KitSprout
UWBNode

2017.08.01
Ver. v1.6C
Lib. v3.2

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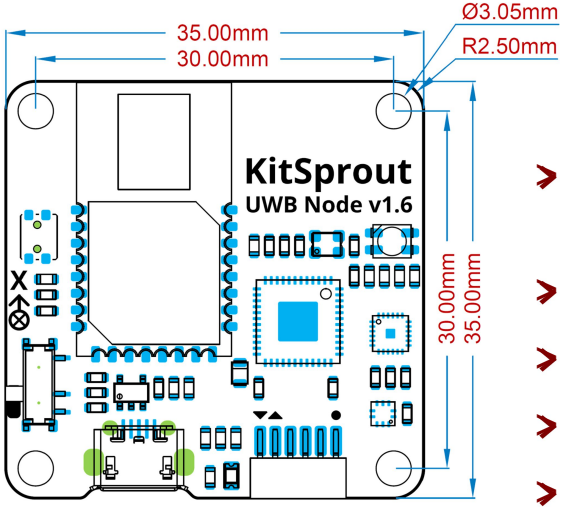
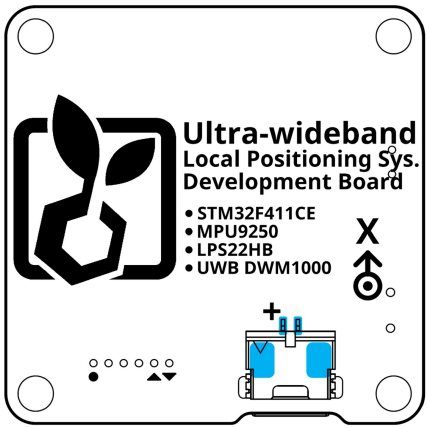
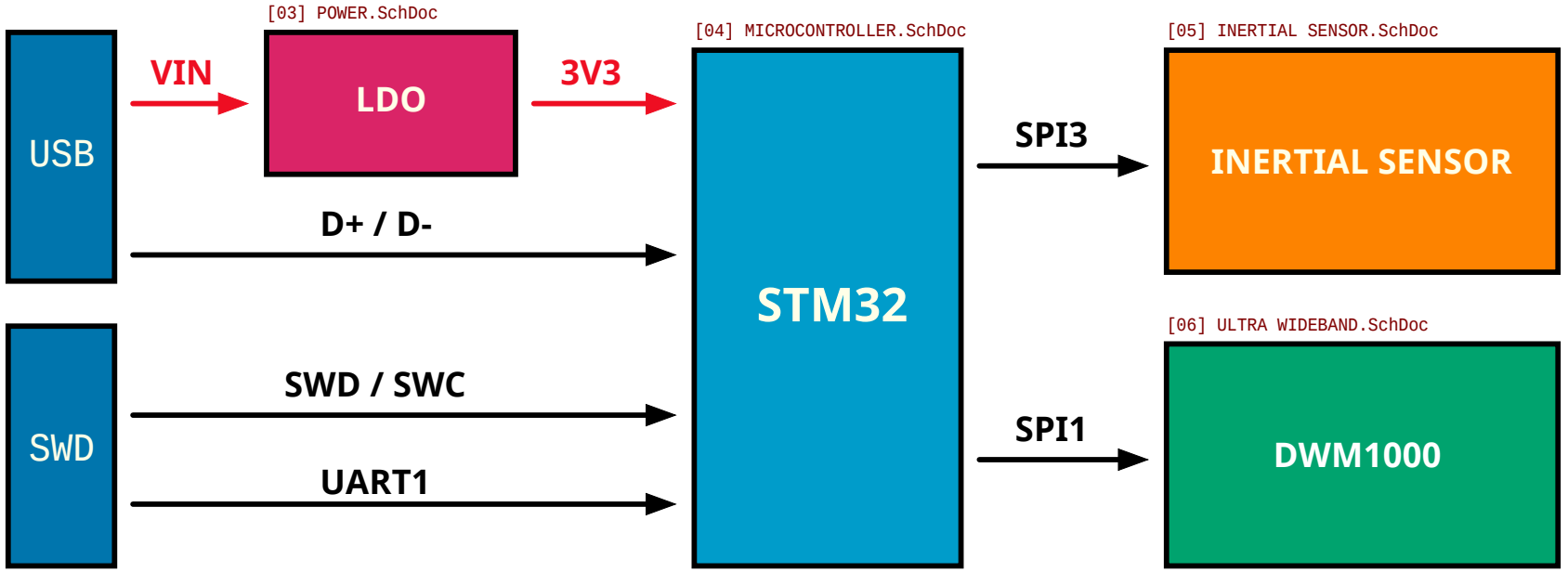


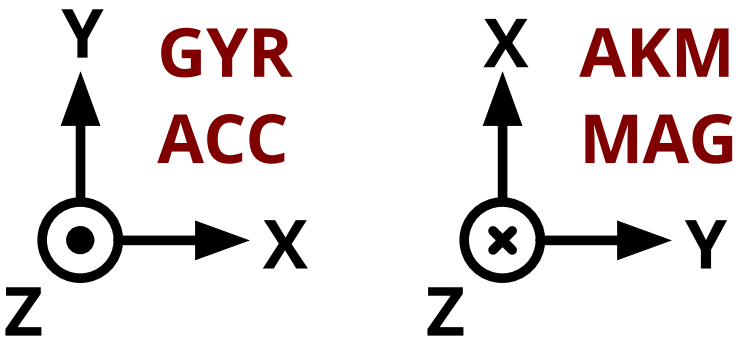


- STM32F411CE CORTEX-M4F 100MHz
- RGB LED (LOW - ON)
- KEY (LOW - ON)
- MICRO USB
- SWD (WITH UART)
- MPU9250 (SPI) 3-AXIS GYR/ACC/MAG
- LPS22HB (SPI) BAROMETER/THERMOMETER
- DWM1000 (SPI) ULTRA-WIDEBAND MODULE

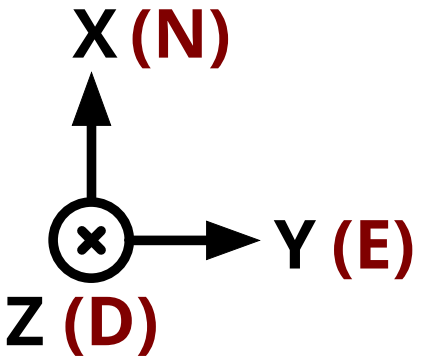
[02] BLOCK DIAGRAM.SchDoc



Sensor on Board Axis



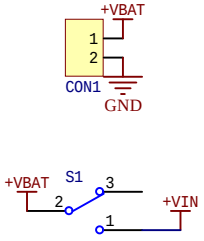
Coordinate System (NED)

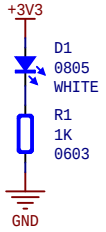


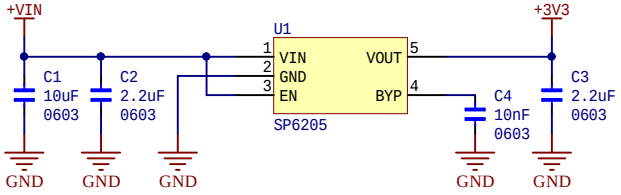
[03] POWER.SchDoc

POWER LED

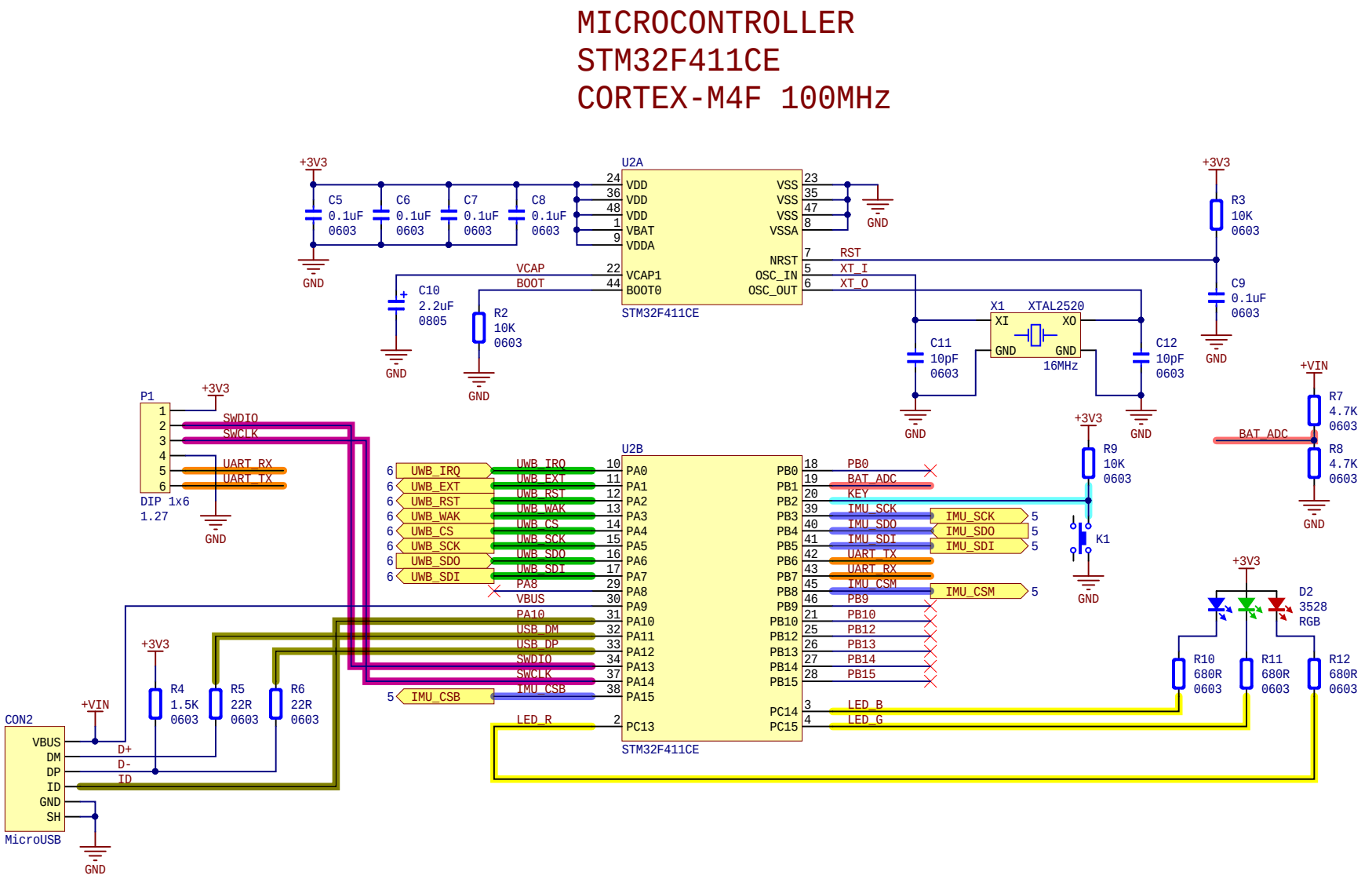
Low-Dropout Linear Regulator
VIN : 6V (MAX)
VOUT : 3V3 / 500mA



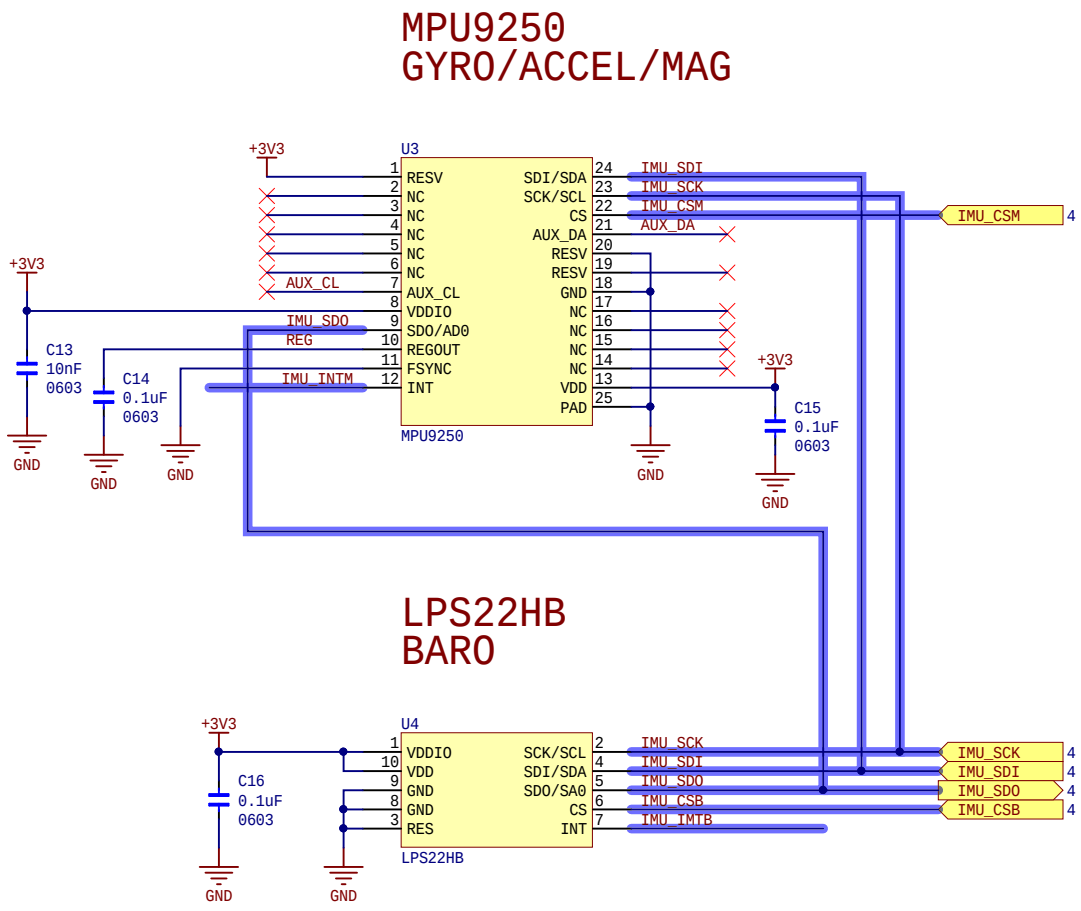




[04] MICROCONTROLLER.SchDoc



[05] INERTIAL SENSOR.SchDoc



- Gyroscope (MPU6500)
  ±250/500/1000/2000 dps
- Accelerometer (MPU6500)
  ±2/4/8/16 g

  Device ID = 0x71
  I2C Address = 0xD0 (AD0 = 0)
  = 0xD2 (AD0 = 1)

- Magnetometer (AK8963)
  ±4800 uT

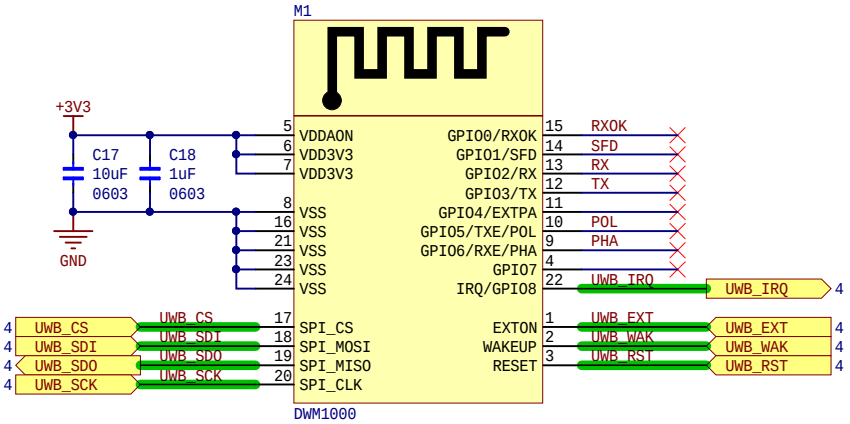
  Device ID = 0x48
  I2C Address = 0x0C

- Barometer (LPS22HB)
  260-1260 hPa

  Device ID = 0xB1
  I2C Address = 0xB8 (SA0 = 0)
  = 0xBA (SA0 = 1)

[06] ULTRA WIDEBAND.SchDoc

DWM1000
ULTRA-WIDEBAND



POL	PHA	SPI MODE	
0	0	0	default
0	1	1	
1	0	2	
1	1	3	

MODE 0
Data is sampled on the rising (first) edge of the clock and launched on the falling