basic VLF RFID tag used for presence sensing, Aceess Control etc. Works in the 125kHz RF range. These tags come with a unique 32-bit ID and are not re-programmable. Card is blank, smooth, and mildly flexible.

**RFID Clamshell Card (125kHz) Features:**

* EM4001 ISO based RFID IC
* 125kHz Carrier
* 2kbps ASK
* Manchester encoding
* 32-bit unique ID
* 64-bit data stream [Header+ID+Data+Parity]

**Dimensions:** 54 x 85.5 x 1.8mm