U_Power
Power.SchDoc

POWER_ON — PON
Enable_5V_LED — PW_5V_LED_EN
Enable_5V_TEL — PW_5V_TEL_EN

U_CAN
CAN.SchDoc

CAN_1_TX — CAN1_TX
CAN_1_RX — CAN1_RX
CAN_2_TX — CAN2_TX
CAN_2_RX — CAN2_RX
CAN_EN — CAN_EN

U_RDAC
RDAC.SchDoc

RDAC_TX — UART3_RX
RDAC_RX — UART3_TX
RDAC_EN — RDAC_EN

U_Telemetry
Telemetry.SchDoc

TEL_UART_TX — TEL_TX
TEL_UART_RX — TEL_RX
TEL_UART_CTS — TEL_CTS
TEL_UART_RTS — TEL_RTS

U_Microcontroller
Microcontroller.SchDoc

WS2812B_DO

GPS_TX
GPS_RX
GPS_5V_EN

DIS_MOSI
DIS_SCK
DIS_CS
DIS_CD
DIS_RST
DIS_EN
DIS_BL_PWM

WS1
WS2812B.SchDoc

DI
DO

WS2
WS2812B.SchDoc

DI
DO

U_GPS
GPS.SchDoc

GPS_UART_TX
GPS_UART_RX
GPS_5V_EN

U_Display
Display.SchDoc

SI
SCK
CS
C/D
RST
BL_EN
BL_PWM

Title

Size
A4

Number

Revision

Date: 20.03.2017
File: C:\Users\..\Main.SchDoc

Sheet of
Drawn By:

Item #	mn Name Error:Manufa	#Column Name Error:Manufacturer No	Quantity	#Column Name Error:Note	Designator	Description	Footprint	Comment	LibRef
1			3		Analog, P_IN, RaceDAC	Hirose DF13-5P-1.25H(20)	DF13-5P-1.25H(20)	DF13-5P-1.25H(20)	Hirose DF13-5P-1.25H(20)
2			49		C1_WS1, C1_WS2, C2_WS1, C2_WS2, C3_WS1, C3_WS2, C4_WS1, C4_WS2, C5_WS1, C5_WS2, C6_WS1, C6_WS2, C7_WS1, C7_WS2, C8_WS1, C8_WS2, C9_WS1, C9_WS2, C10_WS1, C10_WS2, C11_WS1, C11_WS2, C12_WS1, C12_WS2, C13_WS1, C13_WS2, C14_WS1, C14_WS2, C15_WS1, C15_WS2, C16_WS1, C16_WS2, C17, C17_WS1, C17_WS2, C27, C31, C33, C34, C35, C36, C38, C46, C47, C48, C49, C50, C53, C55	C 100nF 100V 0603 MLCC X7R	C0603H08_M	100nF	C 100nF 100V 0603 MLCC X7R
3			2		C16, C52	C 220nF 50V 0805 MLCC Y5V	C0805H085_L	220nF	C 220nF 50V 0805 MLCC Y5V
4			1		C18	C 1µF 6.3V 0603 MLCC X7R	C0603H08_M	1µF	C 1µF 6.3V 0603 MLCC X7R
5			8		C19, C20, C21, C22, C28, C29, C30, C32	C 4.7µF 6.3V 0603 MLCC X5R	C0603H08_L	4.7µF	C 4.7µF 6.3V 0603 MLCC X5R
6			2		C23, C24	C 6pF 50V 0603 MLCC C0G/NP0	C0603H08_L	6pF	C 6pF 50V 0603 MLCC C0G/NP0
7			5		C25, C26, C37, C56, C58	C 2.2µF 6.3V 0603 MLCC X7R	C0603H08_M	2.2µF	C 2.2µF 6.3V 0603 MLCC X7R
8			1		C39		C0805H06_M	TO BE DEFINED!	_C 0805
9			2		C40, C41		C1206H08_M	10µF 16V Tantal	_C 1206
10			2		C42, C43	CPT 100µF 6.3V 1210 Tantal	C1210_TANTAL_M	100µF	CPT 100µF 6.3V 1210 Tantal
11			2		C44, C45	C 10µF 6.3V 0603 MLCC X5R	C0603H08_L	10µF	C 10µF 6.3V 0603 MLCC X5R
12			1		C51	CPT 47µF 16V 1210 Tantal	C1210_TANTAL_M	47µF	CPT 100µF 6.3V 1210 Tantal
13			1		C54		C1210H125_M	22µF	_C 1210
14			1		C57		C0603H08_M	10nF	_C 0603
15			2		CAN1, CAN2	Hirose DF13-4P-1.25H(20)	DF13-4P-1.25H(20)	DF13-4P-1.25H(20)	Hirose DF13-4P-1.25H(20)
16			1		CMC1	WURTH ELEKTRONIK - 744232090 - SIGNALFILTER, SMD, 90OHM, 370MA	Murata 1206 CMC	WURTH ELEKTRONIK - 744232090 - SIGNALFILTER, SMD, 90OHM, 370MA	USB CMC 1206 WE 744232090 Chip CommonMod Choke 1206
17			34		D1_WS1, D1_WS2, D2_WS1, D2_WS2, D3_WS1, D3_WS2, D4_WS1, D4_WS2, D5_WS1, D5_WS2, D6_WS1, D6_WS2, D7_WS1, D7_WS2, D8_WS1, D8_WS2, D9_WS1, D9_WS2, D10_WS1, D10_WS2, D11_WS1, D11_WS2, D12_WS1, D12_WS2, D13_WS1, D13_WS2, D14_WS1, D14_WS2, D15_WS1, D15_WS2, D16_WS1, D16_WS2, D17_WS1, D17_WS2	WS2812B RGB LED	WS2812B	WS2812B	WS2812B
18			1		D16	Schottky Rectifier, 500mA, 40V	SOD123_H	LS MBR0540	LS MBR0540
19			4		D17, D19, D22, D24		CD 0603	LS CD0603	LS CD0603
20			1		D18	WURTH ELEKTRONIK - 824015 - DIODENARRAY, TVS	SOT95P255X116-6N	WURTH ELEKTRONIK - 824015 - DIODENARRAY, TVS	USB TVS Dioden Array 824015
21			3		D20, D21, D23	Schottky Rectifier, 2A, 60V	SOD-123W	LS PMEG6020ER	LS PMEG6020ER
22			1		D25		SOT95P245X110-3N	Diode Array BAT_54C	Diode Array BAT_54C
23			1		DISP	240x128	DOGXL240*-7 + LED	EA DOGXL240-7	EA DOGXL240-7
24			3		GPS, ISP, RF-868P_LR	Hirose DF13-6P-1.25H(20)	DF13-6P-1.25H(20)	DF13-6P-1.25H(20)	Hirose DF13-6P-1.25H(20)
25			2		IC1, IC2	EMC-OPTIMIZED HIGH SPEED CAN TRANSCEIVER	SOIC127P600X175-8N	CAN Transceiver SN65HVD1040A	CAN Transceiver SN65HVD1040A
26			3		L1, R2, R3		R0805H05_M	.Resistor	.Resistor
27			1		L2	Ferrit Bead 0603 1000Ohm 300mA	R0603H05_L	742792515	Ferrit Bead 0603 1000Ohm 300mA
28			3		Q1, Q2, Q4	Enhanced single channel power switches	SOT-23-5	Enhanced single channel power switches	HSS STMPS2151 High Side Switch 500mA (2151)/1000mA (2161)
29			1		Q3	N-Channel Enhancement Mode Field Effect Transistor	SOT95P245X110-3N	2N7002	2N7002
30			25		R1, R4, R5, R6, R8, R9, R10, R11, R12, R17, R18, R19, R20, R21, R22, R24, R25, R26, R29, R30, R31, R32, R33, R34, R35		R0603H05_M	.Resistor	.Resistor
31			1		R7	WURTH ELEKTRONIK - 82550040 - SMD VARISTOR POWER 0805 4VRMS	Varistor 0805	Varistor 0805 4V WE 82550040	Varistor 0805 4V WE 82550040
32			2		R13, R14		R0402H04_M	22R	.Resistor
33			3		R15, R16, R23		R0603H05_M	1k	.Resistor
34			2		R27, R28		R0603H05_M	10k	.Resistor
35			1		U1	High Efficiency 10 LED Boost Converter	SOT-23-5	CAT4238	STU CAT4238
36			1		U2	ARM Cortex-M4 32-bit MCU+FPU, 210 DMIPS, 1024 kB Flash, 192 kB Internal RAM, 51 I/Os, 64-pin LQFP, -40 to 85 degC, Tray	STM-LQFP64_N	STM32F405RGT6	STM32F405RGT6
37			2		U3, U4	LDO 5V 1.5A, EN, ERR	5-Pin TO-263	MIC29151-5.0	LDO MIC29151 5V 1.5A 26VIN Enable Error Flag TO-263-5
38			1		U5	LDO 5V High-Voltage 450mA Enable	TSOP65P640X120_HS-21N	TPS7B6750	LDO TPS7B6750 5V High-Voltage 450mA Enable
39			1		U6	200mA, Low Quiescent Current, Ultra-Low Noise, High PSRR Low Dropout Linear Regulator	SOT-23-5	LDO TPS799xx Ultra Low Noise, HIGH PSRR, 200mA	LDO TPS799xx Ultra Low Noise, HIGH PSRR, 200mA
40			1		USB	MOLEX - 105017-0001 - MICRO USB B, BUCHSE, SMT, RWKL, 5POL	Micro USB Molex	Molex Micro USB B	Molex Micro USB B
41			1		X1	ABRACON - ABS25-32.768KHZ-6-1-T - QUARZ, 32.768KHZ, 6PF, SMD	Abracon ABS25 Series Crystal	ABRACON - ABS25-32.768KHZ-6-1-T - QUARZ, 32.768KHZ, 6PF, SMD	Quarz 32.768khz
42			1		X2	MURATA - CSTCE8M00G55Z-R0 - RESONATOR,SMD 8.0MHZ	CSTCE_G15	8MHz, 33pF	Ceramic Resonator 8Mhz
43			1		µSD	MOLEX - 502774-0891 - BUCHSE, MICROSD, PUSH-PUSH, 1.8MM	Micro SD Connector 502774	Micro SD Connector	Molex MicroSD 502774