


NOTE 1: USB CONNECTOR SELECTION

Populate:
{R14u and R15u}
OR
{R14e and R15e}

e for Edge Connector
u for uUSB Connector

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Modified from Damien P. George's: Micro Python Board STM32F405 (PYBv1.1)

Title <i>IsoCore</i>			<i>Electric Ray Engineering</i> <i>www.torpediniformes.com</i>	
Size: Tabloid	Number:	Revision: A1		
Date: 9/11/2018	Time: 7:55:26 AM	Sheet 1 of 1		
File: IsoCore_Main.SchDoc				

Electrical Rules Check Report

Class	Document	Message
Warning	IsoCore_Main.SchDoc	Net BOOT0 has no driving source (Pin BOOT0-2,Pin R12-2,Pin U1-60)

Designator	Value	Comment	Description	Footprint	LibRef	Manufacturer 1	Manufacturer Part Number 1	Supplier 1	Supplier Part Number 1	Quantity
BOOT0		Header 3	Header, 3-Pin	HDR1X3	Header 3					1
C1, C9	4u7	Cap Semi	Capacitor (Semiconductor SIM Model)	1608[0603]	Cap Semi	Murata Electronics North America	GRM188R61C475 ME11D	Digi-Key	490-14638-1-ND	2
C2, C10, C15	0.1u	Cap Semi	Capacitor (Semiconductor SIM Model)	1608[0603]	Cap Semi	Murata Electronics North America	GCM188R71C104K A37D	Digi-Key	490-4774-1-ND	3
C3, C4	10pF	Cap Semi	Capacitor (Semiconductor SIM Model)	1608[0603]	Cap Semi	Murata Electronics North America	GQM1885C1H100J B01D	Digi-Key	490-3570-1-ND	2
C5, C6	2u2	Cap Semi	Capacitor (Semiconductor SIM Model)	1608[0603]	Cap Semi	TDK Corporation	CGB3B1JB1C225M 055AC	Digi-Key	445-13221-1-ND	2
C7, C8	2p2	Cap Semi	Capacitor (Semiconductor SIM Model)	1608[0603]	Cap Semi	Murata Electronics North America	GQM1885C2A2R2C B01D	Digi-Key	490-11271-1-ND	2
C11, C13	1u	Cap Semi	Capacitor (Semiconductor SIM Model)	1608[0603]	Cap Semi	Murata Electronics North America	GRM188R61C105K A12D	Digi-Key	490-10479-1-ND	2
C12, C14	10u	Cap Semi	Capacitor (Semiconductor SIM Model)	C1206	Cap Semi	Murata Electronics North America	GRT31CC8YA106M E01L	Digi-Key	490-12425-1-ND	2
D1		LED_RED_SMD	Generic LED, SMD, RED	IN-S63AT_RED	LED_RED_SMD	Inolux	IN-S63ATR	Digi-Key	1830-1065-1-ND	1
D2		LED_GREEN_0603	Generic LED, 0603, GREEN	IN-S63AT_GRN	LED_GREEN_0603	Inolux	IN-S63AT5G	Digi-Key	1830-1062-1-ND	1
D3		LED_ORANGE_0603	Generic LED, 0603, ORANGE	LO Q976	LED_ORANGE_0603	OSRAM Opto Semiconductors Inc.	LO Q976-PS-25-0-20-R18	Digi-Key	475-2486-1-ND	1
D4		LED_BLUE_0603	Generic LED, 0603, BLUE	IN-S63AT_BLU	LED_BLUE_0603	Inolux	IN-S63AT5B	Digi-Key	1830-1061-1-ND	1
D5, D6, D7		Diode	DIODE SCHOTTKY 20V 1A SOD123FL	SOD-123FL	MBR120	ON Semiconductor	MBR120VLSFT3G	Digi-Key	MBR120VLSFT3GO SCT-ND	3
F1		PTC_2016L050MR	600mA PTC	PolyFuse_2016L	PTC_2016L050MR_LITTELFUSE	Littelfuse Inc.	2016L050MR	Digi-Key	F4070CT-ND	1
FB1	1K	Inductor	Inductor	J1-0603	Inductor	Murata Electronics North America	BLM18AG102SN1D	Digi-Key	490-1015-1-ND	1
GND		BLK_TESTPOINT	5001K - BLK KEYSTONE TESTPOINT	BLK_TP_KEYSTONE	BLK_TESTPOINT					1
J1		0473092851	CONN MICRO SD CARD PUSH-PULL R/A	0473092851	473092851	Molex, LLC	0473092851	Digi-Key	WM6701CT-ND	1
J2		10118194-0001LF	USB uB R/A Board Edge Connector	USB-R/A-10118194-0001LF	10118194-0001LF	Amphenol FCI	10118194-0001LF	Digi-Key	609-4618-1-ND	1
J3		PCleX1_ERE_RevC_CardEdge	Card Edge Fingers, 38pin, Dual Sided, PCleX1 Physical Layout	PCleX1	PCleX1_ElectricRay_RevC_CardEdge					1
PA, PB, PC, PX		PPTC161LFBN-RC	CONN HEADER FEMALE 16POS.1" TIN	1x16 100mil F Header	PPTC161LFBN-RC					4
R1, R5, R17	220R	Res3	Resistor	J1-0603	Res3	Yageo	RC0603FR-07220RL	Digi-Key	311-220HRCT-ND	3
R2, R12	100K	Res3	Resistor	J1-0603	Res3	Yageo	AC0603FR-07100KL	Digi-Key	311-100KLDCT-ND	2
R3, R4, R13, R16	560R	Res3	Resistor	J1-0603	Res3	Yageo	RC0603JR-07560RL	Digi-Key	311-560GRCT-ND	4
R6, R7, R8, R9, R10, R11	4K7	Res3	Resistor	J1-0603	Res3	Yageo	RC0603FR-074K7L	Digi-Key	311-4.70KHRCT-ND	6
R14e, R14u, R15e, R15u	22R	Res3	Resistor	J1-0603	Res3	Yageo	RC0603JR-0722RL	Digi-Key	311-22GRCT-ND	4
R18, R19, R20	JMP	Res3	Resistor	J1-0603	Res3	Yageo	RC0603JR-070RL	Digi-Key	311-0.0GRCT-ND	3
SW1, SW2		B3FS-1000	SWITCH TACTILE SPST-NO 0.05A 24V	B3FS-1000	B3FS-1000	Omron Electronics Inc-EMC Div	B3FS-1000	Digi-Key	Z5199-ND	2
U1		STM32F405RGT6TR	ARM Cortex-M4 32-bit MCU + FPU, 1024 KB Flash, 192 KB Internal RAM, 51 I/Os, 64-Pin LQFP, -40 to 85 degC, Tape and Reel	STM-LQFP64_N	CMP-0243-00156-1	STMicroelectronics	STM32F405RGT6TR	Digi-Key	497-17432-1-ND	1
U2		AP2112K-3.3	IC REG LINEAR 3.3V 600MA SOT25	SOT25	AP2112K-3.3	Diodes Incorporated	AP2112K-3.3TRG1	Digi-Key	AP2112K-3.3TRG1DICT-ND	1
VDD, VIN		RED_TESTPOINT	5000K - RED KEYSTONE TESTPOINT	RED_TP_KEYSTONE	RED_TESTPOINT					2
Y1		CX3225GB12000D0 HEQCC	CRYSTAL 12.0000MHZ 8PF SMD	XTAL32x25_BSB	CX3225GB12000D0 HEQCC	Kyocera International Inc. Electronic Components	CX3225GB12000D0 HEQCC	Digi-Key	1253-1166-1-ND	1
Y2		ABS07-120-32.768K	CRYSTAL 32.7680KH	XTAL_32x15_BSB	ABS07-120-32.768K	Abracon LLC	ABS07-120-32.768K	Digi-Key	535-11937-1-ND	1