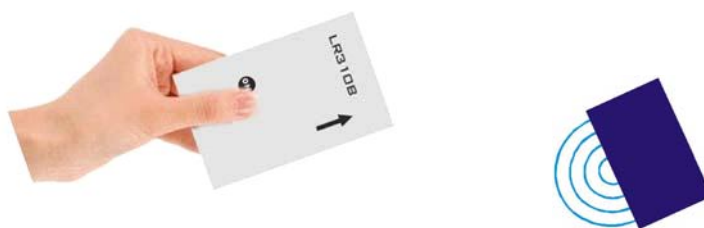


# Rhombus280B Long range oriented reader

## 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  $120^{\circ}$  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	$\leq 1.5$
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	RS485

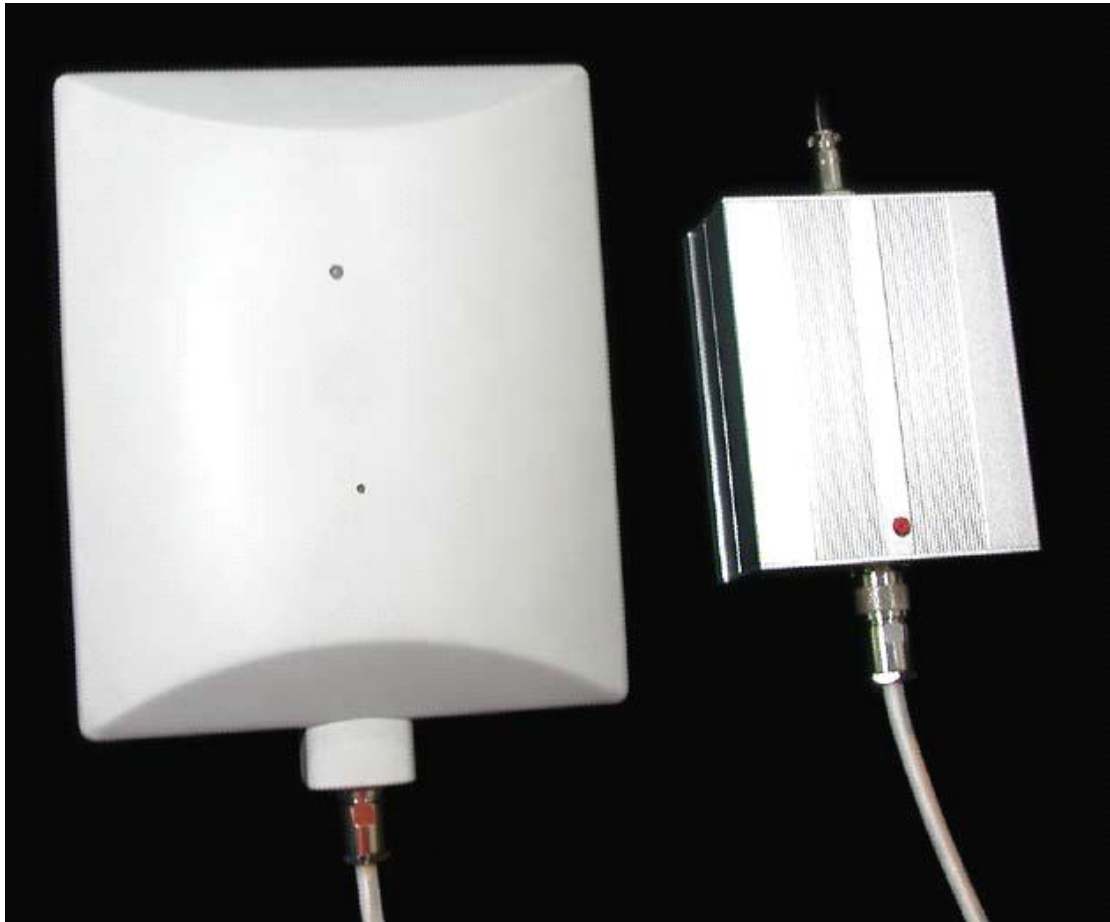
### Other Specification

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 Rhombus280B (RS485) interface

Red	+12VDC
Black	GND
Yellow	R+
Green	R -

### 4 Picture



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