EXPANSION BOARD FOR THE INTEL® JOULE™ COMPUTE MODULE

BPAGE DRAWING

consumer_fab4.sch_1.1
Fri Aug 12 10:48:14 2016

COVER PAGE

BOM_RELEASE_DATE	2016	PB_NUMBER J28235-004		
SIGNATURE	DATE	INTEL CORPORATION	2200 MISSION BLVD SANTA CLARA, CA 95054	
DRN_BY design team	12082016			
CHK_BY Design Team	2016	TITLE Expansion Board FOR THE INTEL® JOULE™ COMPUTE MODULE		
ENGR_APVD design team	2016			
VARIANT: PRIMARY			DOCUMENT_NUMBER CDI 567365	REV 1.12 / PAGE 1/23

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BPAGE DRAWING

consumer_fab4.sch_1.2
Thu Aug 11 09:17:27 2016

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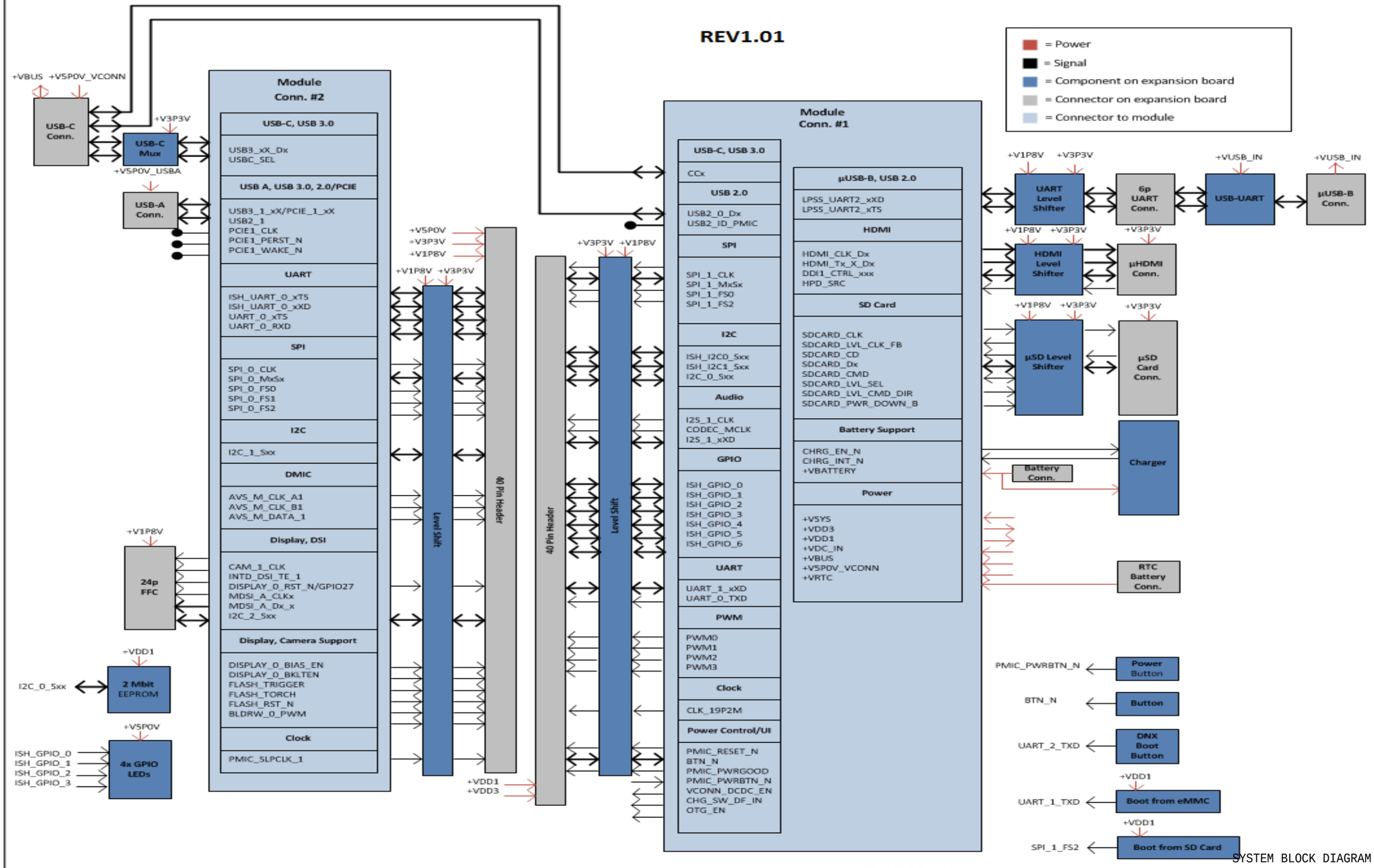
VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	2/23

REV1.01

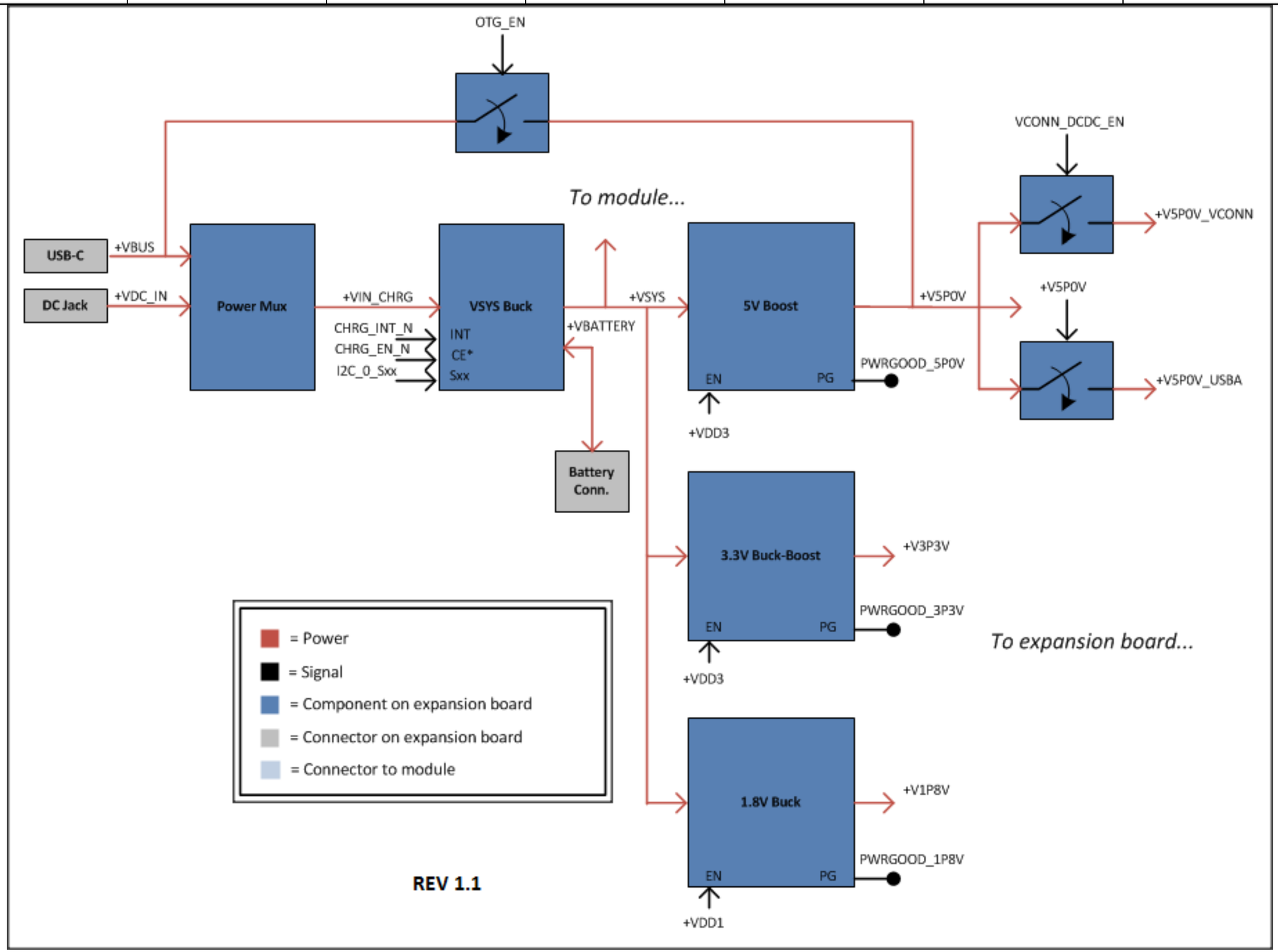


SYSTEM BLOCK DIAGRAM

BPAGE DRAWING

consumer_fab4.sch_1.3
Wed Aug 17 16:58:19 2016

VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	3/23



POWER DELIVERY BLOCK DIAGRAM

BPAGE DRAWING
consumer_fab4.sch_1.4
Thu Sep 01 16:45:31 2016

VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	4/23

I2C MAP

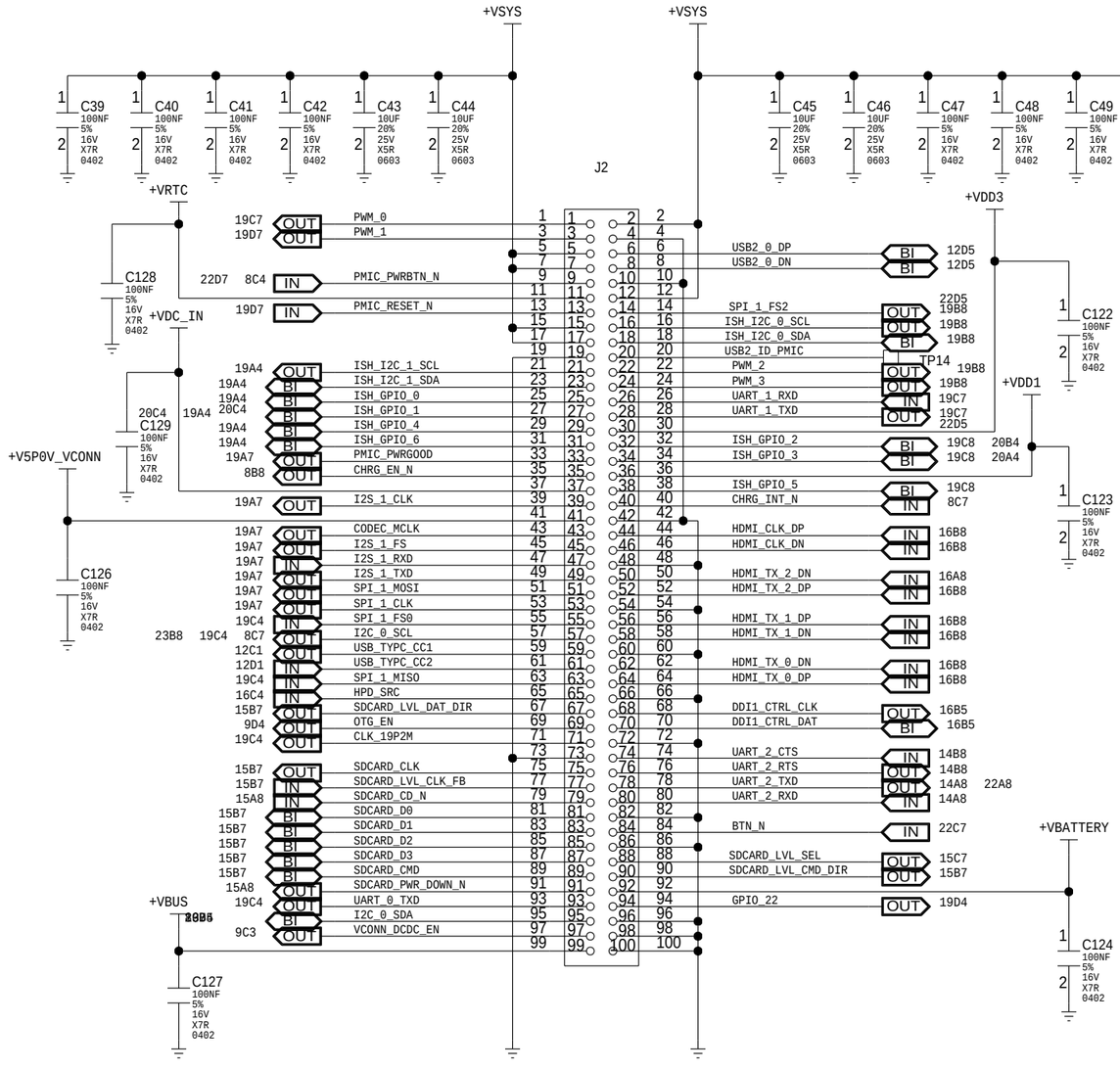
PORT	DEVICE	MPN	ADDRESS
I2C 0	VSYS BUCK	BQ25892	0X6B
I2C 0	EEPROM	M24M02-DRMN6TP	0X50-0X53 AND 0X58-0X5B (PU/PD CONFIG)
I2C 1	NC	NC	NC
I2C 2	NC	NC	NC

BPAGE DRAWING
consumer_fab4.sch_1.5
Thu Sep 01 16:37:32 2016

I2C MAP

VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	5/23

CONNECTOR\RECEPTACLE FOR MODULE

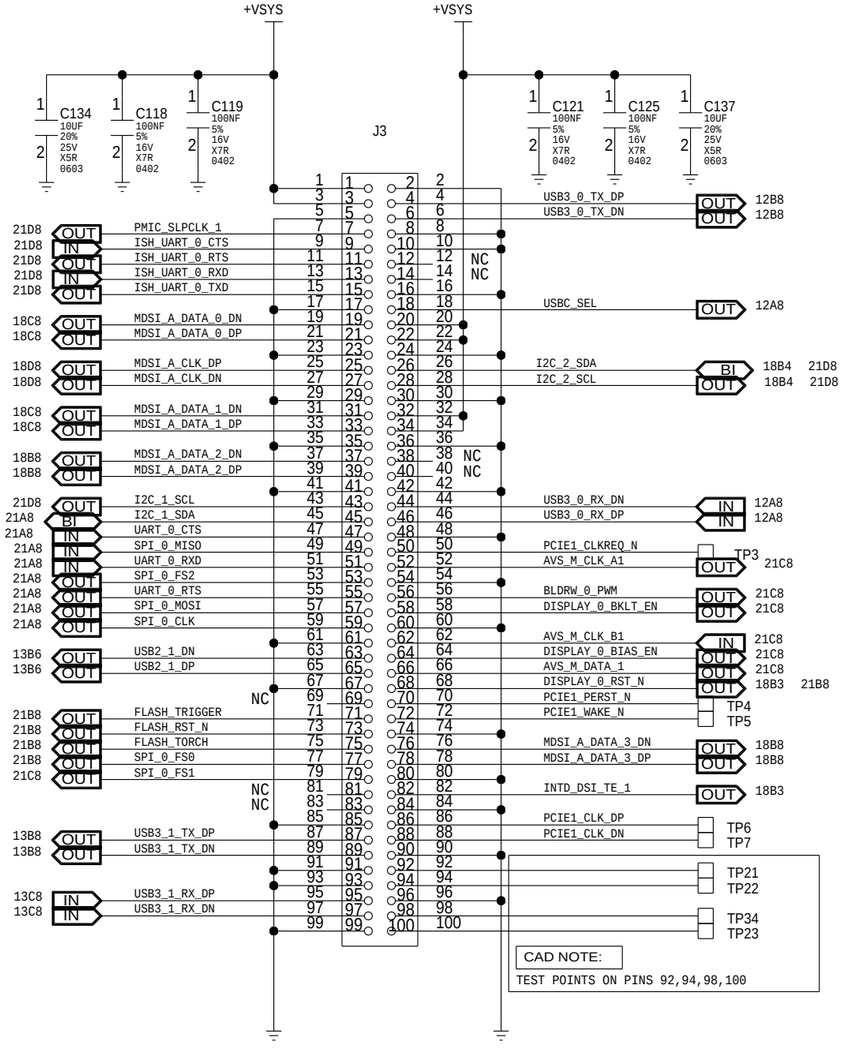


DF40C-100DS-0.4V(51)

CAD NOTE:

PLACE TEST POINTS ON SECONDARY SIDE

CONNECTOR\RECEPTACLE FOR MODULE



DF40C-100DS-0.4V(51)

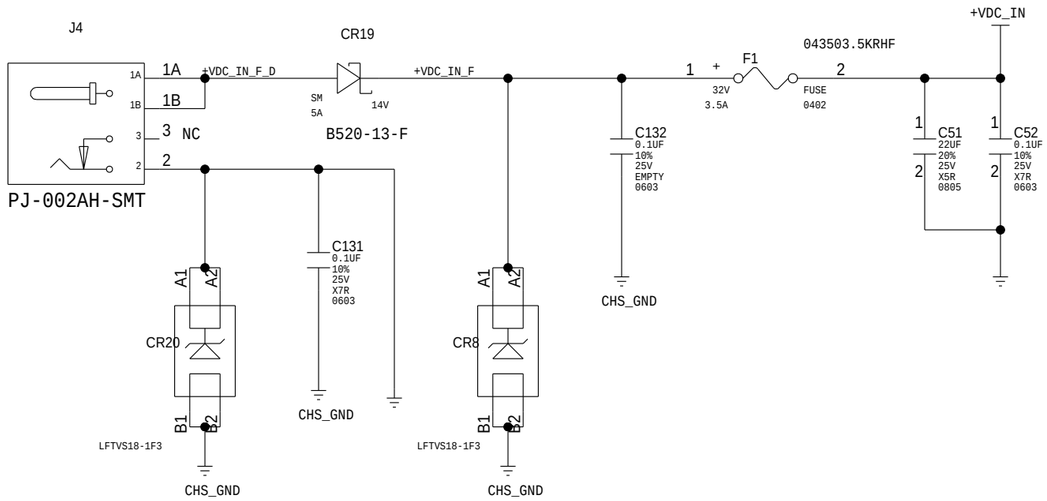
BPAGE DRAWING

consumer_fab4.sch_1.6
Fri Aug 12 10:47:57 2016

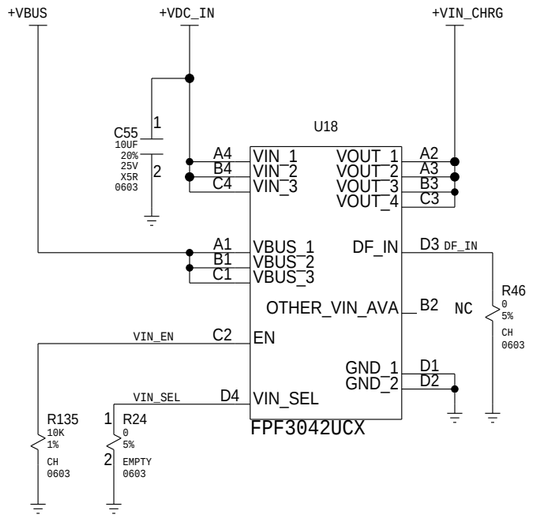
MODULE CONNECTOR INTERFACE

VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	6/23

DC JACK



INPUT POWER MUX



DESIGN NOTE:

+VDC_IN IS DEFAULT WHEN +VBUS AND +VDC_IN ARE PRESENT

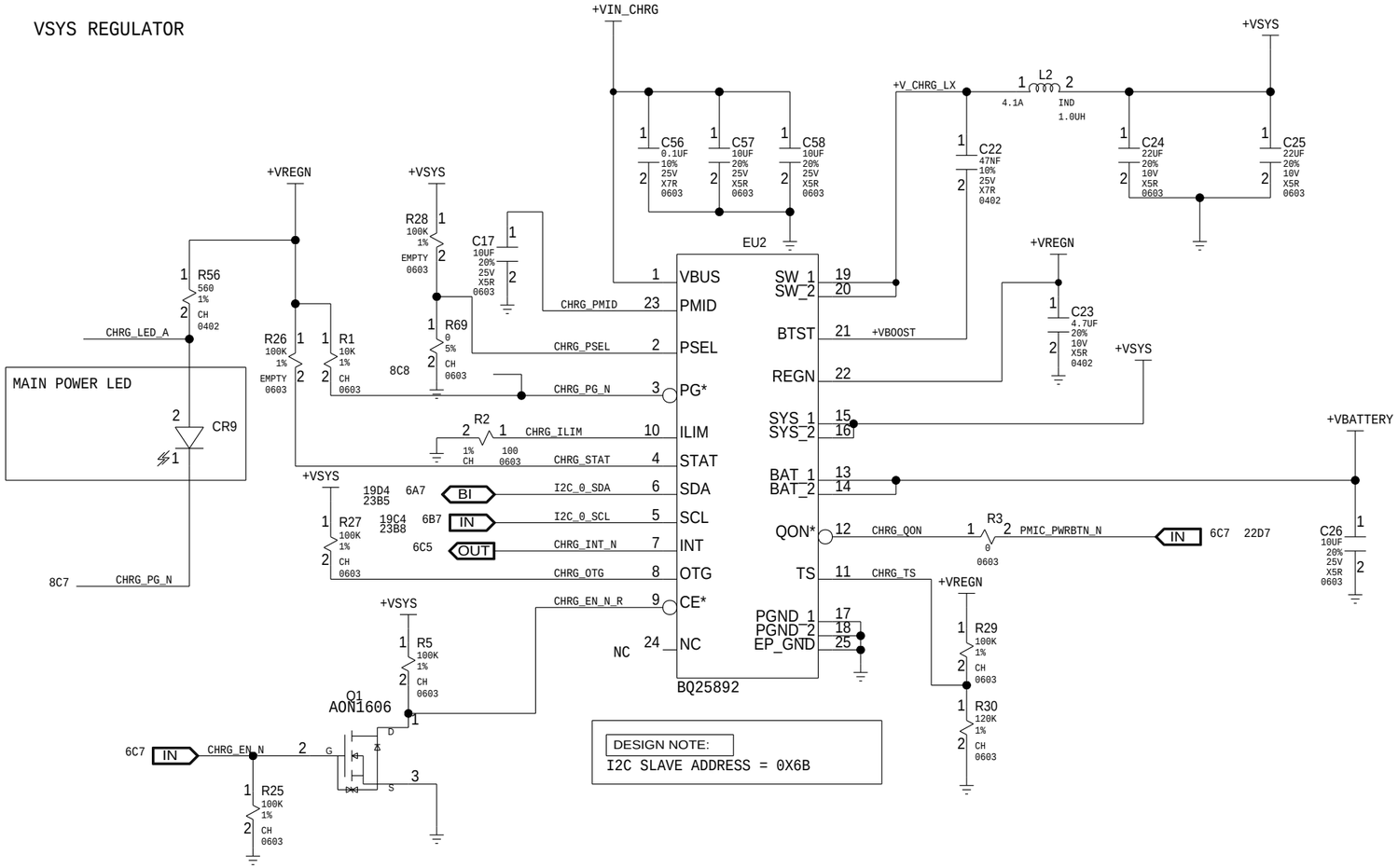
BPAGE DRAWING

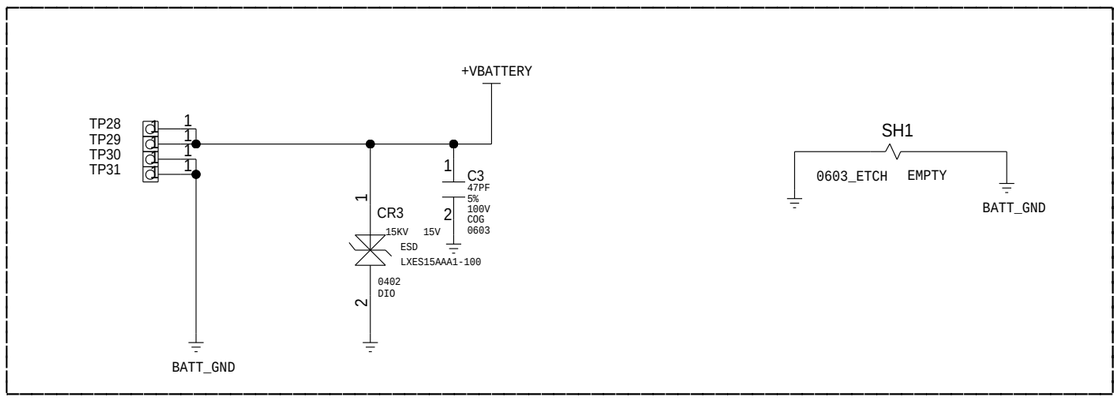
consumer_fab4.sch_1.7
Tue Aug 16 15:55:16 2016

POWER: DC JACK & INPUT POWER MUX

VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	7/23

VSYS REGULATOR





BPAGE DRAWING

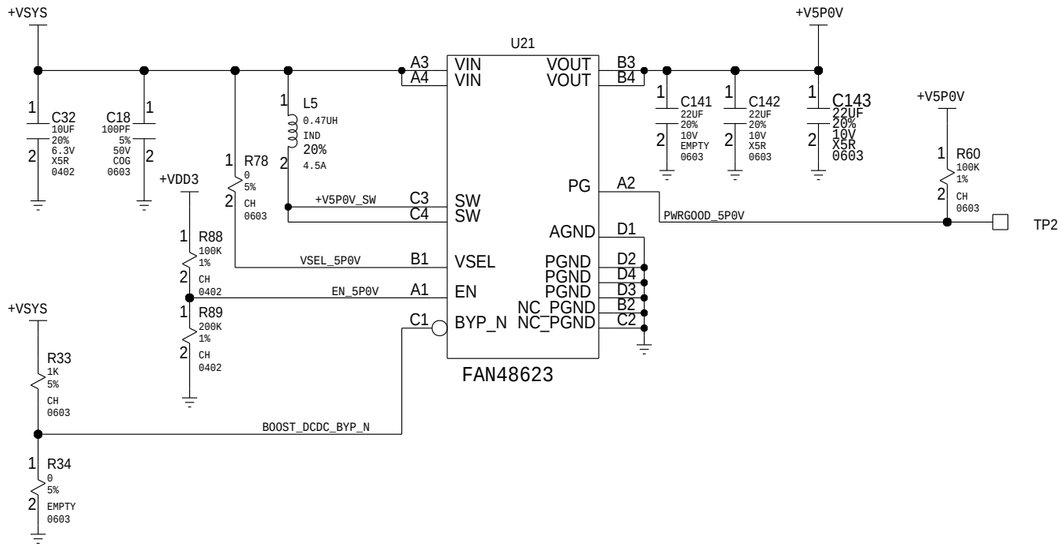
consumer_fab4.sch_1.8

Tue Aug 16 15:58:29 2016

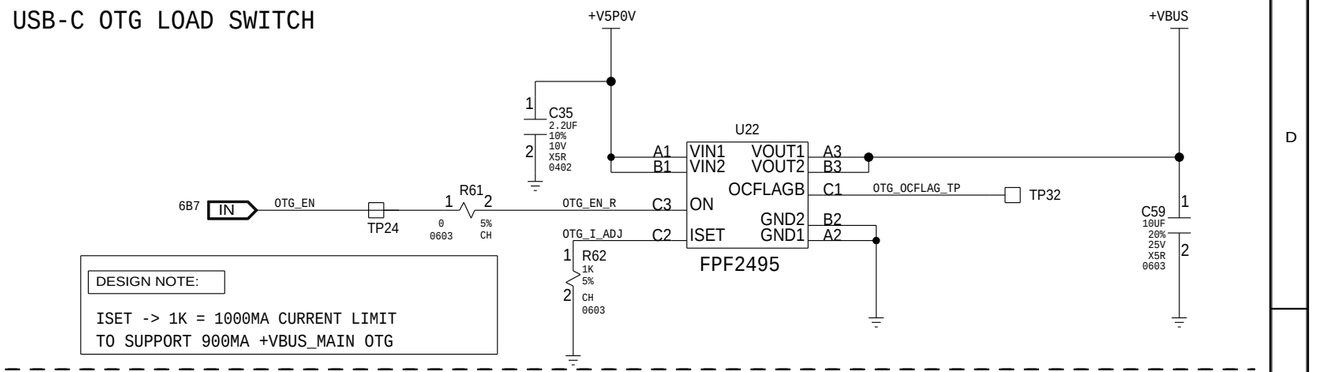
POWER: VSYS REGULATOR

VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	8/23

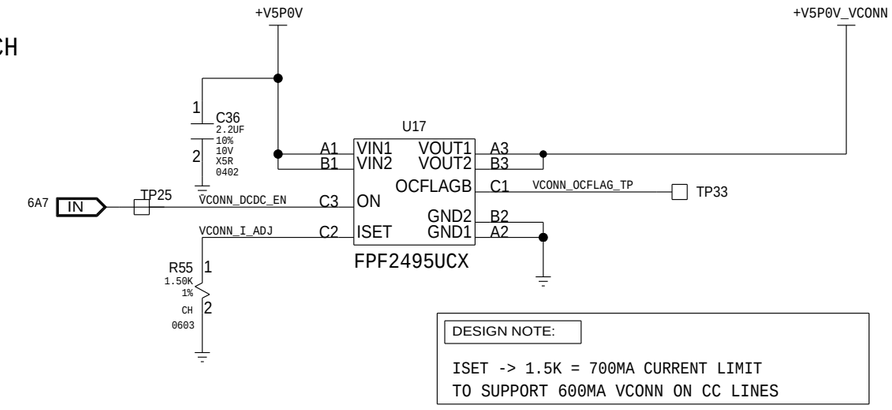
VSYS TO 5P0V BOOST REGULATOR



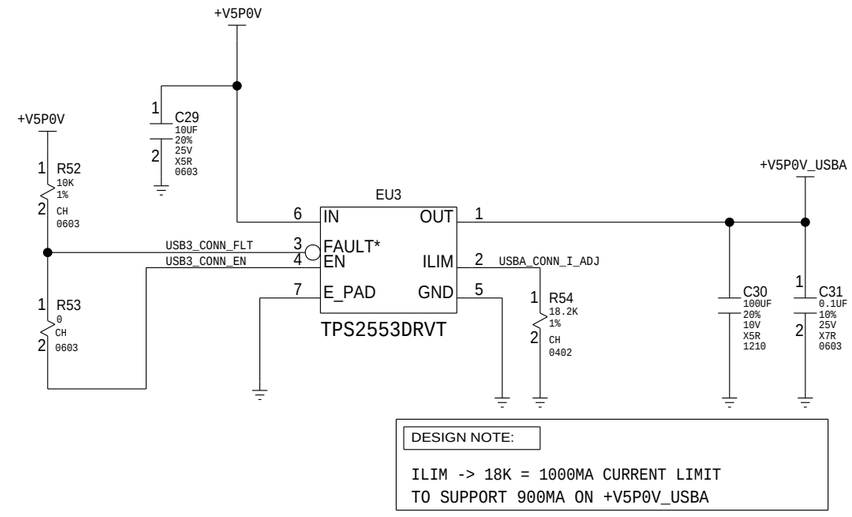
USB-C OTG LOAD SWITCH



USB-C VCONN LOAD SWITCH



USB 3.0 LOAD SWITCH



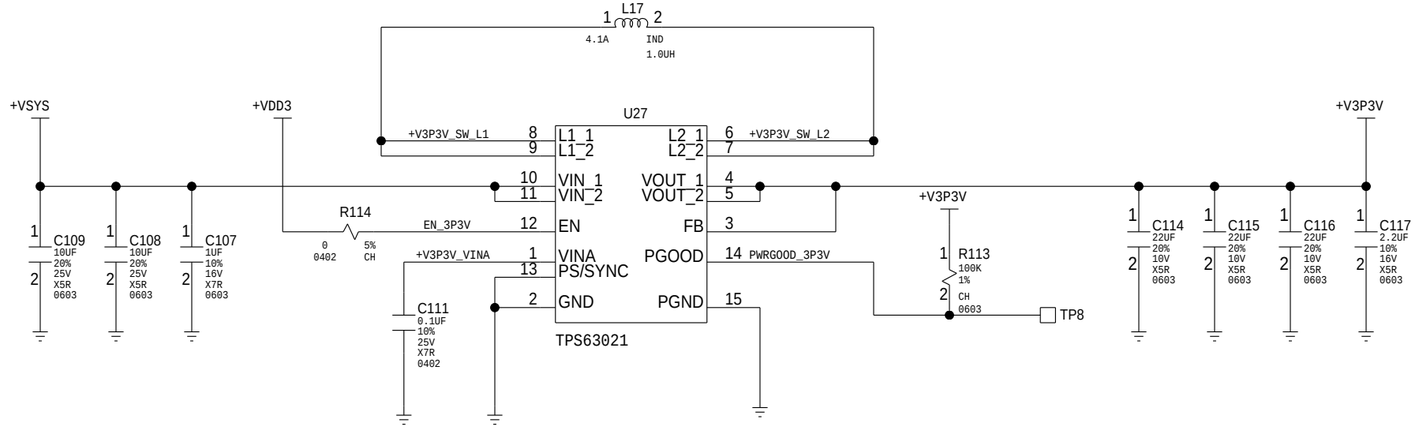
BPAGE DRAWING

consumer_fab4.sch_1.9
Thu Aug 11 09:31:47 2016

POWER: 5V BOOST

VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	9/23

VSYS TO 3.3V BUCK-BOOST REGULATOR

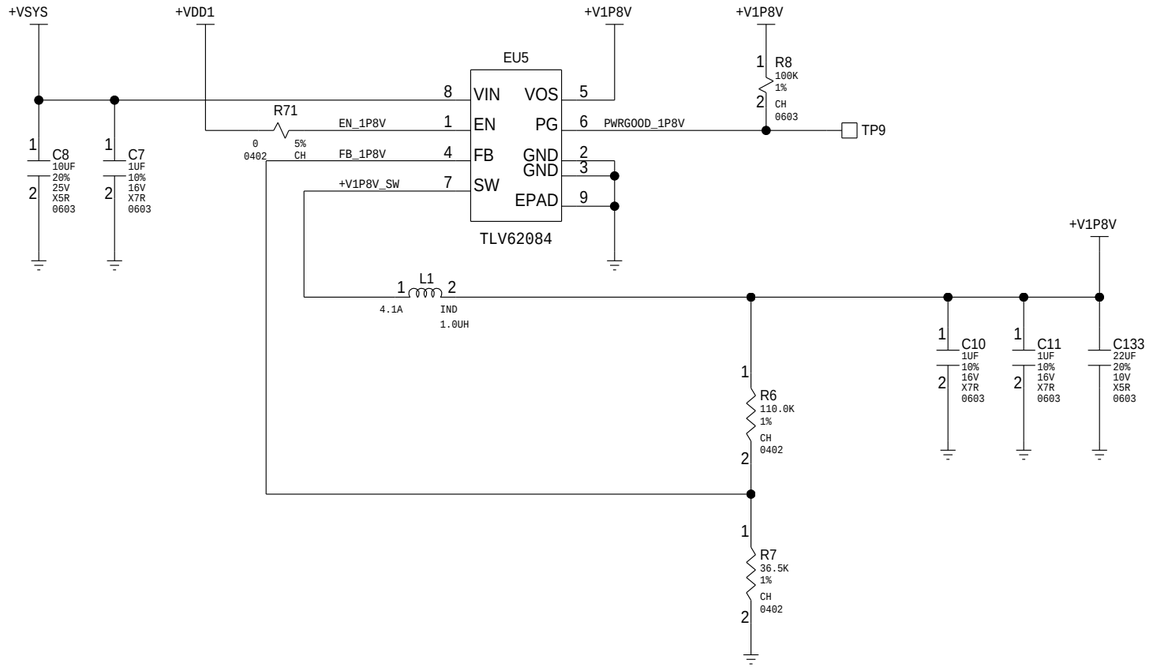


BPAGE DRAWING
consumer_fab4.sch_1.10
Thu Aug 11 09:33:32 2016

POWER 3P3V BUCK-BOOST

VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	10/23

VSYS TO 1.8V BUCK REGULATOR



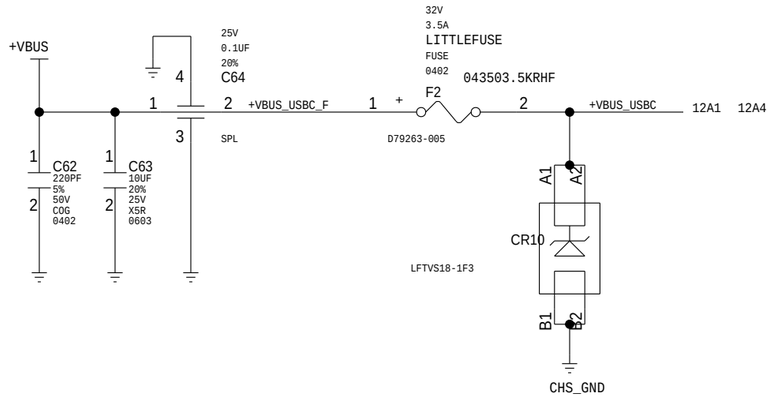
BPAGE DRAWING

consumer_fab4.sch_1.11
Thu Aug 11 09:34:12 2016

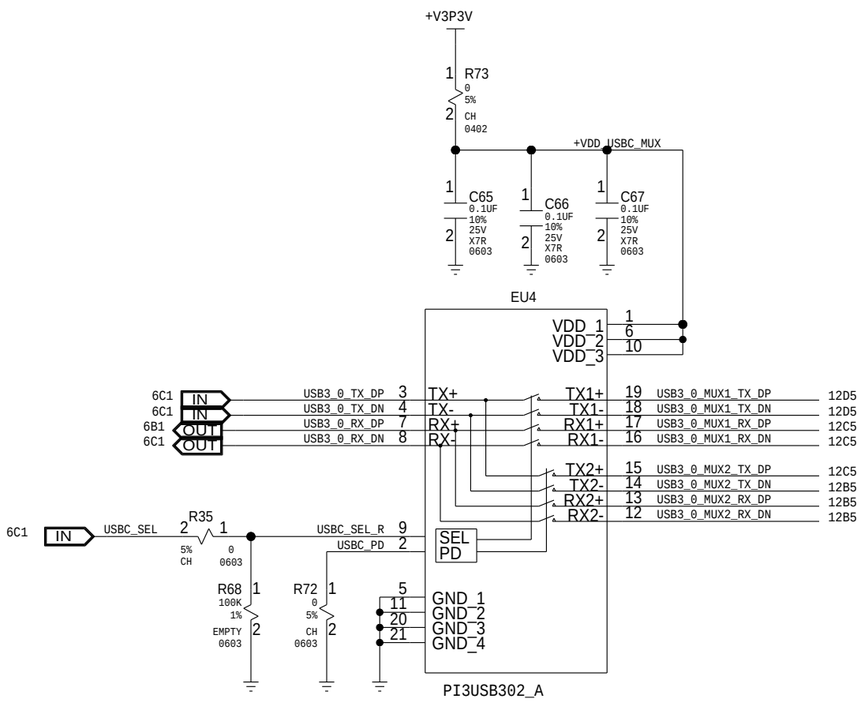
POWER: 1P8V BUCK

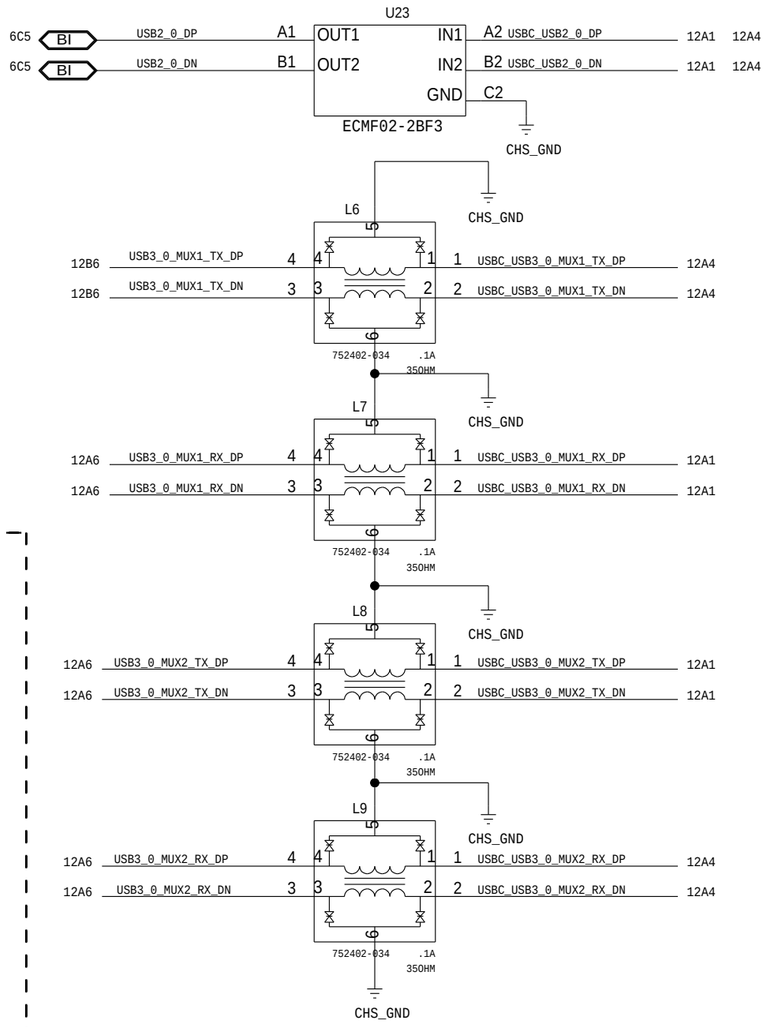
VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	11/23

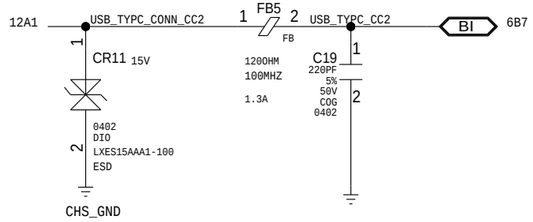
TYPE-C CMC, ESD FILTERS, DIODE PROTECT.

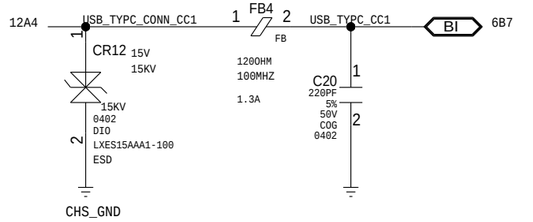


TYPE-C MUX

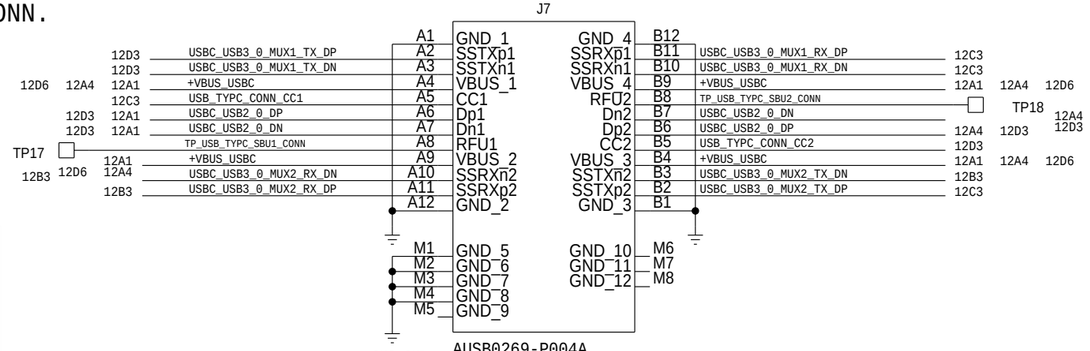








TYPE-C CONN.



CAD NOTE:

'USB-C' SILKSCREEN NEAR J7

CAD NOTE:

FOR BETTER CURRENT PATH
M5, M6, M7 AND M8 PINS
ARE INTENTIONALLY DISCONNECTED
THEY ARE CONNECTED TO
M1, M2, M3 AND M4 ON SHIELD

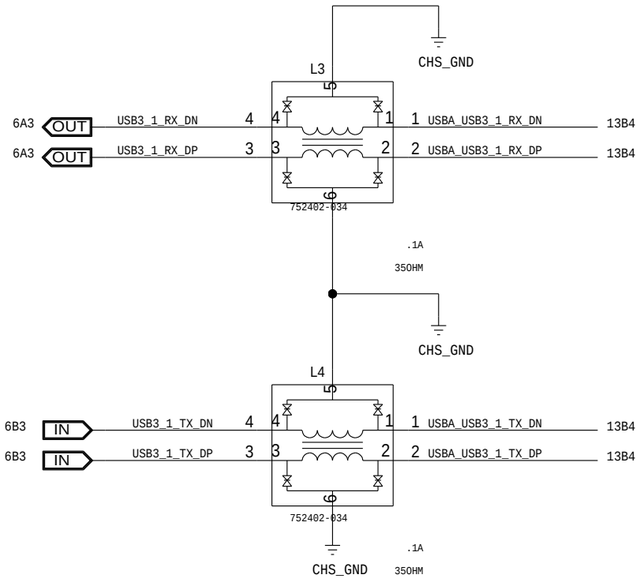
BPAGE DRAWING

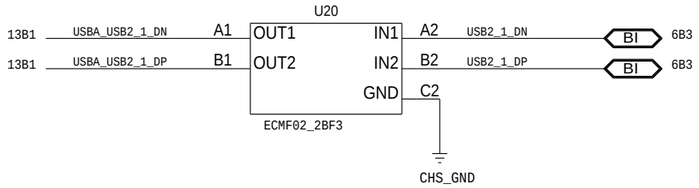
consumer_fab4.sch_1.12
Thu Aug 11 09:35:16 2016

USB: USB TYPE-C

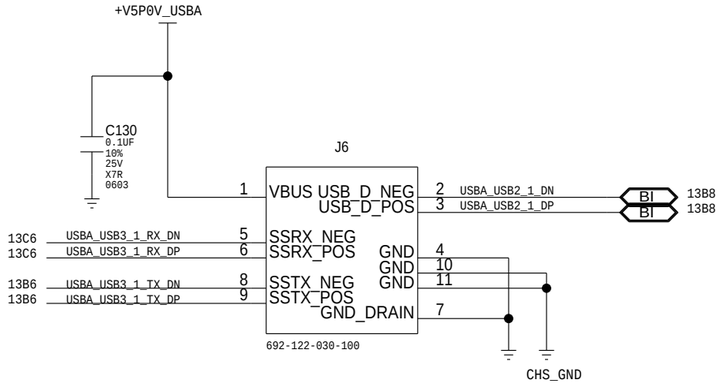
VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	12/23

USB 3.0 CMC, ESD FILTER





USB 3.0 TYPE-A CONNECTOR



BPAGE DRAWING
consumer_fab4.sch_1.13
Thu Aug 11 09:35:48 2016

USB: USB 3.0, USB TYPE-A

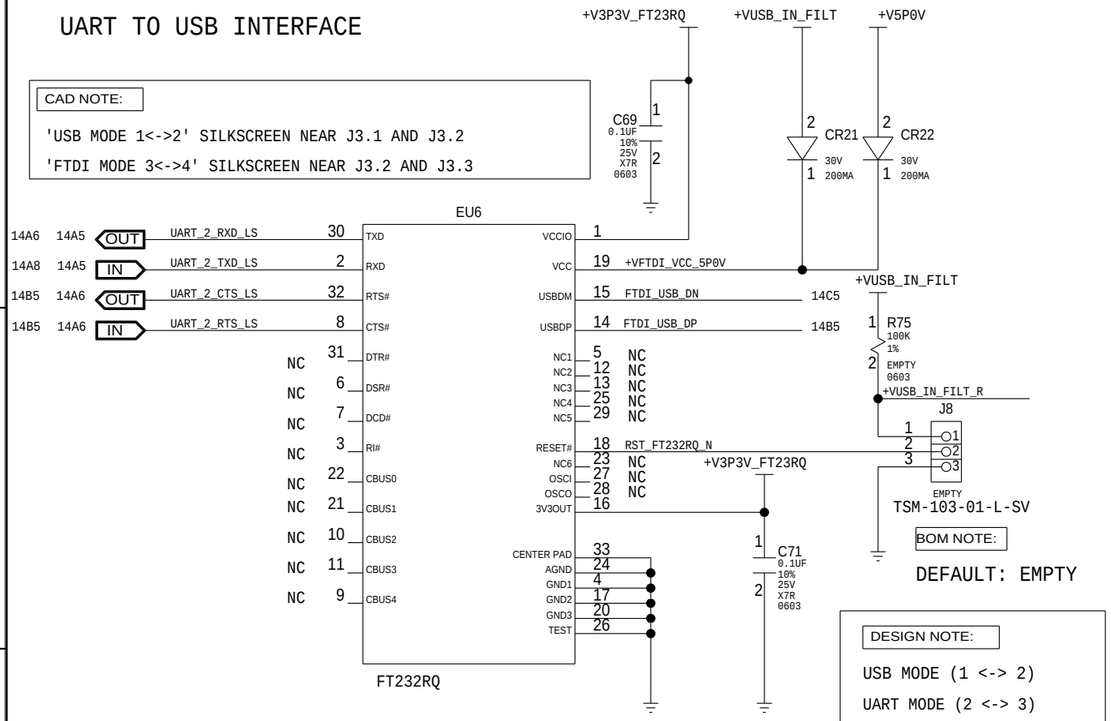
VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	13/23

UART TO USB INTERFACE

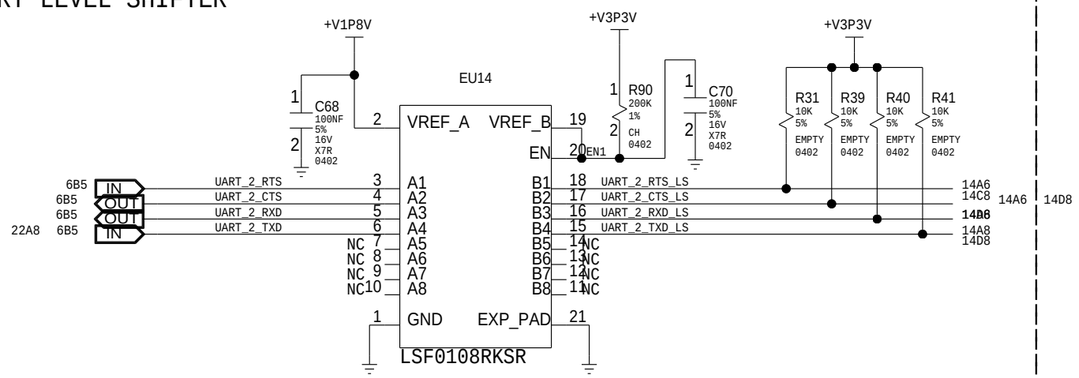
CAD NOTE:

'USB MODE 1<->2' SILKSCREEN NEAR J3.1 AND J3.2

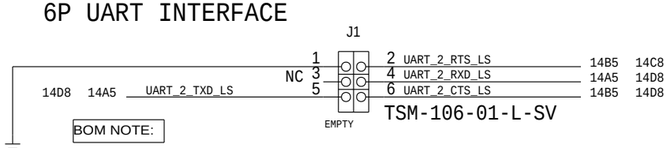
'FTDI MODE 3<->4' SILKSCREEN NEAR J3.2 AND J3.3



UART LEVEL SHIFTER



6P UART INTERFACE



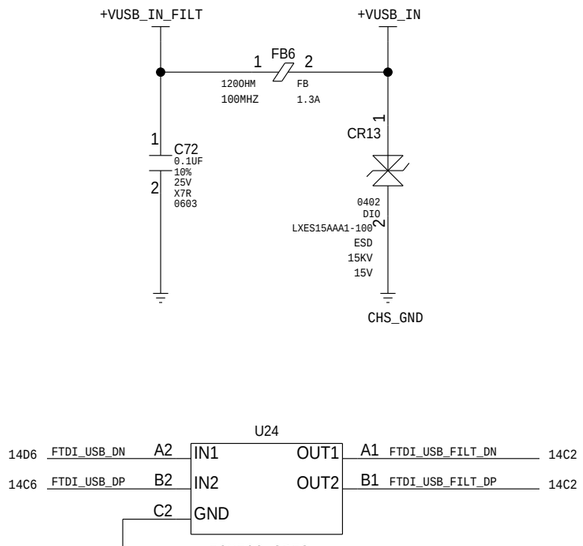
BOM NOTE:

DEFAULT: EMPTY

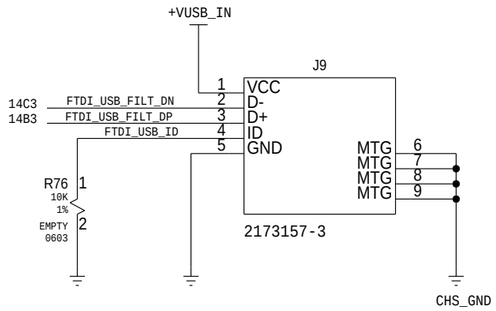
CAD NOTE:

'GND', 'RTS, 'NC', 'RXD', 'TXD', 'CTS' SILKSCREEN
NEAR RESPECTIVE PINS ON J1

SERIAL USB ESD FILTER



MICRO-B CONN. FOR SERIAL PROGRAMMING



BPAGE DRAWING

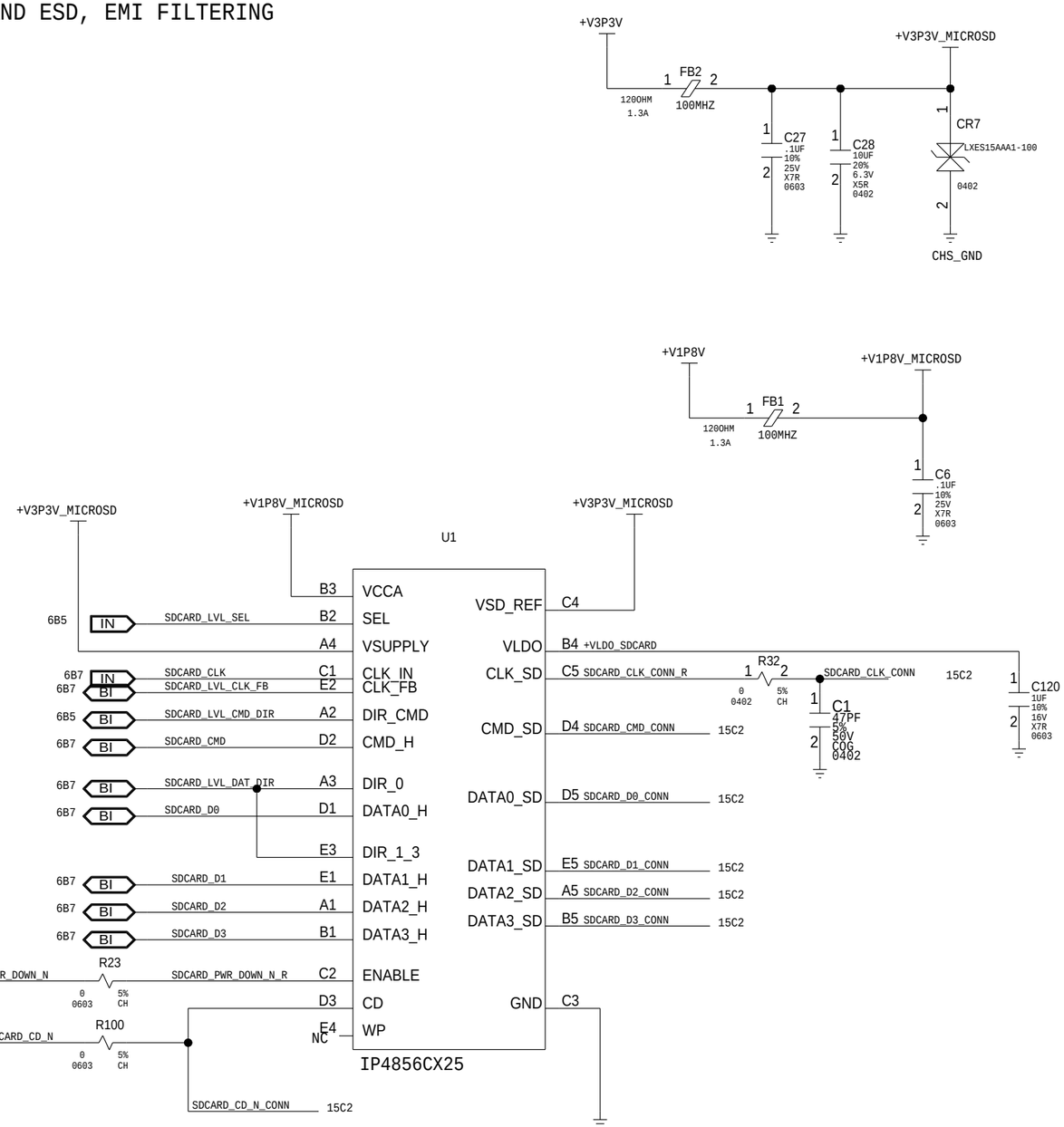
consumer_fab4.sch_1.14

Thu Aug 11 09:36:29 2016

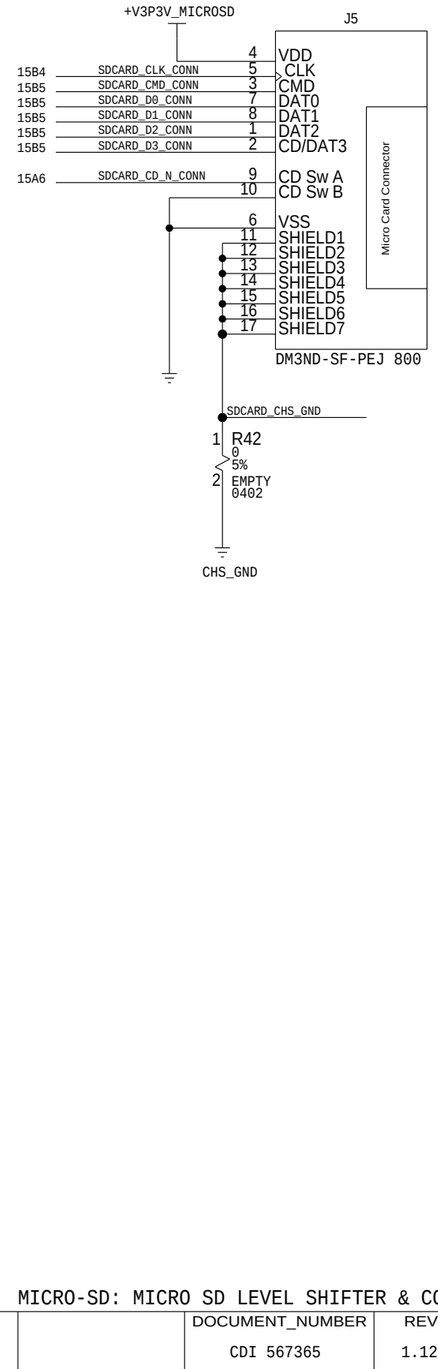
USB: UART TO USB INTERFACE, USB MICRO-B

VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	14/23

MICRO-SD LEVEL SHIFTER AND ESD, EMI FILTERING



MICRO-SD CONN.

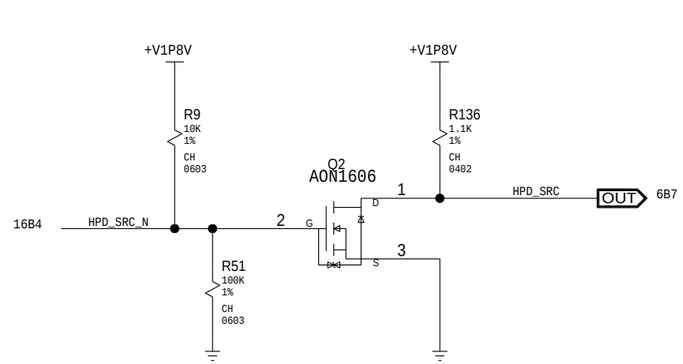


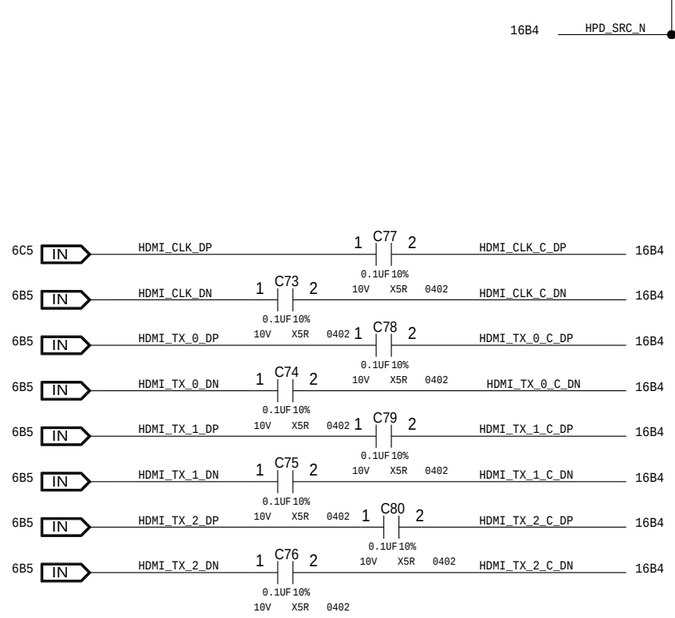
BPAGE DRAWING
consumer_fab4.sch_1.15
Tue Aug 16 16:00:47 2016

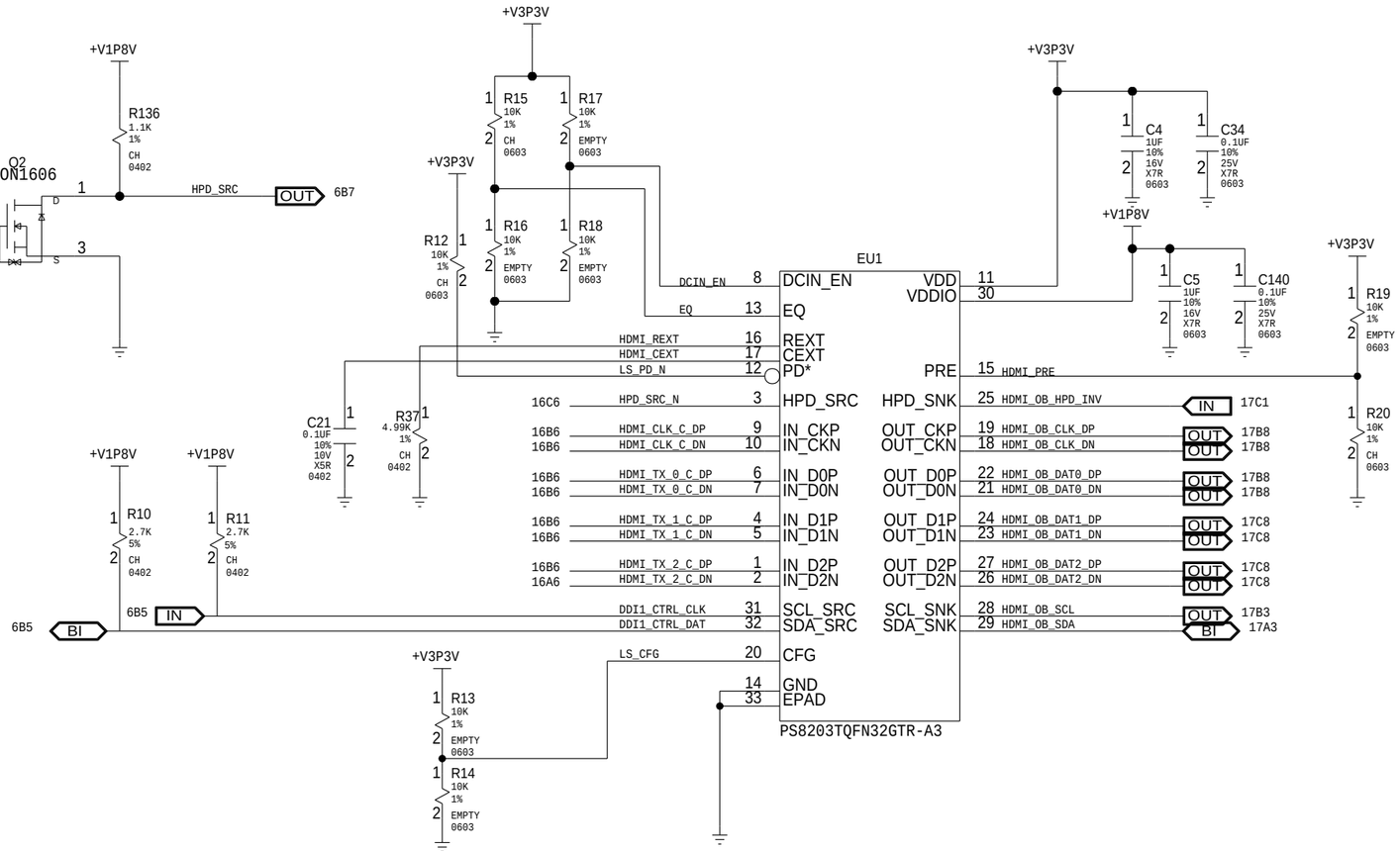
MICRO-SD: MICRO SD LEVEL SHIFTER & CONN

VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	15/23

HDMI LEVEL SHIFTER AND REDRIVER





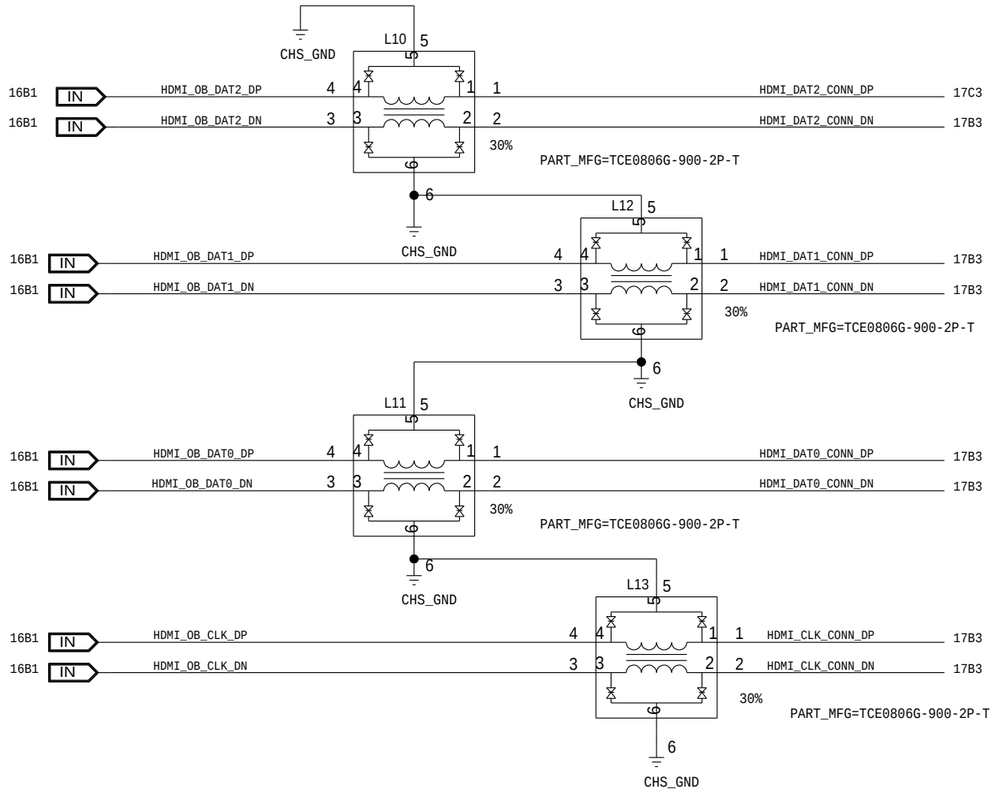


BPAGE DRAWING
consumer_fab4.sch_1.16
Thu Aug 11 09:37:53 2016

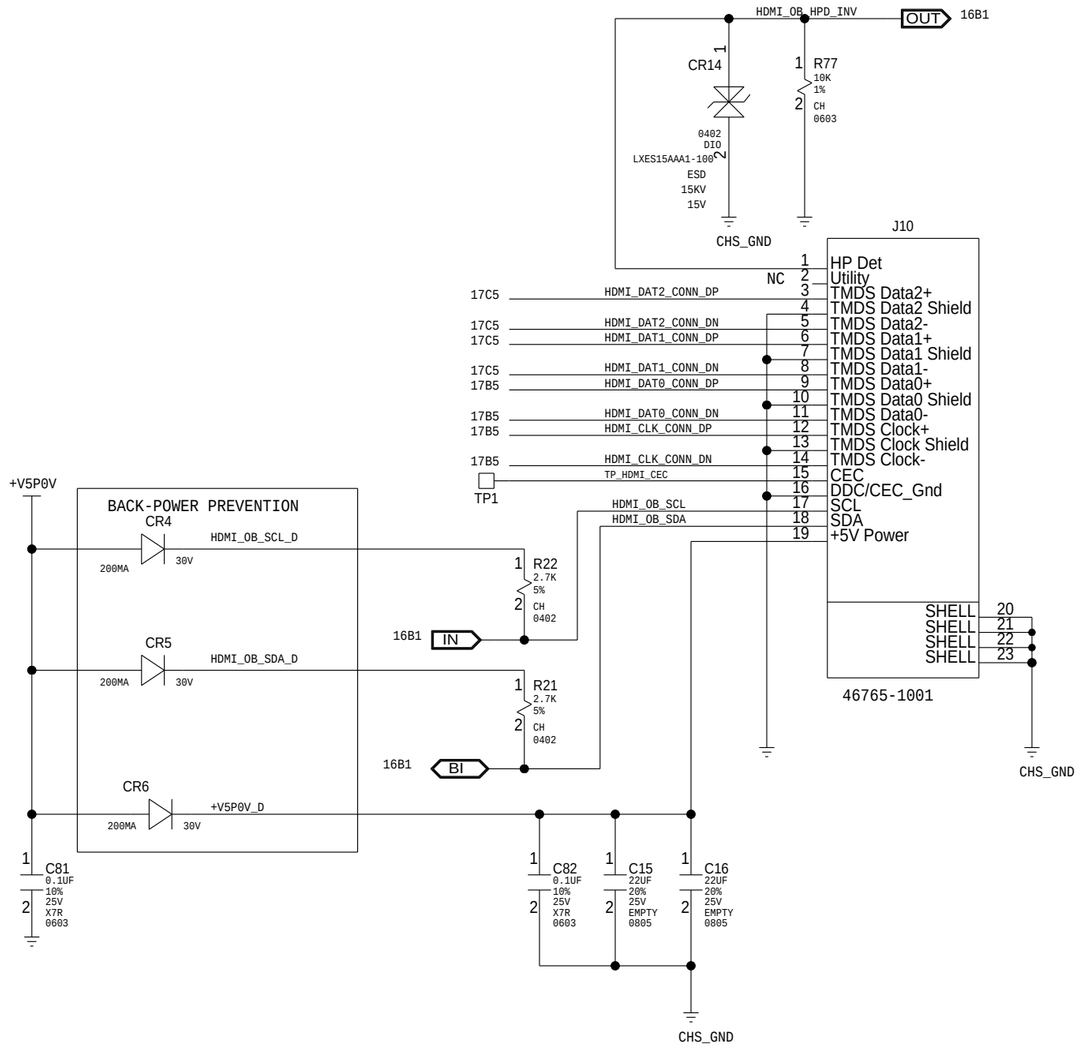
HDMI: HDMI LEVEL SHIFTER

VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	16/23

HDMI EMI FILTERING



MICRO-HDMI CONN.



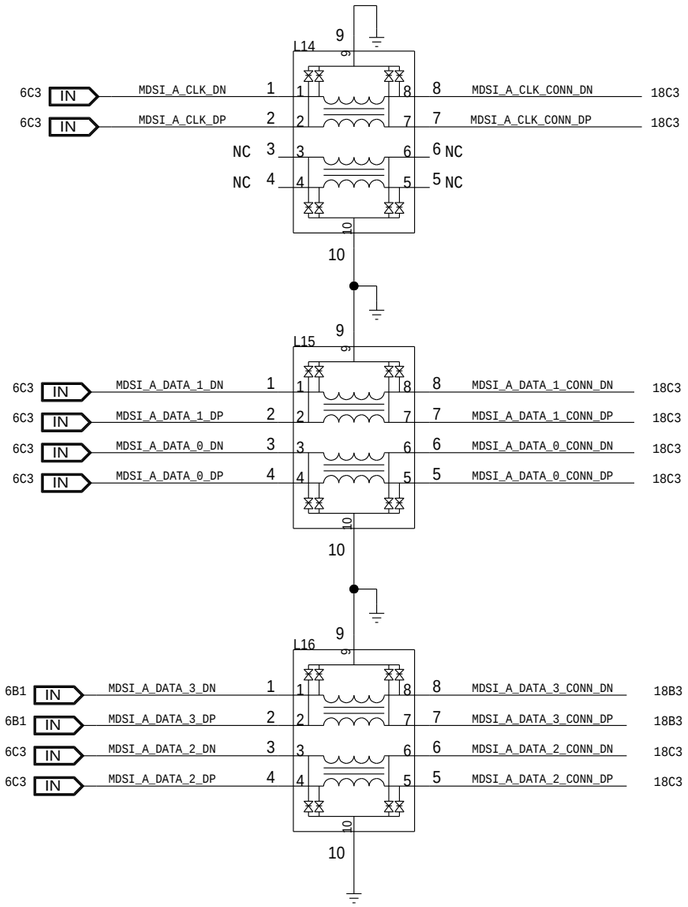
BPAGE DRAWING

consumer_fab4.sch_1.17
Tue Aug 16 16:01:58 2016

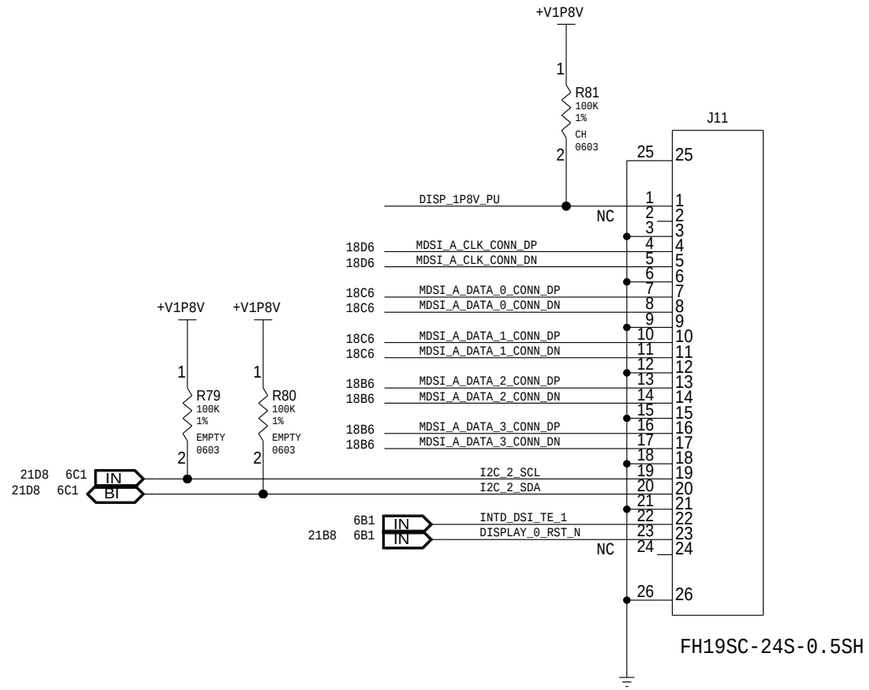
HDMI: MICRO-HDMI CONN

VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	17/23

MIPI DSI EMI FILTERING



MIPI DSI 24P FFC



CAD NOTE:

'MIPI DISPLAY' SILKSCREEN NEAR J11

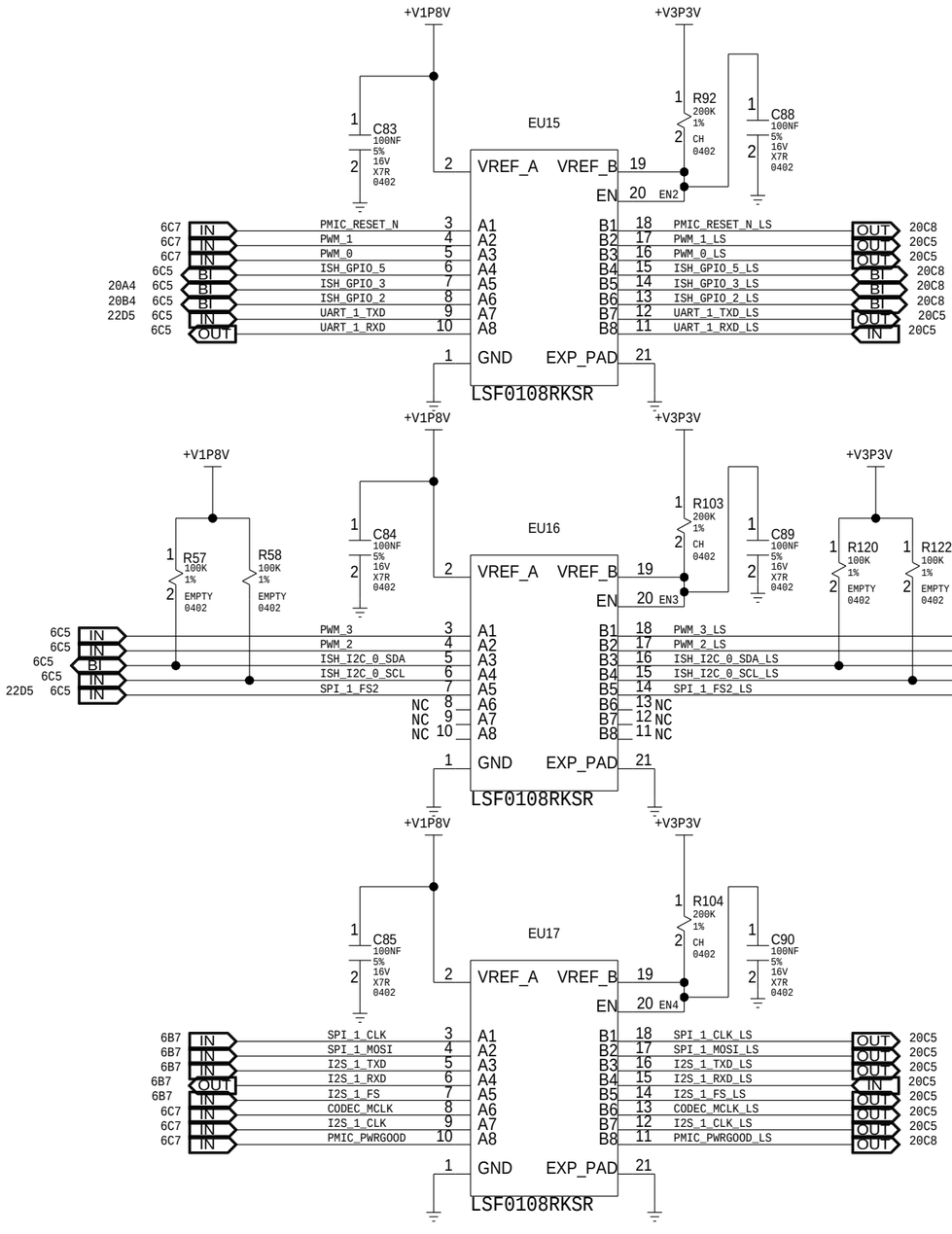
BPAGE DRAWING

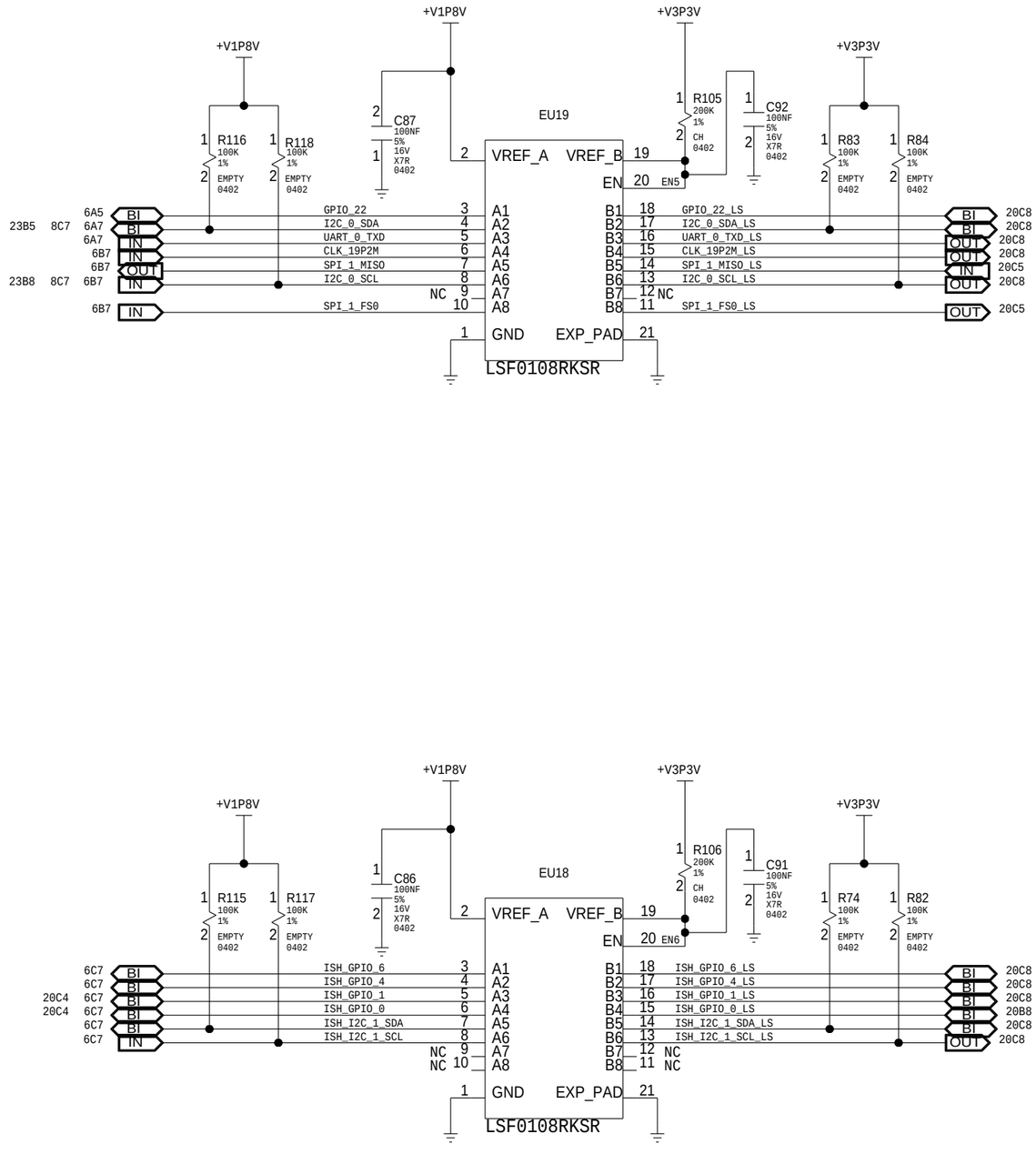
consumer_fab4.sch_1.18
Thu Aug 11 09:39:02 2016

DSI: MIPI DISPLAY CONN

VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	18/23

BREAKOUT #1 LVL SHIFT





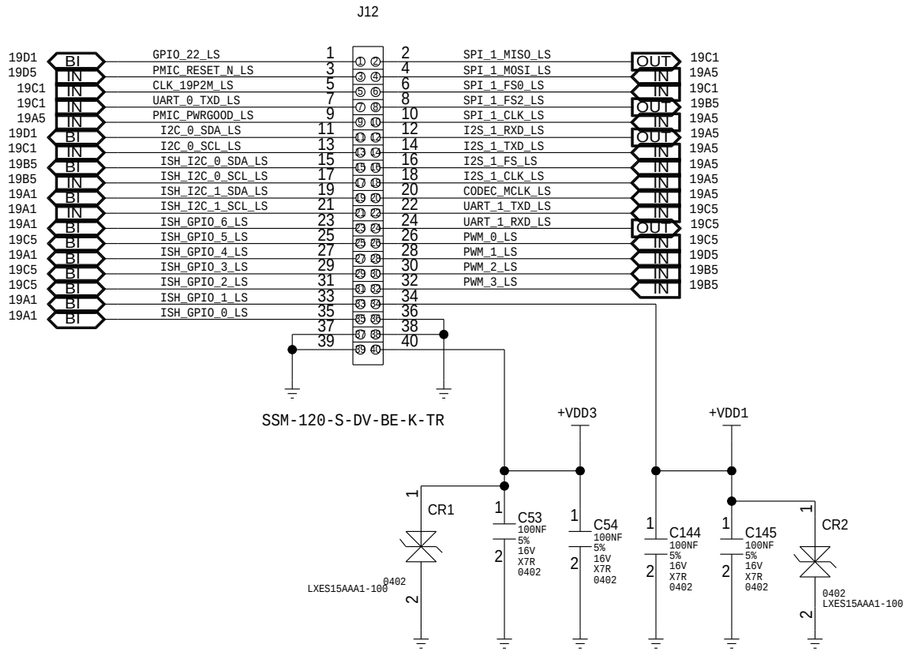
BPAGE DRAWING

consumer_fab4.sch_1.19
Tue Aug 16 16:02:40 2016

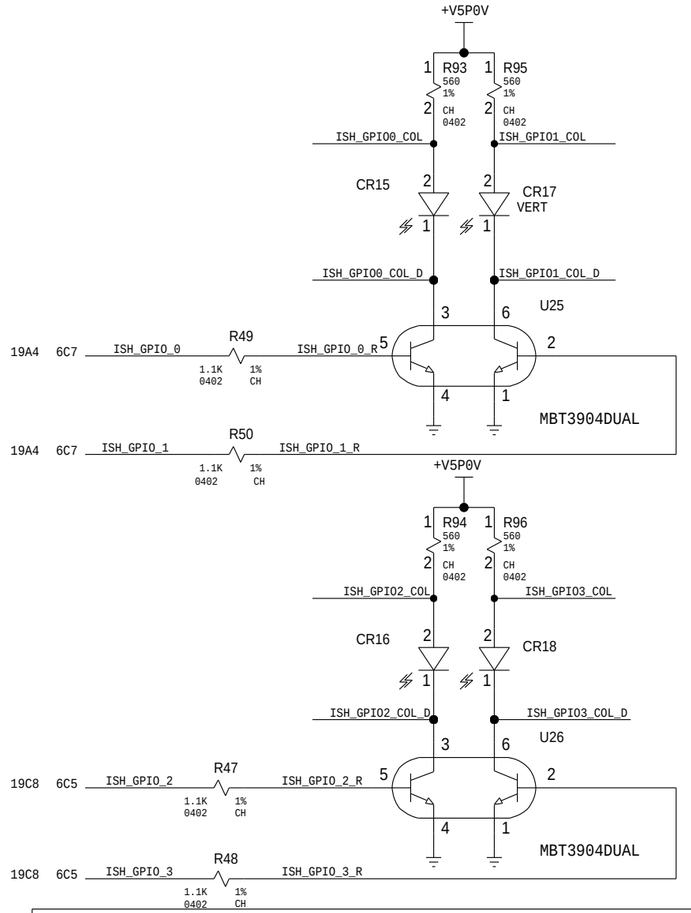
I/O: BREAKOUT #1 LEVEL SHIFTERS

VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	19/23

40P I/O BREAKOUT



GPIO LEDS (1 NIBBLE).



CAD NOTE:

PLACE CR15 NEAR J12.21, PLACE CR16 NEAR J12.25

PLACE CR17 NEAR J12.23, PLACE CR18 NEAR J12.27

CAD NOTE:

'GPIO0', 'GPIO1', 'GPIO2', 'GPIO3' SILKSCREEN NEAR

CR15, CR17, CR16, CR18, RESPECTIVELY

BPAGE DRAWING

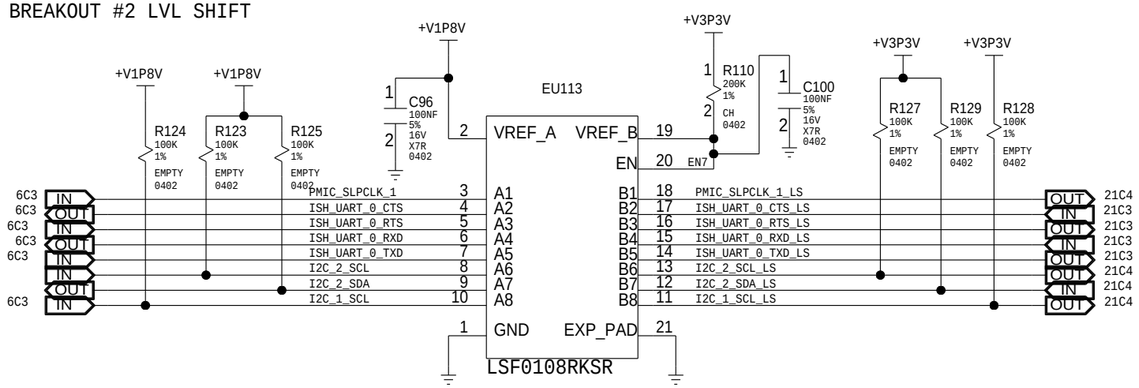
consumer_fab4.sch_1.20

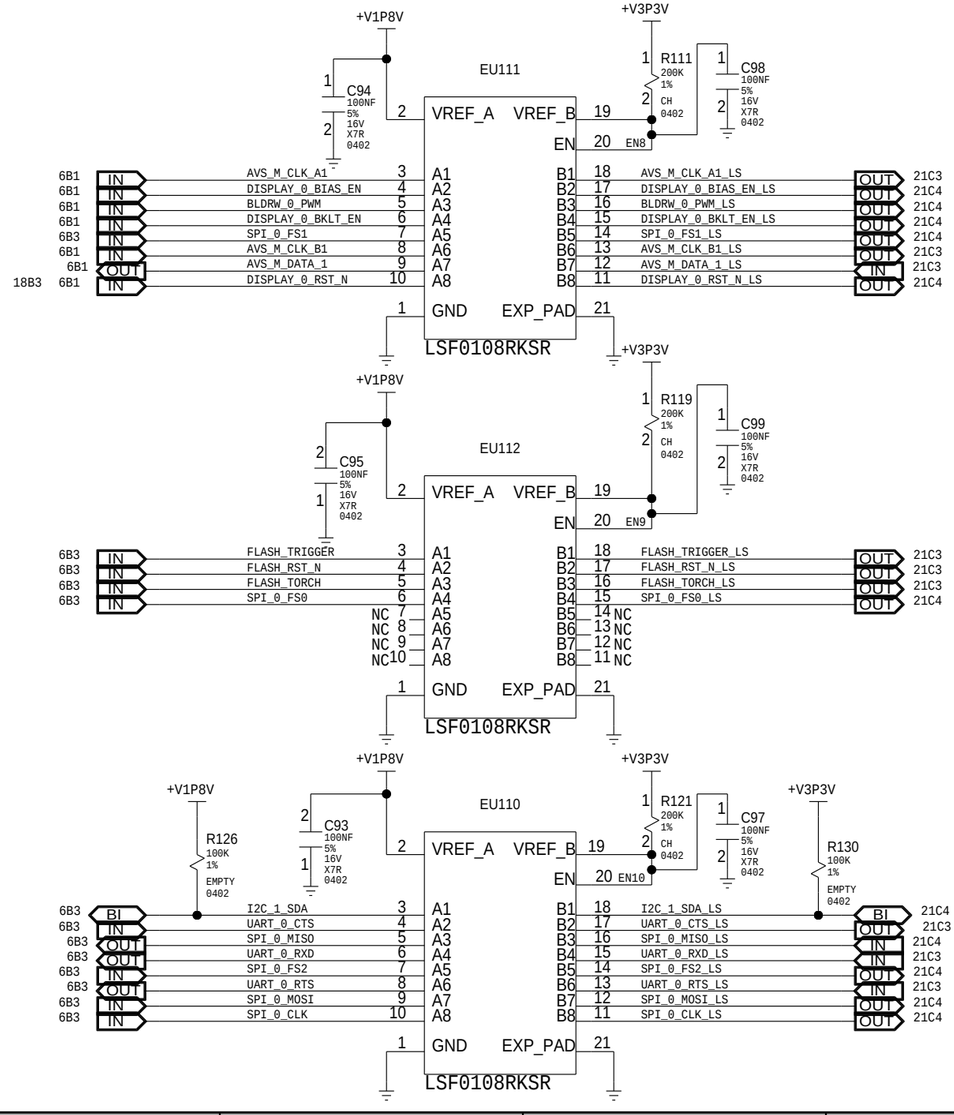
Thu Aug 11 09:40:29 2016

I/O: BREAKOUT #1 LEDS

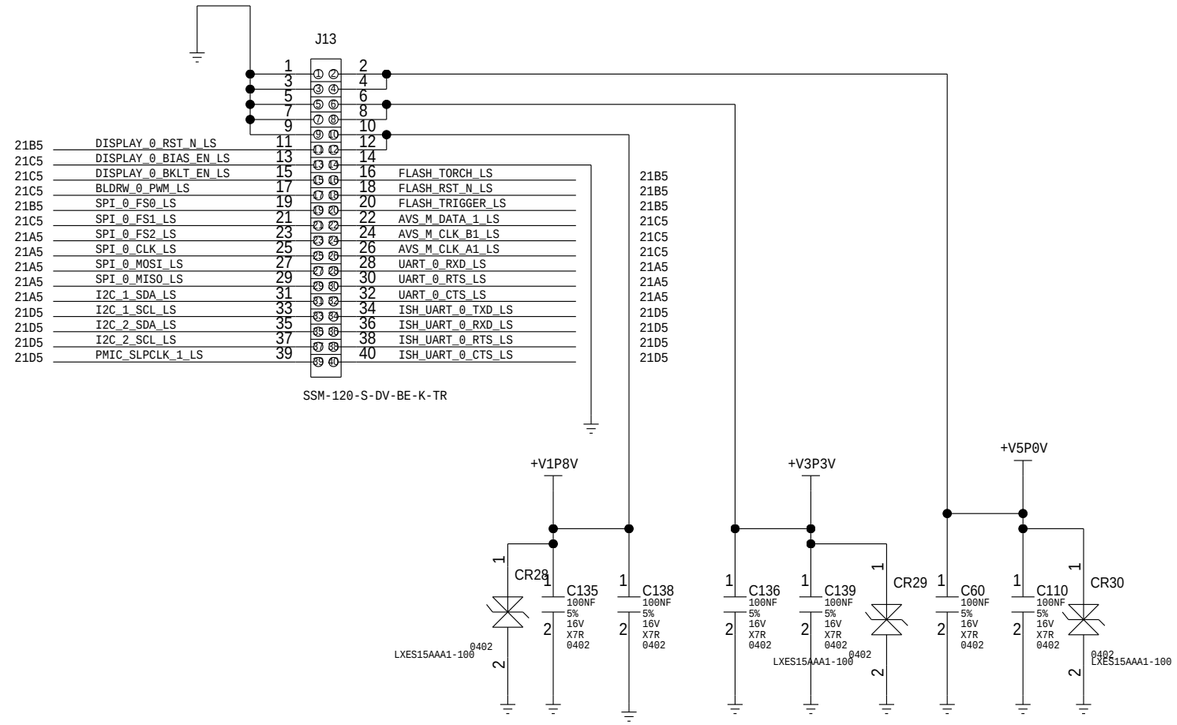
VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	20/23

BREAKOUT #2 LVL SHIFT





40P I/O BREAKOUT



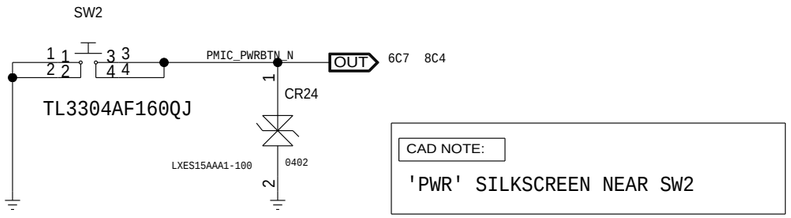
BPAGE DRAWING

consumer_fab4.sch_1.21
Thu Aug 11 09:40:59 2016

I/O: BREAKOUT #2 LEVEL SHIFTERS

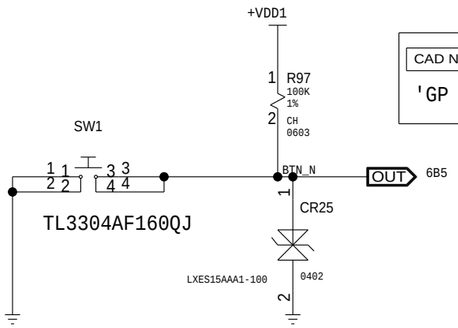
VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	21/23

POWER BUTTON



CAD NOTE:
'PWR' SILKSCREEN NEAR SW2

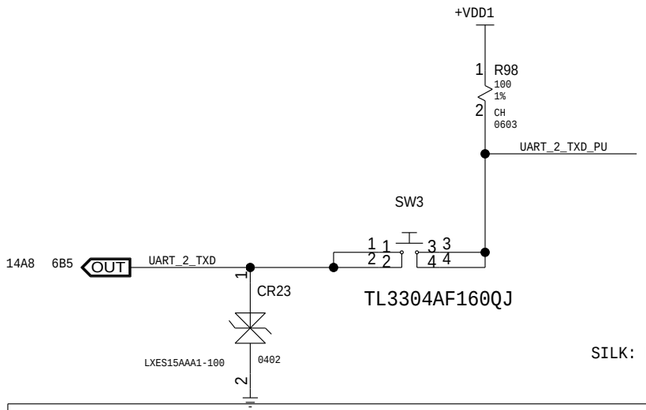
GENERAL PURPOSE BUTTON



CAD NOTE:
'GP BTN' SILKSCREEN NEAR SW1

SILK: BUTTON

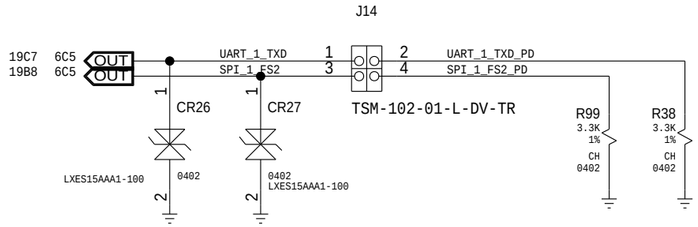
BOOT FROM DNX



SILK: DNX BOOT

DESIGN NOTE:
BOOT FROM DNX (LOAD FW FROM USB MEM. DEVICE)
GPIO_47 / LPSS_UART2_TXD
1 = FORCE
0 = DO NOT FORCE (DEFAULT / SELECTED FOR DESIGN)
INTERNAL 20K PD

HW STRAPS (BOOT FROM EMMC, BOOT FROM SDCARD)



BOM NOTE:
DEFAULT: NO JUMPERS STUFFED

DESIGN NOTE:
SOFTWARE SELECTABLE BOOT ORDER: EMMC / USB / SDCARD

CAD NOTE:
'EMMC BOOT' SILKSCREEN NEAR J14.1 AND J14.2
'SDCARD BOOT' SILKSCREEN NEAR J14.3 AND J14.4

DESIGN NOTE:
BOOT FROM EMMC (3 <-> 4)
GPIO_43 / LPSS_UART1_TXD
STUFFED = ENABLE (DEFAULT)
-> UNSTUFFED = DISABLE, (SELECTED FOR DESIGN)
INTERNAL 20K PU

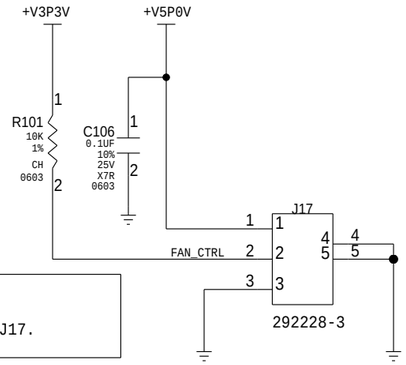
DESIGN NOTE:
SD-CARD BOOT STRAP (5 <->6)
GPIO_114 / SPI_1_SS2 (GP_SSP_1_FS2)
-> STUFFED = DO NOT BOOT FROM SD-CARD (DEFAULT / SELECTED FOR DESIGN)
UNSTUFFED = BOOT FROM SD-CARD
INTERNAL 20K PU

BPAGE DRAWING
consumer_fab4.sch_1.22
Thu Aug 11 09:41:52 2016

I/O: BUTTONS, SWITCHES, HW STRAPS

VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	22/23

FAN HEADER

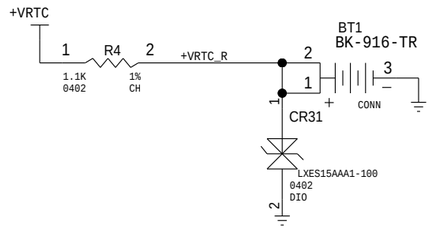


CAD NOTE:
PLACE ON SECONDARY SIDE

DESIGN NOTE:
5V FAN - NO SPEED CONTROL
SUNON
MB40100V2-000U-A99

CAD NOTE:
'FAN HEADER' SILKSCREEN NEAR J17.

RTC BATTERY

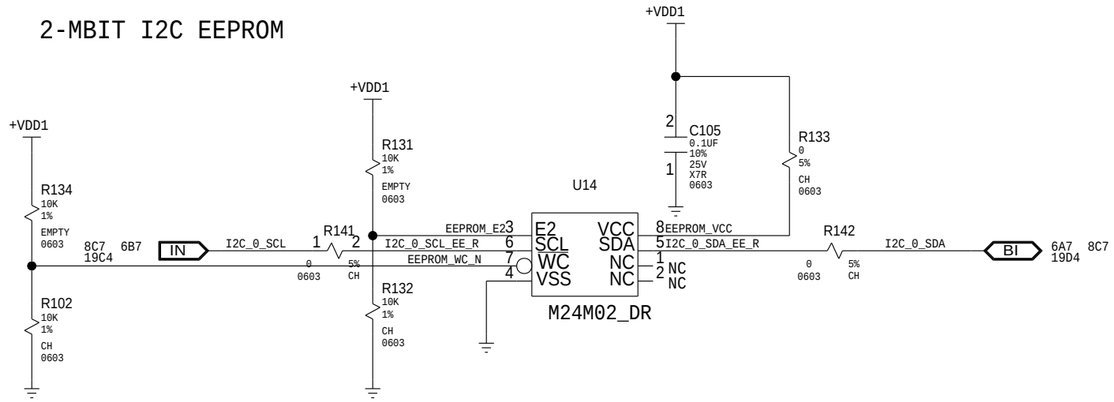


CAD NOTE:
PLACE ON SECONDARY SIDE

CAD NOTE:
'RTC BATTERY' SILKSCREEN NEAR BT1

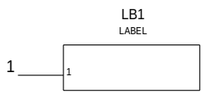
DESIGN NOTE:
FOR USE WITH 3V, 12MM COIN CELL BATT. HOLDER

2-MBIT I2C EEPROM

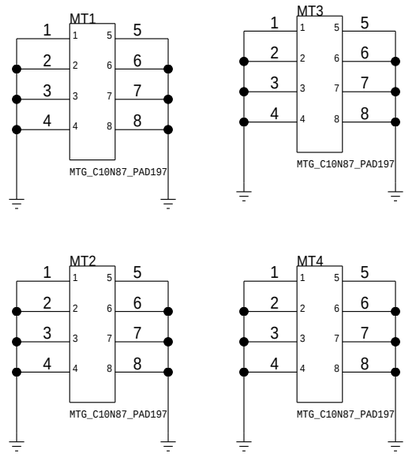


SMTSO FOR MODULE
INTERNALLY THREADED , HEX NUT HEAD

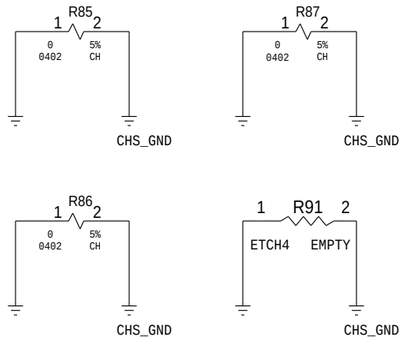
PCB BOARD LABEL



PLATED MOUNTING HOLES



GND STITCHING RESISTORS



BPAGE DRAWING
consumer_fab4.sch_1.23
Thu Sep 01 17:00:25 2016

MISC: EEPROM, FAN, RTC BATTERY

VARIANT:		DOCUMENT_NUMBER	REV	PAGE
PRIMARY		CDI 567365	1.12	23/23

Intel® Joule™ Expansion Board - Bill of Materals for PWA-004 (Schematic 1.12)

Reference Designator	Part Description	Part Number	Supplier
BT1	CONN,MISC,2P,BATT HOLDR,SMT BR1225	BK-916-TR	MEMORY PROTECTION DEVICES INC.
C1	CAPC,C0G,0402,47.000PF,50.000V,+/-5%	C0402C0G470J500NTB	Eyang
C10, C107, C11, C120, C4, C5, C7	CAPC,X7R,0603,1.000UF,16.000V,+/- 10%	1276-1019-1-ND	Digikey
C100, C110, C118, C119, C121, C122, C123, C124, C125, C126, C127, C128, C129, C135, C136, C138, C139, C144, C145, C39, C40, C41, C42, C47, C48, C49, C50, C53, C54, C60, C68, C70, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99	CAP,X7R,0402,100NF,16V,+/- 5%	399-7761-1-ND	Digikey
C105, C106, C130, C131, C140, C27, C31, C34, C52, C56, C6, C65, C66, C67, C69, C71, C72, C81, C82	CAPC,X7R,0603,0.100UF,25.000V,+/- 10%	445-1316-2-ND	Digikey
C108, C109, C134, C137, C17, C26, C29, C43, C44, C45, C46, C55, C57, C58, C59, C63, C8	CAPC,X5R,0603,25V,20%,10UF,	490-7202-1-ND	Digikey
C111	CAPC,X7R,0402,0.1UF,25.00V,+/- 10%	490-10698-1-ND	Digikey
C114, C115, C116, C133, C142, C143, C24, C25	CAPC,X5R,0603,22.00UF,10.00V,+/- 20%	1276-1274-1-ND	Digikey
C117	CAPC,X5R,0603,2.200UF,16.000V,+/- 10%	1276-1040-1-ND	Digikey
C18	CAPC,C0G,0603,100.000PF,50.000V,+/- 5%	1276-1008-1-ND	Digikey
C19, C20, C62	CAPC,C0G,0402,220.000 PF,50.000V,+/- 5%>	1276-1059-1-ND	Digikey
C21, C73, C74, C75, C76, C77, C78, C79, C80	CAPC,X5R,0402,0.100UF,10.000V,+/- 10%	1276-1022-1-ND	Digikey
C22	CAPC,X7R,0402,0.047 UF,25.000V,+/- 10%	GRM155R71E473KA88E	MURATA ELEC. NORTH AMERICA
C23	CAPC,X5R,0402,4.7UF,10.00V,+/- 20%	1276-1482-1-ND	Digikey
C28, C32	CAPC,X5R,0402,10.00UF,6.3V,+/- 20%	1276-1451-1-ND	Digikey
C3	CAPC,C0G,0603,47.00PF,100.00V,+/- 5%	490-1343-1-ND	Digikey
C30	CAPC,X5R,1210,100.000 uF,10.000V,+/- 20%	587-1965-1-ND	Digikey

Intel does not control or audit third-party benchmark data or the web sites referenced in this document.
You should visit the referenced web site and confirm whether referenced data are accurate.

Intel® Joule™ Expansion Board - Bill of Materals for PWA-004 (Schematic 1.12)

Reference Designator	Part Description	Part Number	Supplier
C35, C36	CAPC,X5R,0402,2.2UF,10.00V,+/- 10%	1276-1108-1-ND	Digikey
C51	CAPC,X5R,0805,22.00UF,25.00V,+/- 20%	490-10749-1-ND	Digikey
C64	CAPC,X7R,0603-3T,0.1UF,25.00V,+/- 20%	NFM18PC104R1E3D	MURATA ELEC. NORTH AMERICA
CR1, CR11, CR12, CR13, CR14, CR2, CR23, CR24, CR25, CR26, CR27, CR28, CR29, CR3, CR30, CR31, CR7	ULTRA,LOW CAP,BIDIRECTIONAL,ESD,DIODE,ANTENNA PORT	490-5680-1-ND	Digikey
CR10, CR20, CR8	IC,DS,DIO,SMT,LFTVS18,TVS,	497-6982-1-ND	Digikey
CR15, CR16, CR17, CR18, CR9	LED,1005,SM,GRN,V,1.00,RC,1	LTST-C281KGKT-ND	Digikey
CR19	IC,DIO,SCHKY DIODE,5A, 14V,REVERSE VOLTAGE, VF(MAX) 0.55V	B520C-FDICT-ND	Digikey
CR21, CR22, CR4, CR5, CR6	IC,DS,DIO,MINDIP,DB2S31000L,SHTKY,	DB2S31000LCT-ND	Digikey
EU1	IC,VLSI,OTHER,HDMI,A3 8203,TQFN,32	PS8203TQFN32GTR-A3	Parade
EU110, EU111, EU112, EU113, EU14, EU15, EU16, EU17, EU18, EU19	IC, LOG,TRANSLATOR,VQFN,LSF0108,TTL-MOS,	296-37841-1-ND	Digikey
EU2	IC,LIN,CONT,24,QFN,BQ25892,BATCGR	296-41131-1-ND	Digikey
EU3	IC,LIN,ANALOGSWITCH,SON,TPS2553,	296-24000-1-ND	Digikey
EU4	MWG,SWITCH,MUX/DEMUX,PI3USB302-A,TQFN	PI3USB302-AZBEXCT-ND	Digikey
EU5	IC,LIN,CONT,8,TSON,TLV62084DSG,PSP	296-40605-1-ND	Digikey
EU6	IC,VLSI,OTHER,FT232,QFN,32	768-1008-1-ND	Digikey
F1, F2	FUSE,0402,3.5A,32V,	043503.5KRHF-ND	Digikey
FB1, FB2, FB4, FB5, FB6	FER-BEAD,0402,120.0 OHM,1.3 A,± 25%	490-5203-1-ND	Digikey
J10	CONN,MISC,19P,HDMI-D,RA, SMT,	WM1282CT-ND	Digikey
J11	CONN,MISC,24P,LVDS, HZ,0.5MM, SMT	HFN524CT-ND	Digikey
J12, J13	CONN,HDR,2X20,RCP,COP,0.1,SMT,KP	SSM-120-S-DV-BE-K-TR	SAMTEC ELECTRONIC HRDWRE
J14	CONN,HDR,2 X 2,PLG,VT,0.1,SMT,KP	TSM-102-01-L-DV-TR	SAMTEC ELECTRONIC HRDWRE

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Intel® Joule™ Expansion Board - Bill of Materals for PWA-004 (Schematic 1.12)

Reference Designator	Part Description	Part Number	Supplier
J15, J16, J18, J19	SMT STANDOFF, M1.6 THREADED,1.5 MM TALL	YQSMTSO-51732-ET	PENN ENGINEERING & MFG CORP
J17	CONN,MISC,3P,RT HDR,	A101008CT-ND	Digikey
J2, J3	CONN,MISC,100P,BTB RCPT,.4MM SMT	H11615CT-ND	Digikey
J4	CONN DC POWER JACK 2.1X5.5MM H,	CP-002AHPJCT-ND	Digikey
J5	CONN,MISC,10P,MICRO SD,PSH-PSH,INDUST_TEMP	DM3ND-SF-PEJ (850)	HIROSE ELECTRIC (U.S.A.),INC.
J6	CONN,USB 3.0 TYPE A,SURFACE MT,	732-3150-1-ND	Digikey
J7	CONN,MISC,24P,USBC RA,RCPT, TALL	AUSB0269-P004A01	LOTES
J9	CONN,I/O,5P,USB-B,RA,MIXED,SMT,	A124356CT-ND	Digikey
L1, L17, L2	INDCT,WWOUND,1.00uH,4.1A,NSTD,20.00%,	445-15777-1-ND	Digikey
L10, L11, L12, L13	CHOKE,90.0OHM,100.0MA,0302,2LINE	TCE0806G-900-2P-T200-ND	Digikey
L14, L15, L16	CHOKE,90.0OHM,100.0MA,0603,4LINE	445-9343-1-ND	Digikey
L3, L4, L6, L7, L8, L9	CHOKE,35.0OHM,0.1A,0302,2LINE	TCE0806S-350-2P-T200-ND	Digikey
L5	INDCT,0.47UH,4.5A,23.00MOHM,CUBE,SM	PIFE25201B-R47MS-70	Cyntec
PWA	Intel® Joule™ Expansion (Printed Wire) Board	J28235-004	Intel
Q1, Q2	IC,DS,FET N,DFN,AON1606,	AON1606-ND	Digikey
R1, R101, R102, R12, R132, R135, R15, R20, R52, R77, R9	RES D,0603,10.00 kOHM,1.00%,1/10W,YES	311-10.0KHRCT-ND	Digikey
R10, R11, R21, R22	RES D,0402,2.70 kOHM,5.00%,1/16W	541-2.7KJCT-ND	Digikey
R100, R133, R141, R142, R23, R3, R35, R46, R53, R61, R69, R72, R78	RES_D,0603,0.00OHM,5.00%,1/10W,	541-1888-1-ND	Digikey
R103, R104, R105, R106, R110, R111, R119, R121, R89, R90, R92	RES D,0402,200.00 kOHM,1.00%,1/16W	541-200KLCT-ND	Digikey
R113, R25, R27, R29, R36, R5, R51, R60, R8, R81, R97	RES_D,0603,100.00kOHM,1.00%,1/10W,	541-1788-1-ND	Digikey
R114, R32, R71, R73, R85, R86, R87	RES_D,0402,0.0OHM,5.00%,1/16W,	541-1887-1-ND	Digikey
R136, R4, R47, R48, R49, R50	RES D,0402,1.10 kOHM,1.00%,1/16W	541-1.10KLCT-ND	Digikey
R2, R98	RES D,0603,100.00 OHM,1.00%,1/10W,YES	311-100HRCT-ND	Digikey

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Intel® Joule™ Expansion Board - Bill of Materals for PWA-004 (Schematic 1.12)

Reference Designator	Part Description	Part Number	Supplier
R30	RES_D,0603,120.00kOHM,1.00%,1/10W,	311-120KHRCT-ND	Digikey
R33, R62	RES D,0603,1.00 kOHM,5.00%,1/10W,YES	311-1.0KGRCT-ND	Digikey
R37	RES_D,0402,4.99kOHM,1.00%,1/16W,	541-1746-1-ND	Digikey
R38, R99	RES_D,0402,3.3kOHM,1.0%,1/16W,	311-3.30KLRCT-ND	Digikey
R54	RES D,0402,18.20 kOHM,1.00%,1/16W	YAG2371CT-ND	Digikey
R55	RES D,0603,1.50 kOHM,1.00%,1/10W,YES	CRCW06031K50FKEB-ND	Digikey
R56, R93, R94, R95, R96	RES D,0402,560.00 OHM,1.00%,1/16W,YES	541-560LCT-ND	Digikey
R6	RES D,0402,110.00 kOHM,1.00%,1/16W	311-110KLRCT-ND	Digikey
R7	RES D,0402,36.50 kOHM,1.00%,1/16W,YES	YAG3135CT-ND	Digikey
R84	RES D,0402,0.00 OHM,5.00%,1/16W	541-0.0JCT-ND	Digikey
R88	RES_D,0402,100.0kOHM,1.00%,1/16W,	541-1751-1-ND	Digikey
SW1, SW2, SW3	CONN,SWIT,TACTILE,VT,SPST,2,50.0 mA,SMT	TL3304AF160QJ-ND	Digikey
U1	IC,LIN,INTFC,CSP,IP4856CX,TRANSLAT,	IP4856CX25/CZ-ND	Digikey
U14	MWG,EEPROM,SERIAL,2MBIT,M24M02-DR	497-11600-1-ND	Digikey
U17, U22	IC,LIN,WLCSP,FPF2495UCX,VREG	FPF2495UCXCT-ND	Digikey
U18	IC,LIN,ANALOGSWITCH,FCBGA,FPF3042,	FPF3042UCXCT-ND	Digikey
U20, U23, U24	IC,DS,DIO,CSP,ECMF02,TVS,	497-12953-1-ND	Digikey
U21	IC,LIN,WLCSP,FAN48623,DC/DC	FAN48623UC50XCT-ND	Digikey
U25, U26	IC,DS,NPN XSTR,SOT363,MDT3904,LF	MMDT3904-FDICT-ND	Digikey
U27	IC,LIN,CONT,14,QFN,TPS63021DSJ,PSP	296-27259-1-ND	Digikey

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