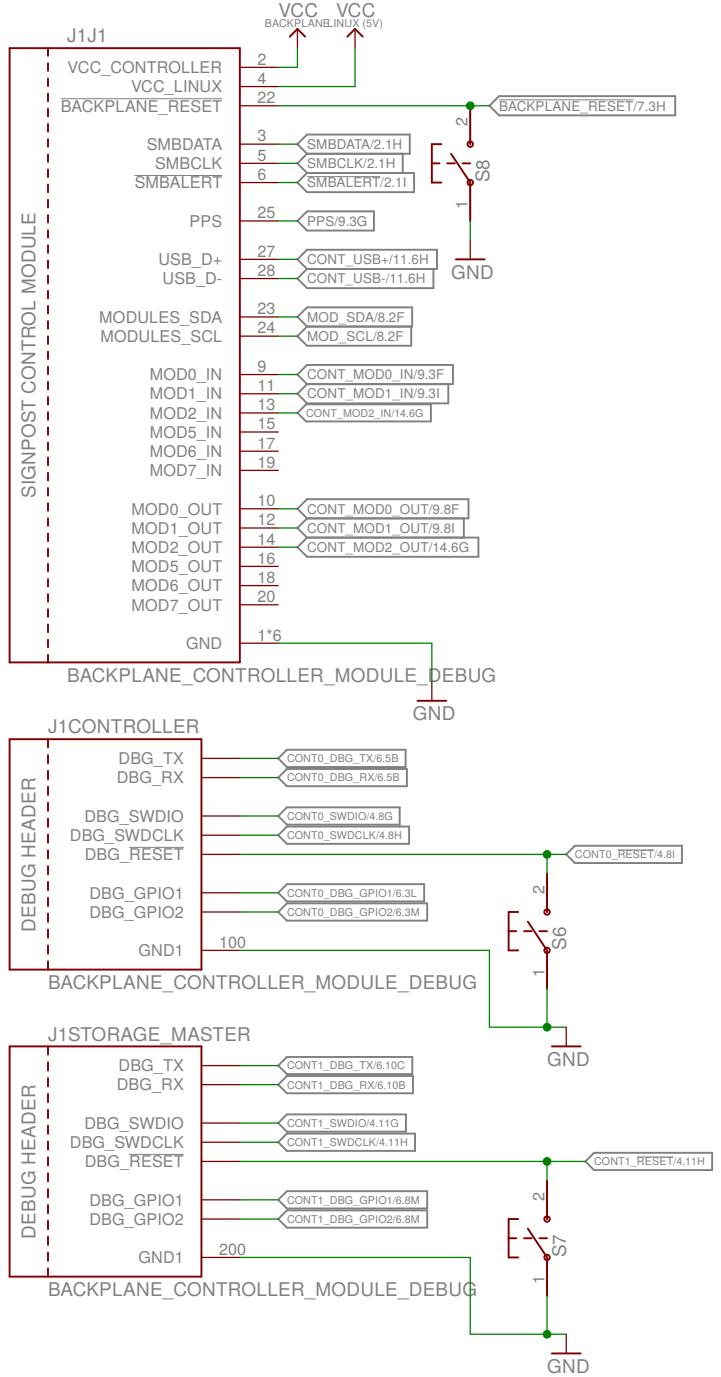


# Special Modules



1



Signpost Debug Backplane

REV:  
A

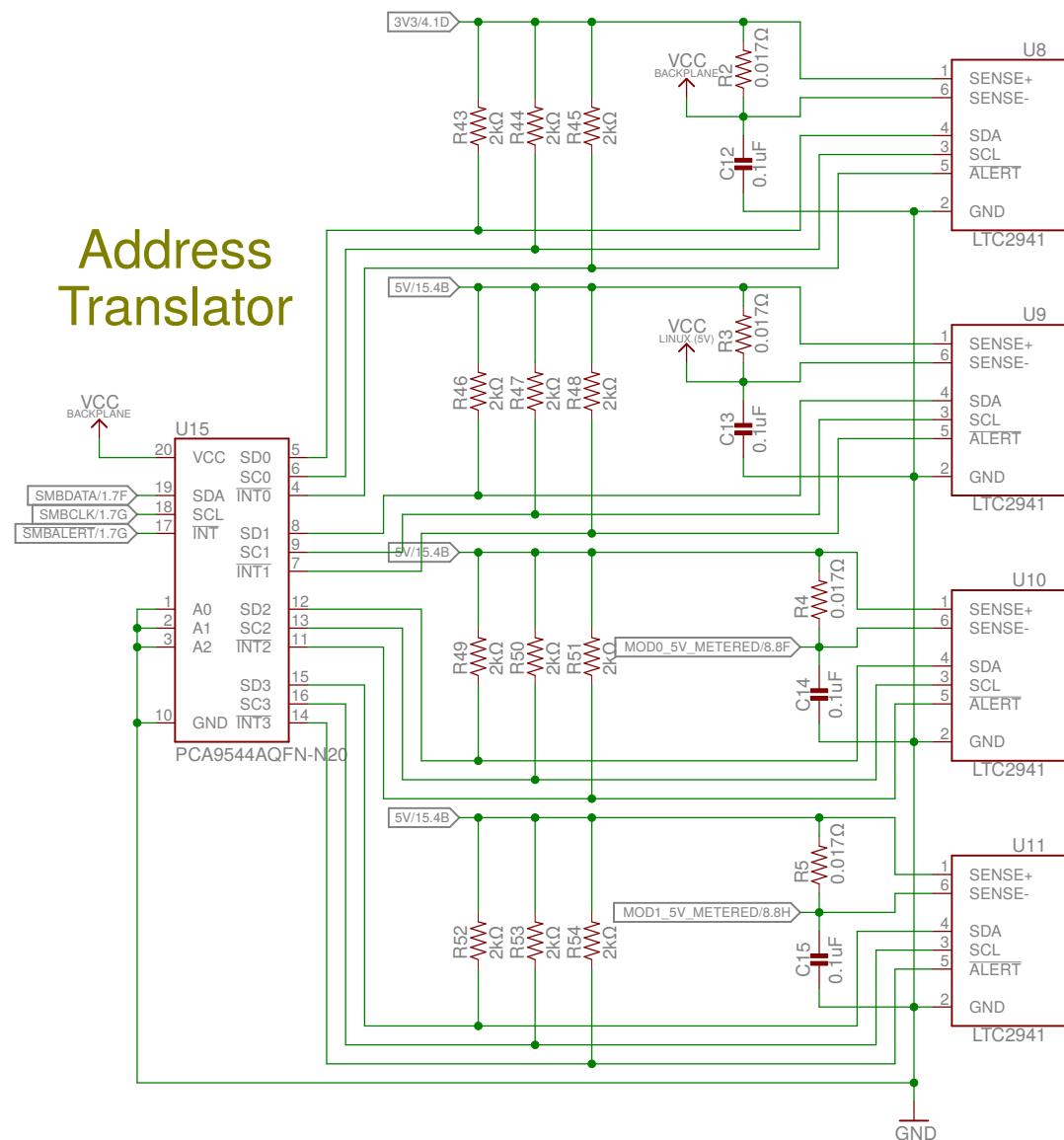
Author: Joshua Adkins and Pat Pannuto

Date: 1/22/17 8:28 PM

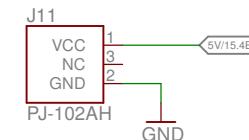
Sheet: 1/15

# POWER SUPPLY

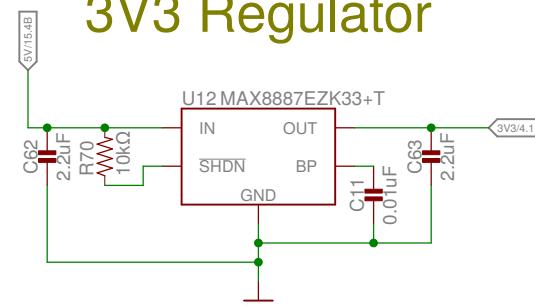
## Coulomb Counters



5V Barrel Jack



3V3 Regulator



Signpost Debug Backplane

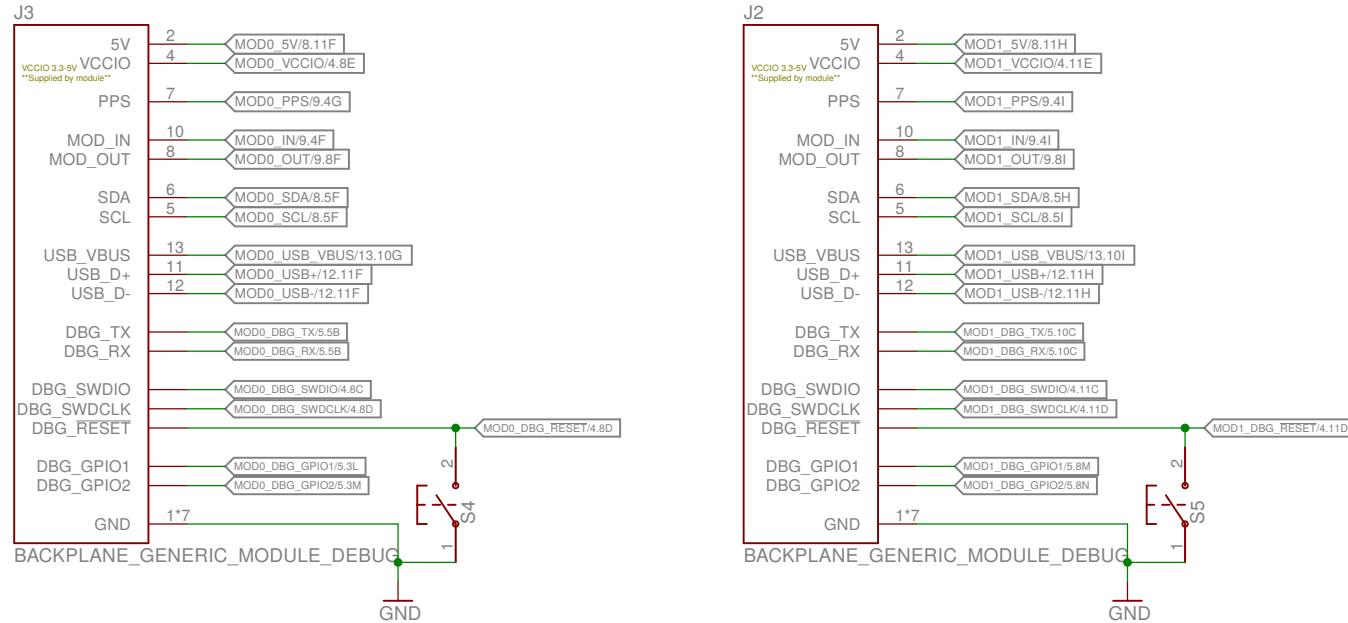
REV:  
A

Author: Joshua Adkins and Pat Pannuto

Date: 1/22/17 8:28 PM

Sheet: 2/15

# Generic Modules



Signpost Debug Backplane

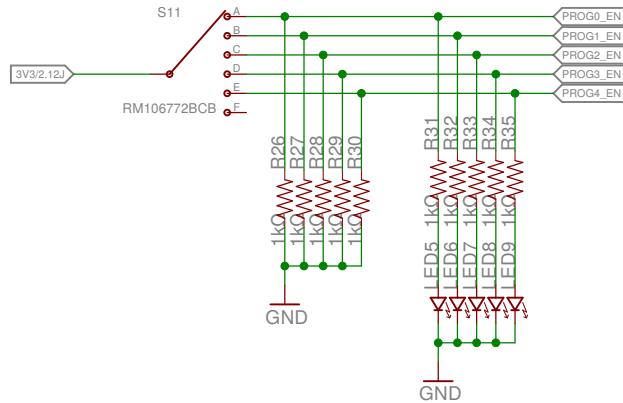
REV:  
A

Author: Joshua Adkins and Pat Pannuto

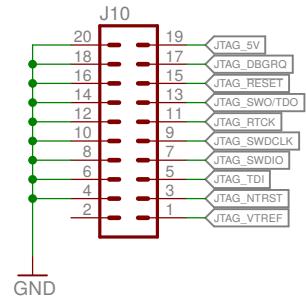
Date: 1/22/17 8:28 PM

Sheet: 3/15

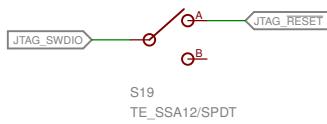
## One-Hot Enable Lines



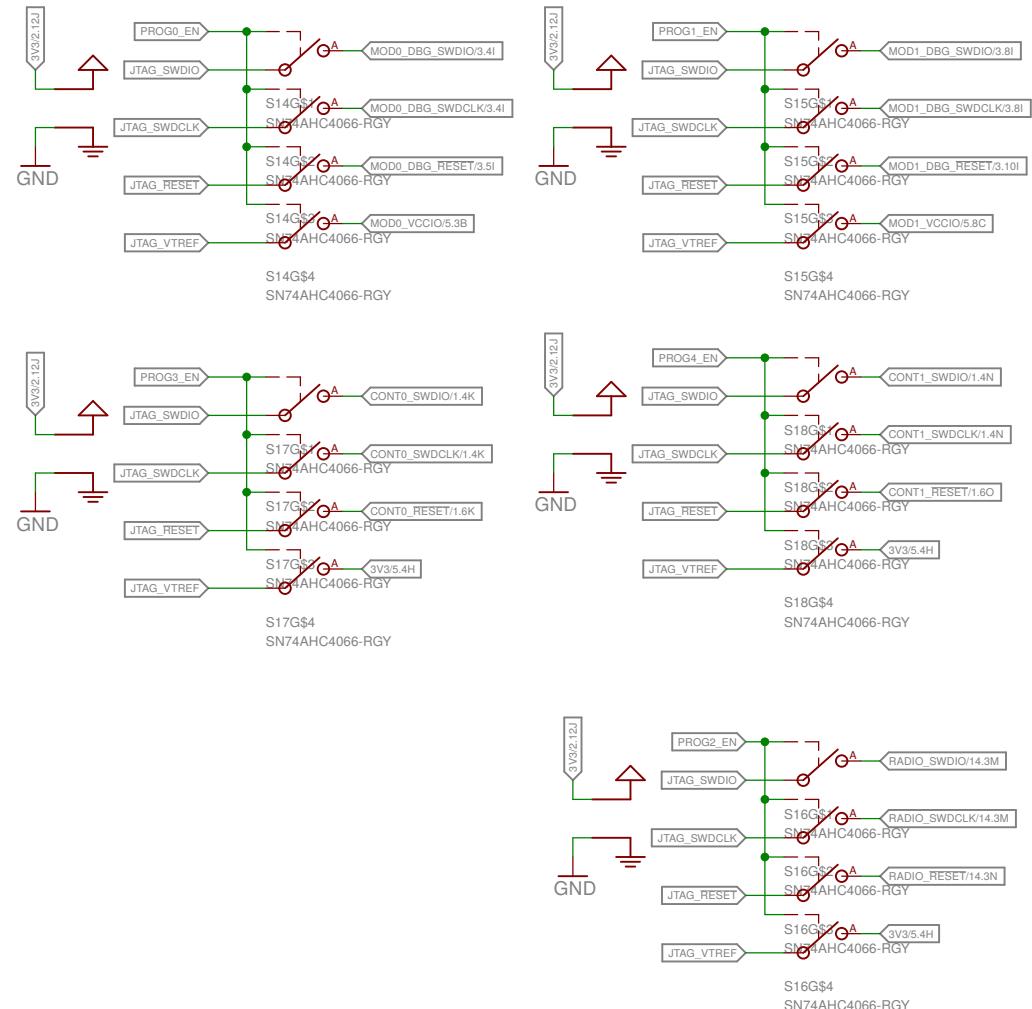
## JTAG Header



## Ties SWDIO to Reset



## Signal Enable ICs



**M** Signpost Debug Backplane

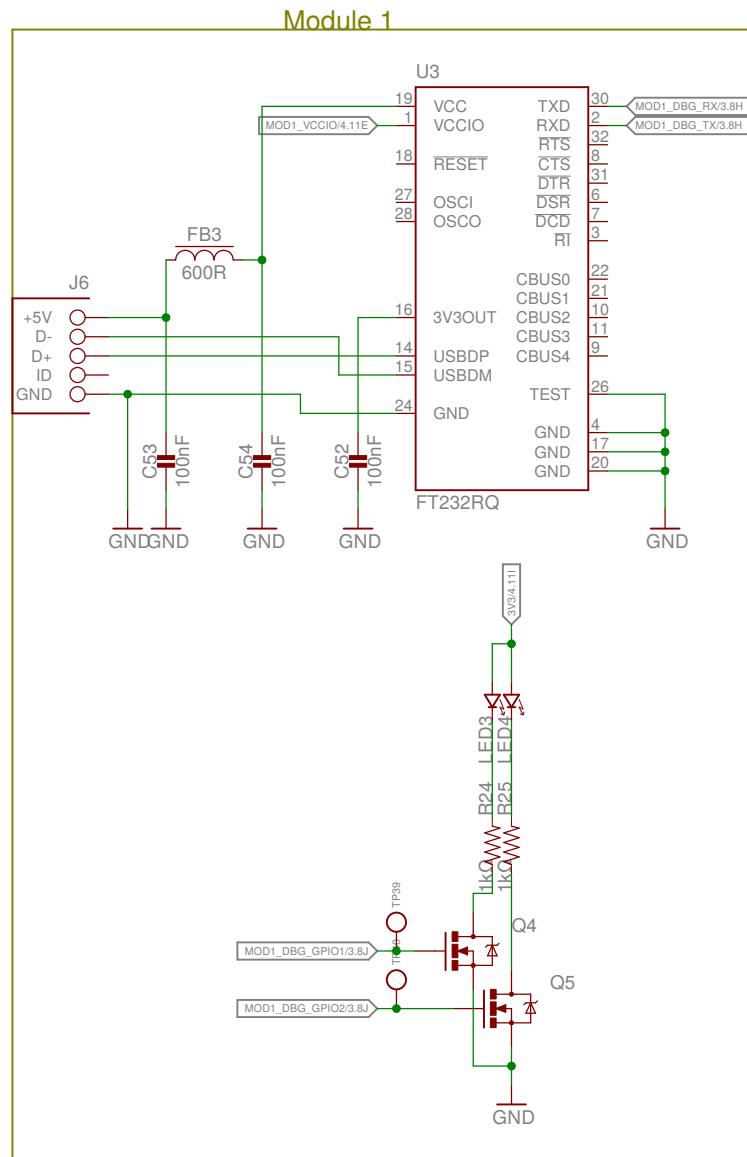
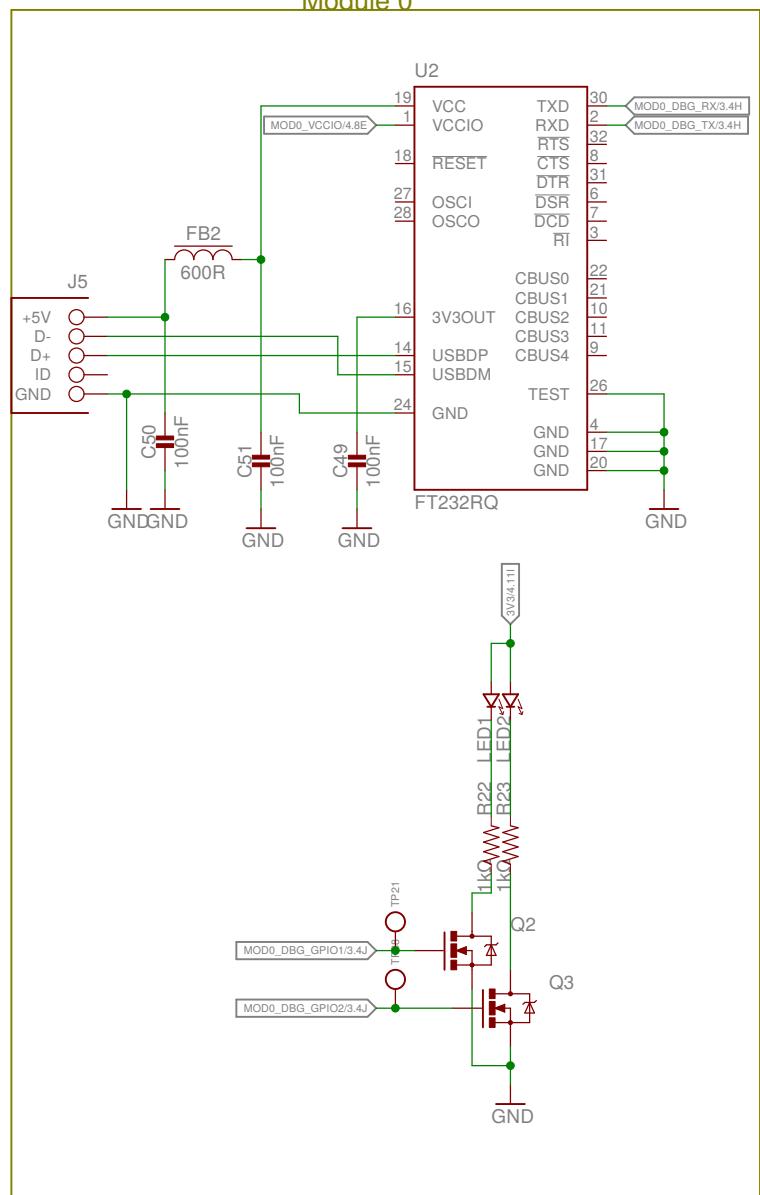
Author: Joshua Adkins and Pat Pannuto

Date: 1/22/17 8:28 PM

REV:  
A

Sheet: 4/15

# Module Debugging



**M** Signpost Debug Backplane

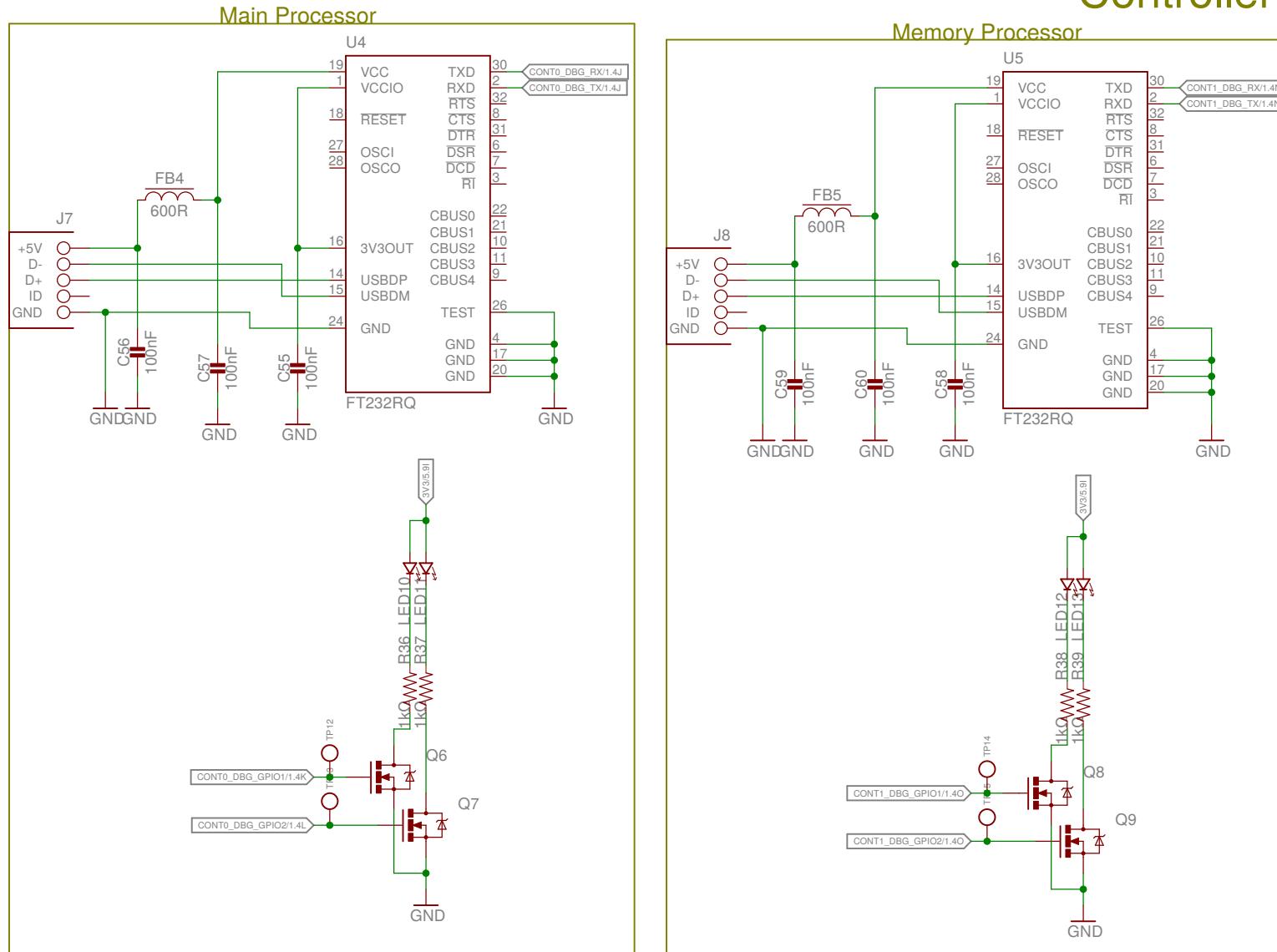
REV:  
A

Author: Joshua Adkins and Pat Pannuto

Date: 1/22/17 8:28 PM

Sheet: 5/15

# Controller Debugging



Signpost Debug Backplane

REV:  
A

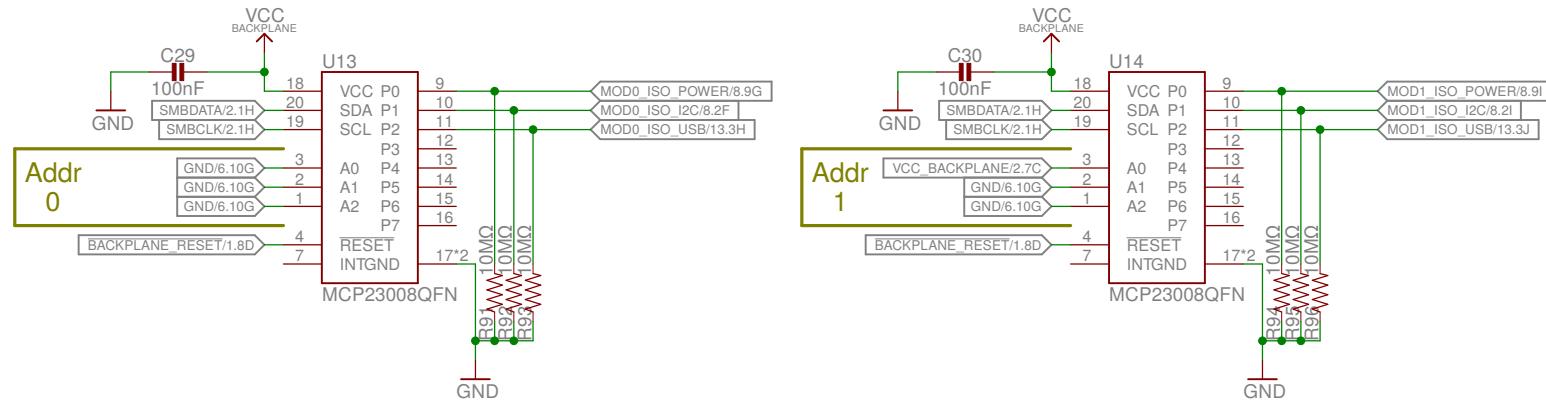
Author: Joshua Adkins and Pat Pannuto

Date: 1/22/17 8:28 PM

Sheet: 6/15

# Isolation Control

I2C to GPIO for Isolation. Connected to SMBUS



Signpost Debug Backplane

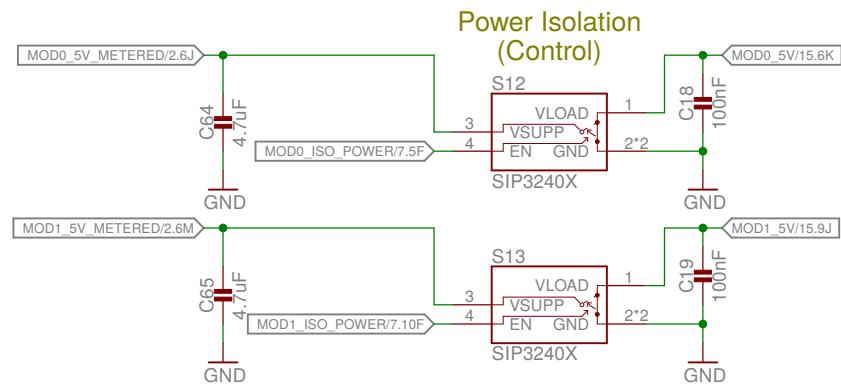
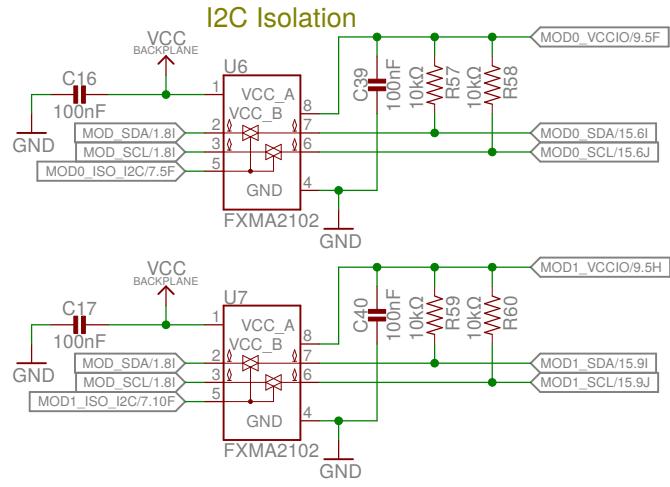
REV:  
A

Author: Joshua Adkins and Pat Pannuto

Date: 1/22/17 8:28 PM

Sheet: 7/15

# Module Isolation



Signpost Debug Backplane

REV:  
A

Author: Joshua Adkins and Pat Pannuto

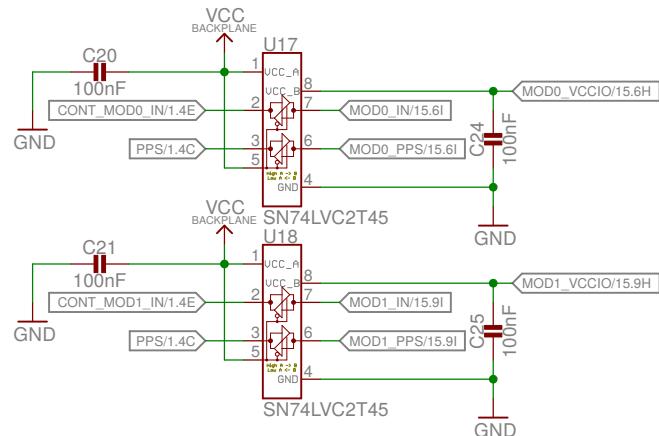
Date: 1/22/17 8:28 PM

Sheet: 8/15

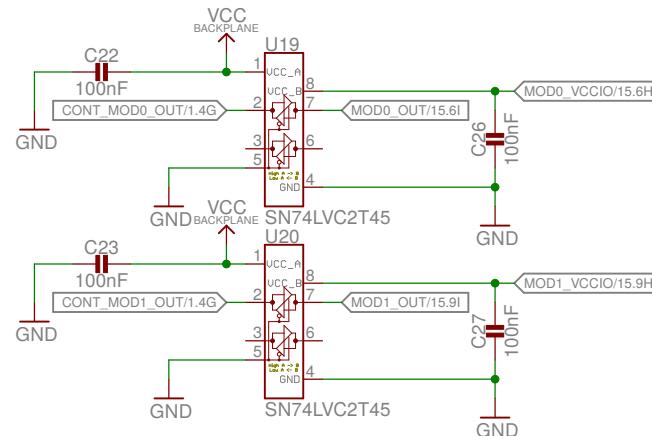
# Module Isolation

MOD\_IN, MOD\_OUT, PPS

Buffer / Level  
Backplane --> Module



Buffer / Level  
Backplane <-- Module



Signpost Debug Backplane

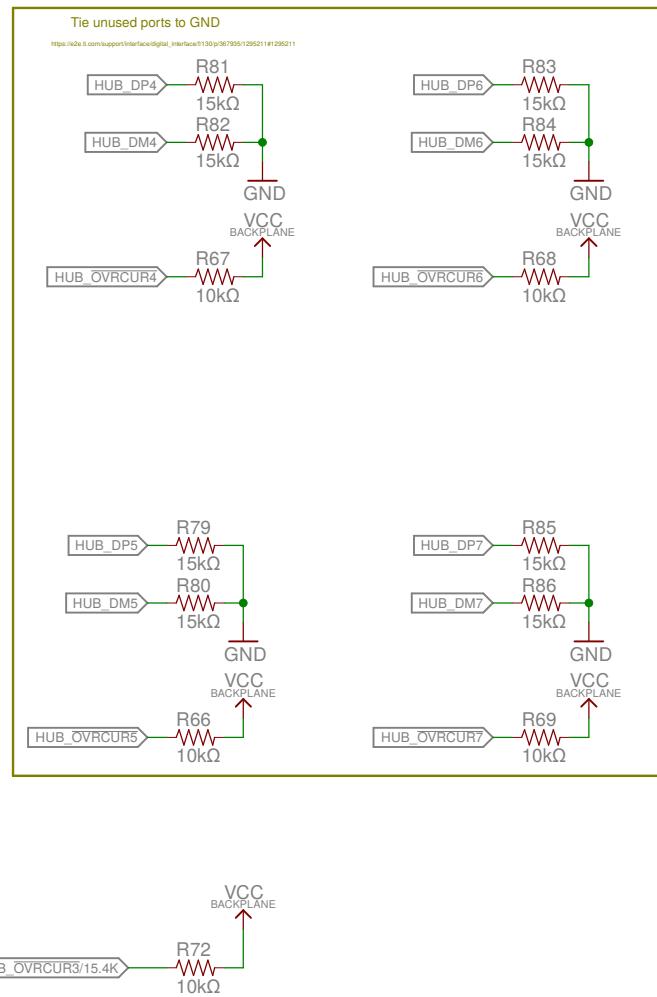
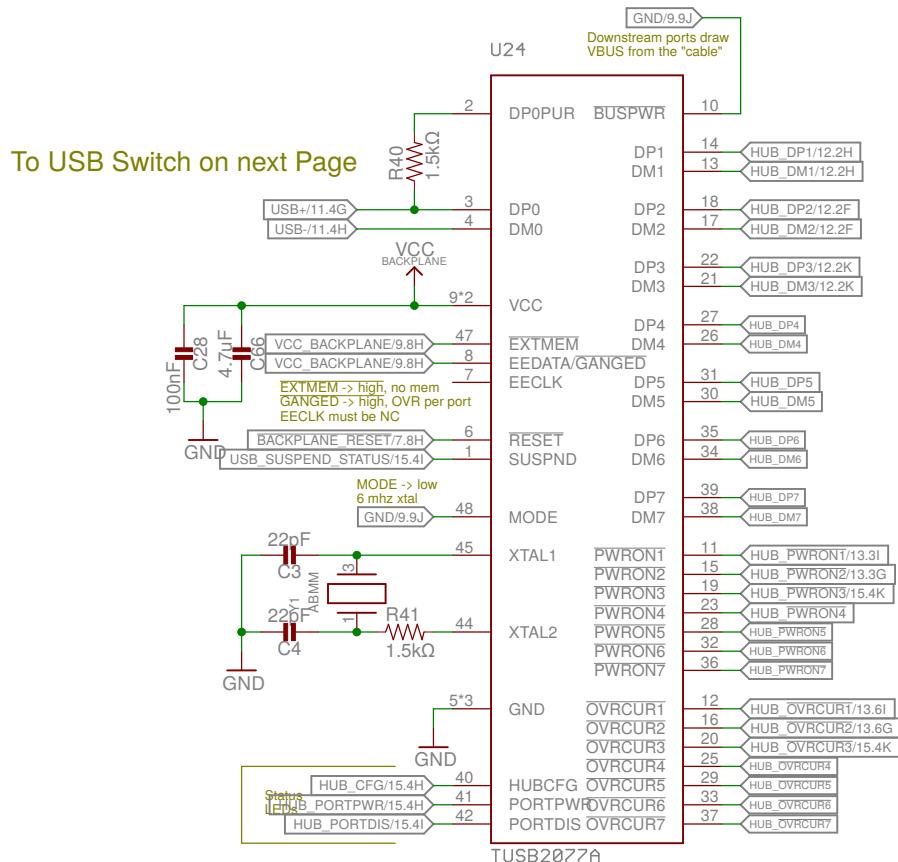
REV:  
A

Author: Joshua Adkins and Pat Pannuto

Date: 1/22/17 8:28 PM

Sheet: 9/15

# USB Hub



Signpost Debug Backplane

REV:  
A

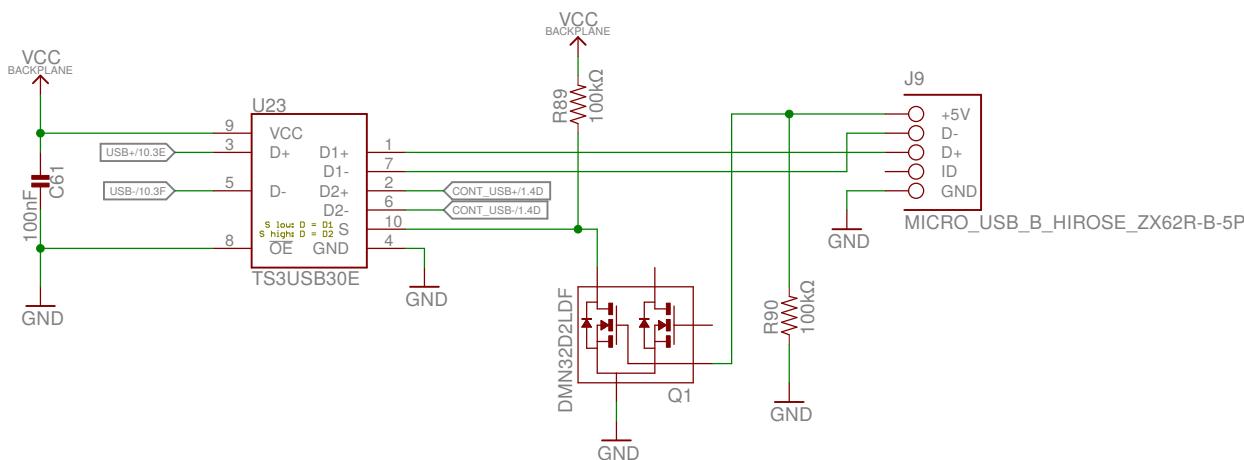
Author: Joshua Adkins and Pat Pannuto

Date: 1/22/17 8:28 PM

Sheet: 10/15

# USB SWITCH

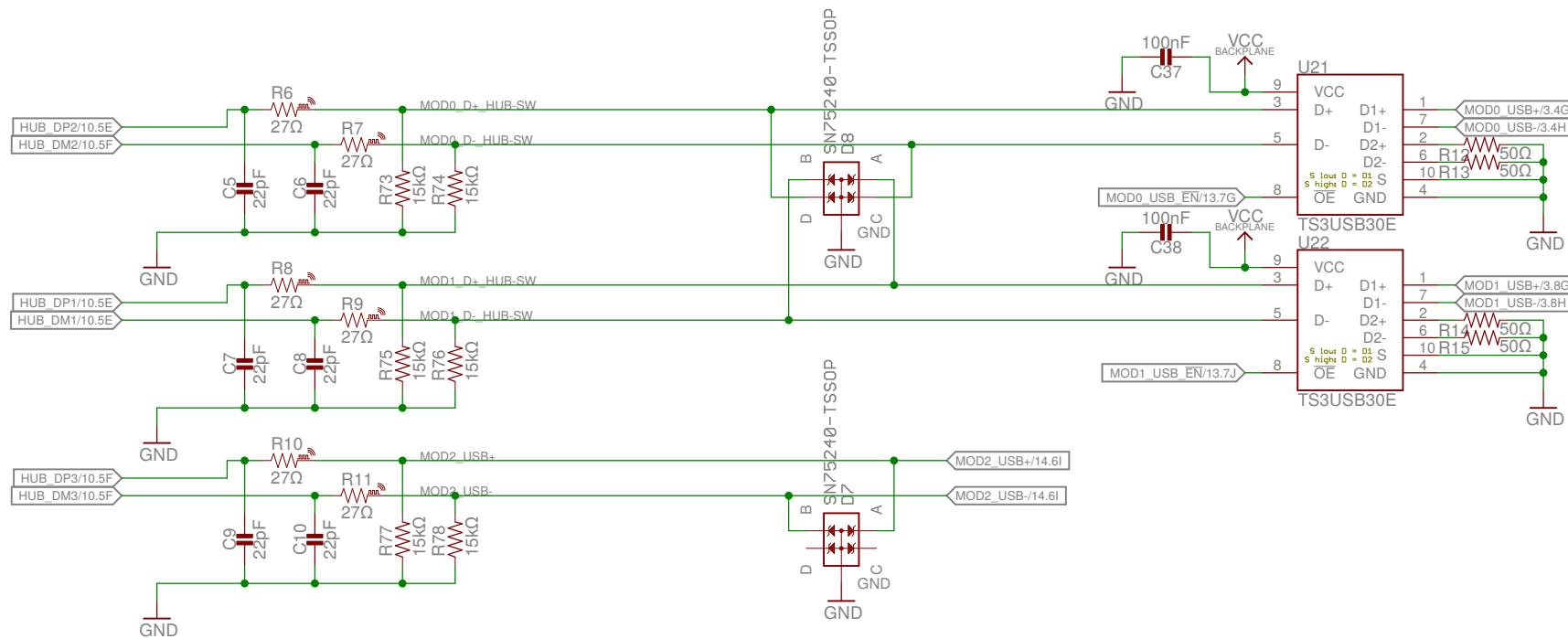
Allows USB port to act as host  
instead of the Controller.  
Useful for Debuggin Module USB.



Signpost Debug Backplane

REV:  
A

Author: Joshua Adkins and Pat Pannuto



Transient voltage protection



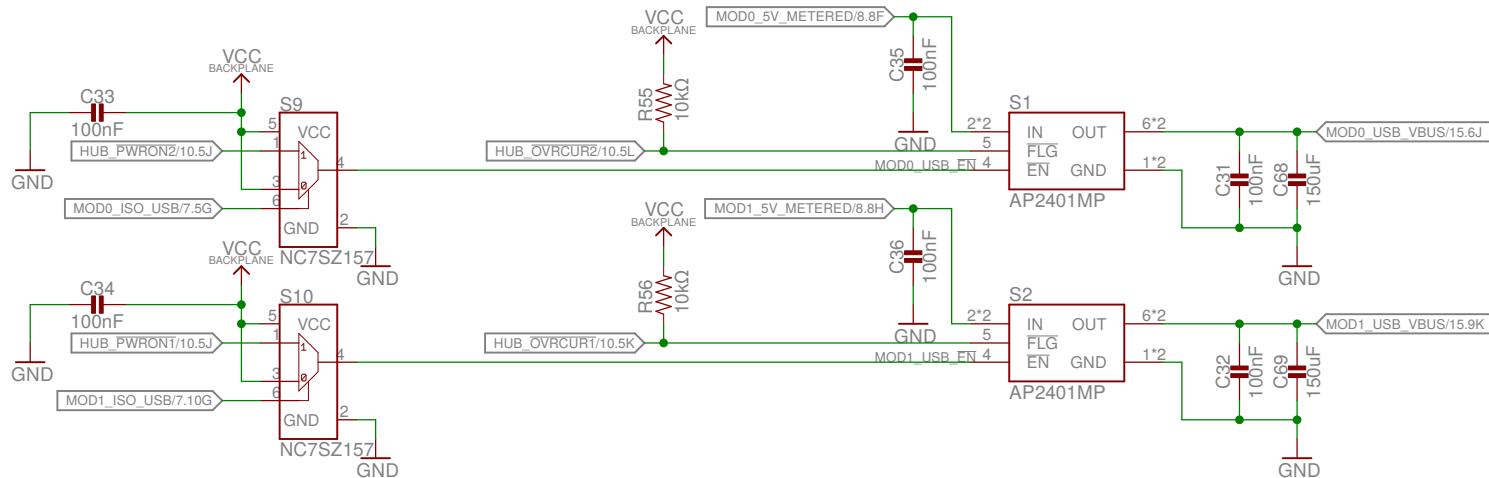
Signpost Debug Backplane

REV:  
A

Author: Joshua Adkins and Pat Pannuto

Date: 1/22/17 8:28 PM

Sheet: 12/15



Signpost Debug Backplane

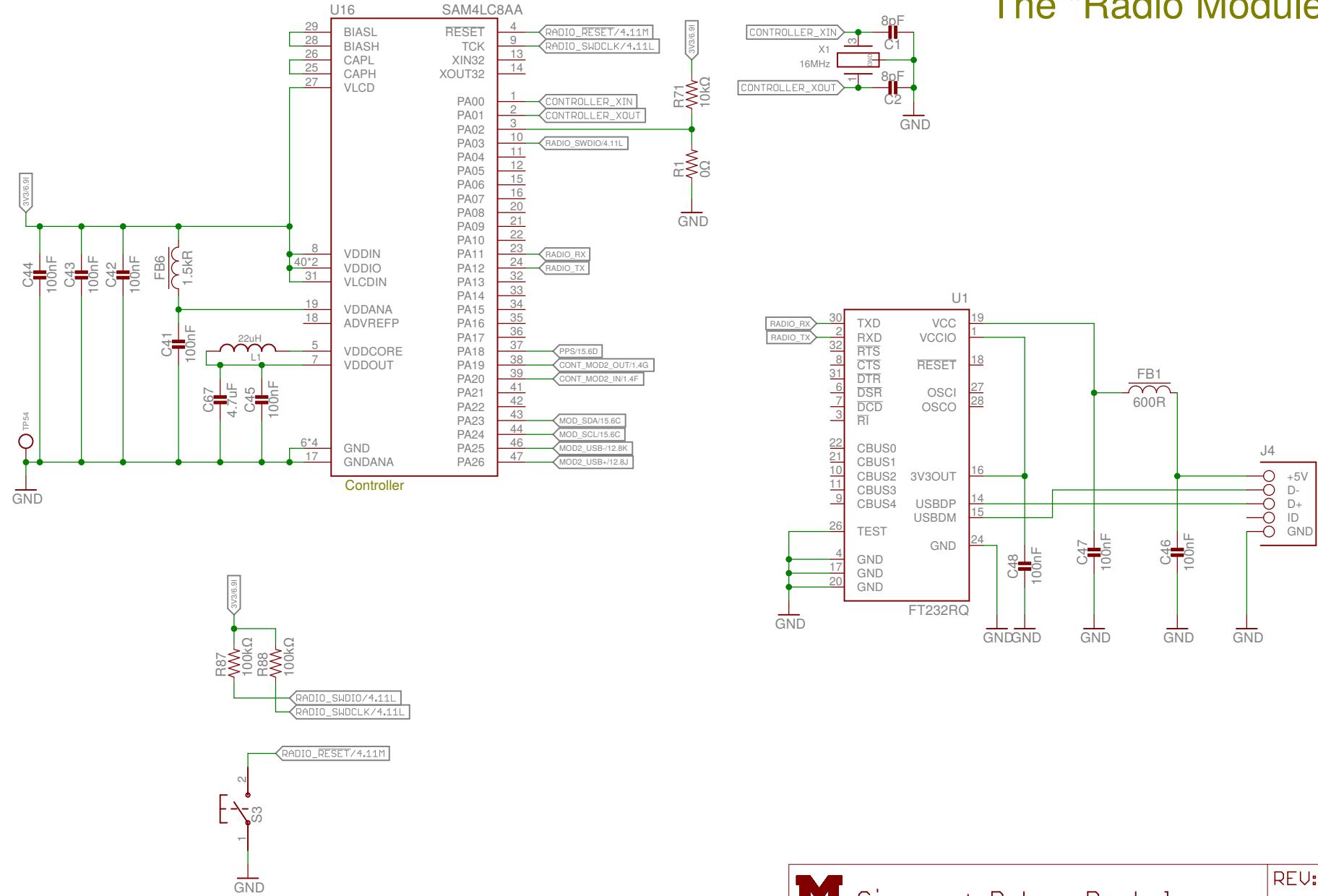
REV:  
A

Author: Joshua Adkins and Pat Pannuto

Date: 1/22/17 8:28 PM

Sheet: 13/15

# The "Radio Module"



**M** Signpost Debug Backplane

REV:  
A

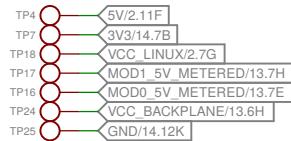
Author: Joshua Adkins and Pat Pannuto

Date: 1/22/17 8:28 PM

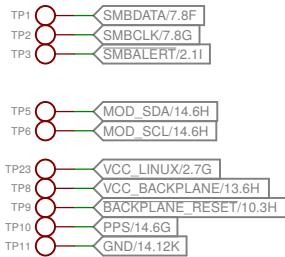
Sheet: 14/15

# Debugging

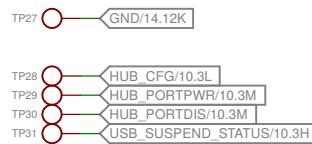
## power debugging



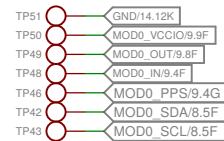
## Controller Debugging



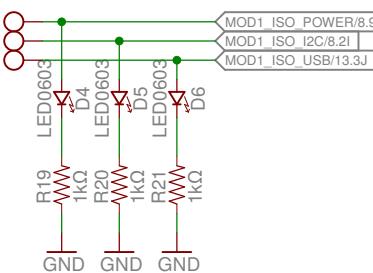
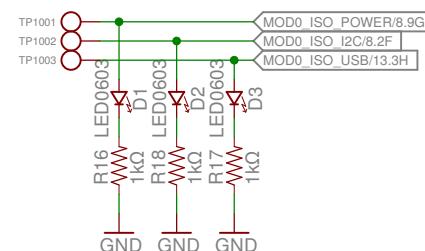
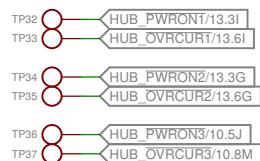
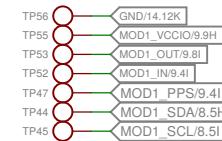
## USB Debugging



## MOD0 Debugging



## MOD1 Debugging



Signpost Debug Backplane

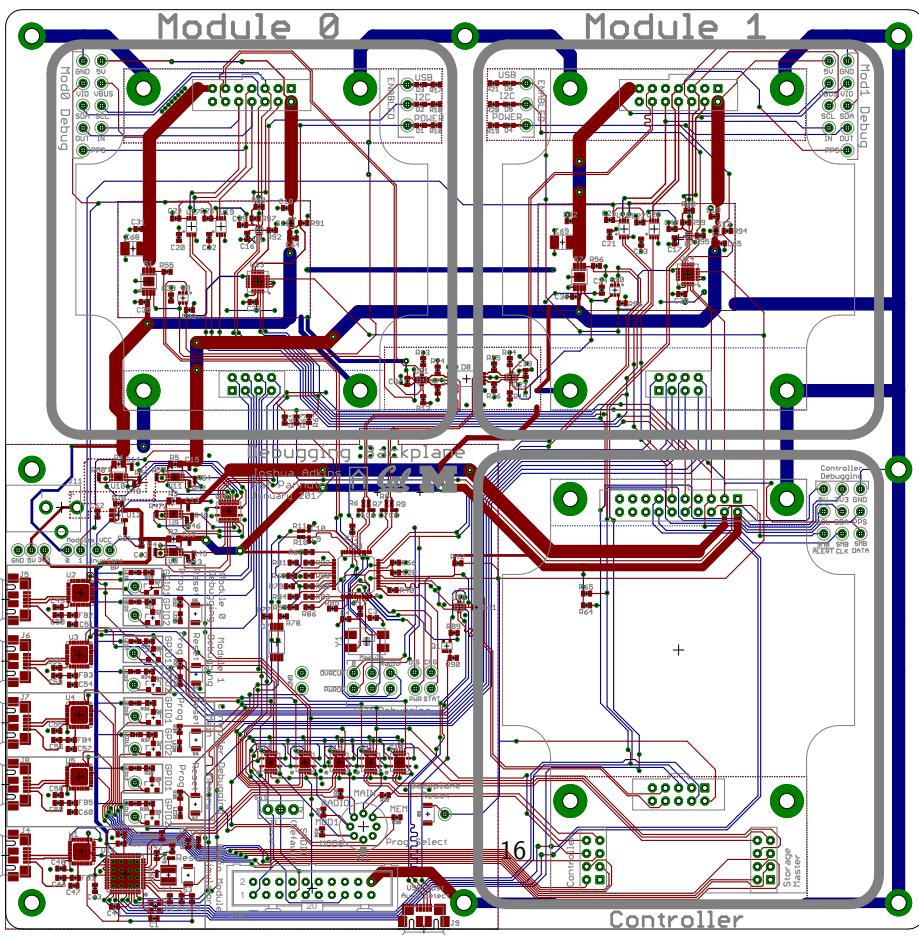
REV:  
A

Author: Joshua Adkins and Pat Pannuto

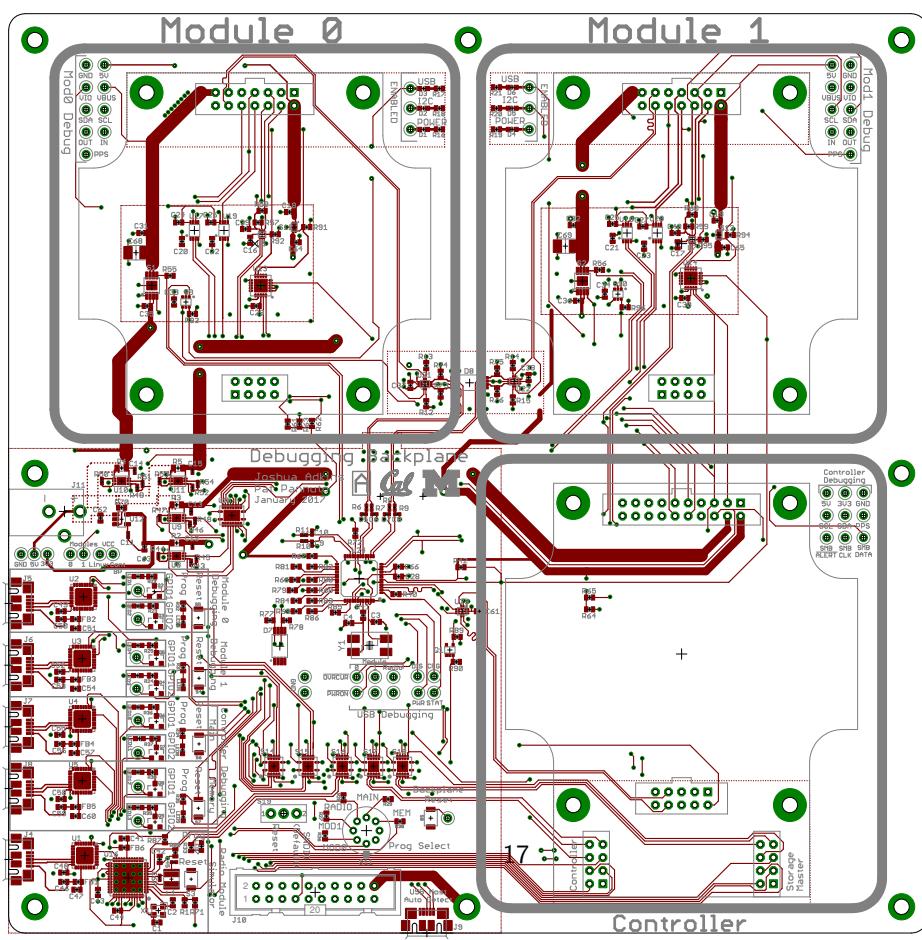
Date: 1/22/17 8:28 PM

Sheet: 15/15

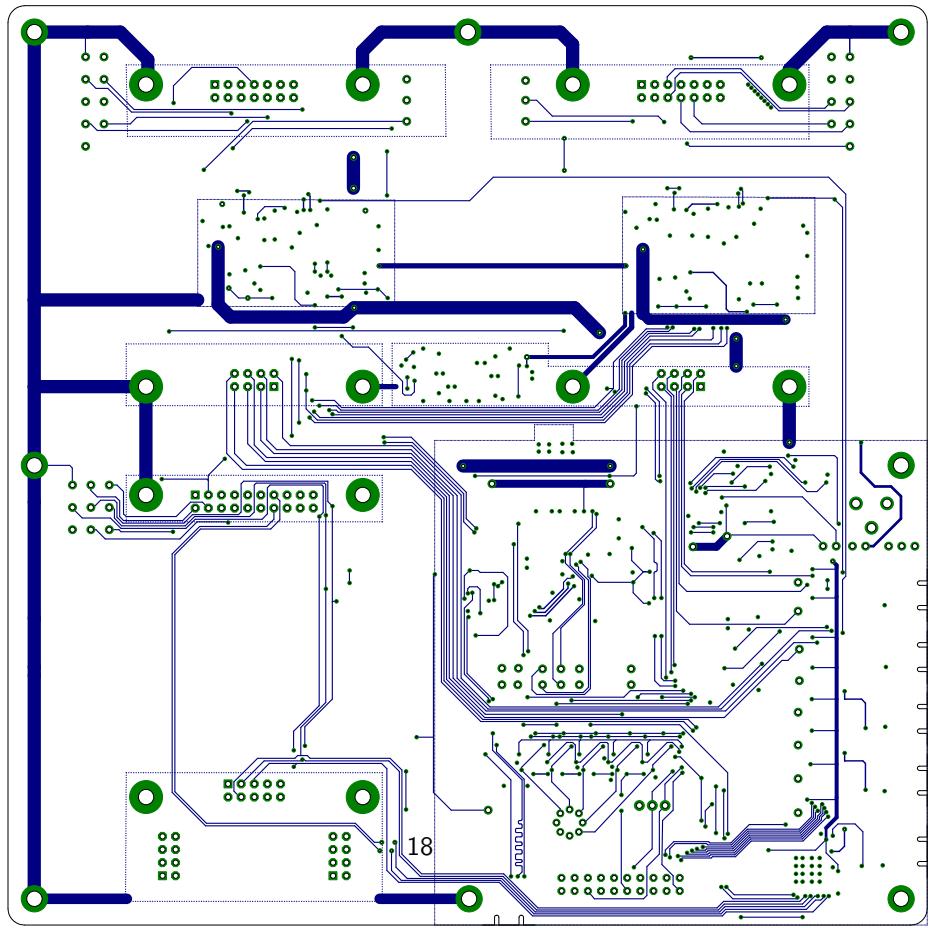
## Top and Bottom Layers



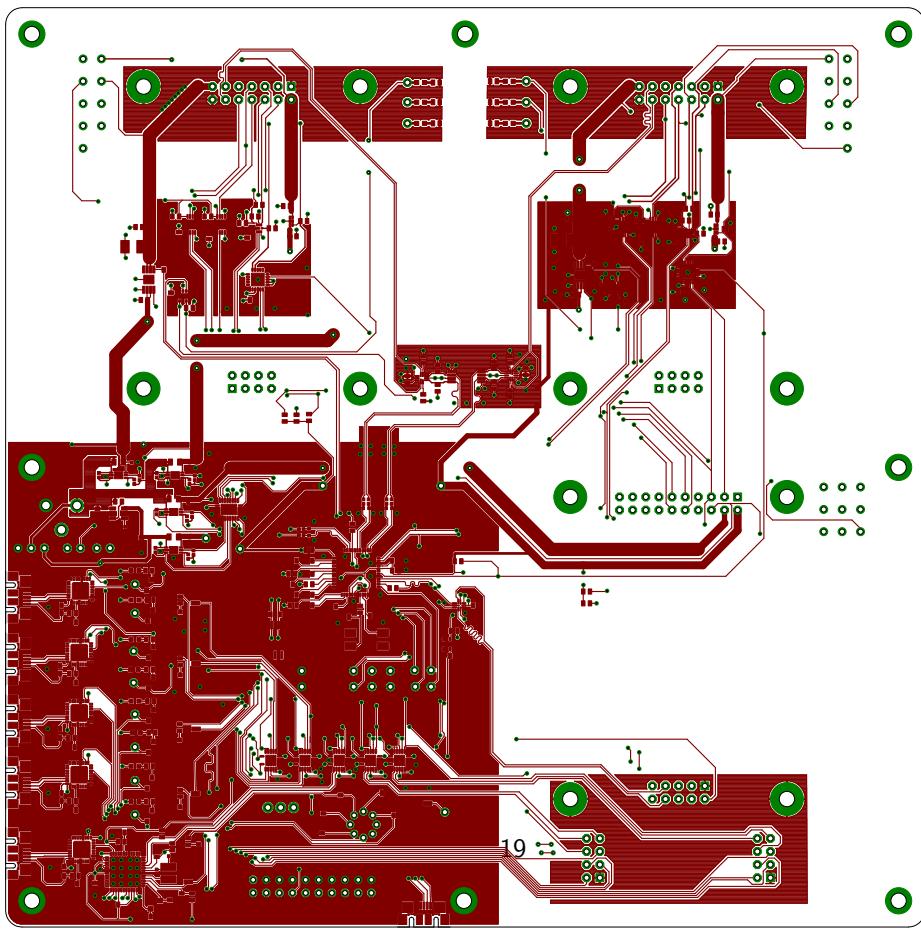
Top Layer



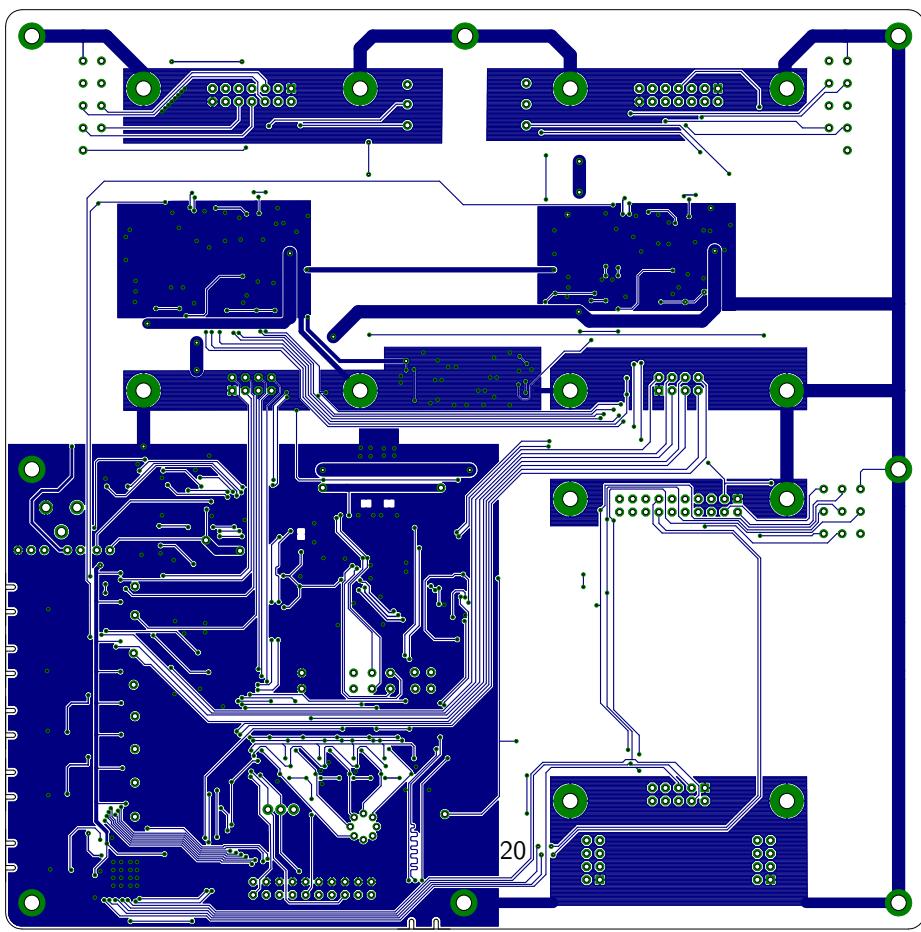
Bottom Layer



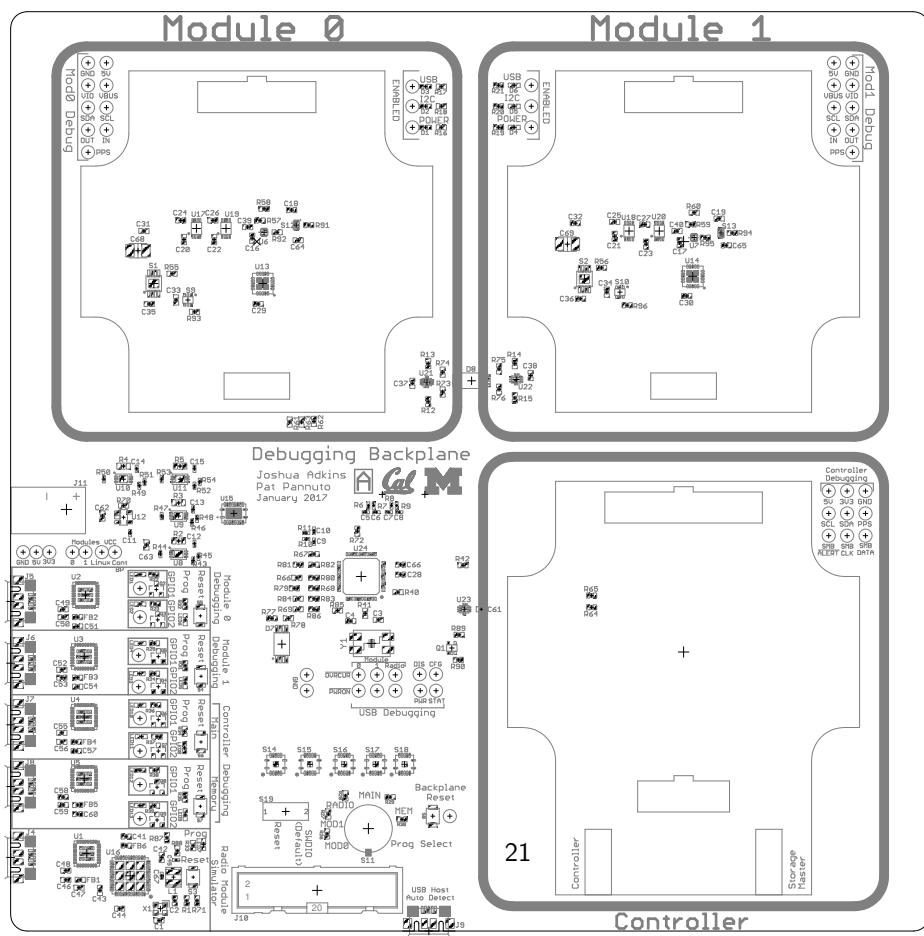
Top Copper Layer



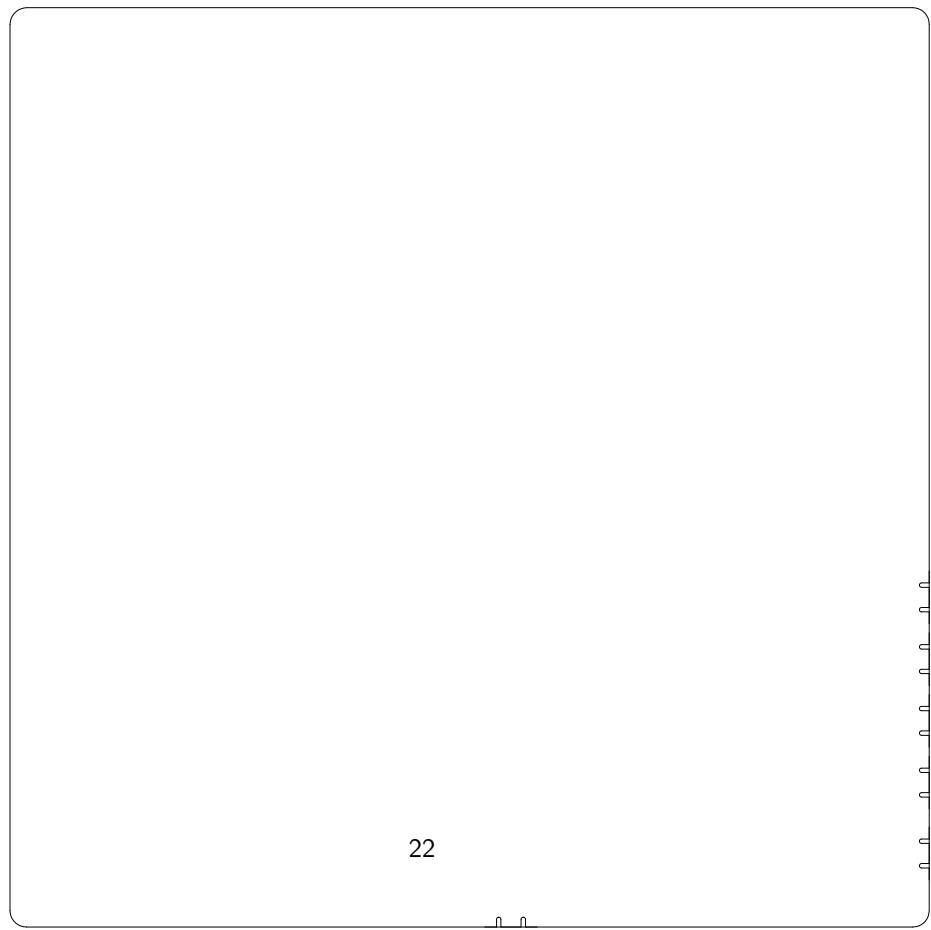
Bottom Copper Layer

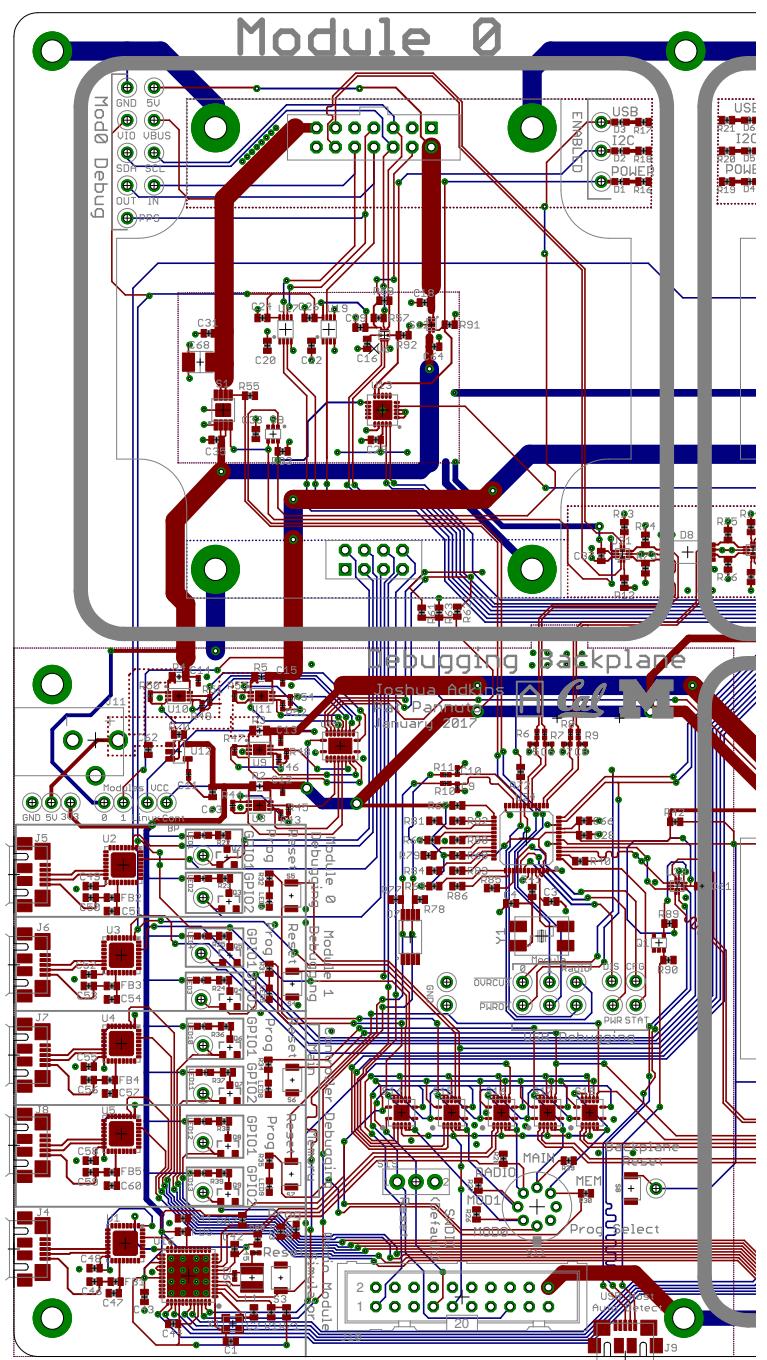


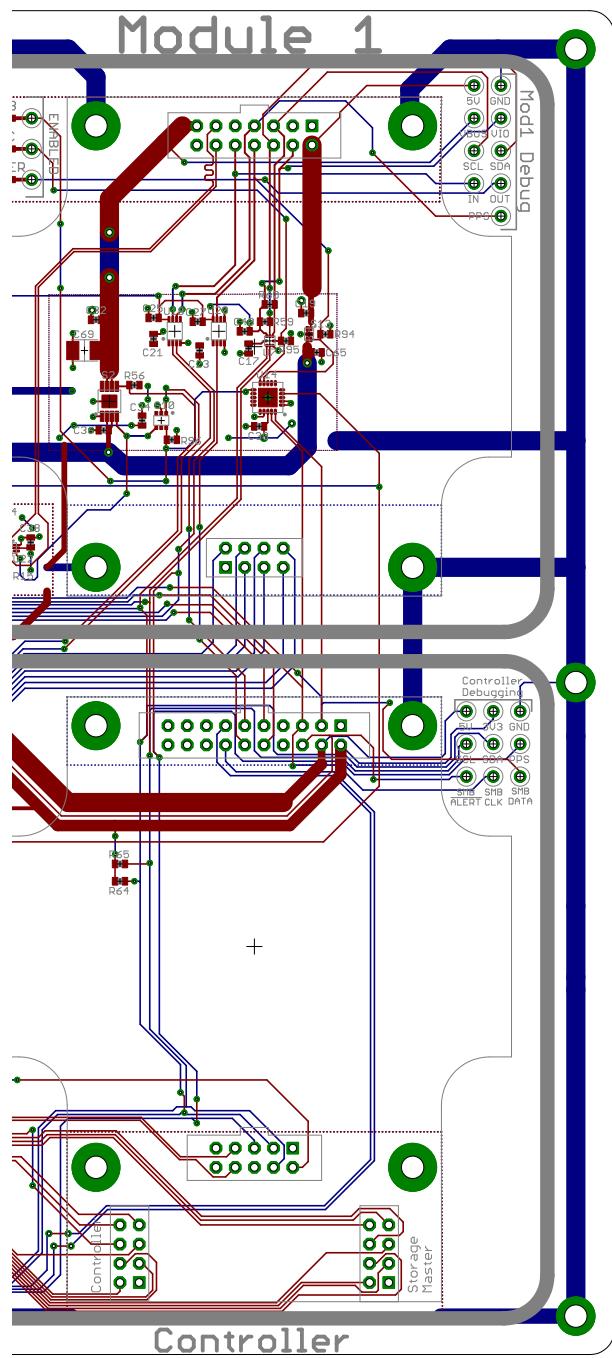
## Top Paste Layer with Silkscreen



Bottom Paste Layer with Silkscreen



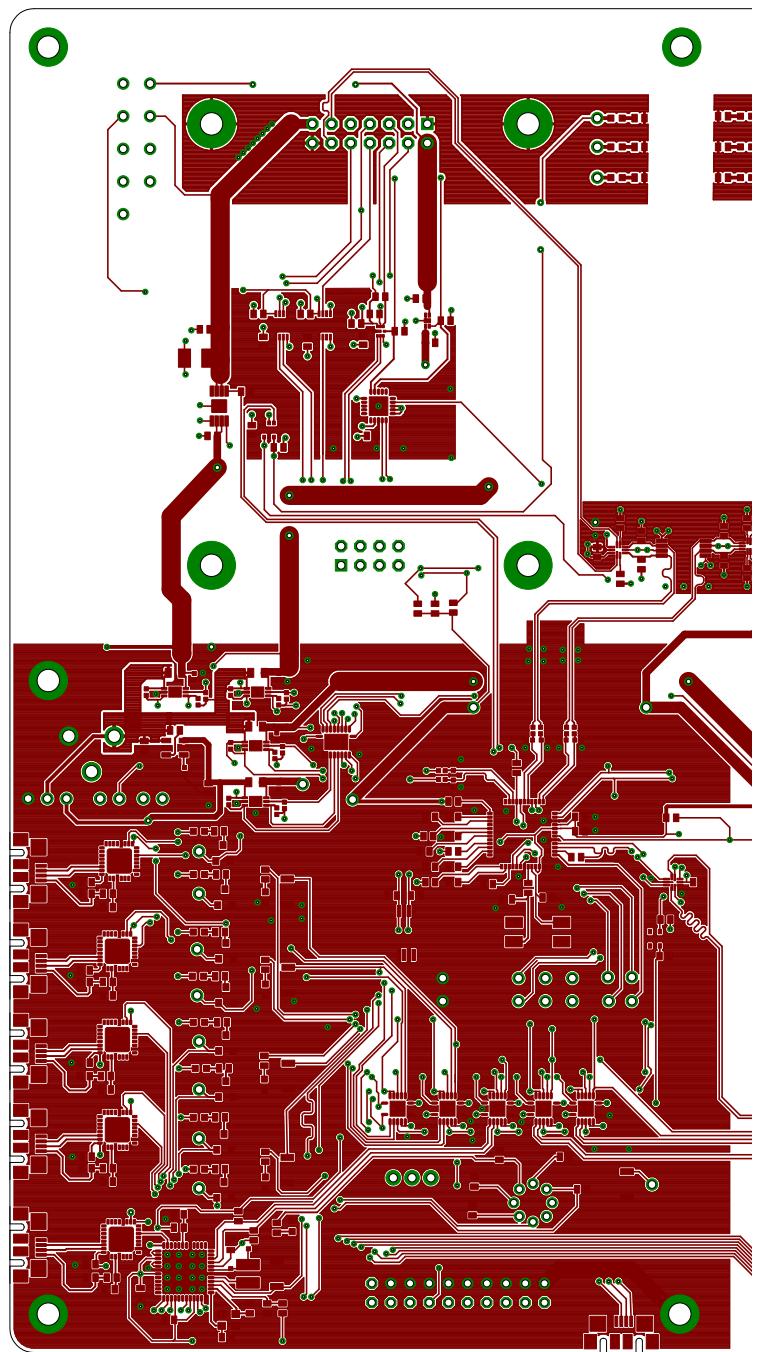




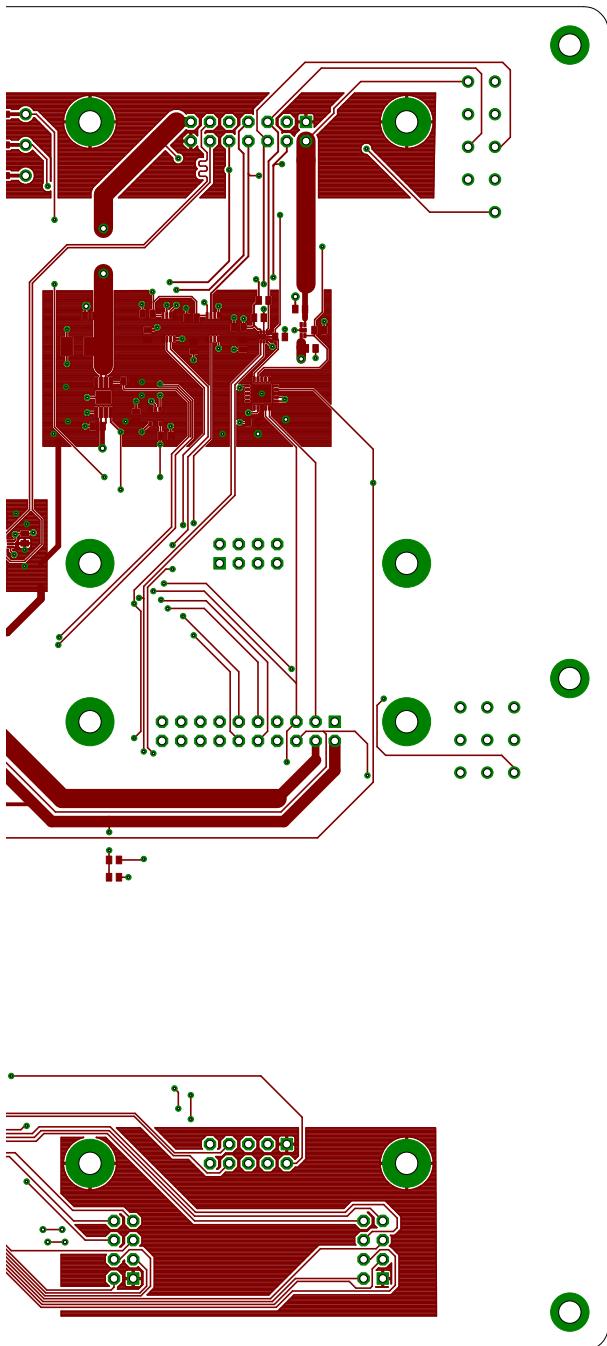
Top and Bottom Layers 1:1 Scale

Top and Bottom Layers 1:1 Scale

Top Layer 1:1 Scale



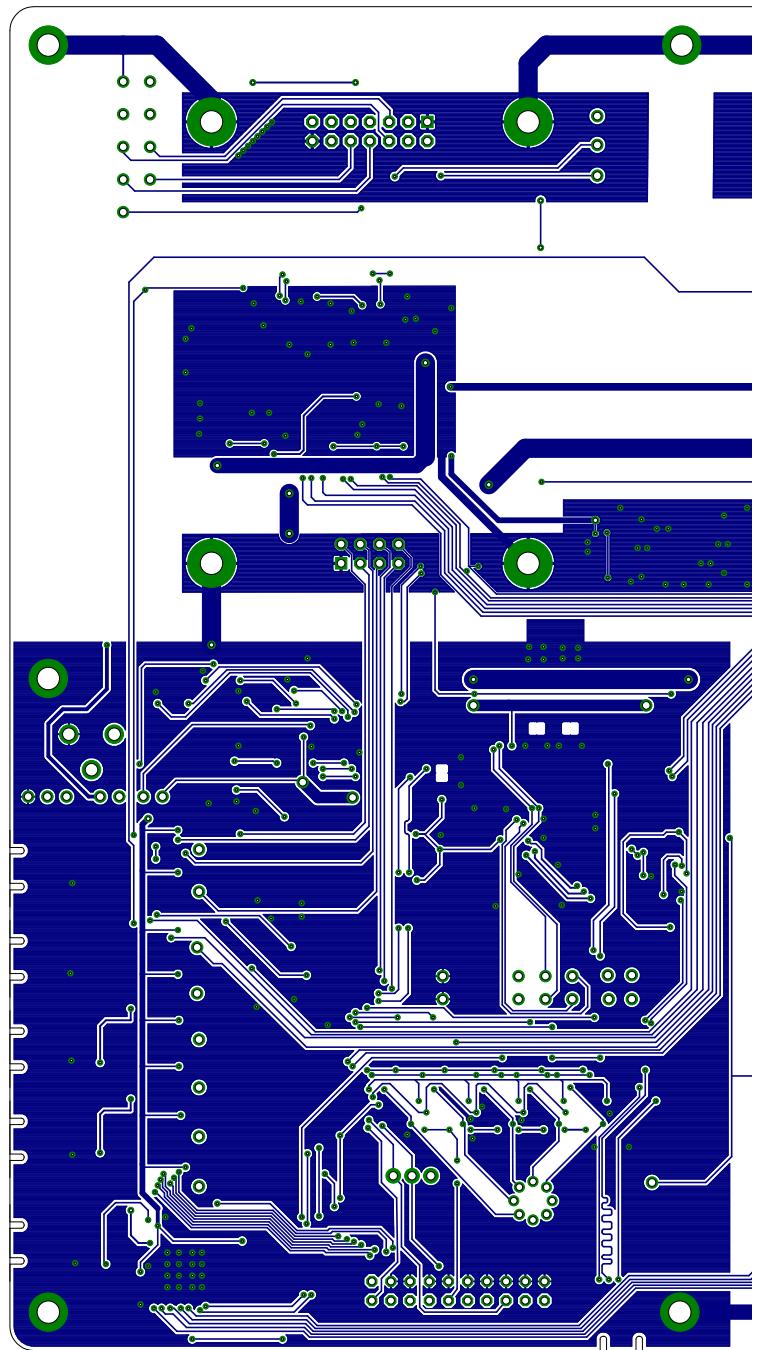
Top Layer 1:1 Scale



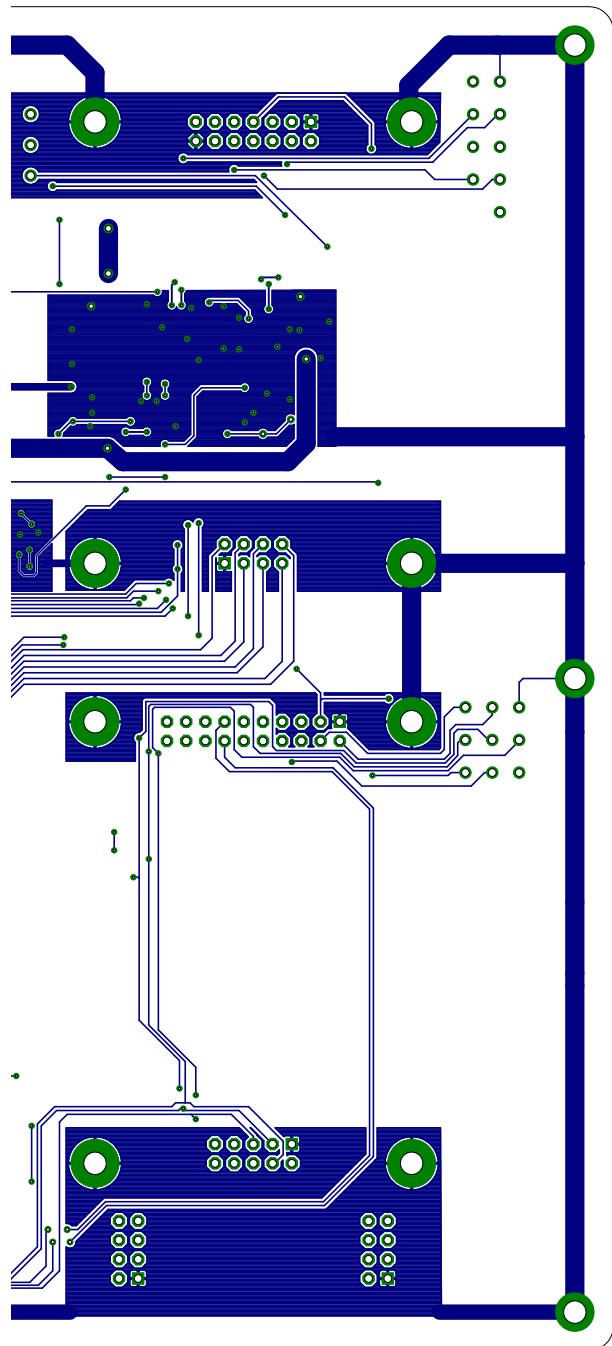
Top Layer 1:1 Scale

Top Layer 1:1 Scale

Bottom Copper Layer 1:1 Scale



Bottom Copper Layer 1:1 Scale



Bottom Copper Layer 1:1 Scale

Bottom Copper Layer 1:1 Scale

debug\_backplane

Part	Value	Device
C1	8pF	CAPACITOR0603_CAP
C2	8pF	CAPACITOR0603_CAP
C3	22pF	CAPACITOR0603_CAP
C4	22pF	CAPACITOR0603_CAP
C5	22pF	CAPACITOR0402_CAP
C6	22pF	CAPACITOR0402_CAP
C7	22pF	CAPACITOR0402_CAP
C8	22pF	CAPACITOR0402_CAP
C9	22pF	CAPACITOR0402_CAP
C10	22pF	CAPACITOR0402_CAP
C11	0.01uF	CAPACITOR0402_CAP
C12	0.1uF	CAPACITOR0402_CAP
C13	0.1uF	CAPACITOR0402_CAP
C14	0.1uF	CAPACITOR0402_CAP
C15	0.1uF	CAPACITOR0402_CAP
C16	100nF	CAPACITOR0603_CAP
C17	100nF	CAPACITOR0603_CAP
C18	100nF	CAPACITOR0603_CAP
C19	100nF	CAPACITOR0603_CAP
C20	100nF	CAPACITOR0603_CAP
C21	100nF	CAPACITOR0603_CAP
C22	100nF	CAPACITOR0603_CAP
C23	100nF	CAPACITOR0603_CAP
C24	100nF	CAPACITOR0603_CAP
C25	100nF	CAPACITOR0603_CAP
C26	100nF	CAPACITOR0603_CAP
C27	100nF	CAPACITOR0603_CAP
C28	100nF	CAPACITOR0603_CAP
C29	100nF	CAPACITOR0603_CAP
C30	100nF	CAPACITOR0603_CAP
C31	100nF	CAPACITOR0603_CAP
C32	100nF	CAPACITOR0603_CAP
C33	100nF	CAPACITOR0603_CAP
C34	100nF	CAPACITOR0603_CAP
C35	100nF	CAPACITOR0603_CAP
C36	100nF	CAPACITOR0603_CAP
C37	100nF	CAPACITOR0603_CAP
C38	100nF	CAPACITOR0603_CAP
C39	100nF	CAPACITOR0603_CAP
C40	100nF	CAPACITOR0603_CAP
C41	100nF	CAPACITOR0603_CAP
C42	100nF	CAPACITOR0603_CAP
C43	100nF	CAPACITOR0603_CAP
C44	100nF	CAPACITOR0603_CAP
C45	100nF	CAPACITOR0402_CAP
C46	100nF	CAPACITOR0603_CAP
C47	100nF	CAPACITOR0603_CAP
C48	100nF	CAPACITOR0603_CAP

debug\_backplane

C49	100nF	CAPACITOR0603_CAP
C50	100nF	CAPACITOR0603_CAP
C51	100nF	CAPACITOR0603_CAP
C52	100nF	CAPACITOR0603_CAP
C53	100nF	CAPACITOR0603_CAP
C54	100nF	CAPACITOR0603_CAP
C55	100nF	CAPACITOR0603_CAP
C56	100nF	CAPACITOR0603_CAP
C57	100nF	CAPACITOR0603_CAP
C58	100nF	CAPACITOR0603_CAP
C59	100nF	CAPACITOR0603_CAP
C60	100nF	CAPACITOR0603_CAP
C61	100nF	CAPACITOR0603_CAP
C62	2.2uF	CAPACITOR0603_CAP
C63	2.2uF	CAPACITOR0603_CAP
C64	4.7uF	CAPACITOR0603_CAP
C65	4.7uF	CAPACITOR0603_CAP
C66	4.7uF	CAPACITOR0603_CAP
C67	4.7uF	CAPACITOR0402_CAP
C68	150uF	CAPACITOR1210_CAP
C69	150uF	CAPACITOR1210_CAP
D1	LED0603	LED0603
D2	LED0603	LED0603
D3	LED0603	LED0603
D4	LED0603	LED0603
D5	LED0603	LED0603
D6	LED0603	LED0603
D7	SN75240-TSSOP	SN75240-TSSOP
D8	SN75240-TSSOP	SN75240-TSSOP
FB1	600R	FERRITE_BEAD0603
FB2	600R	FERRITE_BEAD0603
FB3	600R	FERRITE_BEAD0603
FB4	600R	FERRITE_BEAD0603
FB5	600R	FERRITE_BEAD0603
FB6	1.5kR	FERRITE_BEAD0603
J1	BACKPLANE_CONTROLLER_MODULE_DEBUG	BACKPLANE_CONTROLLER_MODULE_DEBUG
J2	BACKPLANE_GENERIC_MODULE_DEBUG	BACKPLANE_GENERIC_MODULE_DEBUG
J3	BACKPLANE_GENERIC_MODULE_DEBUG	BACKPLANE_GENERIC_MODULE_DEBUG
J4	MICRO_USB_B_HIROSE_ZX62R-B-5P	MICRO_USB_B_HIROSE_ZX62R-B-5P
J5	MICRO_USB_B_HIROSE_ZX62R-B-5P	MICRO_USB_B_HIROSE_ZX62R-B-5P
J6	MICRO_USB_B_HIROSE_ZX62R-B-5P	MICRO_USB_B_HIROSE_ZX62R-B-5P
J7	MICRO_USB_B_HIROSE_ZX62R-B-5P	MICRO_USB_B_HIROSE_ZX62R-B-5P
J8	MICRO_USB_B_HIROSE_ZX62R-B-5P	MICRO_USB_B_HIROSE_ZX62R-B-5P
J9	MICRO_USB_B_HIROSE_ZX62R-B-5P	MICRO_USB_B_HIROSE_ZX62R-B-5P
J10	20 Pin JTAG Header	ML20
J11	PJ-102AH	PJ-102AH
L1	22uH	LHQ3NP
LED1	LED0603	LED0603
LED2	LED0603	LED0603

debug\_backplane

LED3	LED0603	LED0603
LED4	LED0603	LED0603
LED5	LED0603	LED0603
LED6	LED0603	LED0603
LED7	LED0603	LED0603
LED8	LED0603	LED0603
LED9	LED0603	LED0603
LED10	LED0603	LED0603
LED11	LED0603	LED0603
LED12	LED0603	LED0603
LED13	LED0603	LED0603
Q1	DMN32D2LDF	DMN32D2LDF
Q2	MOSFET-NCHANNELSMD	MOSFET-NCHANNELSMD
Q3	MOSFET-NCHANNELSMD	MOSFET-NCHANNELSMD
Q4	MOSFET-NCHANNELSMD	MOSFET-NCHANNELSMD
Q5	MOSFET-NCHANNELSMD	MOSFET-NCHANNELSMD
Q6	MOSFET-NCHANNELSMD	MOSFET-NCHANNELSMD
Q7	MOSFET-NCHANNELSMD	MOSFET-NCHANNELSMD
Q8	MOSFET-NCHANNELSMD	MOSFET-NCHANNELSMD
Q9	MOSFET-NCHANNELSMD	MOSFET-NCHANNELSMD
R1		0 RESISTOR0603_RES
R2		0.017 RESISTOR0805_RES
R3		0.017 RESISTOR0805_RES
R4		0.017 RESISTOR0805_RES
R5		0.017 RESISTOR0805_RES
R6		27 RESISTOR-HIGH_SPEED0402
R7		27 RESISTOR-HIGH_SPEED0402
R8		27 RESISTOR-HIGH_SPEED0402
R9		27 RESISTOR-HIGH_SPEED0402
R10		27 RESISTOR-HIGH_SPEED0402
R11		27 RESISTOR-HIGH_SPEED0402
R12		50 RESISTOR0603_RES
R13		50 RESISTOR0603_RES
R14		50 RESISTOR0603_RES
R15		50 RESISTOR0603_RES
R16	1k	RESISTOR0603_RES
R17	1k	RESISTOR0603_RES
R18	1k	RESISTOR0603_RES
R19	1k	RESISTOR0603_RES
R20	1k	RESISTOR0603_RES
R21	1k	RESISTOR0603_RES
R22	1k	RESISTOR0603_RES
R23	1k	RESISTOR0603_RES
R24	1k	RESISTOR0603_RES
R25	1k	RESISTOR0603_RES
R26	1k	RESISTOR0603_RES
R27	1k	RESISTOR0603_RES
R28	1k	RESISTOR0603_RES
R29	1k	RESISTOR0603_RES

debug\_backplane

R30	1k	RESISTOR0603_RES
R31	1k	RESISTOR0603_RES
R32	1k	RESISTOR0603_RES
R33	1k	RESISTOR0603_RES
R34	1k	RESISTOR0603_RES
R35	1k	RESISTOR0603_RES
R36	1k	RESISTOR0603_RES
R37	1k	RESISTOR0603_RES
R38	1k	RESISTOR0603_RES
R39	1k	RESISTOR0603_RES
R40	1.5k	RESISTOR0603_RES
R41	1.5k	RESISTOR0603_RES
R42	1.5k	RESISTOR0603_RES
R43	2k	RESISTOR0402_RES
R44	2k	RESISTOR0402_RES
R45	2k	RESISTOR0402_RES
R46	2k	RESISTOR0402_RES
R47	2k	RESISTOR0402_RES
R48	2k	RESISTOR0402_RES
R49	2k	RESISTOR0402_RES
R50	2k	RESISTOR0402_RES
R51	2k	RESISTOR0402_RES
R52	2k	RESISTOR0402_RES
R53	2k	RESISTOR0402_RES
R54	2k	RESISTOR0402_RES
R55	10k	RESISTOR0603_RES
R56	10k	RESISTOR0603_RES
R57	10k	RESISTOR0603_RES
R58	10k	RESISTOR0603_RES
R59	10k	RESISTOR0603_RES
R60	10k	RESISTOR0603_RES
R61	10k	RESISTOR0603_RES
R62	10k	RESISTOR0603_RES
R63	10k	RESISTOR0603_RES
R64	10k	RESISTOR0603_RES
R65	10k	RESISTOR0603_RES
R66	10k	RESISTOR0603_RES
R67	10k	RESISTOR0603_RES
R68	10k	RESISTOR0603_RES
R69	10k	RESISTOR0603_RES
R70	10k	RESISTOR0603_RES
R71	10k	RESISTOR0603_RES
R72	10k	RESISTOR0603_RES
R73	15k	RESISTOR0603_RES
R74	15k	RESISTOR0603_RES
R75	15k	RESISTOR0603_RES
R76	15k	RESISTOR0603_RES
R77	15k	RESISTOR0603_RES
R78	15k	RESISTOR0603_RES

## debug\_backplane

R79	15k	RESISTOR0603_RES
R80	15k	RESISTOR0603_RES
R81	15k	RESISTOR0603_RES
R82	15k	RESISTOR0603_RES
R83	15k	RESISTOR0603_RES
R84	15k	RESISTOR0603_RES
R85	15k	RESISTOR0603_RES
R86	15k	RESISTOR0603_RES
R87	100k	RESISTOR0603_RES
R88	100k	RESISTOR0603_RES
R89	100k	RESISTOR0603_RES
R90	100k	RESISTOR0603_RES
R91	10M	RESISTOR0603_RES
R92	10M	RESISTOR0603_RES
R93	10M	RESISTOR0603_RES
R94	10M	RESISTOR0603_RES
R95	10M	RESISTOR0603_RES
R96	10M	RESISTOR0603_RES
S1	AP2401MP	AP2401MP
S2	AP2401MP	AP2401MP
S3	B3U-1000P	B3U-1000P
S4	B3U-1000P	B3U-1000P
S5	B3U-1000P	B3U-1000P
S6	B3U-1000P	B3U-1000P
S7	B3U-1000P	B3U-1000P
S8	B3U-1000P	B3U-1000P
S9	NC7SZ157	NC7SZ157
S10	NC7SZ157	NC7SZ157
S11	RM106772BCB	RM106772BCB
S12	SIP3240X	SIP3240X
S13	SIP3240X	SIP3240X
S14	SN74AHC4066-RGY	SN74AHC4066-RGY
S15	SN74AHC4066-RGY	SN74AHC4066-RGY
S16	SN74AHC4066-RGY	SN74AHC4066-RGY
S17	SN74AHC4066-RGY	SN74AHC4066-RGY
S18	SN74AHC4066-RGY	SN74AHC4066-RGY
S19	TE_SSA12/SPDT	TE_SSA12/SPDT
TP1	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP2	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP3	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP4	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP5	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP6	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP7	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP8	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP9	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP10	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP11	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP12	TEST_POINT_0.040IN	TEST_POINT_0.040IN

## debug\_backplane

TP13	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP14	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP15	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP16	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP17	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP18	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP20	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP21	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP23	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP24	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP25	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP27	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP28	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP29	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP30	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP31	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP32	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP33	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP34	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP35	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP36	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP37	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP38	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP39	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP40	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP41	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP42	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP43	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP44	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP45	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP46	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP47	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP48	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP49	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP50	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP51	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP52	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP53	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP54	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP55	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP56	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP57	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP58	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP1001	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP1002	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP1003	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP1004	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP1005	TEST_POINT_0.040IN	TEST_POINT_0.040IN
TP1006	TEST_POINT_0.040IN	TEST_POINT_0.040IN

debug\_backplane

U1	FT232RQ	FT232RQ
U2	FT232RQ	FT232RQ
U3	FT232RQ	FT232RQ
U4	FT232RQ	FT232RQ
U5	FT232RQ	FT232RQ
U6	FXMA2102	FXMA2102
U7	FXMA2102	FXMA2102
U8	LTC2941	LTC2941
U9	LTC2941	LTC2941
U10	LTC2941	LTC2941
U11	LTC2941	LTC2941
U12	MAX8887EZK33+T	MAX8887EZK33+T
U13	MCP23008QFN	MCP23008QFN
U14	MCP23008QFN	MCP23008QFN
U15	PCA9544AQFN-N20	PCA9544AQFN-N20
U16	SAM4LC8AA	SAM4LC8AA
U17	SN74LVC2T45	SN74LVC2T45
U18	SN74LVC2T45	SN74LVC2T45
U19	SN74LVC2T45	SN74LVC2T45
U20	SN74LVC2T45	SN74LVC2T45
U21	TS3USB30E	TS3USB30E
U22	TS3USB30E	TS3USB30E
U23	TS3USB30E	TS3USB30E
U24	TUSB2077A	TUSB2077A
X1	16MHz	FH1600015
Y1	ABMM	ABMM

## debug\_backplane

Package	Description
0603_CAP	0402 Capacitor
0402_CAP	0402 Capacitor
0603_CAP	0402 Capacitor
0402_CAP	0402 Capacitor
0603_CAP	0402 Capacitor
0603_CAP	0402 Capacitor
0603_CAP	0402 Capacitor

## debug\_backplane

0603_CAP	0402 Capacitor
0402_CAP	0402 Capacitor
1210_CAP	0402 Capacitor
1210_CAP	0402 Capacitor
LED-0603	LED
TSSOP-8	TVS Diodes [suggested for TI USB Hub] (2 array)
TSSOP-8	TVS Diodes [suggested for TI USB Hub] (2 array)
0603_CAP	
BACKPLANE_MControl module for signpost, with debug headers	
BACKPLANE_MA backplane header for the debug module	
BACKPLANE_MA backplane header for the debug module	
USB_MICRO_B-USB	Micro B Connector
ML20	HARTING
PJ-102AH	DC Power Jack
1212 LHQ3NP Inductor	
LED-0603	LED
LED-0603	LED

## debug\_backplane

LED-0603	LED
SOT353	Common source dual n-channel mosfet
SOT23-3	Generic NMOS footprint
0603-RES	Resistor
0805_RES	Resistor
0402_RES-HIG	Resistor with keepout, for inline on high-speed traces (e.g. USB)
0402_RES-HIG	Resistor with keepout, for inline on high-speed traces (e.g. USB)
0402_RES-HIG	Resistor with keepout, for inline on high-speed traces (e.g. USB)
0402_RES-HIG	Resistor with keepout, for inline on high-speed traces (e.g. USB)
0402_RES-HIG	Resistor with keepout, for inline on high-speed traces (e.g. USB)
0402_RES-HIG	Resistor with keepout, for inline on high-speed traces (e.g. USB)
0603-RES	Resistor



## debug\_backplane

0603-RES	Resistor
MSOP-8EP	USB Power Switch
MSOP-8EP	USB Power Switch
B3U-1000P	Switch
B3U-1000P	Switch
B3U-1000P	Switch
B3U-1000P	Switch
B3U-1000P	Switch
B3U-1000P	Switch
SC70-6	MUX
SC70-6	MUX
RM-SWITCH	Rotary Switch 6 Position SP6T 500mA (DC) 24VDC Through Hole
TDFN4	High power (2.4 A) high-side switch
TDFN4	High power (2.4 A) high-side switch
S-PVQFN-N14-3.5MM	
TE_SSA12/SPDSWITCH SLIDE SPDT 2POS SSA SER	
TESTPOINT_0.(0.040in	Test Point



## debug\_backplane

QFN32	Source: <a href="http://www.ftdichip.com/Documents/DataSheets/DS_FT232R_v1">http://www.ftdichip.com/Documents/DataSheets/DS_FT232R_v1</a>
UMLP-8	Dual Supply, 2-Bit Voltage Translator / Buffer / Repeater / Isolator for I2C
UMLP-8	Dual Supply, 2-Bit Voltage Translator / Buffer / Repeater / Isolator for I2C
DFN-6-2MMX3M2C	Battery Gas Gauge
SOT-23-5	IC REG LDO 3.3V 0.3A TSOT23-5
QFN-20-4MM	GPIO Extender via I2C - 8 Pin
QFN-20-4MM	GPIO Extender via I2C - 8 Pin
QFN-N20	1-4 I2C/SMBUS Multiplexer with interrupt for power supply coulomb coun
QFN-48-7MM	Atmel SAM4L microcontroller. ARM Cortex M4 with 512 KB Flash and 6
VFSOP-8	Bidirectional Buffer / Level Converter 2 Circuits
VFSOP-8	Bidirectional Buffer / Level Converter 2 Circuits
VFSOP-8	Bidirectional Buffer / Level Converter 2 Circuits
VFSOP-8	Bidirectional Buffer / Level Converter 2 Circuits
UQFN-10	USB Mux with OE control and ESD
UQFN-10	USB Mux with OE control and ESD
UQFN-10	USB Mux with OE control and ESD
LQFP-48	Full Speed USB Hub - 7 Port
FHXXX	Pericom Type FH 16 MHz 2.5 x 2.0 mm
ABMM	Low-Profile SMD crystal

debug\_backplane

DIGIKEY	MF	MOUSER	MPN	NEWARK OC_FARNELL
1276-2141-1-ND				
1276-2141-1-ND				
478-1167-1-ND				
478-1167-1-ND				
399-8827-1-ND				
490-1313-1-ND				
478-1129-1-ND				
478-1129-1-ND				
478-1129-1-ND				
490-1532-1-ND				
478-1129-1-ND				
490-1532-1-ND				
490-1532-1-ND				
490-1532-1-ND				

## debug\_backplane

490-1532-1-ND		
490-3296-1-ND		
490-3296-1-ND		
490-3297-1-ND		
490-3297-1-ND		
490-3297-1-ND		
490-5915-1-ND		
1276-3367-1-ND		
1276-3367-1-ND		
160-1446-1-ND		
296-6596-1-ND		
296-6596-1-ND		
732-1593-1-ND		
490-5216-1-ND		
S9197-ND , S9194-ND , S7072-ND , S7072-ND		
S9195-ND , S7072-ND		
S9195-ND , S7072-ND		
H125274CT-ND	798-ZX62R-B-5P	69W0714
S9172-ND		unknown
CP-102AH-ND		
490-5350-1-ND		
160-1447-1-ND		
160-1446-1-ND		

## debug\_backplane

160-1447-1-ND  
160-1446-1-ND  
160-1827-1-ND  
160-1827-1-ND  
160-1827-1-ND  
160-1827-1-ND  
160-1827-1-ND  
160-1827-1-ND  
160-1827-1-ND  
160-1447-1-ND  
160-1446-1-ND  
160-1447-1-ND  
160-1446-1-ND  
DMN32D2LDF-7DICT-ND  
SI2302CDS-T1-E3DKR-ND  
SI2302CDS-T1-E3DKR-ND  
SI2302CDS-T1-E3DKR-ND  
SI2302CDS-T1-E3DKR-ND  
SI2302CDS-T1-E3DKR-ND  
SI2302CDS-T1-E3DKR-ND  
SI2302CDS-T1-E3DKR-ND  
SI2302CDS-T1-E3DKR-ND  
SI2302CDS-T1-E3DKR-ND  
311-0.0GRCT-ND  
WSLPB-.017CT-ND  
WSLPB-.017CT-ND  
WSLPB-.017CT-ND  
WSLPB-.017CT-ND  
311-27JRCT-ND  
311-27JRCT-ND  
311-27JRCT-ND  
311-27JRCT-ND  
311-27JRCT-ND  
311-27JRCT-ND  
311-47GRCT-ND  
311-47GRCT-ND  
311-47GRCT-ND  
311-47GRCT-ND  
311-1.0KGRCT-ND  
311-1.0KGRCT-ND

debug\_backplane

311-1.0KGRCT-ND  
311-1.5KGRCT-ND  
311-1.5KGRCT-ND  
311-1.5KGRCT-ND  
311-2.0KJRCT-ND  
311-10KGRCT-ND  
311-15KGRCT-ND  
311-15KGRCT-ND  
311-15KGRCT-ND  
311-15KGRCT-ND  
311-15KGRCT-ND  
311-15KGRCT-ND

debug\_backplane

311-15KGRCT-ND  
311-100KGRCT-ND  
311-100KGRCT-ND  
311-100KGRCT-ND  
311-100KGRCT-ND  
311-10MGRCT-ND  
311-10MGRCT-ND  
311-10MGRCT-ND  
311-10MGRCT-ND  
311-10MGRCT-ND  
311-10MGRCT-ND  
311-10MGRCT-ND  
AP2401MP-13DICT-ND  
AP2401MP-13DICT-ND  
SW1020CT-ND  
SW1020CT-ND  
SW1020CT-ND  
SW1020CT-ND  
SW1020CT-ND  
SW1020CT-ND  
NC7SZ157P6XCT-ND  
NC7SZ157P6XCT-ND  
CKN10703-ND  
SIP32402ADNP-T1GE4CT-ND  
SIP32402ADNP-T1GE4CT-ND  
296-15258-1-ND  
296-15258-1-ND  
296-15258-1-ND  
296-15258-1-ND  
296-15258-1-ND  
450-1602-ND  
5001K-ND  
5001K-ND

debug\_backplane

5001K-ND

debug\_backplane

768-1307-ND	FT232RQ	1146033
769-1307-ND	FT232RQ	1146033
770-1307-ND	FT232RQ	1146033
771-1307-ND	FT232RQ	1146033
772-1307-ND	FT232RQ	1146033
FXMA2102UMXCT-ND		
FXMA2102UMXCT-ND		
LTC2941IDCB#TRMPBFCT-ND		
MAX8887EZK33+TCT-ND		
MCP23008-E/ML-ND		
MCP23008-E/ML-ND		
296-20960-1-ND		
ATSAM4LC8AA-MU-ND		
296-17014-1-ND		
296-24684-1-ND		
296-24684-1-ND		
296-24684-1-ND		
296-37871-1-ND		
FH1600015CT-ND		
535-10156-1-ND		

debug\_backplane

OC\_NEWARK

debug\_backplane

unknown

debug\_backplane

91K9919  
91K9919  
91K9919  
91K9919  
91K9919