



ITOUCH_POP2

Specification

DUALi Inc.

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FCC STATEMENT

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.

FCC ID: SWUITOUCHPOPV2

WARNING! Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RF EXPOSURE WARNING! This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

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We have our development center in South Korea to provide technical support. For any technical assistance can contact our technical support team as below;

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Revision History

- 2014.12.11 (Ver. 1.0) : Release

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1 Introduction

iTOUCH pop2 is designed as a wall-mounted smartcard reader suitable for time-attendance, access control, ID check, self-check-in, self-payment system based on Android O/S.

iTOUCH pop2 communicates with PC or controller via USB ,TCP/IP, WiFi(wireless LAN) or Bluetooth(option). User can develop their own program by using Android Jellybean

CPU	32bit ARM-CORTEX A5 RISC processor	
Operating frequency	Normal. 625MHz	Up to 833MHz
Working Memory	DDR3 (4Gbit x 2)	
Program Memory	Nand flash (4Gbyte)	
OS	Linux3.0.31 or better, Android 4.2.2 Jellybean	
Network	10/100M Ethernet	POE Option
Display	480*272 RGB (16.7M colors) with 4.3inch touch panel	480*3(RGB)*272
Camera I/F	1/4-inch 5Mp SOC Digital image sensor 5M Pixels,Auto Focus	Option
SAM I/F	1 SAMs supported	ISO-7816
Sound	Stereo Audio Codec	
Speaker	Stereo Output with 1Watts 1ea	
Serial Comm.	RS232 1ch with 5V power (Control outdoor sound) RS232 1ch, RS485 1ch	3ch.
Wiegand	D0, D1, LED(in)	OUTPUT
SD/MMC Card Slot	Micro SD memory card	1Slot
USB OTG	USB 2.0 OTG	1ch.
USB Host	USB 2.0 Host	1ch.
RF	PN512 with AMP	
Button	4 Keys	
Door control I/F	Door status check sensor, Open Switch Relay(NO, NC, COM), Secure Lock(RS485), Output(PDU)	

WIFI	Wireless LAN Module IEEE 802.11n/e/i standards up to 150Mbps	Option
Operating Powers	Min 9V, Max 28V (12V DC adaptor)	

2 Components Confirmation

2.1 Product Components



①



②



③

① Reader unit

② WALL Fixer Bracket

③ Screw (2.5*4 / 4 EA)

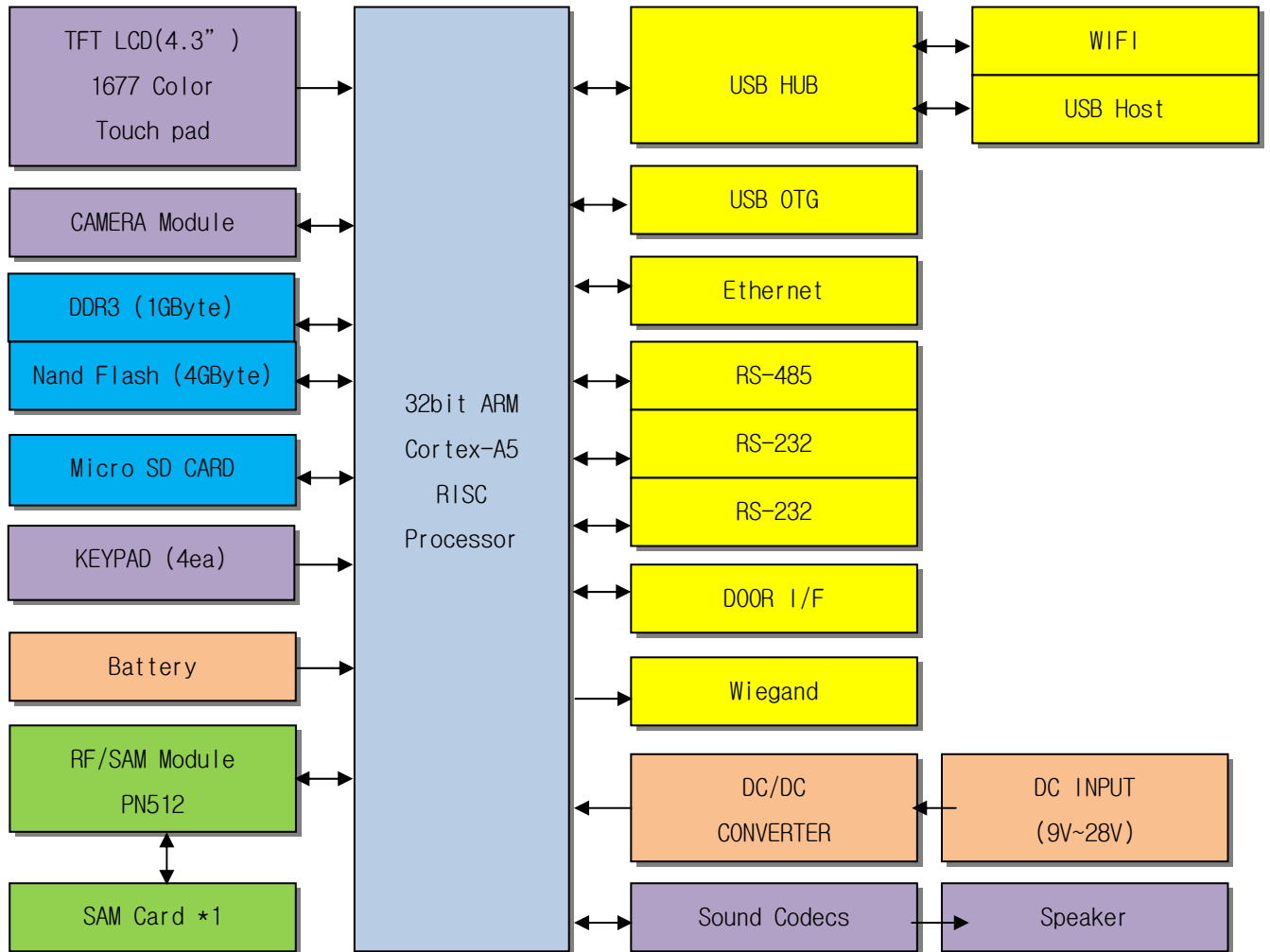
④ Cable (Provide as your favor)

- 1) Door cable
- 2) Wiegand cable
- 3) PWR cable
- 4) RS-232 cable
- 5) RS-485 cable

⑤ 12V DC adaptor

- Please use the approved adapter that satisfies the LPS

2.2 Block Diagram



2.3 Block Diagram specification

- CPU: ARM CORTEX 32-bit A5 RISC processor TCC8925
- Program & Data Memory: NAND Flash 4Gbyte for program running & file system.
- Operation Memory: 1Gbyte DDR3 SDRAM for rapid operating process
- LCD: Wide 4.3-inch (16.7M Color TFT LCD) with Touch panel.
- Camera: Includes Auto Focus and LED for light
- Speaker: 1W / 8ohm speaker is embedded.
- RF Module: Using PN512 (Serial Interface on board) and supporting R/W ISO-14443 A/B cards, Mifare, Felica, NFC.
- SAM Card: It has 1 SAM card slot supporting ISO 7816 and it's controlled by RF Module part.
- DC INPUT: 9V~24V, Power consumption is 10W. Required to use 9V-2A, 12V-1.5A, 24V-700mA adaptor or SMPS.
- SD CARD Slot: It has 1 Micro SD Card Slot for Memory extension.
- Ethernet: Supports up to 100Mbps.
- Serial Interface: 1 RS-485, 2 RS-232 port communication interfaces.
- USB OTG : 1 USB OTG
- USB HOST: 1 USB Host. These can be used for extending optional functions such as memory, RF reader.
- Door Interface: There are RELAY control part for door control, Door open & close status control Input and Exit switch status control Input part. For Secure locking, iTOUCH pop2 must be connected to IO Controller via RS-485. In case of using PDU, 24V LOCK is possible.
- Wi-Fi: Optional
- Battery: Use recharge/discharge-able battery to keep RTC.
Discharge after 200 hours (8days).

2.4 Exterior



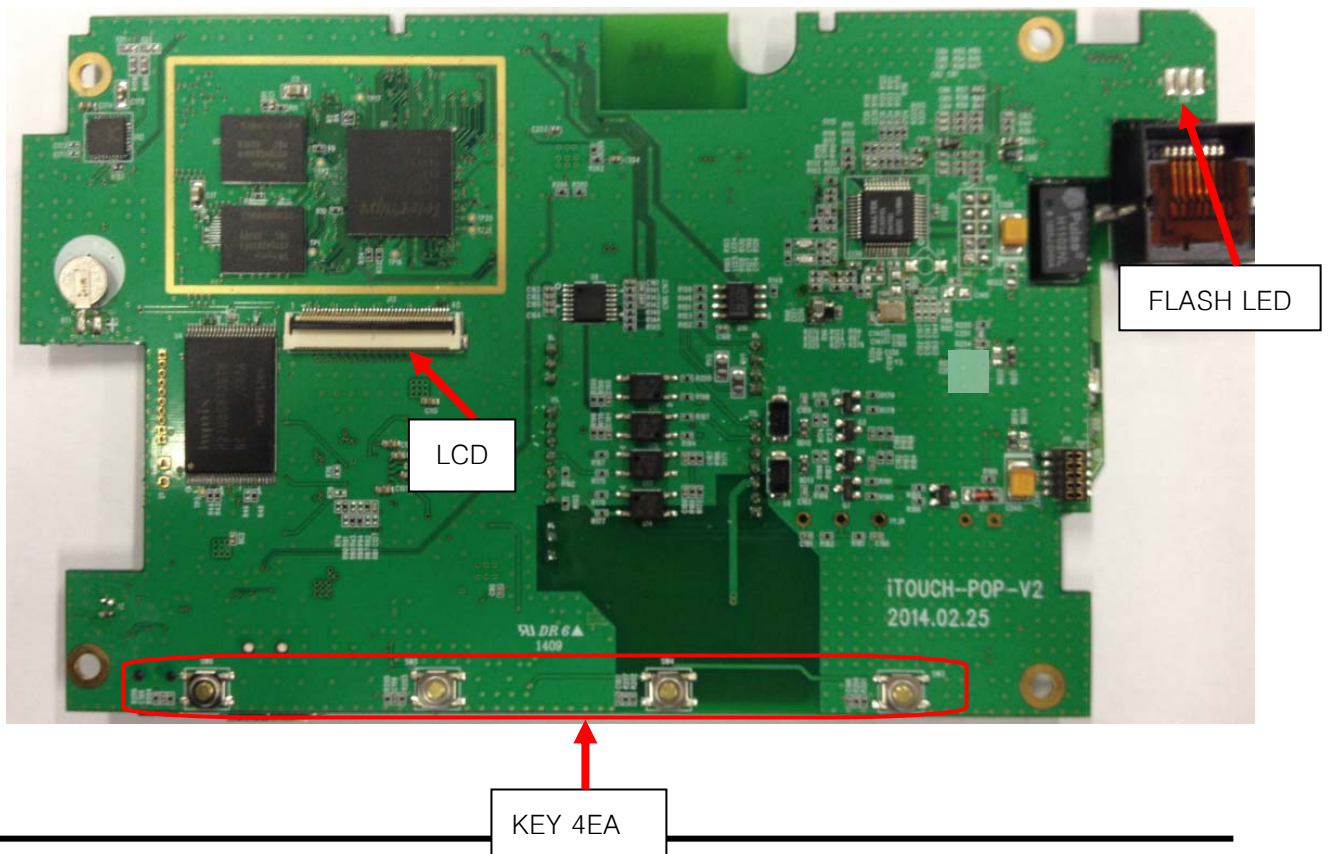
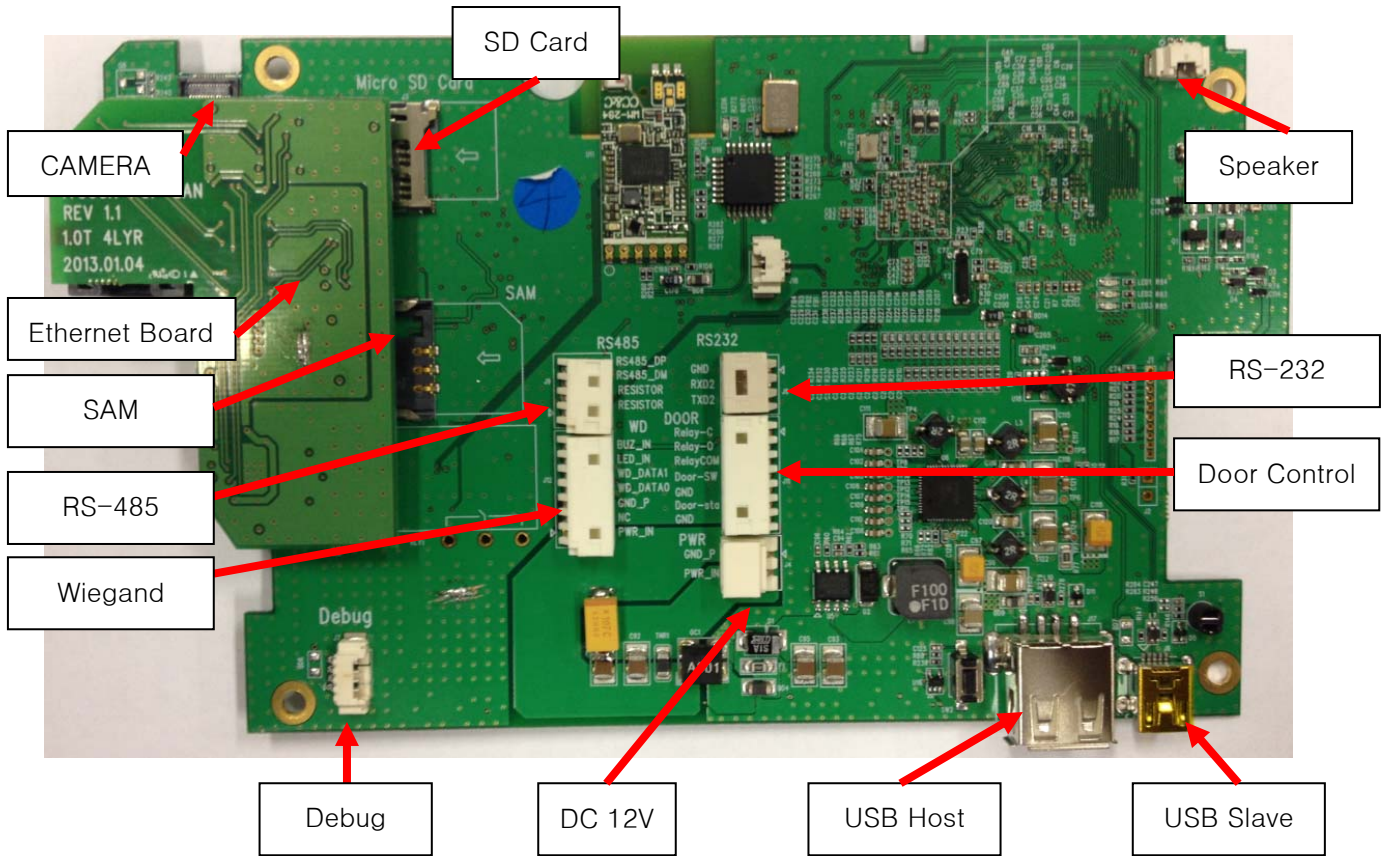
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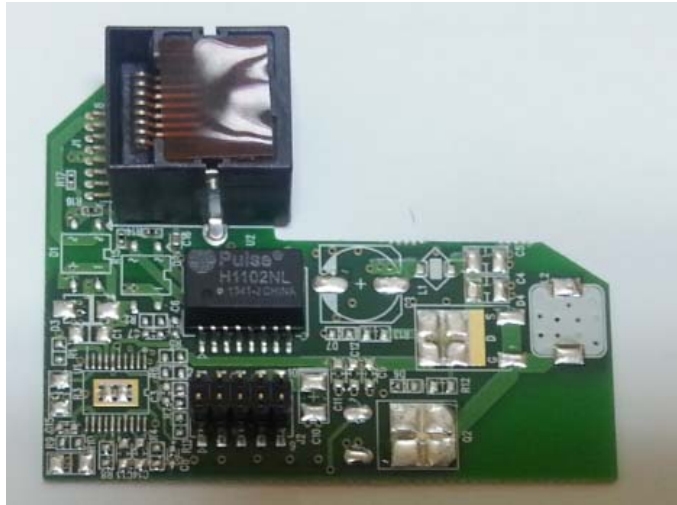
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2.5 PCB

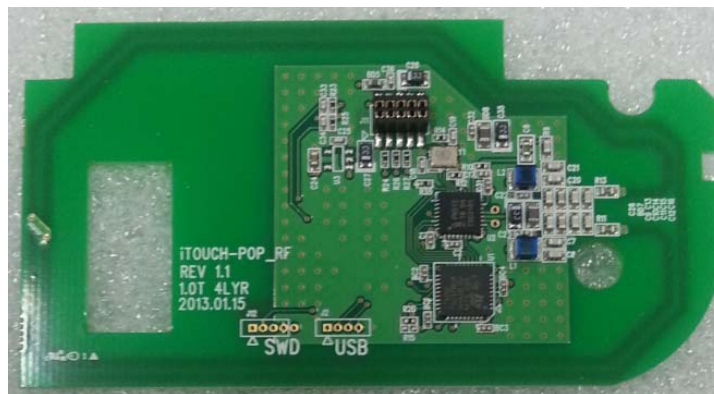
- MAIN Board



- LAN Board



- RF Board



2.6 Product Size

- iTOUCH_POP2 (mm) : 185(W) *108(H) * 20.5(D)
- Thickness (PCB)
 - MAIN Board : 1.0T
 - RF Board : 1.0T
 - LAN Board : 1.0T

3 Power & Interface Specification

3.1 Power Specification

- 12V : 1.5A or above
- 24V : 700mA or above

3.2 Electric Current Specification

- 12V : average 400mA
- 12V : Max 550mA

3.3 RS-232 Interface Specification

- 8 Data, 1 Stop, No Parity
- Communication speed: Start with 115200 bps

3.4 USB Interface Specification

- USB 1.1 Full Speed(12Mbps)

3.5 TCP/IP Interface Specification

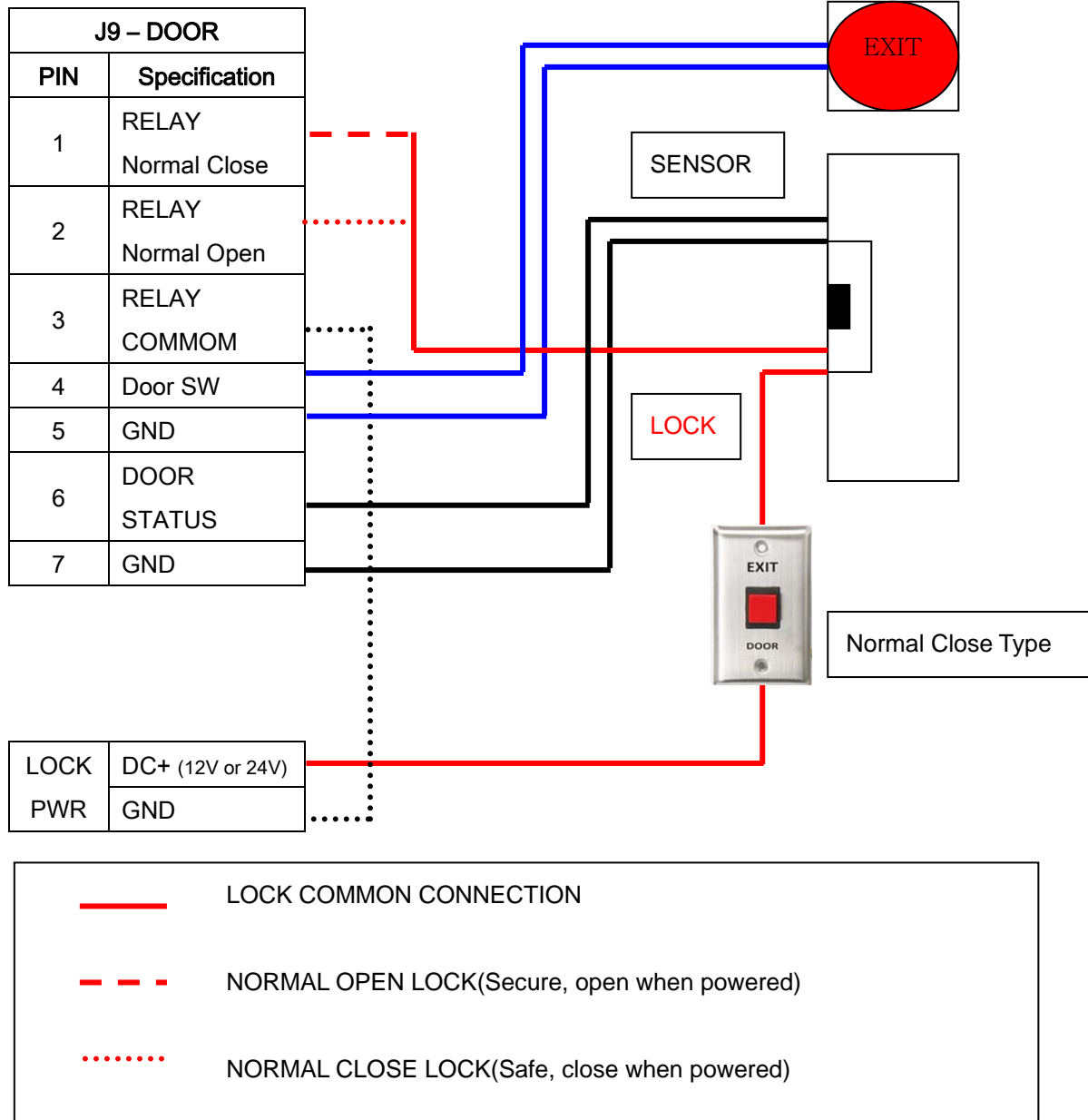
- 10B / 100B both supported

3.6 WI-FI Interface Specification

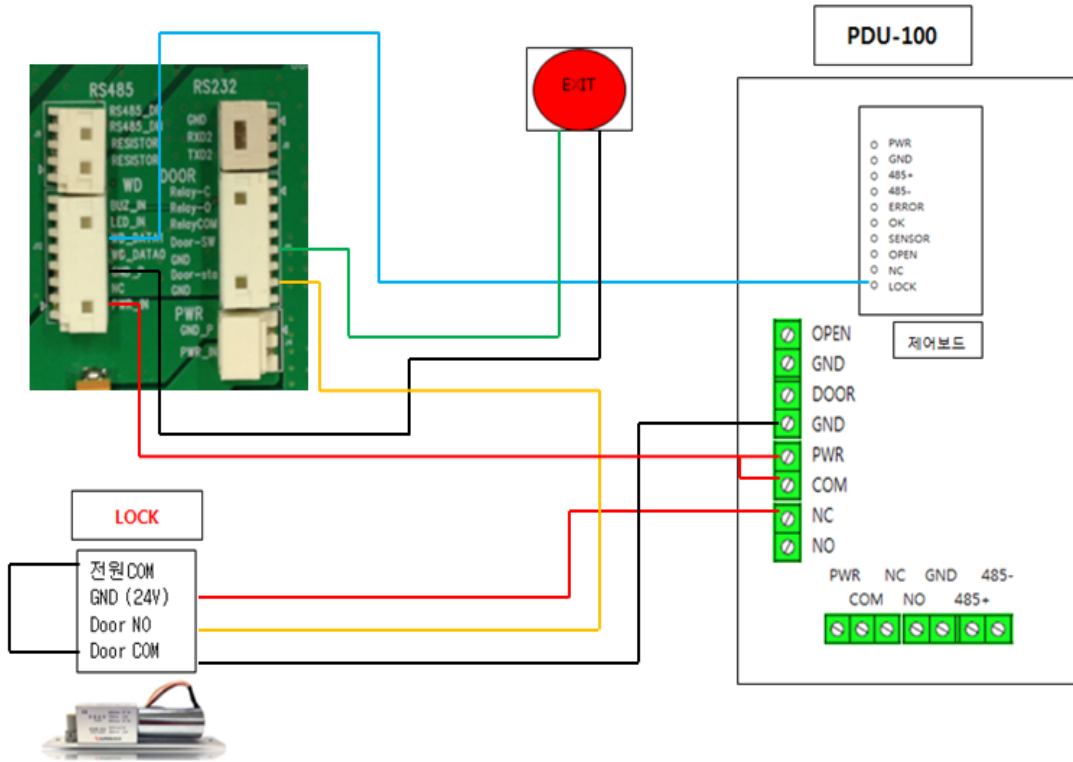
- IEEE 802.11n/e/i standards.

4 Configuration for Door Lock Control

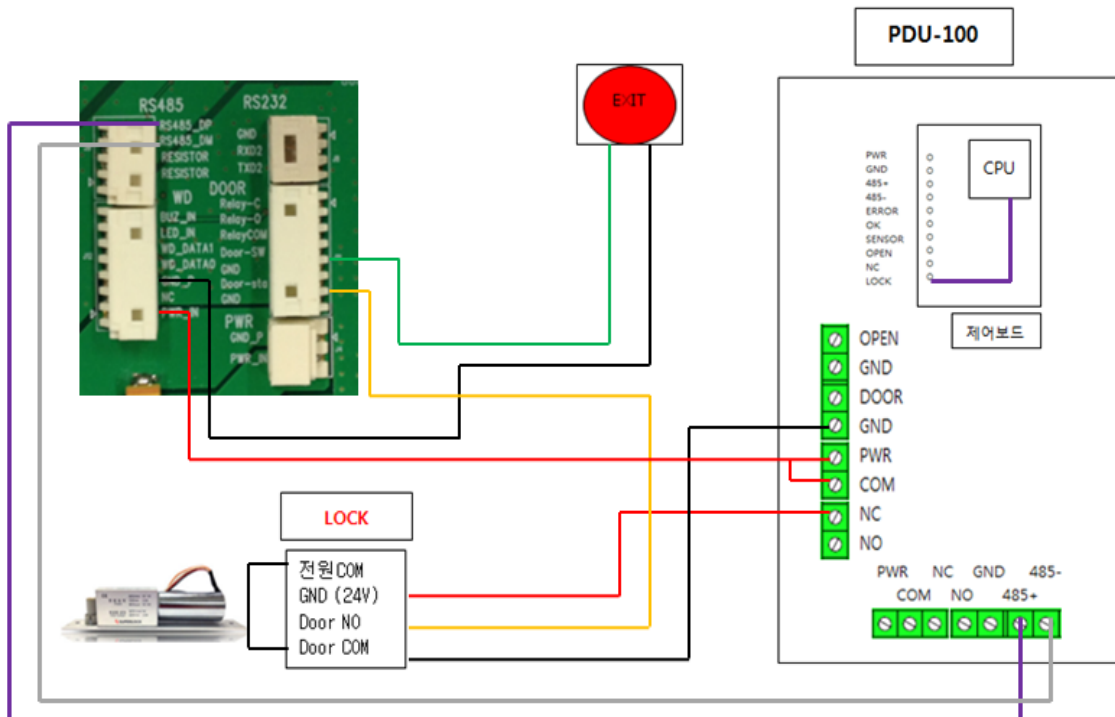
4.1 POP + LOCK



4.2 POP + PDU + Deadbolt Lock



4.3 POP(RS-485) + PDU + Deadbolt Lock



5 Connector Specification

5.1 J6 (MINI USB) – USB_OTG (Outside)

PIN	Specification	Description
1	USB 5.0V	5V not available
2	USB D-	
3	USB D+	
4	ID	
5	GND	

5.2 J17 (USB A TYPE) – USB_HOST (Outside)

PIN	Specification	Description
1	VDD 5.0V	
2	USB D-	
3	USB D+	
4	GND	

5.3 J8 (2mm ,3-PIN DIP TYPE, RIGHT Angle) – UART

– 20017WR-03 (YEONHO)

PIN	Specification	Description
1	RS-232 TXD	
2	RS-232 RXD	
3	GND	

5.4 J7 (1.25mm, 4-PIN SMD TYPE, RIGHT Angle) - DEBUG UART

– 12505WR-04 (YEONHO)

PIN	Specification	Description
1	NC	
2	RS-232 TXD	
3	RS-232 RXD	
4	GND	

5.5 J9 (2mm ,4-PIN DIP TYPE, RIGHT Angle) - RS-485 (Outside)

- 20017WR-04 (YEONHO)

PIN	Specification	Description
1	RS-485 +	
2	RS-485 -	
3	Terminating resistors	Resistor
4	Terminating resistors	Resistor

5.6 J11 (2mm, 7-PIN DIP TYPE, RIGHT Angle) - DOOR (Outside)

- 20017WR-07 (YEONHO)

PIN	Specification	Description
1	Relay C	
2	Relay O	
3	Relay COM	
4	Door_sw	
5	GND	
6	Door_sta	
7	GND	

5.7 J12 (2mm, 7-PIN DIP TYPE, RIGHT Angle) - WD_DATA (Outside)

- 20017WR-07 (YEONHO)

PIN	Specification	Description
1	PWR_IN	
2	NC	
3	GND_POWER	
4	WD_DATA0	OUTPUT
5	WD_DATA1	OUTPUT
6	LED_IN	INPUT
7	BUZ_IN	INPUT

5.8 J4 (2.5mm 2PIN DIP, RIGHT Angle) - POWER (Outside)

- YMAW025-02 (YEONHO)

PIN	Specification	Description
1	PWR_IN	
2	GND_POWER	

6 Usage Environment

6.1 Recommendable Operating Environment

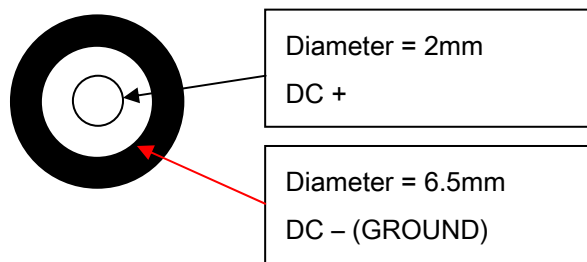
- Temperature: -10 ~ 60 °C
- Humidity: 30 ~ 90 %

6.2 Recommendable Storage Environment

- Temperature: -20 ~ 80 °C
- Humidity: 30 ~ 90 %

7 Warning and Notice

- Indoor use only (Avoid direct sunlight)
- Recommended to use 12V, 700mA or above



- Avoid an element like metal or magnetism within 7cm
- Do not open the product or adjust the antenna part

8 Certification

- KCC, CE, FCC