

SMART SENSOR

1. 결선도

PIN name	Function	ETC
VCC	3.0V	
GND	0V	
DIO7	Digital Input	Pull-down
DIO6_SW	Digital Input	Pull-up
DIO5_SW	Digital Input	Pull-up
DIO9	Digital Input	Pull-down
DIO4	Digital Input	Pull-down
AIO0	Analog Input	0~1.35V
AIO1	Analog Input	0~1.35V
AIO2	Analog Input	0~1.35V

-DIGITAL INPUT

DI6_SW 와 DI5_SW 는 다음 그림과 같이 OPEN 와 CLOSE 입력을 받으며 DIO7, DIO9, DIO4 는 HIGH(3.0V)와 LOW(0.0V)의 입력을 받는다.

-ANALOG INPUT

AIO1, AIO1,AIO2 는 0~1350 mV 범위의 신호를 입력 받을 수 있다.

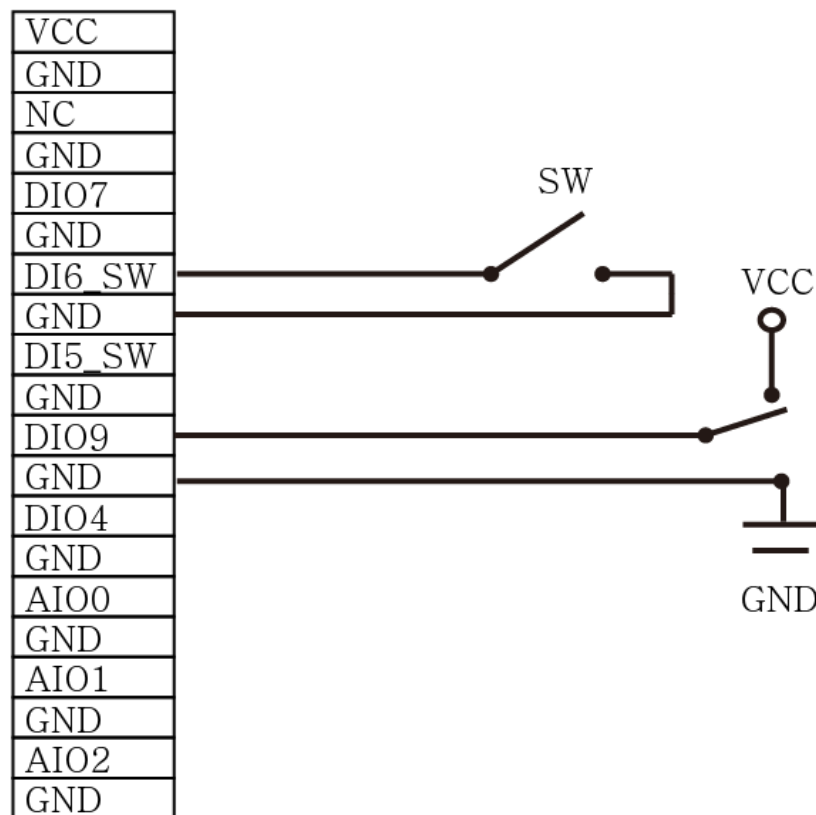


그림 1. 결선도

2. Characteristics

Name	UUID	Access	Size	Description	Value
Smart Sensor Service	0000d102-0000-1000-8000-00805f9b34fb	N/A	N/A	Smart Sensor Service	N/A
Smart Sensor Rx	000011e1-0000-1000-8000-00805f9b34fb	Notify	12 bytes	Smart Sensor 의 Temperature, Humidity, Digital Inputs, Analog Inputs 의 값	표 1. 참고
Smart Sensor Rx - Client Characteristic Config	00002902-0000-1000-8000-00805f9b34fb	Read, Write			

표 1. Smart Sensor RX Value

Data[0]	LSB of Temperature
Data[1]	MSB of Temperature
Data[2]	LSB of Humidity
Data[3]	MSB of Humidity
Data[4]	LSB of AIO0
Data[5]	MSB of AIO0
Data[6]	LSB of AIO1
Data[7]	MSB of AIO1
Data[8]	LSB of AIO2
Data[9]	MSB of AIO2
Data[10]	LSB of DI
Data[11]	MSB of DI

세부 내용

Data[10]

7bit	6bit	5bit	4bit	3bit	2bit	1bit	0bit
DIO7	DIO6	DIO5	DIO4				

Data[11]

7bit	6bit	5bit	4bit	3bit	2bit	1bit	0bit
						DIO9	

예제 소스)

//Temperature

```
Value = ((data[1] << 8) & 0x0000ff00) | (data[0] & 0x000000ff);
Value &= ~0x0003;
double temperatureC;
temperatureC= -46.85 + (175.72/65536) * Value;
String tmp1= String.format("%.2f" , temperatureC)+"C";
```

//Humidity

```
Value = ((data[3] << 8) & 0x0000ff00) | (data[2] & 0x000000ff);
Value &= ~0x0003;
double humidityRH;
humidityRH= -6.0 + 125.0/65536 * Value;
String tmp2= String.format("%.2f" , humidityRH)+"%";
```

//A100

```
Value = ((data[5] << 8) & 0x0000ff00) | (data[4] & 0x000000ff);
String tmp3= String.format("%.3f" , Value*0.001)+"V";
```

//A101

```
Value = ((data[7] << 8) & 0x0000ff00) | (data[6] & 0x000000ff);
String tmp4= String.format("%.3f" , Value*0.001)+"V";
```

//A102

```
Value = ((data[9] << 8) & 0x0000ff00) | (data[8] & 0x000000ff);
String tmp5= String.format("%.3f" , Value*0.001)+"V";
```

//Digital Input

//PIN 7

```
if((data[10] & 0x80) == 0x80)
    digitalWriteBtn7.setChecked(true);
else
    digitalWriteBtn7.setChecked(false);
```

//PIN 6

```
if((data[10] & 0x40) == 0x40)
    digitalWriteBtn6.setChecked(false);
else
    digitalWriteBtn6.setChecked(true);
```

//PIN 5

```
if((data[10] & 0x20) == 0x20)
    digitalWriteBtn5.setChecked(false);
else
    digitalWriteBtn5.setChecked(true);
```

//PIN 9

```
if((data[11] & 0x02) == 0x02)
    digitalWriteBtn9.setChecked(true);
else
    digitalWriteBtn9.setChecked(false);
```

//PIN 4

```
if((data[10] & 0x10) == 0x10)
    digitalWriteBtn4.setChecked(true);
else
    digitalWriteBtn4.setChecked(false);
```

SMART BAND

1. Characteristics

Name	UUID	Access	Size	Description	Value
Smart band Service	0000e02-0000-1000-8000-00805f9b34fb	N/A	N/A	Smart band Service	N/A
Smart band Rx	00002e1-0000-1000-8000-00805f9b34fb	Notify	2 bytes	Smart band 의 Button, Free fall event 의 값	표 2. 참고
Smart band Rx - Client Characteristic Config	00002902-0000-1000-8000-00805f9b34fb	Read, Write			
Smart band Tx	00006b00-0000-1000-8000-00805f9b34fb	Write	1byte	Event 초기화	0x01: 초기화

표 2. Smart Band RX Value

Data[0]	EVENT
Data[1]	RESERVED

세부 내용

Data[0]

7bit	6bit	5bit	4bit	3bit	2bit	1bit	0bit
					Free Fall		Button Push