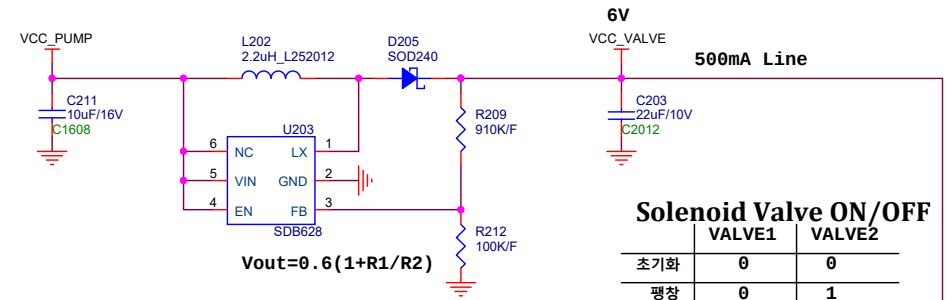
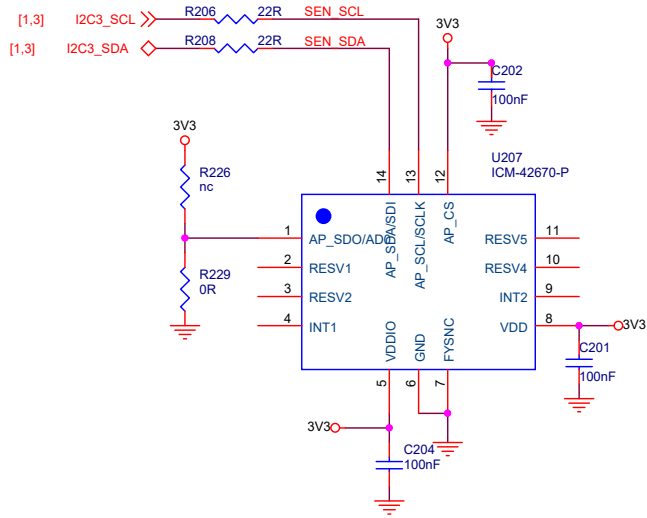
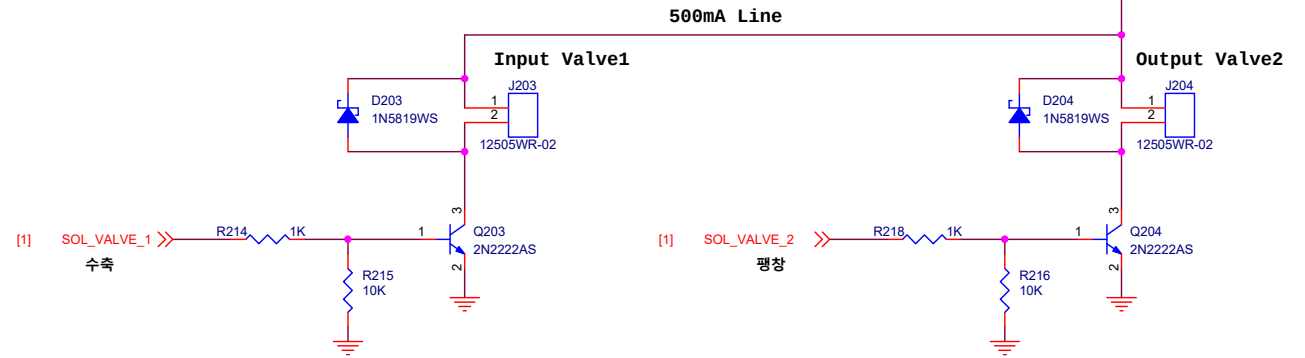


6-Axis sensor(acc+gyro)

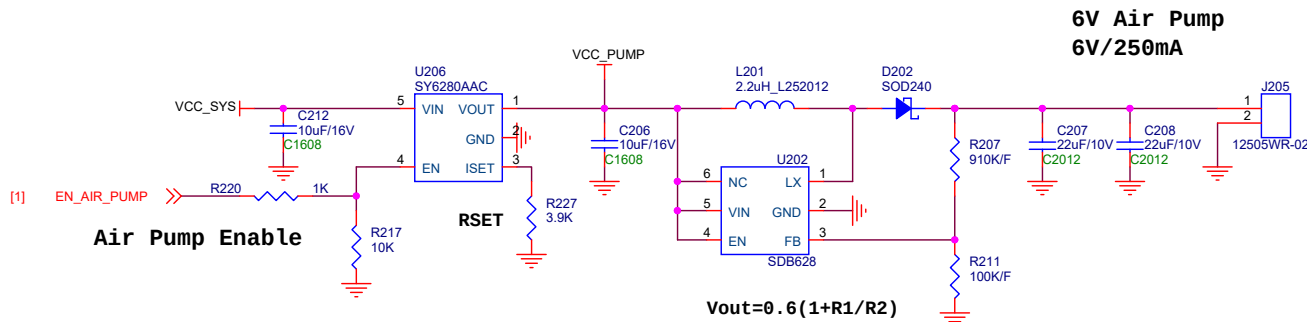


Solenoid Valve ON/OFF

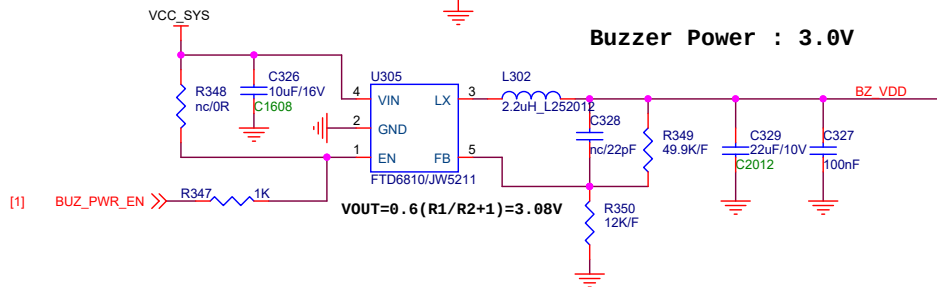
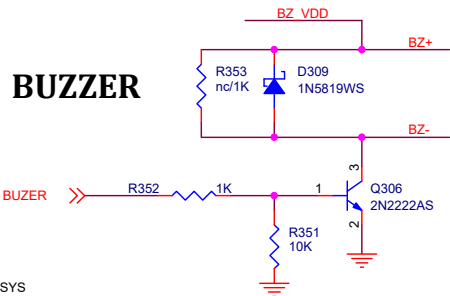
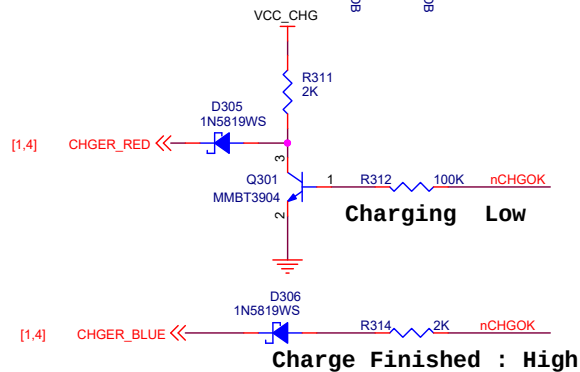
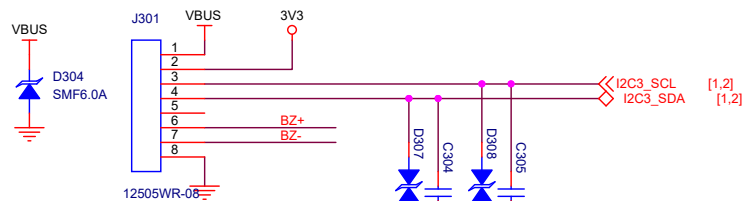
	VALVE1	VALVE2
초기화	0	0
팽창	0	1
수축	1	0



Air Pump ON/OFF



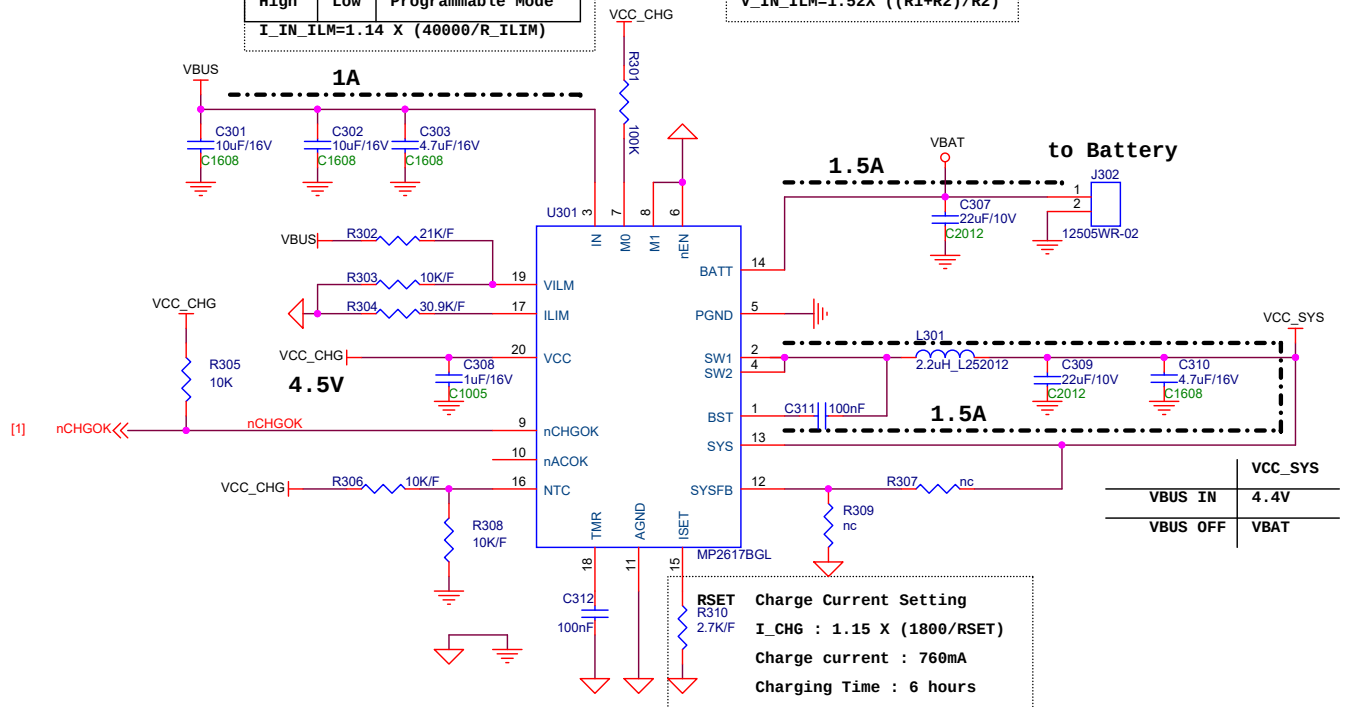
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Size	Document Number		Rev
B	BLE & 6-Axis Sensor		0.1
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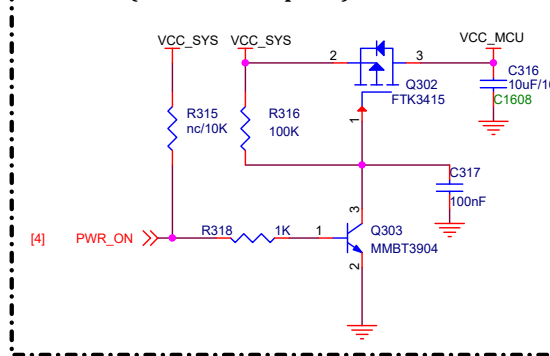
Battery Charger

VBUS Input Current Limit Setting		
M0	M1	
High	Low	Programmable Mode
$I_{IN_ILM}=1.14 \times (40000/R_{ILIM})$		

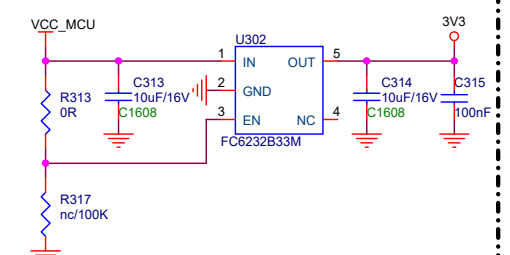
VBUS Input Voltage Clamp
 $V_{IN_ILM}=1.52 \times ((R1+R2)/R2)$



System Power Control(Max 150mA) (Front board option)

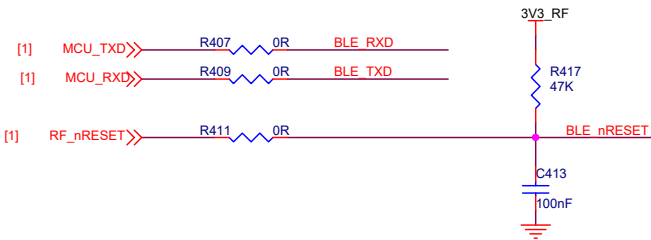
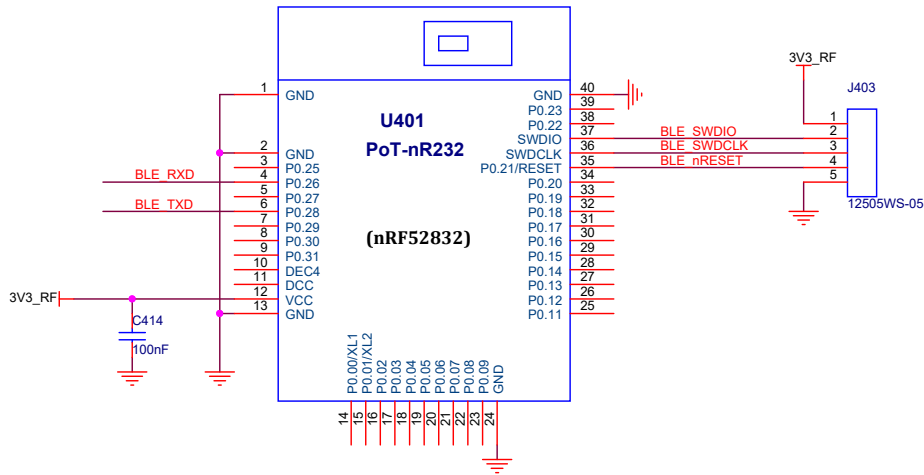


System Power 3.3V(Max 50mA)

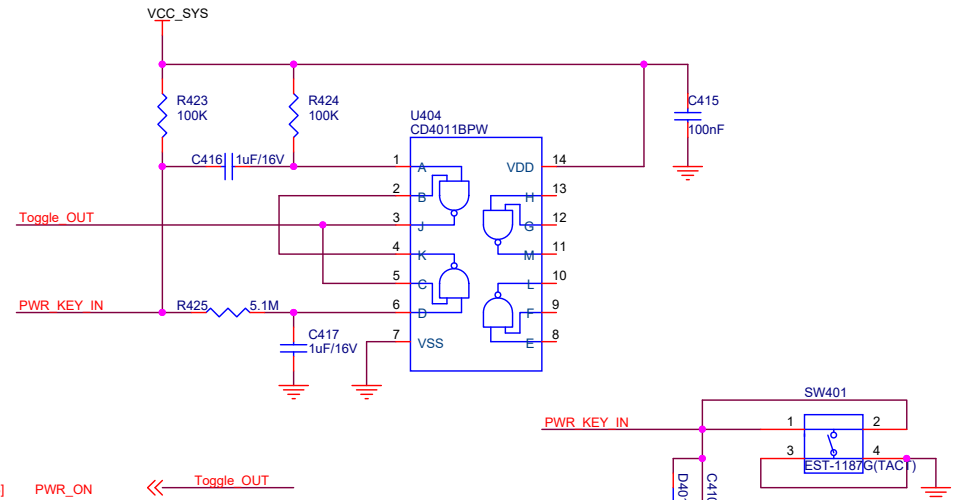
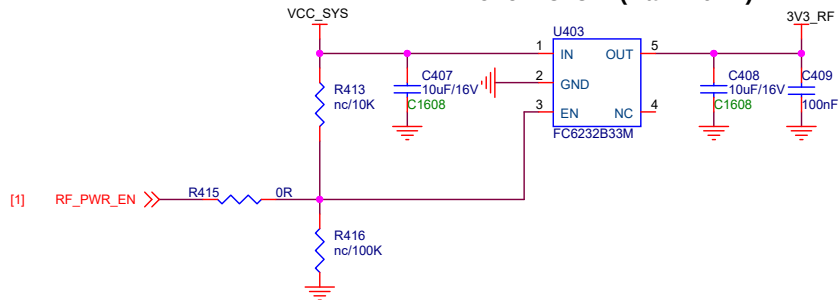


Title		
Size	Document Number	Rev
B	Charger & Shoot	0.1
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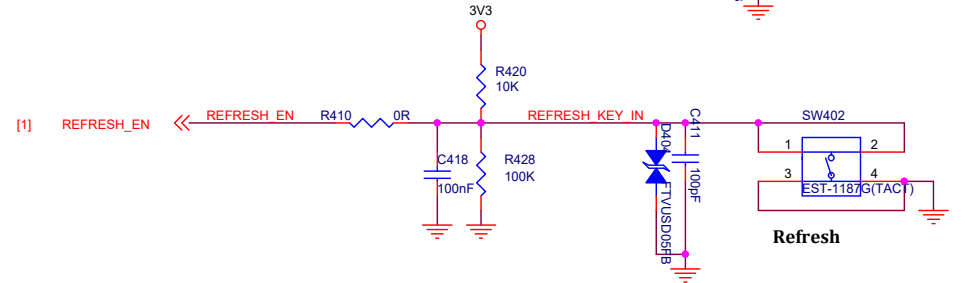
LoRA & BLE Module Interface



RF Power 3.3V (max 20mA)

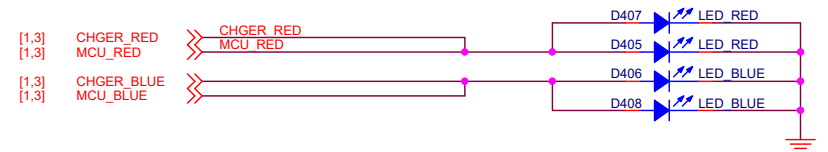


Power ON/OFF (OFF => 2-sec Press)



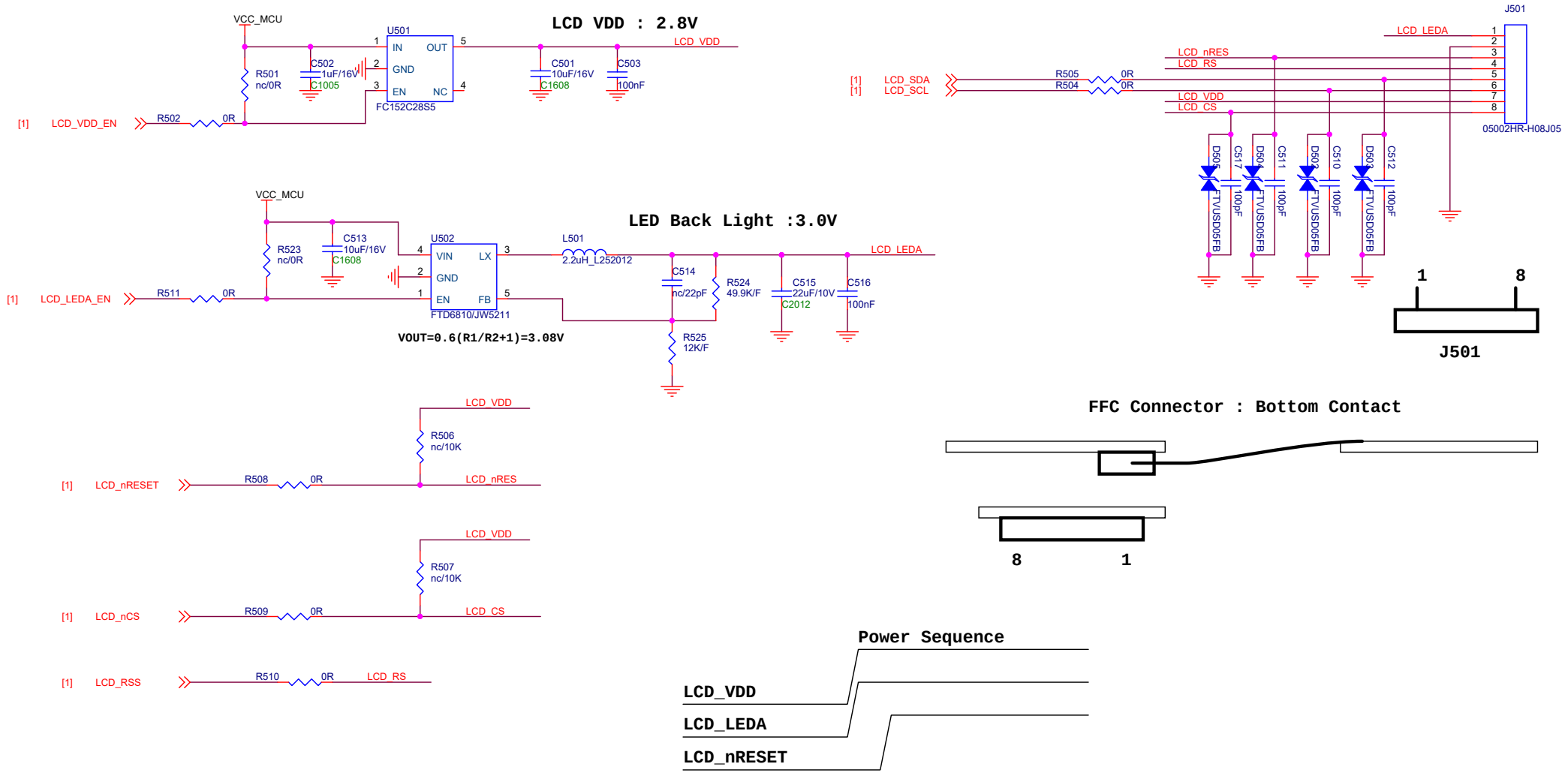
Refresh

Charging & Operation LED

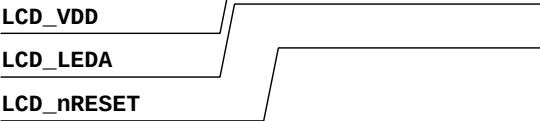


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LCD Interface (I2C)

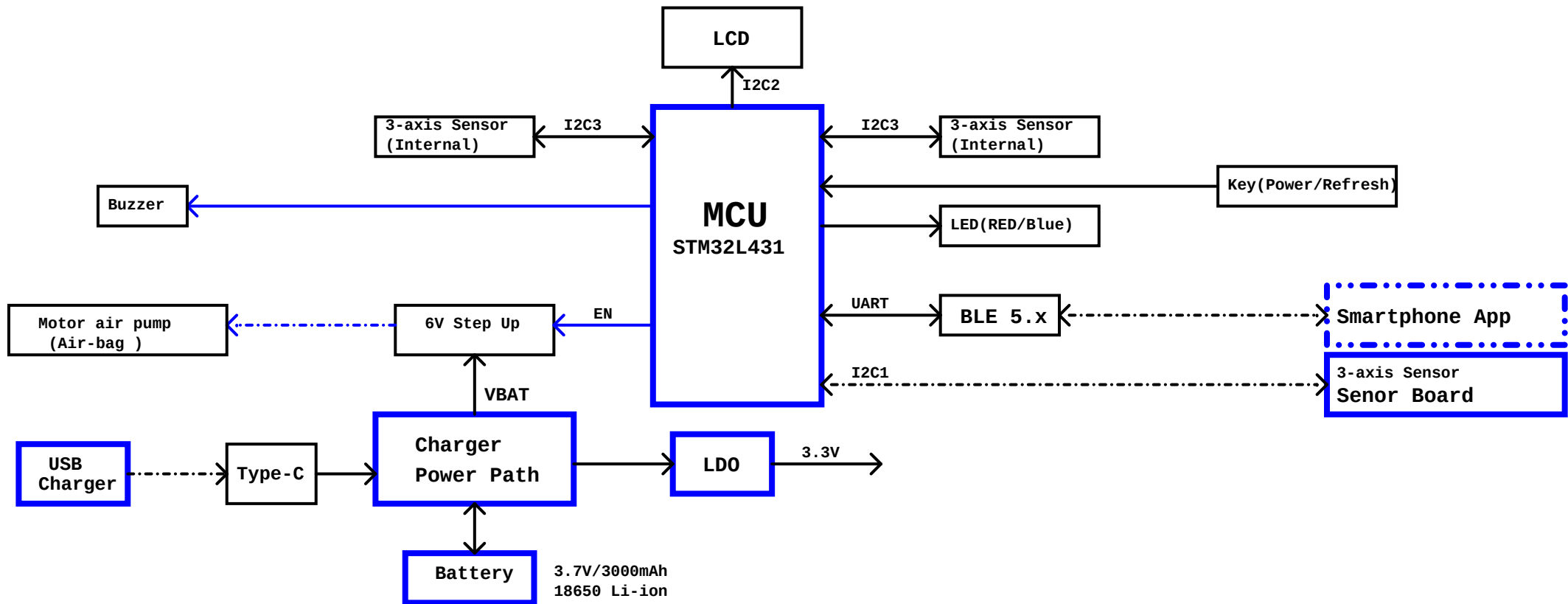


Power Sequence



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0-U-A System Block



0-U-A Sensor Board Specifications

MCU : STM32L431CBU6 - 128KB Flash / 64KB RAM

Battery : 3.7V/3000mAh (18650 Li-ion Battery)

Sensor : 6-Axis IMU Sensor

RF : Bluetooth BLE5.0

충전기 : 5V/1.2A , USB Type-C Connector & Cable 일체형

PCB 사양 :

Layer : 4-Layer

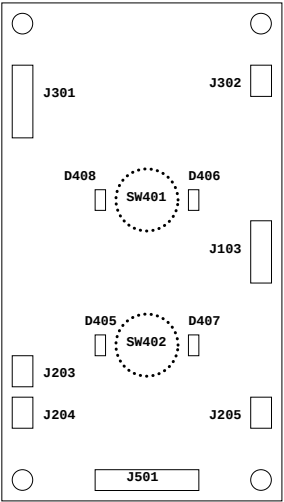
Thickness : 1.2T

특이사항

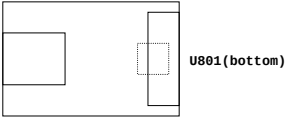
- 경고음 부저
- 전원 스위치
- Motor Air pump 사용 => Airbag Flow
- Mono OLED Display
- Main Board 에 LCD On/Off 감지를 위한 3축 센서 사용
- 동작중 충전기 연결되면 LCD 는 항상 켜짐
- 유아용 이므로 전자파 차폐설계
- 블루투스 통신 (스마트폰 App 개발)
- Air-bag Refresh 스위치 사용 (터치 스위치)
- 센서보드 서브보드로 사용
- 온도도 센서 적용

Title ?		
Size A3	Document Number BLOCK DIAGRAM	Rev 0.1
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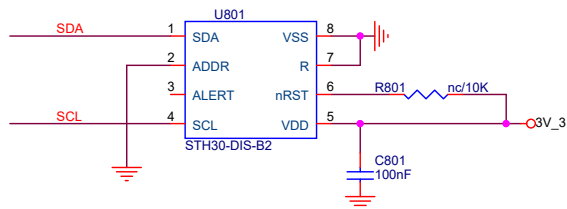
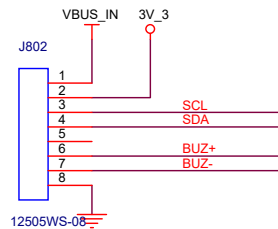
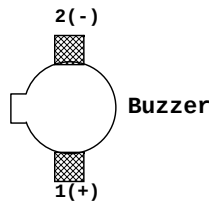
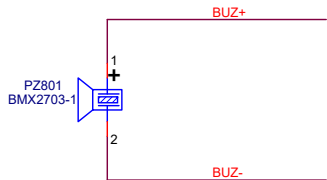
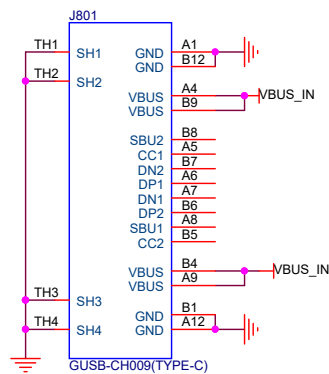
MAIN PCB 배치도



SUB PCB

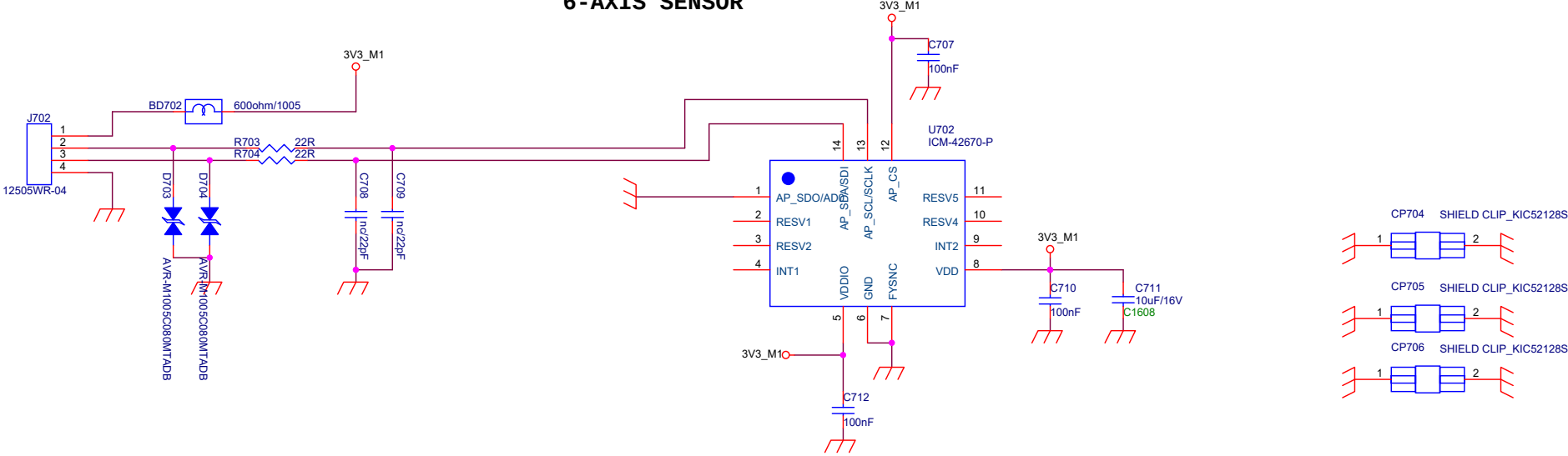


USB Type-C 5V Charge Adaptor

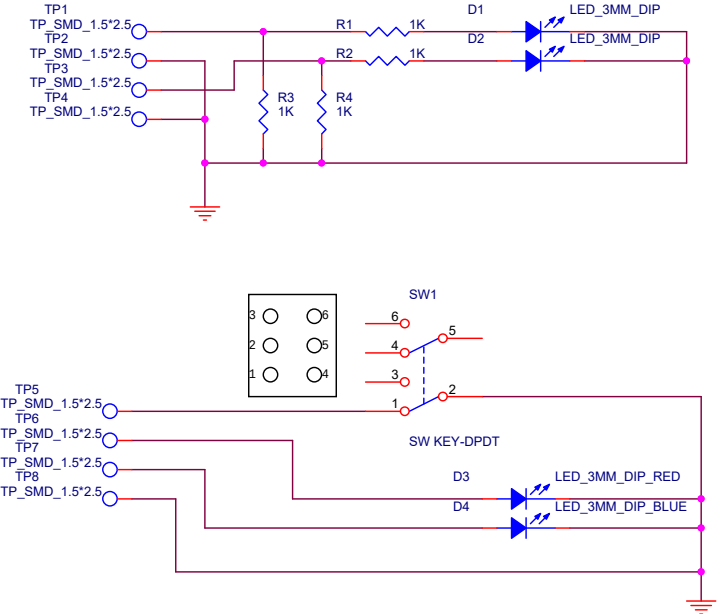


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6-AXIS SENSOR

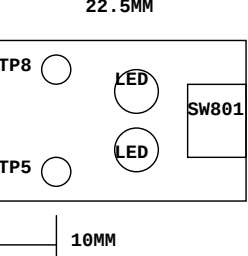
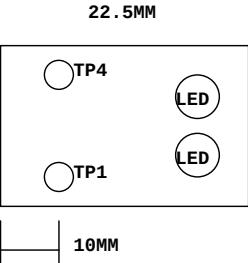


TEST PCB



TP 간격 : 2.5MM

TP 간격 : 2.5MM



PCB LAYOUT

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