

# PRODUCT SPECIFICATION AND MANUAL

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Title	Document		
Project Name	KORANDO C	Date	2010-06-21
		Finish Date	2010-06-21
		Made by	B.S.Choi

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## 1. Contents

Type	Weak Signal Equip.
Name	Unit Ass'y - Smart Key
Use	Utilizing the frequency of 133.33kHz RFID vehicle anti-theft device
Contents	<ol style="list-style-type: none"> <li>1. Smart Key Module of the Smart Key automobile will send Low Frequency to FOB(Transmitter). (Passive Lock/Unlock)</li> <li>2. This Equip &amp; Transponder communicate encryption algorithm mutually for User Authentication.</li> <li>3. This equipment uses semiconductors and integrated circuits that are designed to have a high reliability.</li> </ol>
Composition	<ol style="list-style-type: none"> <li>1. LF Antenna Controller</li> <li>2. LF Antenna</li> </ol>

## 2. Electronic spec

LIST	UNIT	Unit ASS'Y Smart Key Module
Rated voltage		DC 12.0V
Operating voltage range		DC 6.0V ~ 16.0V
Operating temperature range		-30°C ~ +80°C
Preservable temperature range		-40°C ~ +85°C
INPUT/OUTPUT FREQUENCY		133.33 kHz

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### 3. Specification

Form name of equipment	Unit Ass'y - Smart Key
Type	Weak Signal Equip.
Equipment List	LF Transmitter-Receiver
Frequency	TX-133.33 kHz
Antenna Type	Low Frequency ANTENNA
Communication Scheme	Two-Way Communication
Equipment use	Vehicle Antitheft Equip. (Smart Key System)
Operating Temp.	-30°C ~ +80°C

### 4. CIRCUIT EXPLANATION

1. When receiving Trigger switch(external)or Start switch(internal) input MCU(U1) will control the High Side Controller(U26) and provide power to LF Antenna controller(U5, U6, U9, U22, U24).

2. When MCU(U1) makes wake-up pattern and serial data and send it to LF Antenna controller(U5, U6, U9, U22, U24) the wave amplified by the LF Antenna controller(U5, U6, U9, U22, U24) will be transmitted through the external LF Antenna.

#### FCC (Federal Communications Commission)

**WARNING:** This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

This device complies with Part 15 of the FCC`s Rules. Operation is subject to the following two Conditions:

1. This device may not cause harmful interference, and
2. This device must accept ant interference received, including interference that may cause undesirable operation.

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