


Title RS485 channel			OSRF 170 S. Whisman Road Building D, Suite A Mountain View, CA 94041 http://osrfoundation.org	 Open Source Robotics Foundation
Size: A	Number:*	Revision: B		
Date: 4/13/2015	Time: 9:45:40 AM	Sheet 2 of 2		
Designer: Morgan Quigley				



Open Source Robotics Foundation

RS485 ROUTER
REV. B



J9

OUTPUT PORTS:

Y Z B A + -

12V



U4

C8

C9

J4

GND

+12V

J3A

C36

SJ1A

U1A

R2A

R1A

C1A

J1A

J2A

J3B

SJ1B

U1B

R2B

R1B

C1B

J1B

J2B

J3C

SJ1C

U1C

R2C

R1C

C1C

J1C

J2C

J3D

SJ1D

U1D

R2D

R1D

C1D

J1D

J2D

J3E

SJ1E

U1E

R2E

R1E

C1E

J1E

J2E

J3F

SJ1F

U1F

R2F

R1F

C1F

J1F

J2F

J3G

SJ1G

U1G

R2G

R1G

C1G

J1G

J2G

J3H

SJ1H

U1H

R2H

R1H

C1H

J1H

J2H

J3I

SJ1I

U1I

R2I

R1I

C1I

J1I

J2I

J3J

SJ1J

U1J

R2J

R1J

C1J

J1J

J2J

J3K

SJ1K

U1K

R2K

R1K

C1K

J1K

J2K

J3L

SJ1L

U1L

R2L

R1L

C1L

J1L

J2L

J3M

SJ1M

U1M

R2M

R1M

C1M

J1M

J2M

J3N

SJ1N

U1N

R2N

R1N

C1N

J1N

J2N

J3O

J3P

J3Q

J3R

J3S

J3T

J3U

J3V

J3W

J3X

J3Y

J3Z

J3A

J3B

J3C

J3D

J3E

J3F

J3G

J3H

J3I

J3J

J3K

J3L

J3M

J3N

J3O

J3P

J3Q

J3R

J3S

J3T

J3U

J3V

J3W

J3X

J3Y

J3Z

J3A

J3B

J3C

J3D

J3E

J3F

J3G

J3H

J3I

J3J

J3K

J3L

J3M

J3N

J3O

J3P

J3Q

J3R

J3S

J3T

J3U

J3V

J3W

J3X

J3Y

J3Z

J3A

J3B

J3C

J3D

J3E

J3F

J3G

J3H

J3I

J3J

J3K

J3L

J3M

J3N

J3O

J3P

J3Q

J3R

J3S

J3T

J3U

J3V

J3W

J3X

J3Y

J3Z

J3A

J3B

J3C

J3D

J3E

J3F

J3G

J3H

J3I

J3J

J3K

J3L

J3M

J3N

J3O

J3P

J3Q

J3R

J3S

J3T

J3U

J3V

J3W

J3X

J3Y

J3Z

J3A

J3B

J3C

J3D

J3E

J3F

J3G

J3H

J3I

J3J

J3K

J3L

J3M

J3N

J3O

J3P

J3Q

J3R

J3S

J3T

J3U

J3V

J3W

J3X

J3Y

J3Z

J3A

J3B

J3C

J3D

J3E

J3F

J3G

J3H

J3I

J3J

J3K

J3L

J3M

J3N

J3O

J3P

J3Q

J3R

J3S

J3T

J3U

J3V

J3W

J3X

J3Y

J3Z

J3A

J3B

J3C

J3D

J3E

J3F

J3G

J3H

J3I

J3J

J3K

J3L

J3M

J3N

J3O

J3P

J3Q

J3R

J3S

J3T

J3U

J3V

J3W

J3X

J3Y

J3Z

J3A

J3B

J3C

J3D

J3E

J3F

J3G

J3H

J3I

J3J

J3K

J3L

J3M

J3N

J3O

J3P

J3Q

J3R

J3S

J3T

J3U

J3V

J3W

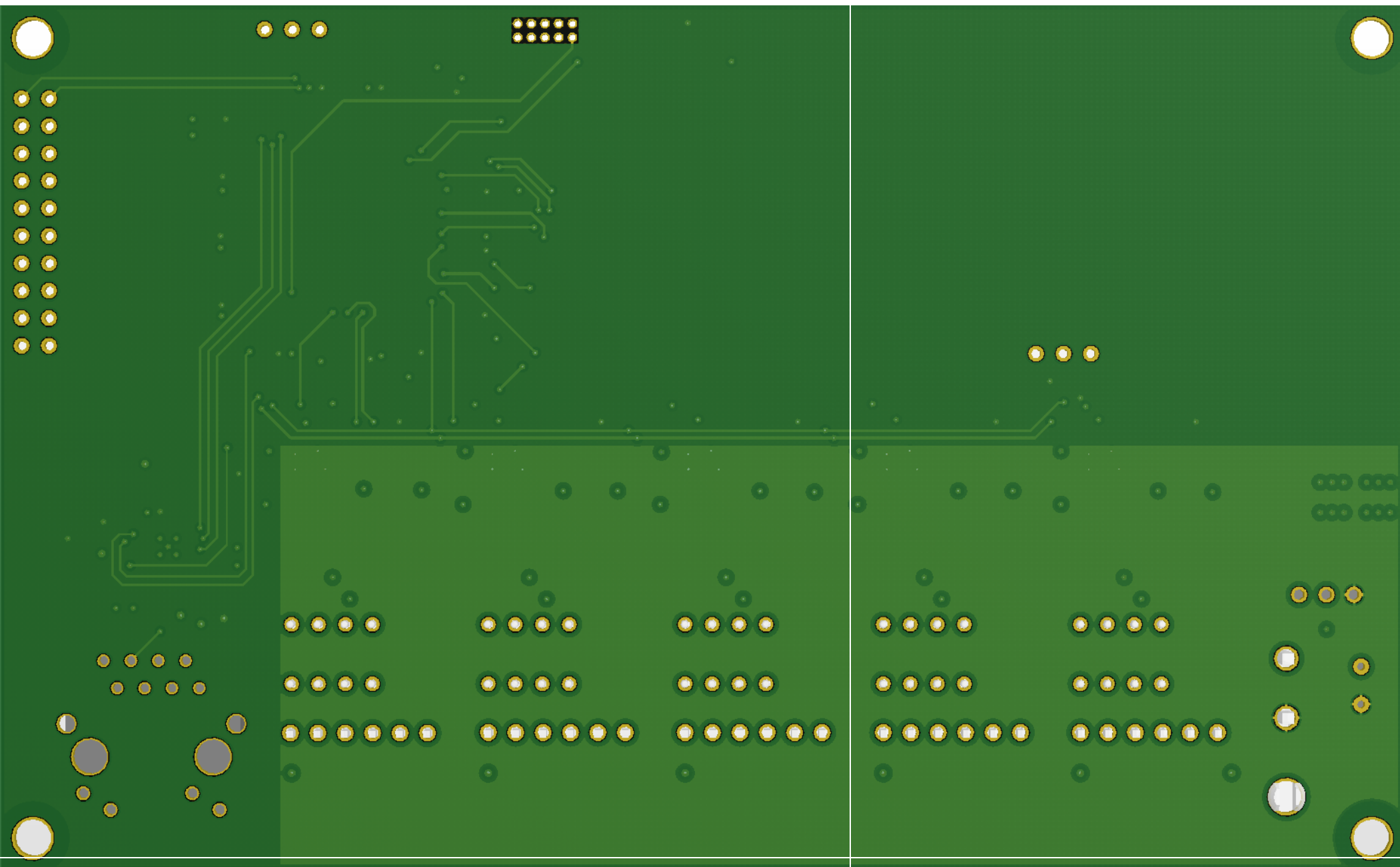
J3X

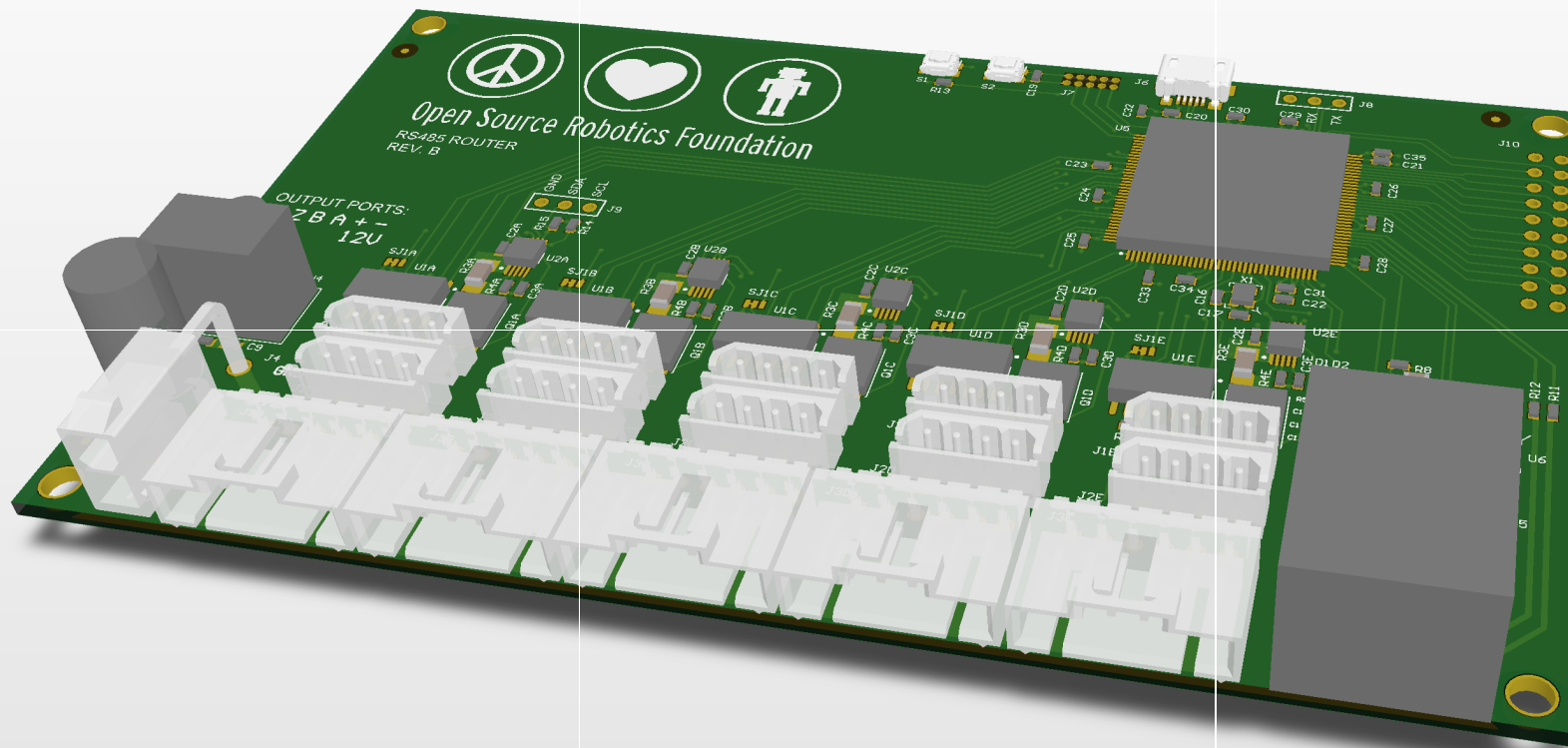
J3Y

J3Z

J3A

J3B





Bill of Materials

Board: RS485 Router, rev. A

Morgan Quigley, Open Source Robotics Foundation

morgan@osrfoundation.org

650-796-4881

RS485 Router

A

Designator	Quantity	Value	Footprint	digkey	Mouser	Manufacturer	Manufacturer Part Number
X1	1		CRYSTAL_2 2.5	887-1339		TXC	8Z-25.000MEEQ-T
U6	1		OSCILLATOR_3.2x2.5	535-9577	815-ASE-50.000MLCT	Abracon	ASE-50.000MHZ-LCT
U5	1		STM-LQFP144_N	497-14050		STMicroelectronics	STM32F427ZIT6
U4	1		RECOM_R_78xx_0.5	DNP		DNP	DNP
U3	1		KSZ8081RNX	576-4177		Micrel	KSZ8081RNDCA
U2A, U2B, U2C, U2D, U2E	5		ADM1176	ADM1176-1ARMZ-R7	584-ADM1176-1ARMZ-R7	Analog Devices	ADM1176-1ARMZ-R7
U1A, U1B, U1C, U1D, U1E	5		MAX3079E	MAX3079EESD+T	700-MAX3079EESD	Maxim Integrated	MAX3079EESD+
SJ1A, SJ1B, SJ1C, SJ1D, SJ1E	5		SOLDER_SPDT_NC	DNP		DNP	DNP
S1, S2	2		EVPA4402_switch	P13349S	667-EVP-AA402W	Panasonic	EVP-AA402W
R11, R12	2	220	GENERIC_0603	541-220H		Vishay	CRCW0603220RFKEA
R10	1	0	GENERIC_0603	541-0.0G		Vishay	CRCW06030000Z0EA
R7, R8, R9	3	1k	GENERIC_0603	541-1.00KH		Vishay	CRCW06031K00FKEA
R6	1	6k49	GENERIC_0603	541-6.49KH		Vishay	CRCW06036K49FKEA
R5, R13, R14, R15	4	10k	GENERIC_0603	541-10.0KH		Vishay	CRCW060310K0FKEA
R4A, R4B, R4C, R4D, R4E	5	100k	GENERIC_0603	541-100KH		Vishay / Dale	CRCW0603100KFKEA
R3A, R3B, R3C, R3D, R3E	5	0R1	GENERIC_1206	1276-6187		Samsung	RUW3216FR100CS
R1A, R1B, R1C, R1D, R1E, R2A, R2B, R2C, R2D, R2E	10	120	GENERIC_0603	541-120H		Vishay	CRCW0603120RFKEA
Q1A, Q1B, Q1C, Q1D, Q1E	5		MOSFET_TDSON_8	BSC011N03LS		Infineon	BSC011N03LS
J10	1		HDR2X10				
J9	1		HDR1X3	DNP		DNP	DNP
J8	1		HDR1X3	DNP		DNP	DNP
J7	1		50MIL_TH_VERT_5X2	DNP		DNP	DNP
J6	1		JAЕ_Dx4R005HJ5R2000	670-2674	656-DX4R005HJ5R2000	JAЕ	DX4R005HJ5R2000
J5	1		pulse_J0011d01bnl	DNP		DNP	DNP
J4	1		MINIFIT_2POS_RA	DNP		DNP	DNP
J3A, J3B, J3C, J3D, J3E	5		100mil_th_ra_6x1_s hrouded	DNP		DNP	DNP
J1A, J1B, J1C, J1D, J1E, J2A, J2B, J2C, J2D, J2E	10		MOLEX_SPOX_4POS _TH_VERT	DNP		DNP	DNP
FB1	1	220	GENERIC_0603	445-1565		TDK	MPZ1608S221ATA00
F1, F2, F3	3		fiducial_circle				
D1, D2	2		SOD323F	568-4138		NXP	PMEG6010CEJ,115
C36	1	220u	electrolytic_8mm_th	DNP		DNP	DNP
C18	1	10n	GENERIC_0603	445-1311		TDK	C1608X7R1H103K080AA
C16, C17	2	18pF	GENERIC_0603	445-1272		TDK	C1608C0G1H180J080AA
C12, C20, C21	3	2u2	GENERIC_0603	445-5958		TDK	C1608X7R1A225K080AC
C10	1	100u	panasonic_c	493-2248		Panasonic	UUD1A101MCL1GS
C8, C9, C11, C22	4	10u	GENERIC_0603	445-9015		TDK	C1608X5R1E106M080AC
C4, C5	2	22u	GENERIC_0805	445-6797		TDK	C2012X5R1C226K125AC
C3A, C3B, C3C, C3D, C3E	5	1u	GENERIC_0603	445-5956		TDK	C1608X7R1E105K080AB
C1A, C1B, C1C, C1D, C1E, C2A, C2B, C2C, C2D, C2E, C6, C7, C13, C14, C15, C19, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35	29	100n	GENERIC_0603	445-1316		TDK	C1608X7R1E104K080AA