



ISO-15693 RFID - Reader

2010.03.10	V1.0	V 1.0 Release
2010.07.24	V1.1	V 1.1 Release
2010.07.28	V1.2	V 1.2 Release
2010.10.15	V1.3	RF Off 가

IS-1000 Interface

목 차

1. Specification
2. IS1000 구성물
3. IS1000 구성
4. Serial Setup Interface
5. IS-1000 USB To Serial Driver 설치 방법
 - (1) CP2101 Driver File
 - (2) 설치 방법
6. IS1000 운영 방법
7. IS1000 제공 되는 Card 메모리 정보
8. Command Interface
 - 6.1 Request (Target , PC → IS-1000)
 - 6.2 Response (IS-1000 → Target , PC)
9. Check Sum 계산법
10. Protocol Data
 - 10.1 Firmware Version Request (Target , PC → IS-1000)
 - 10.2 Firmware Version Response Pass (IS-1000 → Target , PC)
 - 10.3 Card Serial Read Request (Target , PC → IS-1000)
 - 10.4 Card Serial Read Response Pass (IS-1000 → Target , PC)
 - 10.5 Card Block Data Read Request (Target , PC → IS-1000)
 - 10.6 Card Block Data Read Response (IS-1000 → Target , PC)
 - 10.7 Card Block Data Write Request (Target , PC → IS-1000)
 - 10.8 Card Block Data Write Response (IS-1000 → Target , PC)
 - 10.9 Card StayQuit Request (Target , PC → IS-1000)
 - 10.10 Card StayQuit Response (IS-1000 → Target , PC)
 - 10.11 Card GetSys Request (Target , PC → IS-1000)
 - 10.12 Card GetSys Response (IS-1000 → Target , PC)
 - 10.13 Card Reset To Ready Request (Target , PC → IS-1000)
 - 10.14 Card Reset To Ready Response (IS-1000 → Target , PC)
 - 10.15 Card Block Lock Request (Target , PC → IS-1000)
 - 10.16 Card Block Lock Response (IS-1000 → Target , PC)
 - 10.17 Card DSFID Write Request (Target , PC → IS-1000)
 - 10.18 Card DSFID Write Response (IS-1000 → Target , PC)
 - 10.19 Card DSFID Lock Request (Target , PC → IS-1000)
 - 10.20 Card DSFID Lock Response (IS-1000 → Target , PC)
 - 10.21 Card AFI Write Request (Target , PC → IS-1000)

IS-1000 Interface

- 10.22 Card AFI Write Response (IS-1000 → Target , PC)
- 10.23 Card AFI Lock Request (Target , PC → IS-1000)
- 10.24 Card AFI Lock Response (IS-1000 → Target , PC)
- 10.25 RFID 카드인식 LED 동작 여부 Request (Target , PC → IS-1000)
- 10.26 RFID 카드인식 LED 동작 여부 Response (IS-1000 → Target , PC)
- 10.27 RFID 카드인식 Buzzer 동작 여부 Request (Target , PC → IS-1000)
- 10.28 RFID 카드인식 Buzzer 동작 여부 Response (IS-1000 → Target , PC)
- 10.29 RF_Off 명령어 동작 여부 Request
- 10.30 RF_Off 명령어 동작 여부 Response

11. IS-1000 데모 프로그램 설명서

- (1) 장치 관리자에서 CP210X를 확인 합니다.
- (2) Serial Port Connect
- (3) UID Reader
- (4) Block Data Reader
- (5) Block Data Write
- (6) Block Data Lock
- (7) Buzzer / LED Control
- (8) StayQuit / Reset To Ready
- (9) GetSys
- (10) DSFID Write
- (11) DSFID Lock
- (12) AFI Write
- (13) AFI Lock



RFID 13.56Mhz

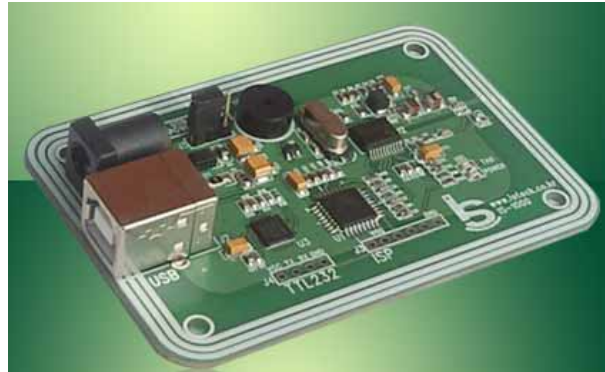
<http://www.iksung.co.kr>

IS-1000 Interface

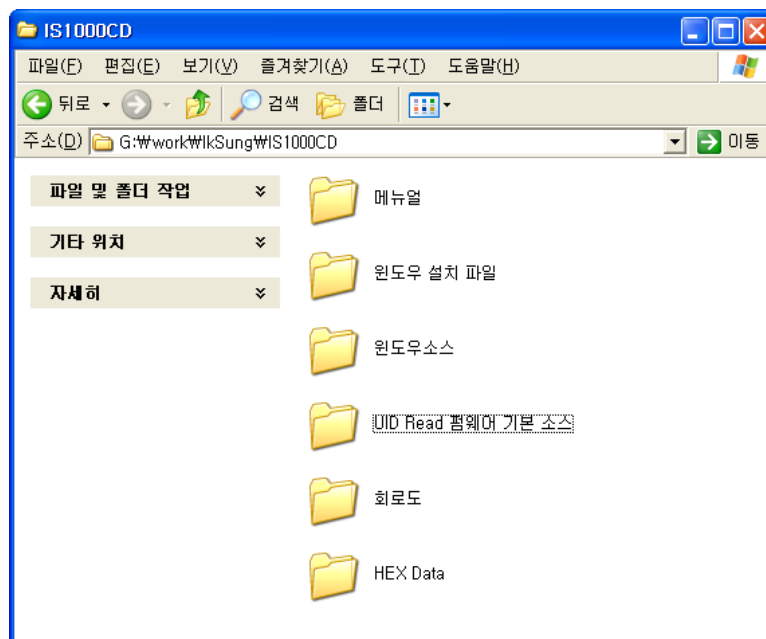
1. Specification

RF Frequency	13.56Mhz
Power Supply	USB Self Power Or 5V DC Operation
Supply Current	40mA @ 5V
Dimensions	81 x 54 x 13 mm
RF Data Rate	ISO15693
Host Interface	Serial TTL232, USB To Serial(CP2101)
Antennna	50-ohm Internal antenna
RF Power	80mW @ 5V
Read Range	50mm internal ant
Anticollision	Support(1tags)

2. IS-1000 구성물

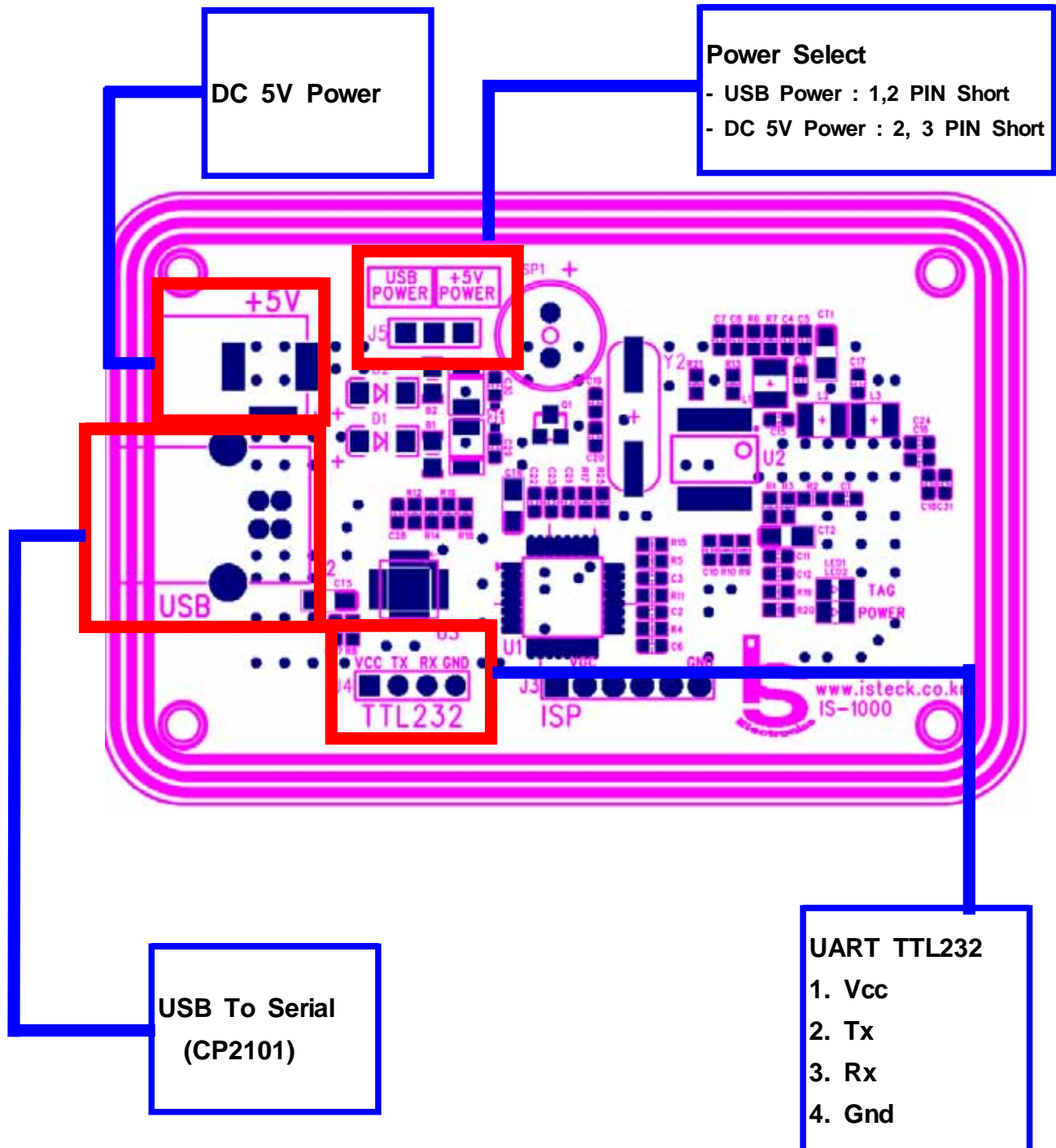


- CD 내용



IS-1000 Interface

3. IS-1000 구성



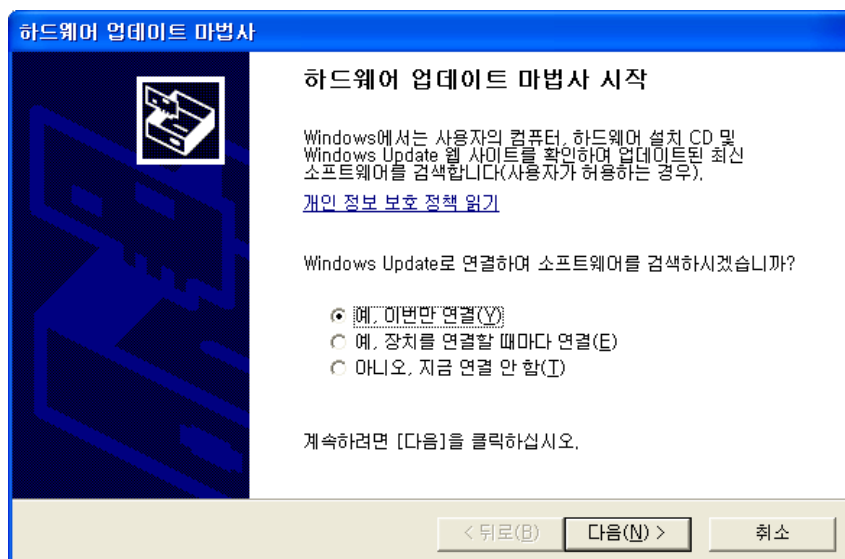
4. IS-1000 USB To Serial Driver 설치 방법

(1) CP2101 Driver File

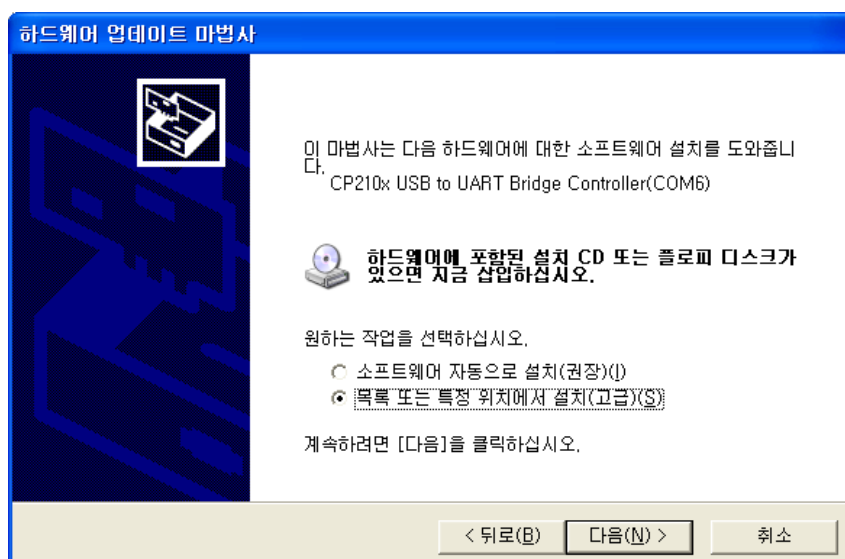
- ① <http://www.iksung.co.kr> 홈페이지 자료실에서 "CP2101" Download
- ② 제공 하는 CD에 CP2101 Driver

(2) 설치 방법

- ① IS-1000을 USB포트에 연결 합니다.

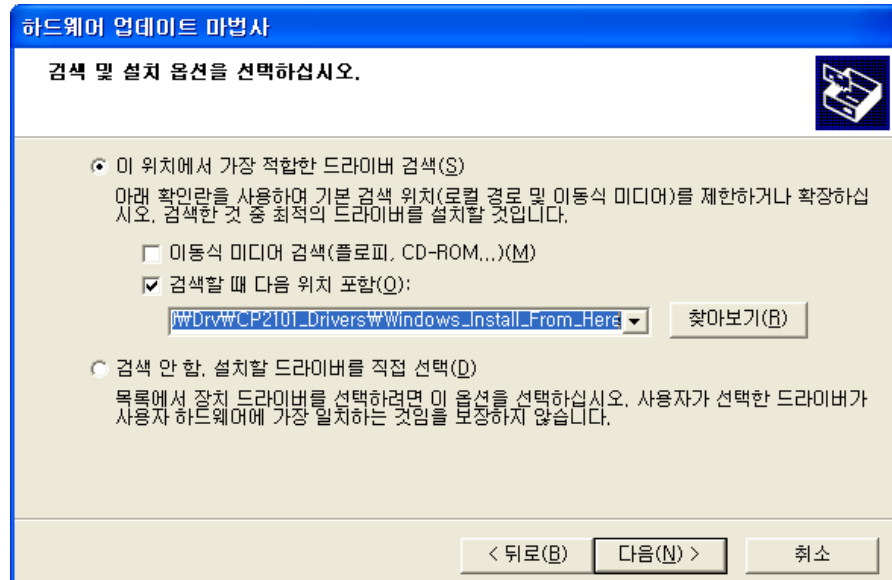


- ② “예 이번만 연결” 을 선택후 다음 버튼을 클릭 합니다.



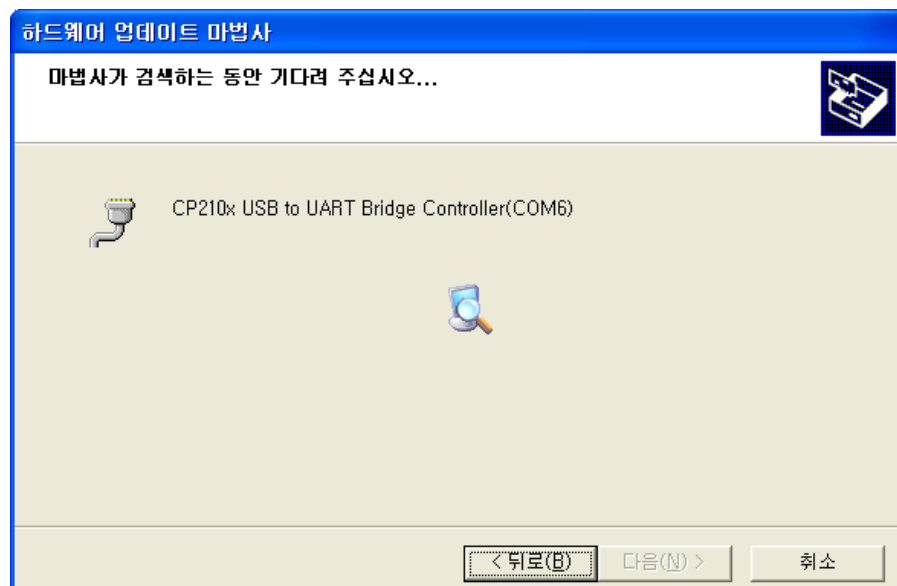
IS-1000 Interface

- ③ “목록 또는 특정 위치에서 설치(고급)” 을 선택후 다음 버튼을 클릭 합니다.



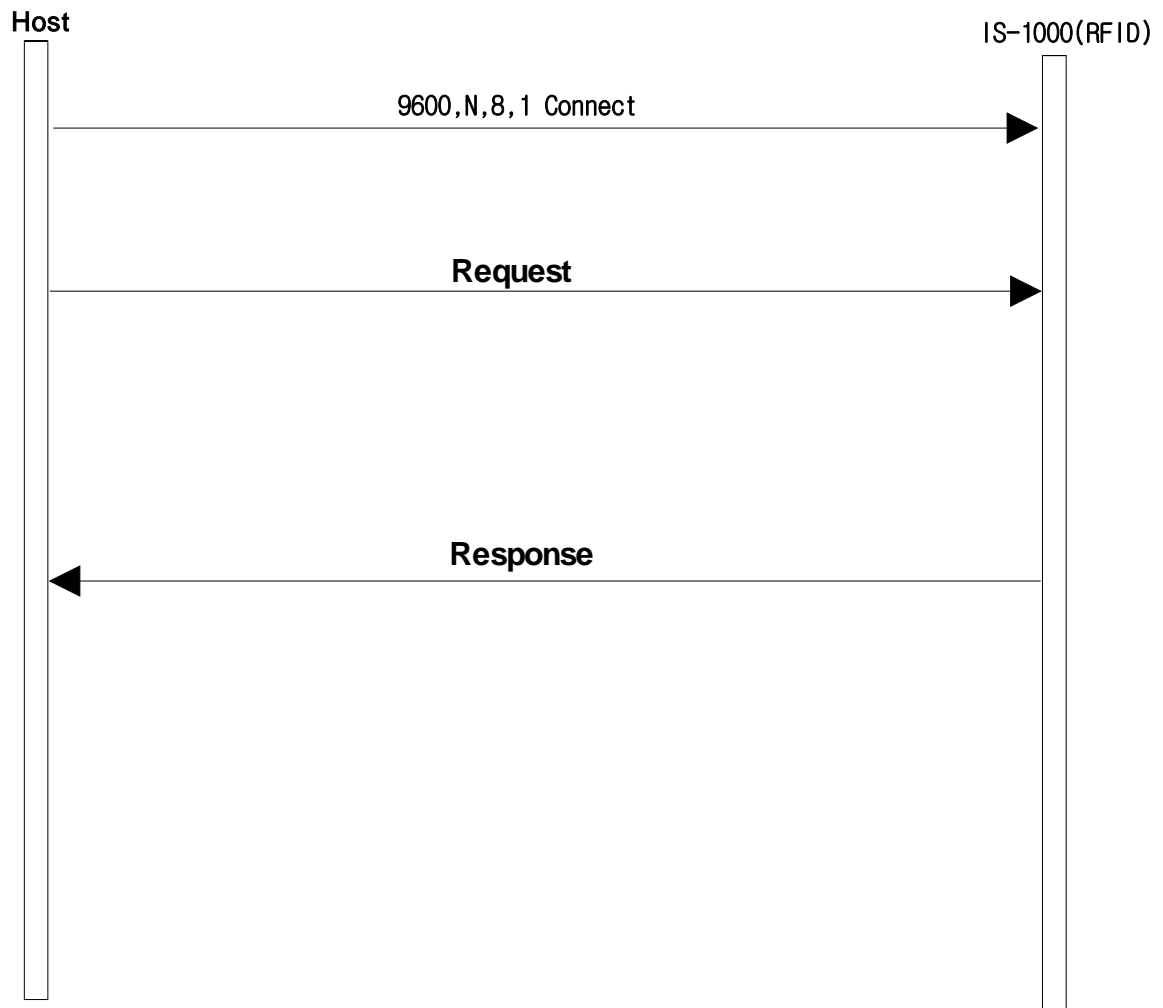
- 찾아보기를 선택 하여 CP2101 Driver 가 있는 폴더를 선택 합니다.

- ④ 찾아보기에서 CP2101 Driver 폴더를 선택 후 을 선택후 다음 버튼을 클릭 합니다.



IS-1000 Interface

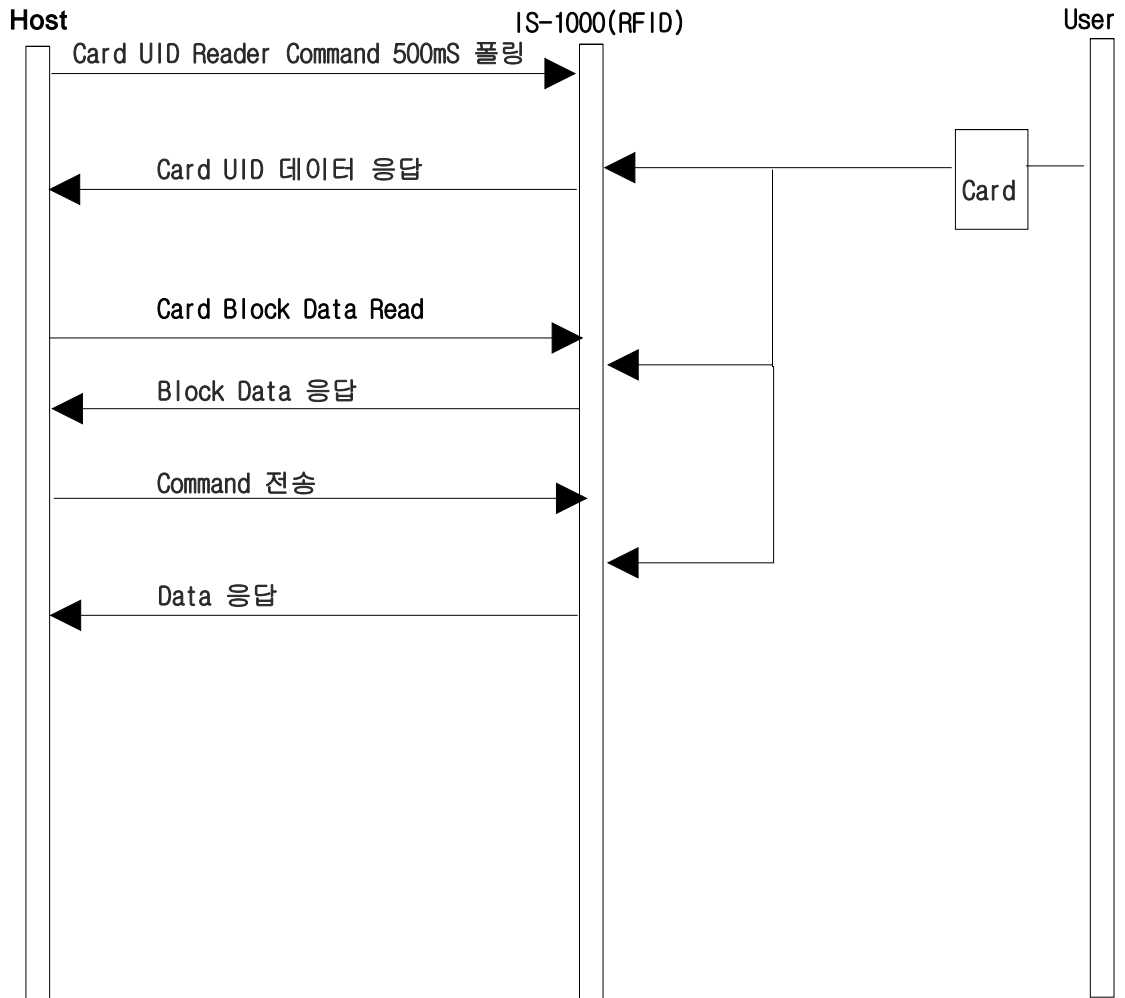
5. Serial Setup Interface



- 비트/초 : 9600
- 데이터 비트 : 8
- 패리티 : None
- 정지 비트 : 1
- 흐름 제어 : 없음

IS-1000 Interface

6. IS1000 운영 방법



- (1) Card UID Reader 명령을 500mS 주기로 연속적으로 계속 명령을 내립니다.
- (2) Card를 인식 하면 Card UID 데이터를 Host로 전송 합니다.
- (3) Card UID를 받으면 필요한 명령어(Card Read, Card Write, Card StayQuit 등등)을 다시 전송하여 Card 정보를 얻을수 있습니다.

IS-1000 Interface

7. IS1000 제공 되는 Card 메모리 정보

		<----- 32bits ----->				LockBIT
Block#	00					UNLOCK
Block#	01					UNLOCK
Block#	02					UNLOCK
	..	User Memory 108Byte				
	..					
	..					
Block#	24					UNLOCK
Block#	25					UNLOCK
Block#	26					UNLOCK
UID(64Bits)						LOCK
DSFID						UNLOCK
AFI						UNLOCK

- (1) Card Block 총 개수는 27 Block
- (2) Card Block 하나의 크기는 4Byte
- (3) DSFID 정보 Write 가능
- (4) AFI 정보 Write 가능

IS-1000 Interface

8. Command Interface

8.1 Request (Target , PC → IS-1000)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	Lens	Hex	Packet Lens
Command	1	Command	Hex	0x14 : Firmware Version 0x22 : Card Serial 0x23 : Card Block Data Read 0x24 : Card Block Data Write 0x25 : Card StayQuit 0x26 : Card GetSys 0x27 : Card Reset To Ready 0x28 : Card Block Look 0x29 : Card Write DSFID 0x2A : Card DSFID Lock 0x2B : Card AFI Write 0x2C : Card AFI Lock 0x31 : LED 0x32 : Buzzer 0x40 : RF OFF (10/15 가)
Data	N		Hex	Request Data
Check Sum	1		Hex	"Check Sum "
ETX	1	03	Hex	End Data

IS-1000 Interface

8.2 Response (IS-1000 → Target , PC)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	Lens	Hex	Packet Lens
Command	1	Command	Hex	0x14 : Firmware Version 0x22 : Card Serial 0x23 : Card Block Data Read 0x24 : Card Block Data Write 0x25 : Card StayQuit 0x26 : Card GetSys 0x27 : Card Reset To Ready 0x28 : Card Block Look 0x29 : Card Write DSFID 0x2A : Card DSFID Lock 0x2B : Card AFI Write 0x2C : Card AFI Lock 0x31 : LED 0x32 : Buzzer
Data	N		Hex	Response Data
Check Sum	1		Hex	"Check Sum "
ETX	1	03	Hex	End Data



9. Check Sum 계산법

Check Sum = (BYTE)(Lens + Command + Data(0) + Data(1)
+ Data(n))

Example 1:

Lens	Cmd	Check Sum
0x01	0x22	0x23

0x23 = 0x01 + 0x22

◆ Stx 와 Etx는 제외



IS-1000 Interface

10. Protocol Data

10.1 Firmware Version Request (Target , PC → IS-1000)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x01	Hex	Packet Lens
Command	1	0x14	Hex	0x14 : Firmware Version
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data

※ Fireware Version을 읽어 옵니다.

10.2 Firmware Version Response Pass (IS-1000 → Target , PC)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x05	Hex	Packet Lens
Command	1	0x14	Hex	0x14 : Firmware Version
Data(0 ~ 3)	1	Result	Hex	"V1.0"
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data



IS-1000 Interface

10.3 Card Serial Read Request (Target , PC → IS-1000)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x01	Hex	Packet Lens
Command	1	0x22	Hex	0x22 : Card Serial
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data

※ Card 에 Serial Number를 읽어 옵니다.

10.4 Card Serial Read Response Pass (IS-1000 → Target , PC)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x0A	Hex	Packet Lens
Command	1	0x22	Hex	0x22 : Card Serial
Data(0)	1	Result	Hex	Success : 0x01 Fail : 0xFF
Data(1 ~ 8)	8	Result	Hex	Card Serial Number
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data

Data(0) : 성공 0x01, 실패 0xFF

Data(1 ~ 8) : Card Serial Number



IS-1000 Interface

10.5 Card Block Data Read Request (Target , PC → IS-1000)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x0A	Hex	Packet Lens
Command	1	0x23	Hex	0x23 : Card Block Data Read
DATA(0)	1	Block Num	Hex	Block Number
DATA(1 ~ 8)	8	UID 8 Digit	Hex	UID Data
Check Sum	1		Hex	"Check Sum "
ETX	1	03	Hex	End Data

※ Card Block Data를 읽어 옵니다.

10.6 Card Block Data Read Response (IS-1000 → Target , PC)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x06	Hex	Packet Lens
Command	1	0x23	Hex	0x23 : Card Block Data Read
Data(0)	1	Result	Hex	Success : 0x01 Fail : 0xFF
Data(1 ~ 4)	4	Result	Hex	Card Block Data
Check Sum	1		Hex	"Check Sum "
ETX	1	03	Hex	End Data

Data(0) : 성공 여부

Data(1 ~ 4) : Card Block Data



IS-1000 Interface

10.7 Card Block Data Write Request (Target , PC → IS-1000)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x0E	Hex	Packet Lens
Command	1	0x24	Hex	0x24 : Card Block Data Write
DATA(0)	1	0x00~CardMax	Hex	Block Number
DATA(1 ~ 8)	8	UID 8 Digit	Hex	UID Data
DATA(9 ~ 12)	4	Block Data	Hex	Block Data
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data

※ Card Block Data에 Data를 Write 합니다.

10.8 Card Block Data Write Response (IS-1000 → Target , PC)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x02	Hex	Packet Lens
Command	1	0x24	Hex	0x24 : Card Block Data Write
Data(0)	1	0x01, 0x0F, 0xFF	Hex	Success : 0x01 Block Lock : 0x0F Fail : 0xFF
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data



IS-1000 Interface

10.9 Card StayQuit Request (Target , PC → IS-1000)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x09	Hex	Packet Lens
Command	1	0x25	Hex	0x25 : Card StayQuit
Data(0 ~ 7)	8	UID 8 Digit	Hex	UID Data
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data

※ Card 종료 시킵니다.

10.10 Card StayQuit Response (IS-1000 → Target , PC)

Response : 없음



RFID 13.56Mhz

<http://www.iksung.co.kr>

IS-1000 Interface

10.11 Card GetSys Request (Target , PC → IS-1000)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x09	Hex	Packet Lens
Command	1	0x26	Hex	0x26 : Card GetSys
Data(0 ~ 7)	8	UID 8 Digit	Hex	UID Data
Check Sum	1		Hex	“Check Sum ”
ETX	1	03	Hex	End Data

※ Card의 정보를 읽어 옵니다.

10.12 Card GetSys Response (IS-1000 → Target , PC)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x10	Hex	Packet Lens
Command	1	0x26	Hex	0x26 : Card GetSys
Data(0)	1	0xFF, 0x01	Hex	Success : 0x01 Fail : 0xFF
Data(1 ~ 14)	14	Get System	Hex	Card
Check Sum	1		Hex	“Check Sum ”
ETX	1	03	Hex	End Data



IS-1000 Interface

10.13 Card Reset To Ready Request (Target , PC → IS-1000)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x09	Hex	Packet Lens
Command	1	0x27	Hex	0x27 : Card Reset To Ready
Data(0 ~ 7)	8	UID 8 Digit	Hex	UID Data
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data

※ Card를 Reset 시킵니다. (Card StayQuit 명령으로 종료된 카드를 다시 Reset 시켜 동작 시킵니다.)

10.14 Card Reset To Ready Response (IS-1000 → Target , PC)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x02	Hex	Packet Lens
Command	1	0x27	Hex	0x27 : Card Reset To Ready
Data(0)	1	0xFF, 0x01	Hex	Success : 0x01 Fail : 0xFF
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data

IS-1000 Interface

10.15 Card Block Lock Request (Target , PC → IS-1000)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x0A	Hex	Packet Lens
Command	1	0x28	Hex	0x28 : Card Block Lock
Data(0)	1	Block Number	Hex	Block Number
Data(1 ~ 7)	8	UID 8 Digit	Hex	UID Data
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data

※ Card의 해당 Block을 Lock을 설정 합니다.
한번 Lock이 걸린 Block은 복구가 불가능 합니다.

10.16 Card Block Lock Response (IS-1000 → Target , PC)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x02	Hex	Packet Lens
Command	1	0x28	Hex	0x28 : Card Block Lock
Data(0)	1	0xFF, 0x01	Hex	Success : 0x01 Fail : 0xFF
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data



IS-1000 Interface

10.17 Card DSFID Write Request (Target , PC → IS-1000)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x0A	Hex	Packet Lens
Command	1	0x29	Hex	0x29 : Card Write DSFID
Data(0)	1	DSFID Data	Hex	DSFID Data
Data(1 ~ 7)	8	UID 8 Digit	Hex	UID Data
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data

※ Card를 DSFID의 정보를 변경 합니다.

10.18 Card DSFID Write Response (IS-1000 → Target , PC)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x02	Hex	Packet Lens
Command	1	0x29	Hex	0x29 : Card Write DSFID
Data(0)	1	0xFF, 0x01	Hex	Success : 0x01 Fail : 0xFF
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data



IS-1000 Interface

10.19 Card DSFID Lock Request (Target , PC → IS-1000)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x09	Hex	Packet Lens
Command	1	0x2A	Hex	0x2A : Card DSFID Lock
Data(1 ~ 7)	8	UID 8 Digit	Hex	UID Data
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data

※ Card를 DSFID의 정보를 변경 할수 없도록 LOCK을 설정 합니다.

10.20 Card DSFID Lock Response (IS-1000 → Target , PC)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x02	Hex	Packet Lens
Command	1	0x2A	Hex	0x2A : Card DSFID Lock
Data(0)	1	0xFF, 0x01	Hex	Success : 0x01 Fail : 0xFF
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data



IS-1000 Interface

10.21 Card AFI Write Request (Target , PC → IS-1000)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x0A	Hex	Packet Lens
Command	1	0x2B	Hex	0x2B : Card AFI Write
Data(0)	1	AFI Data	Hex	AFI Data
Data(1 ~ 7)	8	UID 8 Digit	Hex	UID Data
Check Sum	1		Hex	“Check Sum ”
ETX	1	03	Hex	End Data

※ Card를 AFI의 정보를 변경 합니다.

10.22 Card AFI Write Response (IS-1000 → Target , PC)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x02	Hex	Packet Lens
Command	1	0x2B	Hex	0x2B : Card AFI Write
Data(0)	1	0xFF, 0x01	Hex	Success : 0x01 Fail : 0xFF
Check Sum	1		Hex	“Check Sum ”
ETX	1	03	Hex	End Data



IS-1000 Interface

10.23 Card AFI Lock Request (Target , PC → IS-1000)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x09	Hex	Packet Lens
Command	1	0x2C	Hex	0x2C : Card AFI Lock
Data(1 ~ 7)	8	UID 8 Digit	Hex	UID Data
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data

※ Card를 AFI의 정보를 변경 할수 없도록 LOCK을 설정 합니다.

10.24 Card AFI Lock Response (IS-1000 → Target , PC)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x02	Hex	Packet Lens
Command	1	0x2C	Hex	0x2C : Card AFI Lock
Data(0)	1	0xFF, 0x01	Hex	Success : 0x01 Fail : 0xFF
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data



IS-1000 Interface

10.25 RFID 카드인식 LED 동작 여부 Request (Target , PC → IS-1000)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x02	Hex	Packet Lens
Command	1	0x31	Hex	0x31 : LED
Data(0)	1	0x01, 0x02	Hex	0x01 : LED On 0x02 : LED Off
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data

※ Card을 읽을 때 LED 깜박임을 설정 할수 있습니다.

10.26 RFID 카드인식 LED 동작 여부 Response (IS-1000 → Target , PC)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x02	Hex	Packet Lens
Command	1	0x31	Hex	0x31 : LED
Data(0)	1	0xFF, 0x01	Hex	Success : 0x01 Fail : 0xFF
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data



IS-1000 Interface

10.27 RFID 카드인식 Buzzer 동작 여부 Request (Target , PC → IS-1000)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x02	Hex	Packet Lens
Command	1	0x32	Hex	0x32 : Buzzer
Data(0)	1	0x01, 0x02	Hex	0x01 : Buzzer On 0x02 : Buzzer Off
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data

※ Card을 읽을 때 Buzzer 동작 여부를 설정 할 수 있습니다.

10.28 RFID 카드인식 Buzzer 동작 여부 Response (IS-1000 → Target , PC)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x02	Hex	Packet Lens
Command	1	0x32	Hex	0x32 : Buzzer
Data(0)	1	0xFF, 0x01	Hex	Success : 0x01 Fail : 0xFF
Check Sum	1		Hex	"Check Sum"
ETX	1	03	Hex	End Data



IS-1000 Interface

10.29 RF_Off 명령어 동작 여부 Request (Target , PC → IS-1000)

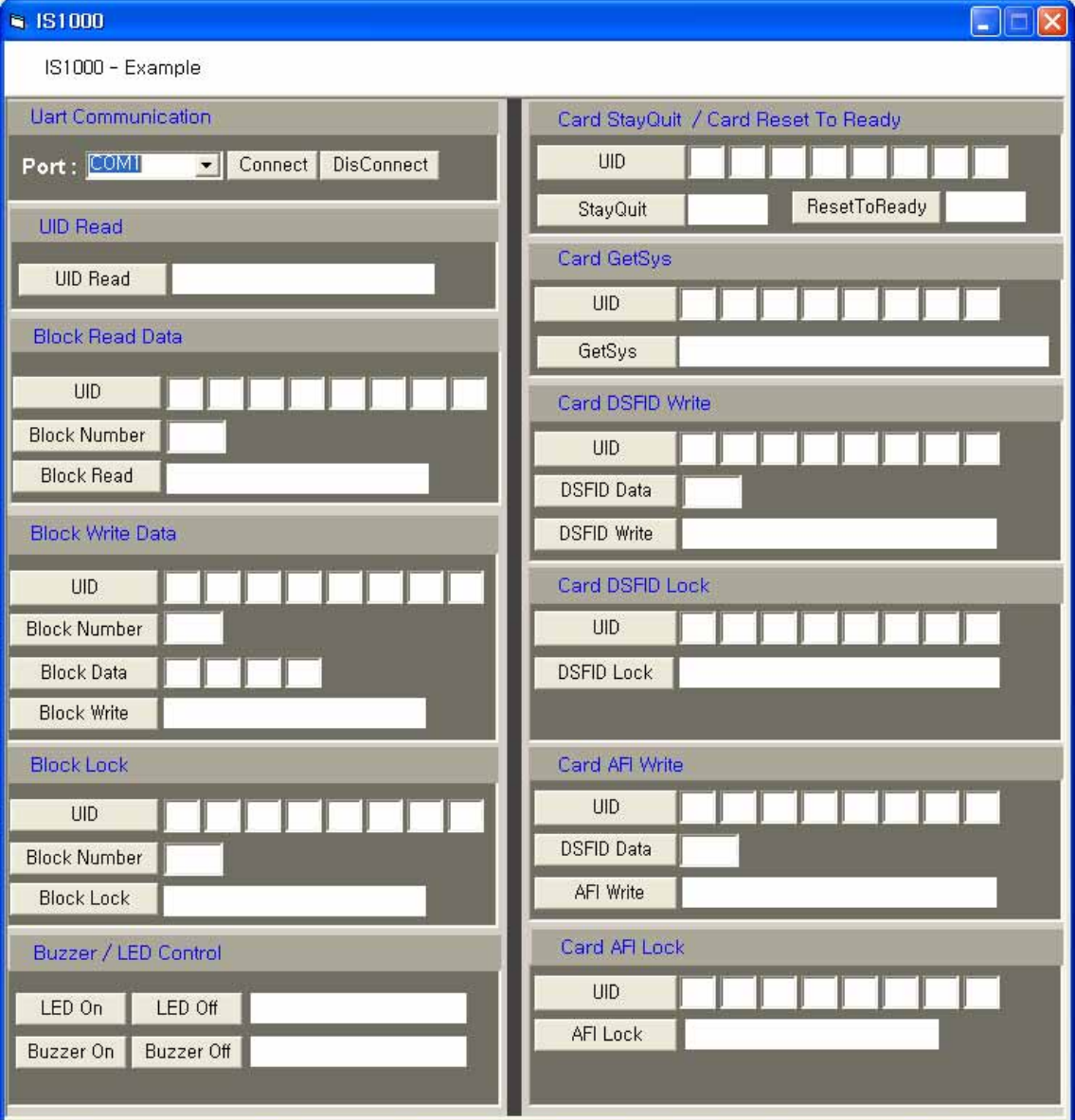
ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x02	Hex	Packet Lens
Command	1	0x40	Hex	0x40 : RF Off
Data(0)	1	0x01	Hex	0x01 : RF Off
Check Sum	1		Hex	"Check Sum "
ETX	1	03	Hex	End Data

※ Card을 읽을 때 Buzzer 동작 여부를 설정 할 수 있습니다.

10.30 RF_Off 명령어 동작 여부 Response (IS-1000 → Target , PC)

ITEM	BYTE	DESC		REMARK
STX	1	0x02	Hex	Start Data
Lens	1	0x02	Hex	Packet Lens
Command	1	0x40	Hex	0x32 : Buzzer
Data(0)	1	0xFF, 0x01	Hex	Success : 0x01 Fail : 0xFF
Check Sum	1		Hex	"Check Sum "
ETX	1	03	Hex	End Data

11. IS-1000 데모 프로그램 설명서



IS1000 - Example

Uart Communication

Port:

UID Read

UID Read

Block Read Data

UID

Block Number

Block Read

Block Write Data

UID

Block Number

Block Data

Block Write

Block Lock

UID

Block Number

Block Lock

Buzzer / LED Control

LED On LED Off

Buzzer On Buzzer Off

Card StayQuit / Card Reset To Ready

UID

StayQuit ResetToReady

Card GetSys

UID

GetSys

Card DSFID Write

UID

DSFID Data

DSFID Write

Card DSFID Lock

UID

DSFID Lock

Card AFI Write

UID

DSFID Data

AFI Write

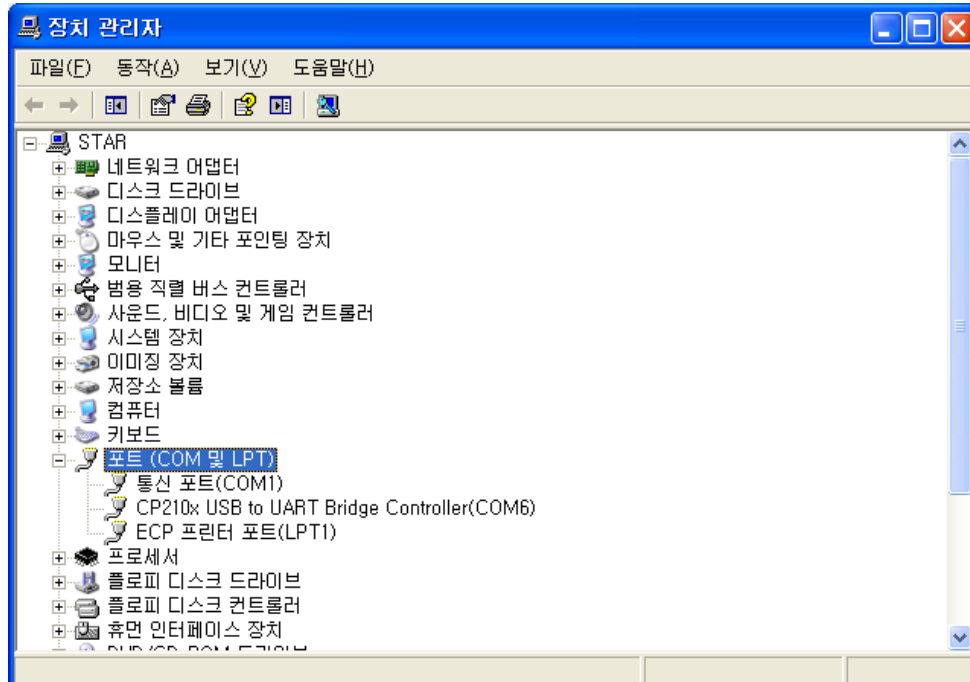
Card AFI Lock

UID

AFI Lock

IS-1000 Interface

(1) 장치 관리자에서 CP210X를 확인 합니다.



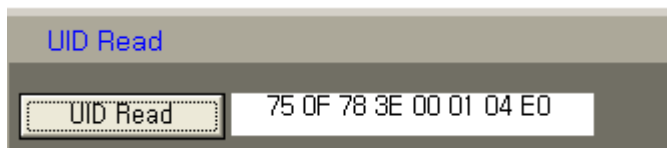
- CP210X USB to UART Bridga Controller (COM6) 으로 설정되어 있으므로 COM6으로 설정 되어 있습니다.

(2) Serial Port Connect



- 포트번호 선택후 Connect

(3) UID Reader



- Card를 IS-1000 Reader 와 근처에 위치 하고 UID Read를 클릭

IS-1000 Interface

(4) Block Data Reader

Block Read Data									
UID	75	0F	78	3E	00	01	04	E0	
Block Number	1								
Block Read	11 12 34 56								

- UID를 선택 하여 UID 데이터를 UID Read 목록에서 가지고 옵니다.
- Block Number를 사용자가 직접 입력 합니다. (0 ~ 26) “Card 메모리 정보” 참조
- Block Read를 선택 합니다.

(5) Block Data Write

Block Write Data									
UID	75	0F	78	3E	00	01	04	E0	
Block Number	1								
Block Data	12	34	56	78					
Block Write	Success								

- UID를 선택 하여 UID 데이터를 UID Read 목록에서 가지고 옵니다.
- Writer 할 Block Number를 사용자가 직접 입력
- Block Data를 직접 입력
- Block Write 선택 하면 "Success"가 나오면 성공

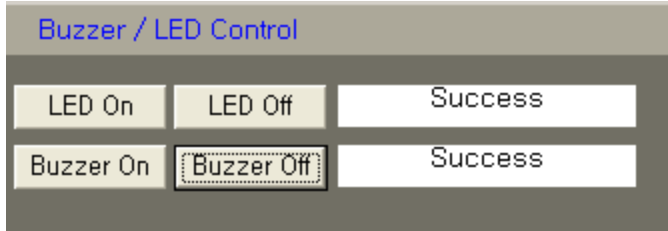
(6) Block Data Lock

Block Lock									
UID	75	0F	78	3E	00	01	04	E0	
Block Number	1								
Block Lock	Success								

- UID를 선택 하여 UID 데이터를 UID Read 목록에서 가지고 옵니다.
- Block Number를 직접 입력 합니다.
- Block Lock을 클릭(참조: 한번 Lock이 걸린 Block은 복구가 불가능 합니다.)

IS-1000 Interface

(7) Buzzer / LED Control



- LED On 을 클릭 하면 IS-1000 RFID Reader가 동작 할때 LED Blink 동작을 수행
- LED Off 을 클릭 하면 IS-1000 RFID Reader가 동작 할때 LED Blink 동작을 수행 하지 않습니다.
- Buzzer On 을 클릭 하면 IS-1000 RFID Reader가 동작 할때 Buzzer 소리를 발생
- Buzzer Off 을 클릭 하면 IS-1000 RFID Reader가 동작 할때 Buzzer 소리를 발생 않습니다.

(8) StayQuit / Reset To Ready



- UID를 선택 하여 UID 데이터를 UID Read 목록에서 가지고 옵니다.
- StayQuit 명령어를 누르면 Card가 종료(Halt) 됩니다.
(카드가 종료 되므로 응답값이 없습니다.)
- ResetToReady 명령어는 Card가 Reset 시키고 준비 상태

IS-1000 Interface

(9) GetSys

Card GetSys

UID	75	0F	78	3E	00	01	04	E0
GetSys	0F	75	0F	78	3E	00	01	04 E0 11 66 1B 03 01

- UID를 선택 하여 UID 데이터를 UID Read 목록에서 가지고 옵니다.
- GetSys 명령을 수행

Info Flag	UID								DSFID	AFI	Block	Block	Flag
0F	75	0F	78	3E	00	01	04	E0	11	66	1B	03	01

Table 10 — Information flags definition

Bit Nb	Flag name	State	Description
Bit 1	DSFID	0	DSFID is not supported. DSFID field is not present
		1	DSFID is supported. DSFID field is present
Bit 2	AFI	0	AFI is not supported. AFI field is not present
		1	AFI is supported. AFI field is present
Bit 3	VICC memory size	0	Information on VICC memory size is not supported. Memory size field is not present.
		1	Information on VICC memory size is supported. Memory size field is present.
Bit 4	IC reference	0	Information on IC reference is not supported. IC reference field is not present.
		1	Information on IC reference is supported. IC reference field is present.
Bit 5	RFU		Shall be set to 0.
Bit 6	RFU		Shall be set to 0.
Bit 7	RFU		Shall be set to 0.
Bit 8	RFU		Shall be set to 0.

- DSFID 또는 AFI 값은 GetSys로 확인 할수 있습니다.
- Card의 블록 크기나 사이즈 정보를 확인 할 수 있습니다.
- InfoFlag를 통해서 더욱 다양한 정보를 확인 할수 있습니다. (자세한 내용은 ISO-15693-3문서를 통해 확인 하세요.)

IS-1000 Interface

(10) DSFID Write

Card DSFID Write									
UID	75	0F	78	3E	00	01	04	E0	
DSFID Data	AA								
DSFID Write	Success								

- UID를 선택 하여 UID 데이터를 UID Read 목록에서 가지고 옵니다.
- DSFID DATA를 사용자가 직접 입력 합니다.
- DSFID Write 후 Success 가 나오면 성공
- DSFID 데이터 확인은 GetSys로 확인 가능 합니다.

(11) DSFID Lock

Card DSFID Lock									
UID	7E	F0	77	3E	00	01	04	E0	
DSFID Lock	Success								

- UID를 선택 하여 UID 데이터를 UID Read 목록에서 가지고 옵니다.
- DSFID Lock 클릭 (Lock 설정후에는 다시는 복구 불가능)

(12) AFI Write

Card AFI Write									
UID	C1	08	78	3E	00	01	04	E0	
DSFID Data	00								
AFI Write	Success								

- UID를 선택 하여 UID 데이터를 UID Read 목록에서 가지고 옵니다.
- AFI DATA를 사용자가 직접 입력 합니다.
- AFI Write 후 Success 가 나오면 성공
- AFI 데이터 확인은 GetSys로 확인 가능 합니다.

(13) AFI Lock

Card AFI Lock

UID	7E	F0	77	3E	00	01	04	E0
AFI Lock	Success							

- UID를 선택 하여 UID 데이터를 UID Read 목록에서 가지고 옵니다.
- AFI Lock 클릭 (Lock 설정후에는 다시는 복구 불가능)