

## 2E-2657A

### UHF RFID Integrated Card Reader



#### Introduction and Application

UHF RFID card reader is an important way of information data automatic identifying and inputting, it is a comprehensive technology based on computer and communication technology. The automatic identification technology develops quickly in recent years, which consists of barcode technology, magstripe technology, RF technology, optical character identification technology, biometrics identification technology and UHF RFID reader etc.

Usually, UHF RFID reader has high sensitivity. In some system; receiving and transmitting of UHF RFID reader is mutually independent, especially when uplink signal frequency is different from down going signal.

Generally, transmitting power 100mW-500mW is applicable to all kinds of UHF RFID reader.

2E-2657 UHF RFID reader has many advantages such as more protocols supporting, fast reading, more labels identification, circular polarization antenna and compact design. The reader is widely used in all kinds of RFID system.

#### Application:

☆ Logistics and Warehouse management;

☆ Parking control system;

☆ Manufacturing management;

☆ Products anti-counterfeiting detection;

☆ Other field: Club management, library, student school rolls, attendance management and swimming pool system etc.

#### Function:

Low power, stable reading and writing distance,

Fast data reading speed,

More labels can be read at same time,

More protocols supporting,

Compact designs and waterproof.

**Specification :**

Working Frequency : National standard ( 920~925MHz ), America standard (902~928MHz)or customize other frequency.

Support Protocol : ISO18000-6B , ISO18000-6C ( EPC GEN2 )

Frequency Hopping : FHSS or fixed frequency set by software

Working Way : Automatically reading card at regular time and set reading card way

Frequency Power : 0~30dBm, can be adjusted by software

Reading Distance : 1 ~ 15 meters

Reading Sensitivity : Unipolarizationreading

Reading Speed : One label 64bit ID number <6ms

Antenna : Built-in linear polarization antenna, gain 12dB

Interface : RS232 , Wiegand26 , Wiegand34

**CANBUS (customize)**

Working Voltage : DC + 12V

Working Status Indication : Buzzer

Power : 1W

Working Temperature :- 20°C +80°C

Storage Temperature :- 40°C +125°C

Working Humidity : 20%~ 95%( no condensing )

Dimension : 450mmx450mmx75mm

**Using Explanation :**

The UHF RFID reader start to work when the buzzer makes a sound,when the tag approach the reader,the buzzer makes a sound again to indicate transmitting data.The time intervalbetween two times of reading one IC card can be set by software.After reading card, the IC card will not make any indication and not transmit data if it is still in RFIDreader field,but if exceed the time interval, or other ID cards in RFID reader filed, thereader will read cards and transmit data.

The UHF RFID reader use radio influence technology,avoid approaching the metal asfar as possible when using it.The radio wave will be affected by metal and readingdistance will be shorted when reader approach to metal.The UHF RFID reader installationposition should be far away from motor and transformer etc, to reduce the impact onreader. 2E-2657 can be compatible with Wiegand 26bits/Wiegand 34 bits/RS485.

2E-2657 reader is mainly used in Parking lot.

2E-2657 reader provides SDK with demo of VB and VC.

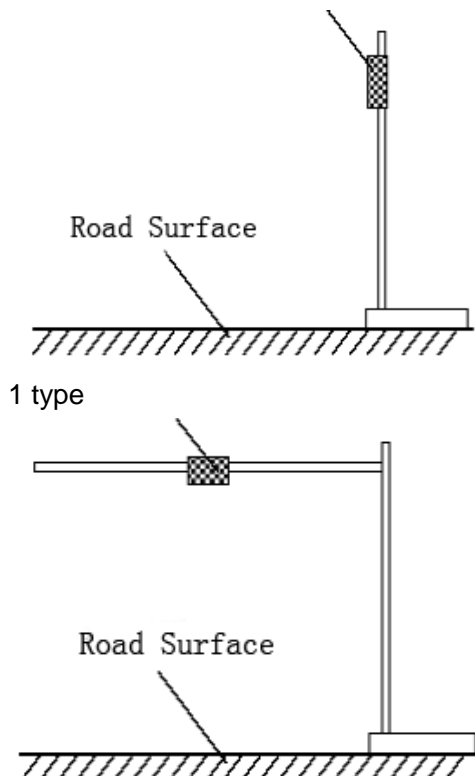
**Signal Definition :**

SerialNo.	Name	CableColor	Function
1	DC+12V	Red	+9V ~ 15V positive
2	GND	black	Negative
3	TXD	brown	RS232 signal output (PIN2)
4	RXD	Yellow	RS232 signal input (PIN3)
5	GND	Blue	RS232 grounding(PIN5)
6	Trigger	Gray	Trig pin
7	DATA0	Green	Wiegand data 0 or 485 interface positive port
8	DATA1	white	Wiegand data 1 or 485 interface negative port

**Hardware Installation and Application**

1) Installation

There are two ways to install the reader bracket: “1 type” and “L type”, see pictures below: select the installation way according to application and actual system. Generally, “1 type” reading distance is notlong, but simple installation; “L type” reading distance is longer, but complicated installation.



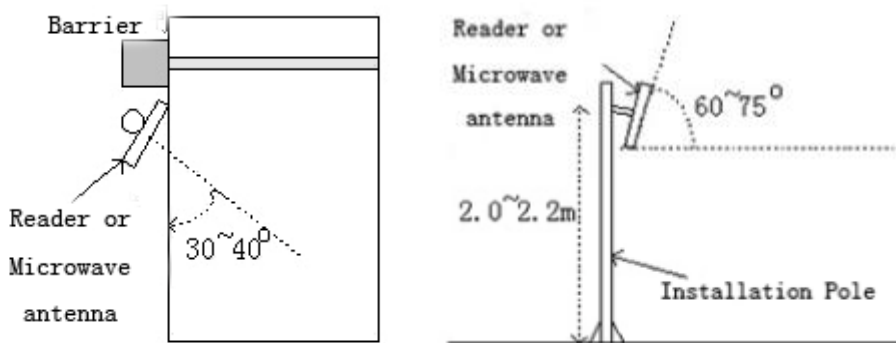
L type

2) Reader Fixing and Height Adjustment

“1 type”, the diameter of bracket pole must be 50-60mm, the length is 2.2 meters, it would be better use the stainless steel material which thickness is more than 1.2mm. Fix the reader at the top of bracket by accessories. Adjust the height of reader according to car type (big car or small car), usually the height is about 2.0m (1.8-2.2 meter).

“L type”, the diameter of L type bracket vertical pole must be 60-80mm, the diameter of horizontal pole must be 50-60mm, it would be better use the stainless steel material which thickness is more than 1.2-2.0mm. Fix the reader at the top of bracket and close to the center of roadway. Adjust the horizontal pole height according to car height, usually the height is about 3.5-4.0 meter.

3) Reader Angle Adjustment



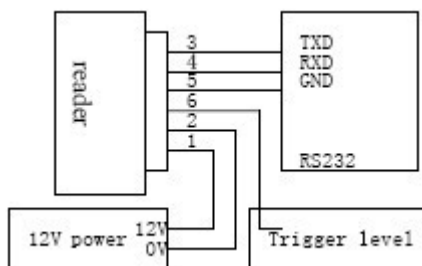
Angle picture

Antenna angle 1: when antenna incline ground, the angle between antenna and horizontal line is about 60~75°

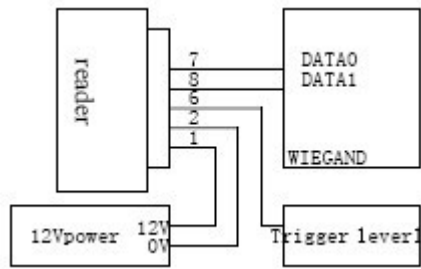
Antenna angle 2: when antenna incline roadway, the angle is about 30~40°

Communication

1) RS-232



2) Wiegand



**Attention and After Service**

- 1) When card reader working, the installation people should stand 30cm away from the antenna, this is the most approaching distance of America FCC standard.
- 2) Stand far away from reader when it working.
- 3) Wiegand communication, power trigger level should be same as Wiegand trigger level.
- 4) Trigger conditions: high level or low level.
- 5) According to production date, we provide 1 year guarantee, but collision, high voltage, wrong operation and man-made damage are not in free repairing field.