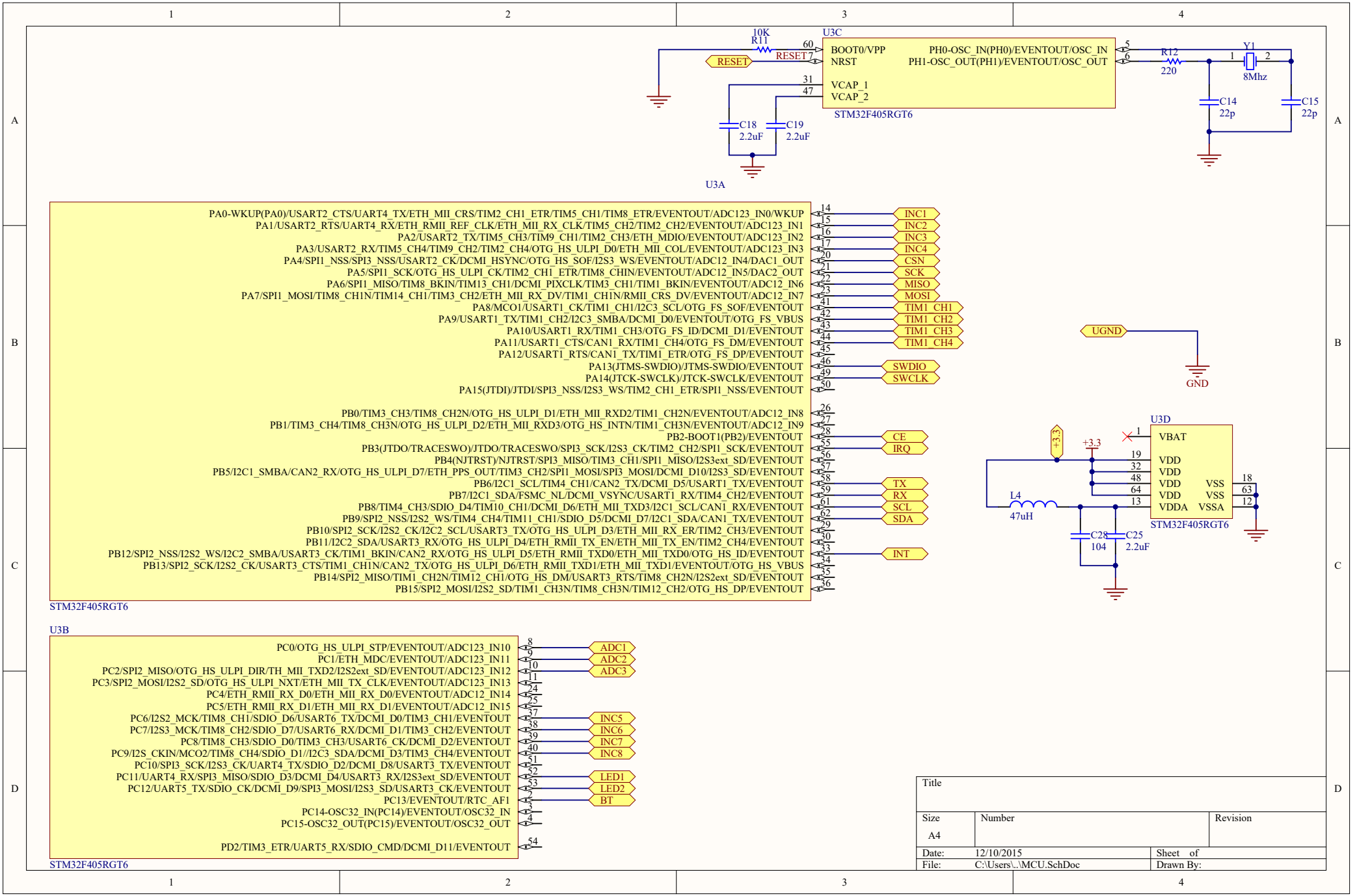
10K
R11
RESET
60
RESET7
U3C
BOOT0/VPP
NRST
VCAP_1
VCAP_2
31
47
PH0-OSC_IN(PH0)/EVENTOUT/OSC_IN
PH1-OSC_OUT(PH1)/EVENTOUT/OSC_OUT
5
6
R12
220
Y1
8Mhz
C14
22p
C15
22p
C18
2.2uF
C19
2.2uF
STM32F405RGT6
U3A
PA0-WKUP(PA0)/USART2_CTS/UART4_TX/ETH_MII_CRS/TIM2_CH1_ETR/TIM5_CH1/TIM8_ETR/EVENTOUT/ADC123_IN0/WKUP
PA1/USART2_RTS/UART4_RX/ETH_RMII_REF_CLK/ETH_MII_RX_CLK/TIM5_CH2/TIM2_CH2/EVENTOUT/ADC123_IN1
PA2/USART2_TX/TIM5_CH3/TIM9_CH1/TIM2_CH3/ETH_MDIO/EVENTOUT/ADC123_IN2
PA3/USART2_RX/TIM5_CH4/TIM9_CH2/TIM2_CH4/OTG_HS_ULPI_D0/ETH_MII_COL/EVENTOUT/ADC123_IN3
PA4/SPI1_NSS/SPI3_NSS/USART2_CK/DCMI_HSYNC/OTG_HS_SOF/I2S3_WS/EVENTOUT/ADC12_IN4/DAC1_OUT
PA5/SPI1_SCK/OTG_HS_ULPI_CK/TIM2_CH1_ETR/TIM8_CHIN/EVENTOUT/ADC12_IN5/DAC2_OUT
PA6/SPI1_MISO/TIM8_BKIN/TIM13_CH1/DCMI_PIXCLK/TIM3_CH1/TIM1_BKIN/EVENTOUT/ADC12_IN6
PA7/SPI1_MOSI/TIM8_CH1N/TIM14_CH1/TIM3_CH2/ETH_MII_RX_DV/TIM1_CH1N/RMII_CRS_DV/EVENTOUT/ADC12_IN7
PA8/MCO1/USART1_CK/TIM1_CH1/I2C3_SCL/OTG_FS_SOF/EVENTOUT
PA9/USART1_TX/TIM1_CH2/I2C3_SMBA/DCMI_D0/EVENTOUT/OTG_FS_VBUS
PA10/USART1_RX/TIM1_CH3/OTG_FS_ID/DCMI_D1/EVENTOUT
PA11/USART1_CTS/CAN1_RX/TIM1_CH4/OTG_FS_DM/EVENTOUT
PA12/USART1_RTS/CAN1_TX/TIM1_ETR/OTG_FS_DP/EVENTOUT
PA13(JTMS-SWDIO)/JTMS-SWDIO/EVENTOUT
PA14(JTCK-SWCLK)/JTCK-SWCLK/EVENTOUT
PA15(JTDI)/JTDI/SPI3_NSS/I2S3_WS/TIM2_CH1_ETR/SPI1_NSS/EVENTOUT
PB0/TIM3_CH3/TIM8_CH2N/OTG_HS_ULPI_D1/ETH_MII_RXD2/TIM1_CH2N/EVENTOUT/ADC12_IN8
PB1/TIM3_CH4/TIM8_CH3N/OTG_HS_ULPI_D2/ETH_MII_RXD3/OTG_HS_INTN/TIM1_CH3N/EVENTOUT/ADC12_IN9
PB2-BOOT1(PB2)/EVENTOUT
PB3(JTDO/TRACESWO)/JTDO/TRACESWO/SPI3_SCK/I2S3_CK/TIM2_CH2/SPI1_SCK/EVENTOUT
PB4(NJTRST)/NJTRST/SPI3_MISO/TIM3_CH1/SPI1_MISO/I2S3ext_SD/EVENTOUT
PB5/I2C1_SMBA/CAN2_RX/OTG_HS_ULPI_D7/ETH_PPS_OUT/TIM3_CH2/SPI1_MOSI/SPI3_MOSI/DCMI_D10/I2S3_SD/EVENTOUT
PB6/I2C1_SCL/TIM4_CH1/CAN2_TX/DCMI_D5/USART1_TX/EVENTOUT
PB7/I2C1_SDA/FSMC_NL/DCMI_VSYNC/USART1_RX/TIM4_CH2/EVENTOUT
PB8/TIM4_CH3/SDIO_D4/TIM10_CH1/DCMI_D6/ETH_MII_TXD3/I2C1_SCL/CAN1_RX/EVENTOUT
PB9/SPI2_NSS/I2S2_WS/TIM4_CH4/TIM11_CH1/SDIO_D5/DCMI_D7/I2C1_SDA/CAN1_TX/EVENTOUT
PB10/SPI2_SCK/I2S2_CK/I2C2_SCL/USART3_TX/OTG_HS_ULPI_D3/ETH_MII_RX_ER/TIM2_CH3/EVENTOUT
PB11/I2C2_SDA/USART3_RX/OTG_HS_ULPI_D4/ETH_RMII_TX_EN/ETH_MII_TX_EN/TIM2_CH4/EVENTOUT
PB12/SPI2_NSS/I2S2_WS/I2C2_SMBA/USART3_CK/TIM1_BKIN/CAN2_RX/OTG_HS_ULPI_D5/ETH_RMII_TXD0/ETH_MII_TXD0/OTG_HS_ID/EVENTOUT
PB13/SPI2_SCK/I2S2_CK/USART3_CTS/TIM1_CH1N/CAN2_TX/OTG_HS_ULPI_D6/ETH_RMII_TXD1/ETH_MII_TXD1/EVENTOUT/OTG_HS_VBUS
PB14/SPI2_MISO/TIM1_CH2N/TIM12_CH1/OTG_HS_DM/USART3_RTS/TIM8_CH2N/I2S2ext_SD/EVENTOUT
PB15/SPI2_MOSI/I2S2_SD/TIM1_CH3N/TIM8_CH3N/TIM12_CH2/OTG_HS_DP/EVENTOUT
INC1
INC2
INC3
INC4
CSN
SCK
MISO
MOSI
TIM1_CH1
TIM1_CH2
TIM1_CH3
TIM1_CH4
SWDIO
SWCLK
CE
IRQ
TX
RX
SCL
SDA
INT
STM32F405RGT6
U3B
PC0/OTG_HS_ULPI_STP/EVENTOUT/ADC123_IN10
PC1/ETH_MDC/EVENTOUT/ADC123_IN11
PC2/SPI2_MISO/OTG_HS_ULPI_DIR/TH_MII_TXD2/I2S2ext_SD/EVENTOUT/ADC123_IN12
PC3/SPI2_MOSI/I2S2_SD/OTG_HS_ULPI_NXT/ETH_MII_TX_CLK/EVENTOUT/ADC123_IN13
PC4/ETH_RMII_RX_D0/ETH_MII_RX_D0/EVENTOUT/ADC12_IN14
PC5/ETH_RMII_RX_D1/ETH_MII_RX_D1/EVENTOUT/ADC12_IN15
PC6/I2S2_MCK/TIM8_CH1/SDIO_D6/USART6_TX/DCMI_D0/TIM3_CH1/EVENTOUT
PC7/I2S3_MCK/TIM8_CH2/SDIO_D7/USART6_RX/DCMI_D1/TIM3_CH2/EVENTOUT
PC8/TIM8_CH3/SDIO_D0/TIM3_CH3/USART6_CK/DCMI_D2/EVENTOUT
PC9/I2S_CKIN/MCO2/TIM8_CH4/SDIO_D1//I2C3_SDA/DCMI_D3/TIM3_CH4/EVENTOUT
PC10/SPI3_SCK/I2S3_CK/UART4_TX/SDIO_D2/DCMI_D8/USART3_TX/EVENTOUT
PC11/UART4_RX/SPI3_MISO/SDIO_D3/DCMI_D4/USART3_RX/I2S3ext_SD/EVENTOUT
PC12/UART5_TX/SDIO_CK/DCMI_D9/SPI3_MOSI/I2S3_SD/USART3_CK/EVENTOUT
PC13/EVENTOUT/RTC_AF1
PC14-OSC32_IN(PC14)/EVENTOUT/OSC32_IN
PC15-OSC32_OUT(PC15)/EVENTOUT/OSC32_OUT
PD2/TIM3_ETR/UART5_RX/SDIO_CMD/DCMI_D11/EVENTOUT
ADC1
ADC2
ADC3
INC5
INC6
INC7
INC8
LED1
LED2
BT
STM32F405RGT6
UGND
GND
U3D
+3.3
VBAT
VDD
VDD
VDD
VDD
VDDA
VSS
VSS
VSSA
L4
47uH
C28
104
C25
2.2uF
STM32F405RGT6
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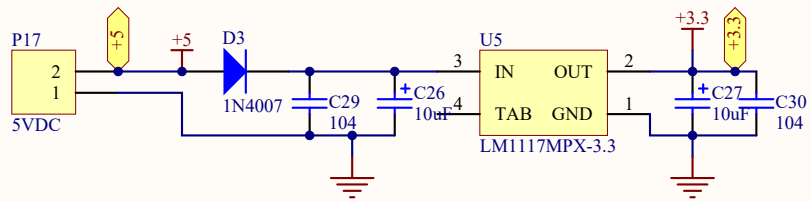
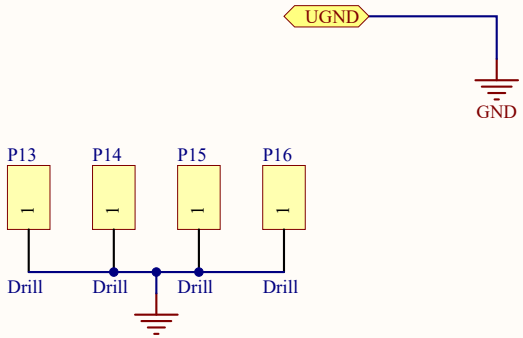
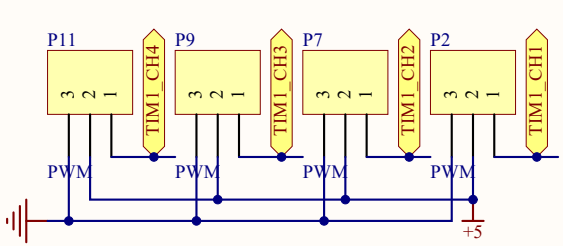
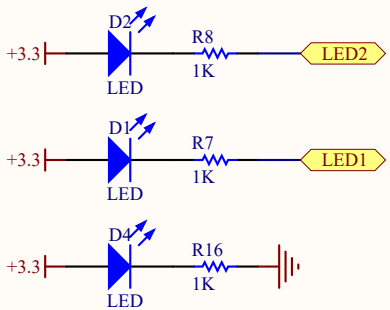
Power Supply

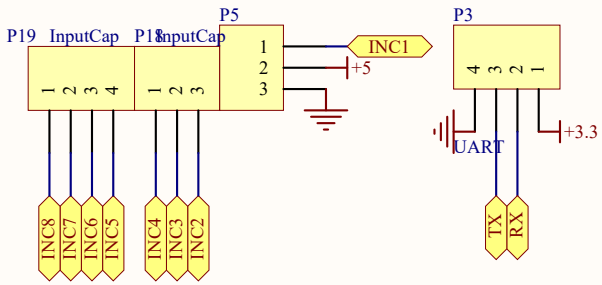




IO







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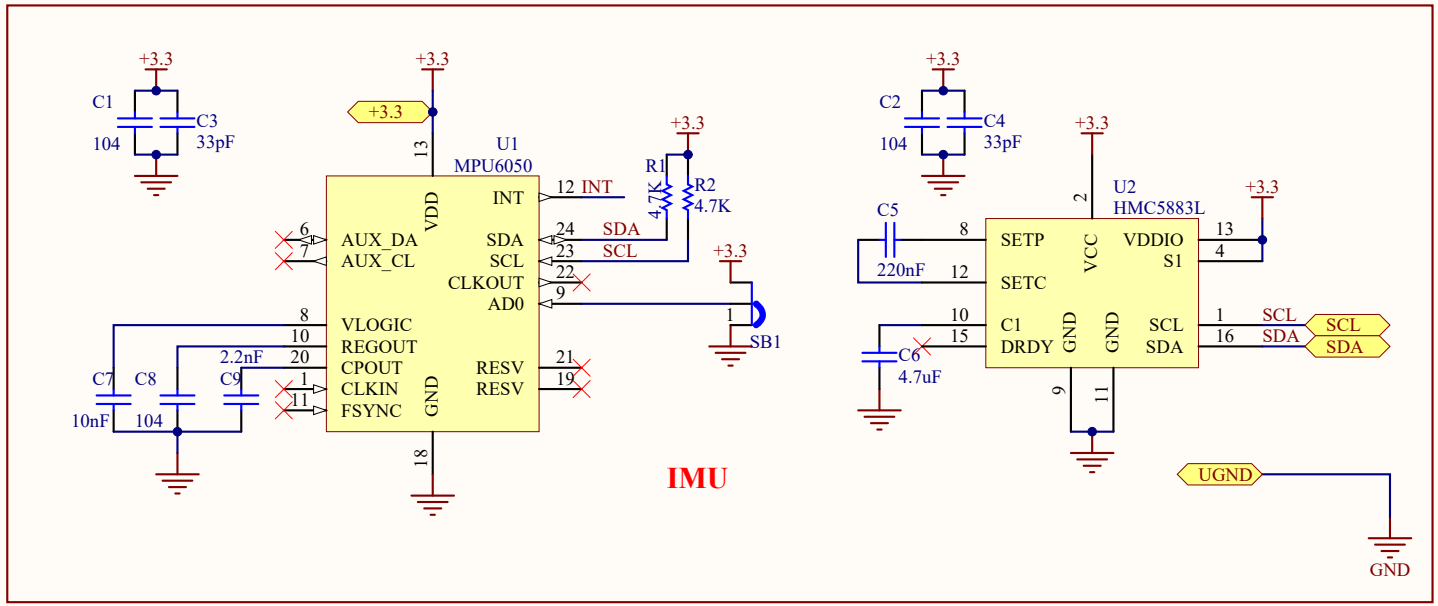

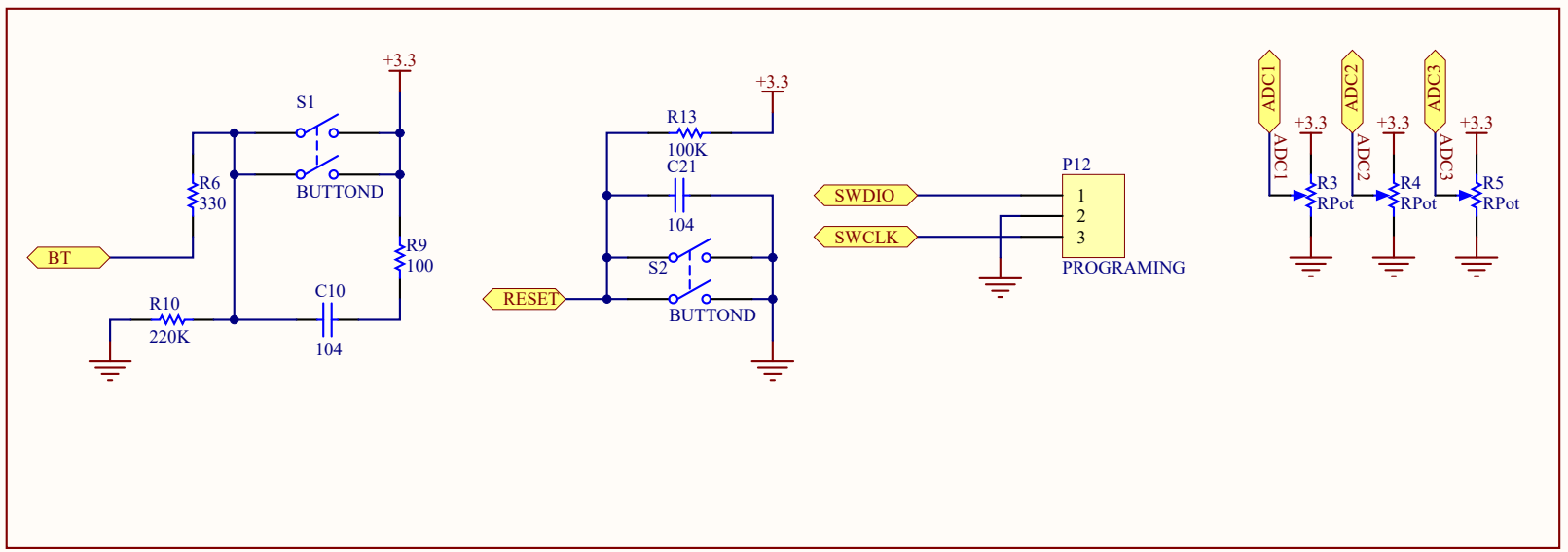

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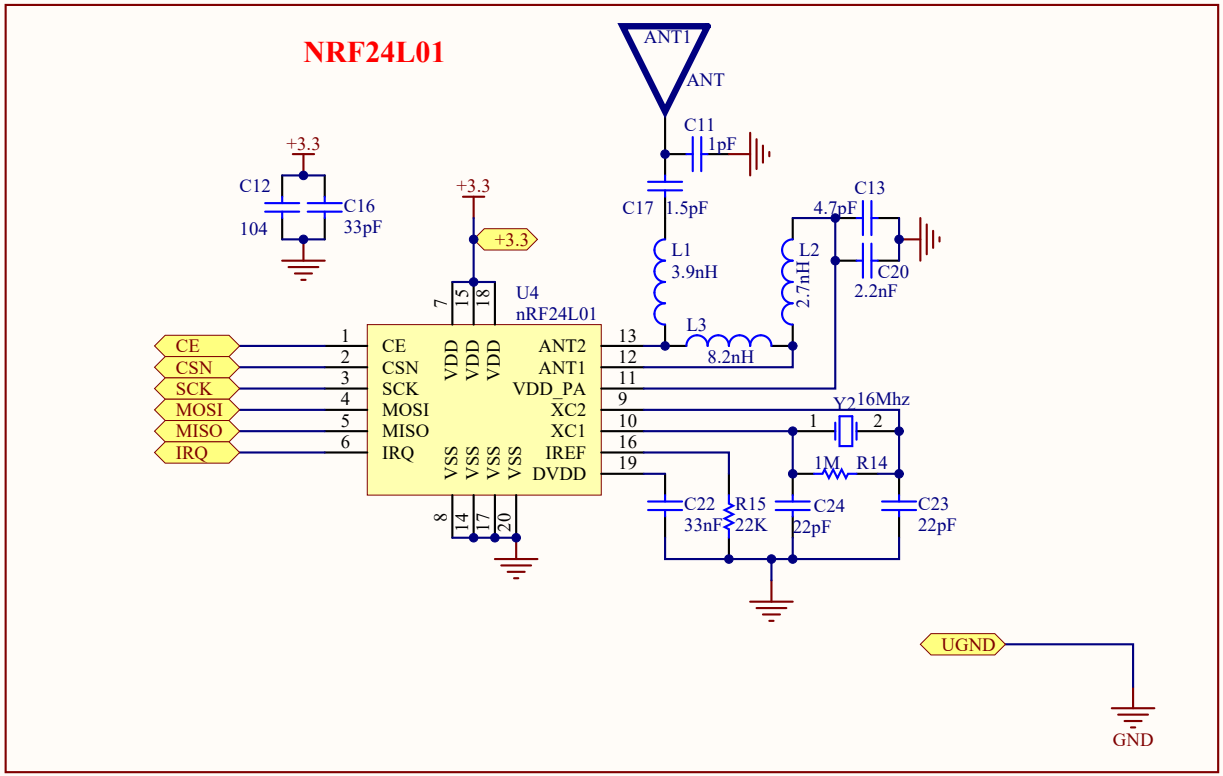

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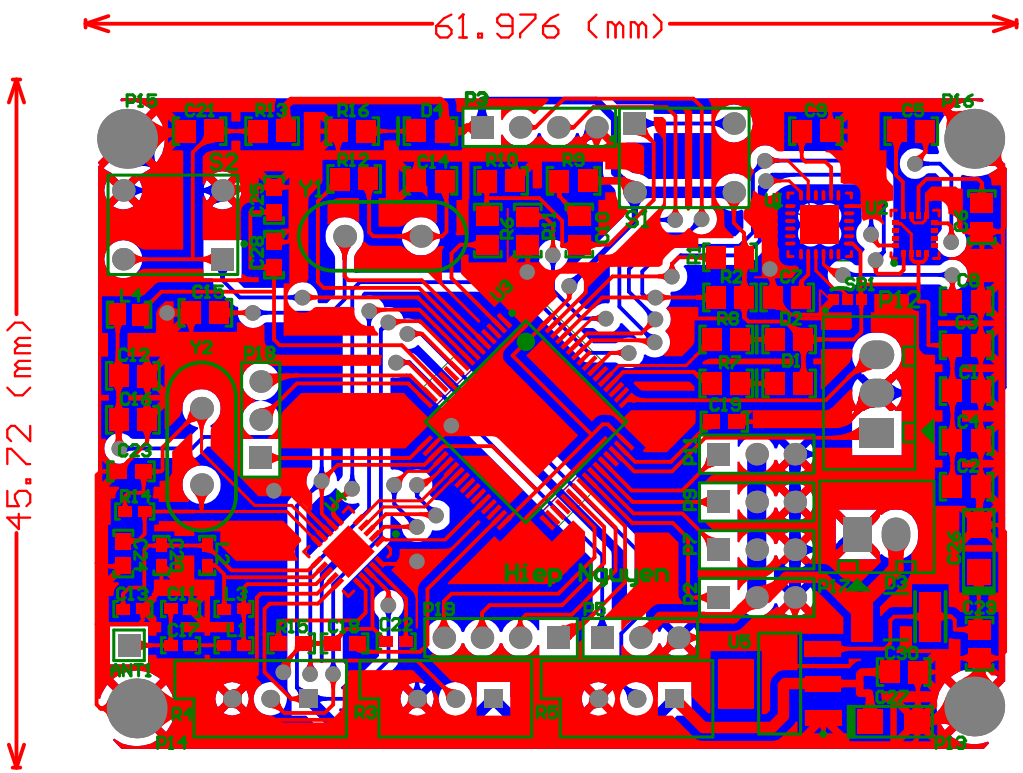

String

Comment	Description	Designator	Footprint	LibRef	Quantity
ANT	Anten	ANT1	PIN1	ANT	1
104	Capacitor (Semiconductor SIM Model)	C1, C2, C8, C12, C21, C29, C30	C-0805	Cap Ceramic	7
33pF	Capacitor (Semiconductor SIM Model)	C3, C4, C16	C-0805	Cap Ceramic	3
220nF	Capacitor (Semiconductor SIM Model)	C5	C-0805	Cap Ceramic	1
4.7uF	Capacitor (Semiconductor SIM Model)	C6	C-0805	Cap Ceramic	1
10nF	Capacitor (Semiconductor SIM Model)	C7	C-0805	Cap Ceramic	1
2.2nF	Capacitor (Semiconductor SIM Model)	C9	C-0805	Cap Ceramic	1
Cap Ceramic	Capacitor (Semiconductor SIM Model)	C10	C-0805	Cap Ceramic	1
1pF	Capacitor (Semiconductor SIM Model)	C11	C-0402	Cap Ceramic	1
4.7pF	Capacitor (Semiconductor SIM Model)	C13	C-0402	Cap Ceramic	1
22p	Capacitor (Semiconductor SIM Model)	C14, C15	C-0805	Cap Ceramic	2
1.5pF	Capacitor (Semiconductor SIM Model)	C17	C-0402	Cap Ceramic	1
2.2uF	Capacitor (Semiconductor SIM Model)	C18, C19, C25	C-0603	Cap Ceramic	3
2.2nF	Capacitor (Semiconductor SIM Model)	C20	C-0402	Cap Ceramic	1
33nF	Capacitor (Semiconductor SIM Model)	C22	C-0402	Cap Ceramic	1
22pF	Capacitor (Semiconductor SIM Model)	C23, C24	C-0603	Cap Ceramic	2
10uF	Midget Conformal Coated Solid Tantalum Chip Capacitor. 1.5uF, 20% Tolerance, 15 WVDC @ +85°C, Surge = 20V	C26, C27	C Tantalum S.A	C Tantalum S.A	2
104	Capacitor (Semiconductor SIM Model)	C28	C-0603	Cap Ceramic	1
LED	Typical INFRARED GaAs LED	D1, D2, D4	LED-0805	LED	3
1N4007	1 Amp General Purpose Rectifier	D3	1N4007 SMD	1N4007	1
3.9nH	Inductor	L1	I-0402	Inductor	1
2.7nH	Inductor	L2	I-0402	Inductor	1
8.2nH	Inductor	L3	I-0402	Inductor	1
47uH	Inductor	L4	I-0805	Inductor	1
PWM	Header, 3-Pin	P2, P7, P9, P11	HDR1X3	Header 3	4
UART	Header, 4-Pin	P3	HDR1X4	Header 4	1
Header 3	Header, 3-Pin	P5	HDR1X3	Header 3	1
PROGRAMING	Header, 3-Pin	P12	CON3	Header 3	1
Drill	Header, 1 Pin	P13, P14, P15, P16	Drill	Header 1	4
5VDC	Header, 2-Pin	P17	CON2	Header 2	1
InputCap	Header, 3-Pin	P18	HDR1X3	Header 3	1
InputCap	Header, 4-Pin	P19	HDR1X4	Header 4	1
4.7K	Rectangular Thick Film Chip Resistor, 10 Ohm to 1M Ohm Range, 0.1% and 0.5% Tolerance, 1/ 8W	R1, R2	R-0805	RES	2
RPot	Potentiometer	R3, R4, R5	VR5	RPot	3
330	Rectangular Thick Film Chip Resistor, 10 Ohm to 1M Ohm Range, 0.1% and 0.5% Tolerance, 1/ 8W	R6	R-0805	RES	1
1K	Rectangular Thick Film Chip Resistor, 10 Ohm to 1M Ohm Range, 0.1% and 0.5% Tolerance, 1/ 8W	R7, R8, R16	R-0805	RES	3
100	Rectangular Thick Film Chip Resistor, 10 Ohm to 1M Ohm Range, 0.1% and 0.5% Tolerance, 1/ 8W	R9	R-0805	RES	1
220K	Rectangular Thick Film Chip Resistor, 10 Ohm to 1M Ohm Range, 0.1% and 0.5% Tolerance, 1/ 8W	R10	R-0805	RES	1
10K	Rectangular Thick Film Chip Resistor, 10 Ohm to 1M Ohm Range, 0.1% and 0.5% Tolerance, 1/ 8W	R11	R-0805	RES	1
220	Rectangular Thick Film Chip Resistor, 10 Ohm to 1M Ohm Range, 0.1% and 0.5% Tolerance, 1/ 8W	R12	R-0805	RES	1
100K	Rectangular Thick Film Chip Resistor, 10 Ohm to 1M Ohm Range, 0.1% and 0.5% Tolerance, 1/ 8W	R13	R-0805	RES	1
1M	Rectangular Thick Film Chip Resistor, 10 Ohm to 1M Ohm Range, 0.1% and 0.5% Tolerance, 1/ 8W	R14	R-0402	RES	1
22K	Rectangular Thick Film Chip Resistor, 10 Ohm to 1M Ohm Range, 0.1% and 0.5% Tolerance, 1/ 8W	R15	R-0603	RES	1
BUTTOND	BUTTON	S1, S2	DPST-4	BUTTOND	2
SB3		SB1	SB3	SB3	1
MPU6050		U1	QFN-24_L	MPU6050	1
HMC5883L		U2	LPCC-16	HMC5883L	1
STM32F405RGT6	ARM Cortex-M4 32b MCU+FPU, 210DMIP, 1024 kB Flash, 192+4 kB RAM, 51 I/Os, 64-pin LQFP, -40 to +85°C, Tray	U3	TQFP64_V	STM32F405RGT6	1
nRF24L01		U4	QFN-20	nRF24L01	1
LM1117MPX-3.3	800mA Low-Dropout Linear Regulator, 4-pin SOT-223	U5	SOT223_N	LM1117MPX-3.3	1
8Mhz	Crystal Oscillator	Y1	XTAL	XTAL	1
16Mhz	Crystal Oscillator	Y2	XTAL	XTAL	1