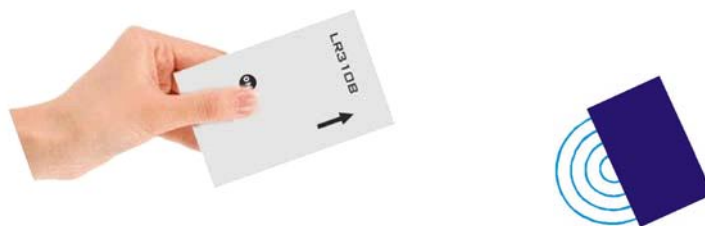


Rhombus280C Long range oriented reader

1 Introduction

1. The operation frequency is 2.4G microwave. It has Passed High Frequency Radiation Electro-Magnetic-wave International Certification framed by U.S.A. and Europe Union. Power of small scale. No harm to human.
2. Reading distance can be from 2 to 15m, and can be adjusted by user. Reading area is 120° at the front of the reader.
3. Rhombus310A smart card is double battery designed. ID number is sent every 1.5 second. Battery lasts more than 2 years. The specification: CR2032, 3V
4. Rhombus310B smart card is double battery designed. Press“ON”when using, encryption ID number is eradiated instantly, which are unbreakable. Battery lasts more than 5 years.
5. when using the long range smart card, one should point the direction of arrowhead on the card to the reader, as a request of affirmance to enter.
6. No plate should be placed in front of the reader, otherwise signals will be barred. It would be better keep off plates in installation in case of affecting the receiving distance. Signals could be sent through glass.



2 Specifications

Microwave radio frequency parameter

| | |
|-------------------------|----------------------------------------------|
| Working Freq. | 2.45G |
| Working Freq. bandwidth | 8MHz |
| Signal modulating mode | GFSK |
| Radio freq. | Max peak value power 1mW |
| Receiving Sensitivity | 90dbm |
| VSWR | ≤ 1.5 |
| Fore-and-aft ratio | $\geq 25\text{dB}$ |
| Polarization | vertical polarization |
| Reading area | 120° at the front of the reader |
| Reading distance | 2~15m adjustable |
| Reading speed | within 100km/hour |
| Anti-collision | identify 30 pieces of cards at the same time |
| Communication mode | dynamic cryptic key encryption mode |
| Bit error | 0.0000001 |

Electrical and Mechanical Specification

| | |
|----------------|-----------------|
| Power Supply | DC12V \pm 15% |
| Current Supply | 60mA |
| Interface | RS232 |

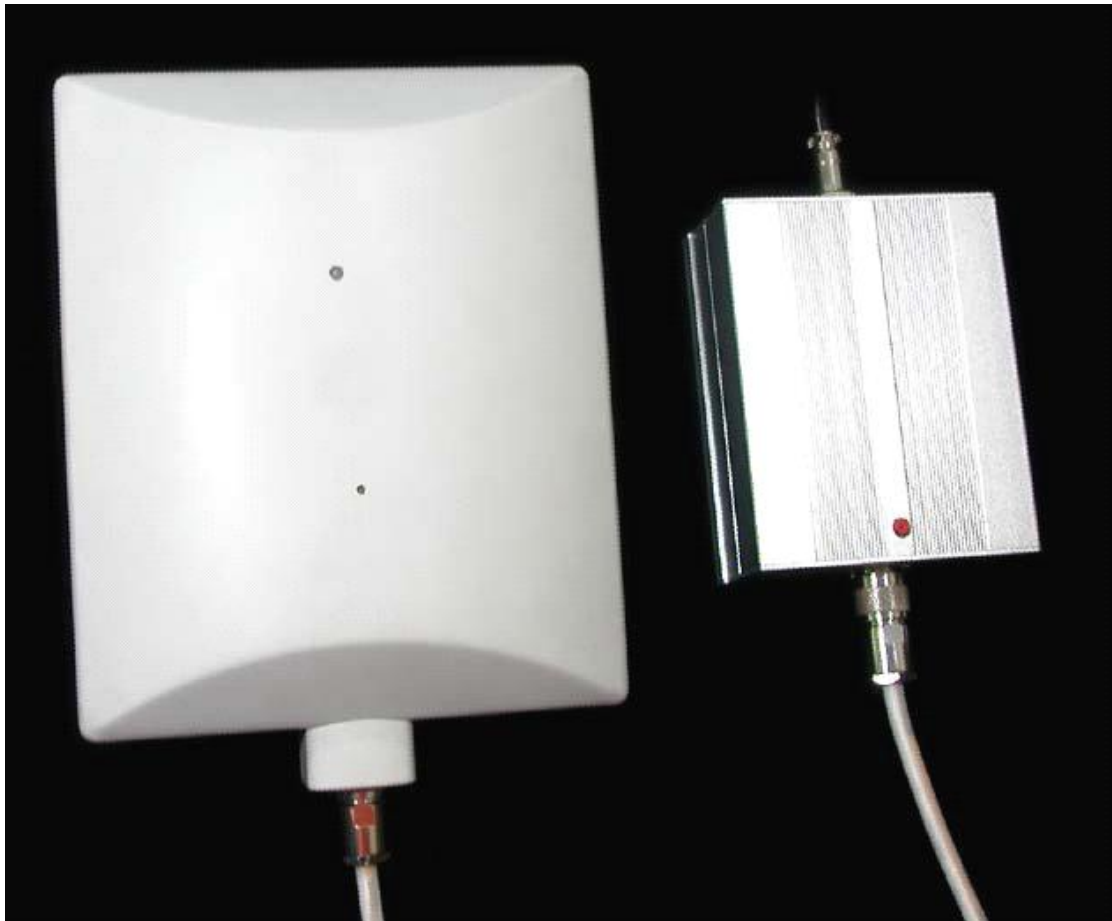
Other Specification

| | |
|---------------------|------------------------|
| Working Temp. | 40°C ~ +70°C |
| Relative humidity | 10% ~ 95% |
| Sound/Vision | Buzzer/LED |
| Card size | 87mm X 55mm X 5.5mm |
| Reader size | 134mm X 106mm X 55mm |
| Reader weight | 0.75Kg |
| Antenna size | 245mm X 215.6mm X 57mm |
| Antenna weight | 2.0Kg |
| Windproof intensity | 60m/s |

3 Rhombus280C (RS232) interface

| | |
|--------|--------|
| Red | +12VDC |
| Black | GND |
| Yellow | RXD |
| Green | TXD |

4 Picture



Note: Rhombus' products must work with linear regulated power supply, and other kinds of power supply are prohibited.