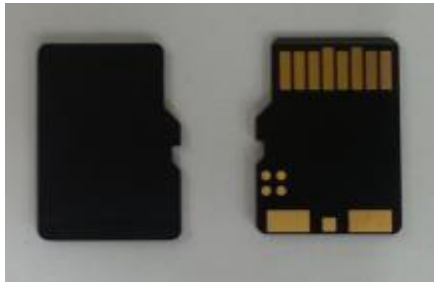


Document for FCC Certification And USERS MANUAL



SK Telecom Co., Ltd.

FCC ID : 2ADMB-M-RFID001

- **Overview**

- **Purpose**

- This document describes the technology that places Mobile RFID Reader Chip on the microSD card (hereinafter referred to as "RFID on microSD Card") to complement weaknesses and maximize strengths of the conventional RFID technology, with the aim of making the commercial sample to expand the RFID market.

- **Necessity of Development**

- The RFID technology is the basic technology for realizing ubiquitous computing, as it has the function of organic communication and computing between objects. As such, it has massive growth potential and implications. However, the conventional RFID technology has been mostly used in the distribution and logistics areas to figure out the number of products and related information in a fixed location. The resultant difficulties in acquiring product information in the process of transportation and storage have made it hard to expand the RFID market. Considering the need to develop a portable and customer-oriented RFID reader to obtain product information anytime and anywhere, the RFID on microSD Card technology is aimed at overcoming the problems (high costs, lack of portability and design limits) of conventional readers and expanding the market.

-

-

- **Major Technologies**

- RFID on microSD Card Hardware technology
- RFID on microSD Card Software technology
- Mobile RFID Reader Chip technology

Product Spec

[Table 2-1] Development Specification

Item	Specification	Note
Frequency	917.10~926.90MHz	Domestic
Standard	ISO 18000-6C / EPCglobal Class1 Gen2	
Tag reading range	2.5~4.5cm	microSD external antenna
Power output	13.7dBm	Conducted
Power consumption	Tx Max(20dBm) 350mA	RFID <70mA ,SD <30mA, Power <250mA
Internal configuration	SD Controller, RFID(PR9200)	
Size	microSD Card	(15mm X 25mm , 0.76T)
Transmission speed	40~160Kbps	Type C
Modulation	DSB-ASK, PR-ASK	Type C

Phone Application-1



RFID on microSD

Phone SD-Card Slot

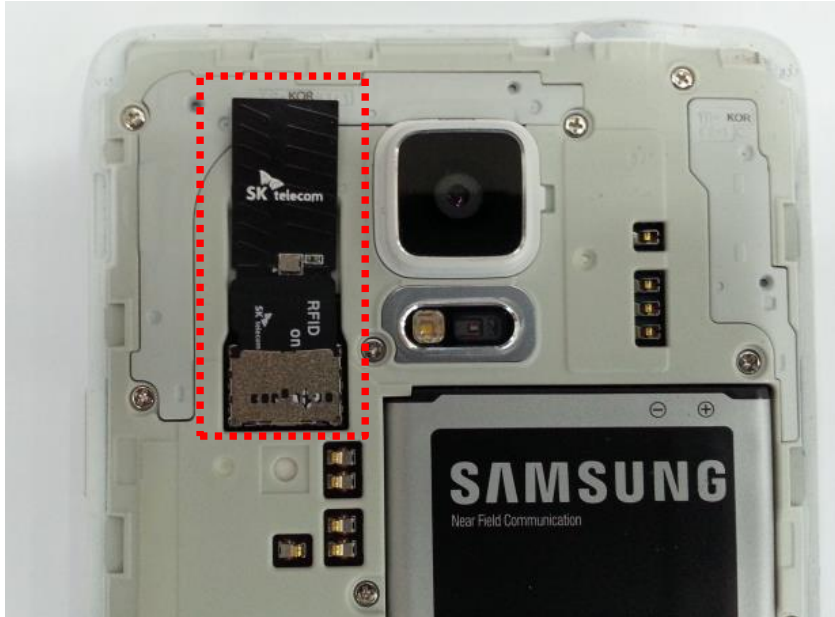
RFID on microSD & Phone

Phone Application-2

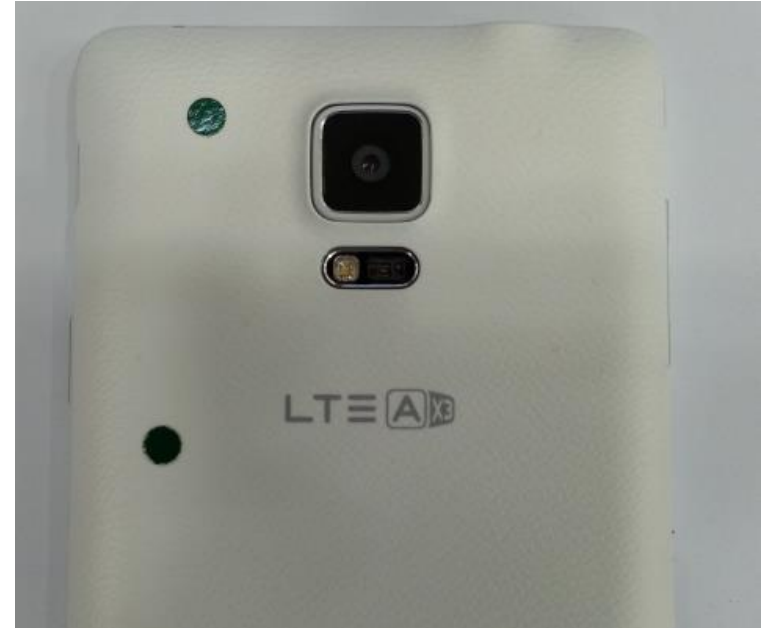


RFID on microSD & Phone

Phone Application-3



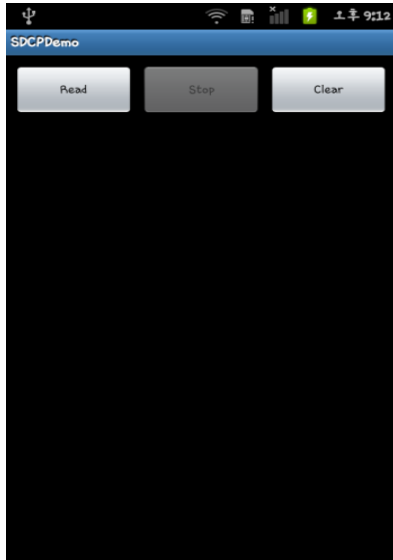
RFID on microSD & Phone



Set up completion at the phone

Tag Read Test App

Initial Screen



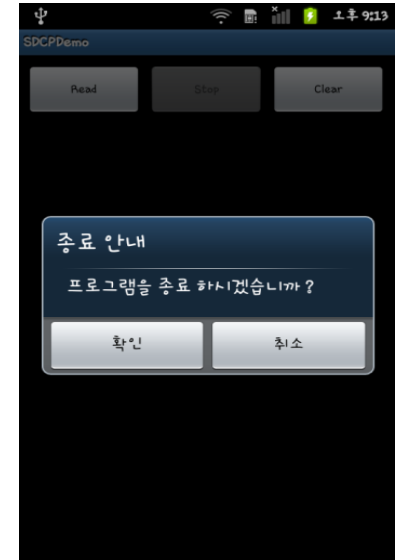
Tag Read Start



Tag Read Stop



Application done



- Initial Screen : Once application on, the Initial Screen(RFID Chip Power Off condition to On condition).
- **Tag Read Start** : Click the "Read" button , once RFID on , Resd Tag data display on the screen.
- **Tag Read Stop** : Once click the "Stop" button, stop the Tag Reading.
- **Application done** : Application done (RFID Chip Power on condition to Off condition)

Application-1(Alcohol Authenticity)



[Alcohol Authenticity Application]

1. Start the Alcohol Authenticity Application

2. Click the "Search" button, approach the Alcohol to micro SD Card on mobile phone.

3. Till vibrating the tag(Tag reading completion), Scan the product, The Tag Data reading only EPC Code.

4. Tag reading completed, search the Tag Data with the server.

Application-2(Alcohol Authenticity)



[Alcohol Authenticity Application]

5. Product search : Click the "Alcohol Authenticity" button.
6. Reading the Tag : EPC Data and reading data
7. Pass word of product Authenticity is right one, the server record the Authenticity.
8. If it is Authenticity, the screen display its authenticity.

- **FCC Information**

- Note : This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference, the user is encouraged to try to correct the interference by consulting with a dealer or an experienced technician for technical assistance.
- Any changes or modifications to the equipment not expressly approved by the party responsible for compliance could void user's authority to operate the equipment.
- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.