U7 — MIC5332-3.3V

GND
VDD 5V IN
C20 10uf
C21 0.1uf
GND

VIN	VOUT1	VDD 3V3 SENSORS
GND	VOUT2	FMU 3.3V
POR2	CSET2	
EN2	EN1	

R7 10K
10K
VDD 3V3 SENSORS_EN

C22 0.1uf　C23 1uf　C24 0.1uf　C25 10uf　C26 0.1uf　C27 10uf

U8 — NUF2030XV6

GND
OTG FS DM1
OTG FS DP1

D1(I) D1(O)	OTG FS DM
GND VBUS	VBUS
D2(I) D2(O)	OTG FS DP

U9 — 74LVC2G240

PPM-SBUS-PROT
R11 220
PPM INPUT

1OE	VCC	FMU 3.3V
1A	2OE	
1Y	2Y	SBUS INPUT
GND	2A	

C30 0.1uf
GND

LEDs

D3　R5 220　GND　LED
D2　R4 220　FMU-LED_2　LED
D1　R3 220　FMU-LED_AMBER　LED
VDD 5V IN

J2 — 烧写口

FMU 3.3V
GND
R9 10K
FMU -SWDIO
FMU -SWCLK
R13 10K
GND

J1 — USB

GND　C29 0.1uf
OTG FS DM1　R10 22
OTG FS DP1　R12 22

| V |
| D- |
| D+ |
| ID |
| GND |

VBUS
GND

U1 — MLX90393

VDD 3V3 SENSORS

INT	N/C
SENB/CS	VDD
SCL/SCLK	N/C
N/C	VSS
SDA/MOSI	A0
MISO	A1
INT/TRIG	N/C
VDD_IO	N/C

MAG DRDY
ACCEL MAG CS2
SPI INT SCK
SPI INT MOSI
SPI INT MISO
VDD 3V3 SENSORS
C9 0.1uf
GND
C11 0.1uf
GND

U2 — MS5611

VDD 3V3 SENSORS
C10 0.1uf

VDD	SCLK	SPI INT SCK
PS	SDI/SDA	SPI INT MOSI
GND	SDO	SPI INT MISO
GSB	GSB	BARO CS

GND

U4 — MPU9250

RESV	SDA/SDI	SPI INT MOSI
NC	SCL/SCLK	SPI INT SCK
NC	nCS	MPU CS
NC	AUX_DA	GND
NC	RESV	GND
NC	RESV	
AUX_CL	GND	
VDDIO	NC	
AD0/SDO	NC	
REGOUT	NC	
FSYNC	NC	
INT	VDD	

FMU 3.3V
SPI INT MISO
GND
MPU DRDY
C14 0.1uf
FMU 3.3V

U5 — BMI088

INT2	INT1	ACCEL DRDY
NC	SDO1	SPI INT MISO
VDD	CSB1	BMI GYRO CS
GNDA	INT4	
CSB2	INT3	GYRO DRDY
GNDIO	VDDIO	
PS	SDO2	SPI INT MISO
SCL/SCK	SDA/SDI	SPI INT MOSI

GND
SPI INT SCK
GND
VDD 3V3 SENSORS
C17 0.1uf　C16 0.1uf

U6 — FM25V02

FRAM CS
FRAM MISO
FMU 3.3V
C18

CS	VDD	
SO	HOLD	FRAM SCK
WP	SCK	FRAM MOSI
VSS	SI	

GND

U3 — STM32F427-100

GND　GND
FMU 3.3V
R1 10K
ACCEL DRDY
BARO CS
FMU-UART2 RX
FMU-UART2 TX

FMU 3.3V
C8
GND
OTG FS DP
OTG FS DM
VBUS
PPM INPUT
MPU DRDY
FRAM CS
FRAM MOSI
FRAM MISO
FRAM SCK

Left pins:
VDD 3V3 SENSORS_EN
FMU-LED_AMBER
FMU-LED_2
BMI GYRO CS
ACCEL MAG CS
GND
FMU 3.3V
OSCIN
MPU CS
FMU 3.3V
GND
FMU 3.3V
FMU-UART4 TX
FMU-UART4 RX

Pin names: PE2 PE3 PE4 PE5 PE6 VBAT PC13 PC14 PC15 VSS VDD PH0 PH1 NRST PC0 PC1 PC2 PC3 VDD VSSA VREF+ VDDA PA0 PA1 PA2

VSS VDD VCAP_2 PA13 PA12 PA11 PA10 PA9 PA8 PC9 PC8 PC7 PC6 PD15 PD14 PD13 PD12 PD11 PD10 PD9 PD8 PB15 PB14 PB13 PB12

Bottom pins:
FMU-CH6
FMU 3.3V
SPI INT SCK
SPI INT MISO
SPI INT MOSI
GYRO DRDY
MAG DRDY
R6 10K
FMU-CH4
FMU-LED_AMBER
FMU-CH2
FMU-CH1
FMU-CH5
SBUS INPUT
C15 2.2uf
FMU 3.3V
GND

Y1 — 有源晶振24M

GND
C19 0.1uf
FMU 3.3V

| OE/ST | VCC |
| GND | OUT |

C28 15pf
OSCIN
GND

Decoupling caps

FMU 3.3V
C1 0.1uf　C2 0.1uf　C3 0.1uf　C4 0.1uf　C5 0.1uf　C6 0.1uf　C7 0.1uf
GND

R2

VBUS　R2 0　VDD 5V IN

J3 — 排针插口

GND
FMU-UART2 TX
FMU-UART2 RX
VDD 5V IN
FMU-UART4 RX
FMU-UART4 TX
PPM-SBUS-PROT
FMU-CH6
FMU-CH5
FMU-CH4
FMU-CH3
FMU-CH2
FMU-CH1

Pin numbers 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

Title Block

Title		
Size A3	Number	Revision
Date: 2019/6/21 星期五		Sheet of
File: C:\Users\..\Sheet1.SchDoc		Drawn By:

Bill of Materials

Footprint	Comment	LibRef	Designator	Description	Quantity
0603	0.1uf	0.1uf	C1, C2, C3, C4, C5, C6, C7, C9, C10, C11, C13, C14, C16, C17, C18, C19, C21, C22, C24, C26, C29, C30		22
0603	2.2uf	2.2uf	C8, C15		2
0603	10nf	10nf	C12		1
0805	10uf	10uf	C20, C25, C27		3
0603	1uf	1uf	C23		1
0603	15pf	15pf	C28		1
3.2X1.6X1.1	LED	LED2	D1, D2, D3	Typical RED, GREEN, YELLOW, AMBER GaAs LED	3
USB	USB	USB	J1		1
贴片-3	烧写口	烧写口	J2		1
排针	排针插口	排针插口	J3		1
0603	10K	10K	R1, R6, R7, R8, R9, R13		6
0603	0	0	R2		1
0603	220	220	R3, R4, R5, R11		4
0603	22	22	R10, R12		2
QFN16	MLX90393	MLX90393	U1		1
MS5611-01BA03	MS5611	MS5611	U2		1
LQFP-100	STM32F427-100	STM32F427-100	U3		1
QFN-24 -A	MPU9250	MPU9250	U4		1
LGA-16	BMI088	BMI088	U5		1
SOIC-8	FM25V02	FM25V02	U6		1
MLF-8	MIC5332-3.3V	MIC5332-3.3V	U7		1
SOT-563-6	NUF2030XV6	NUF2030XV6	U8		1
TSSOP8	74LVC2G240	74LVC2G240	U9		1
SMD-3225-4	有源晶振24M	有源晶振24M	Y1		1
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Approved	Notes	