

# AR900U

## UHF 6B Long Range Wiegand Reader

Date: 18 July 2016



### Introduction:

AR900U is an ultra high frequency long range wiegand reader read up to 7 meter (free air reading) depends on the interference on site and proper card reading angle.

AR900U compatible with multi-protocol, integrated design, quick read, multi-tag read and can used widely in RFID systems. UHF has limited signal penetration against tinted solar film.

AR900U complete with mounting bracket and power supply, housing made of PET material which is weatherproof against sunshine and rain.

Ideals for access control tracking system, car parking

### Features and Benefits:

- Less Maintenance : UHF card is a passive card (battery less)
- Delay Function: There is a present delay. Eg: Set 5 seconds delay, when card A is flashed, reader will wait for 5 seconds to scan the same card again. If different card (card B) is flashed within 5 seconds, it will be scanned. This to avoid continuous transactions to clutter PC reporting.
- It does not cause interference with the existing communication frequency; a specific UHF bandwidth is allocated by MCMC for this application.
- Fast transaction time, detects a tag as fast as in 300 milliseconds.

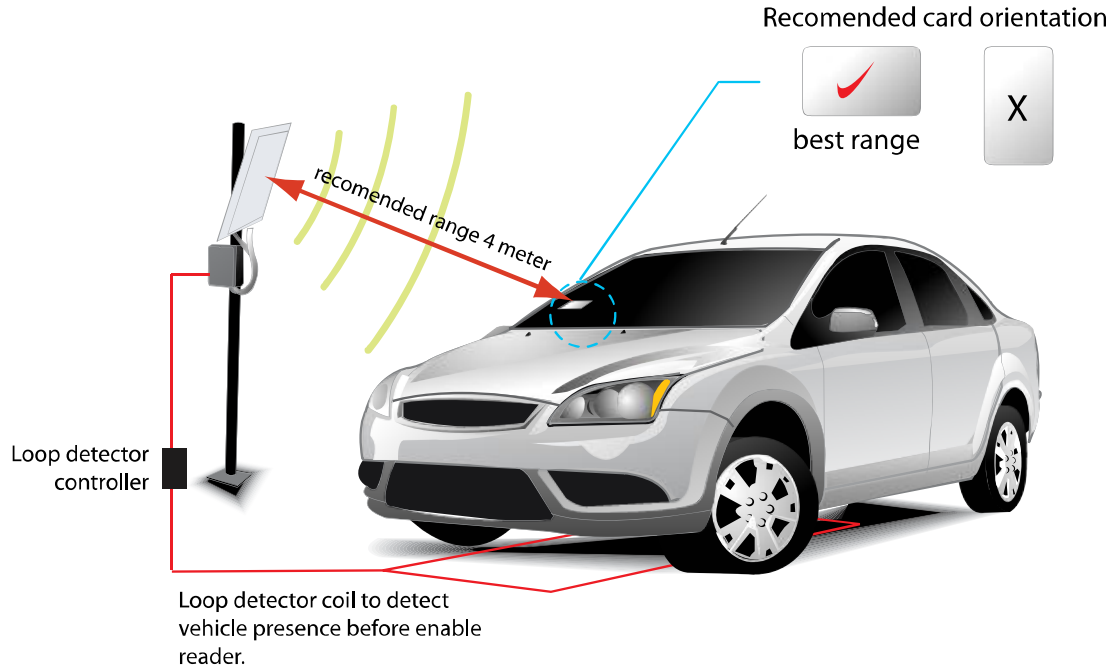
### Specification:

RF Characteristics	ISM 902~ 928MHZ (FCC) or 920 ~ 923MHz (MAS)
Antenna Ports	Built in Antenna, Gain : 12dbi
RF Power Output	0 ~ 30dBm
Protocol	ISO 18000 – 6B, ISO 18000 – 6C
Power Supply	DC +12v AC – DC Adapter, less than 3Amps
Operating Temperature	-20°C to 80°C
Dimension	440 x 440 x 50 mm
Tag Read Rate	Software programmable, Average reading per 64Bits : < 10ms
Weight	2.5 kg
Interface	RS – 232C serial interface / RS 485, Wiegand 26/34 (Optional RJ45)

## Wiring Pin Out Diagram:

POWER		RS232 DB9			RS 485		TRIGGER		WIEGAND		
1	2	Pin 3	Pin 2	Pin 5	Brown	Yellow	Red	Black	Blue	White	Green
+12V	GND	TX	RX	GND	A+	B+	Trigger	GND	Data 0	Data 1	GND

## Installation Guide:



## OPERATION CONSTRAINTS:



Reading range will decrease if there is metal tinted solar film such as Air-cool and etc. UHF can **NOT** pass through solar film with heavy metal oxide such as VKOOL. If heavy metal oxide total block UHF signal, might require user to wind down windows for about 20cm to allow UHF signal penetration into car and read card.

For best reading result, recommended to cut a rectangular slot on the film to allow UHF signal to pass through.

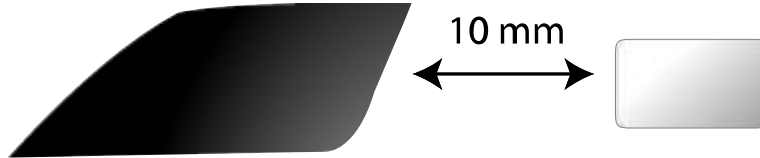
Front View :



Back View :



**Distance between windscreen and card:**



Best distance between car windscreen and card minimum 10mm clearance. Card should not attach directly to the windscreen surface.

**UHF Card Specification:**



UHF card is made of PEC material that can withstand heat at vehicle windshield.

RF Characteristics	UHF band Passive; RF Backscatter
Read Distance	Up to 700cm in free air (Depend on operating environment and windshield solar film)
Memory	64 bits Read only (38 bits Unique ID, 16bits CRC)
Multiple Read Capability	50 tags per second ( ID Read)
Multiple-Read	Yes, Binary-tree
Physical Characteristics	Length : 85 mm Width : 53 mm Thickness : 1 mm
Operating Temperature	Typically -20°C to 65°C
Life	10 years

**Ordering Information:**

- AR900U reader complete with power supply and mounting bracket
- CDU100L UHF card
- CDUS100L Dual frequency UHF and EM 125 Khz card

**Authorized Dealer:**



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