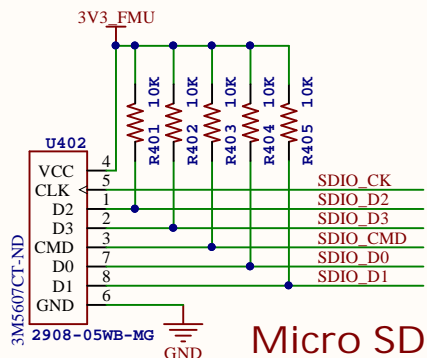
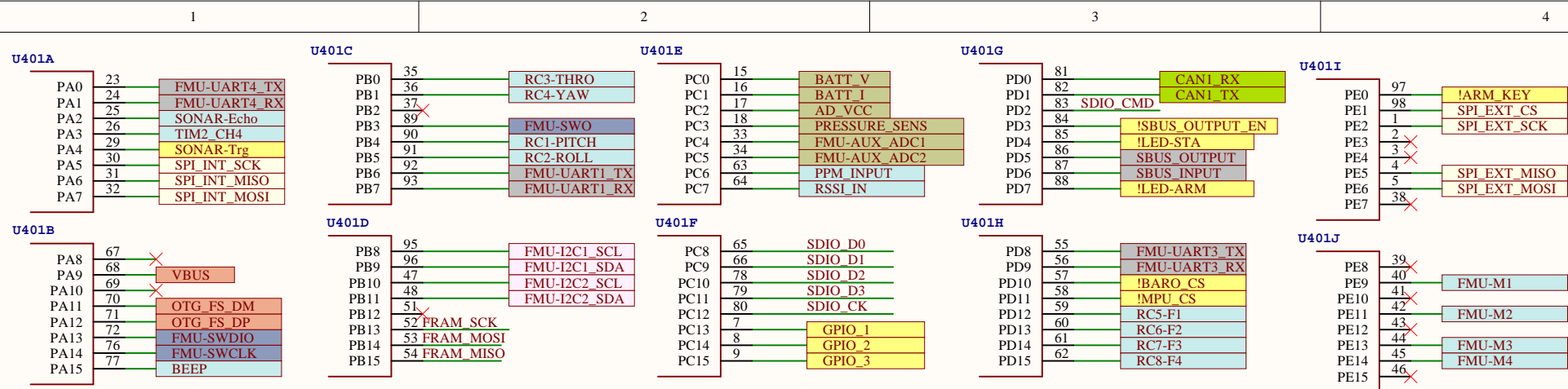


LSM303D( acc mag ) MPU6000( acc gyro ) MS5611( baro )	Title: sensors.SchDoc	
	Drawn by: 元岳鑫	
	Date: 2018/03/30 @ 17:30	
	Sheet: 3 / 6	Alfa 2.0



```
uart allocation:
PB6-7:  UART1_TX, RX -> TELEM
PD5-6 :  UART2_TX, RX -> SBUS
PD8-9:   UART3_TX, RX -> GPS
PA0-1 :  UART4_TX, RX -> DEBUG

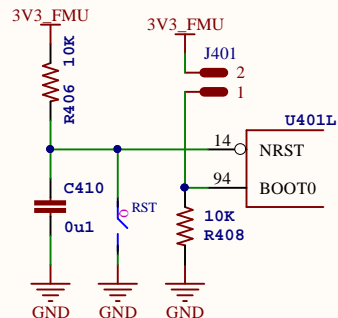
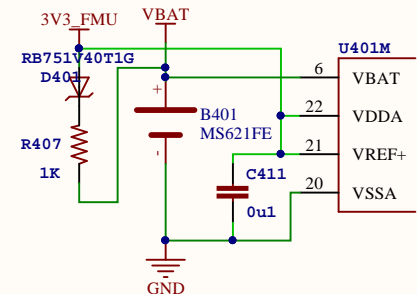
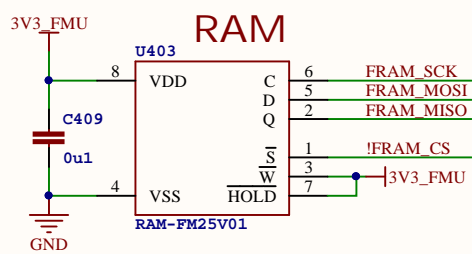
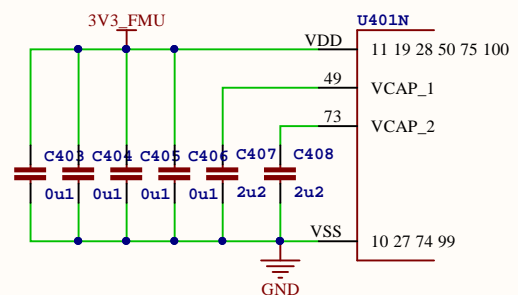
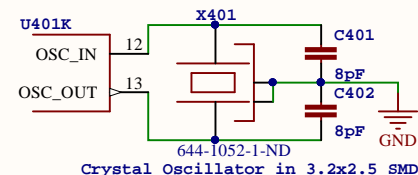
spi allocation::
PA5-7:   SPI1 -> SENSORS <internal>
PB13-15: SPI2 -> FRAM
PE2.5.6: SPI4 -> external SPI
```

```

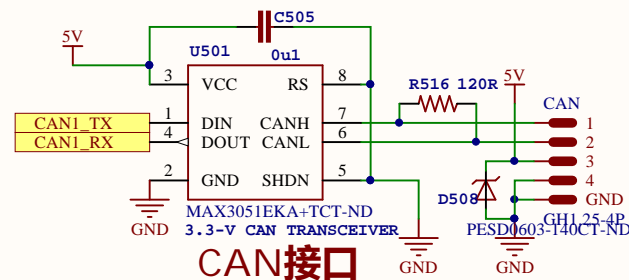
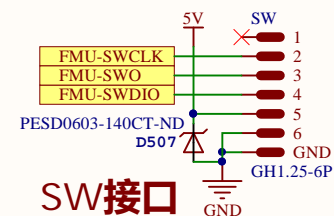
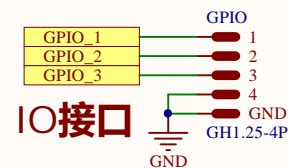
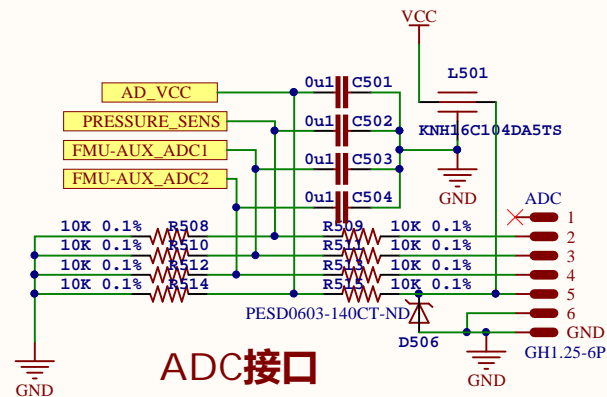
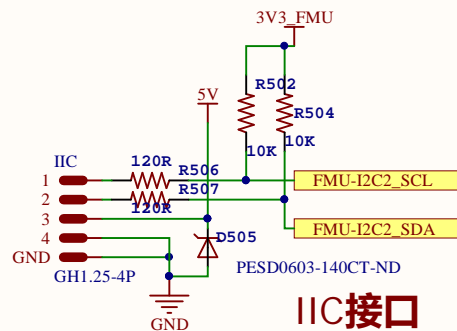
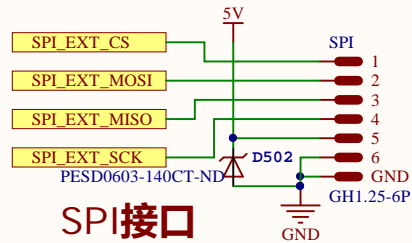
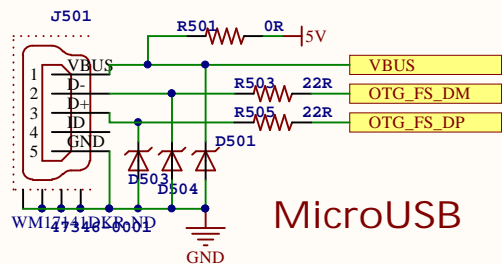
Time allocation:
-----PWM OUTPUT-----
PE9: TIM1_CH1: FMU-M1
PE11: TIM1_CH2: FMU-M2
PE13: TIM1_CH3: FMU-M3
PE14: TIM1_CH4: FMU-M4
PA15: TIM2_CH1: ALARM
PA2: TIM2_CH3: SONAR-Echo
PA3: TIM2_CH4: TIM2_CH4
----- CAPTURE -----
PB4: TIM3_CH1: RC1-PITCH
PB5: TIM3_CH2: RC2-ROLL
PB6: TIM3_CH3: RC3-THRO
PB1: TIM4_CH4: RC4-YAW
PD12: TIM4_CH1: RC5-F1
PD13: TIM4_CH2: RC6-F2
PD14: TIM4_CH3: RC7-F3
PD15: TIM4_CH4: RC8-F4
PC6: TIM8_CH1:PPM-IN
PC7: TIM8_CH2:RSSI-IN

```

```
GPIO allocation:
PC15: _____ OUTPUT
PD0: LED_STATUS
PD1: LED_ARM
PC2: !SRBUS_OUTPUT_EN
PD10: !BARO_CS
PD11: !MPU_CS
PC14: _____ INPUT
PE0: !ARM_KEY
PC13: _____ UNDEF
PC13: GPIO_1
PC14: GPIO_2
PC15: GPIO_3
```



	Title: fmu.SchDoc	
	Drawn by: 亓岳鑫	
	Date: 2018/03/30 @ 17:30	
	Sheet: 4 / 6	Alfa 2.0

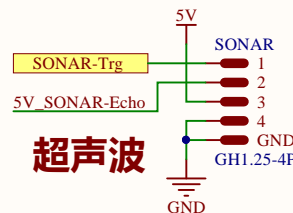
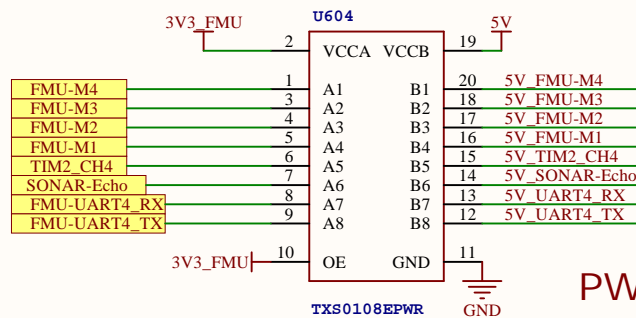
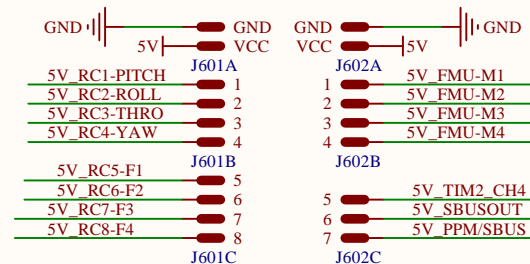
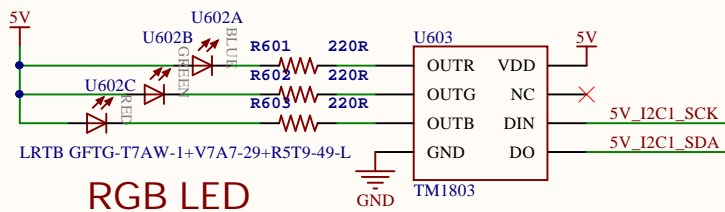
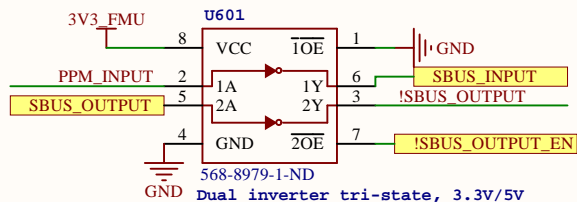


Title: connector\_3v3 .SchDoc

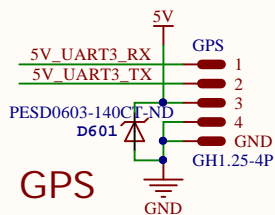
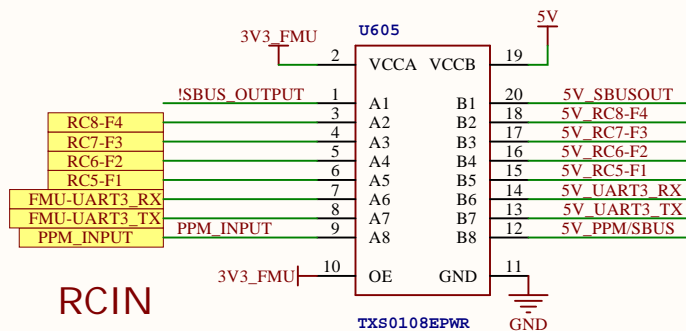
Drawn by: 开岳鑫

Date: 2018/03/30 @ 17:30

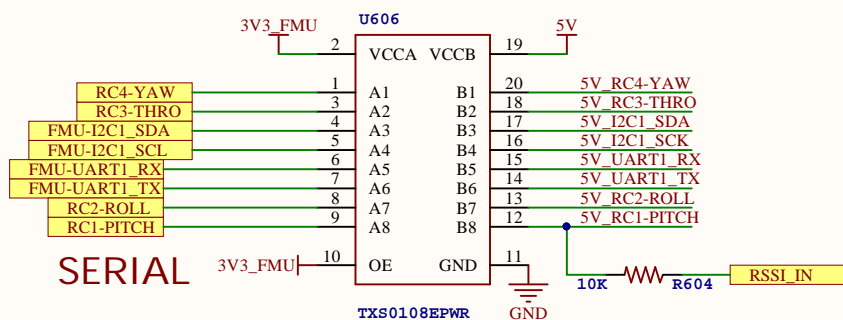
Sheet: 5 / 6 Alfa 2.0



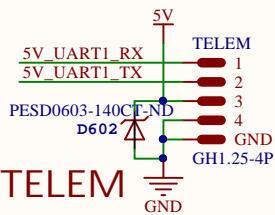
## PWMOUT&SBUS\PPM



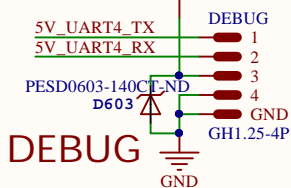
## RCIN



## SERIAL

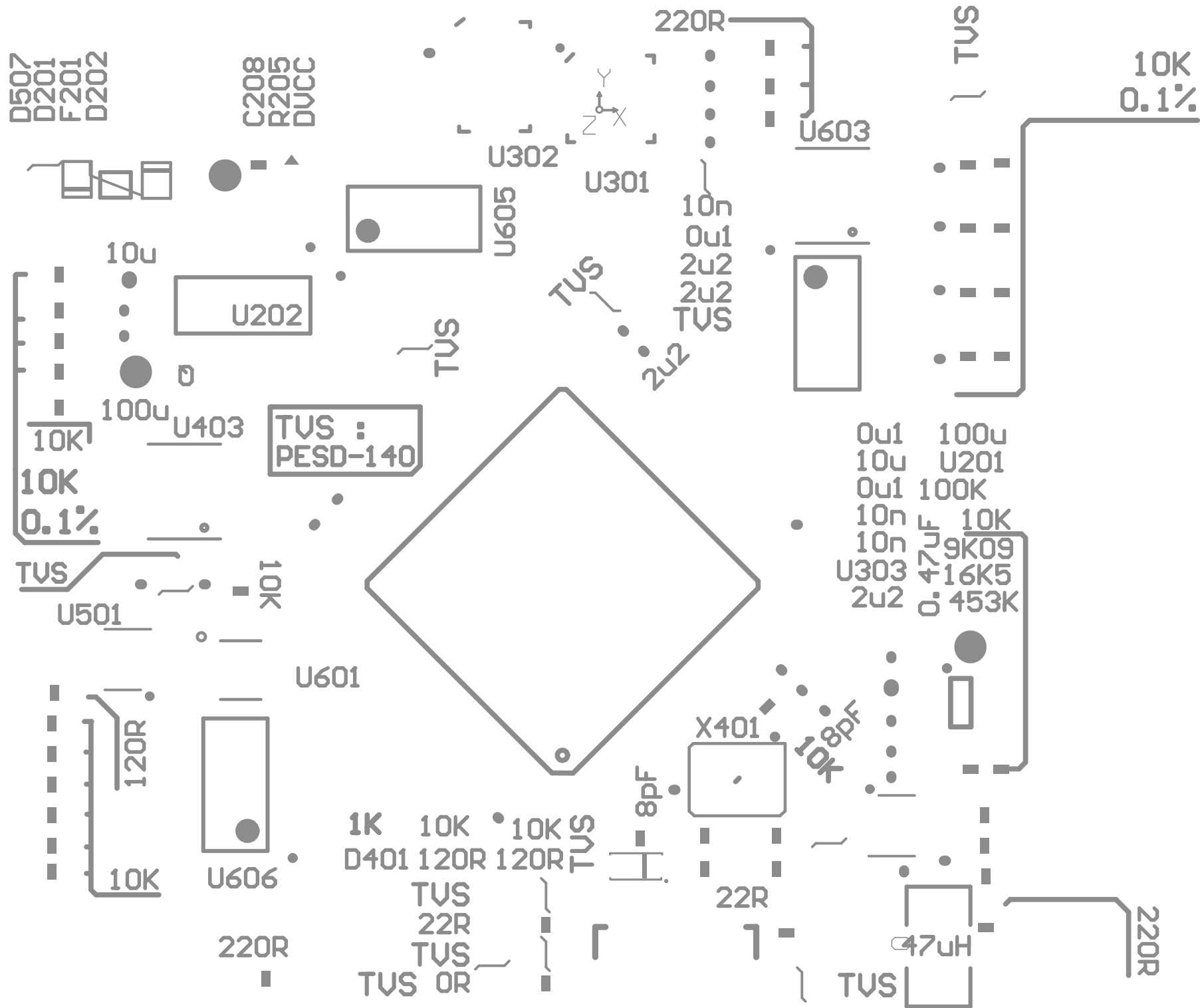


## TELEM



## DEBUG

Title: connerctor_3-5v.SchDoc	
Drawn by: 元岳鑫	
Date: 2018/03/30 @ 17:30	
Sheet: 6 / 6	Alfa 2.0



# Bill of Materials

Bill of Materials For PCB Document [qfc\_Alfa2.0.PcbDoc]

Source Data From: qfc\_Alfa2.0.PcbDoc  
 Project: qfc\_Alfa2.0.PrjPcb  
 Variant: None

Creation Date: 2018/5/3 9:37:58  
 Print Date: 43223 43223.4027

Footprint	Comment	LibRef	Designator	Description	Quantity
PAD.04X.04	TEST	TEST	3V3_FMU, 3V3_SEN, 5V, GND, VCC		5
1.25-6P	GH1.25-6P	GH1.25-6P	ADC, BATT, SPI, SW	GH1.25mm 立贴 间距1.25mm 连接器贴片	4
0603-LED	APT1608SECK	LED0603-RED	ARM	2.2v, LED RED CLEAR 0603 SMD	1
MS621FE	MS621FE	BAT-MS621FE	B401	MS Lithium Rechargeable Battery	1
0805-CAP	10u	CAP0805-10uF	C201, C206	Capacitor, 10uF, 10V, Y5V, 0805, Ceramic	2
0603-CAP	0u1	CAP0603-0.1uF	C202, C204, C207, C209, C303, C305, C403, C404, C405, C406, C409, C410, C411, C501, C502, C503, C504, C505	Capacitor, 0.1uF, 16V, Y5V, 0402, Ceramic	18
0603-CAP	10n	CAP0603-10nF	C203, C301, C308	Capacitor, 10nF, 50V	3
1206-CAP	100u	CAP1206-100uF	C205, C208, C210	CAP CER 100UF 10V 20% X5R 1206	3
0603-CAP	2u2	CAP0603-2.2uF	C302, C304, C306, C407, C408	Capacitor, 2.2uF, 16V, 10%, X6S, 0603, Cera	5
0603-CAP	0.47uF	CAP0603-0.47uF	C307	Capacitor, 0.47uF, 16V, 10%, X6S, 0603, Ce	1
0603-CAP	8pF	CAP0603-8pF	C401, C402	CAP CER 8PF 50v c0g 0603	2
1.25-4P	GH1.25-4P	GH1.25-4P	CAN, DEBUG, GPIO, GPS, IIC, SONAR, TELEM	GH1.25mm 立贴 间距1.25mm 连接器贴片	7
SOD-123LF	MBR120VLSFT3	DIODE-SBD_SOD	D201	DIODE SCHOTTKY 20V 1A , 0.34V, SOD123	1
SOD-123LF	MMSZ5233BT1G	DIODE-ZENER	D202	DIODE ZENER 6V 500MW SOD123	1
SOD-323	RB751V40T1G	DIODE-SBD_SOD	D401	DIODE SCHOTTKY 40V 30mA , 0.34V, SOD	1
0603-ESD	PESD0603-140	DIODE-ESD	D501, D502, D503, D504, D505, D506, D507, D508, D601, D602, D603	TVS DIODE 14V 0603	11
0603-LED	APG1608CGKC	LED0603-GREEN	DVCC	2.1v, LED GREEN CLEAR 0603 SMD	1
1206-FUSE	0ZCA0035FF2G	FUSE-1206	F201	PTC RESTTBLE 0.35A 16V CHIP 1206, 自热	1
BEEP-12MM	BEEP	BEEP	FM301	蜂鸣器	1
HDR2X1	HDR 2X1	HDR 2X1	J401	排针, 2X1 pins	1
MOLEX-47346	47346-0001	MicroUSB	J501	MICRO USB B, BOTTOM MOUNT	1
JR3X8	JR 3X8	JR 3X8	J601	Header 3X8 pins	1
JR3X7	JR 3X7	JR 3X7	J602	Header 3X7 pins	1
0603-KNH16-1	KNH16C104DA5	EMI Filters	L201, L501	EMI FILTER CAP 0.1UF 2A 25V 0603	2
1210 - IND	47uH	INDUCTOR-1210	L301	贴片功率电感, 绕线工字电感	1
HOLE-3MM	HOLE-3MM	HOLE-3MM	M101, M102, M103, M104		4
HOLE-2MM	HOLE-2MM	HOLE-2MM	M105, M106, M107, M108		4
0603-RES	10K 0.1%	RES0603-10k_0	R201, R202, R203, R204, R508, R509, R510, R511, R512, R513, R514, R515	RES 10 OHM 1/10W 0.1% 0603	12
0603-RES	1K	RES0603-1K	R205, R407	RES 1K OHM 1/10W 5% 0603	2
0603-RES	10K	RES0603-10K	R301, R307, R401, R402, R403, R404, R405, R406, R408, R502, R504, R604	RES 10K OHM 1/10W 5% 0603	12
0603-RES	220R	RES0603-220R	R302, R303, R601, R602, R603	RES 220R OHM 1/10W 5% 0603	5
0603-RES	16K5	RES0603-16K5	R304	RES 16K5 OHM 1/10W 5% 0603	1
0603-RES	453K	RES0603-453K	R305	RES 453K OHM 1/10W 5% 0603	1
0603-RES	9K09	RES0603-9K09	R306	RES 9K09 OHM 1/10W 5% 0603	1
0603-RES	100K	RES0603-100K	R308	RES 100K OHM 1/10W 5% 0603	1
0603-RES	0R	RES0603-0R	R501	RES 0R OHM 1/10W 5% 0603	1
0603-RES	22R	RES0603-22R	R503, R505	RES 22R OHM 1/10W 5% 0603	2
0603-RES	120R	RES0603-120R	R506, R507, R516	RES 120R OHM 1/10W 5% 0603	3
SMD-SWITCH	轻触开关 贴片3*6	SWITCH-1	RST	按键 3*6*2.5mm 轻触开关 贴片2脚 白色	1
SW_6*6	SWITCH	SWITCH	SAFE	6*6*4.3 微动轻触开关贴片	1
0603-LED	APT1608QBC/G	LED0603-BLUE	STA	3.3v, LED BLUE CLEAR 0603 SMD	1
R-PDSO-G5	TPS79133	LDO-TPS79133	U201		1
SOT223-4N	LM1117S-3.3	LDO-LM1117S-3	U202	LDO, ouput 3.3V/1A, 0.04% Line Regulation a	1
QFN-24	MPU-6000	MPU-6000	U301	GYRO/ACCELEROMETER 6AXIS 24QFN	1
MS5611-01BA	MS5611-01BA	MS5611-01BA	U302	Board Mount Pressure Sensors	1
SOT23-8	LT3469	LT3469	U303	IC AMP DVR W/REG 1.3MHZ TSOT23-8	1
LQFP100	STM32F427VI qf	STM32F4X7VX	U401	REV 3 Silicon or later IC MCU ARM 2MB FLA	1
MICROSD	2908-05WB-MG	MICROSD-SDI	U402	CONN MICRO SD CARD PUSH-PUSH R/A	1
SO08	RAM-FM25V01	RAM-FM25V01	U403	IC FRAM 128KBIT 40MHZ 8SOIC	1
SOT23-8	3.3-V CAN TRAN	MAX3051	U501	IC TXRX CAN 1MBPS SOT23-8	1
TSSOP8_SOT	Dual inverter tri-s	74LVC2G240-TS	U601	IC INVERTER DUAL 4-INPUT 8TSSOP	1
P-LCC-6	LRTB GFTG-T7A	LED-RGB	U602	Muti LEDs	1
SO08	TM1803	LED_DRV-TM180	U603	3-Channel Constant-Current LED Driver	1
SOP65P640-2	TXS0108EPWR	TXS0108EPWR	U604, U605, U606	IC XLATR VOLT-LVL 8B BDIR 20SOP	3
3225-OSC	Crystal Oscillator	OSCILLATOR-32	X401	CRYSTAL 24MHZ 8PF SMD	1

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Approved	Notes