

# Tender Specifications

(Radio Frequency ID) Access Control Equipment for Vehicle Parking System

## Equipment Performance Specifications

The equipment shall consist of long range reader that can be installed into a car parking control system to provide vehicles totally hands free access to a car parking facility. The readers shall use Radio Frequency Identification technology and communicate with transponder that can be fixed to vehicles. Communications between reader and transponder shall be secure. All entry / exit information must be able to be transmitted to a controller unit to record the time of entry and exit.

### Long Range RFID Reader

General description and specifications:

1. The reader shall be of Radio Frequency Identification technology.
2. The dimension of the reader unit shall not exceed 300 x 300 x 28 mm.
3. The housing should be made of ASA with a two-phase **thermoplastic** material combining **styrene-acrylonitrile copolymer** and acrylic **rubber** with weather resistance for outdoor applications.
4. The protection type shall be of minimum IP65 classification, suitable for operation in subtropical climate conditions and operate within the temperature range of +5 to +60°C.
5. The power supply must be 12-24V/DC and the power consumption must not exceed 1A.
6. The operation frequency shall be of dual frequency of 125 KHz and 433 MHz.
7. The 3 LEDs on the reader should visually indicate when the transponder battery is low.
8. The reader shall read the transponder fitted in anti-solar film sunshield containing metallic oxide.
9. The reader unit must include a built-in antenna that eliminates additional labour cost to build remote antenna.
10. The reading distance shall be up to 7 meters.
11. The reader shall support Wiegand, RS485, RS232, Data Clock interface output to the control unit.
12. The reader can be fixed in such a way to allow the reading of transponders from overhead or alongside of the moving vehicle.
13. The reader must have 3 LED lights to facilitate maintenance and management.

## Transponders (Tags)

### General description and specifications:

14. The dimensions of the transponders shall not exceed 85 x 54 x 6 mm and the housing shall be of ABS material.
15. The protection type shall be of IP54 classification, suitable for operation in subtropical climate conditions and operate within the temperature range of +5 to +50°C.
16. The transponder battery CR2450 shall be **user replaceable**.
17. **Dual Technology transponder** feature shall also be available in order to satisfy "**one-card**" solution not only to read on Long range Active reader but also to read on short range passive reader working on a frequency of 13.56MHz **mifare DESFire EV1** (e.g. lobby or lift access).
18. The transponders shall be of **active type** and equipped one fully encapsulated lithium type battery that guarantees a life span of minimum **2 years and up to 4 years**.
19. The cardholder shall be made of Acrylic material that comes with a suction cup or self-adhesive to attach to the windshield of the automobile.

**Compliance List**

All vendors are required to provide compliance information on the column provided.

Terms of Reference		Compliance	
		Yes	No
	<b>Long Range RFID Reader/ Transponder</b>		
	1.		
	2.		
	3.		
	4.		
	5.		
	6.		
	7.		
	8.		
	9.		
	10.		
	11.		
	12.		
	13.		
	14.		
	15.		
	16.		
	17.		
	18.		
	19.		
	20.		