

S2W SXM2

REV: 1.00



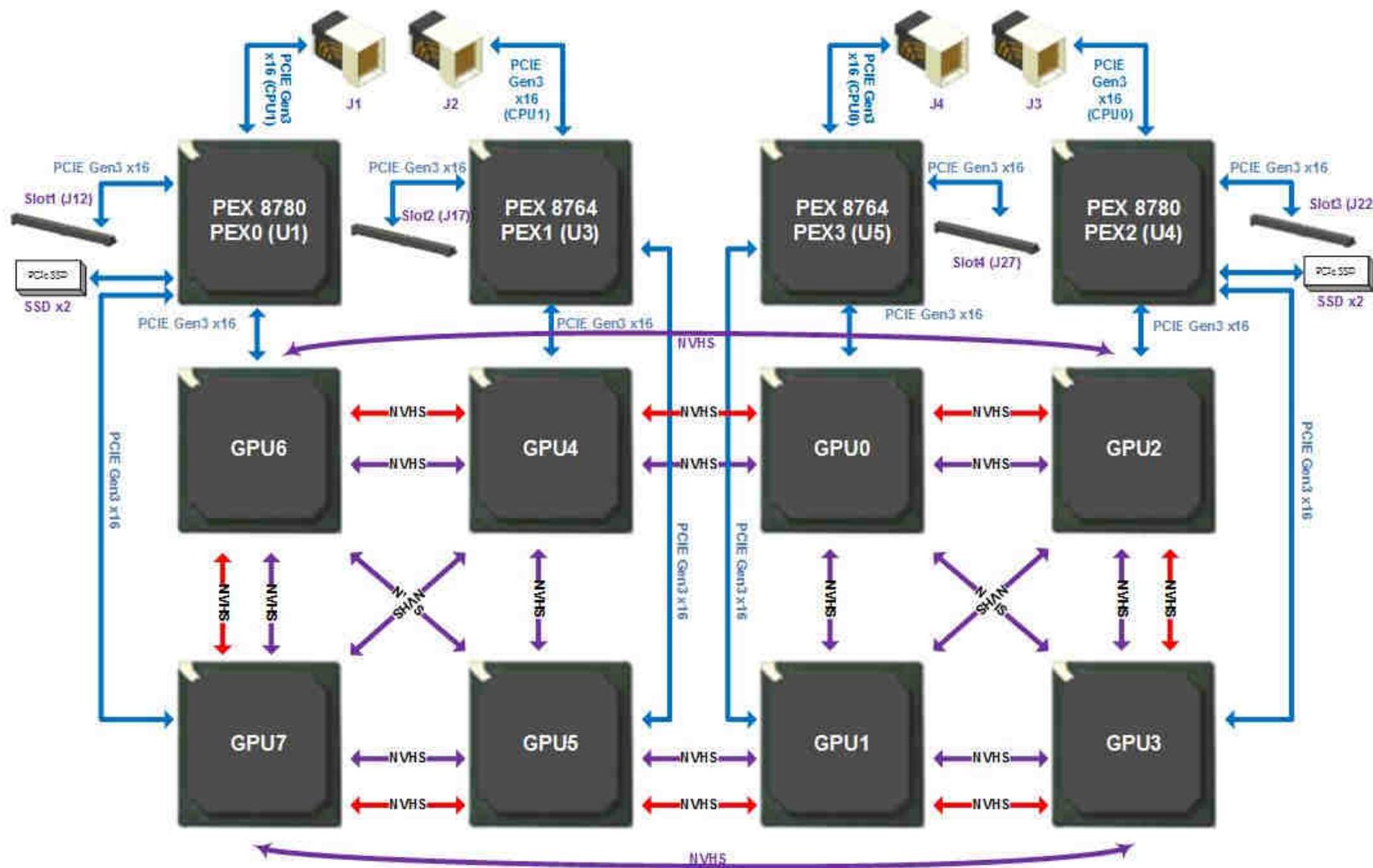
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CCBU		S2W	N/A	E	
REVIEWER NAME	SIZE	C	DATE	Tue Jun 21 11:55:06 2016	SHEET 1 OF 144

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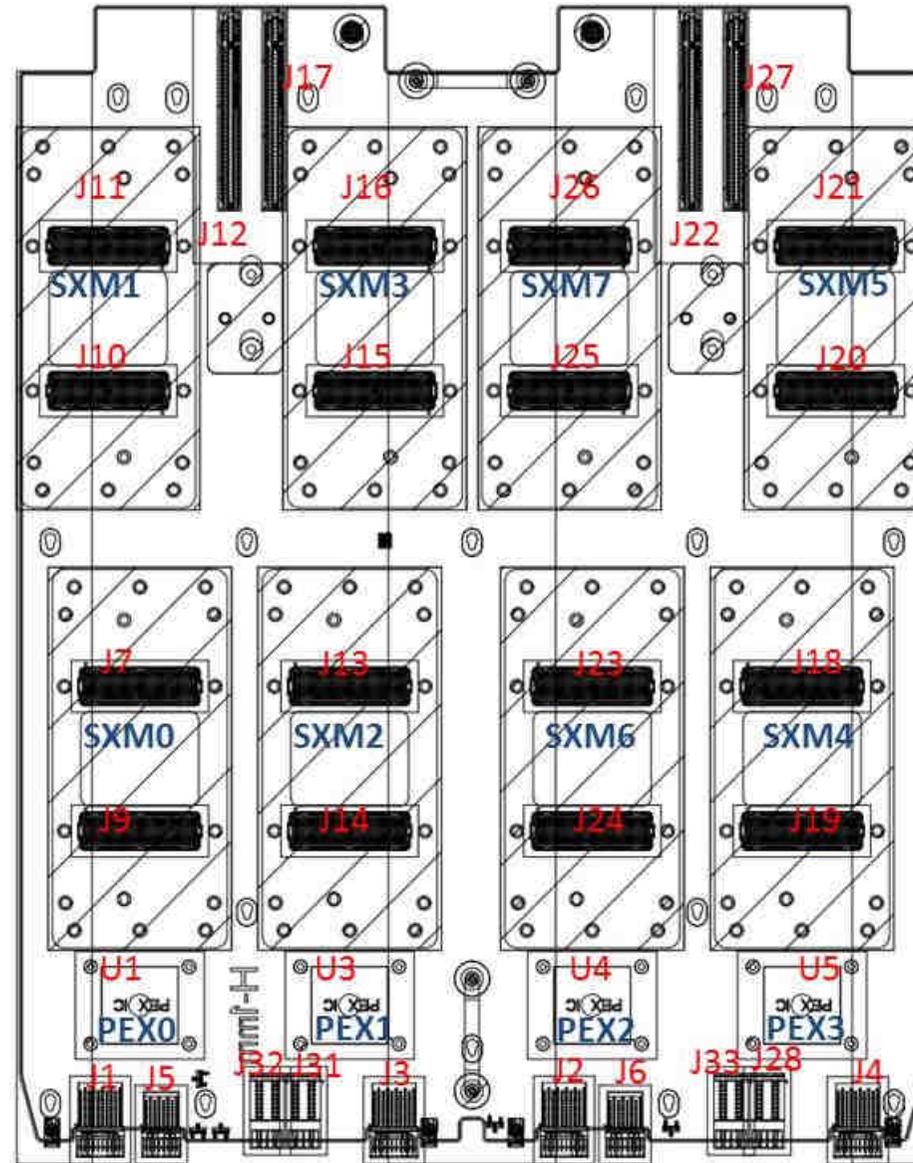
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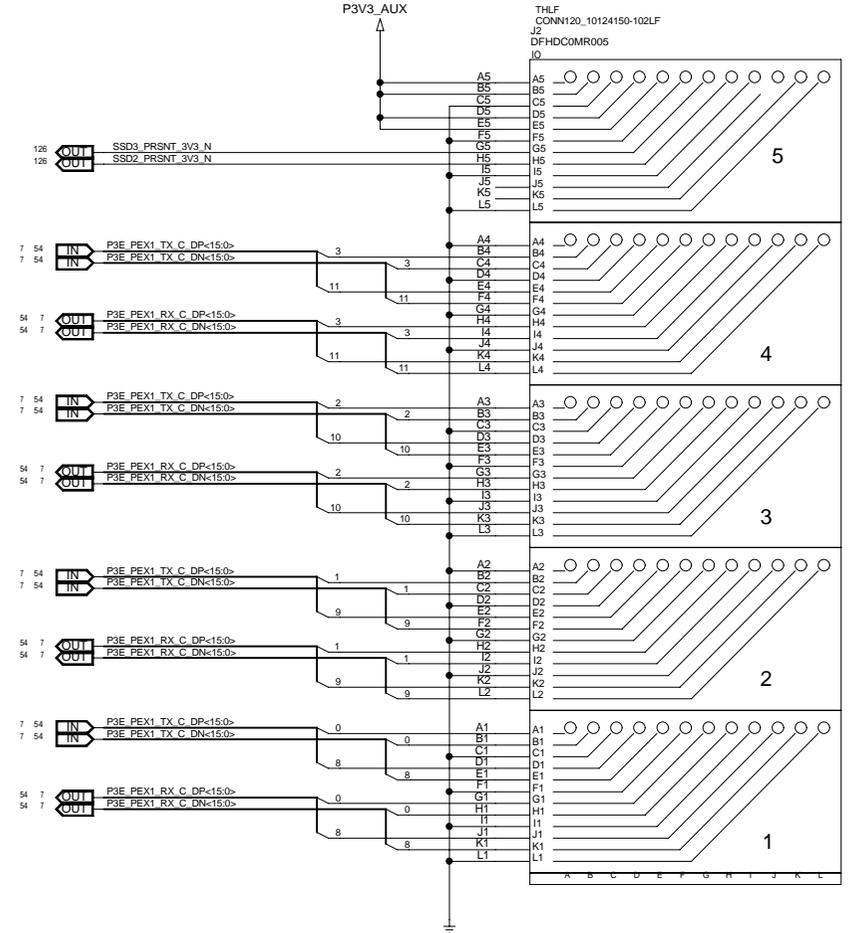
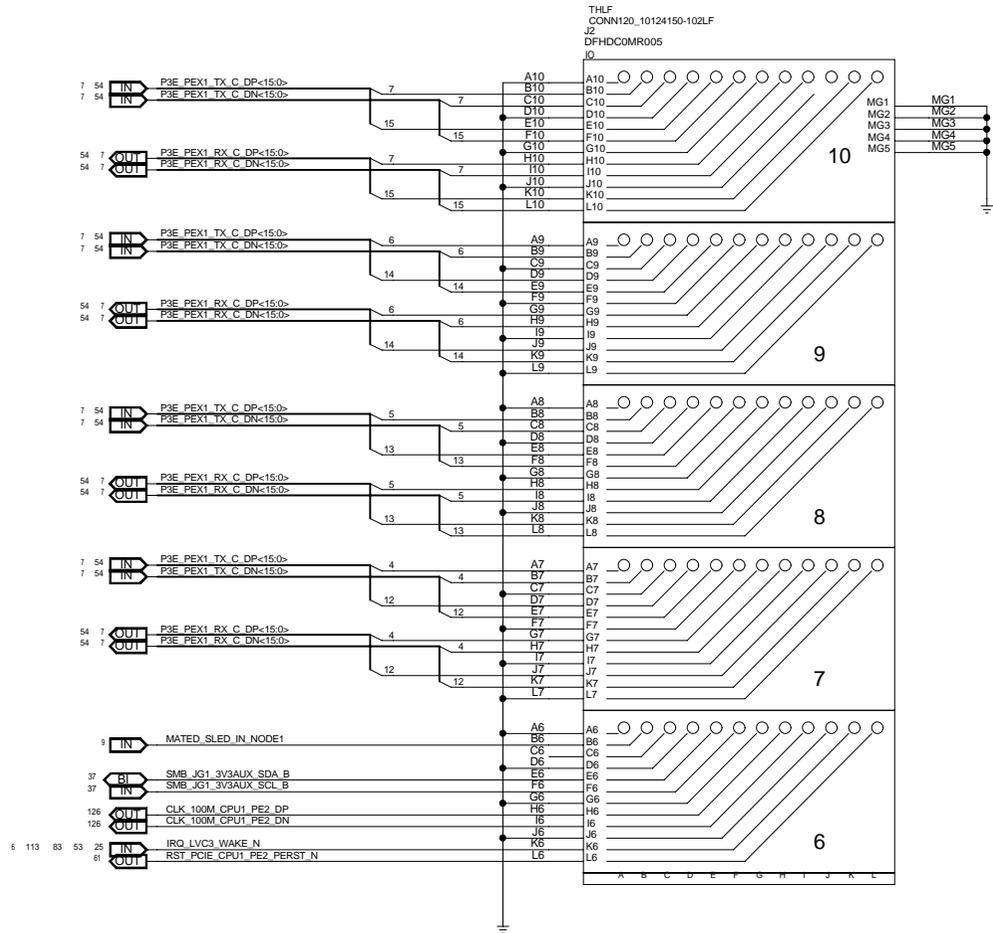


S2W SXM2 Block Diagram

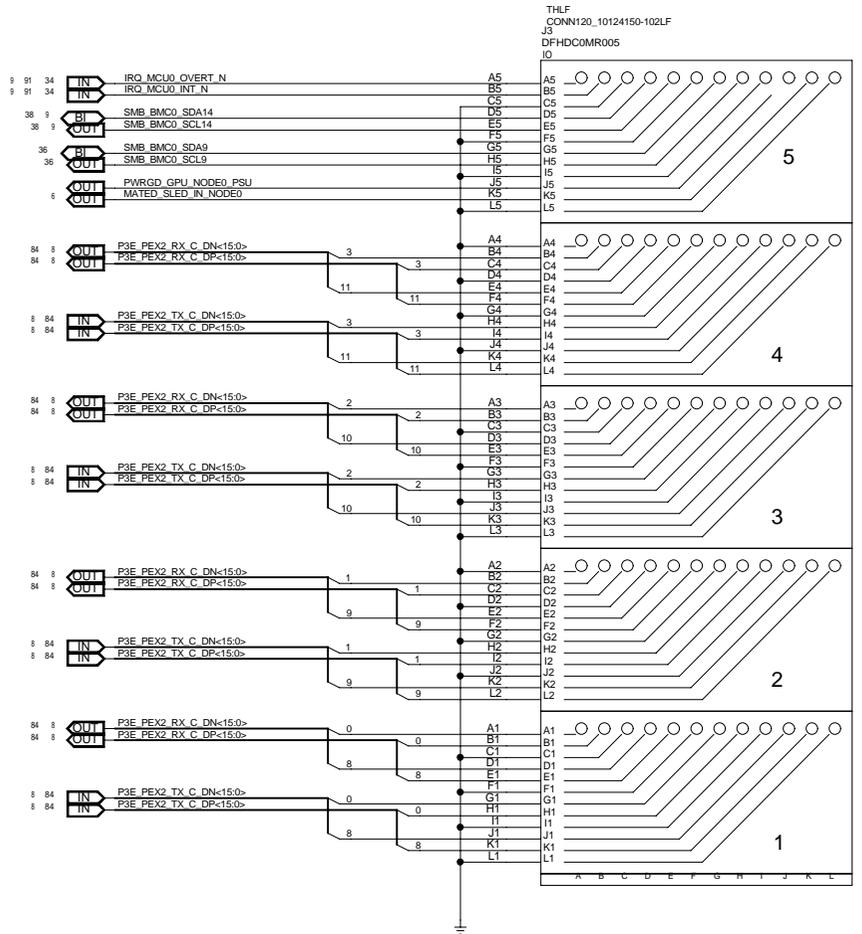
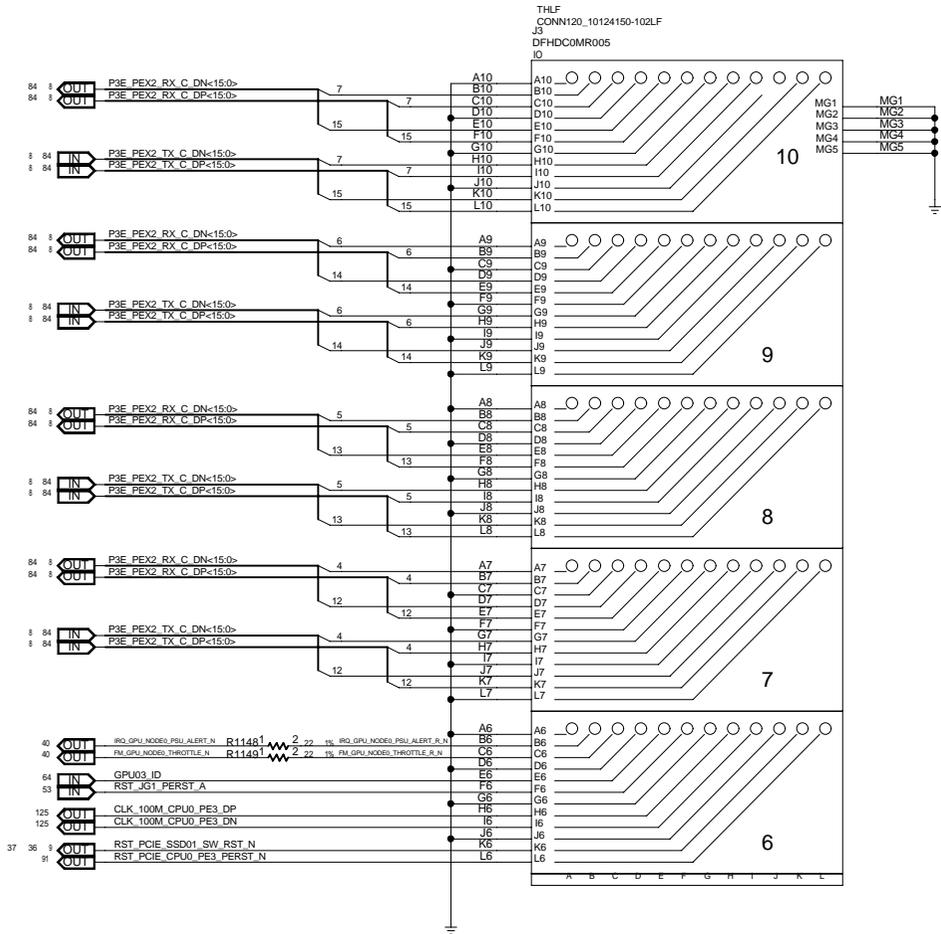
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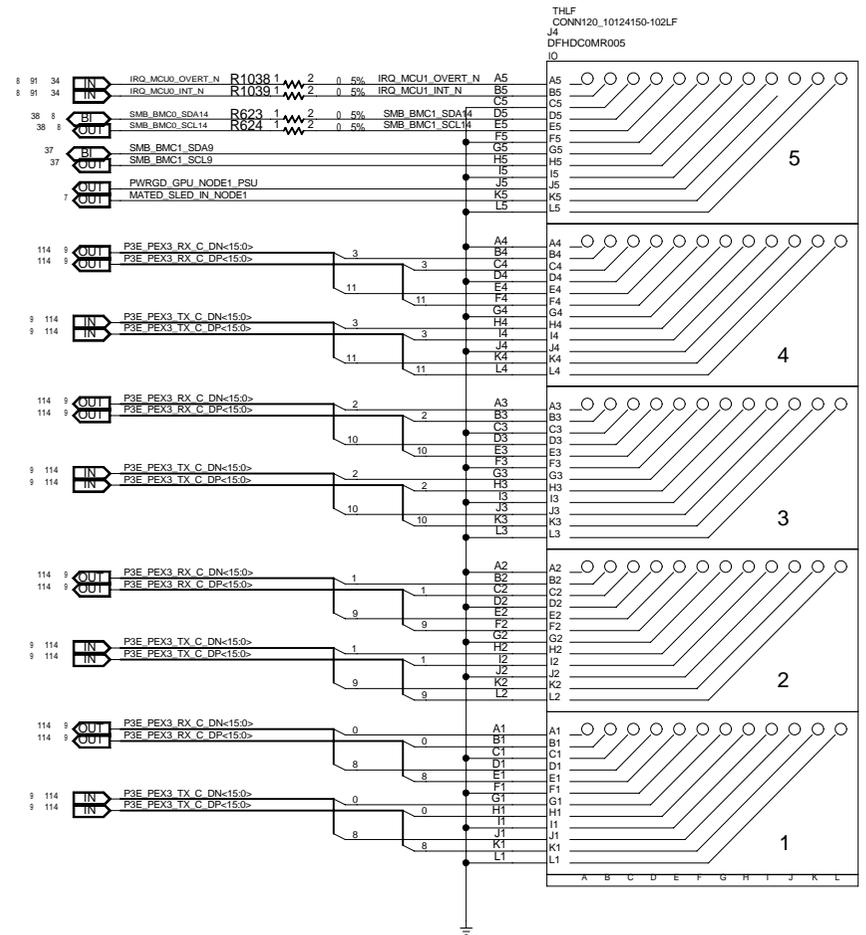
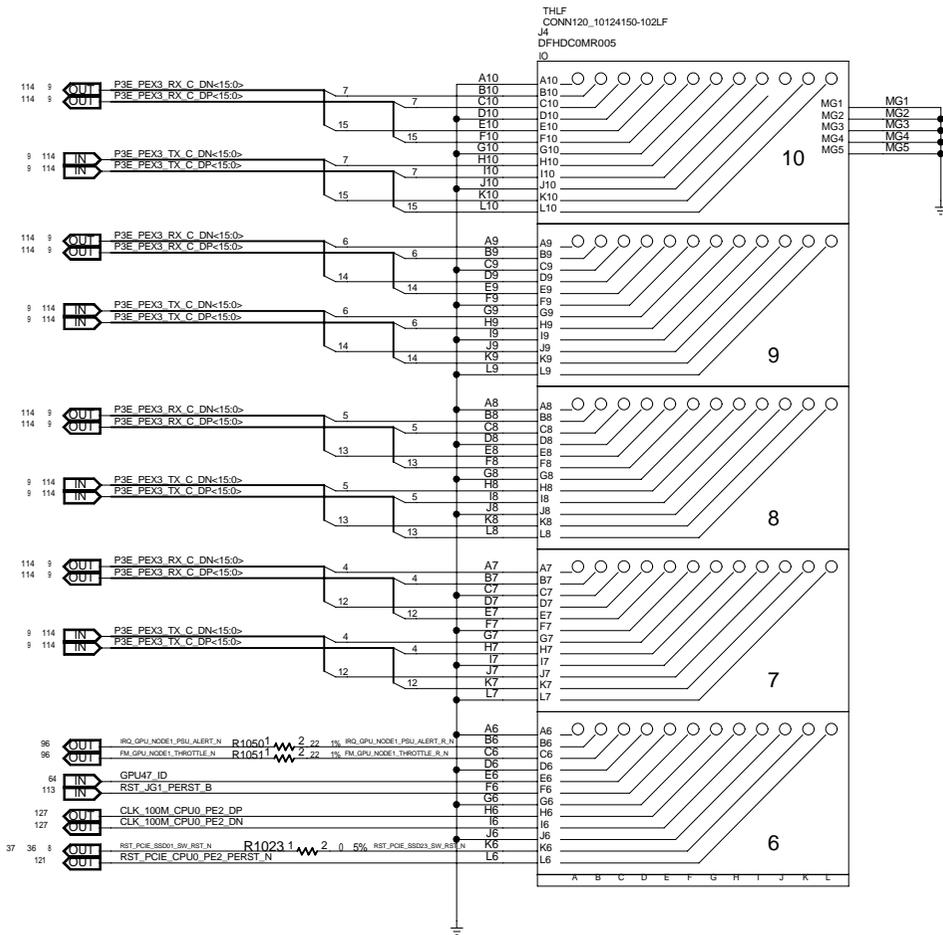
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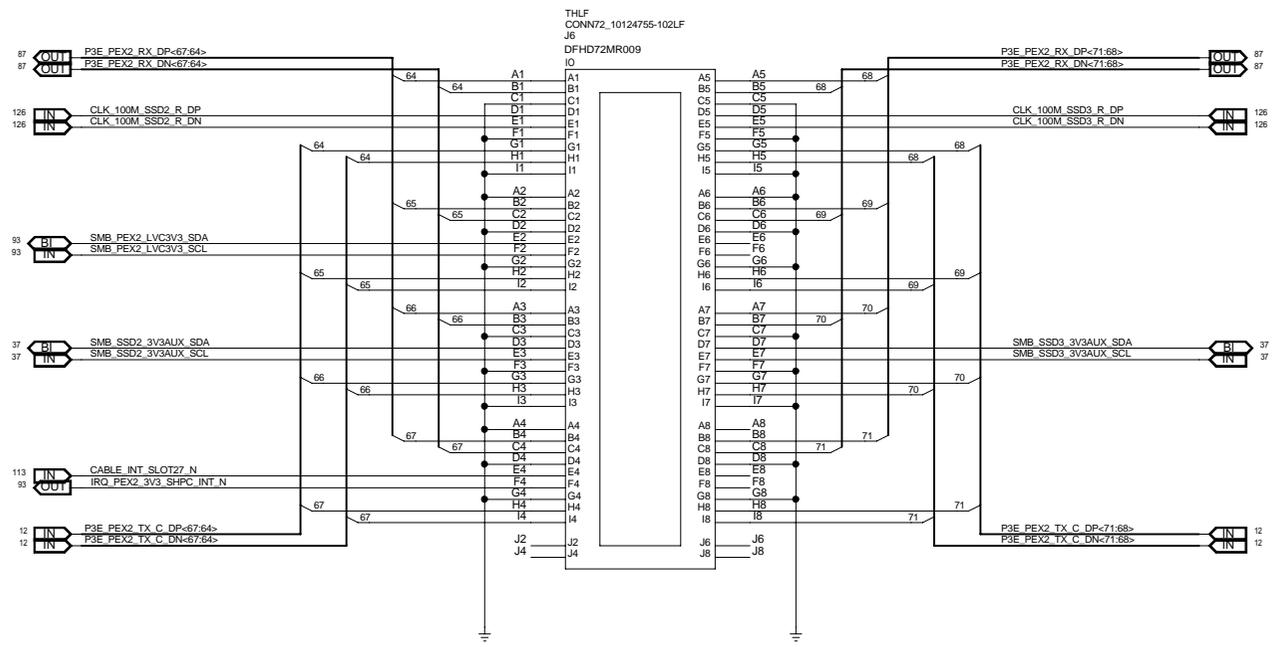
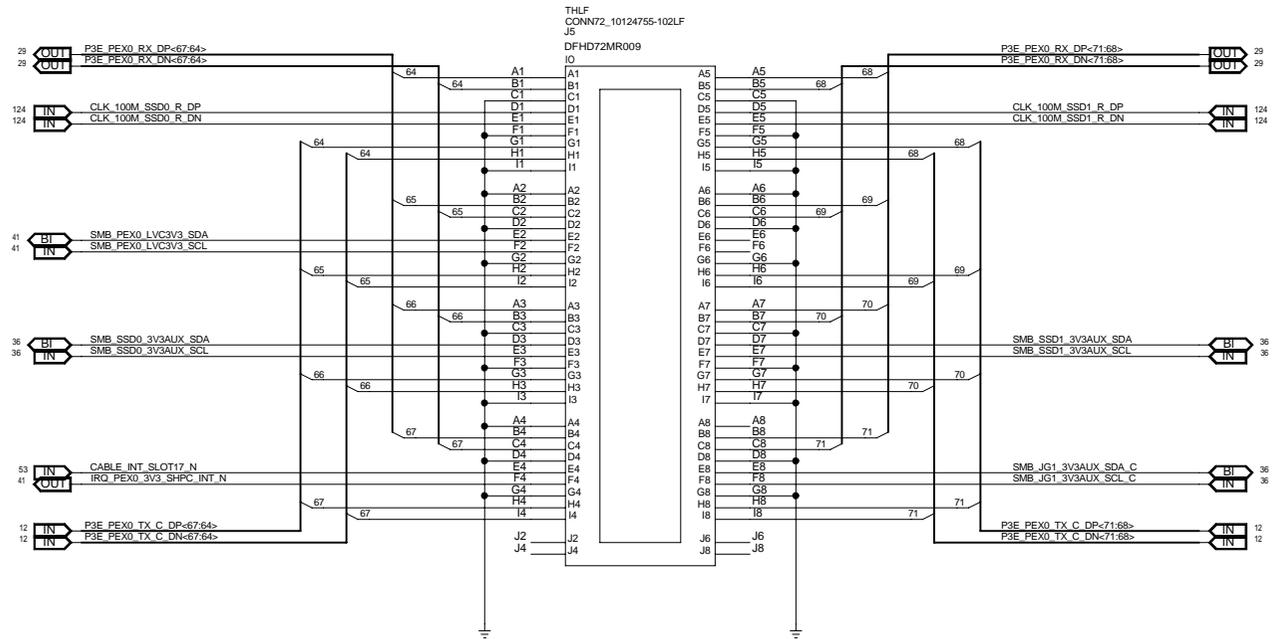


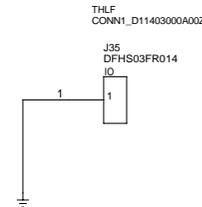
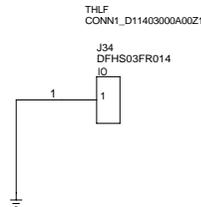
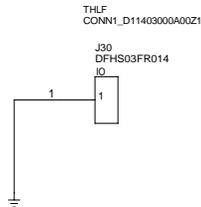
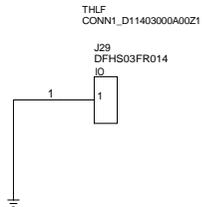
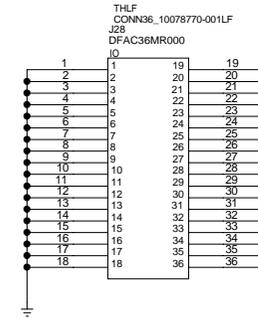
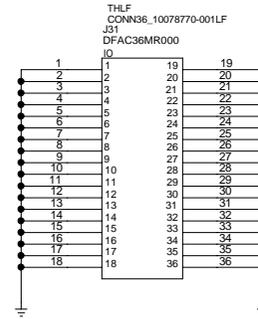
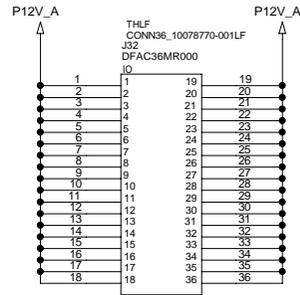
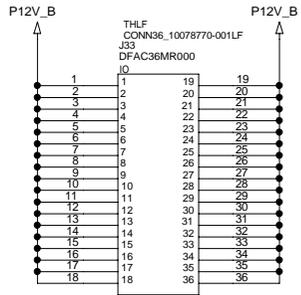
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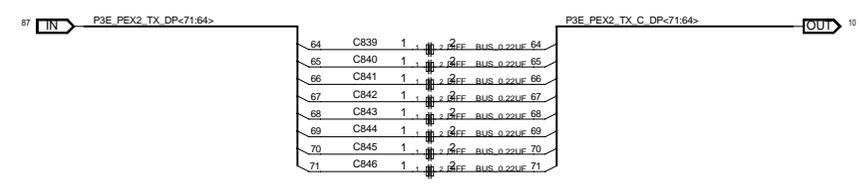
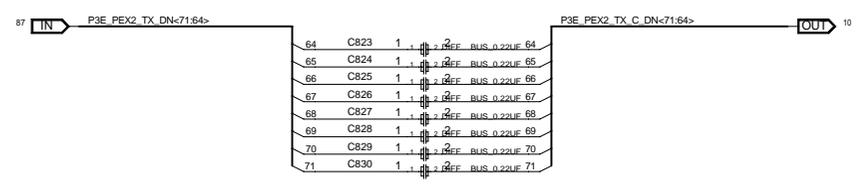
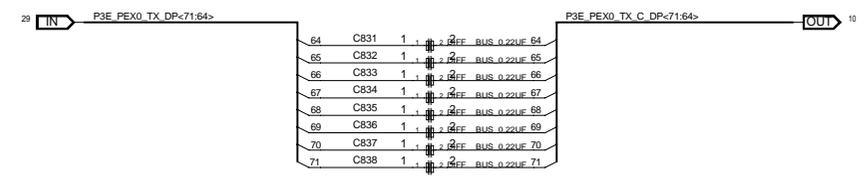
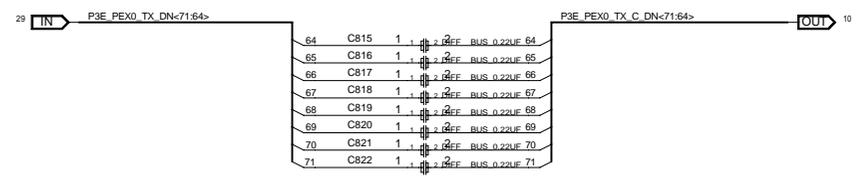


NODE1









7 6 5 4 3 2 1

E
D
C
B
A

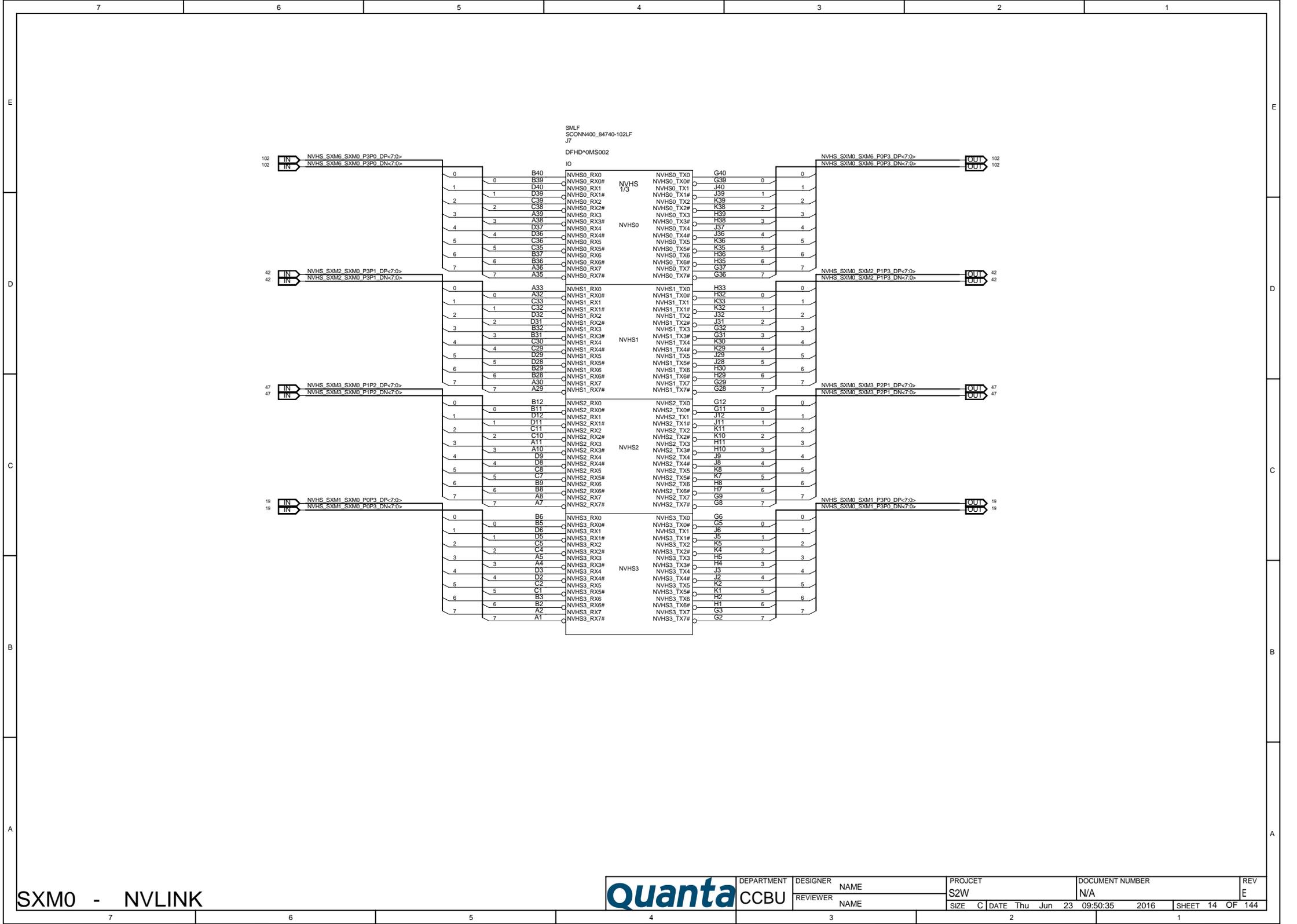
E
D
C
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A

UNTITLED



DEPARTMENT	DESIGNER NAME	PROJECT	DOCUMENT NUMBER	REV
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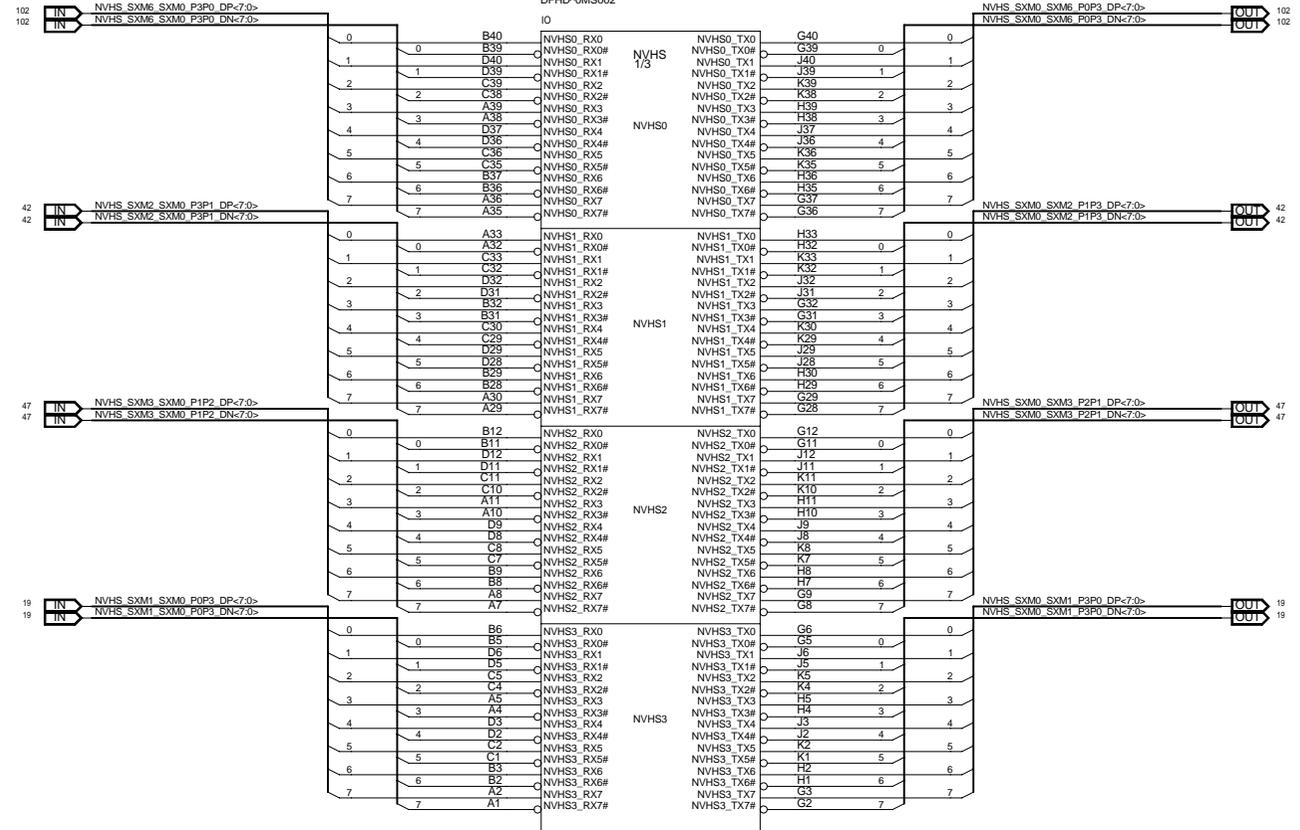
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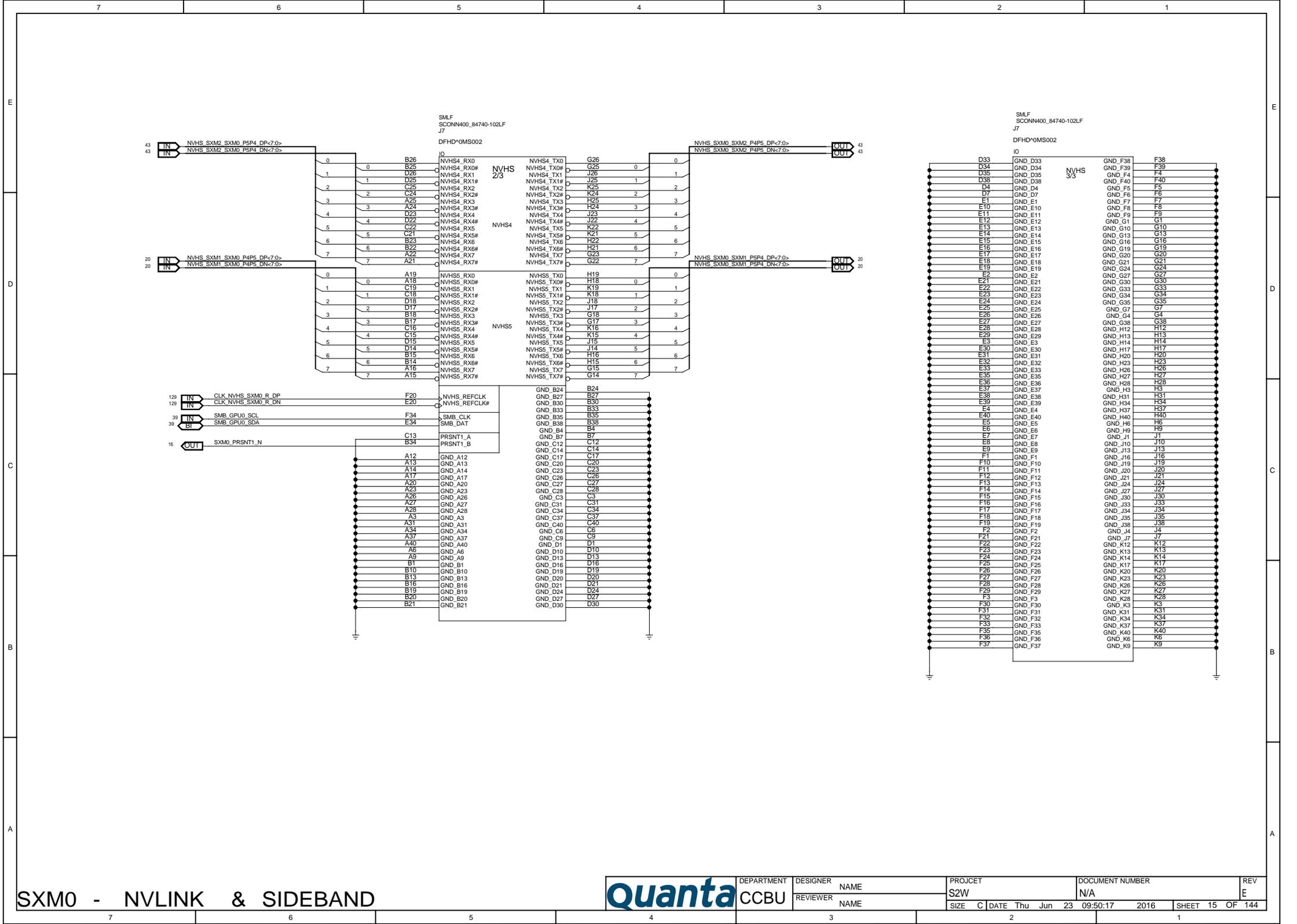


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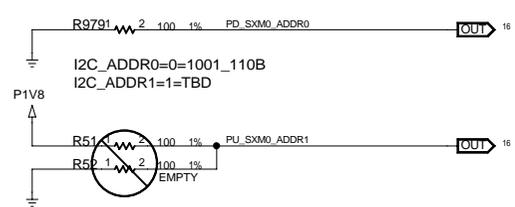
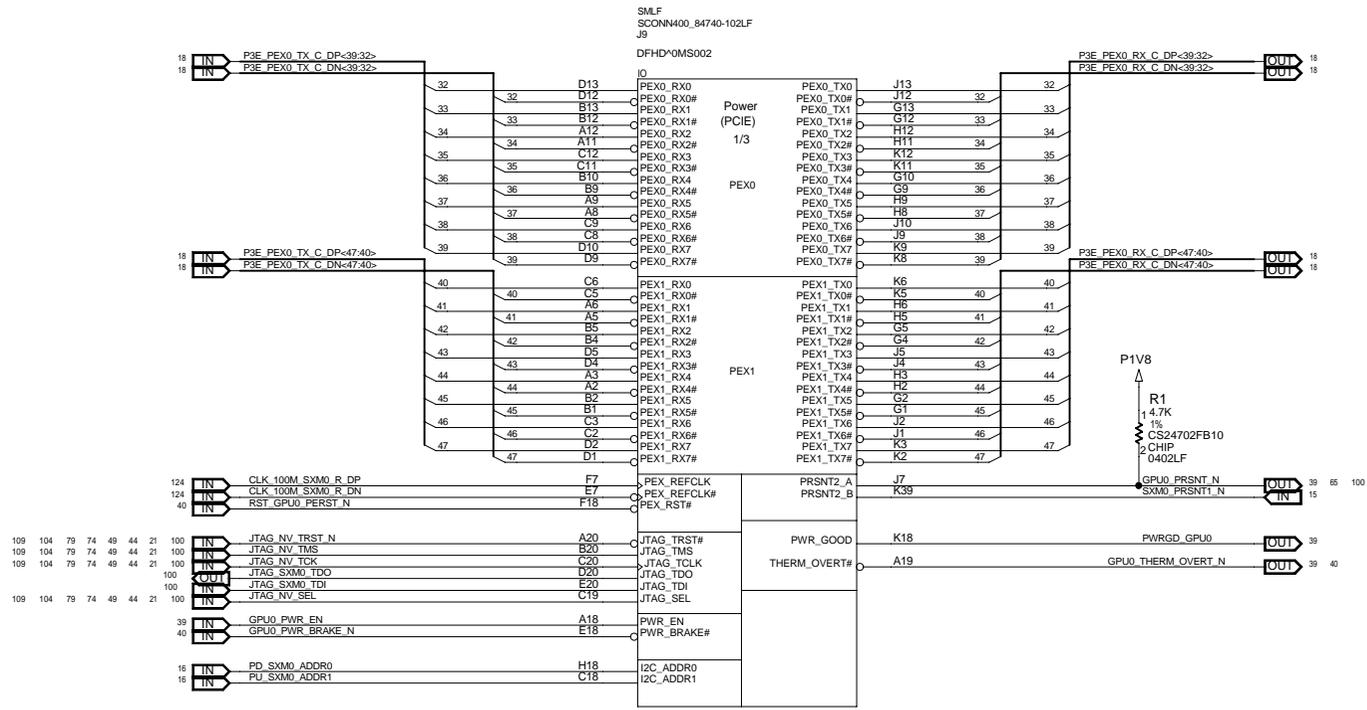
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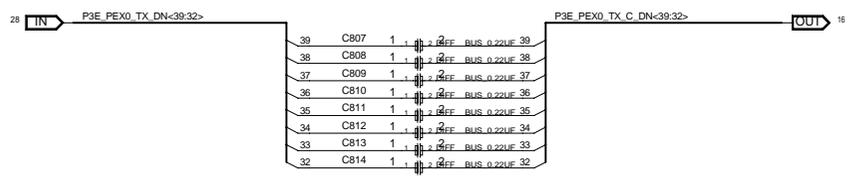
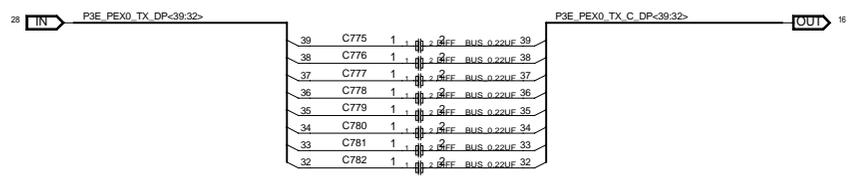
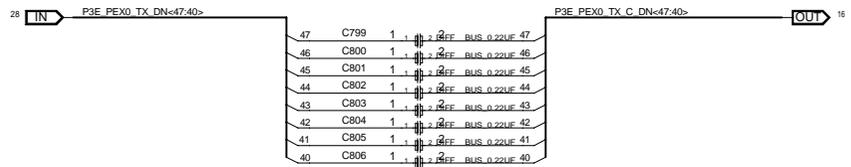
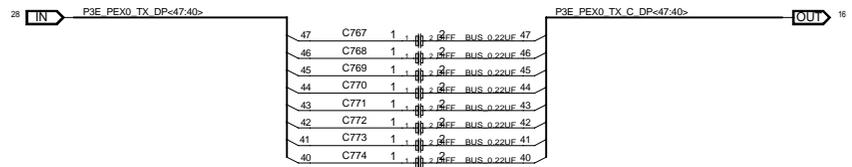
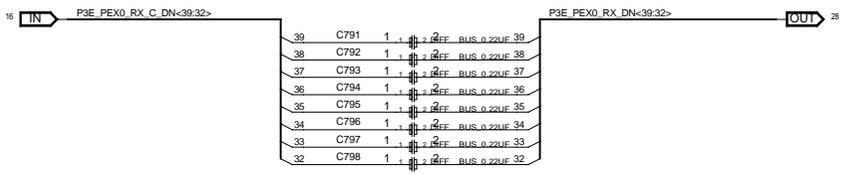
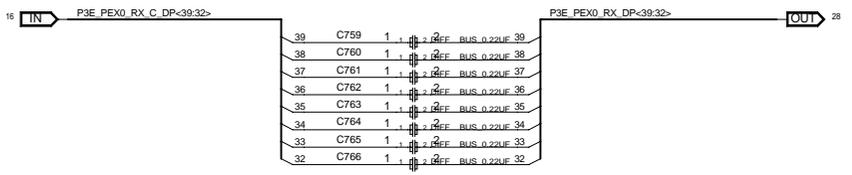
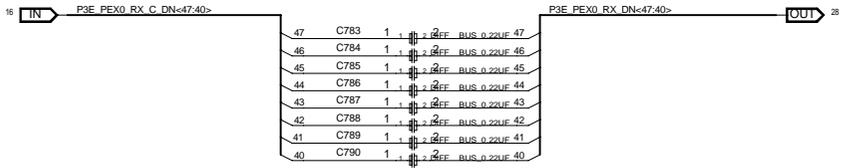
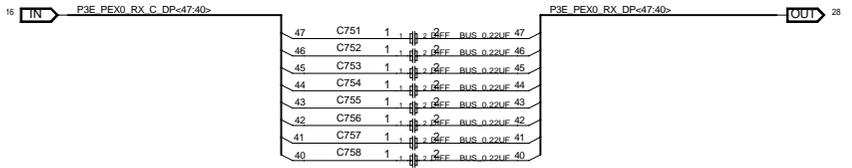
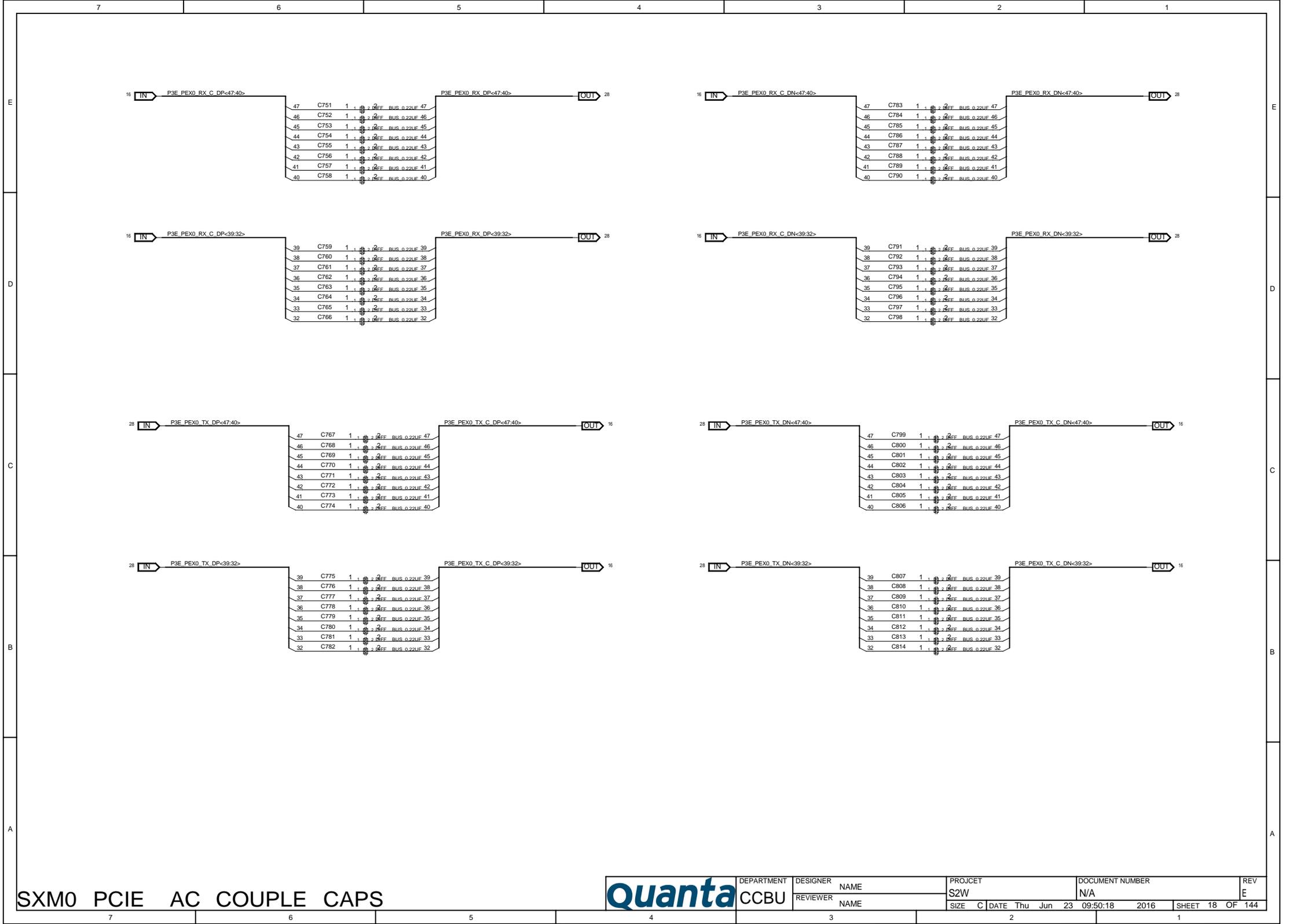
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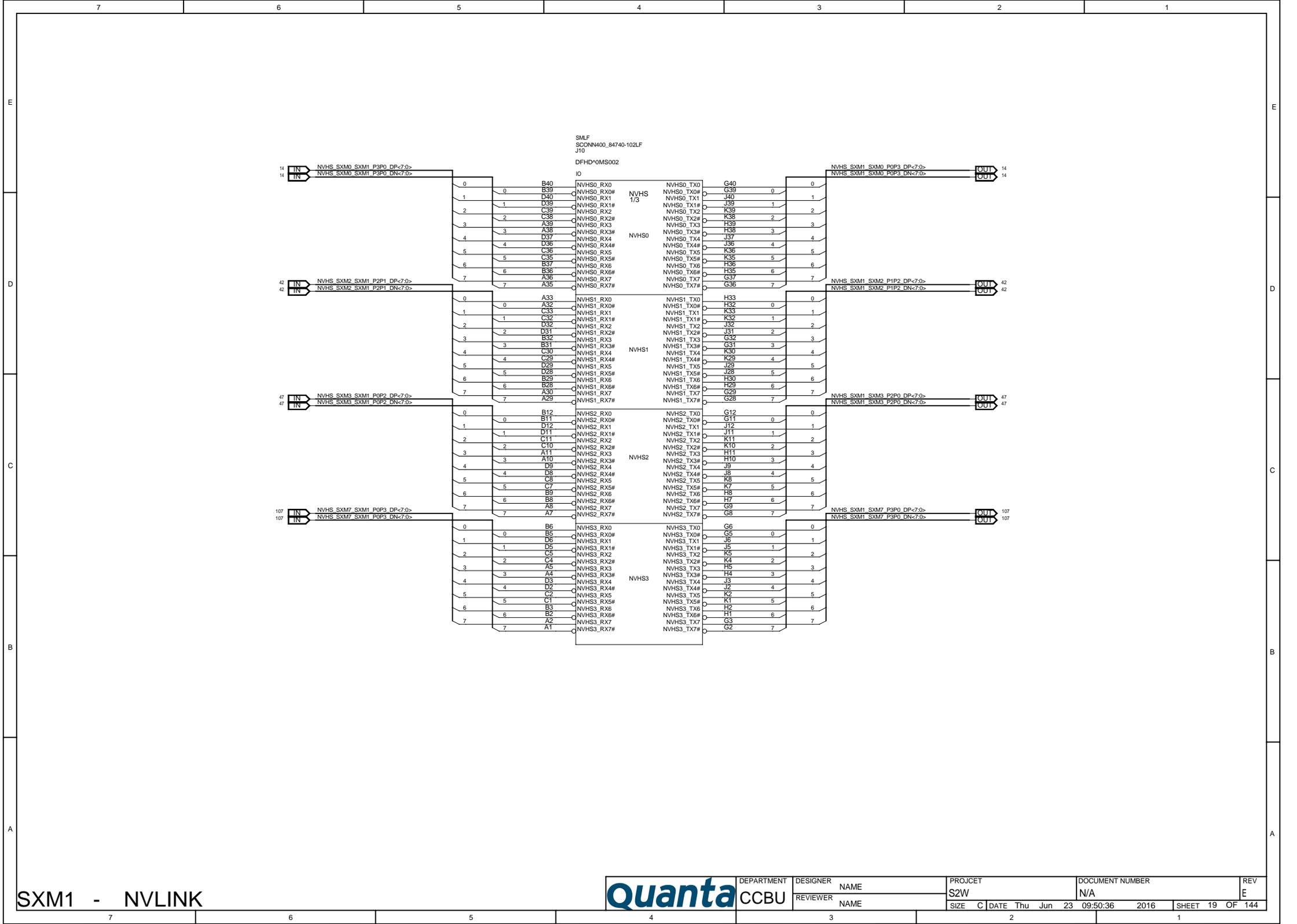


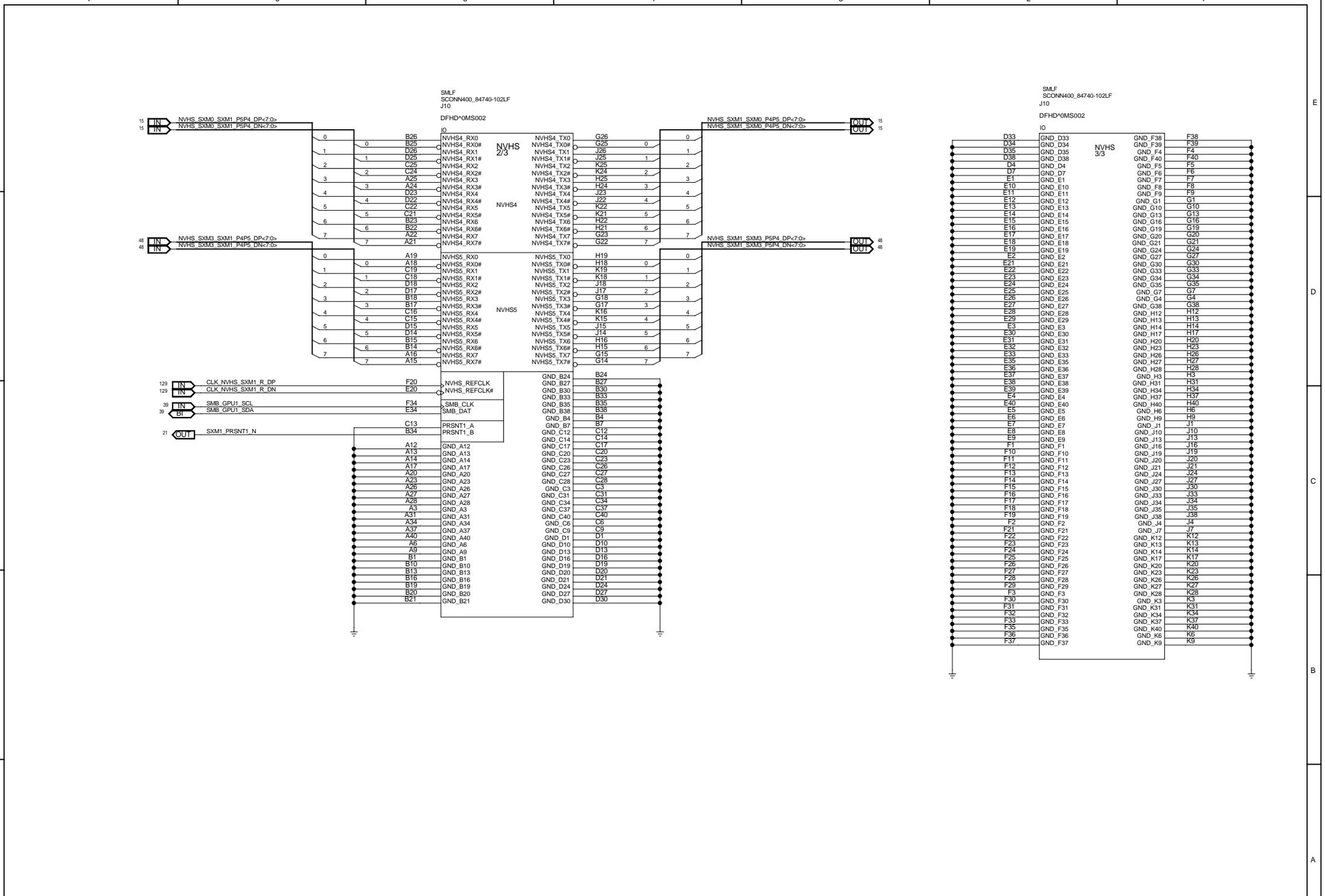


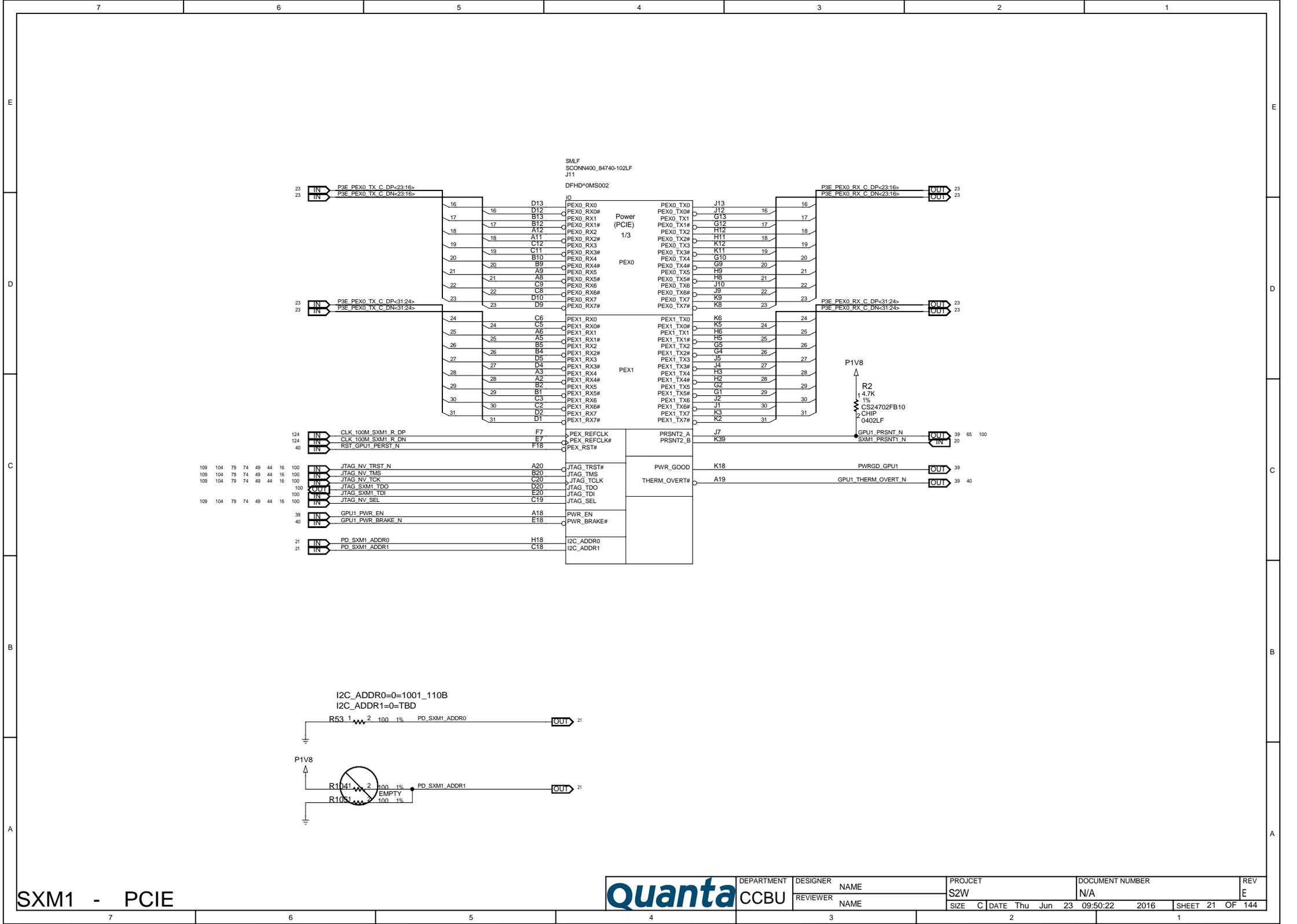
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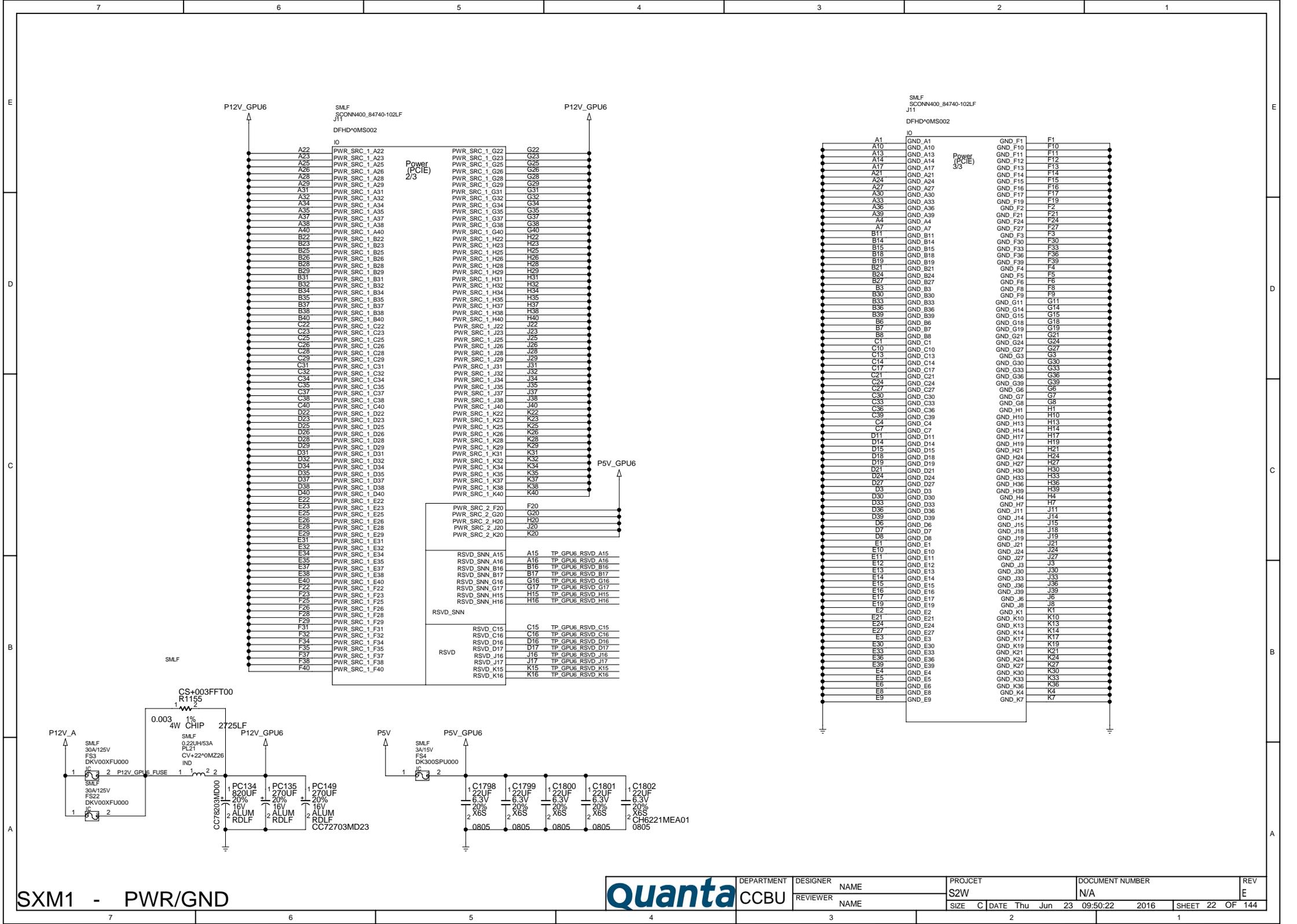












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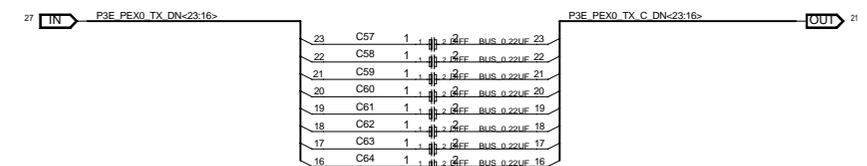
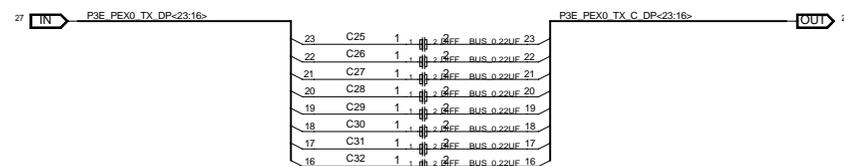
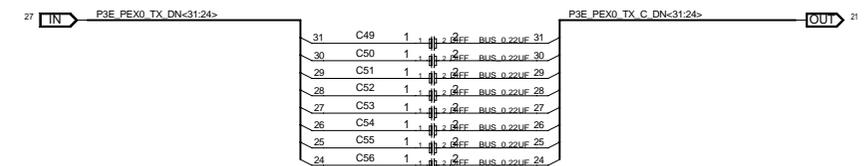
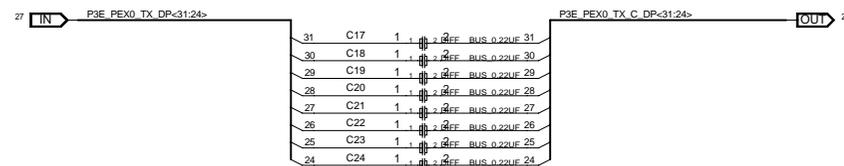
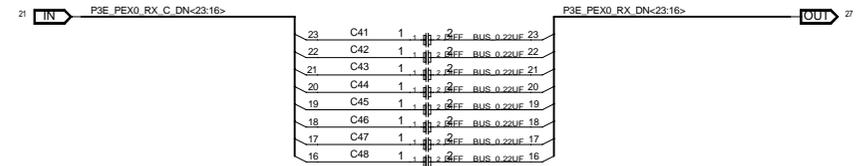
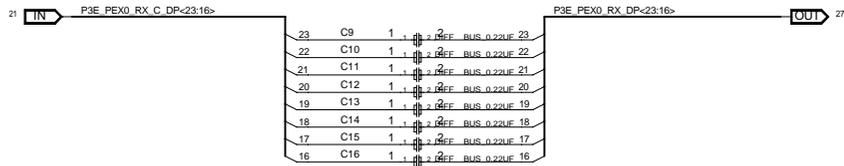
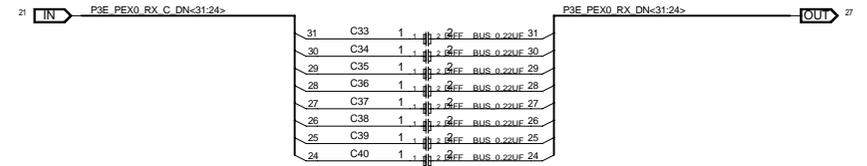
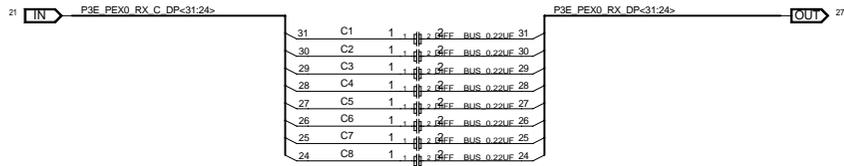
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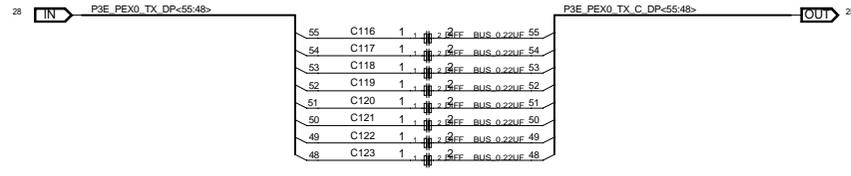
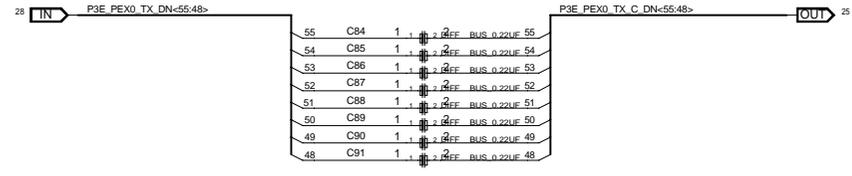
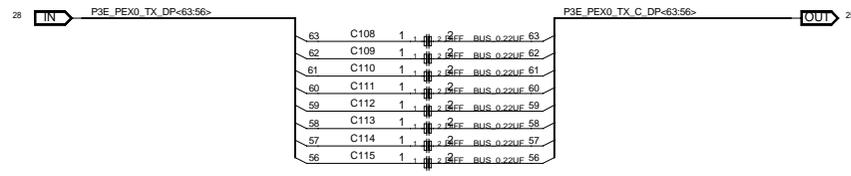
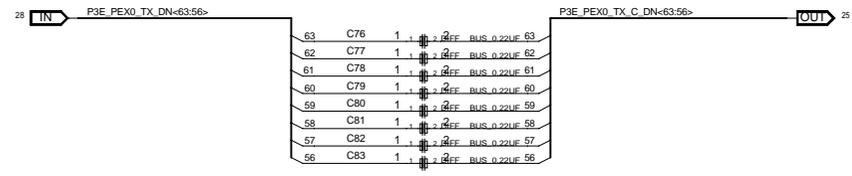
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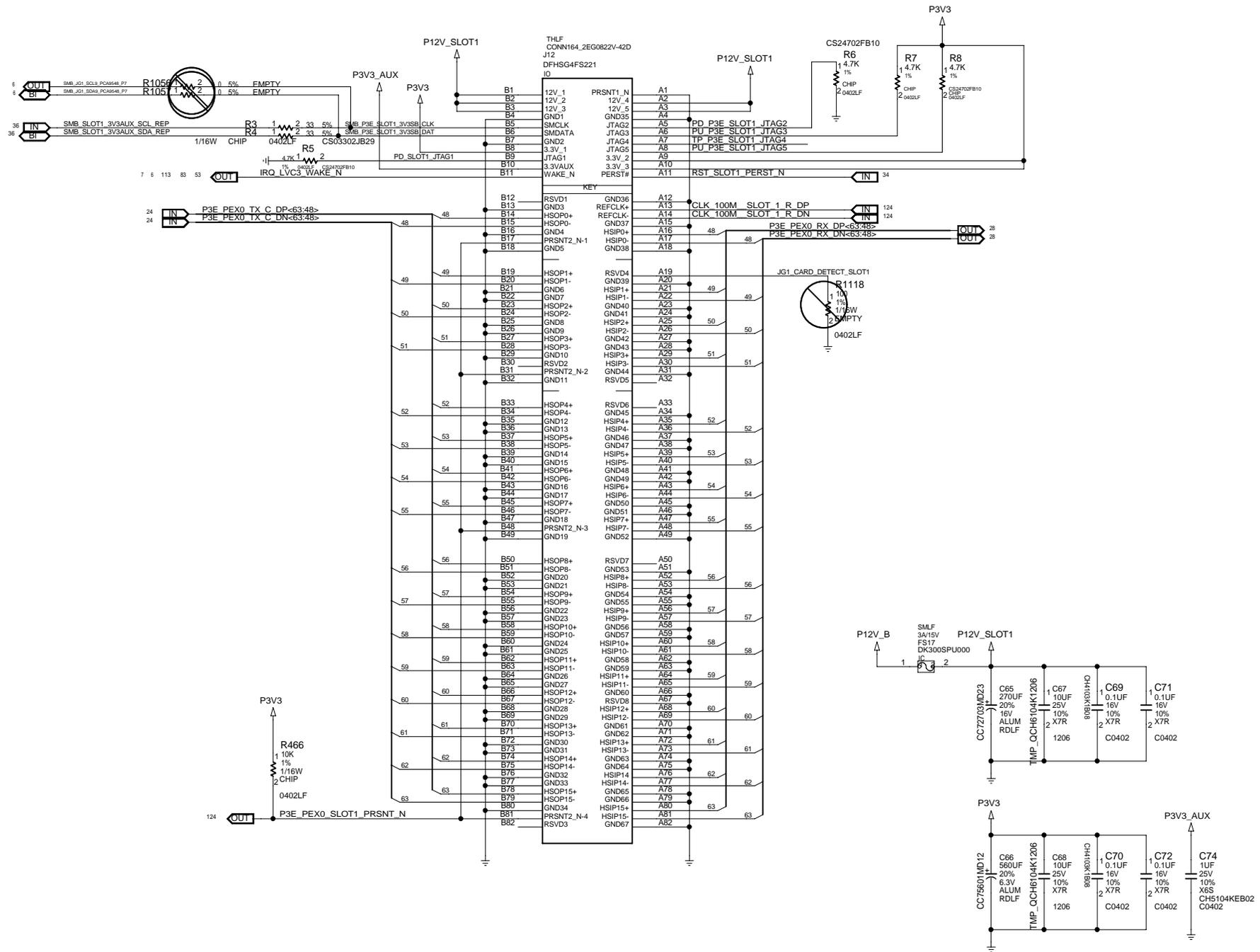
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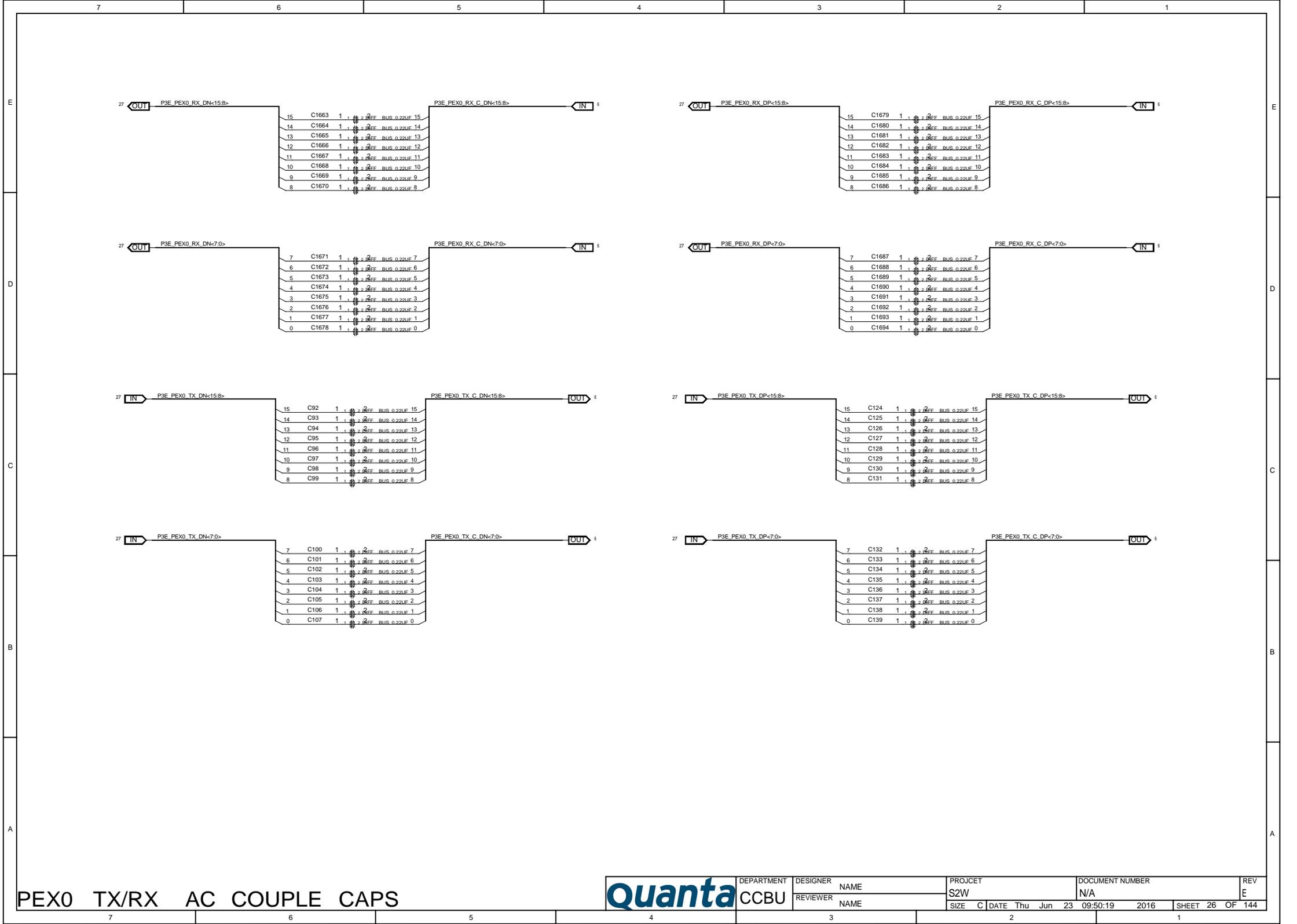
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PEX0 TX/RX AC COUPLE CAPS



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DOCUMENT NUMBER
N/A

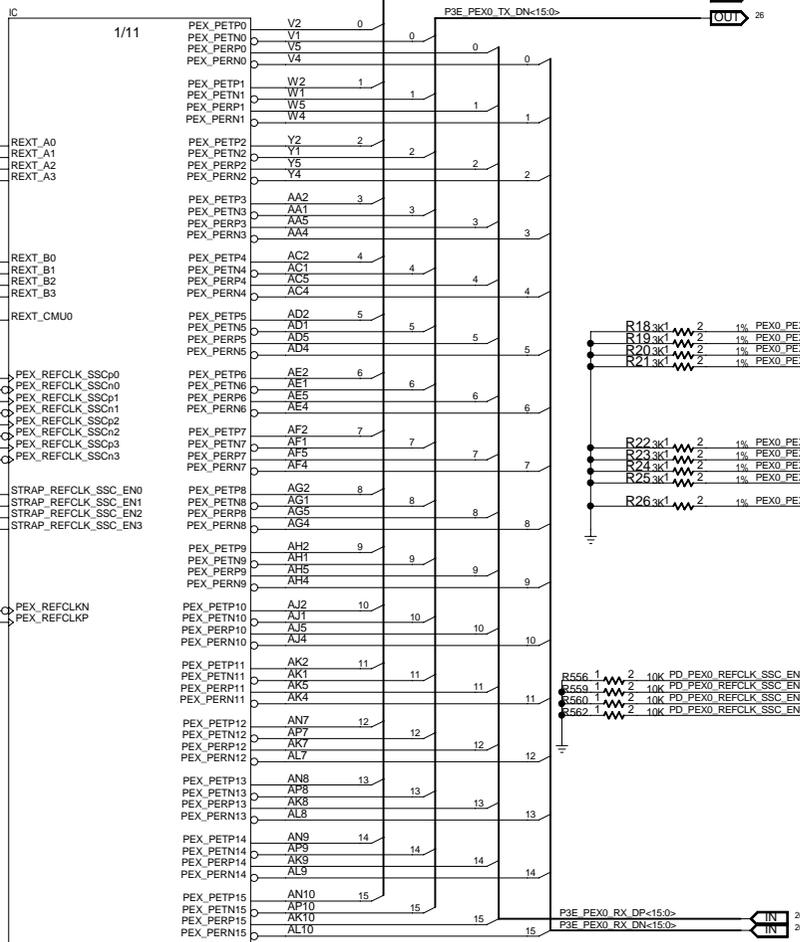
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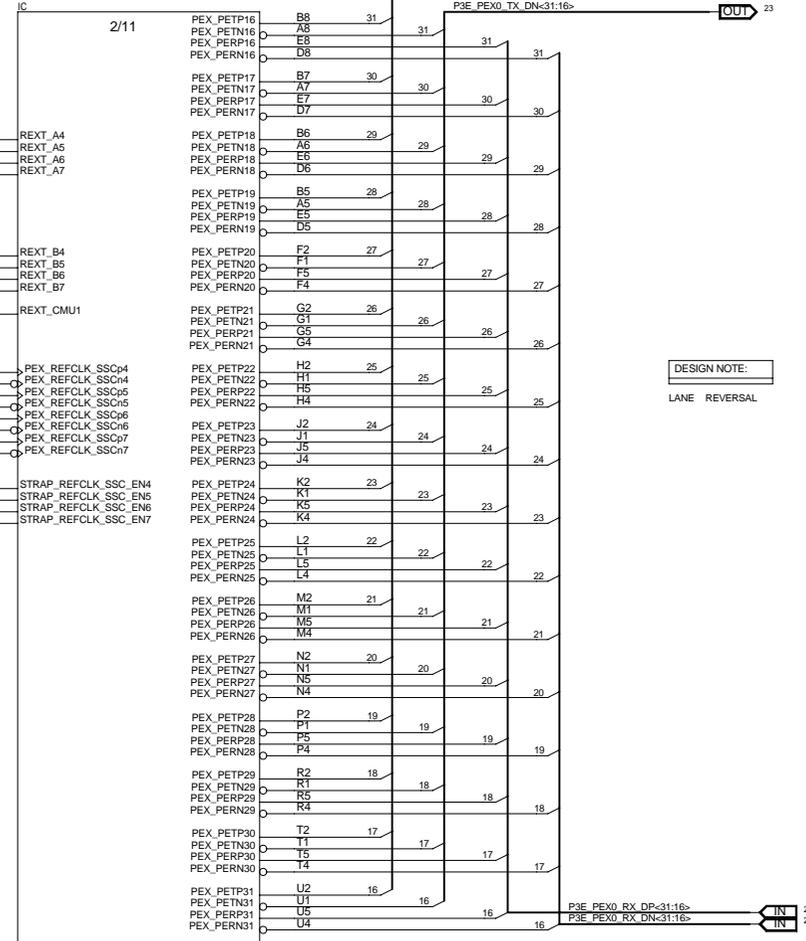
PLX TO CPU

PLX TO GPU1

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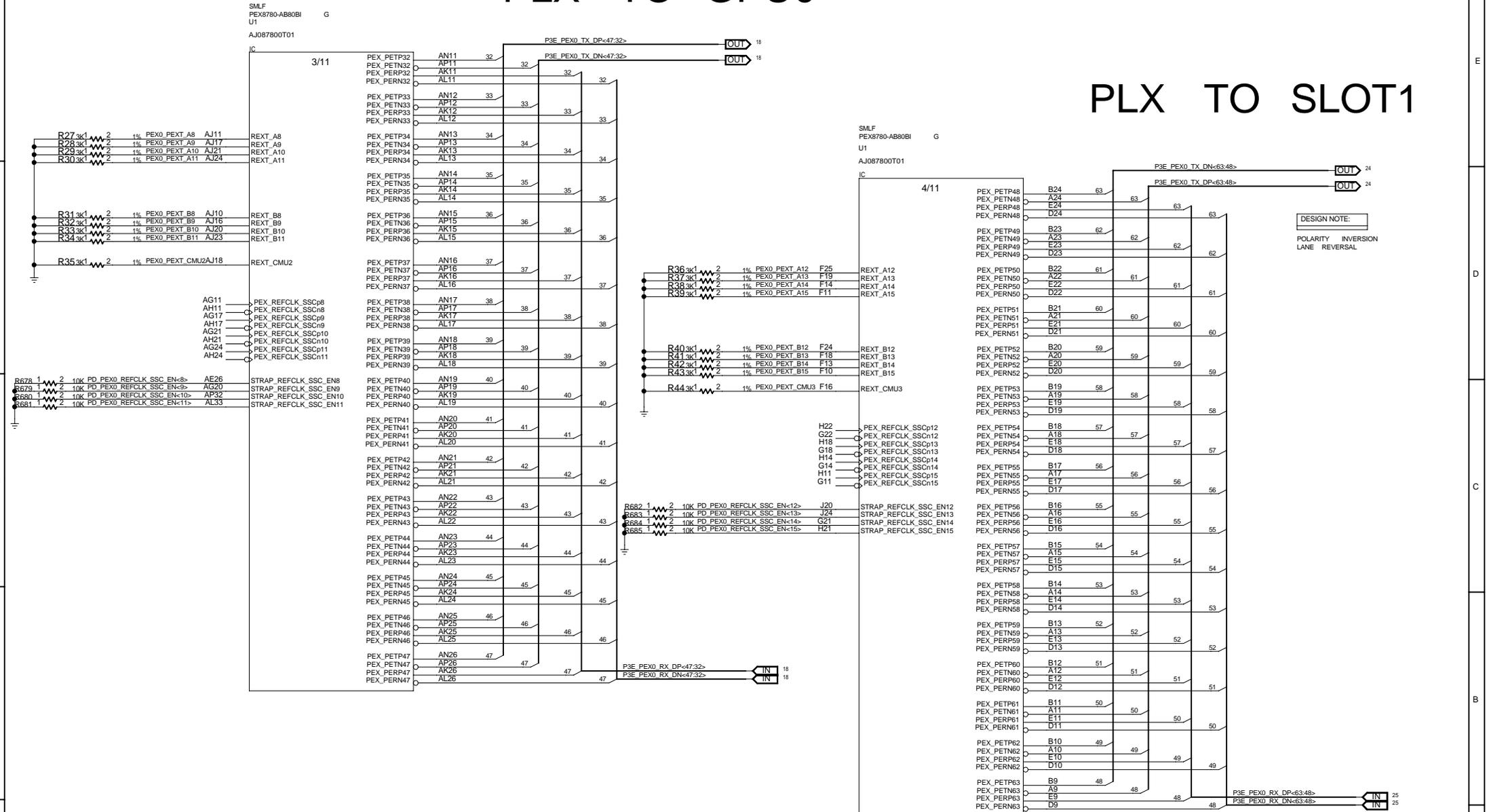
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DESIGN NOTE:
LANE REVERSAL

PLX TO GPU0

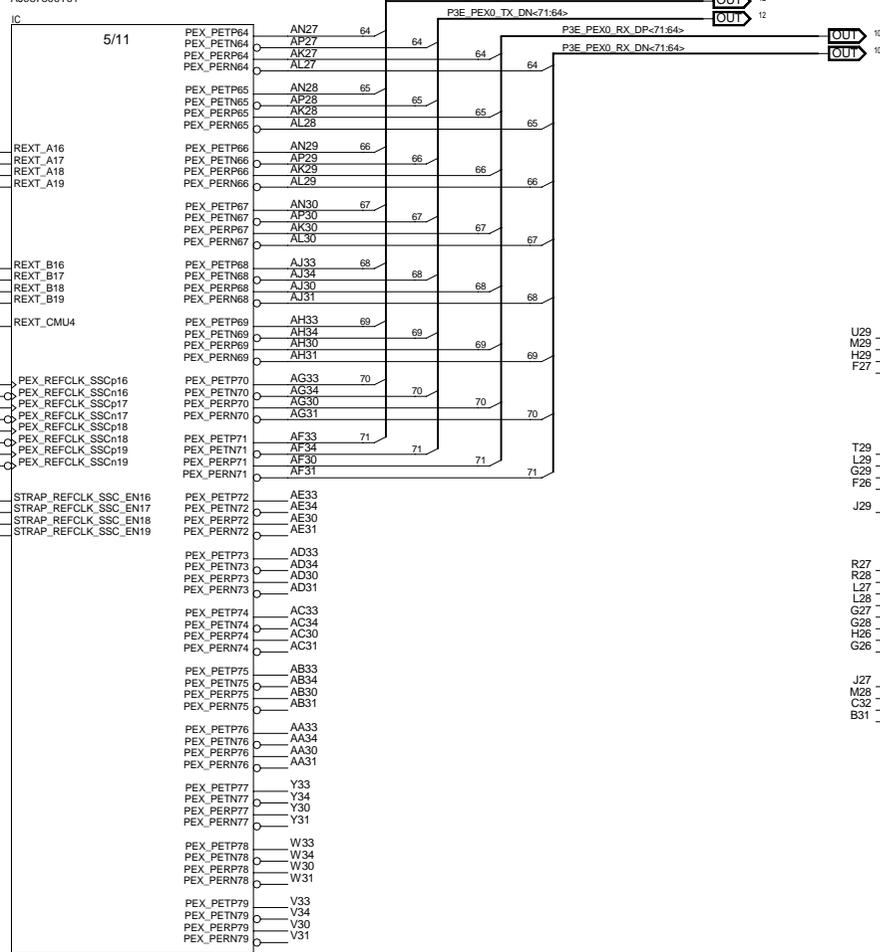
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PLX TO SSD0/1

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AJ087800T01



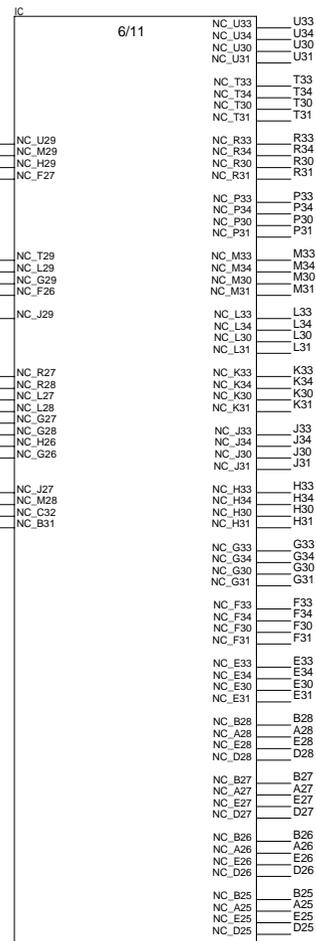
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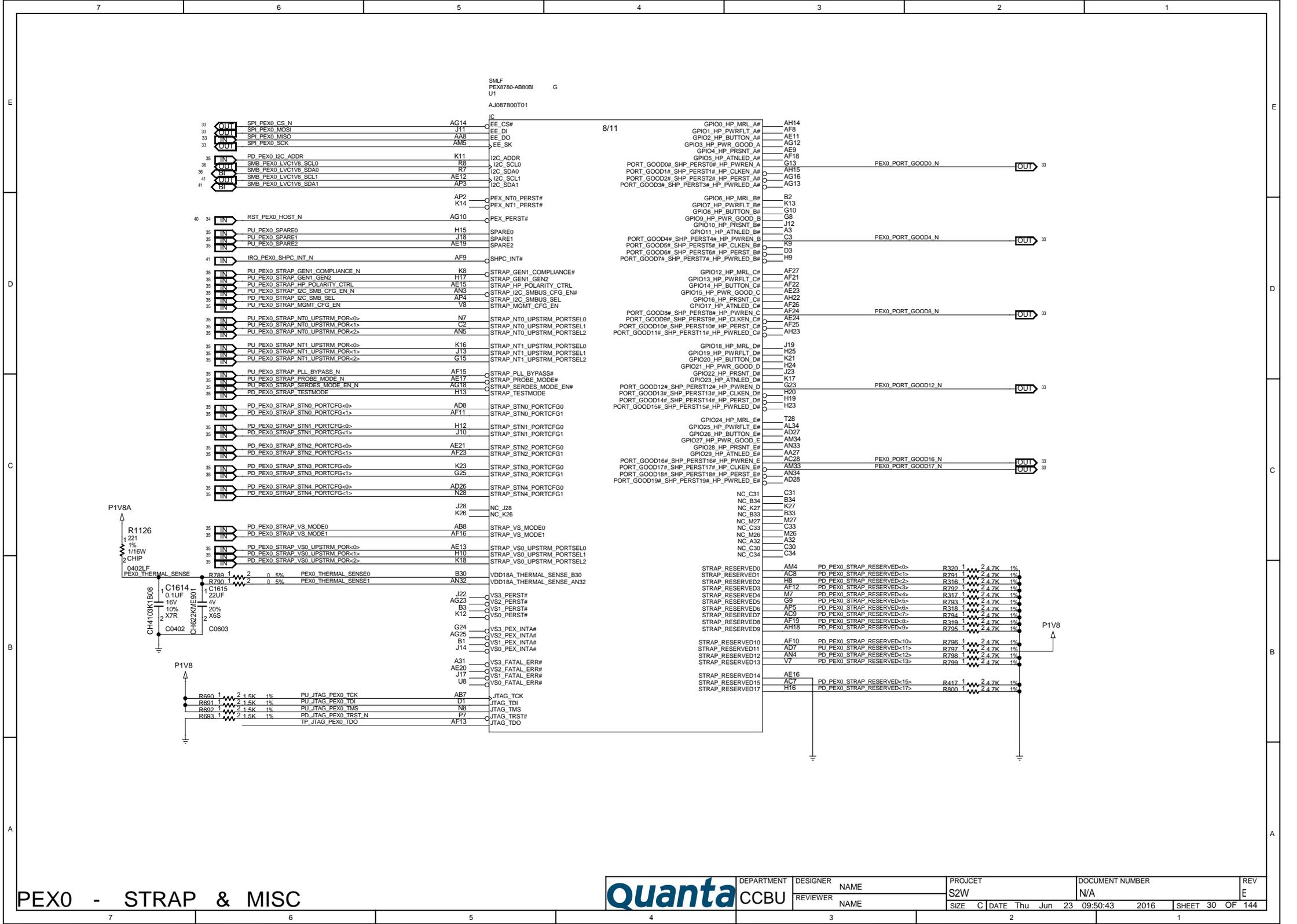
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AB2	NC_AB2		NC_K24	K24
AB4	NC_AB4		NC_K29	K29
AB5	NC_AB5		NC_M8	M8
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AC6	NC_AC6		NC_N30	N30
AD29	NC_AD29		NC_N31	N31
AF14	NC_AF14		NC_N33	N33
AF17	NC_AF17		NC_N34	N34
AF20	NC_AF20		NC_P27	P27
AG26	NC_AG26		NC_P29	P29
AH26	NC_AH26		NC_PE	PE
AJ14	NC_AJ14		NC_R29	R29
AL32	NC_AL32		NC_T27	T27
AM32	NC_AM32		NC_U27	U27
B32	NC_B32		NC_U7	U7
D2	NC_D2		NC_W7	W7
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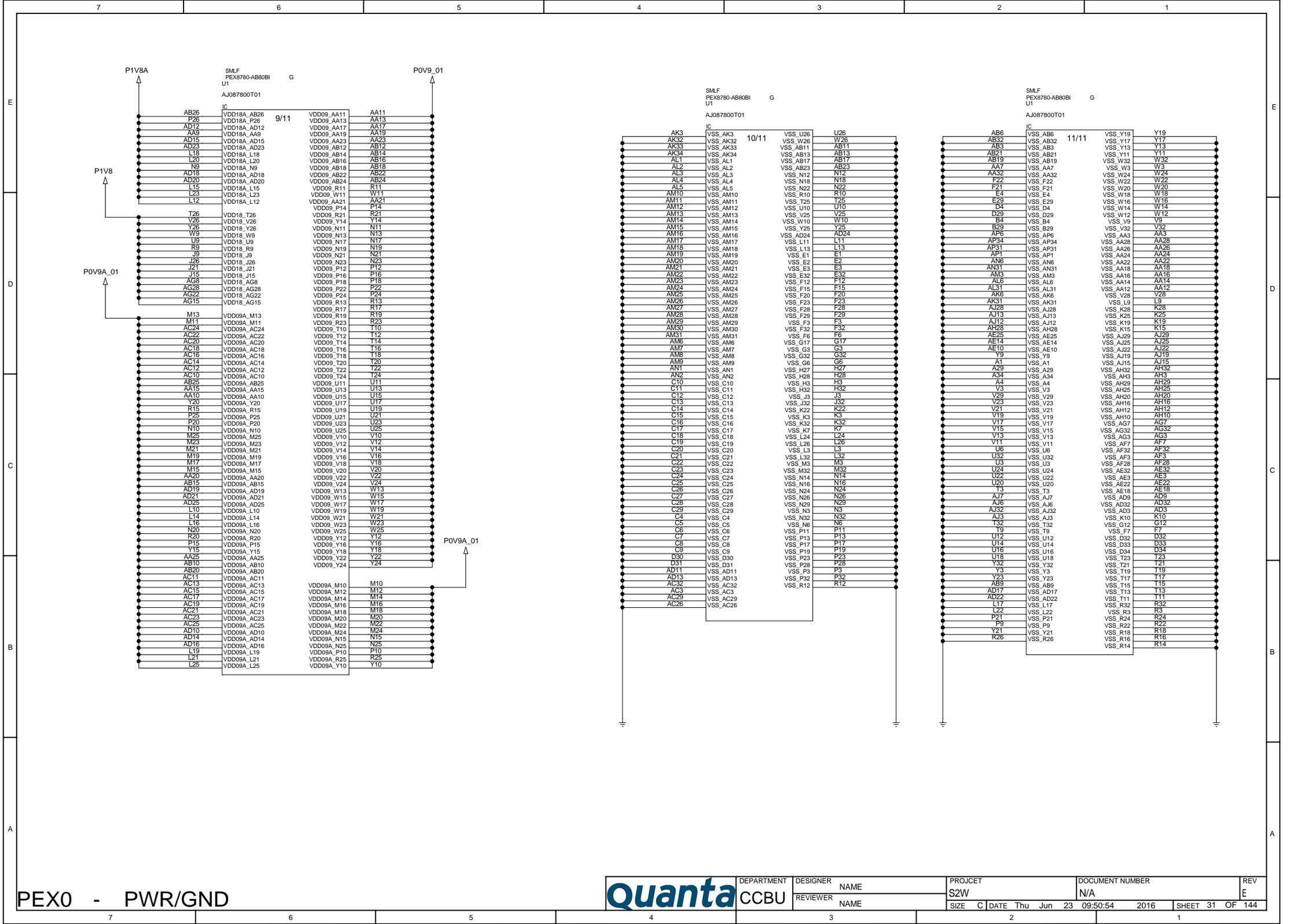
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PEX0 - STRAP & MISC

DEPARTMENT		DESIGNER	NAME	PROJECT	DOCUMENT NUMBER	REV
CCBU		REVIEWER	NAME	S2W	N/A	E
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PEX0 - PWR/GND



DEPARTMENT
CCBU

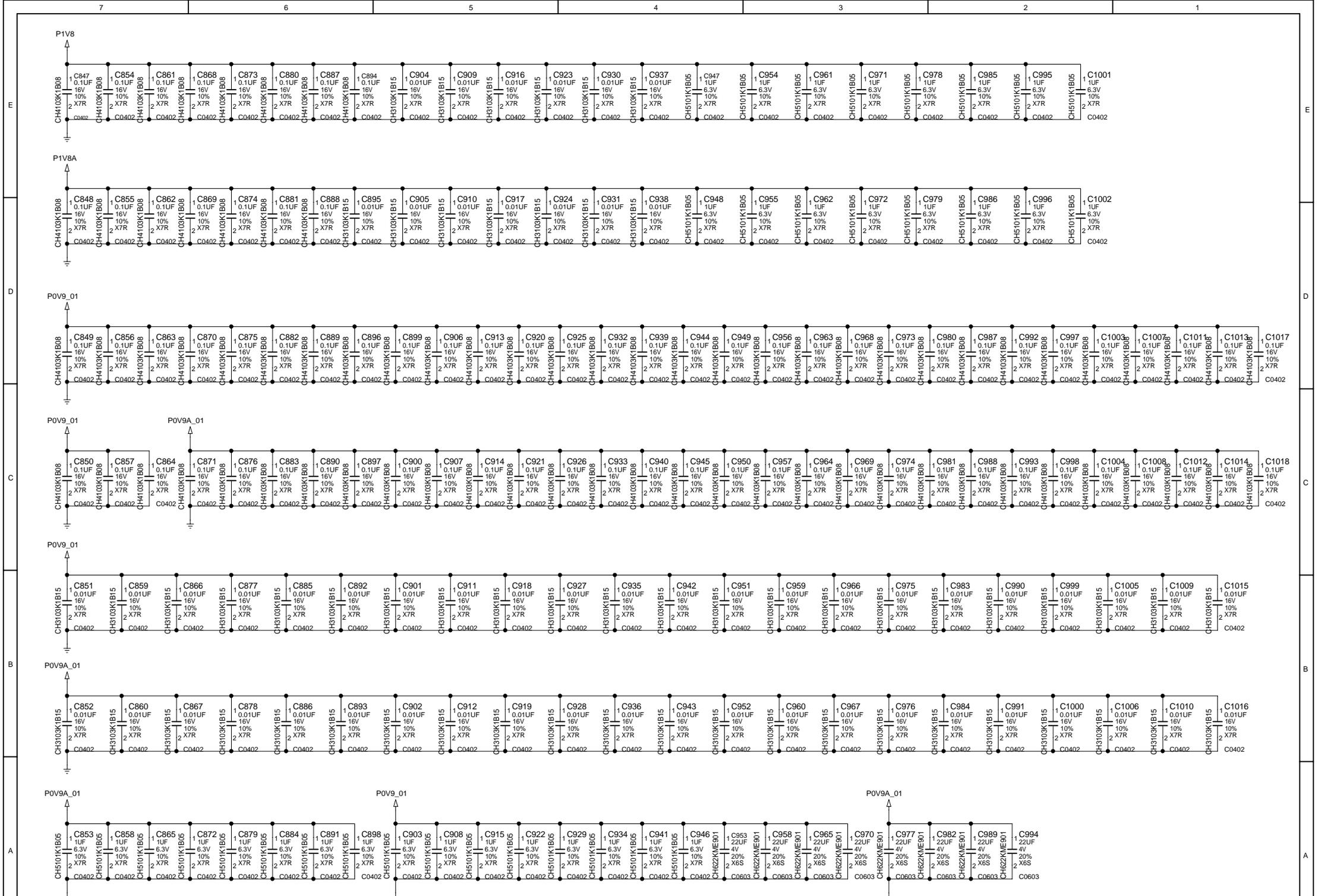
DESIGNER NAME
REVIEWER NAME

PROJECT
S2W

DOCUMENT NUMBER
N/A

REV
E

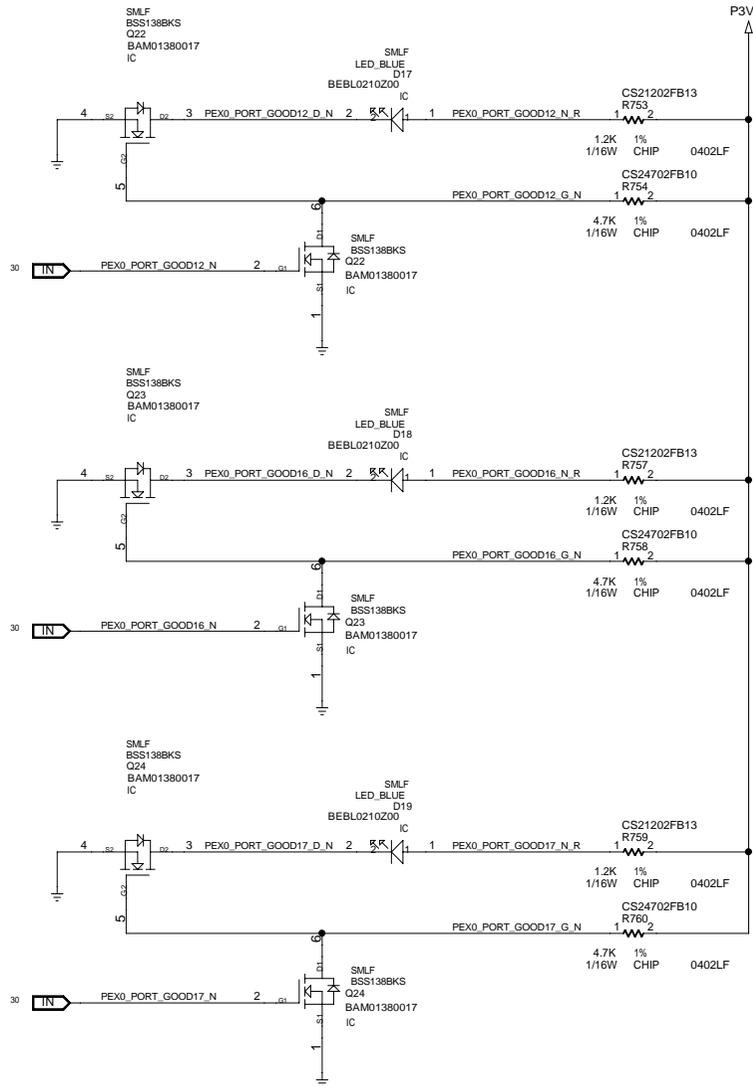
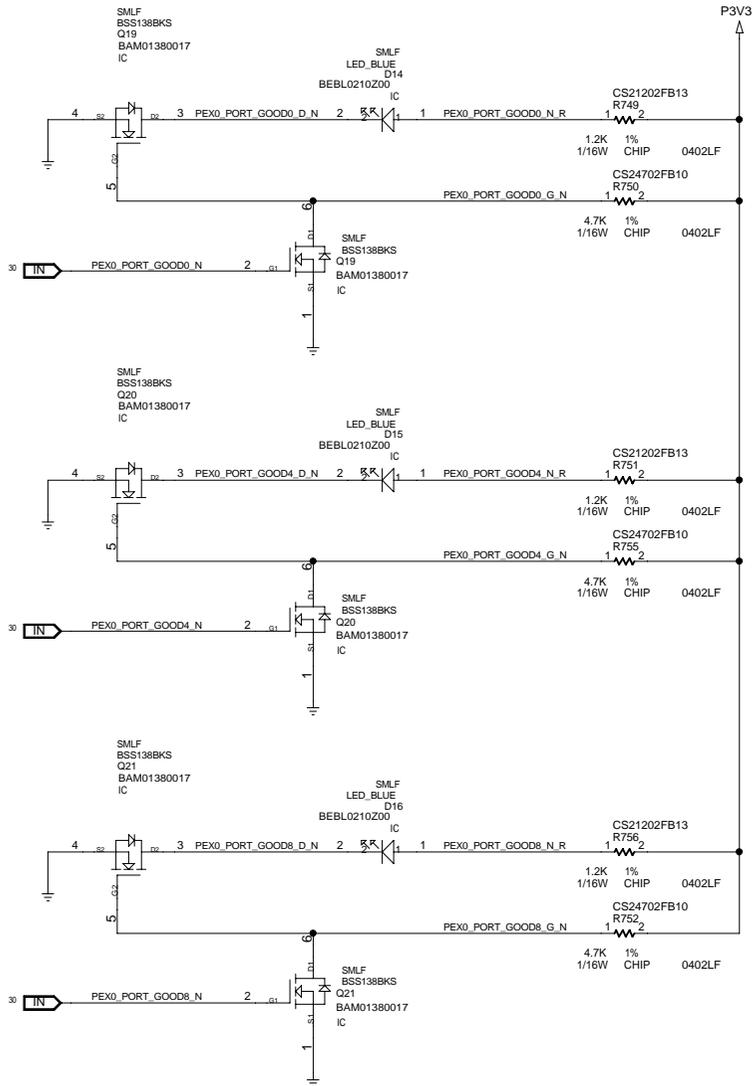
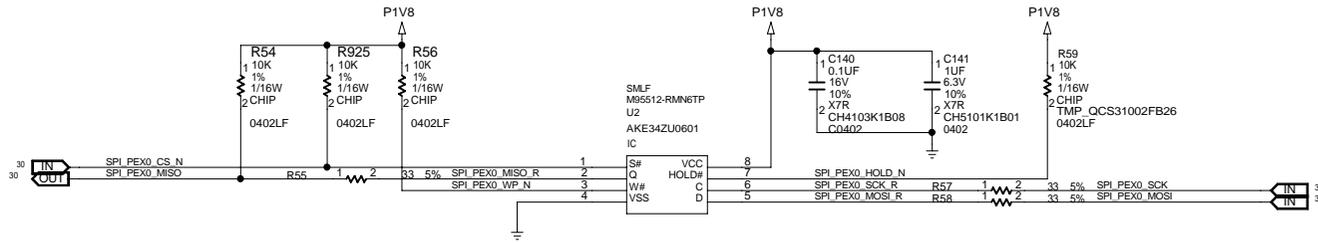
SIZE C DATE Thu Jun 23 09:50:54 2016 SHEET 31 OF 144



PEX0 POWER DECOUPLING



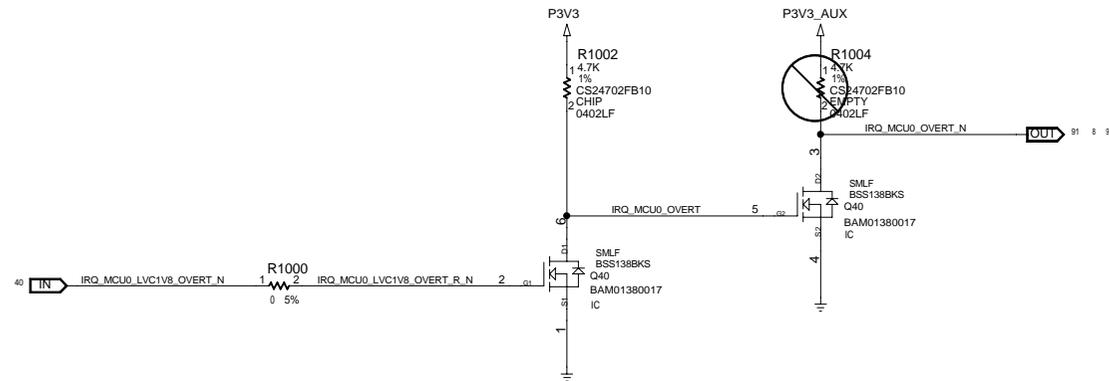
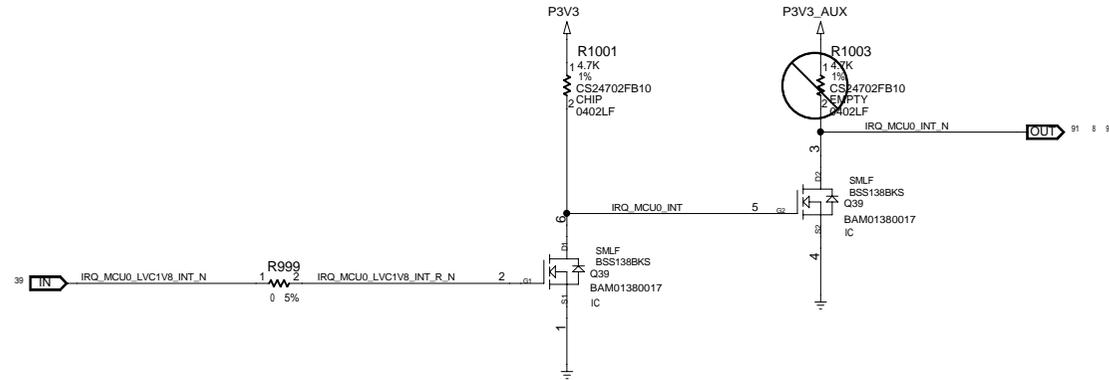
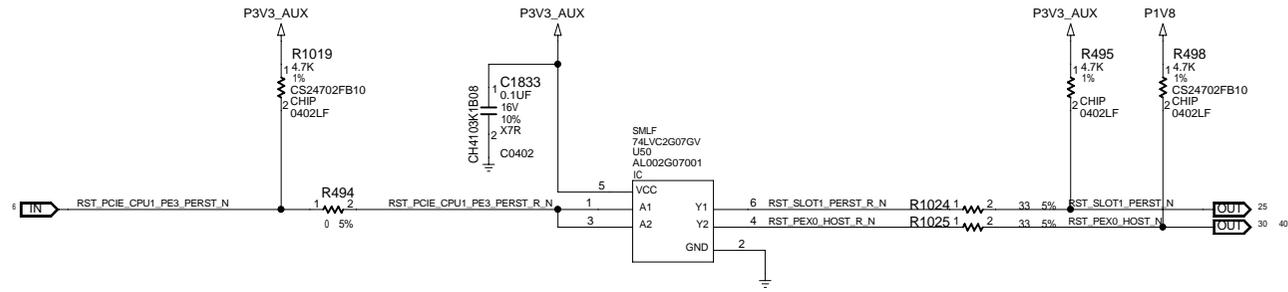
DEPARTMENT	DESIGNER	PROJECT	DOCUMENT NUMBER	REV
CCBU	NAME	S2W	N/A	E
REVIEWER	NAME	SIZE	DATE	SHEET
		C	Thu Jun 23 09:50:38 2016	32 OF 144



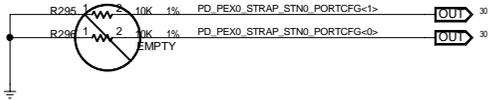
PEX0 EEPROM & PORT LED



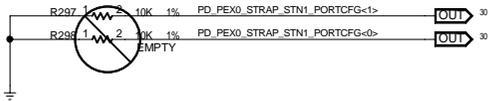
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REVIEWER NAME	DATE Thu Jun 23 09:50:22 2016	SIZE C	SHEET 33 OF 144	



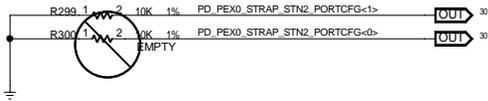
STATION0 PORT CONFIG
CONTROL THRU EEPROM
STN0: 300H[2:0]=001B=X16
STRAP_STN0_PORTCFG[1:0]=0Z=X16



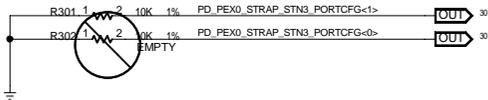
STATION1 PORT CONFIG
CONTROL THRU EEPROM
STN1: 300H[5:3]=001B=X16
STRAP_STN1_PORTCFG[1:0]=0Z=X16



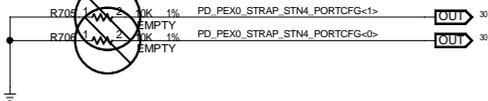
STATION2 PORT CONFIG
CONTROL THRU EEPROM
STN2: 300H[8:6]=001B=X16
STRAP_STN2_PORTCFG[1:0]=0Z=X16



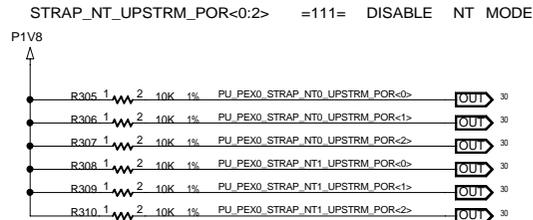
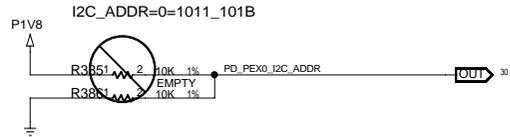
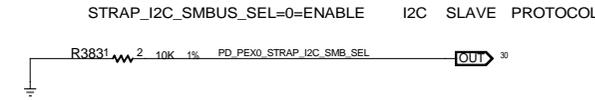
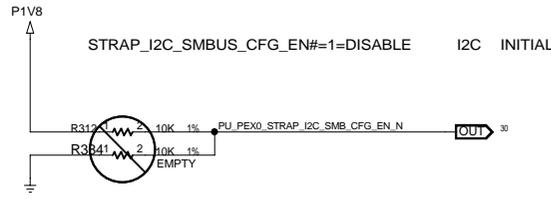
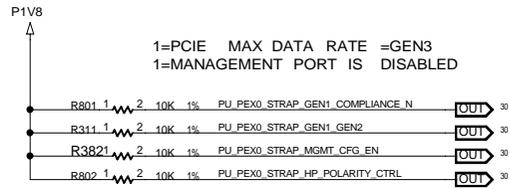
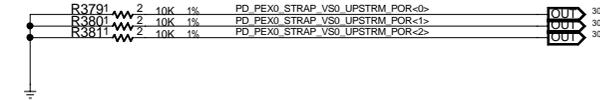
STATION3 PORT CONFIG
CONTROL THRU EEPROM
STN3: 300H[11:9]=001B=X16
STRAP_STN3_PORTCFG[1:0]=0Z=X16



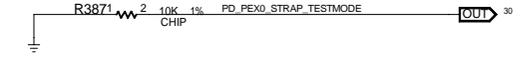
STATION4 PORT CONFIG
CONTROL THRU EEPROM
STN4: 300H[14:12]=004B=X4X4X4X4
STRAP_STN4_PORTCFG[1:0]=ZZ=X4X4X4X4



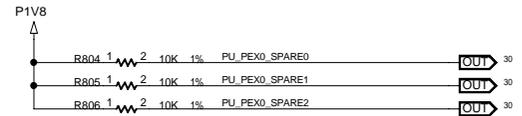
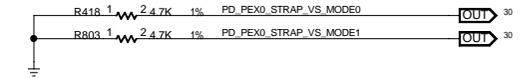
UPSTREAM PORT SELECT
CONTROL THRU EEPROM
360H[4:0]=0_0000B=PORT 0
STRAP_UPSTRM_PORTSEL[2:0]=000=PORT 0



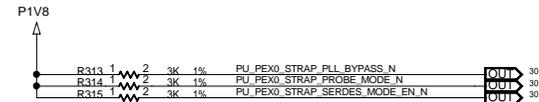
BASE MODE: TEST MODE=0
=PORT_GOODX# + GPIOX INPUT

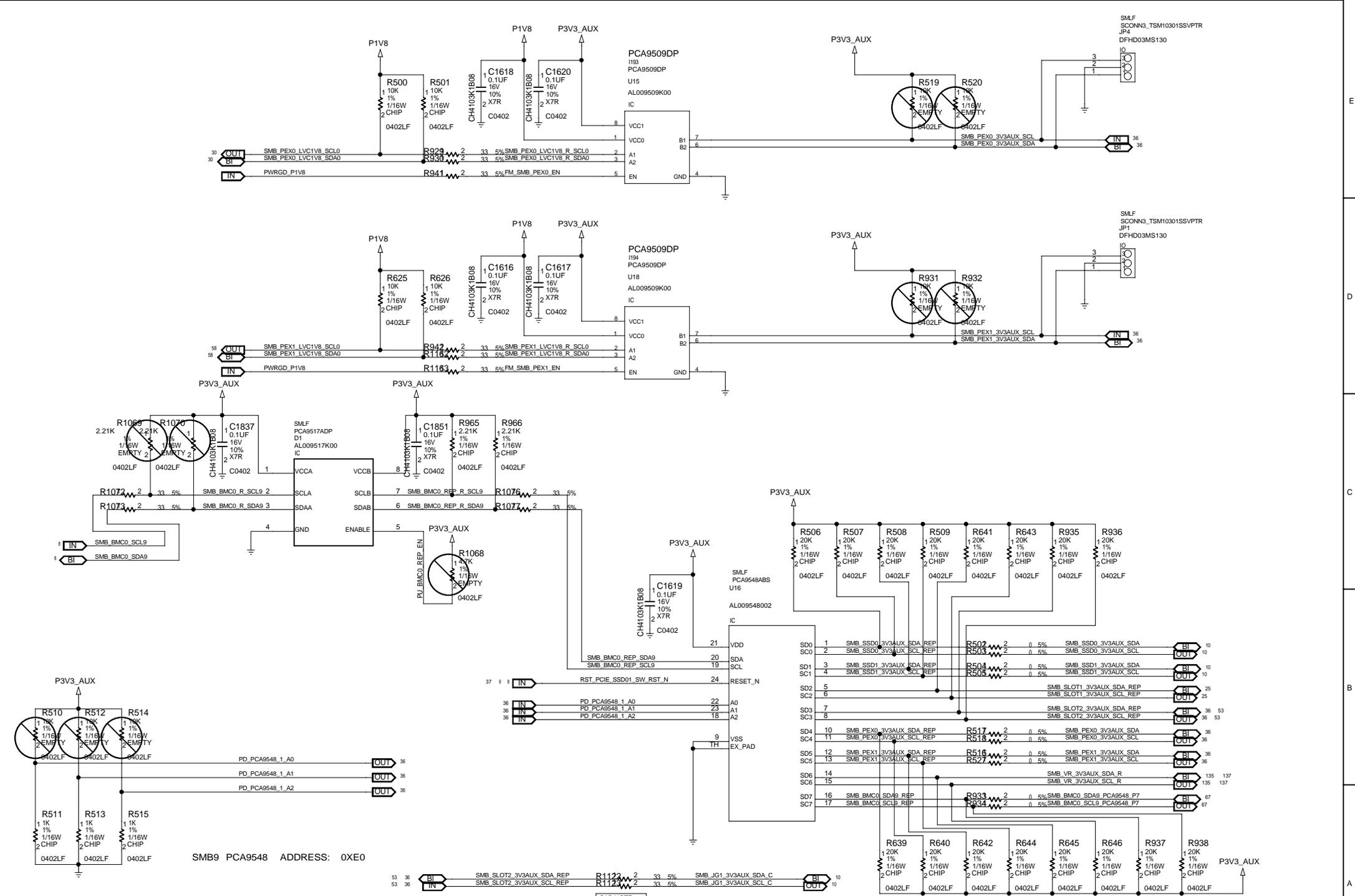


BASE MODE: LL(00)=SINGLE SWITCH

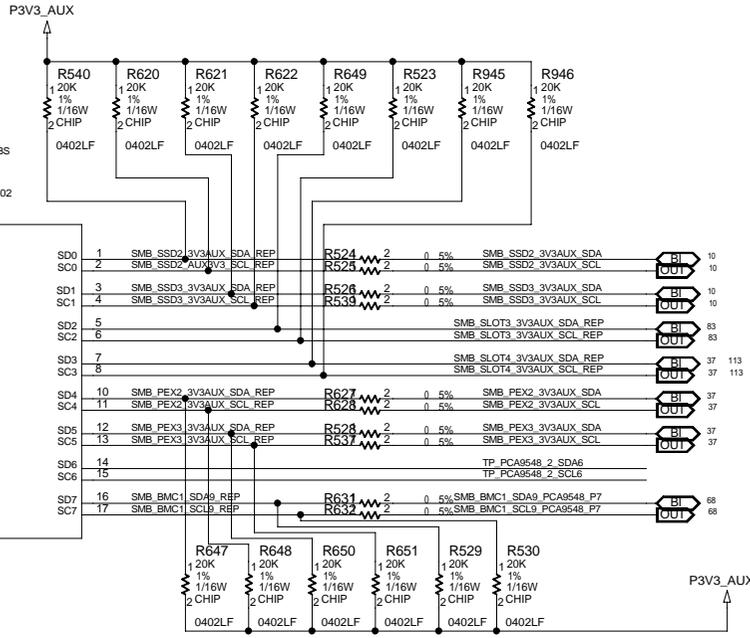
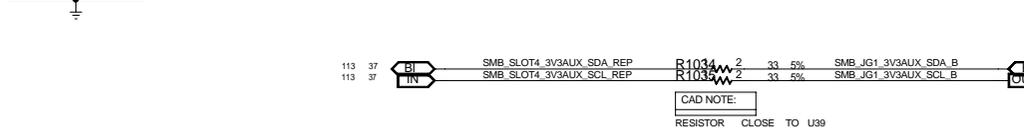
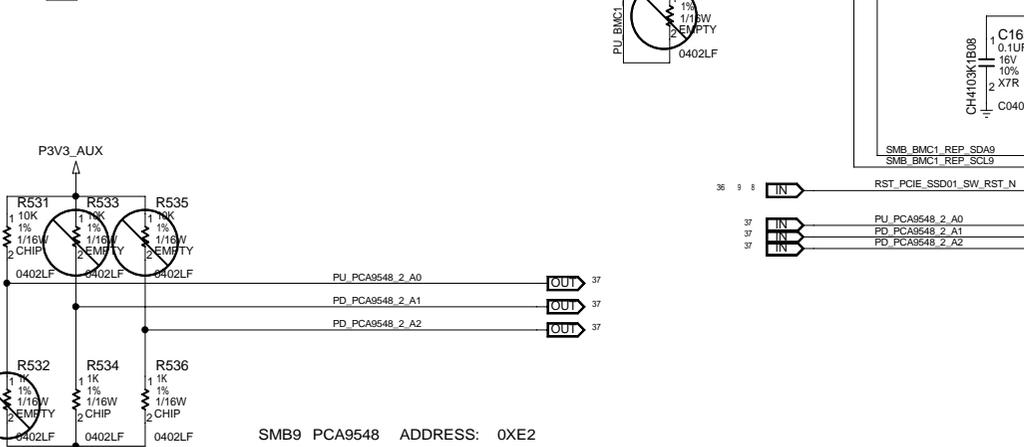
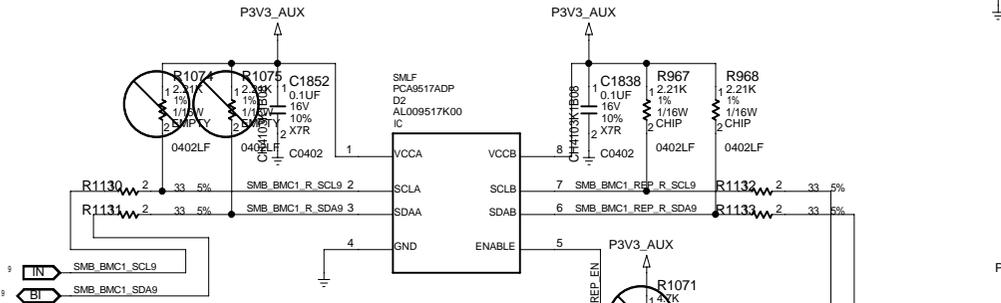
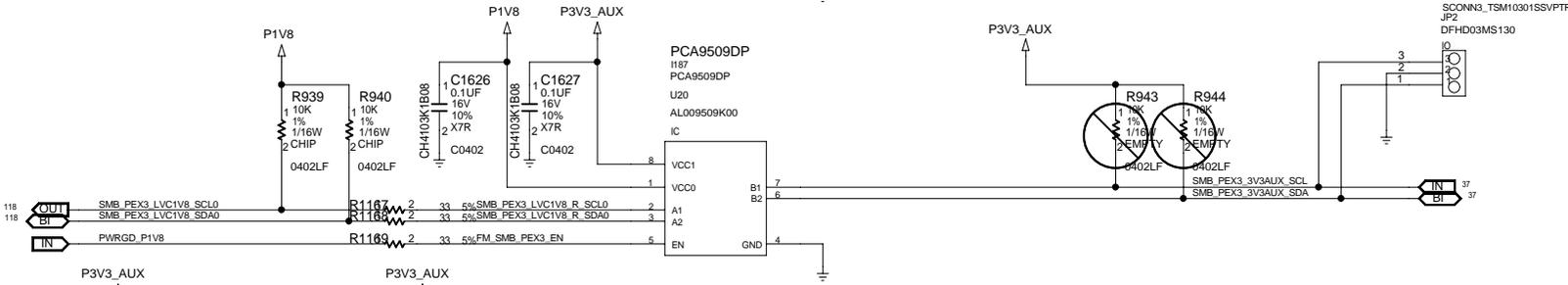
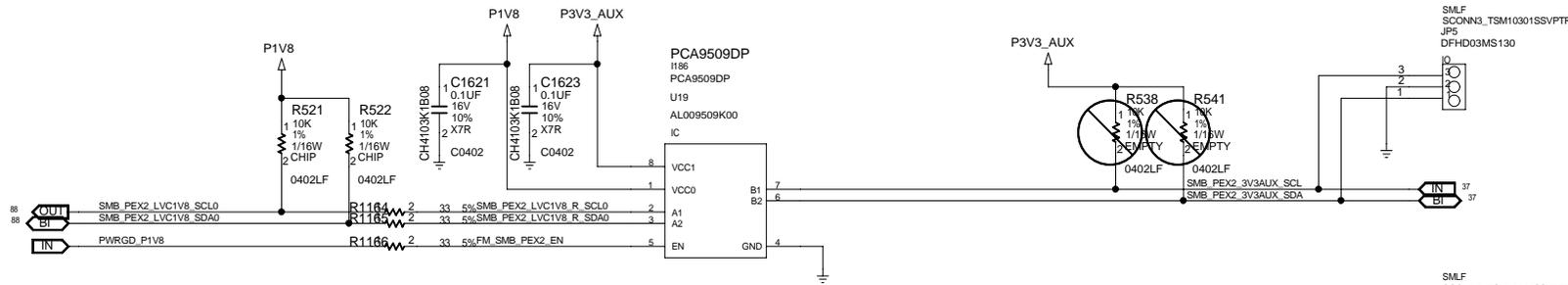


FOR FACTORY TEST ONLY





CAD NOTE:
RESISTOR CLOSE TO U16

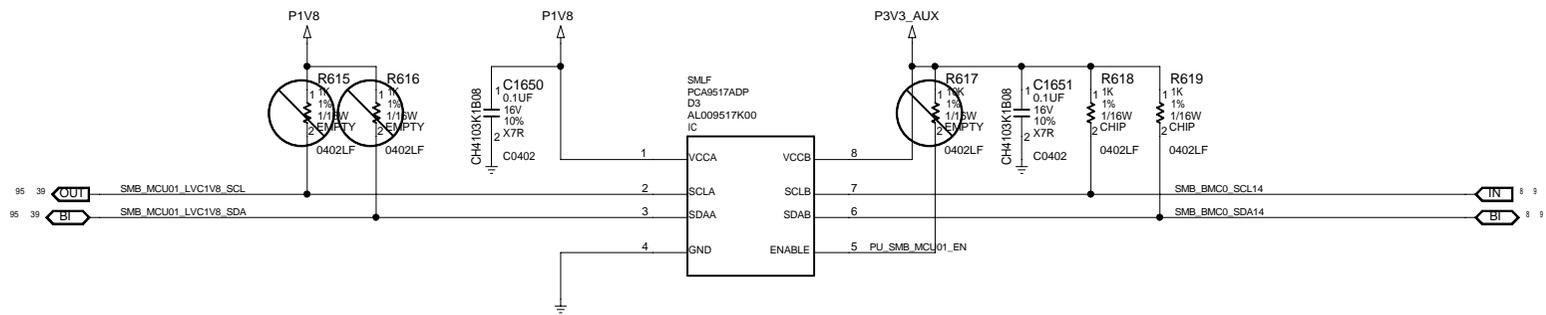


CAD NOTE:
RESISTOR CLOSE TO U39

PEX2/3 SMB LEVEL SHIFT & SWITCH



DEPARTMENT CCBU	DESIGNER NAME	PROJECT S2W	DOCUMENT NUMBER N/A	REV E
REVIEWER NAME	DATE Thu Jun 23 09:50:43 2016	SIZE C	SHEET 37 OF 144	



MCU0/1 SMB REPEATER



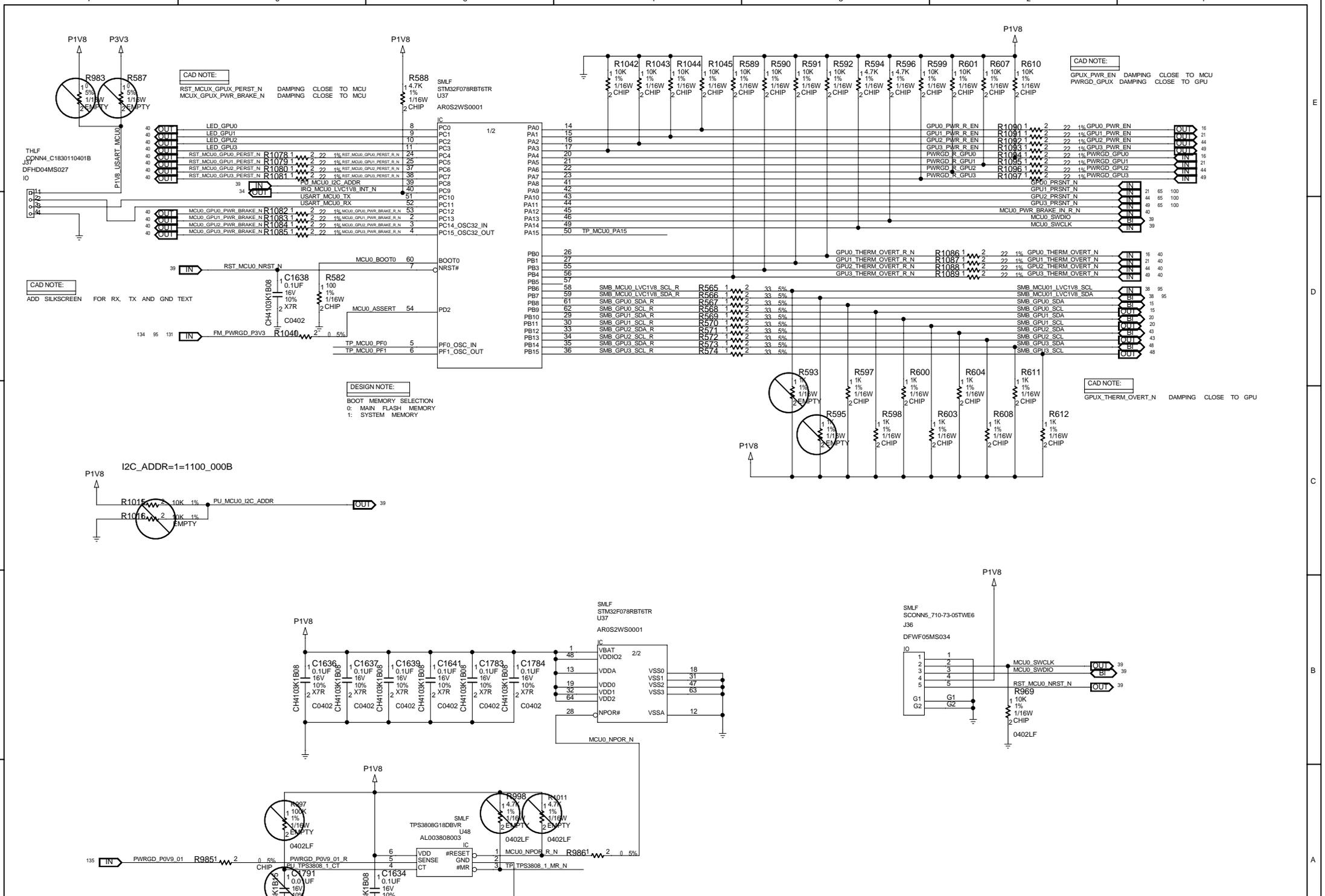
DEPARTMENT
CCBU

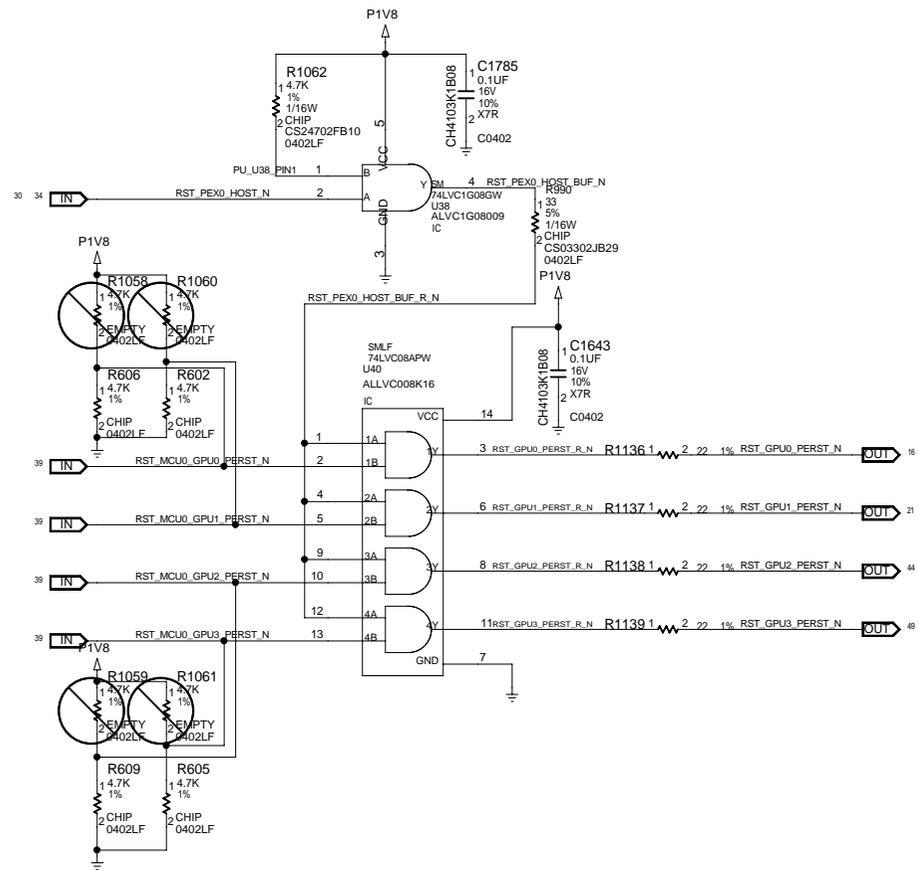
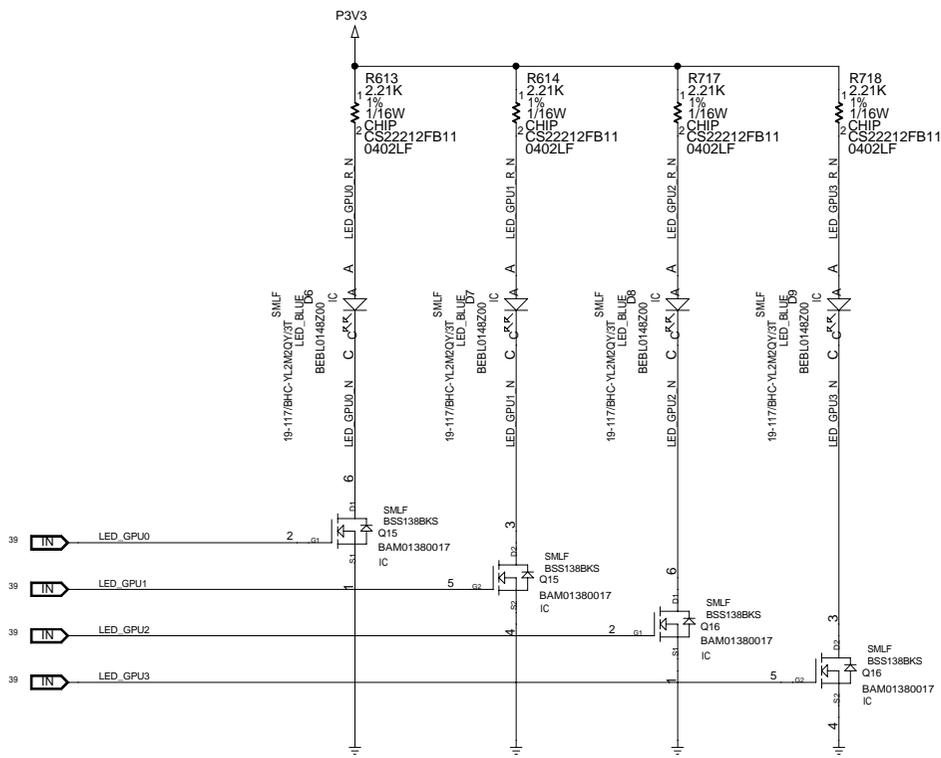
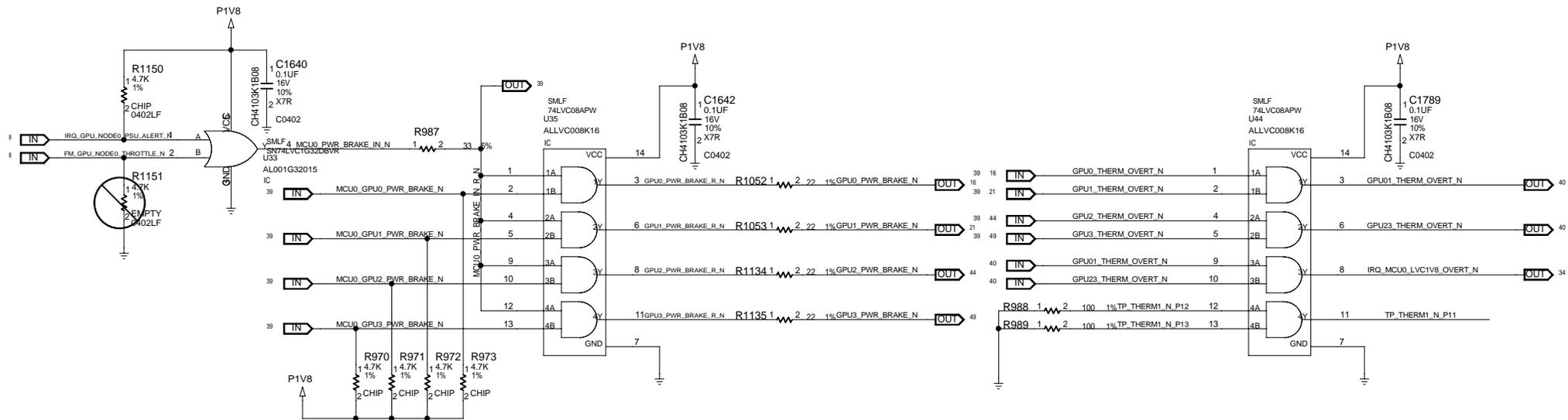
DESIGNER NAME
REVIEWER NAME

PROJECT
S2W

DOCUMENT NUMBER
N/A

REV
E

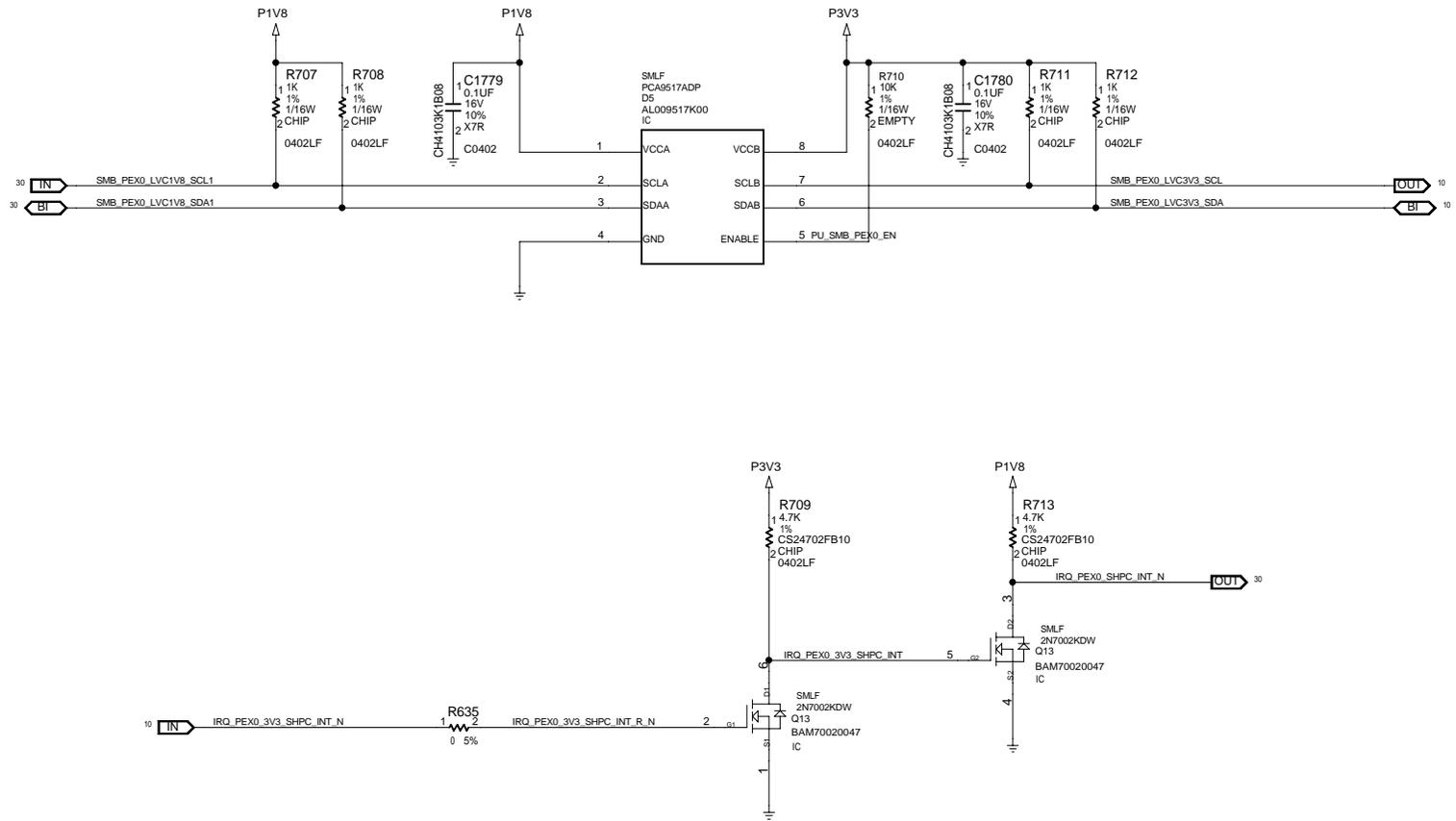


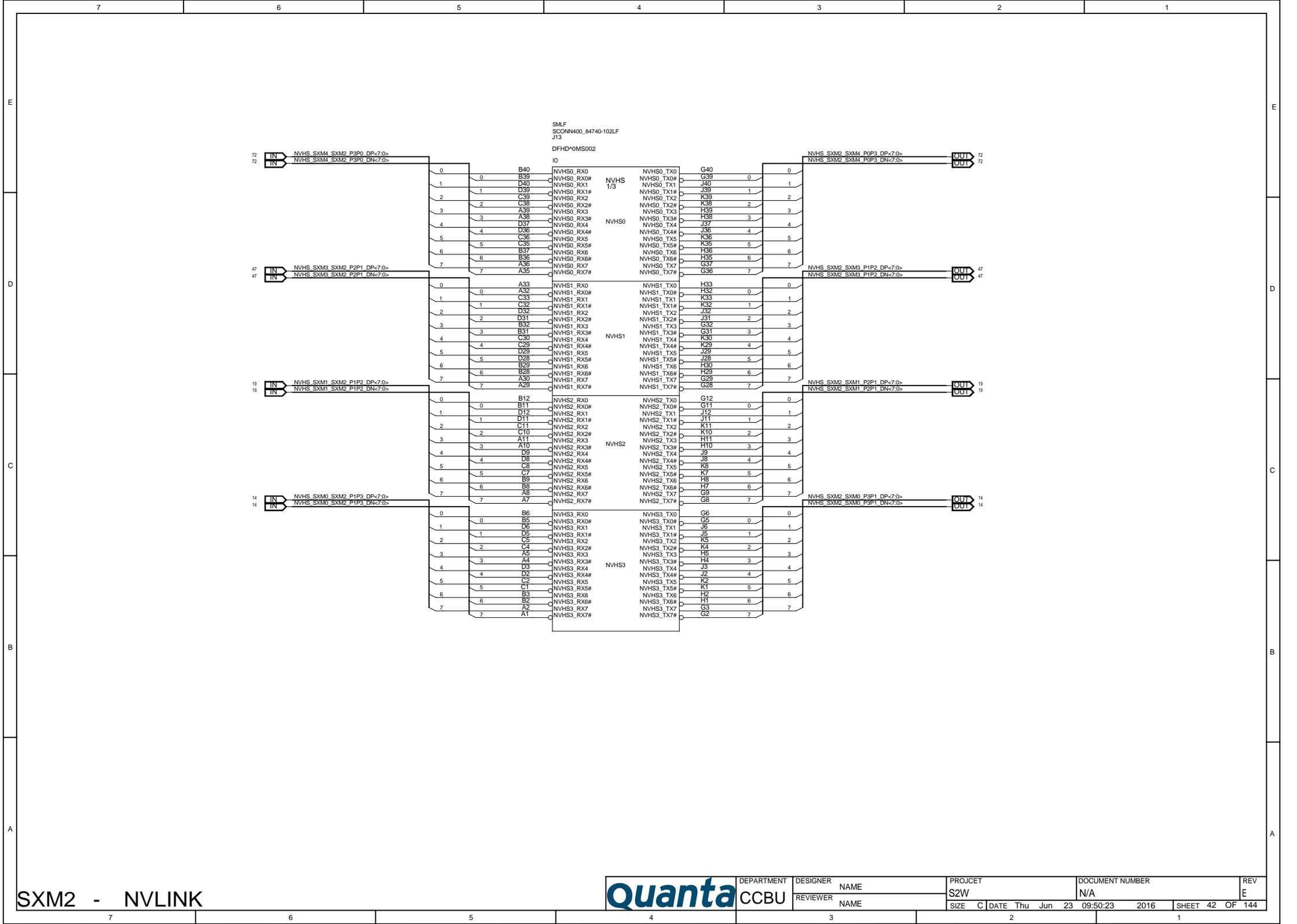


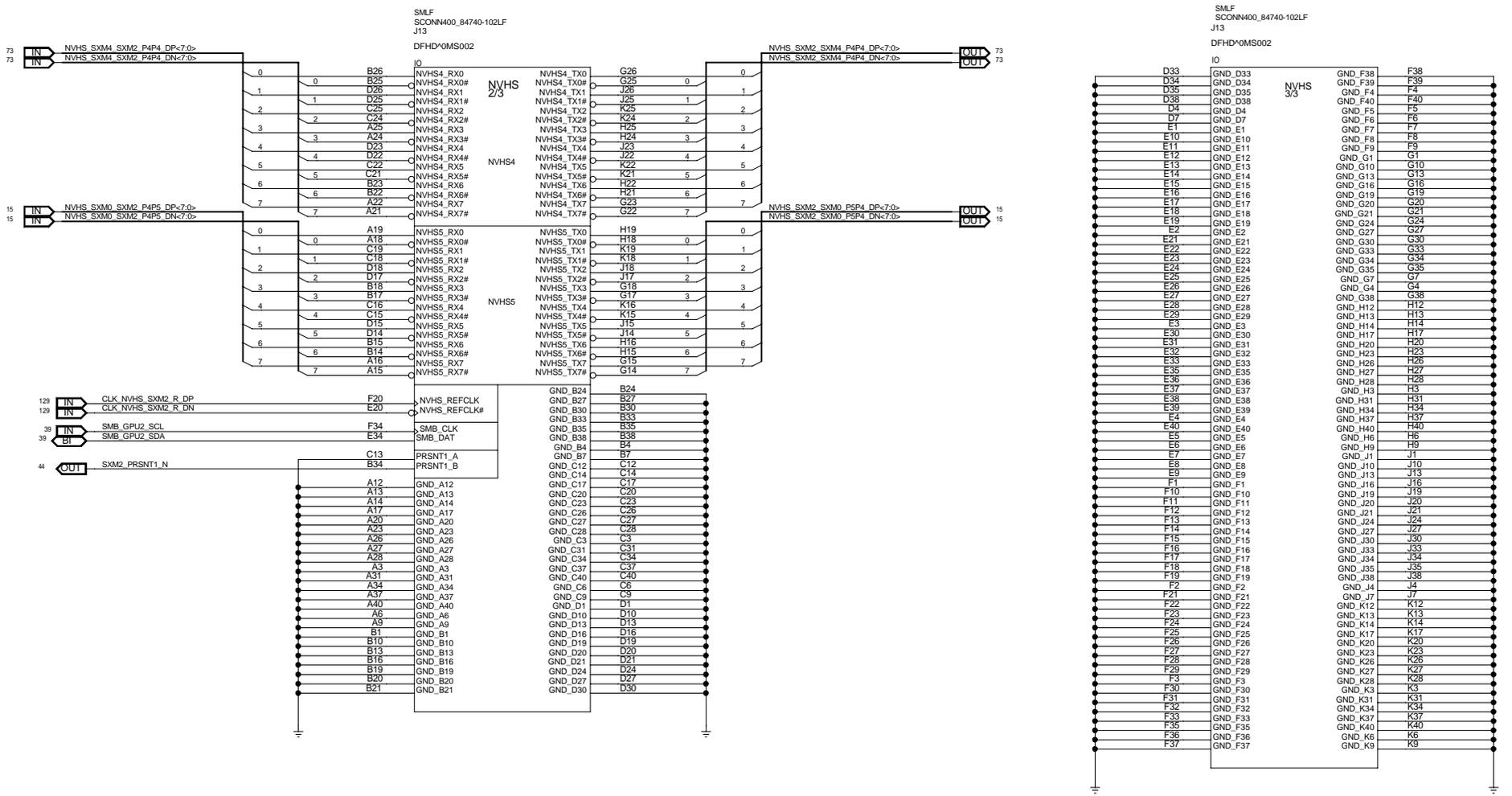
MCU0



DEPARTMENT	DESIGNER	NAME	PROJECT	DOCUMENT NUMBER	REV
CCBU			S2W	N/A	E
REVIEWER	NAME	DATE	SIZE	DATE	SHEET
		Thu Jun 23 09:50:46 2016	C		40 OF 144



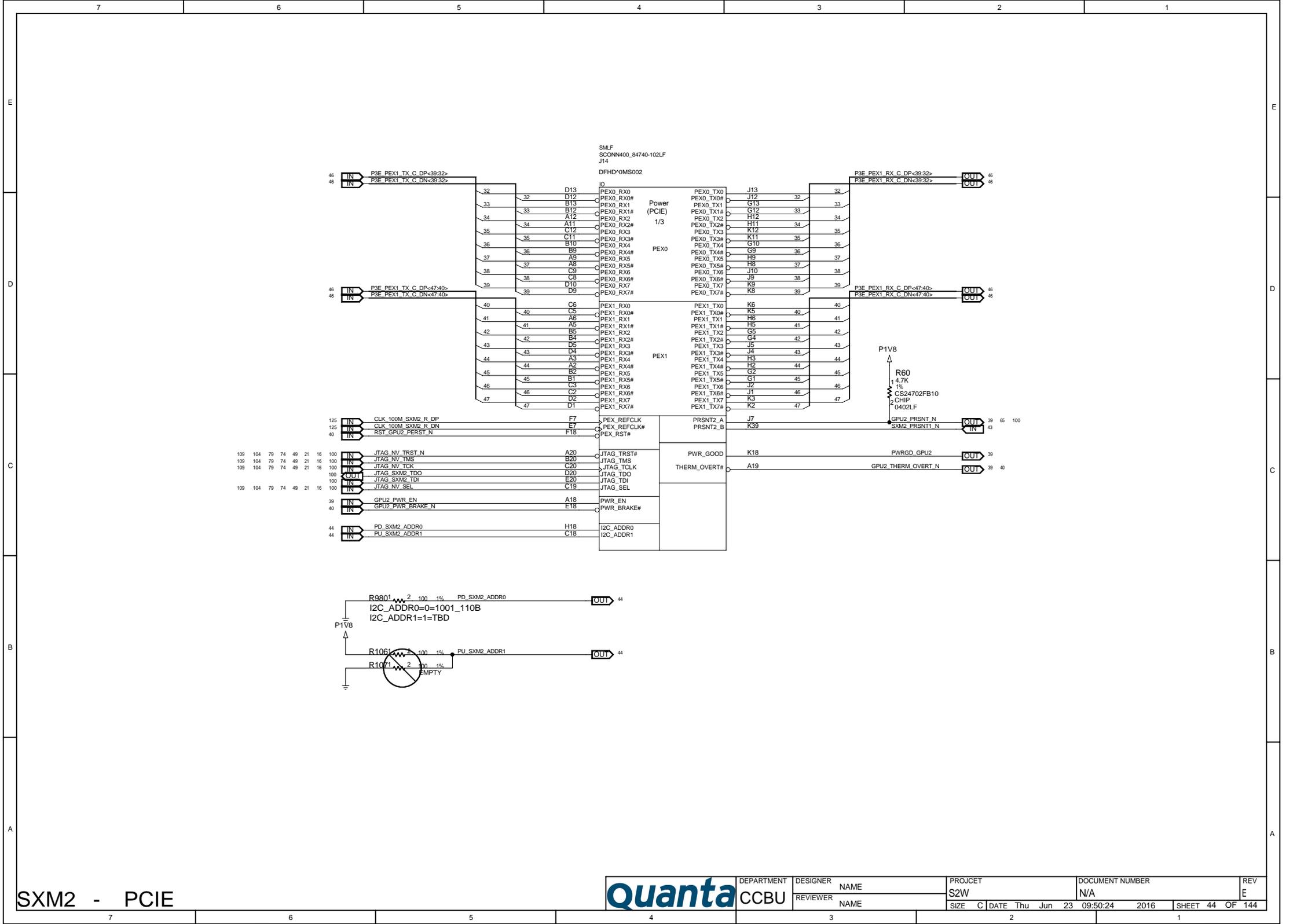




SXM2 - NVLINK & SIDEBAND



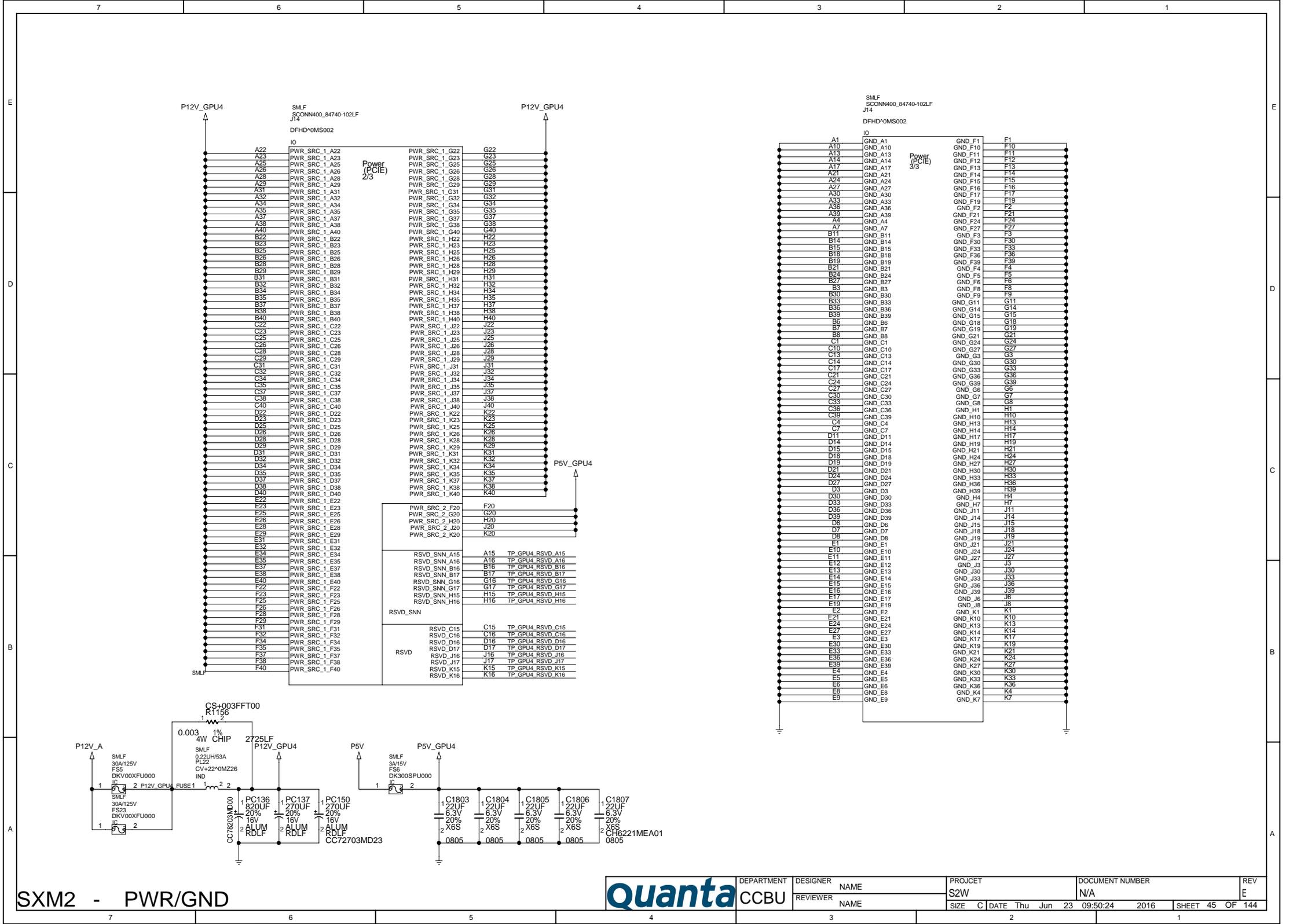
DEPARTMENT	DESIGNER	PROJECT	DOCUMENT NUMBER	REV
CCBU	NAME	S2W	N/A	E
REVIEWER	NAME	SIZE	DATE	SHEET
		C	Thu Jun 23 09:50:23 2016	43 OF 144



SXM2 - PCIE



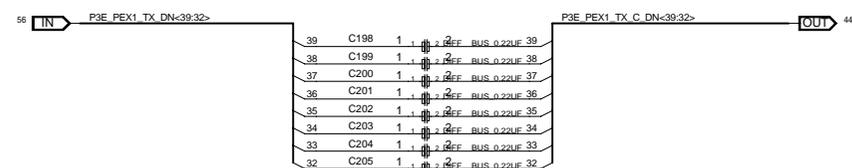
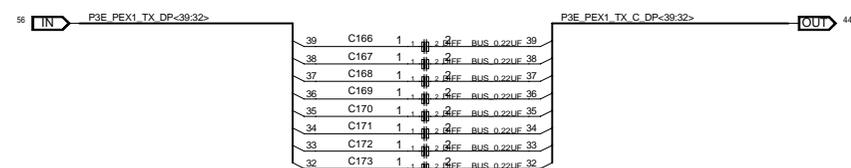
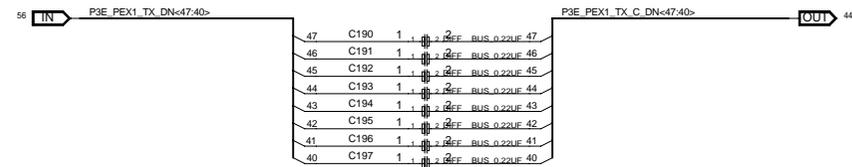
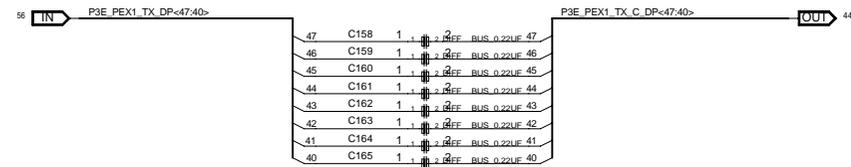
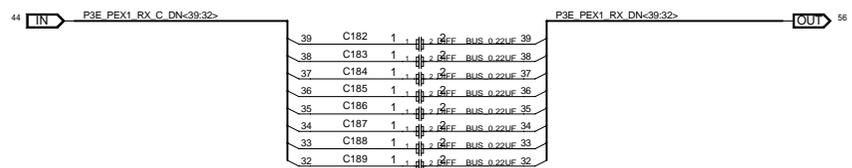
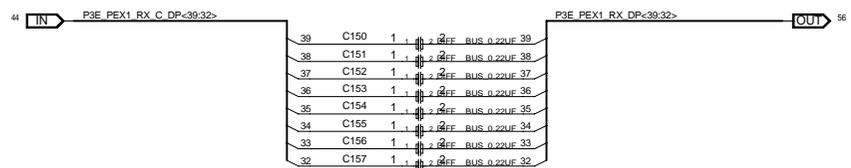
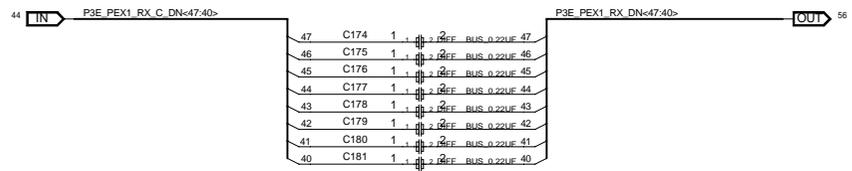
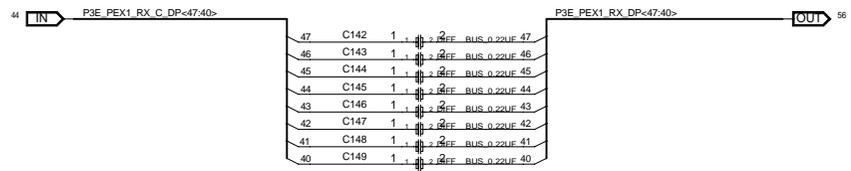
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CCBU	NAME	S2W	N/A	E
REVIEWER	NAME	SIZE	DATE	SHEET
		C	Thu Jun 23 09:50:24 2016	44 OF 144

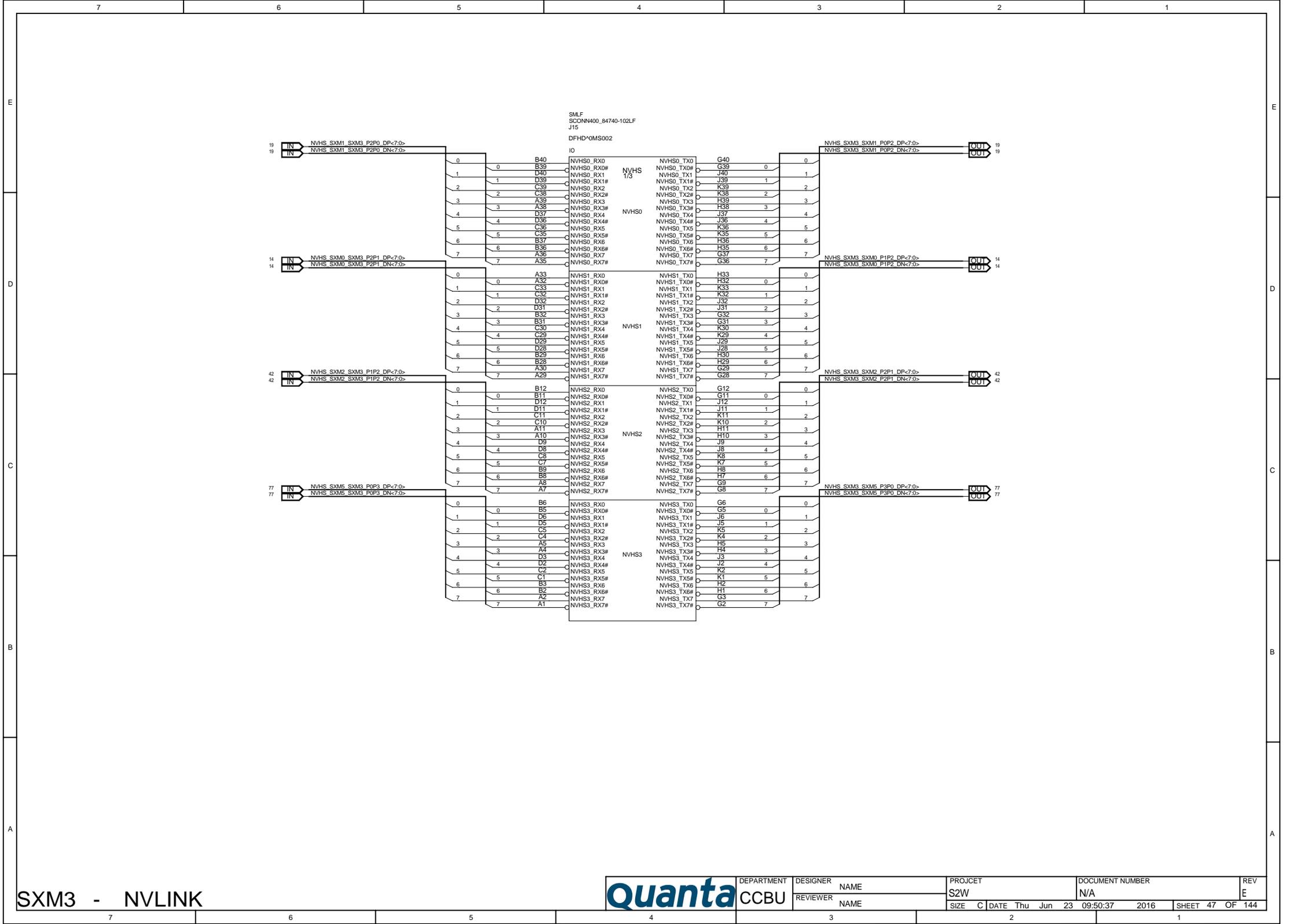


SXM2 - PWR/GND

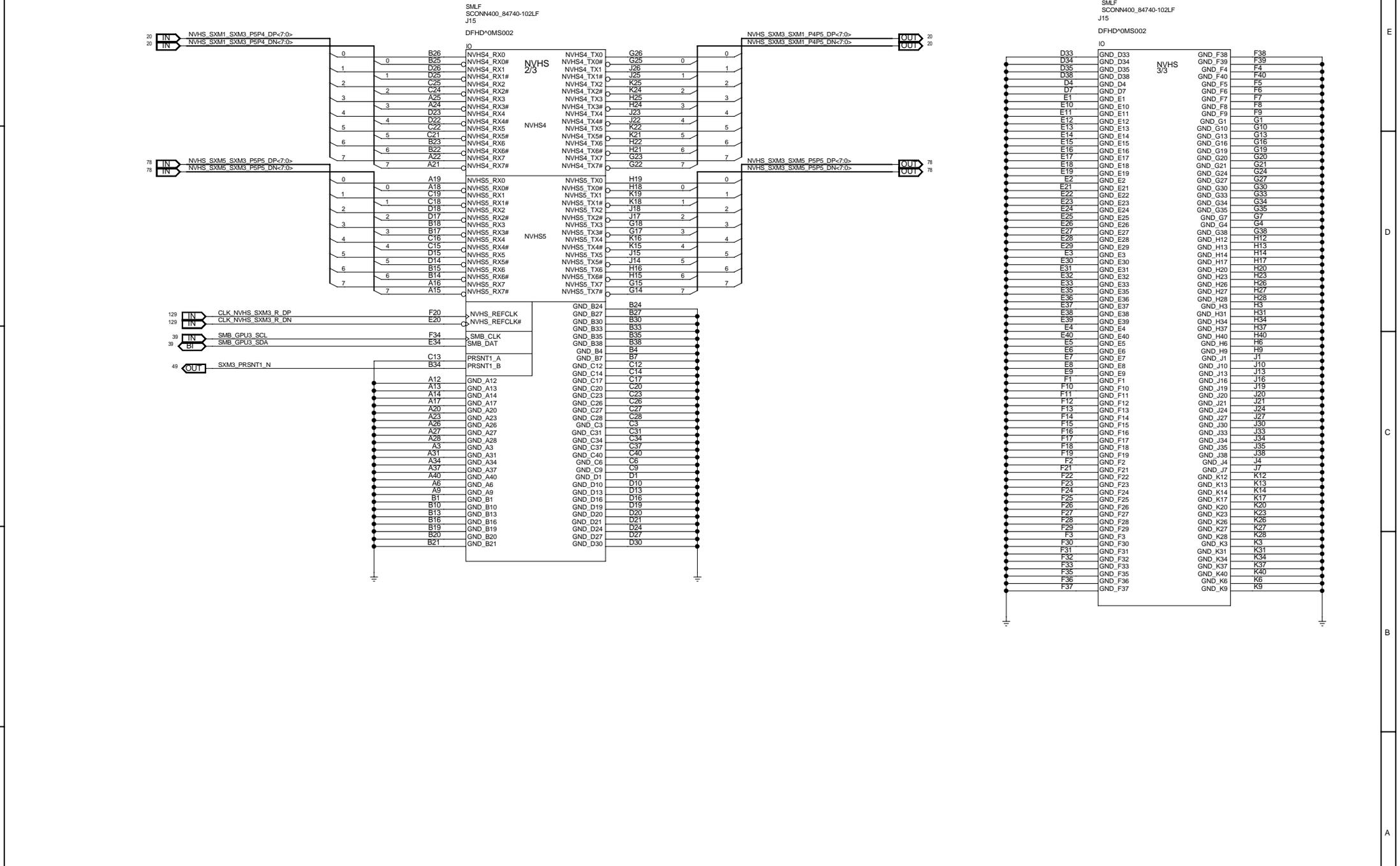


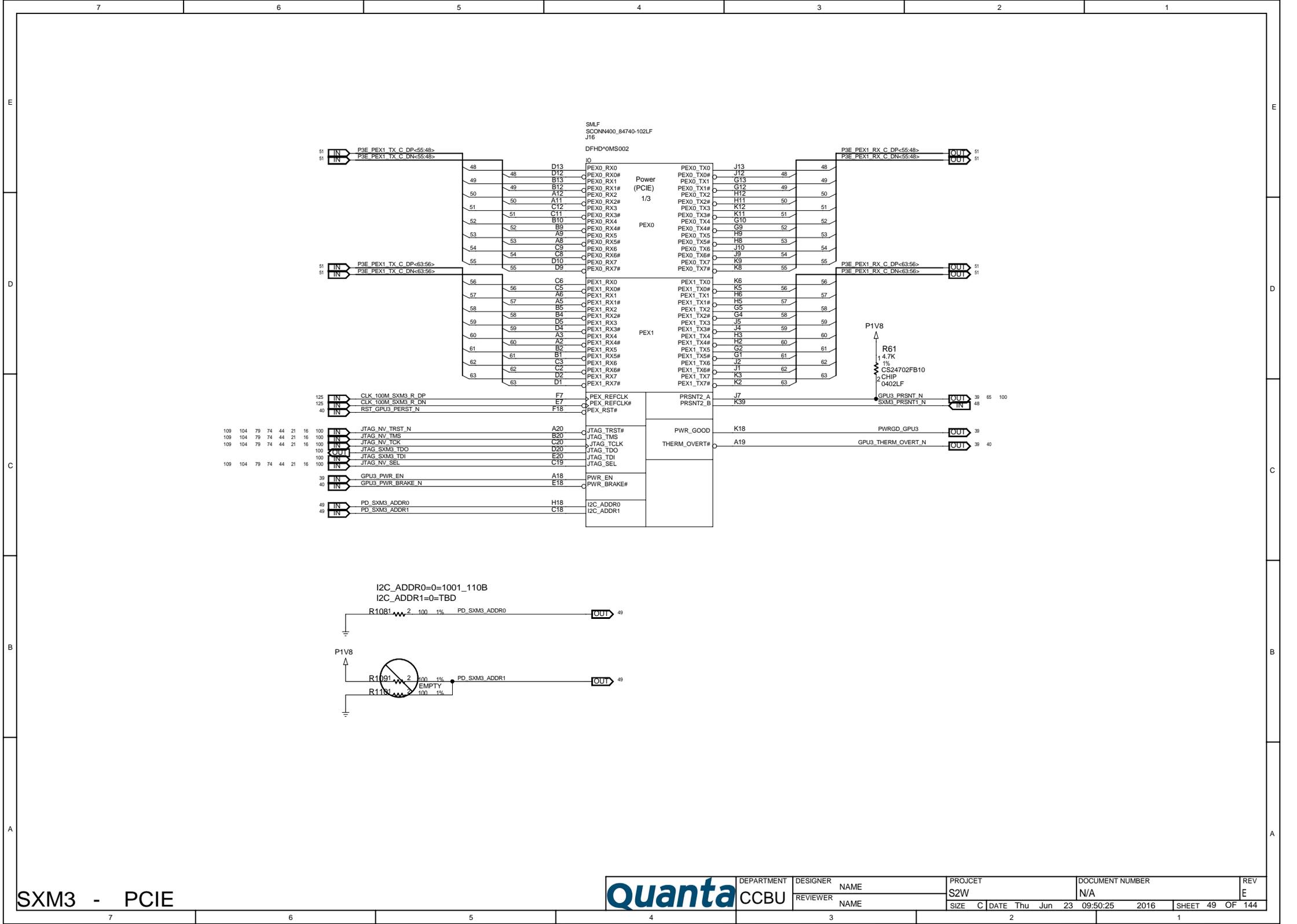
DEPARTMENT	DESIGNER	PROJECT	DOCUMENT NUMBER	REV
CCBU	NAME	S2W	N/A	E
REVIEWER	NAME	SIZE	C DATE	Thu Jun 23 09:50:24 2016
				SHEET 45 OF 144

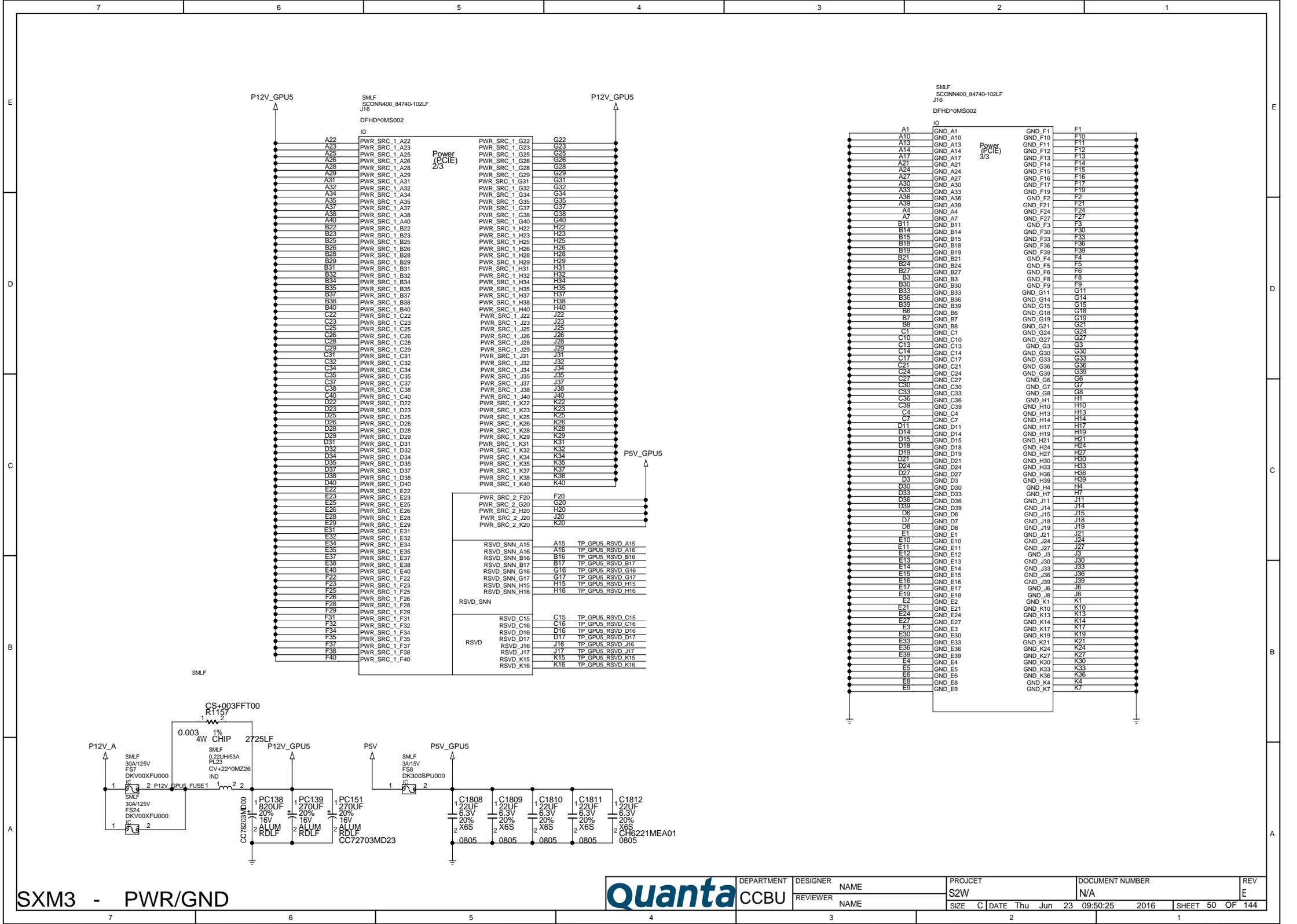




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J15
DFHD*OMS002



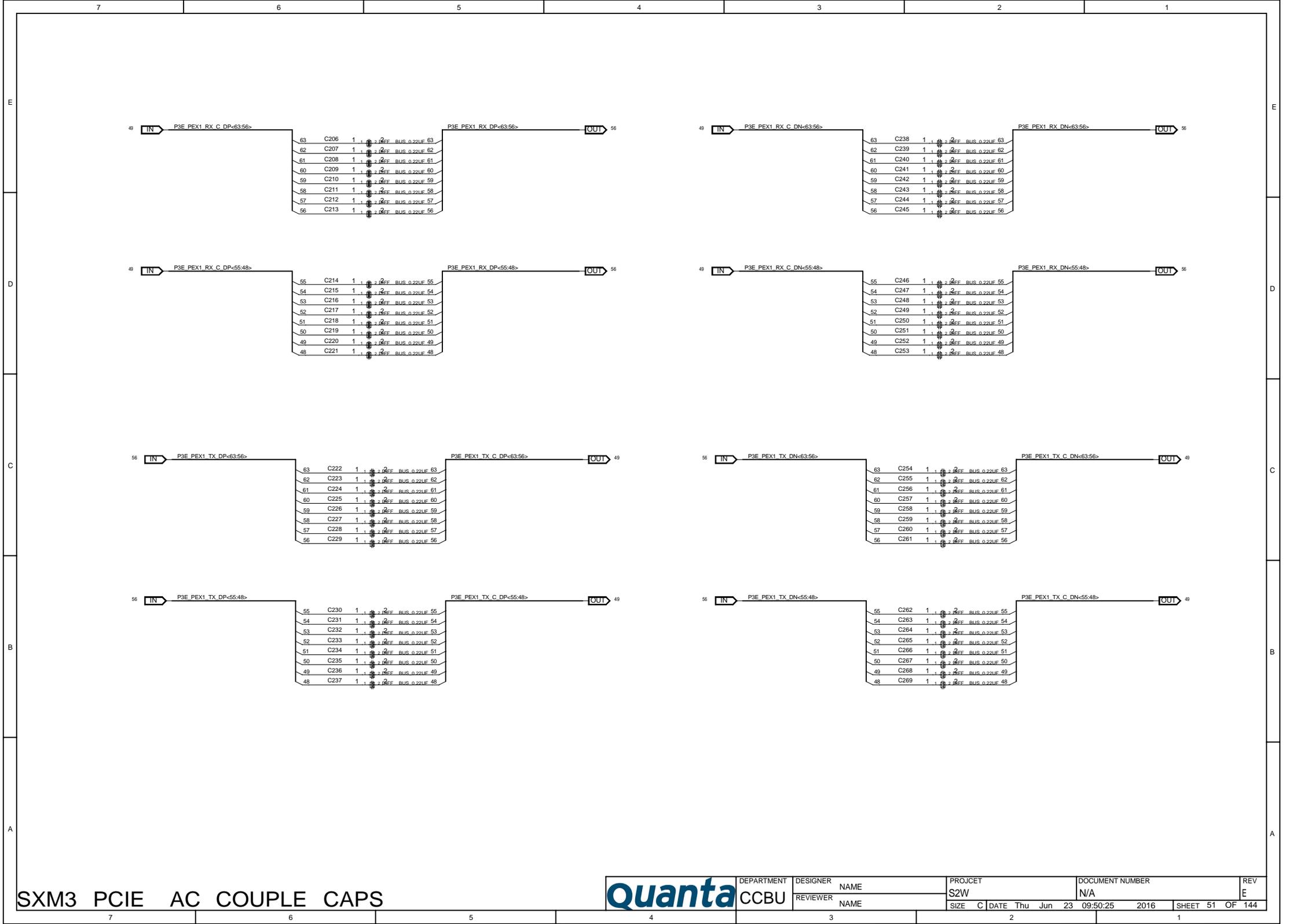




SXM3 - PWR/GND



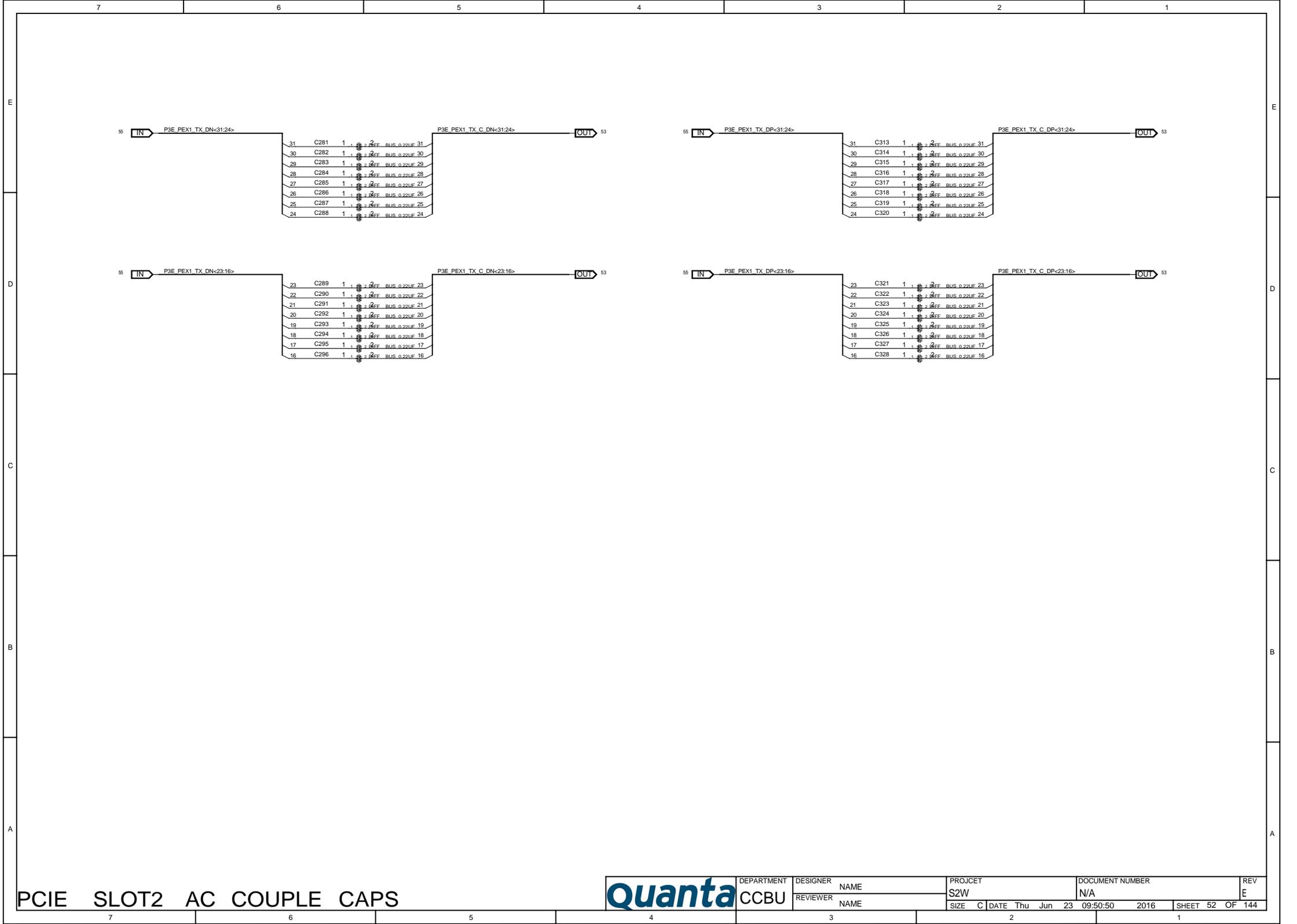
DEPARTMENT	DESIGNER	NAME	PROJECT	DOCUMENT NUMBER	REV
CCBU	REVIEWER	NAME	S2W	N/A	E
			SIZE	C	DATE
					Thu Jun 23 09:50:25 2016
				SHEET	OF
				50	144

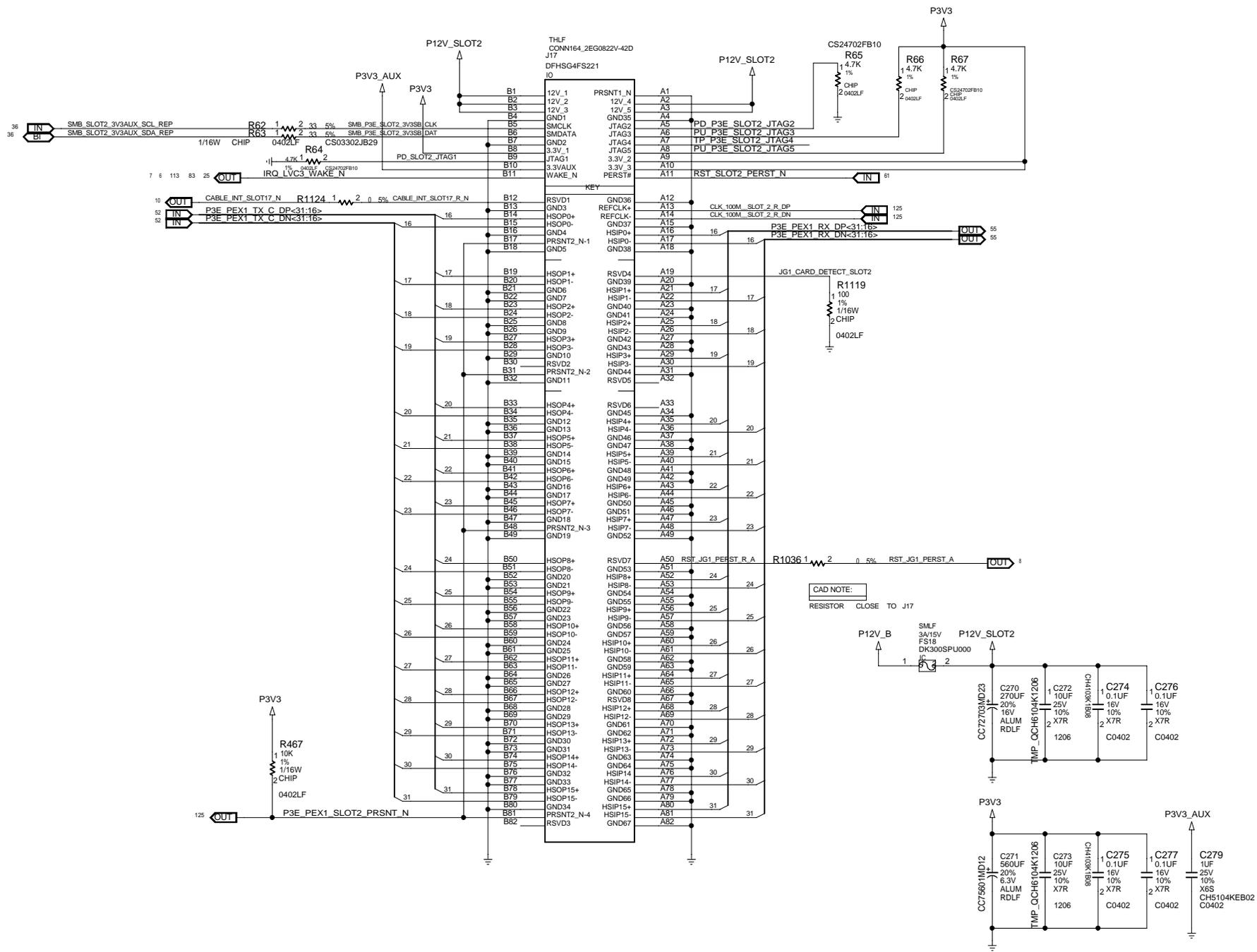


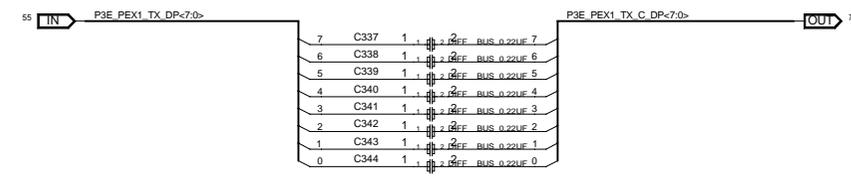
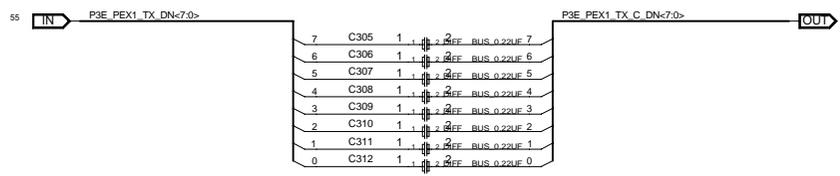
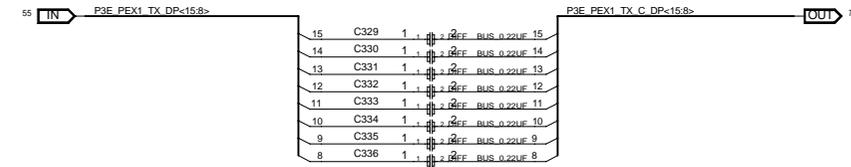
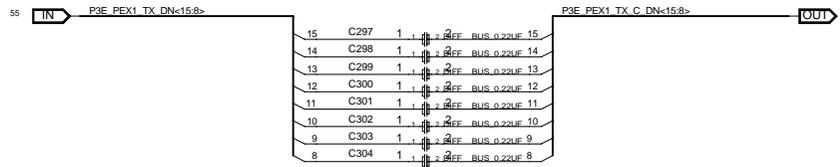
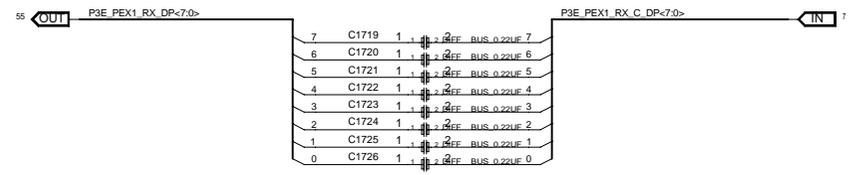
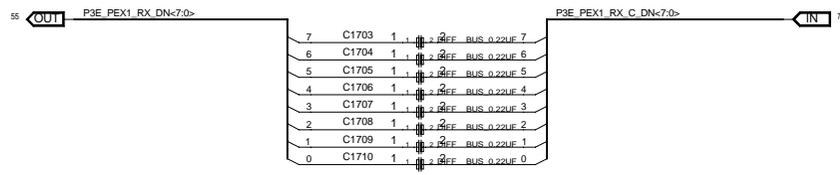
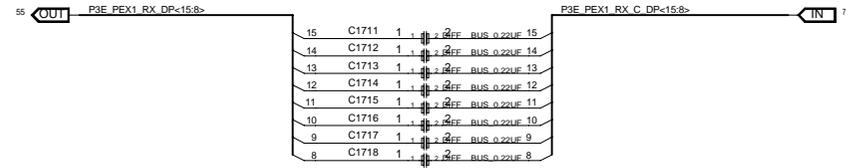
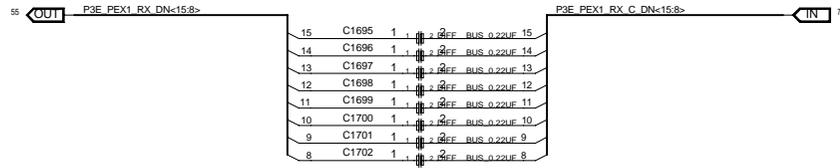
SXM3 PCIE AC COUPLE CAPS



DEPARTMENT	DESIGNER NAME	PROJECT	DOCUMENT NUMBER	REV
CGBU	REVIEWER NAME	S2W	N/A	E
		SIZE C DATE Thu Jun 23 09:50:25 2016	SHEET 51 OF 144	





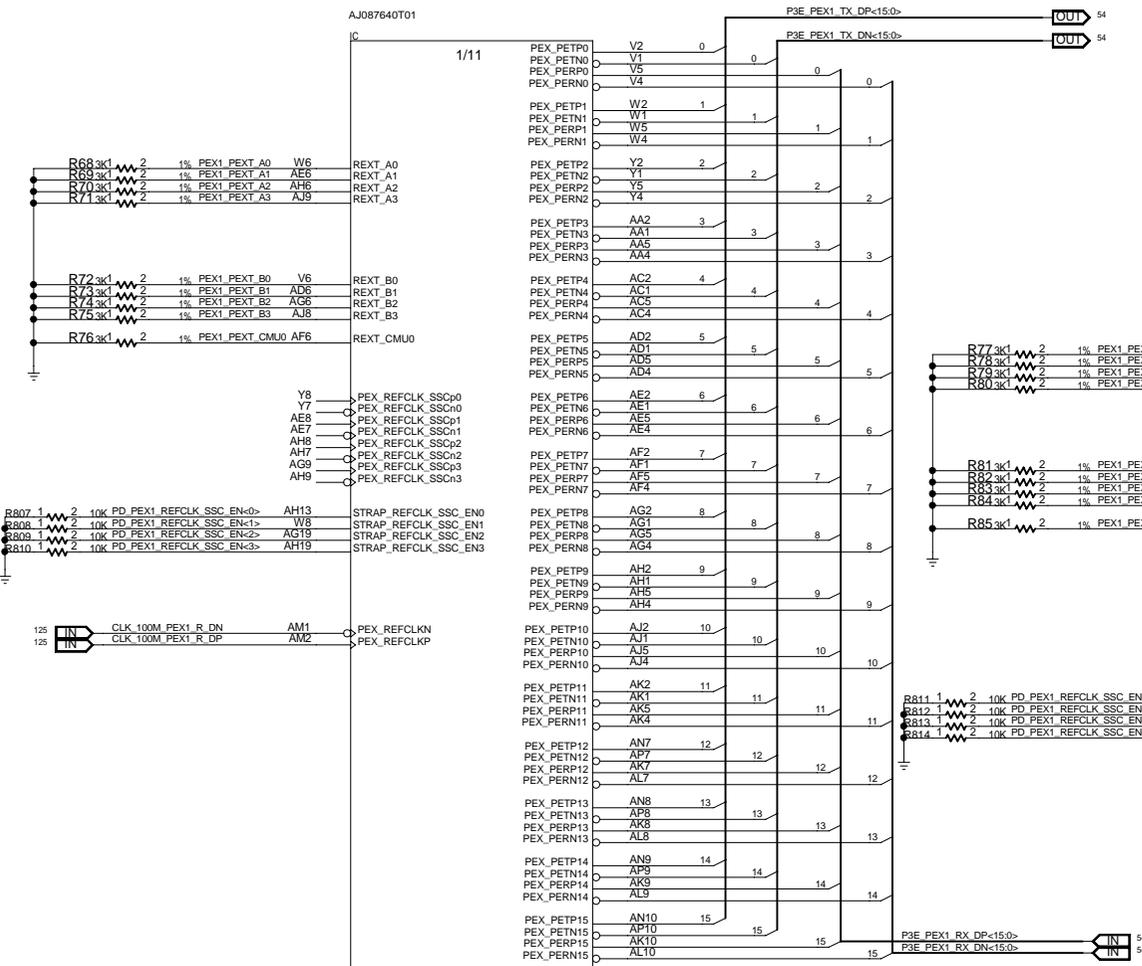


PEX1 TX/RX AC COUPLE CAPS



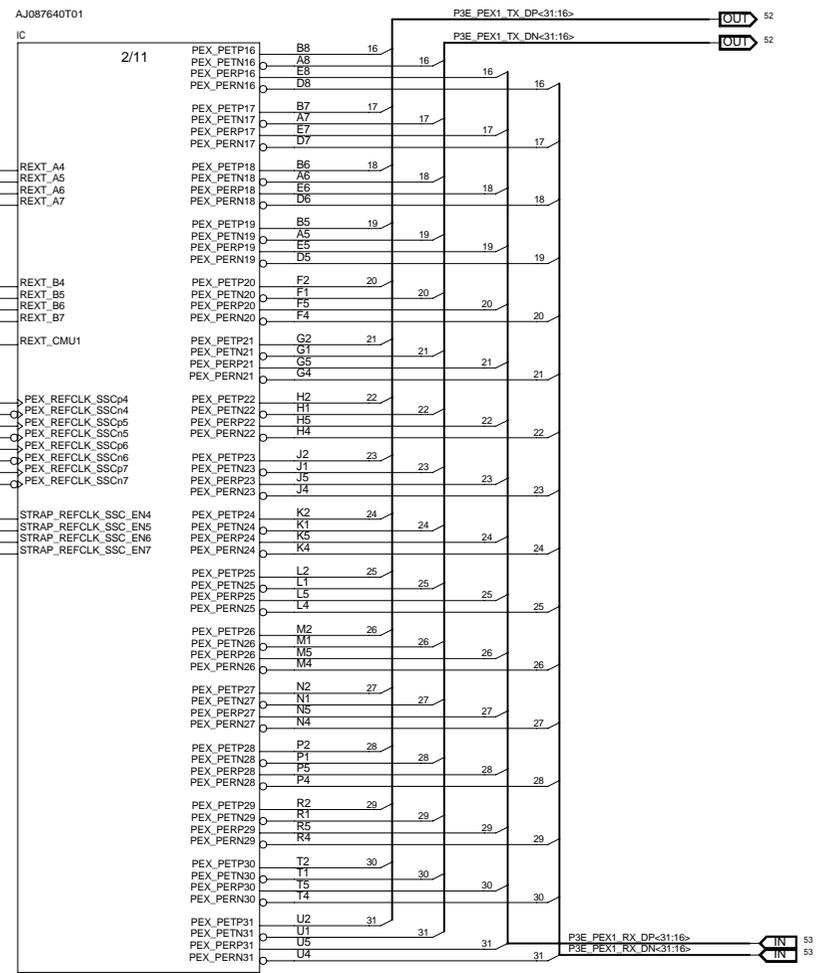
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CCBU		S2W	N/A	E
REVIEWER NAME	SIZE	C	DATE	THU JUN 23 09:50:26 2016
				SHEET 54 OF 144

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U3
AJ087640T01



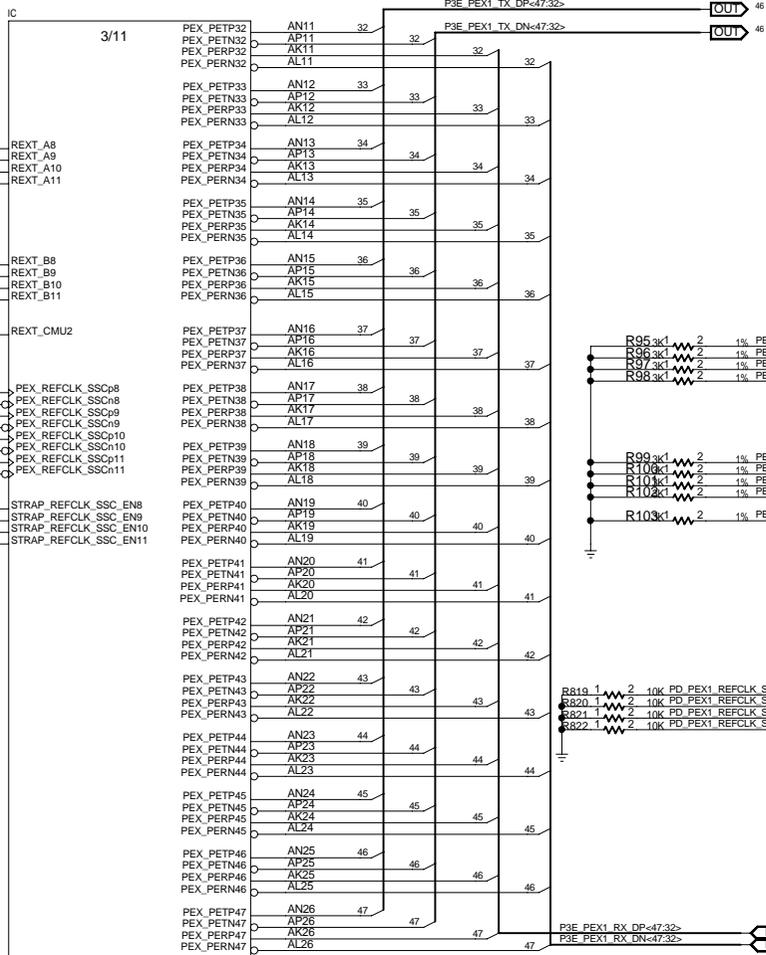
PLX TO CPU

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PEX8764-AB80B1 G
U3
AJ087640T01



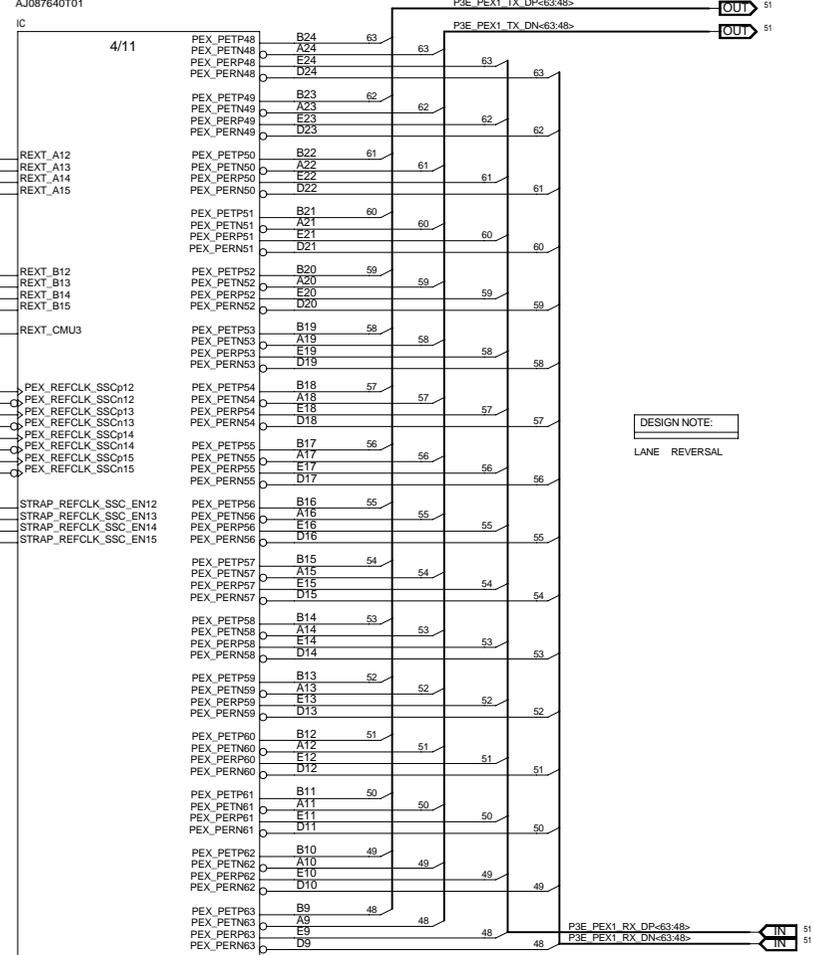
PLX TO SLOT2

SMLF
PEX8764-AB80B1 G
U3
AJ087640T01



PLX TO GPU2

SMLF
PEX8764-AB80B1 G
U3
AJ087640T01



PLX TO GPU3

DESIGN NOTE:
LANE REVERSAL

SMLF
PEX8764-AB80BI G
U3
AJ087640T01

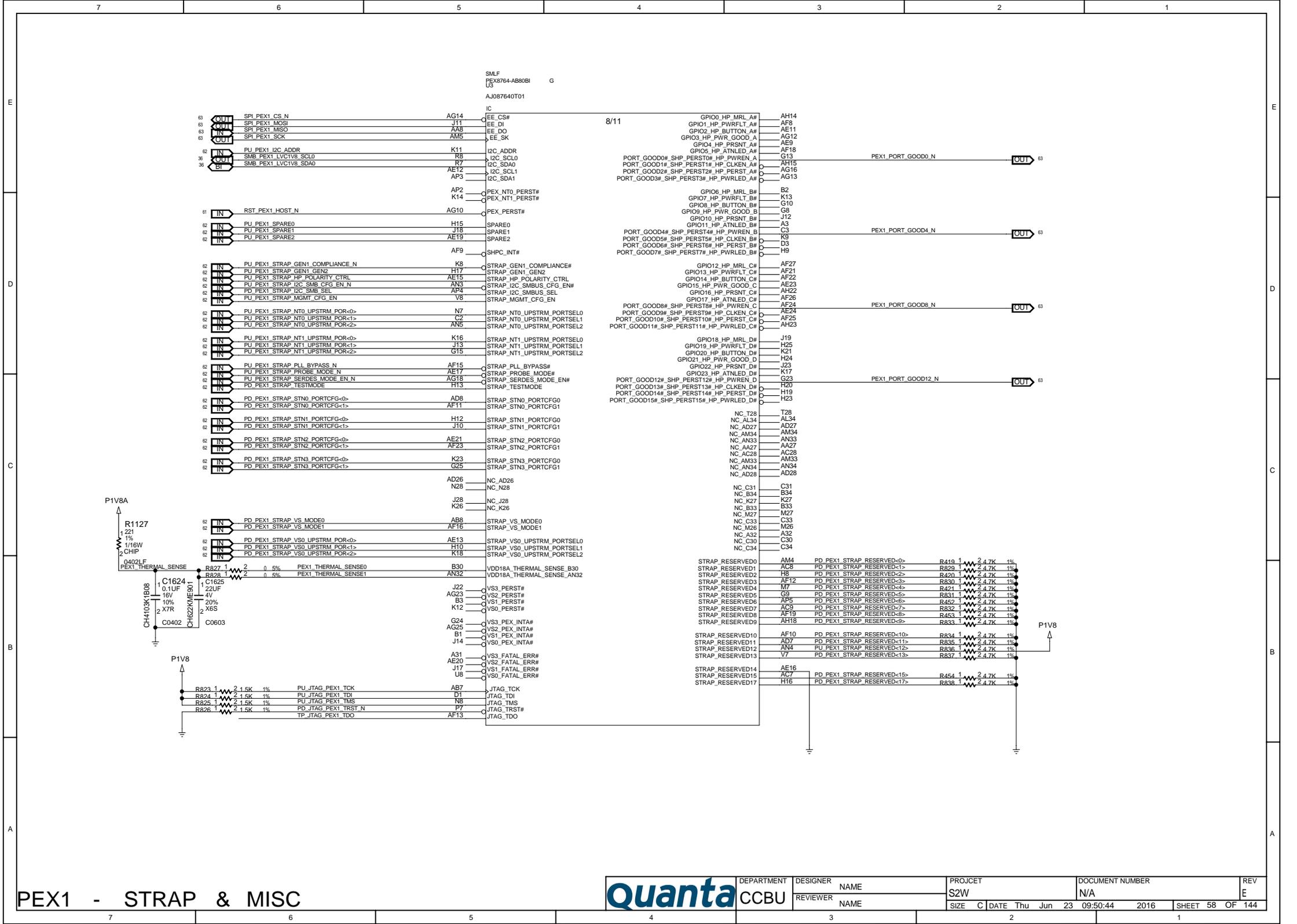
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			NC_AK28	AK28
			NC_AL28	AL28
AJ27	NC_AJ27		NC_AN29	AN29
AG29	NC_AG29		NC_AP29	AP29
AB29	NC_AB29		NC_AK29	AK29
Y29	NC_Y29		NC_AL29	AL29
			NC_AN30	AN30
			NC_AP30	AP30
			NC_AK30	AK30
			NC_AL30	AL30
AJ26	NC_AJ26		NC_AJ33	AJ33
AF29	NC_AF29		NC_AJ34	AJ34
AA29	NC_AA29		NC_AJ30	AJ30
W29	NC_W29		NC_AJ31	AJ31
AE29	NC_AE29		NC_AH33	AH33
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			NC_AH30	AH30
			NC_AH31	AH31
AG27	NC_AG27		NC_AG33	AG33
AH27	NC_AH27		NC_AG34	AG34
AE27	NC_AE27		NC_AG30	AG30
AE28	NC_AE28		NC_AG31	AG31
AB27	NC_AB27		NC_AF33	AF33
AB28	NC_AB28		NC_AF34	AF34
W27	NC_W27		NC_AF30	AF30
W28	NC_W28		NC_AF31	AF31
Y28	NC_Y28		NC_AE33	AE33
AP33	NC_AP33		NC_AE34	AE34
V27	NC_V27		NC_AE30	AE30
U28	NC_U28		NC_AE31	AE31
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			NC_AD34	AD34
			NC_AD30	AD30
			NC_AD31	AD31
			NC_AC33	AC33
			NC_AC34	AC34
			NC_AC30	AC30
			NC_AC31	AC31
			NC_AB33	AB33
			NC_AB34	AB34
			NC_AB30	AB30
			NC_AB31	AB31
			NC_AA33	AA33
			NC_AA34	AA34
			NC_AA30	AA30
			NC_AA31	AA31
			NC_Y33	Y33
			NC_Y34	Y34
			NC_Y30	Y30
			NC_Y31	Y31
			NC_W33	W33
			NC_W34	W34
			NC_W30	W30
			NC_W31	W31
			NC_V33	V33
			NC_V34	V34
			NC_V30	V30
			NC_V31	V31

SMLF
PEX8764-AB80BI G
U3
AJ087640T01

	IC	7/11	NC_A2	G19
A2	NC_A2		NC_G19	G19
A30	NC_A30		NC_G20	G20
A33	NC_A33		NC_J16	J16
AA6	NC_AA6		NC_J25	J25
AB1	NC_AB1		NC_K20	K20
AB2	NC_AB2		NC_K24	K24
AB4	NC_AB4		NC_K29	K29
AB5	NC_AB5		NC_M8	M8
AC27	NC_AC27		NC_N27	N27
AC6	NC_AC6		NC_N30	N30
AD29	NC_AD29		NC_N31	N31
AF14	NC_AF14		NC_N33	N33
AF17	NC_AF17		NC_N34	N34
AF20	NC_AF20		NC_P27	P27
AG26	NC_AG26		NC_P29	P29
AH26	NC_AH26		NC_P6	P6
AJ14	NC_AJ14		NC_R29	R29
AL32	NC_AL32		NC_T27	T27
AM32	NC_AM32		NC_U27	U27
B32	NC_B32		NC_U7	U7
D2	NC_D2		NC_W7	W7
F17	NC_F17		NC_Y27	Y27
			NC_Y6	Y6

SMLF
PEX8764-AB80BI G
U3
AJ087640T01

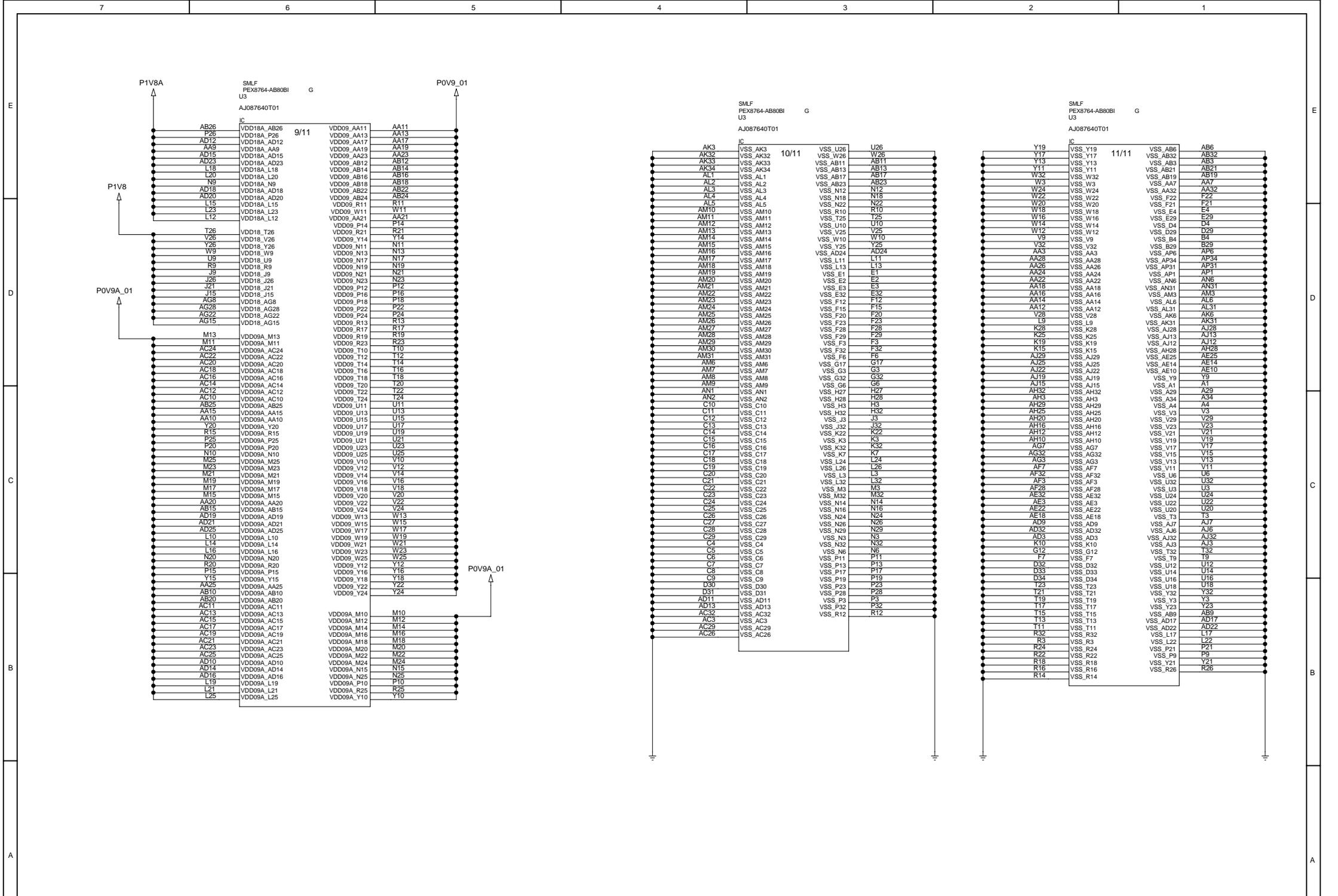
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			NC_T33	T33
			NC_T34	T34
			NC_T30	T30
			NC_T31	T31
U29	NC_U29		NC_R33	R33
M29	NC_M29		NC_R34	R34
H29	NC_H29		NC_R30	R30
F27	NC_F27		NC_R31	R31
			NC_P33	P33
			NC_P34	P34
			NC_P30	P30
			NC_P31	P31
T29	NC_T29		NC_M33	M33
L29	NC_L29		NC_M34	M34
G29	NC_G29		NC_M30	M30
F26	NC_F26		NC_M31	M31
J29	NC_J29		NC_L33	L33
			NC_L34	L34
			NC_L30	L30
			NC_L31	L31
R27	NC_R27		NC_K33	K33
R28	NC_R28		NC_K34	K34
L27	NC_L27		NC_K30	K30
L28	NC_L28		NC_K31	K31
G27	NC_G27		NC_J33	J33
G28	NC_G28		NC_J34	J34
H26	NC_H26		NC_J30	J30
G26	NC_G26		NC_J31	J31
J27	NC_J27		NC_H33	H33
M28	NC_M28		NC_H34	H34
G32	NC_G32		NC_H30	H30
B31	NC_B31		NC_H31	H31
			NC_G33	G33
			NC_G34	G34
			NC_G30	G30
			NC_G31	G31
			NC_F33	F33
			NC_F34	F34
			NC_F30	F30
			NC_F31	F31
			NC_E33	E33
			NC_E34	E34
			NC_E30	E30
			NC_E31	E31
			NC_B28	B28
			NC_A28	A28
			NC_E28	E28
			NC_D28	D28
			NC_B27	B27
			NC_A27	A27
			NC_E27	E27
			NC_D27	D27
			NC_B26	B26
			NC_A26	A26
			NC_E26	E26
			NC_D26	D26
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			NC_A25	A25
			NC_E25	E25
			NC_D25	D25



PEX1 - STRAP & MISC

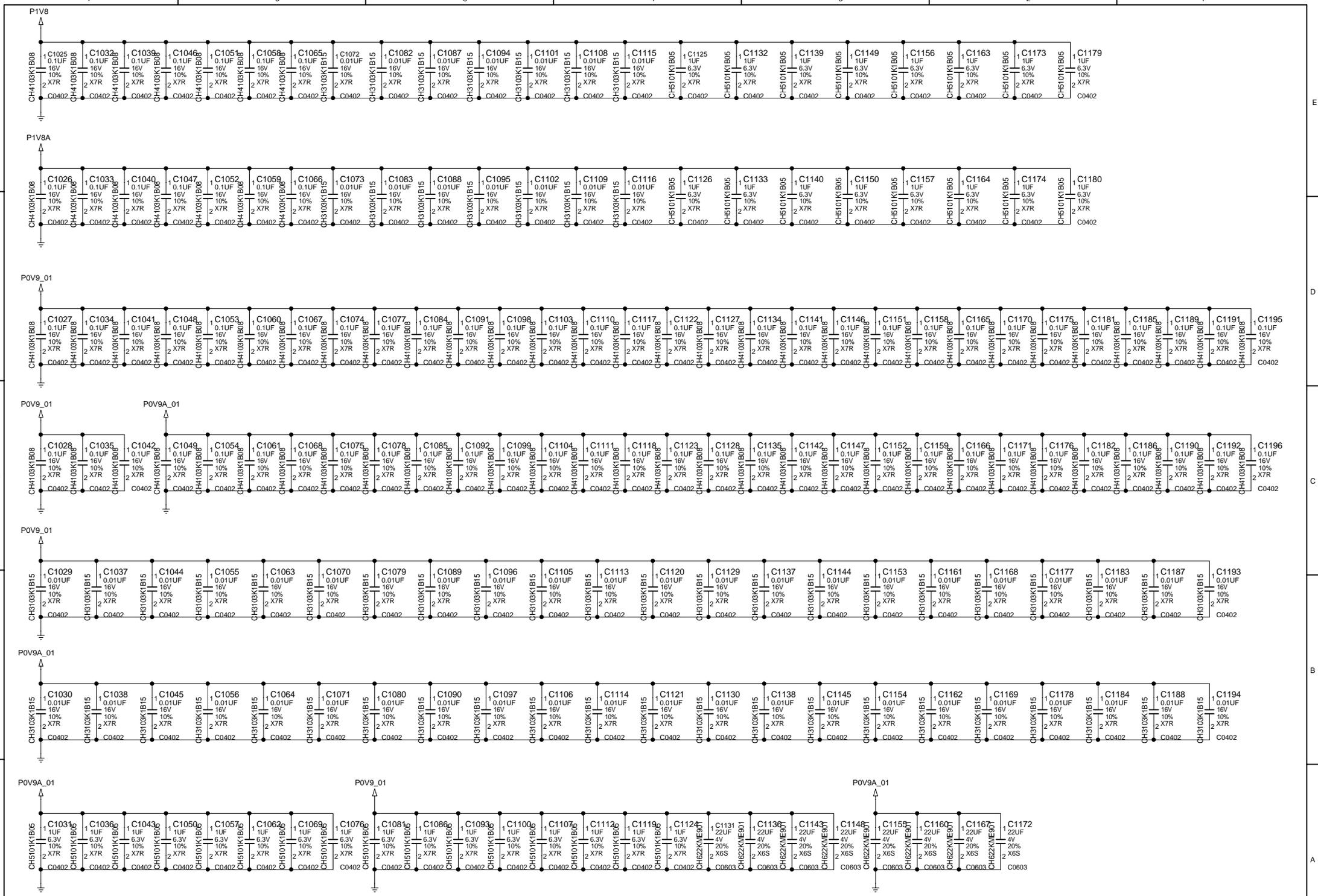


DEPARTMENT	DESIGNER	PROJECT	DOCUMENT NUMBER	REV
CCBU	NAME	S2W	N/A	E
REVIEWER	NAME	SIZE	DATE	SHEET
		C	Thu Jun 23 09:50:44 2016	58 OF 144



PEX1 - PWR/GND

Quanta	DEPARTMENT	DESIGNER	NAME	PROJECT	DOCUMENT NUMBER	REV
	CCBU	REVIEWER	NAME	S2W	N/A	E
				SIZE	C DATE	Thu Jun 23 09:50:55 2016
				SHEET 59 OF 144		



PEX1 POWER DECOUPLING



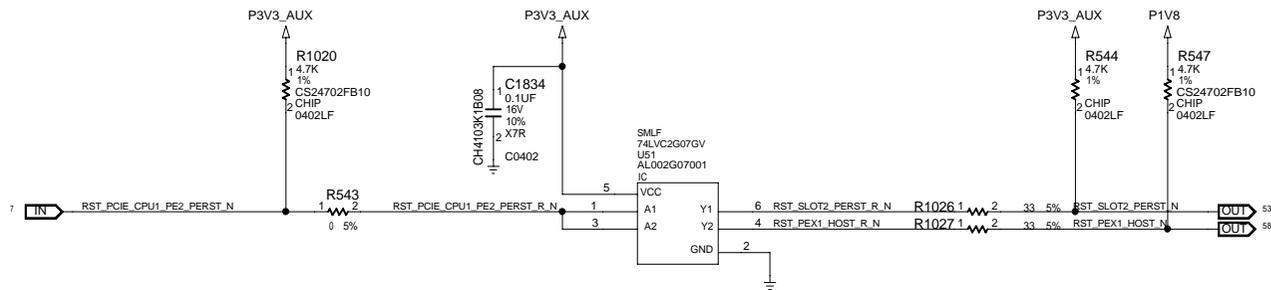
DEPARTMENT
CCBU

DESIGNER NAME
REVIEWER NAME

PROJECT
S2W

DOCUMENT NUMBER
N/A

SIZE C DATE Thu Jun 23 09:50:39 2016 SHEET 60 OF 144

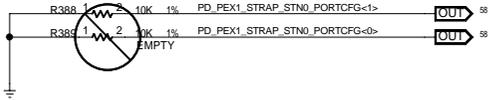


PEX1 PERST LEVEL SHIFT

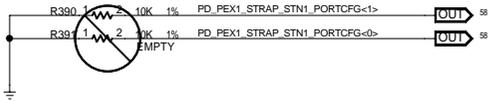


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CCBU	NAME	S2W	N/A	E
REVIEWER	NAME	SIZE	DATE	SHEET
		C	Thu Jun 23 09:50:57 2016	61 OF 144

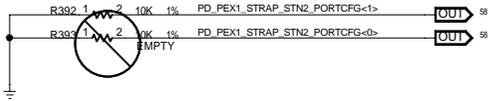
STATION0 PORT CONFIG
 CONTROL THRU EEPROM
 STN0: 300H[2:0]=001B=X16
 STRAP_STN0_PORTCFG[1:0]=0Z=X16



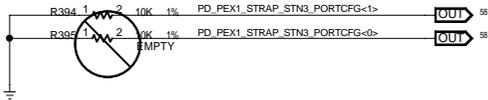
STATION1 PORT CONFIG
 CONTROL THRU EEPROM
 STN1: 300H[5:3]=001B=X16
 STRAP_STN1_PORTCFG[1:0]=0Z=X16



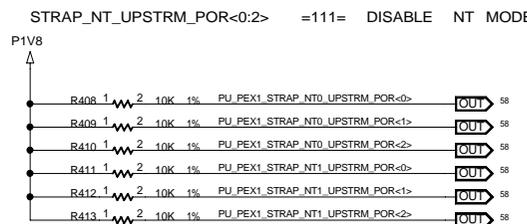
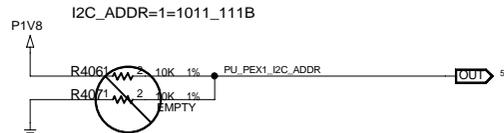
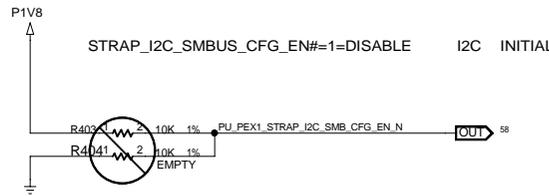
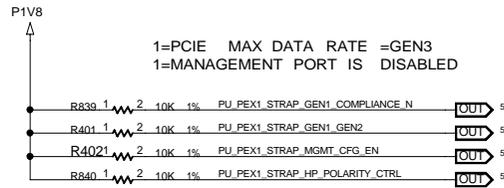
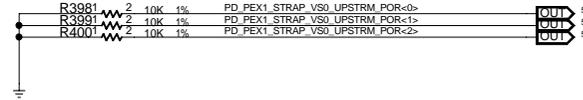
STATION2 PORT CONFIG
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 STN2: 300H[8:6]=001B=X16
 STRAP_STN2_PORTCFG[1:0]=0Z=X16



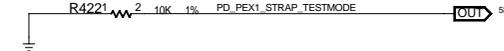
STATION3 PORT CONFIG
 CONTROL THRU EEPROM
 STN3: 300H[11:9]=001B=X16
 STRAP_STN3_PORTCFG[1:0]=0Z=X16



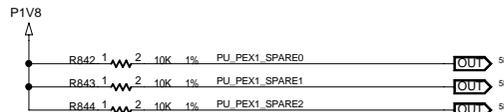
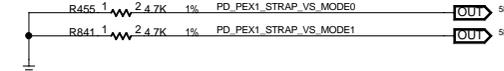
UPSTREAM PORT SELECT
 CONTROL THRU EEPROM
 360H[4:0]=0 0000B=PORT 0
 STRAP_UPSTRM_PORTSEL[2:0]=000=PORT 0



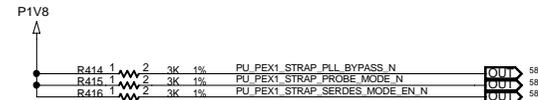
BASE MODE: TEST MODE=0
 =PORT_GOODX# + GPIOX INPUT

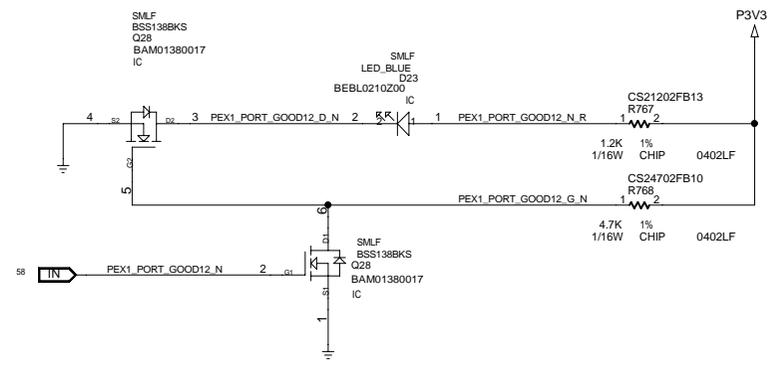
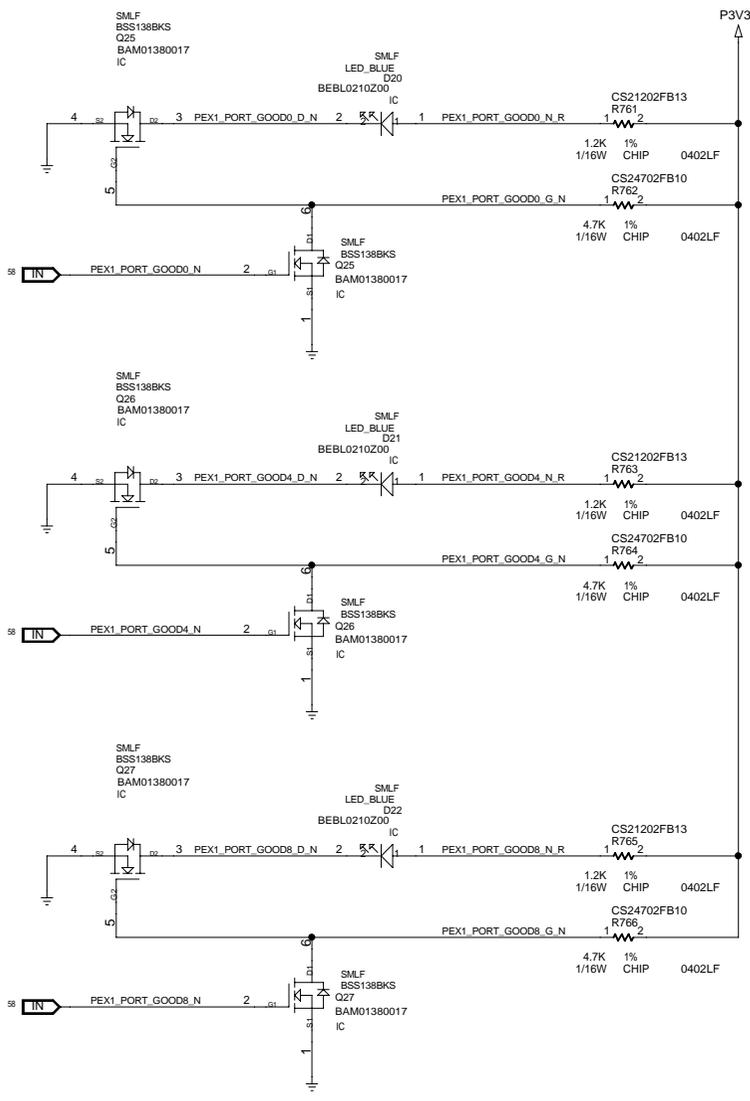
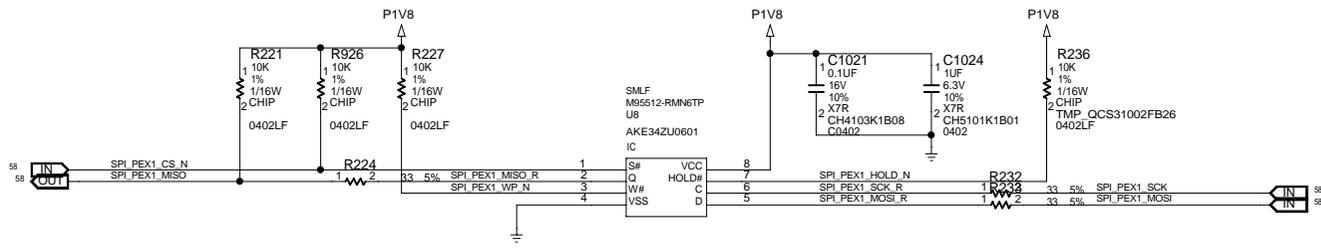


BASE MODE: LL(00)=SINGLE SWITCH



FOR FACTORY TEST ONLY

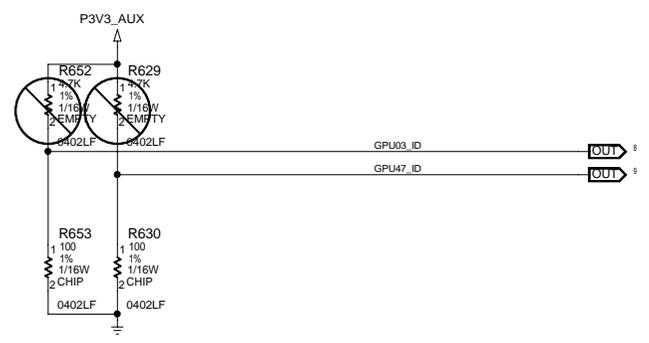




PEX1 EEPROM & PORT LED



DEPARTMENT	DESIGNER	PROJECT	DOCUMENT NUMBER	REV
CCBU	NAME	S2W	N/A	E
REVIEWER	NAME	SIZE	DATE	SHEET
		C	Thu Jun 23 09:50:53 2016	63 OF 144



DESIGN NOTE:

GPU ID
 00 = 8 GPU / 1 NODE
 11 = 4 GPU / 2 NODE

GPU ID



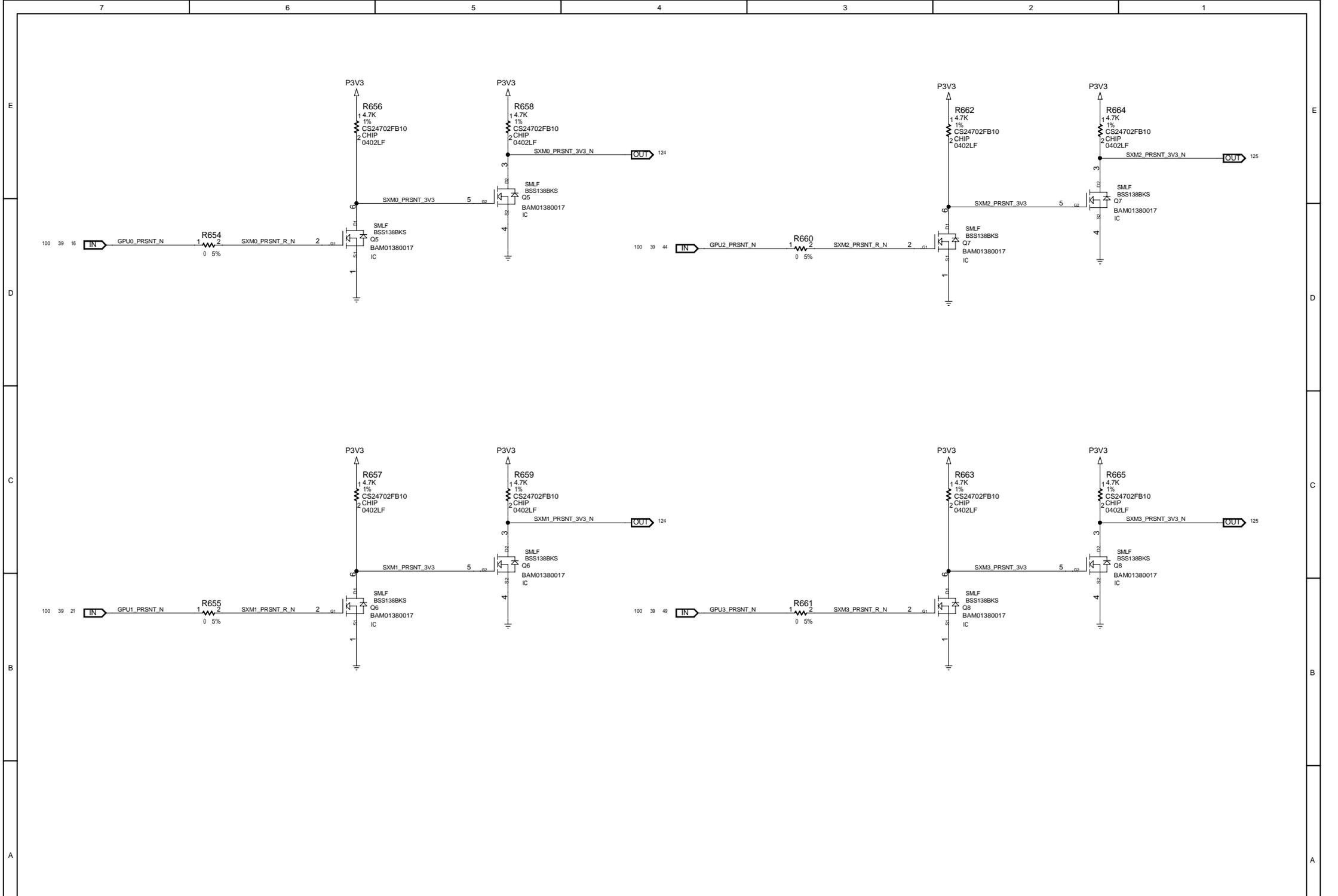
DEPARTMENT
CCBU

DESIGNER NAME
REVIEWER NAME

PROJECT
S2W

DOCUMENT NUMBER
N/A

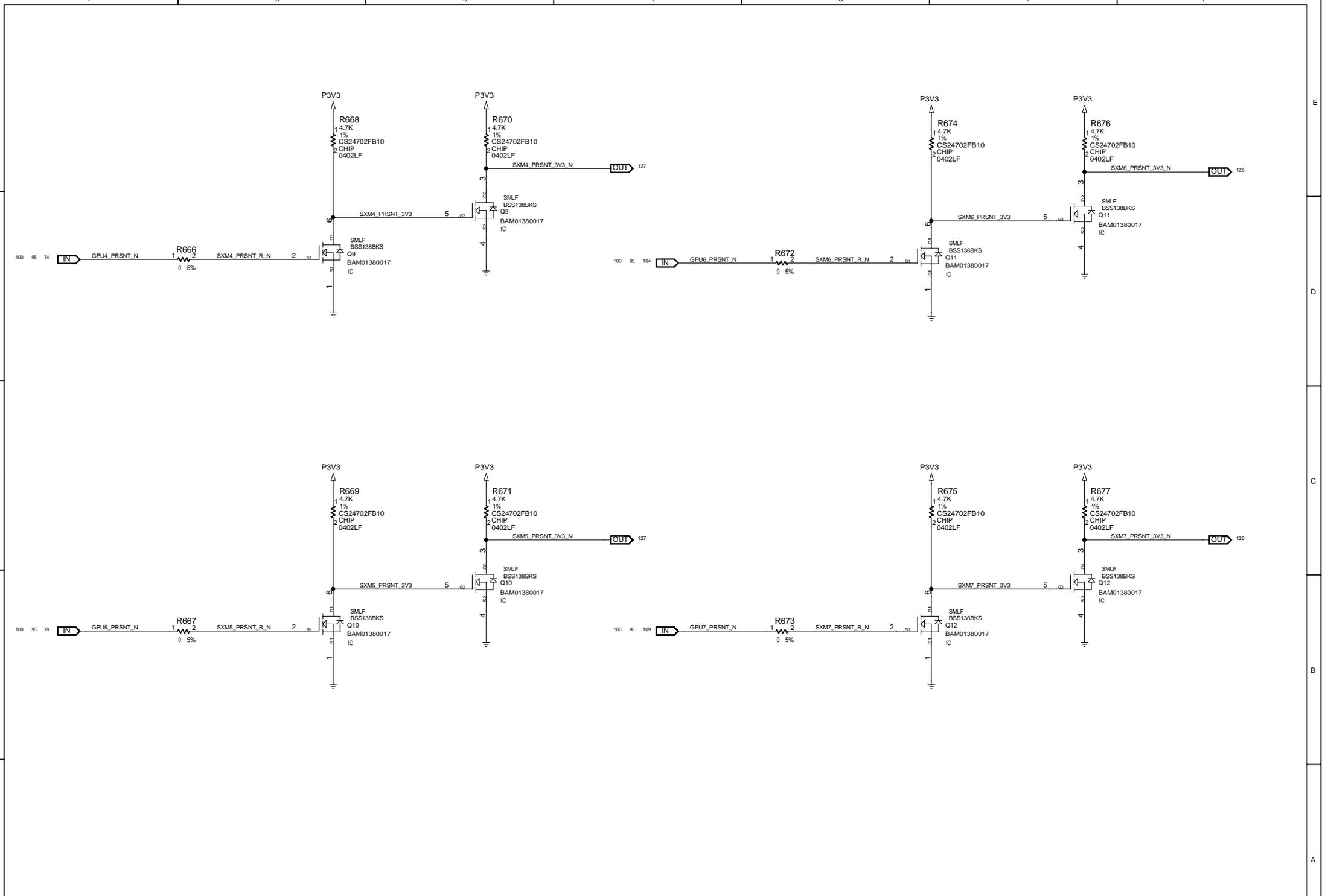
REV
E



SXM0/1/2/3 PRSNT# LEVEL SHIFT



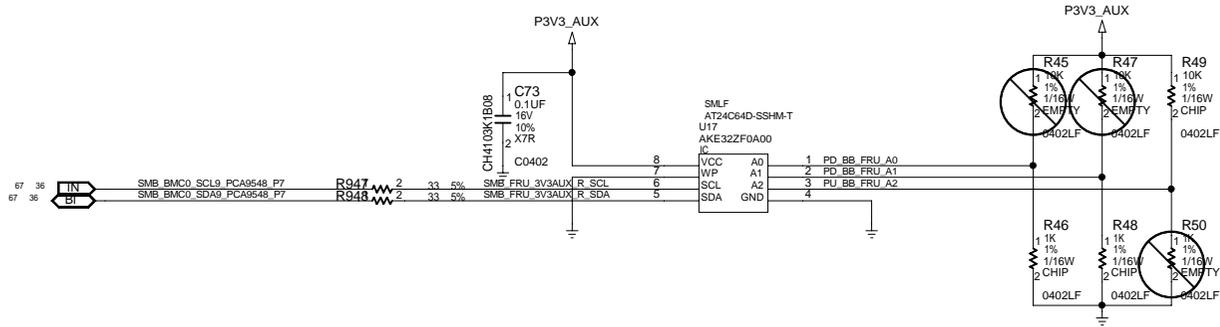
DEPARTMENT CCBU	DESIGNER NAME	PROJECT S2W	DOCUMENT NUMBER N/A	REV E
REVIEWER NAME	DATE Thu Jun 23 09:50:47 2016	SIZE C	SHEET 65 OF 144	



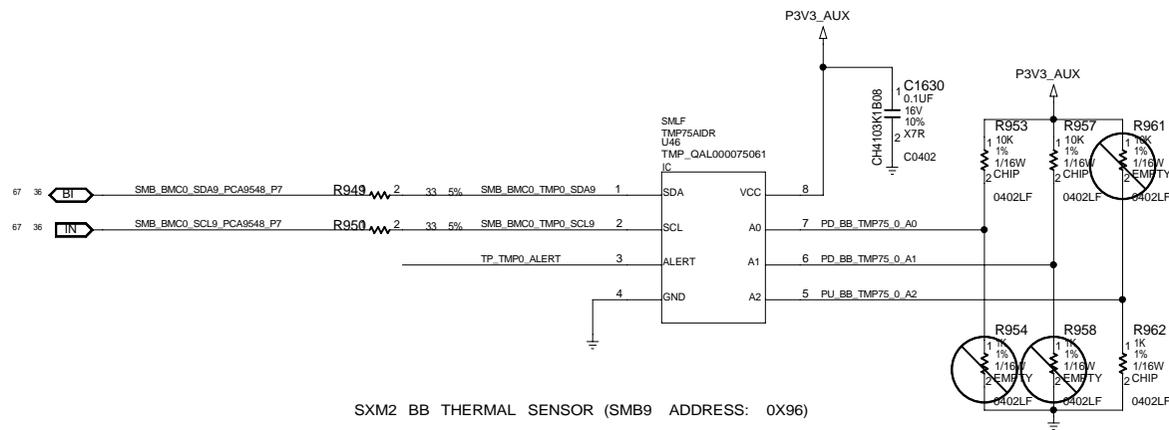
SXM4/5/6/7 PRSNT# LEVEL SHIFT



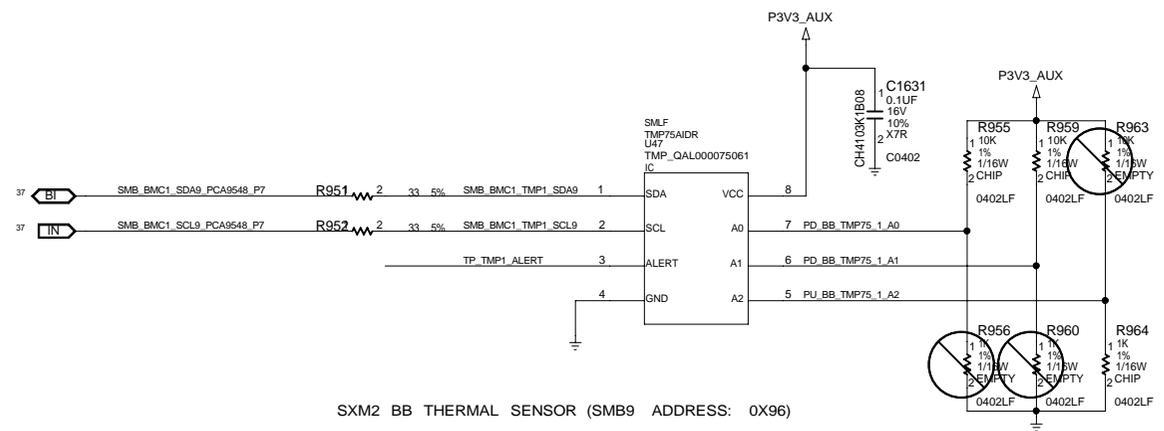
DEPARTMENT CCBU	DESIGNER NAME	PROJECT S2W	DOCUMENT NUMBER N/A	REV E
REVIEWER NAME	DATE Thu Jun 23 09:50:47 2016	SHEET 66	OF 144	



SXM2 BB FRU (SMB9 ADDRESS: 0XA8)



SXM2 BB THERMAL SENSOR (SMB9 ADDRESS: 0X96)



7 6 5 4 3 2 1

E
D
C
B
A

E
D
C
B
A

UNTITLED



DEPARTMENT	DESIGNER NAME	PROJECT	DOCUMENT NUMBER	REV
CCBU		S2W	N/A	E
REVIEWER NAME	SIZE	C	DATE	Thu Jul 23 11:27:32 2015
				SHEET 69 OF 144

7 6 5 4 3 2 1

7 6 5 4 3 2 1

E
D
C
B
A

E
D
C
B
A

UNTITLED



DEPARTMENT	DESIGNER NAME	PROJECT	DOCUMENT NUMBER	REV
CCBU		S2W	N/A	E
REVIEWER NAME	SIZE	C	DATE	Thu Jul 23 11:27:32 2015
				SHEET 70 OF 144

7 6 5 4 3 2 1

7 6 5 4 3 2 1

E
D
C
B
A

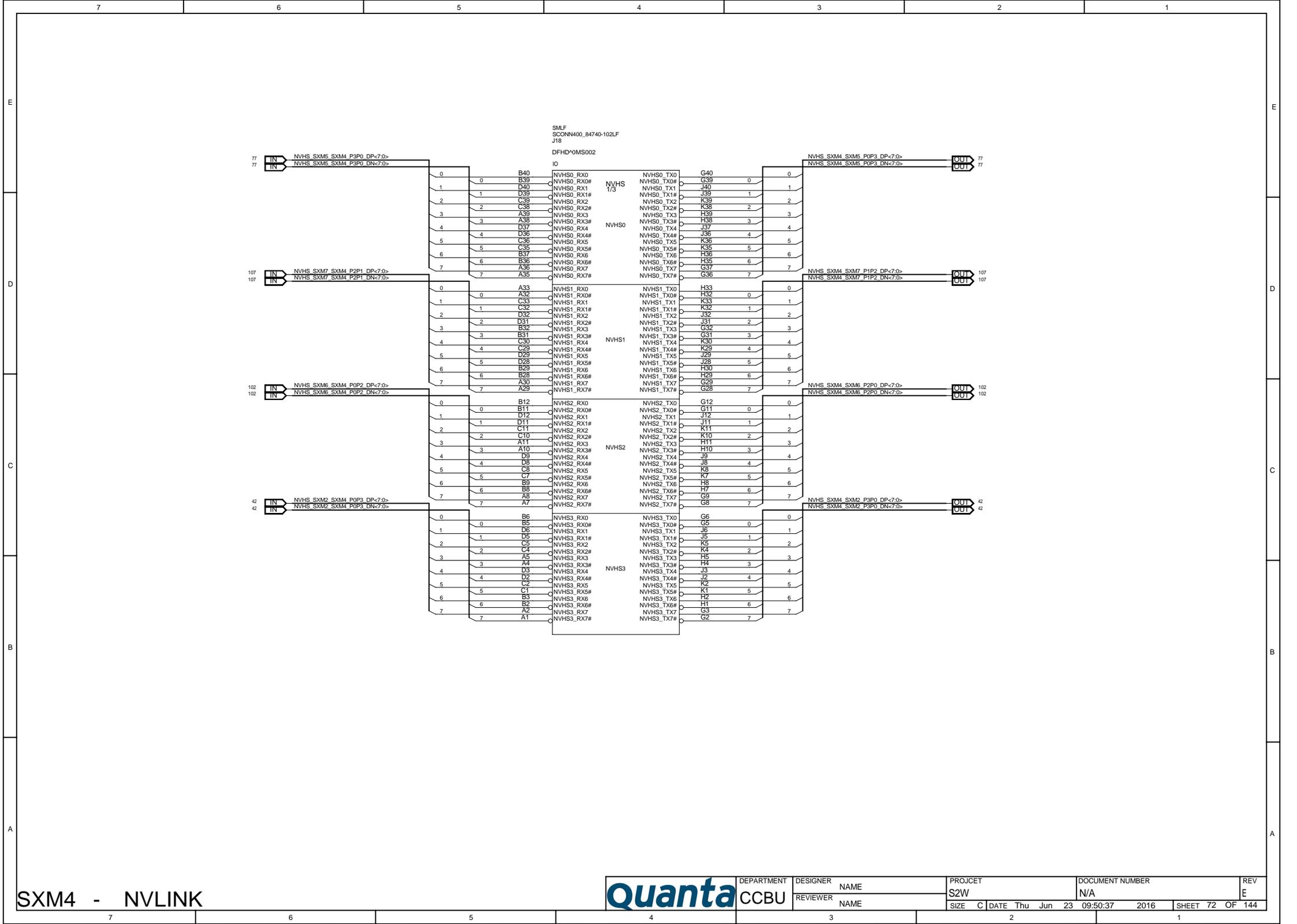
E
D
C
B
A

UNTITLED

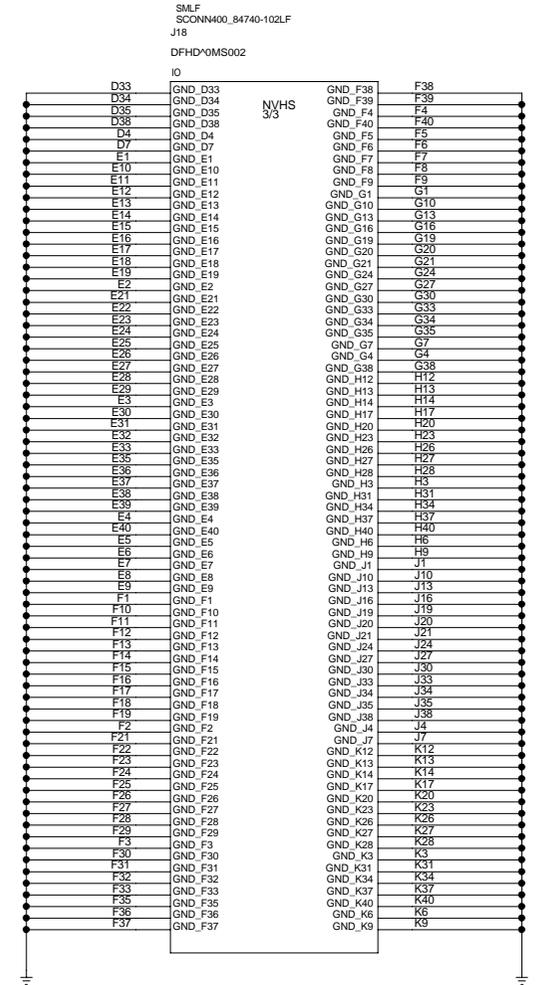
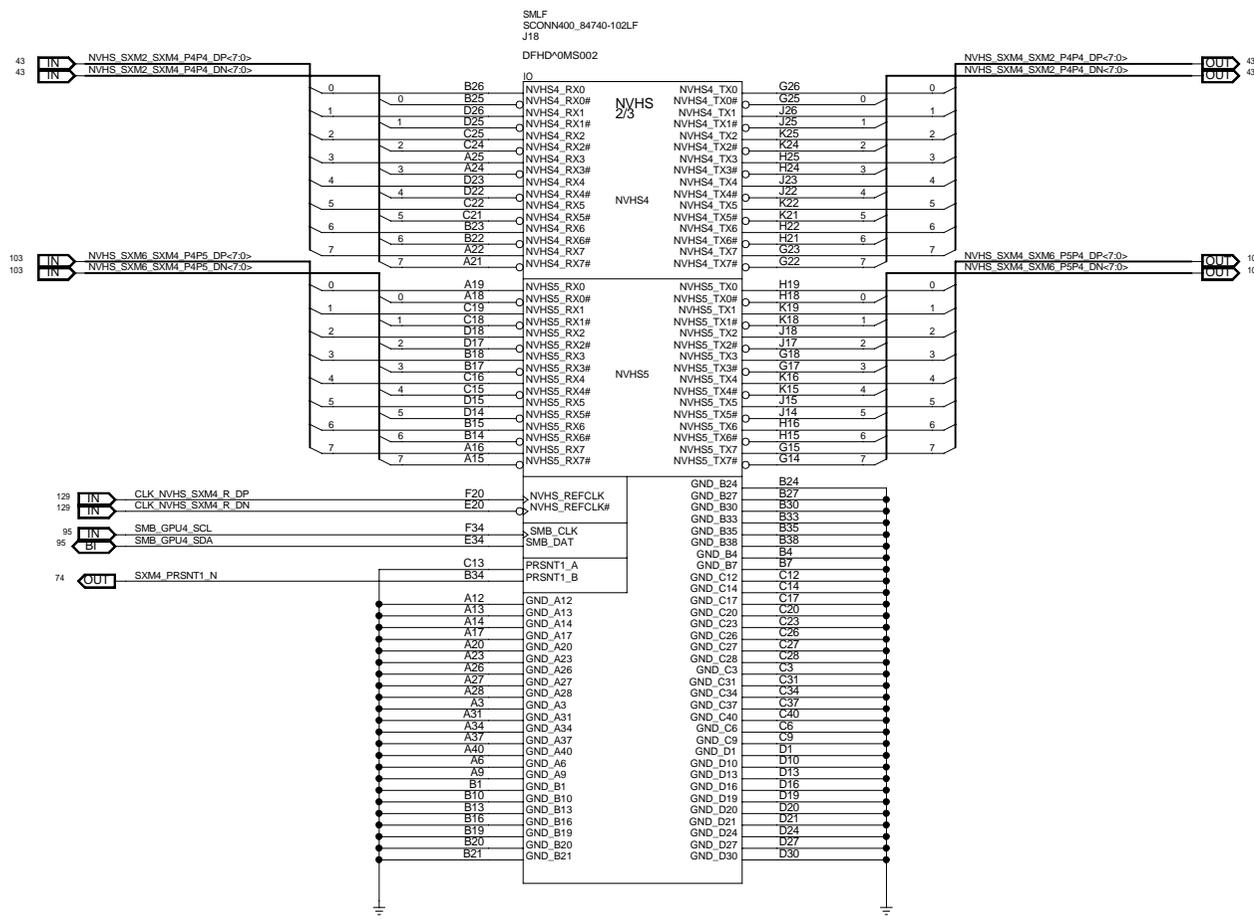


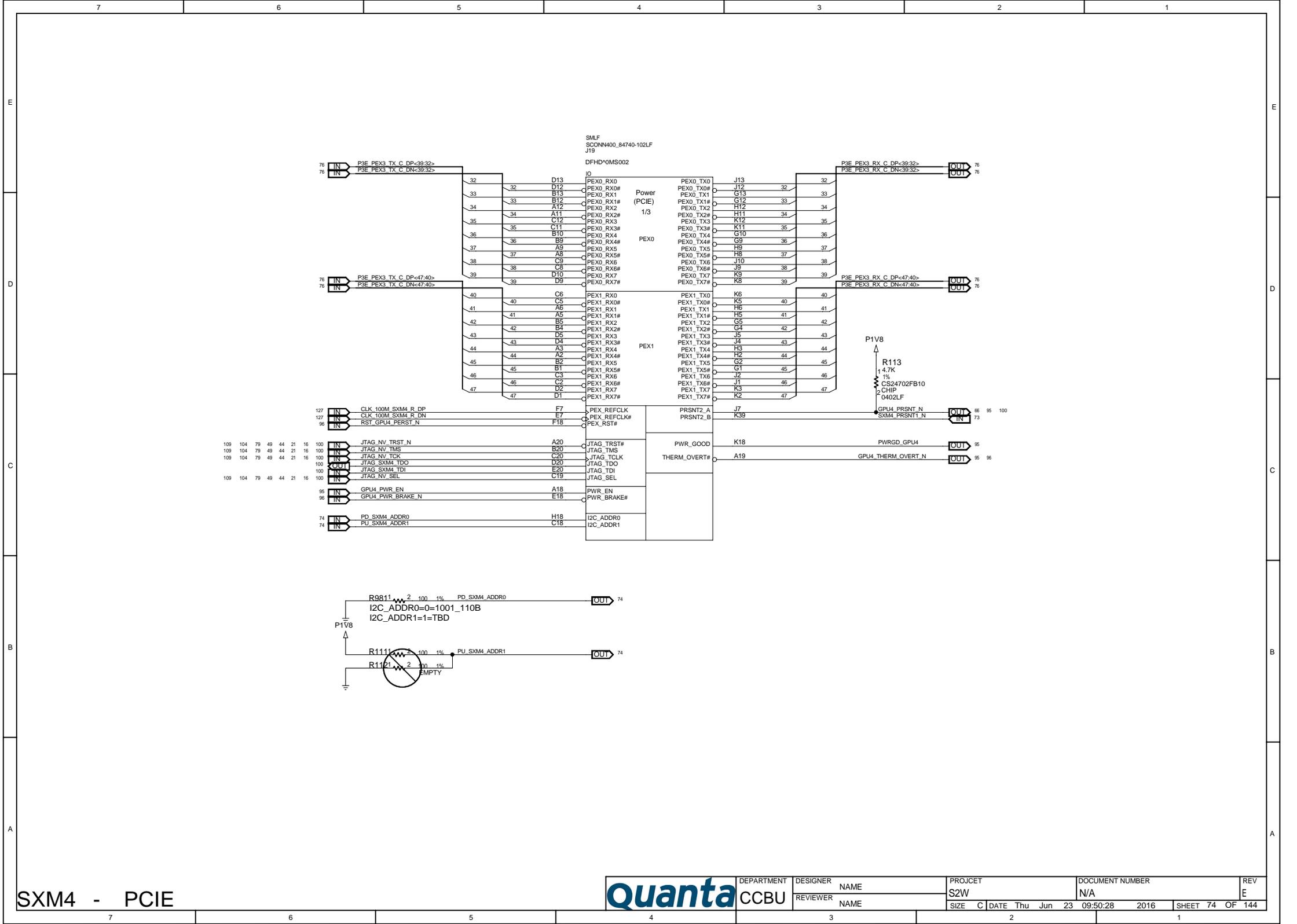
DEPARTMENT	DESIGNER NAME	PROJECT	DOCUMENT NUMBER	REV
CCBU		S2W	N/A	E
REVIEWER NAME	SIZE	C	DATE	Thu Jul 23 11:27:32 2015
				SHEET 71 OF 144

7 6 5 4 3 2 1



SMF
SCONN400_84740-102LF
J18
DFHD*0MS002

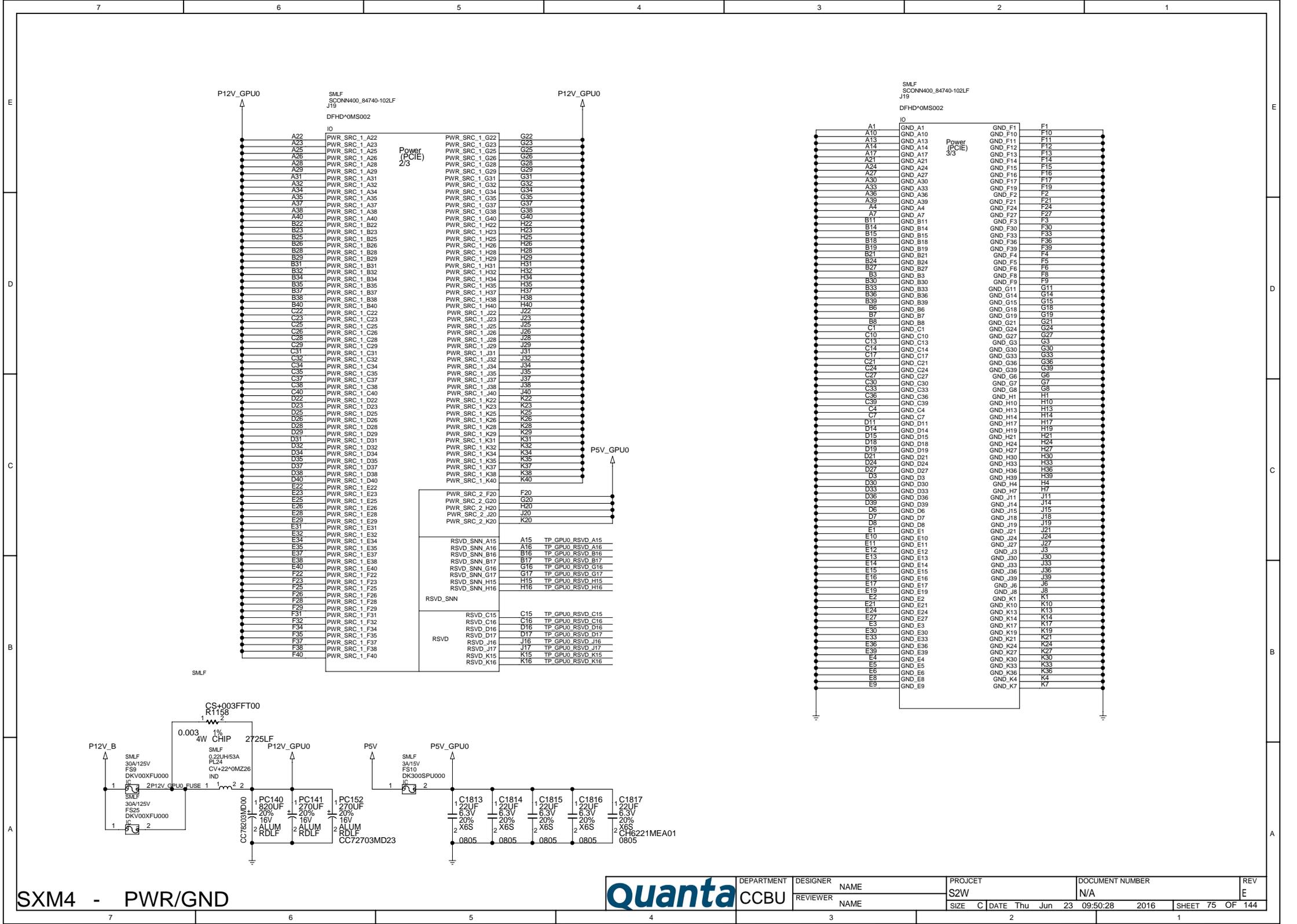




SXM4 - PCIE



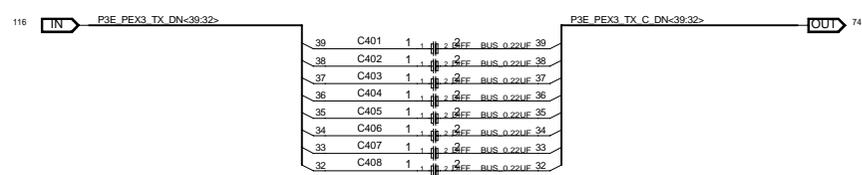
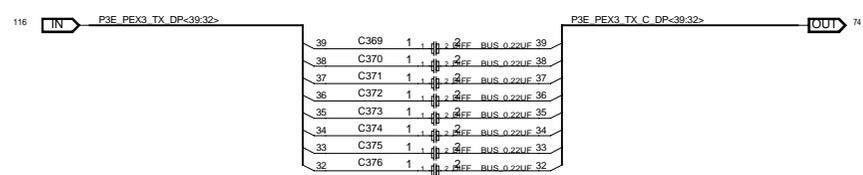
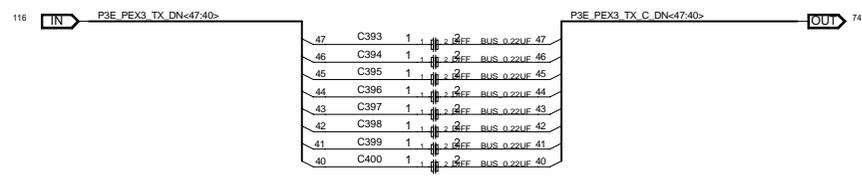
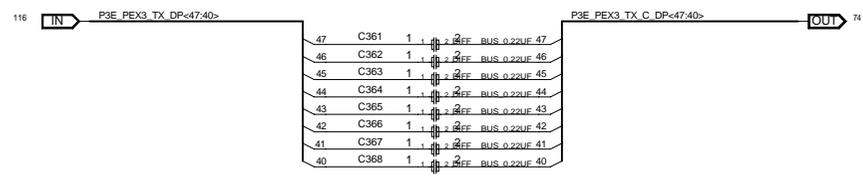
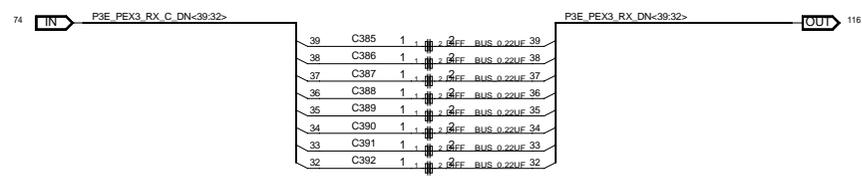
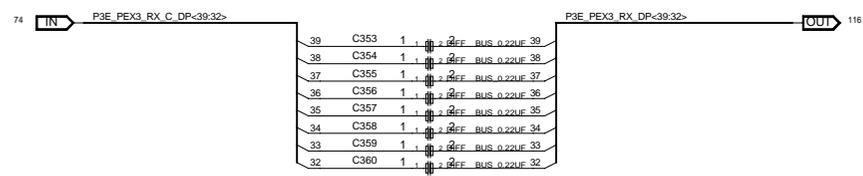
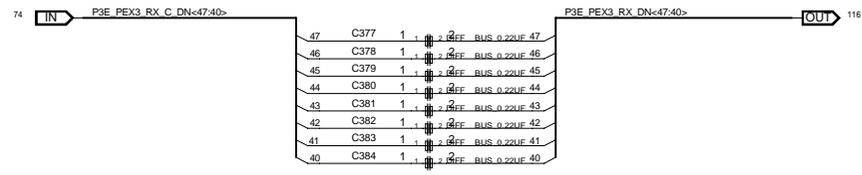
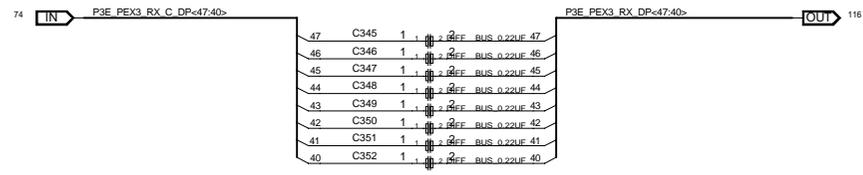
DEPARTMENT	DESIGNER	PROJECT	DOCUMENT NUMBER	REV
CCBU	NAME	S2W	N/A	E
REVIEWER	NAME	SIZE	DATE	SHEET
		C	Thu Jun 23 09:50:28 2016	74 OF 144

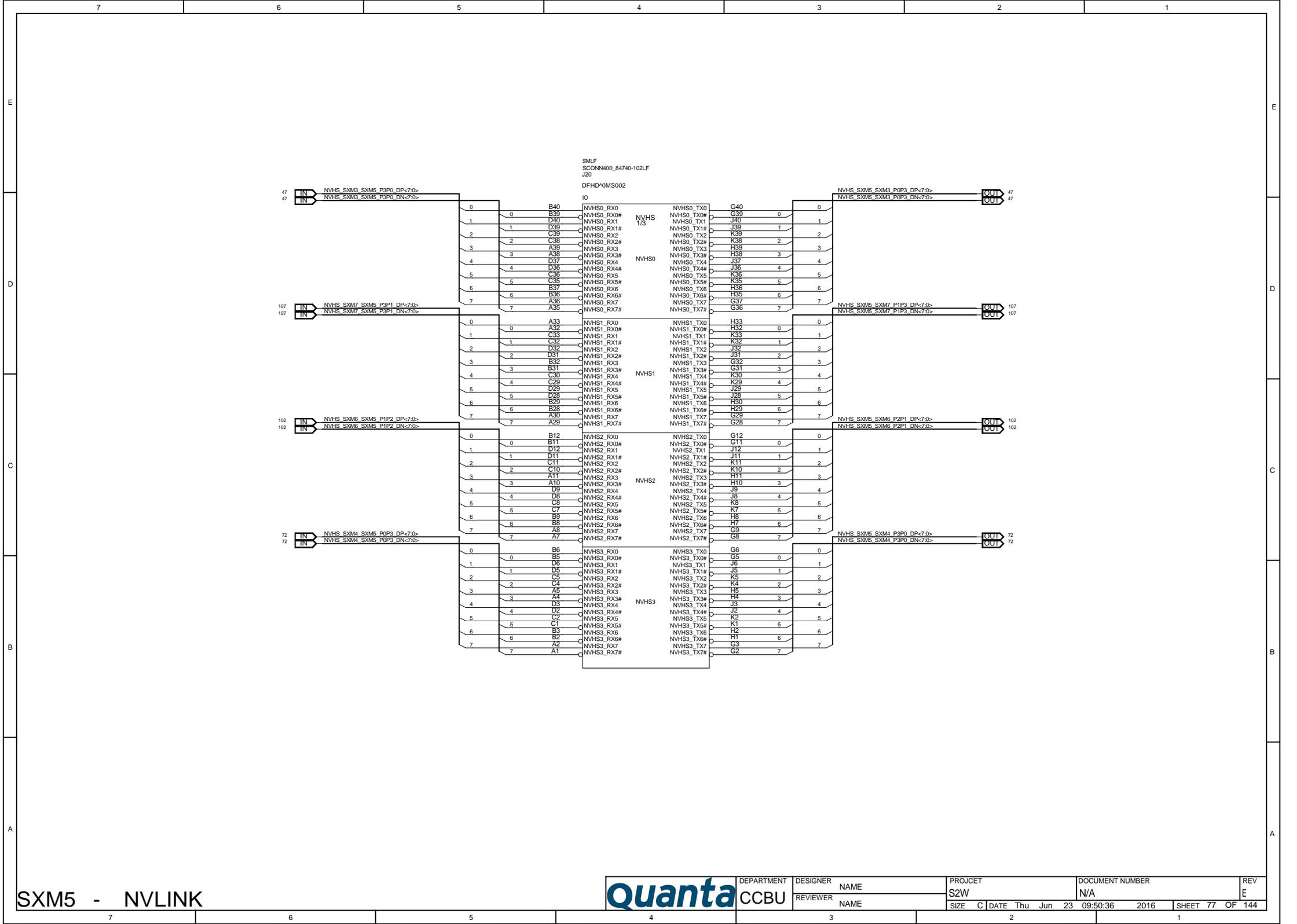


SXM4 - PWR/GND



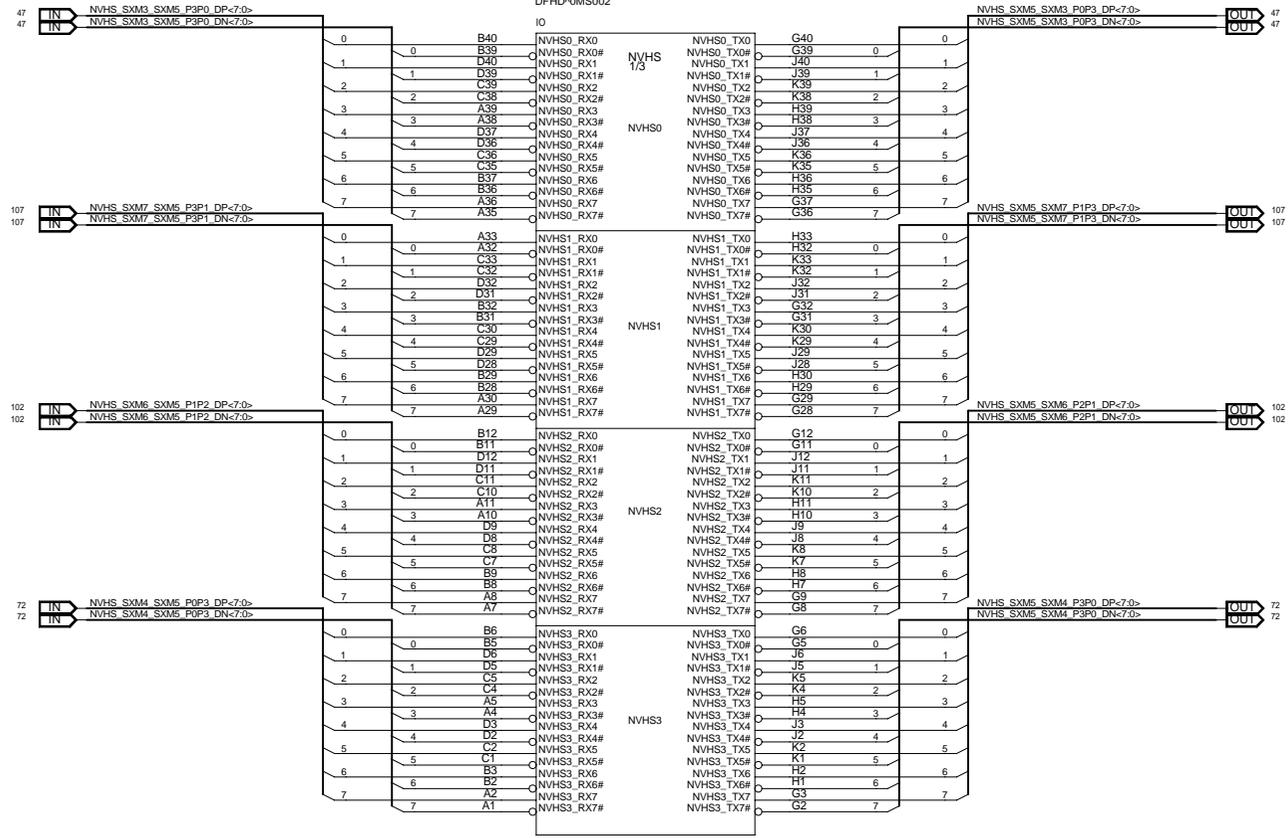
DEPARTMENT CCBU	DESIGNER NAME	PROJECT S2W	DOCUMENT NUMBER N/A	REV E
REVIEWER NAME	DATE Thu Jun 23 09:50:28 2016	SIZE C	SHEET 75 OF 144	

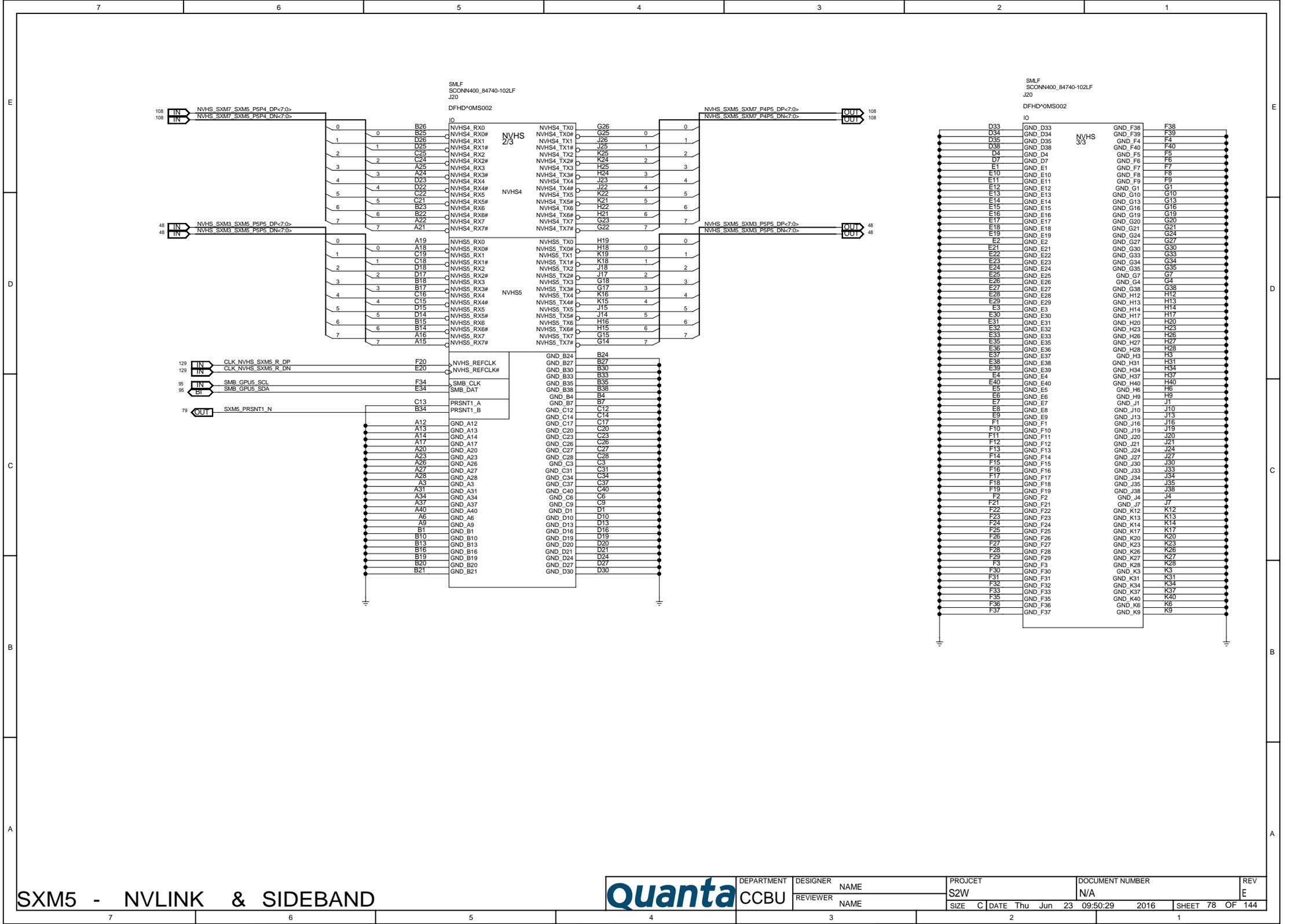


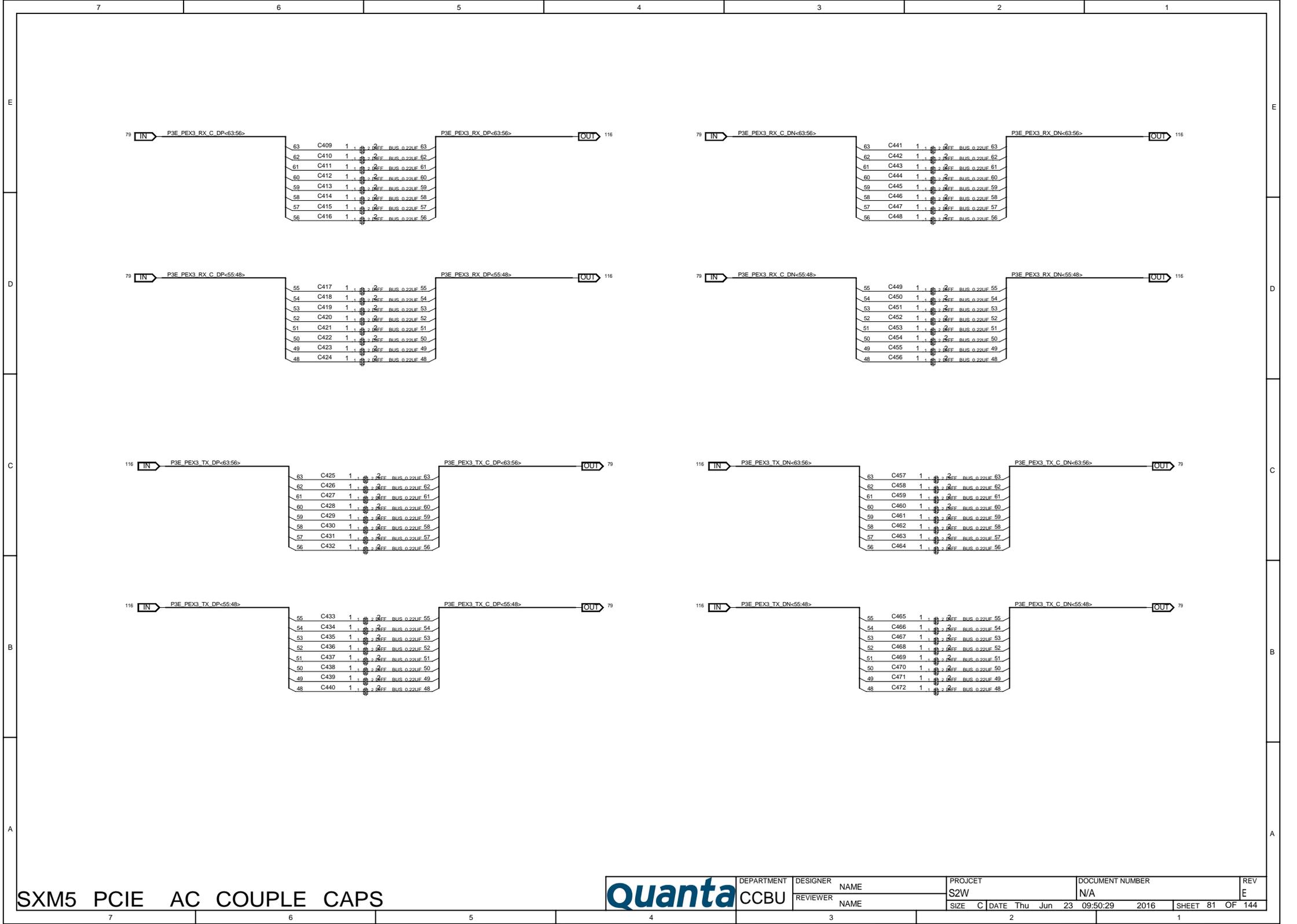


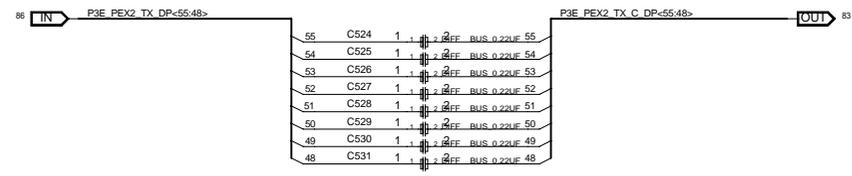
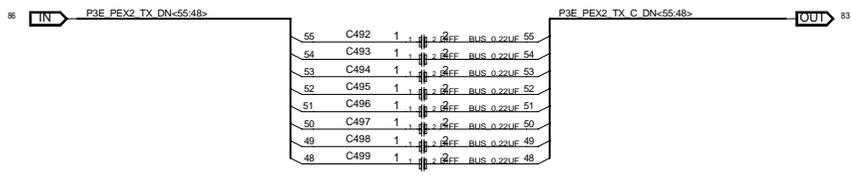
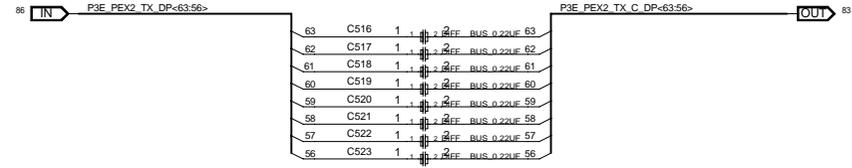
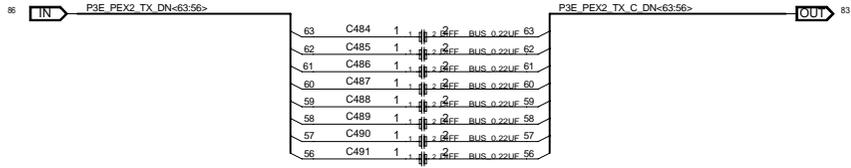
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SCONN400_84740-102LF
J20

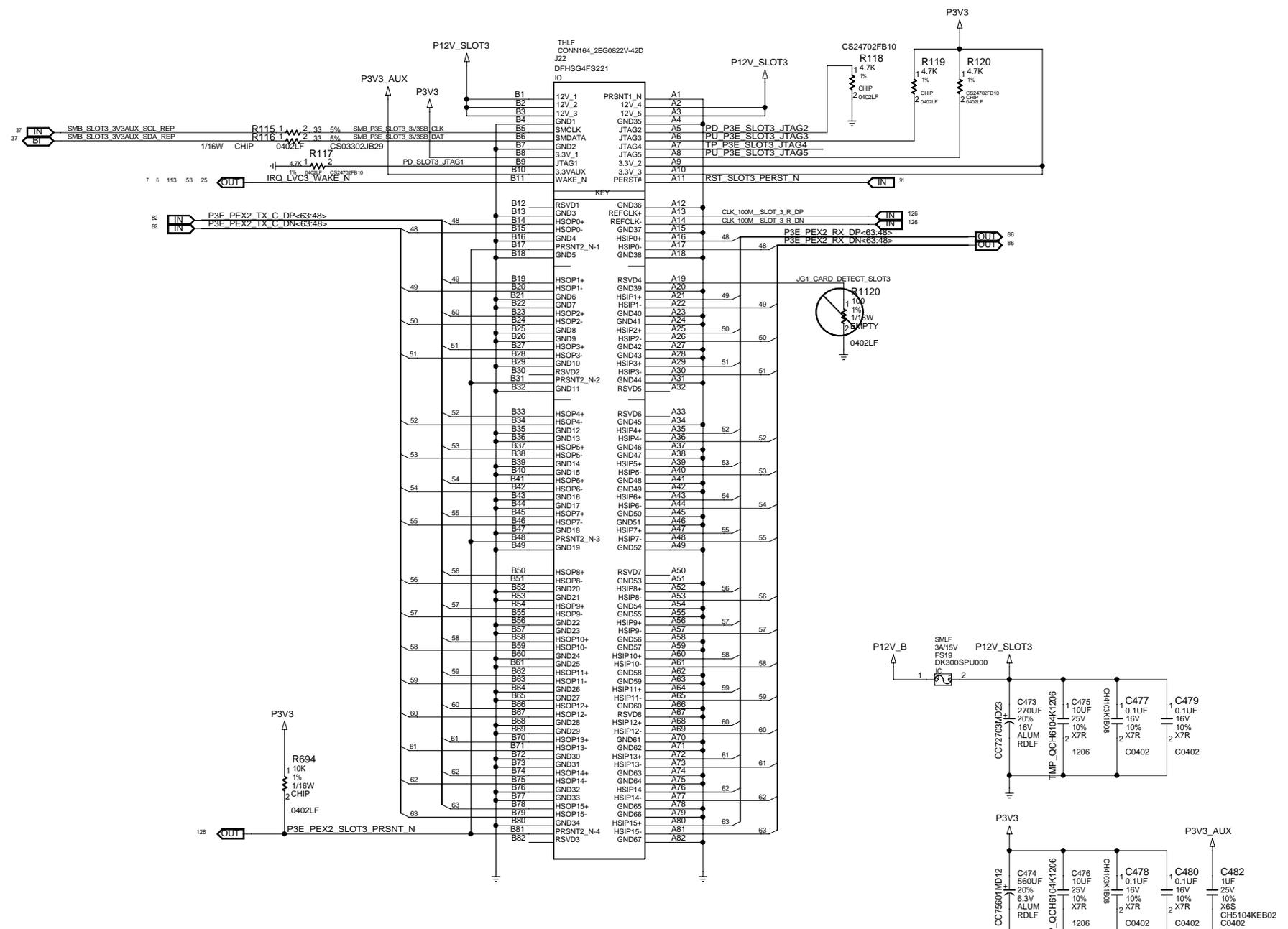
DFHD*0MS002







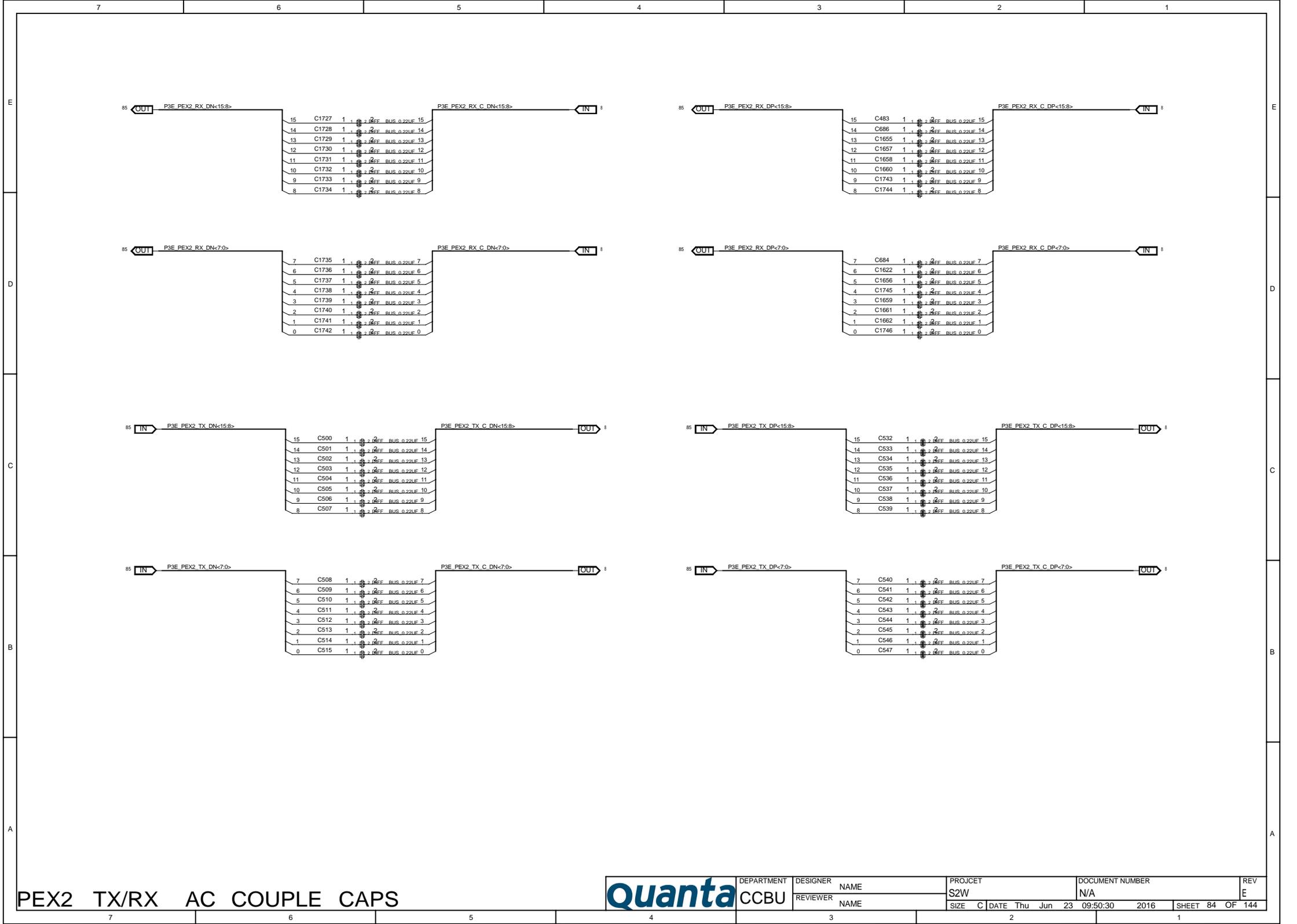




PCIE X16 SLOT3



DEPARTMENT	DESIGNER	NAME	PROJECT	DOCUMENT NUMBER	REV
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REVIEWER	NAME	DATE	SIZE	DATE	SHEET
		Thu Jun 23	09:50:30	2016	83 OF 144

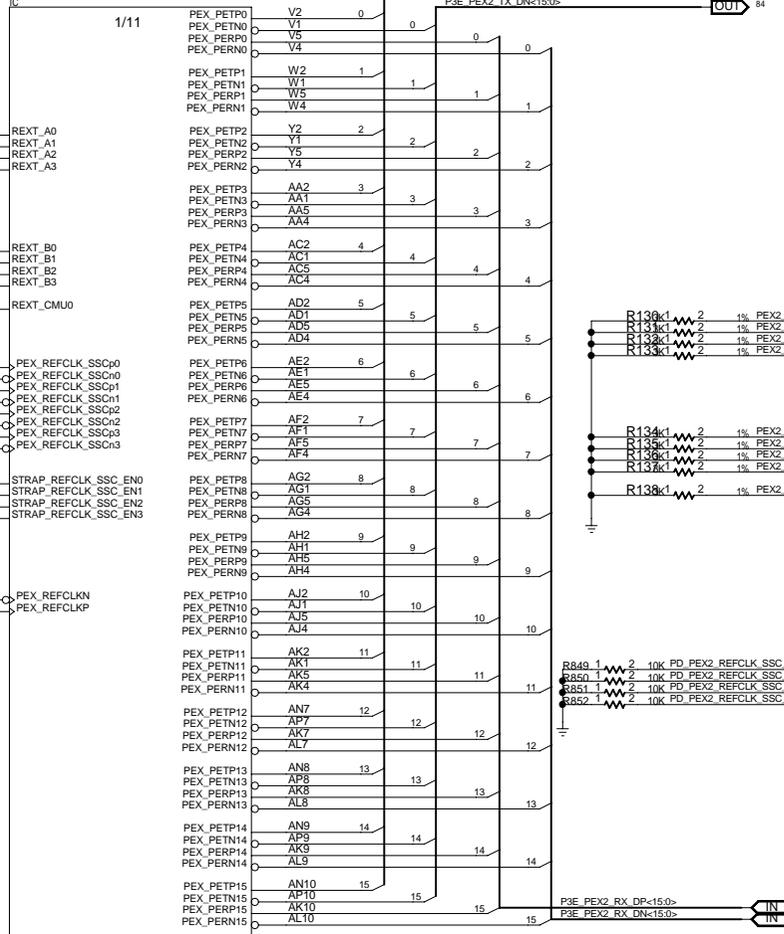


PEX2 TX/RX AC COUPLE CAPS



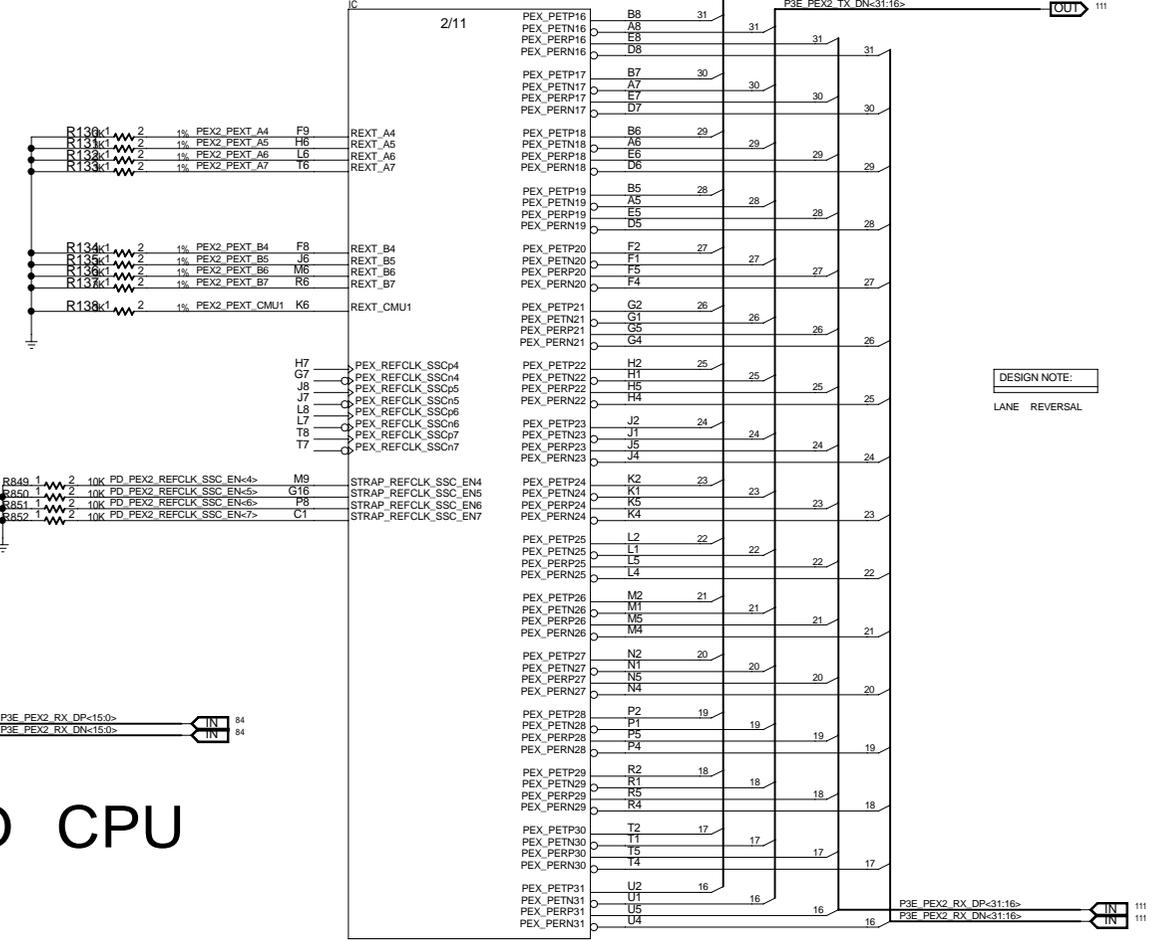
DEPARTMENT CCBU	DESIGNER NAME	PROJECT S2W	DOCUMENT NUMBER N/A	REV E
REVIEWER NAME	SIZE C	DATE Thu Jun 23 09:50:30 2016	SHEET 84 OF 144	

SMLF
PEX8780-AB80BI G
U4
AJ087800T01



PLX TO CPU

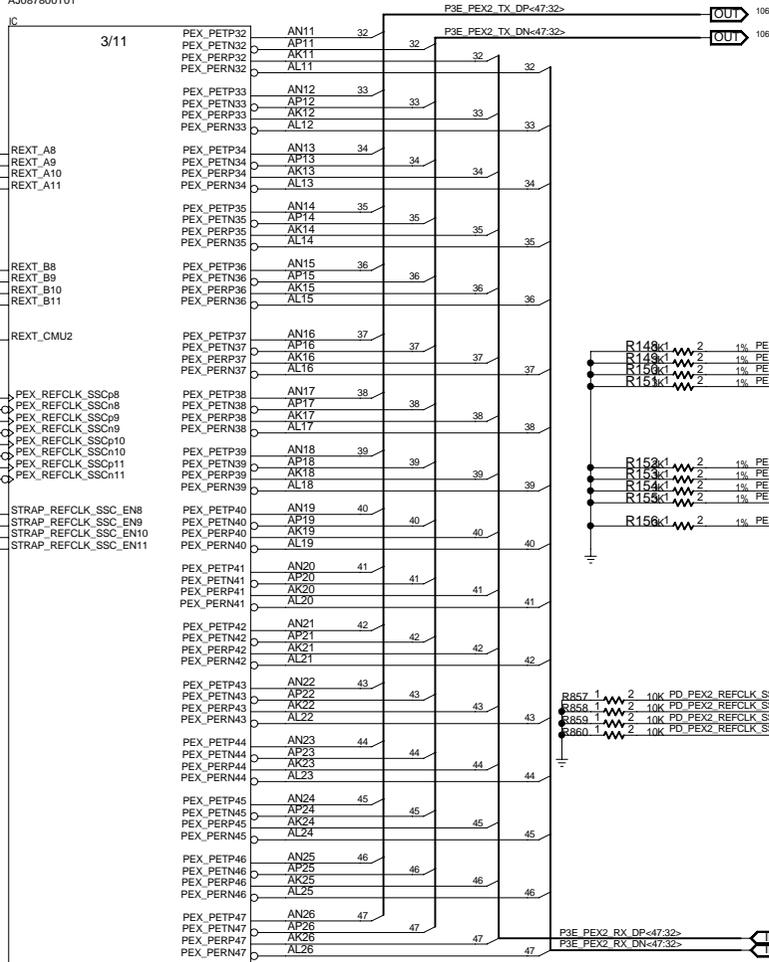
SMLF
PEX8780-AB80BI G
U4
AJ087800T01



DESIGN NOTE:
LANE REVERSAL

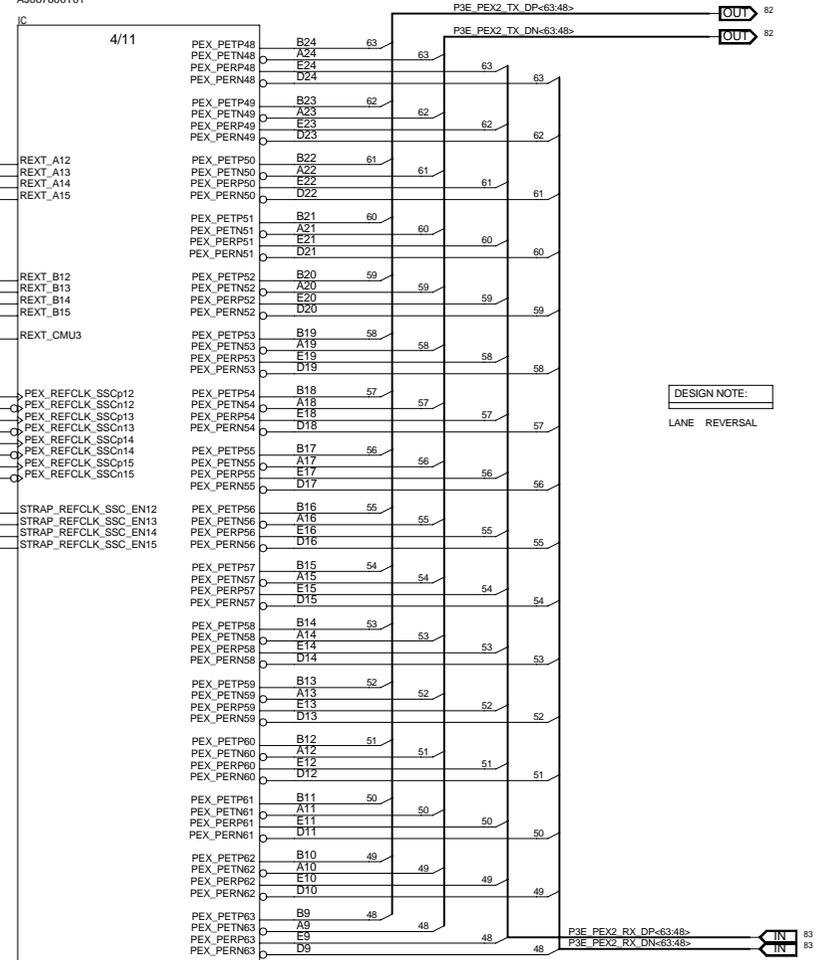
PLX TO GPU7

SMLF
PEX8780-AB80BI
U4
AJ087800T01



PLX TO GPU6

SMLF
PEX8780-AB80BI
U4
AJ087800T01

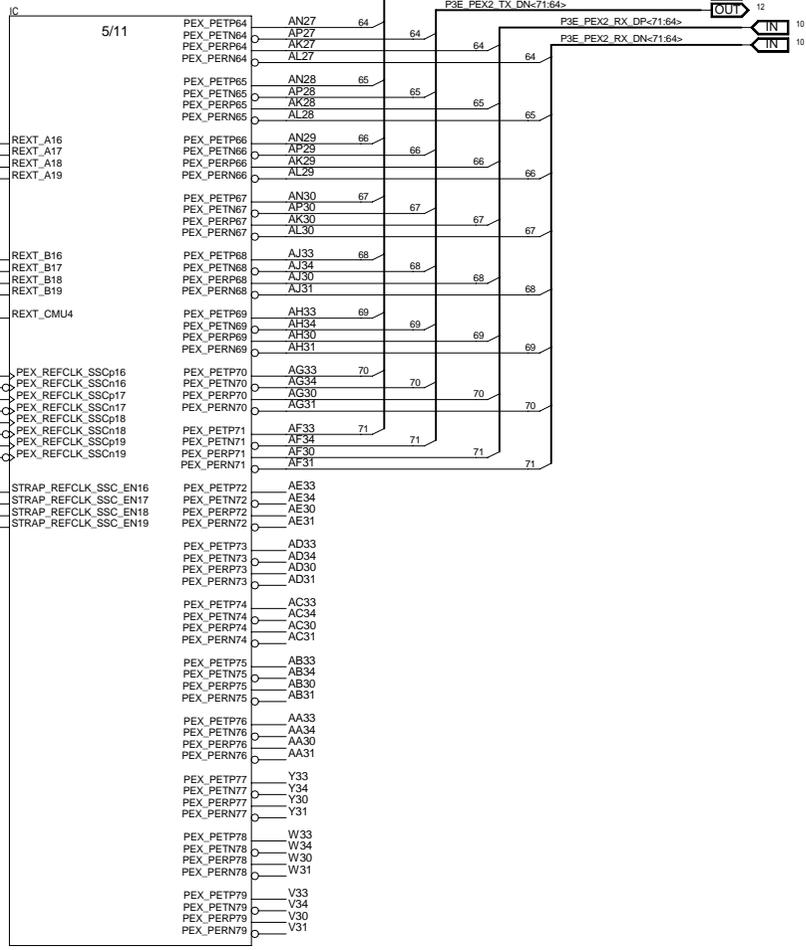


DESIGN NOTE:
LANE REVERSAL

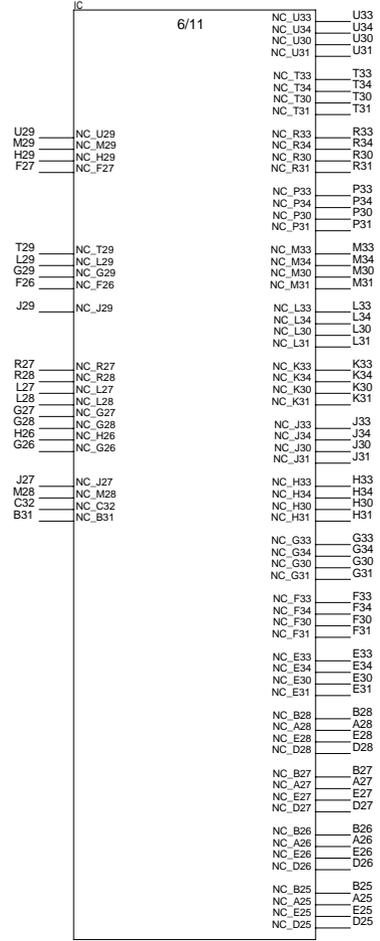
PLX TO SLOT3

PLX TO SSD2/3

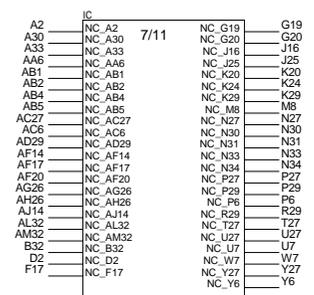
SMLF
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U4
AJ087800T01

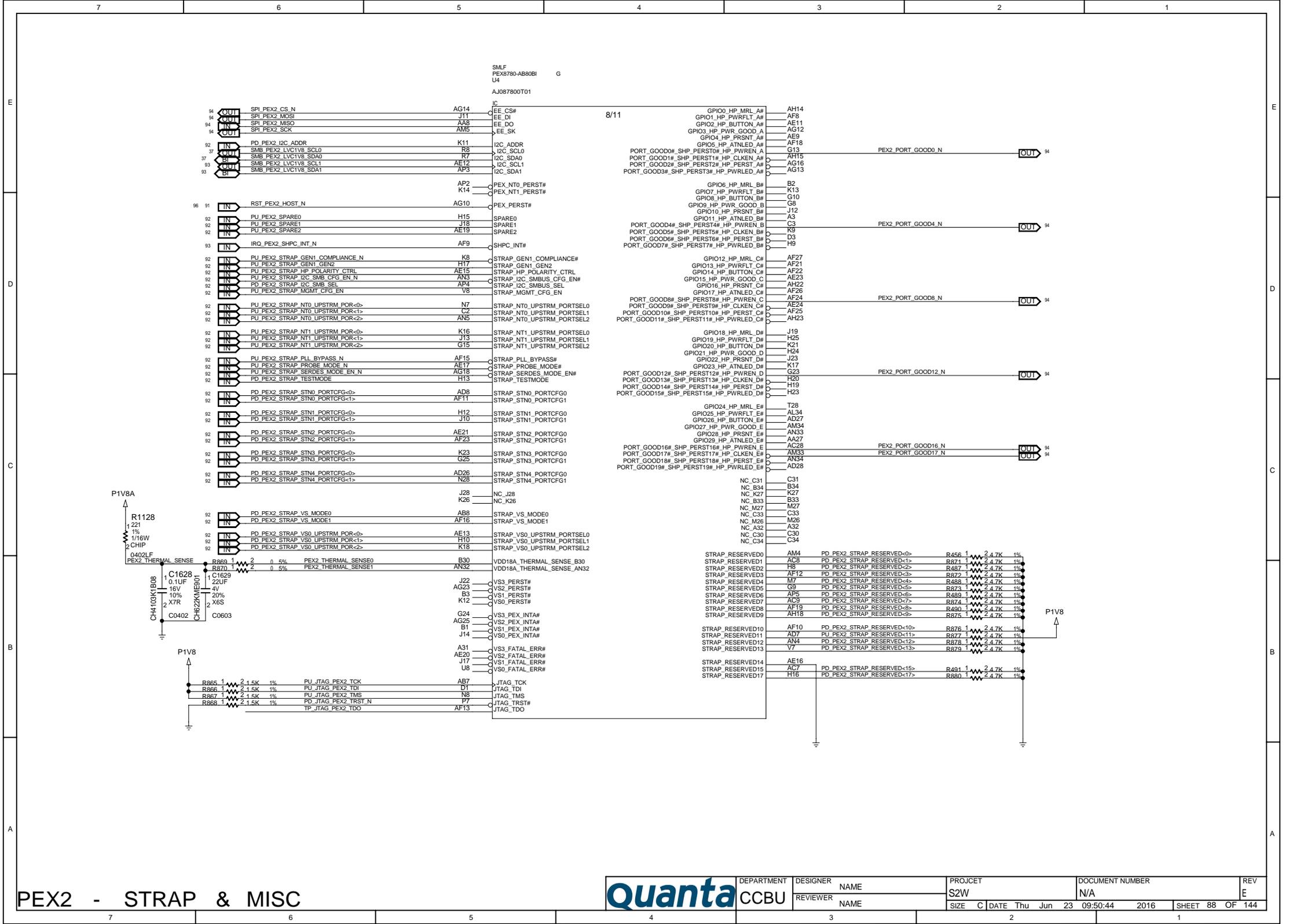


SMLF
PEX8780-AB80BI
U4
AJ087800T01



SMLF
PEX8780-AB80BI
U4
AJ087800T01

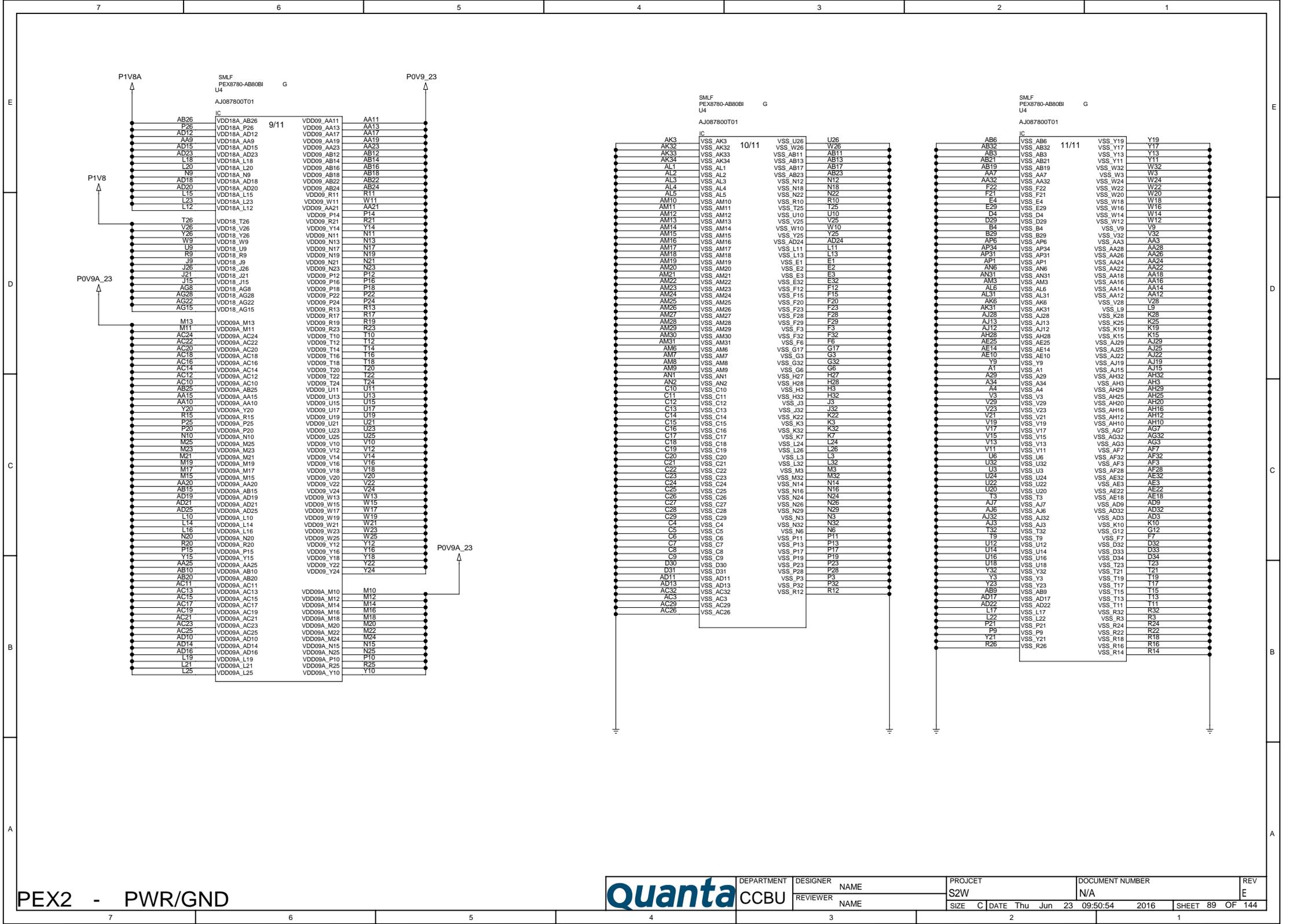




PEX2 - STRAP & MISC



DEPARTMENT	DESIGNER	PROJECT	DOCUMENT NUMBER	REV
CCBU	NAME	S2W	N/A	E
REVIEWER	NAME	SIZE	DATE	SHEET
		C	Thu Jun 23 09:50:44 2016	88 OF 144



PEX2 - PWR/GND



DEPARTMENT
CCBU

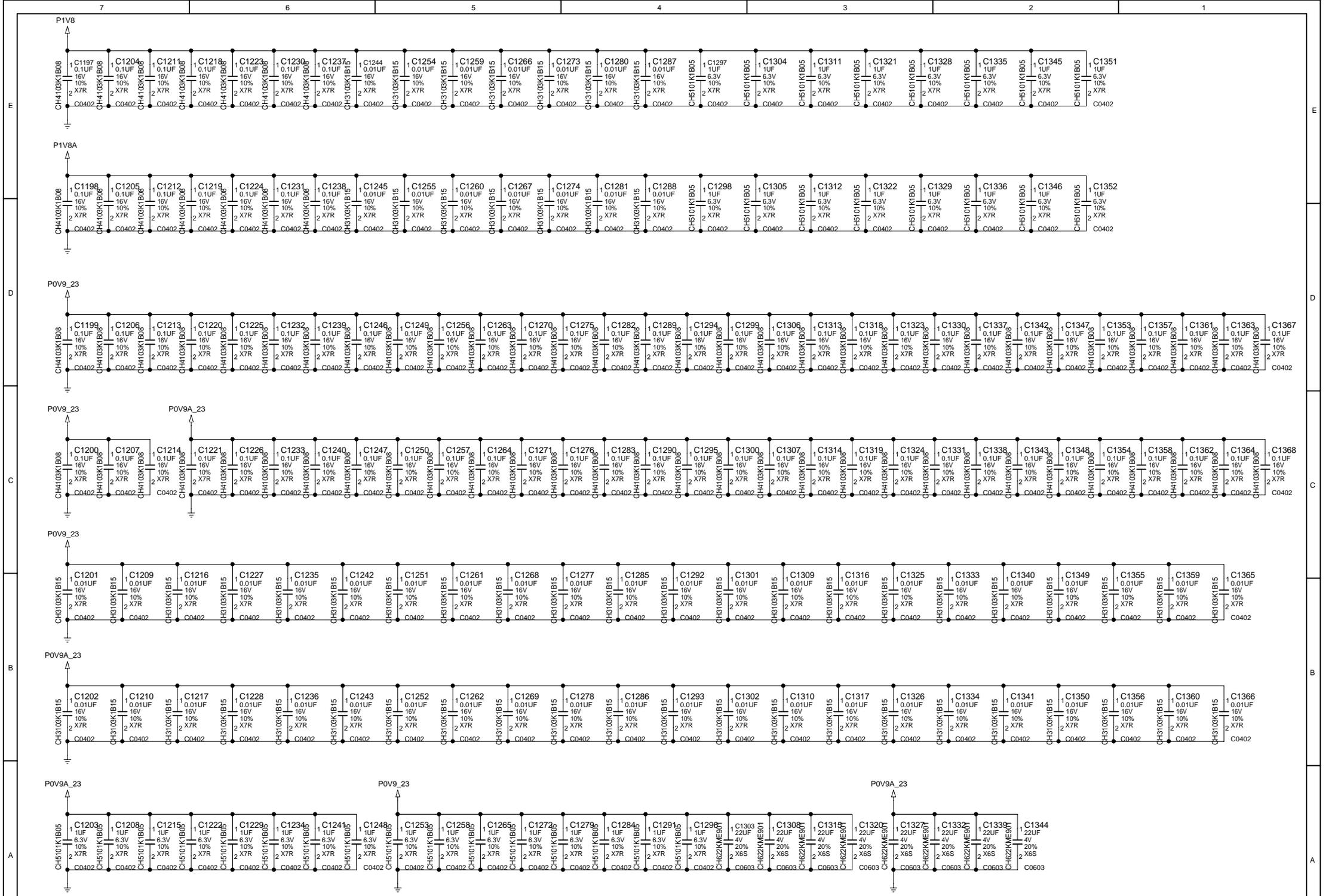
DESIGNER NAME
REVIEWER NAME

PROJECT
S2W

DOCUMENT NUMBER
N/A

REV
E

SIZE C DATE Thu Jun 23 09:50:54 2016 SHEET 89 OF 144



PEX2 POWER DECOUPLING



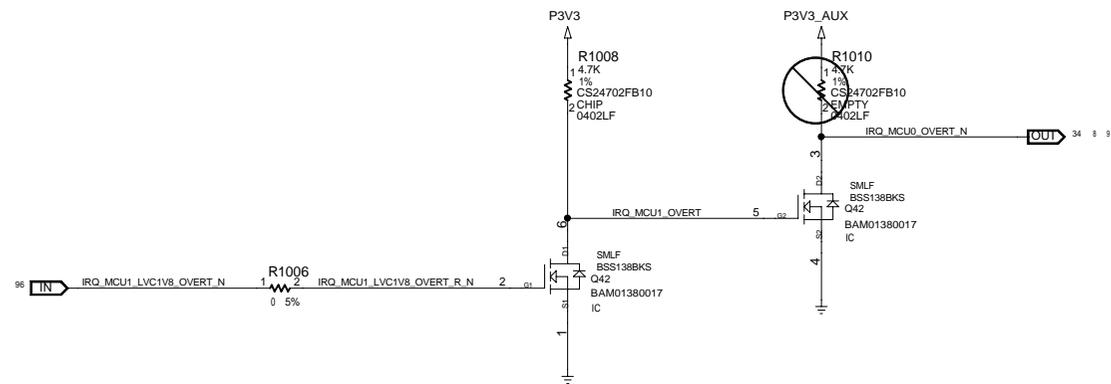
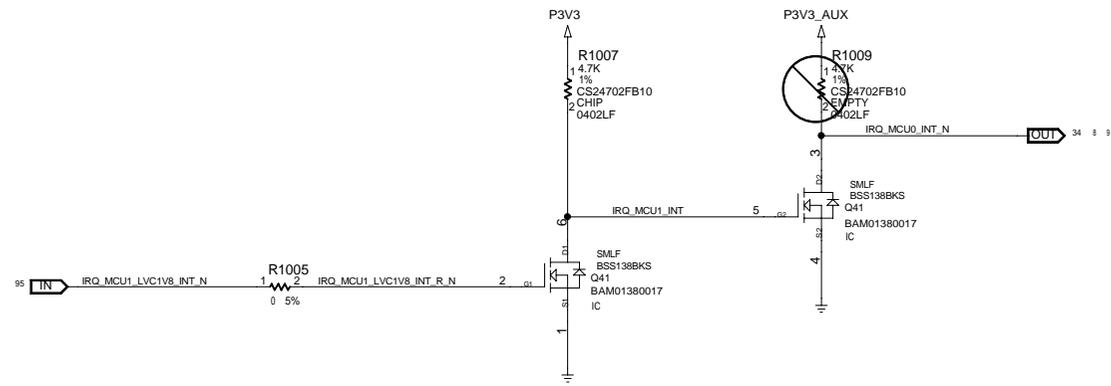
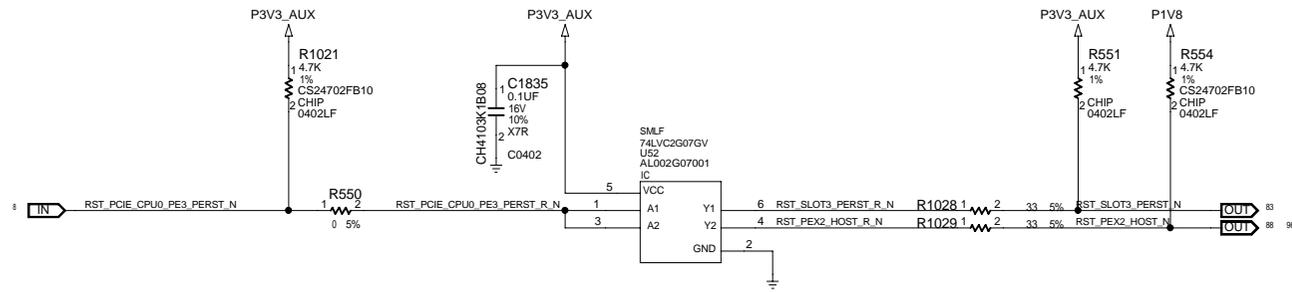
DEPARTMENT
CCBU

DESIGNER NAME
REVIEWER NAME

PROJECT
S2W

DOCUMENT NUMBER
N/A

REV
E



PEX2 PERST & MCU1 INT LEVEL SHIFT



DEPARTMENT
CCBU

DESIGNER NAME
REVIEWER NAME

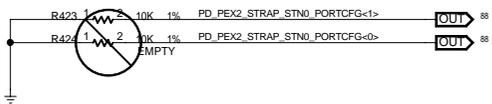
PROJECT
S2W

DOCUMENT NUMBER
N/A

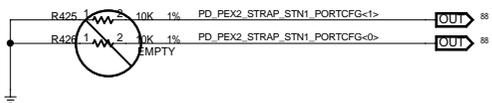
REV
E

SIZE C DATE Thu Jun 23 09:50:56 2016 SHEET 91 OF 144

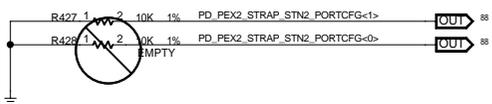
STATION0 PORT CONFIG
 CONTROL THRU EEPROM
 STN0: 300H[2:0]=001B=X16
 STRAP_STN0_PORTCFG[1:0]=0Z=X16



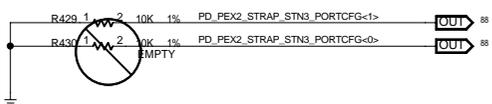
STATION1 PORT CONFIG
 CONTROL THRU EEPROM
 STN1: 300H[5:3]=001B=X16
 STRAP_STN1_PORTCFG[1:0]=0Z=X16



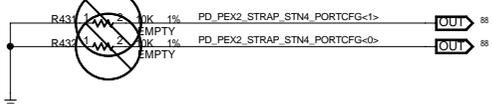
STATION2 PORT CONFIG
 CONTROL THRU EEPROM
 STN2: 300H[8:6]=001B=X16
 STRAP_STN2_PORTCFG[1:0]=0Z=X16



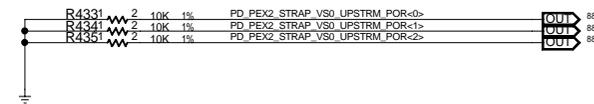
STATION3 PORT CONFIG
 CONTROL THRU EEPROM
 STN3: 300H[11:9]=001B=X16
 STRAP_STN3_PORTCFG[1:0]=0Z=X16



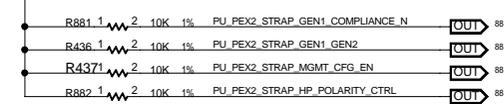
STATION4 PORT CONFIG
 CONTROL THRU EEPROM
 STN4: 300H[14:12]=004B=X4X4X4X4
 STRAP_STN4_PORTCFG[1:0]=ZZ=X4X4X4X4



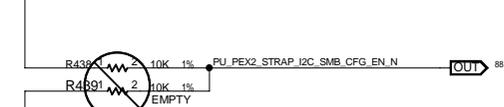
UPSTREAM PORT SELECT
 CONTROL THRU EEPROM
 360H[4:0]=0_0000B=PORT 0
 STRAP_UPSTRM_PORTSEL[2:0]=000=PORT 0



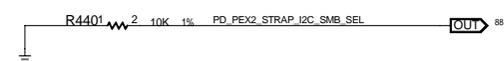
P1V8
 1=PCIE MAX DATA RATE =GEN3
 1=MANAGEMENT PORT IS DISABLED



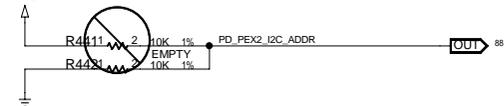
P1V8
 STRAP_I2C_SMBUS_CFG_EN#=1=DISABLE I2C INITIAL



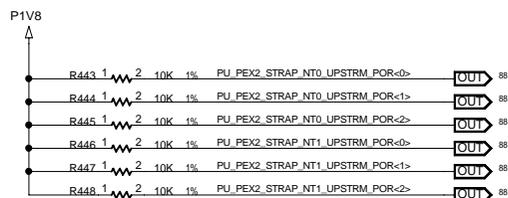
STRAP_I2C_SMBUS_SEL=0=ENABLE I2C SLAVE PROTOCOL



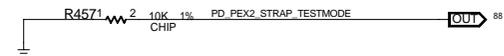
P1V8
 I2C_ADDR=0=1011_101B



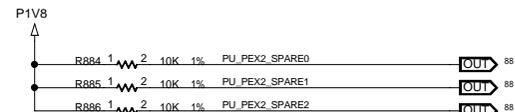
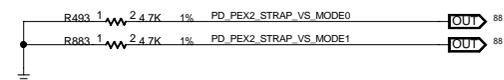
STRAP_NT_UPSTRM_POR<0:2> =111= DISABLE NT MODE



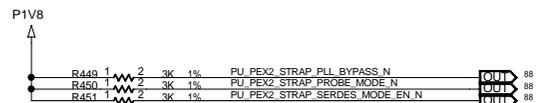
BASE MODE: TEST_MODE=0
 =PORT_GOODX# + GPIO INPUT

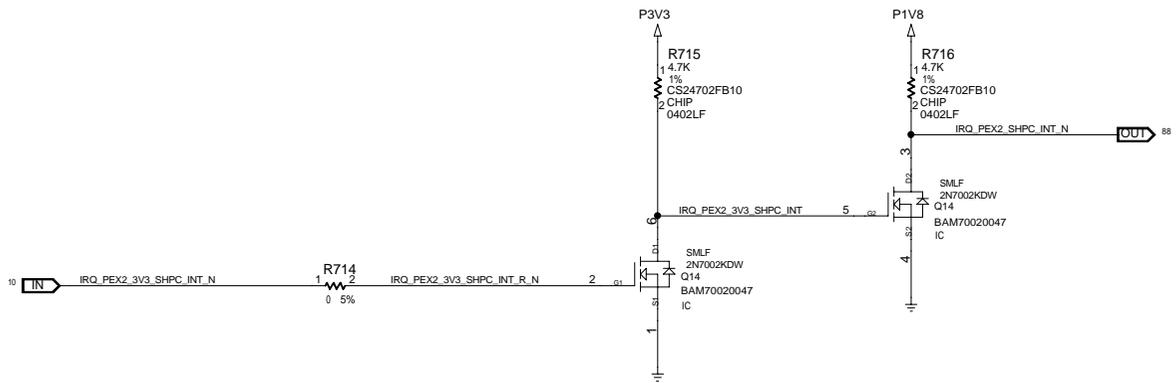
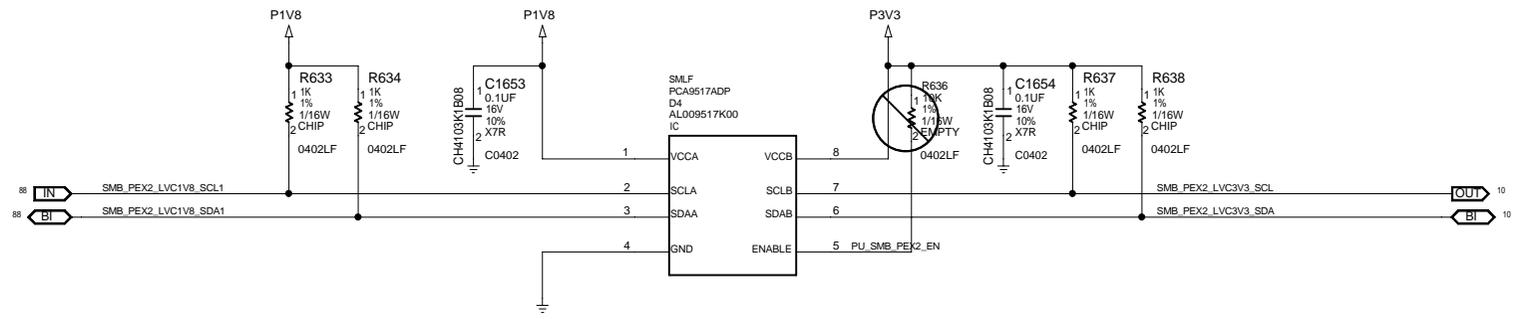


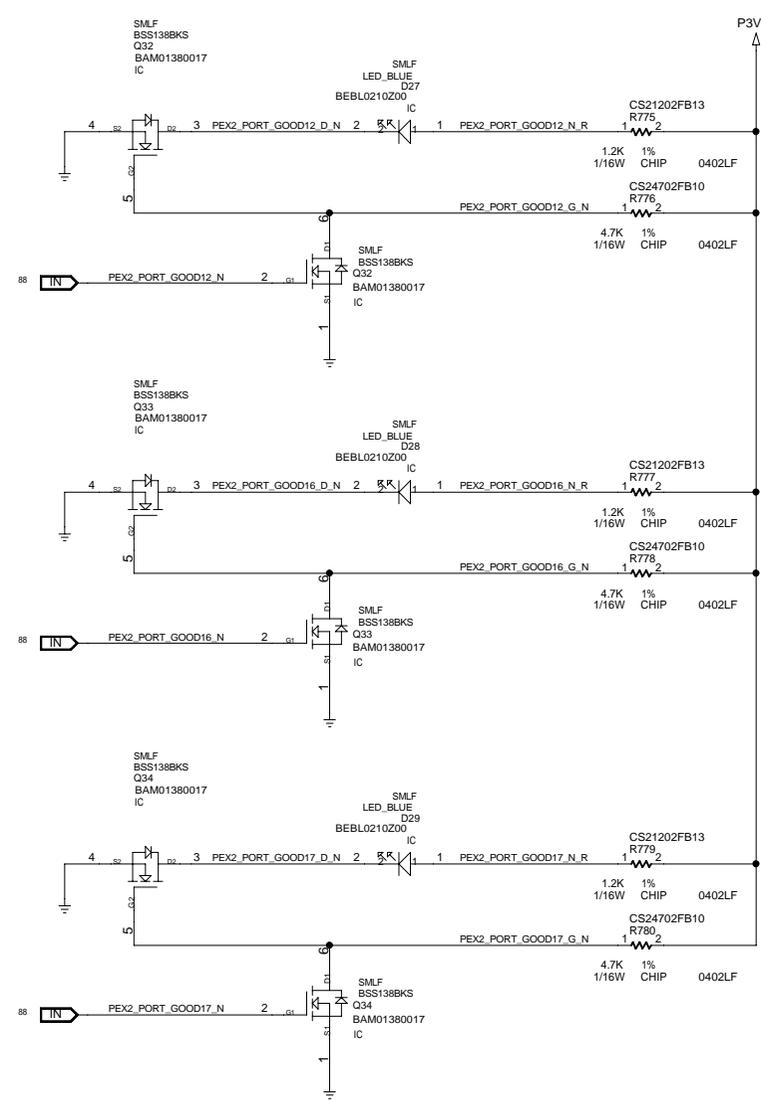
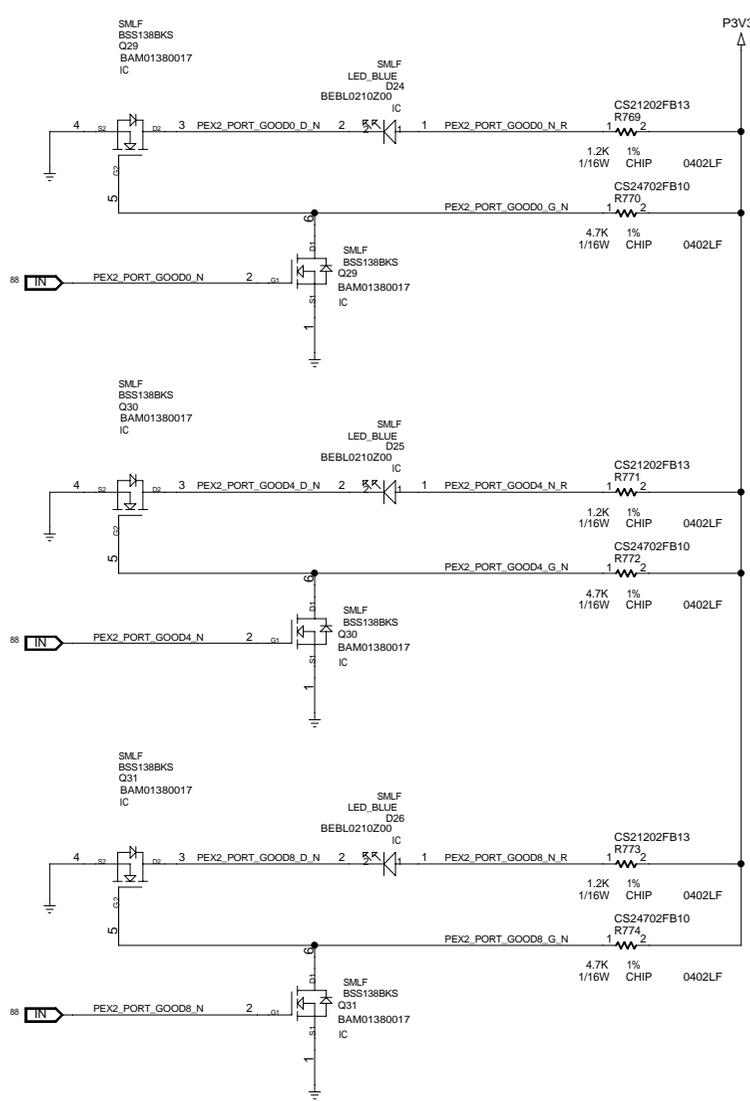
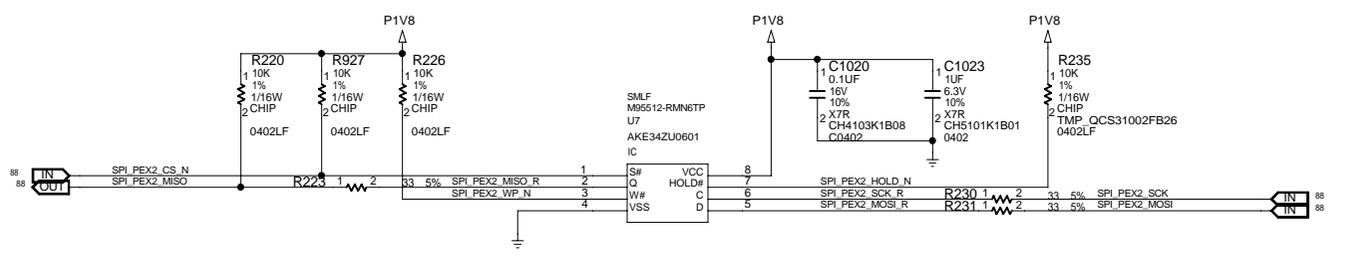
BASE MODE: LL(00)=SINGLE SWITCH



FOR FACTORY TEST ONLY



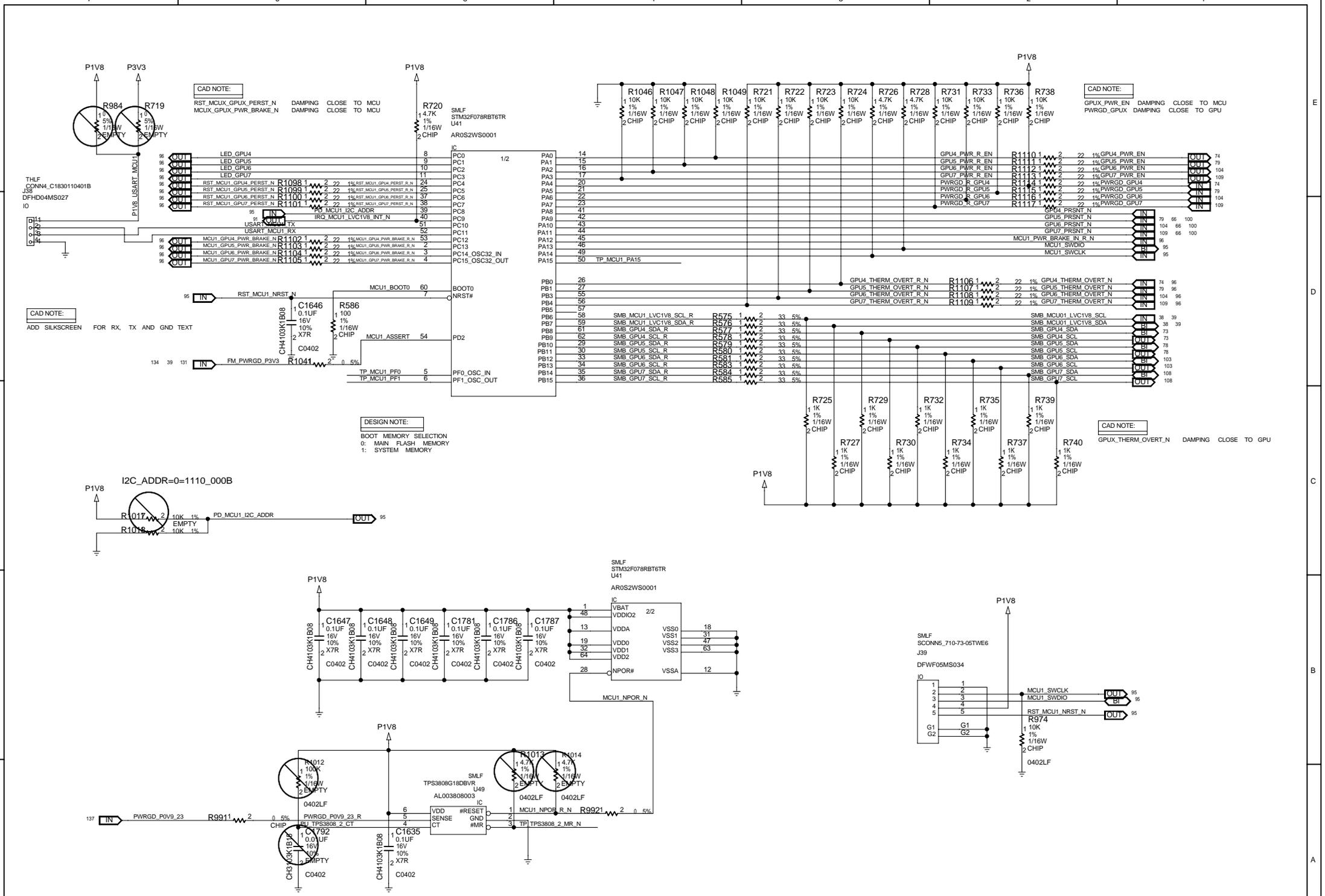


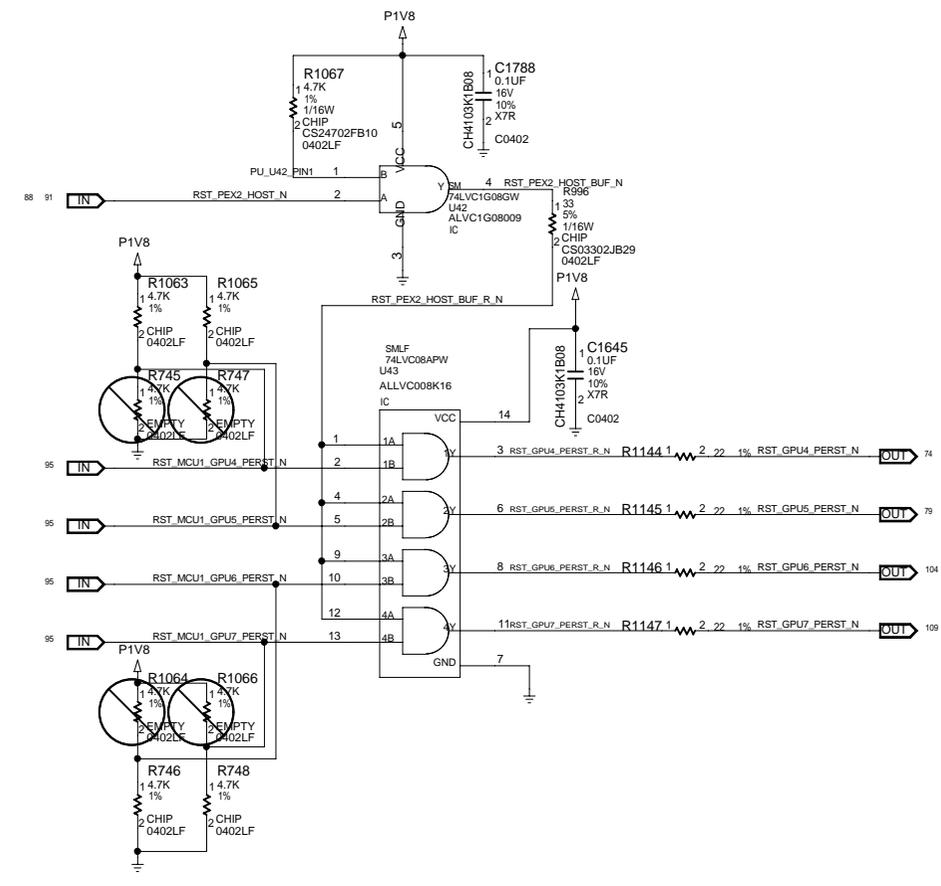
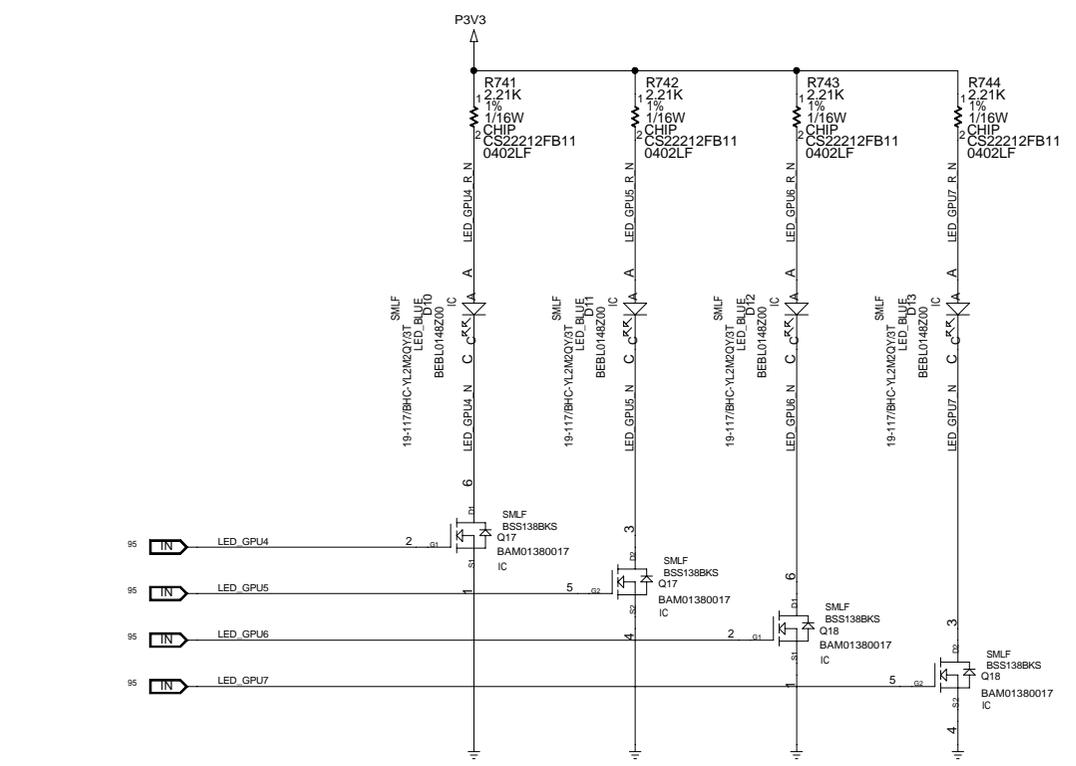
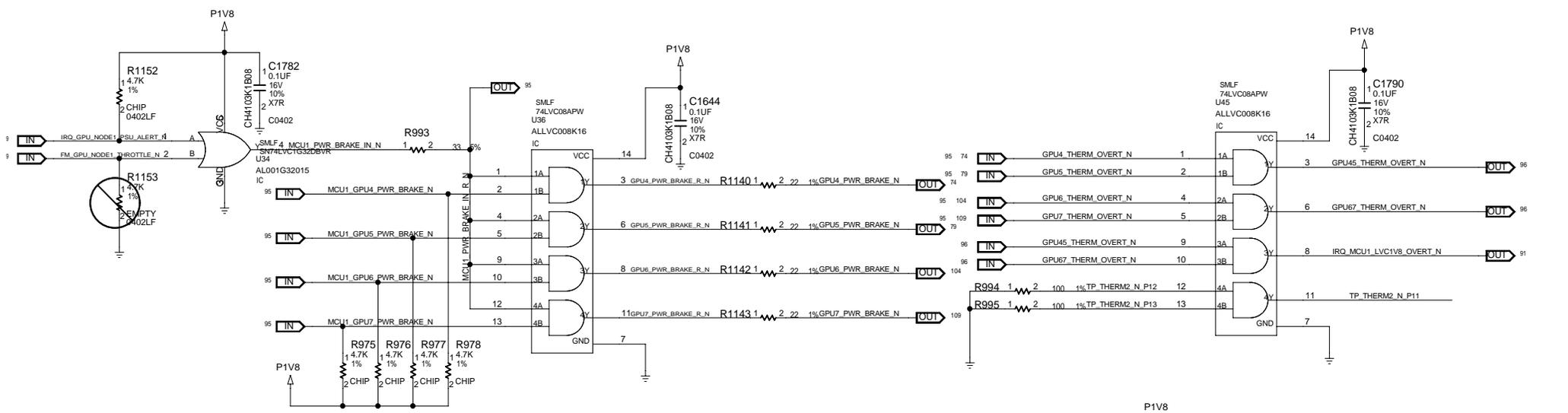


PEX2 EEPROM & PORT LED



DEPARTMENT CCBU	DESIGNER NAME	PROJECT S2W	DOCUMENT NUMBER N/A	REV E
REVIEWER NAME	DATE Thu Jun 23 09:50:53 2016	SIZE C	SHEET 94 OF 144	





MCU1



DEPARTMENT	DESIGNER	PROJECT	DOCUMENT NUMBER	REV
CCBU	N/A	S2W	N/A	E
REVIEWER	NAME	SIZE	DATE	SHEET
		C	Thu Jun 23 09:50:52 2016	96 OF 144

7 6 5 4 3 2 1

E
D
C
B
A

E
D
C
B
A

UNTITLED



DEPARTMENT	DESIGNER NAME	PROJECT	DOCUMENT NUMBER	REV
CCBU		S2W	N/A	E
REVIEWER NAME	SIZE	C	DATE	Thu Jul 23 11:27:26 2015
				SHEET 97 OF 144

7 6 5 4 3 2 1

7 6 5 4 3 2 1

E
D
C
B
A

E
D
C
B
A

UNTITLED



DEPARTMENT	DESIGNER NAME	PROJECT	DOCUMENT NUMBER	REV
CCBU		S2W	N/A	E
REVIEWER NAME	SIZE	C	DATE	Thu Jul 23 11:27:26 2015
				SHEET 98 OF 144

7 6 5 4 3 2 1

7 6 5 4 3 2 1

E
D
C
B
A

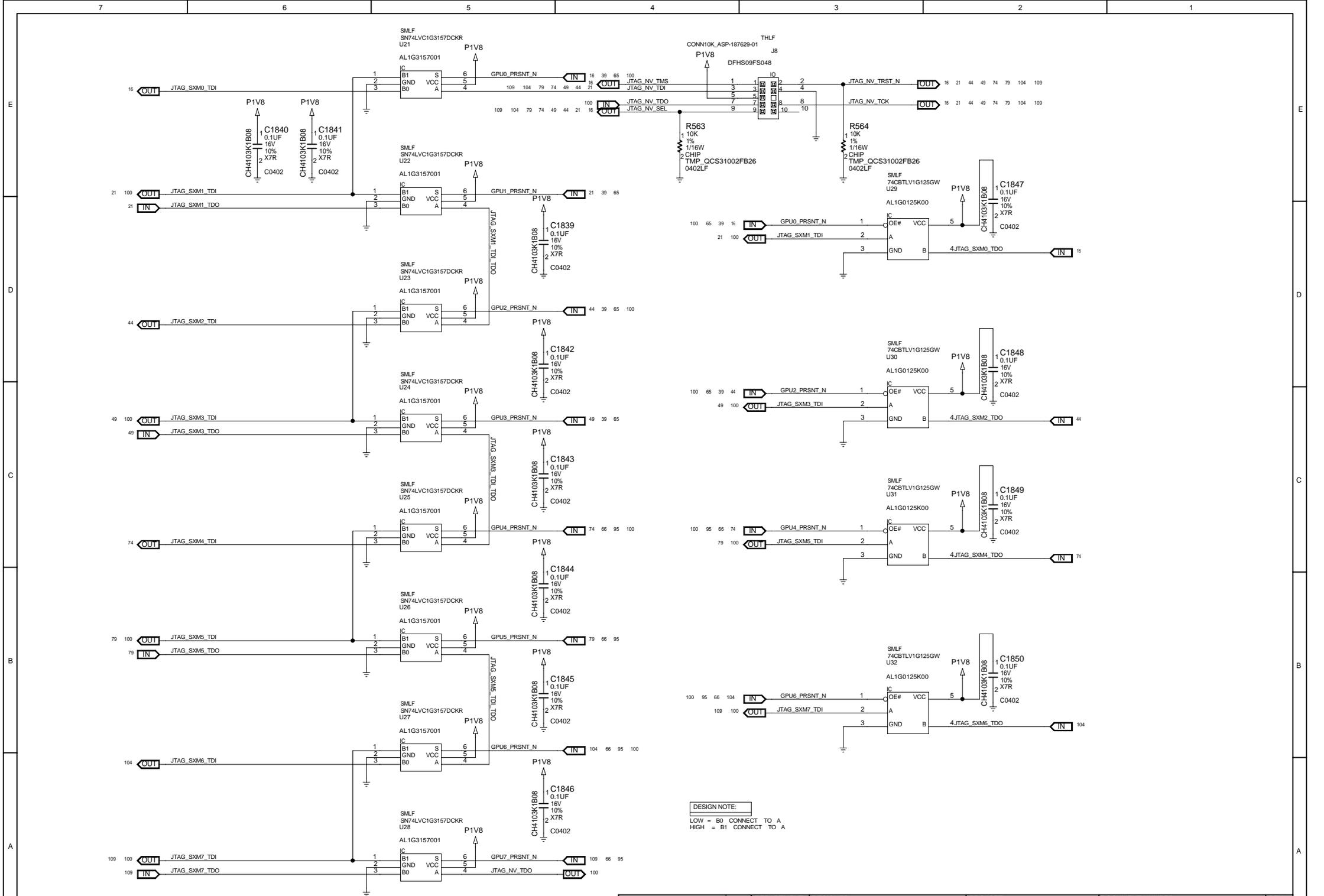
E
D
C
B
A

UNTITLED



DEPARTMENT	DESIGNER NAME	PROJECT	DOCUMENT NUMBER	REV
CCBU		S2W	N/A	E
REVIEWER NAME	SIZE	C	DATE	Thu Jul 23 11:27:26 2015
				SHEET 99 OF 144

7 6 5 4 3 2 1



DESIGN NOTE:
 LOW = B0 CONNECT TO A
 HIGH = B1 CONNECT TO A

NV SXM2 JTAG



DEPARTMENT CCBU	DESIGNER NAME	PROJECT S2W	DOCUMENT NUMBER N/A	REV E
REVIEWER NAME	DATE Thu Jun 23 2016	SIZE C	09:50:51	SHEET 100 OF 144

7 6 5 4 3 2 1

E
D
C
B
A

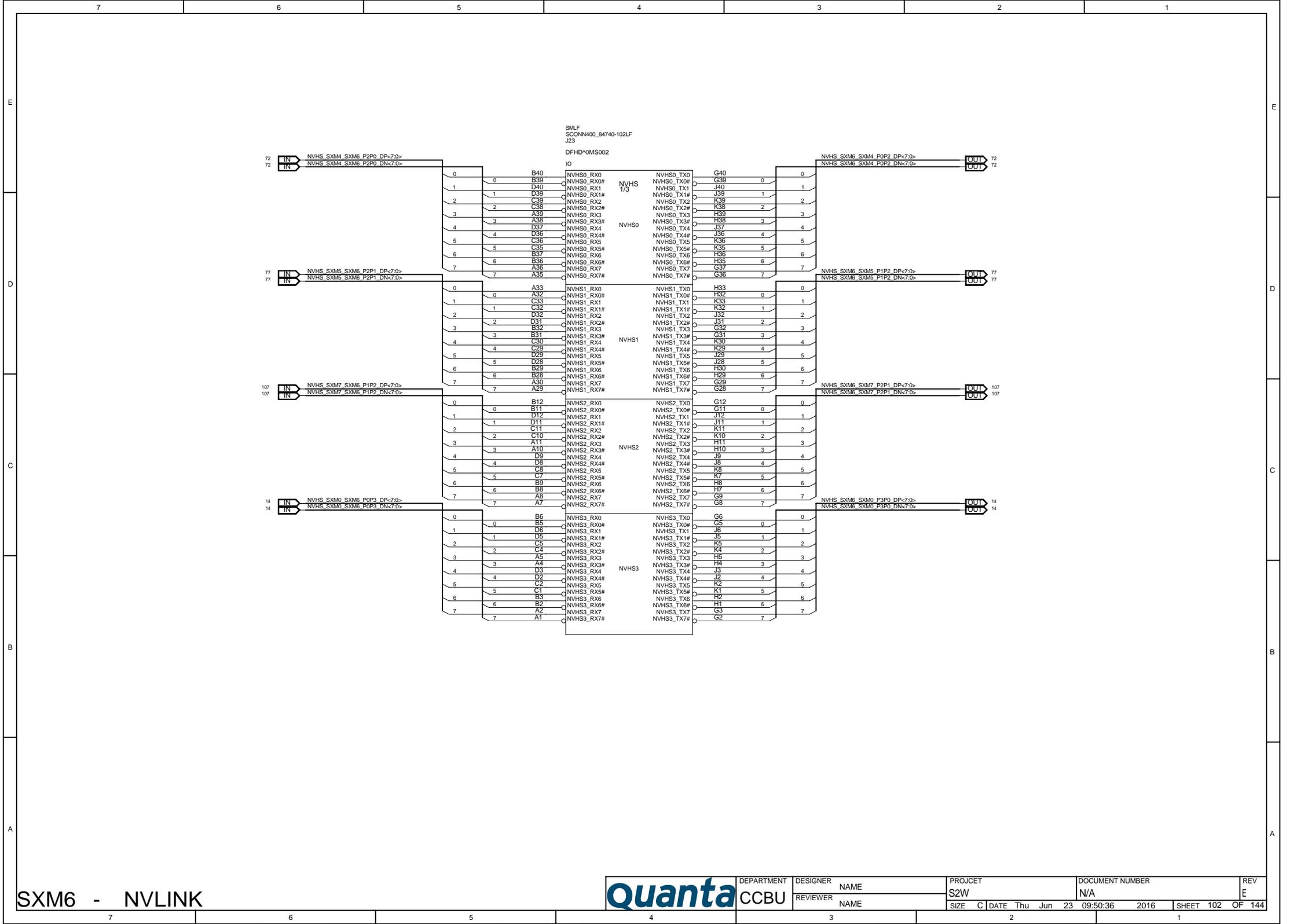
E
D
C
B
A

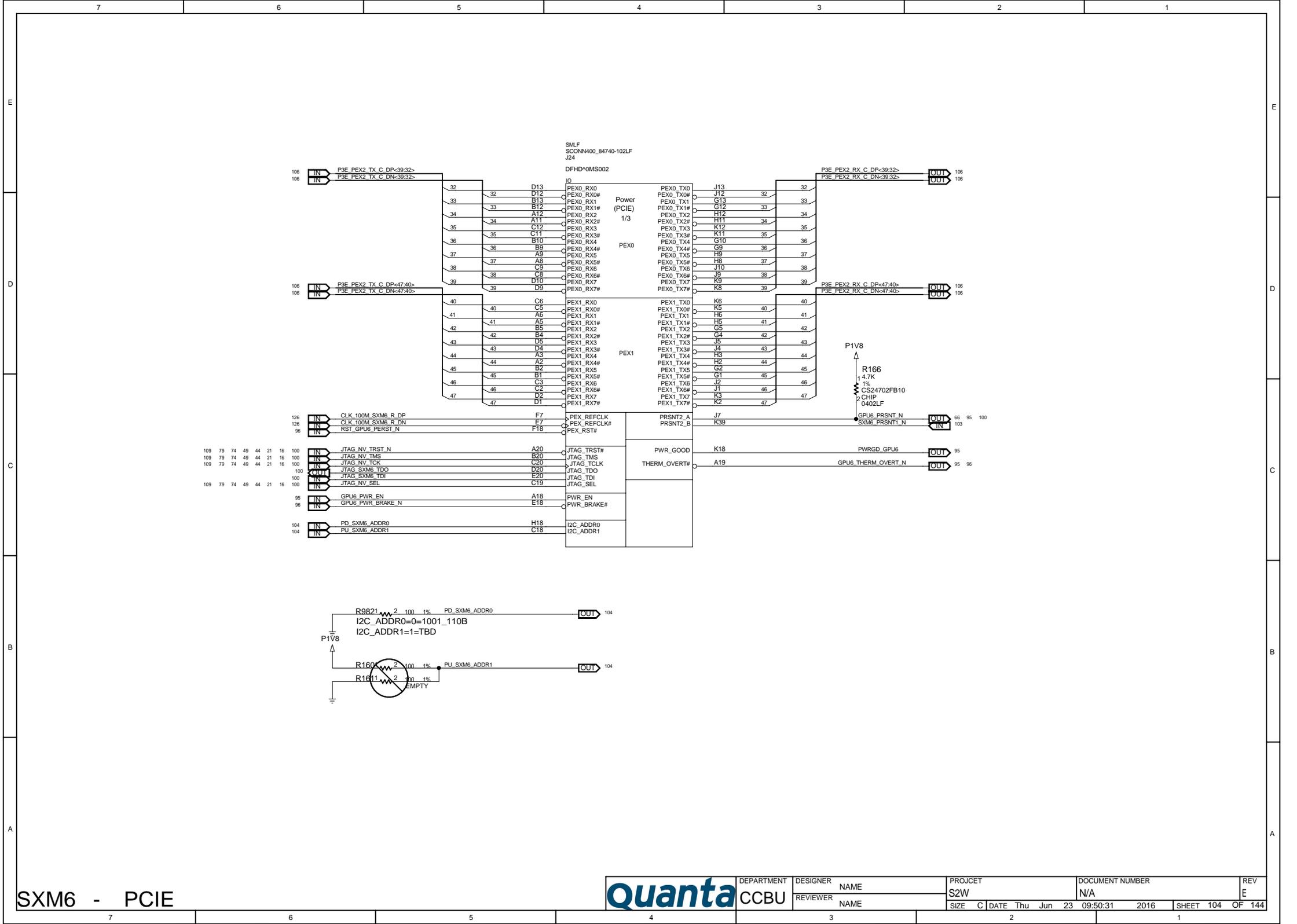
UNTITLED



DEPARTMENT	DESIGNER NAME	PROJECT	DOCUMENT NUMBER	REV
CCBU		S2W	N/A	E
REVIEWER NAME	SIZE	C	DATE	Thu Jul 23 11:27:25 2015
				SHEET 101 OF 144

7 6 5 4 3 2 1





SXM6 - PCIE



DEPARTMENT
CCBU

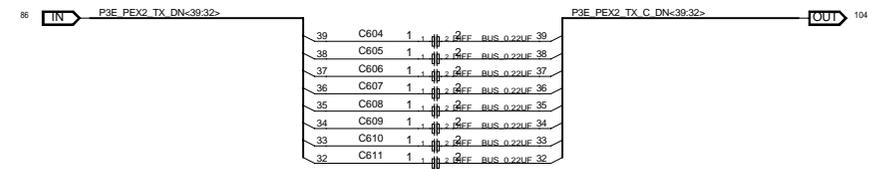
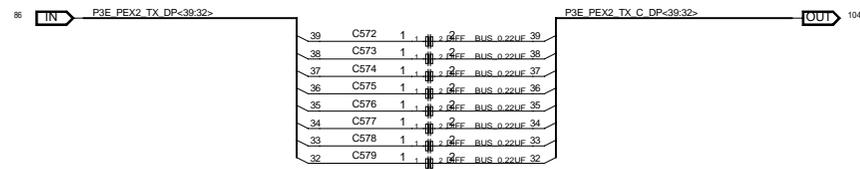
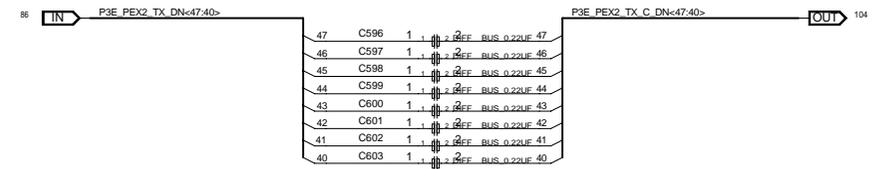
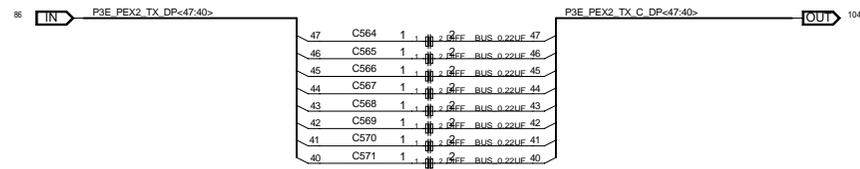
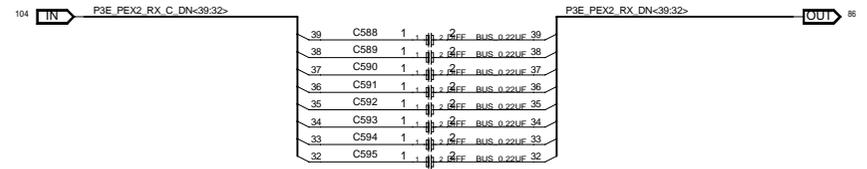
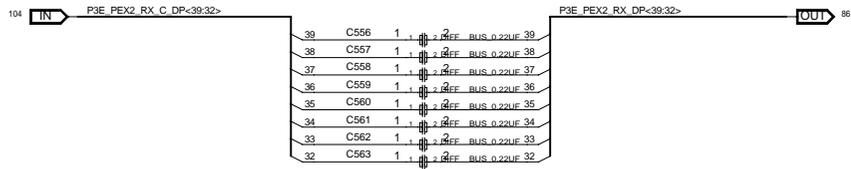
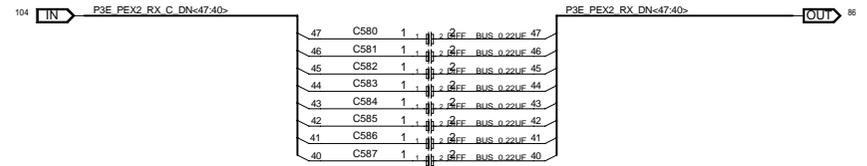
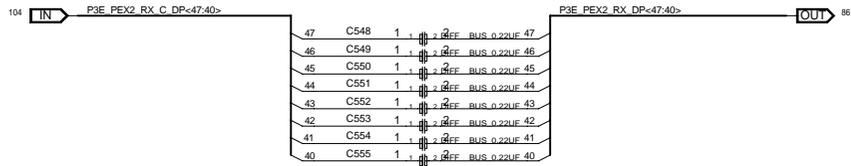
DESIGNER NAME
REVIEWER NAME

PROJECT
S2W

DOCUMENT NUMBER
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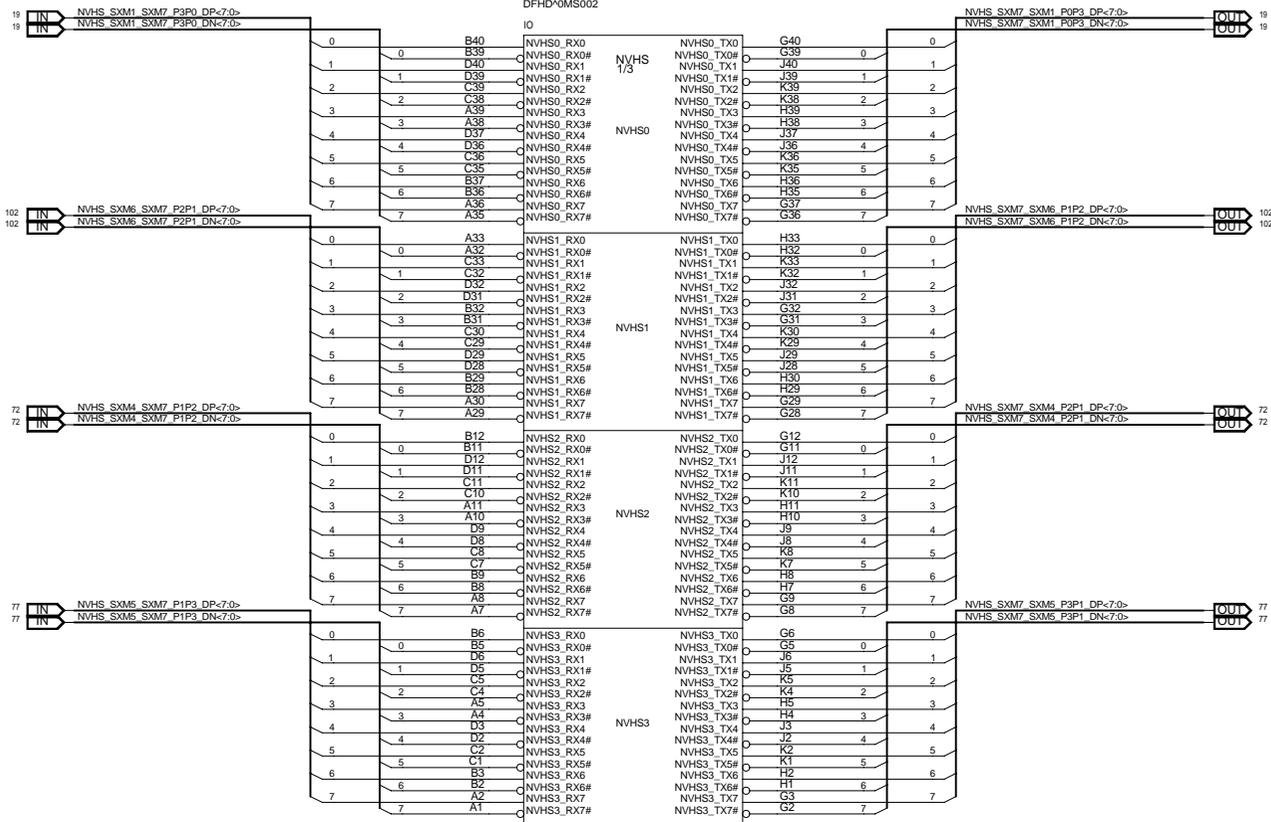
REV
E

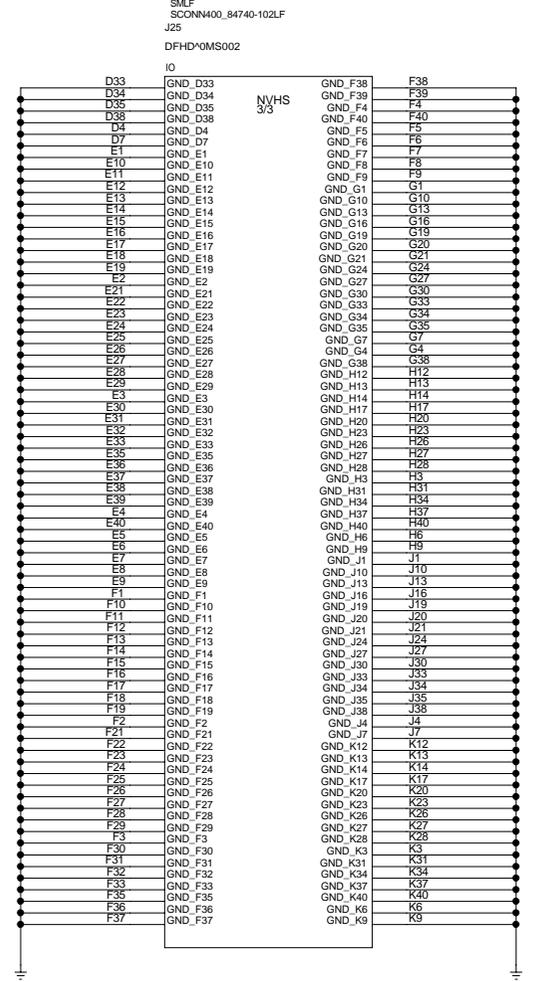
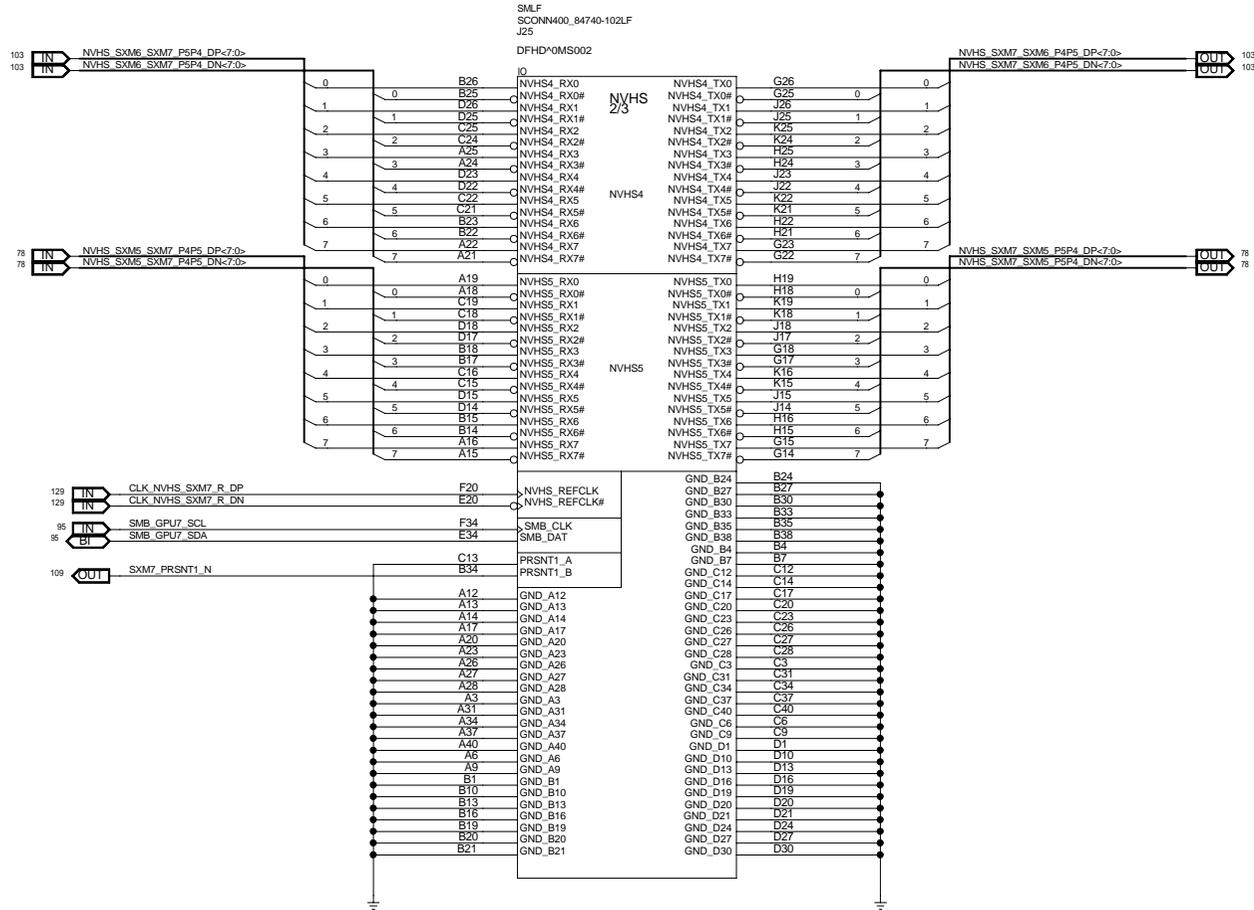
SIZE C DATE Thu Jun 23 09:50:31 2016 SHEET 104 OF 144

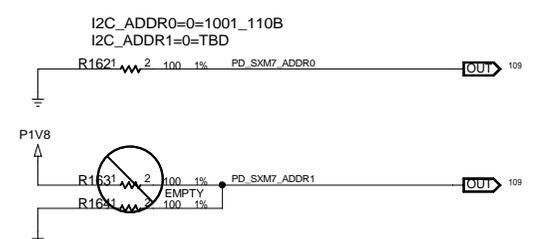
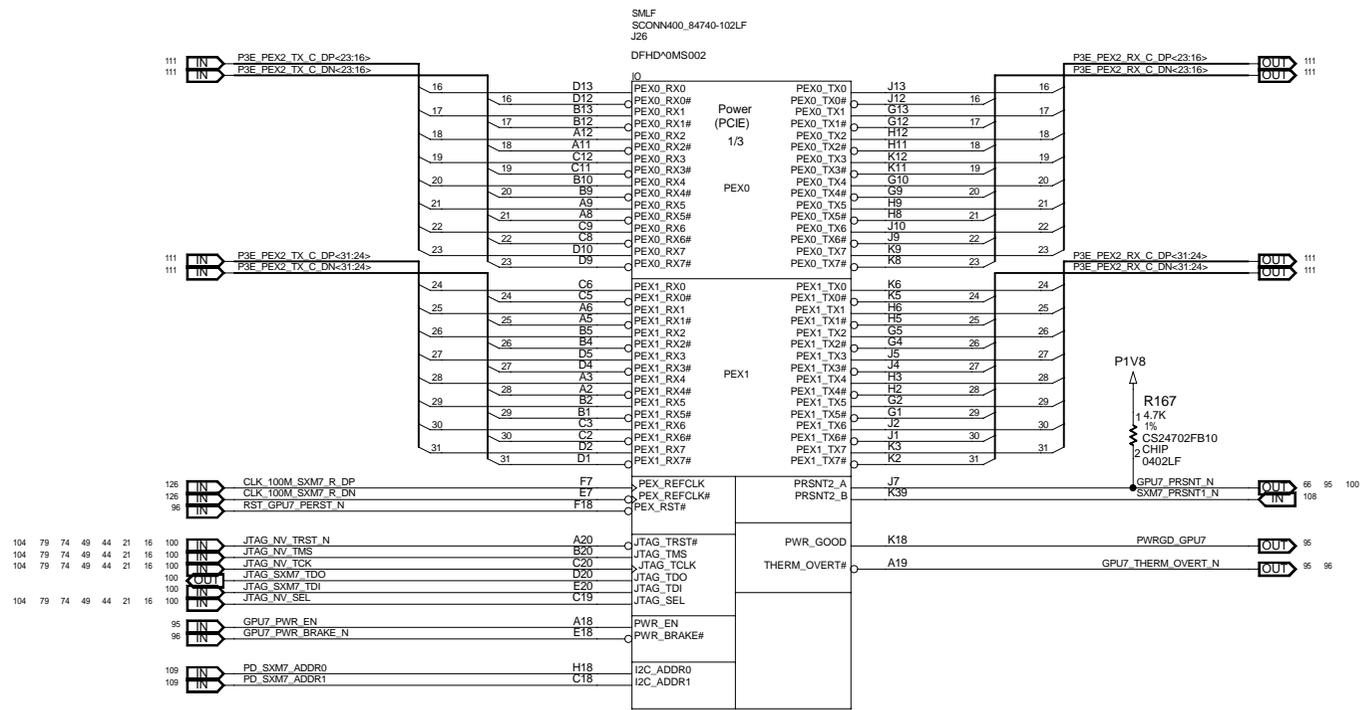


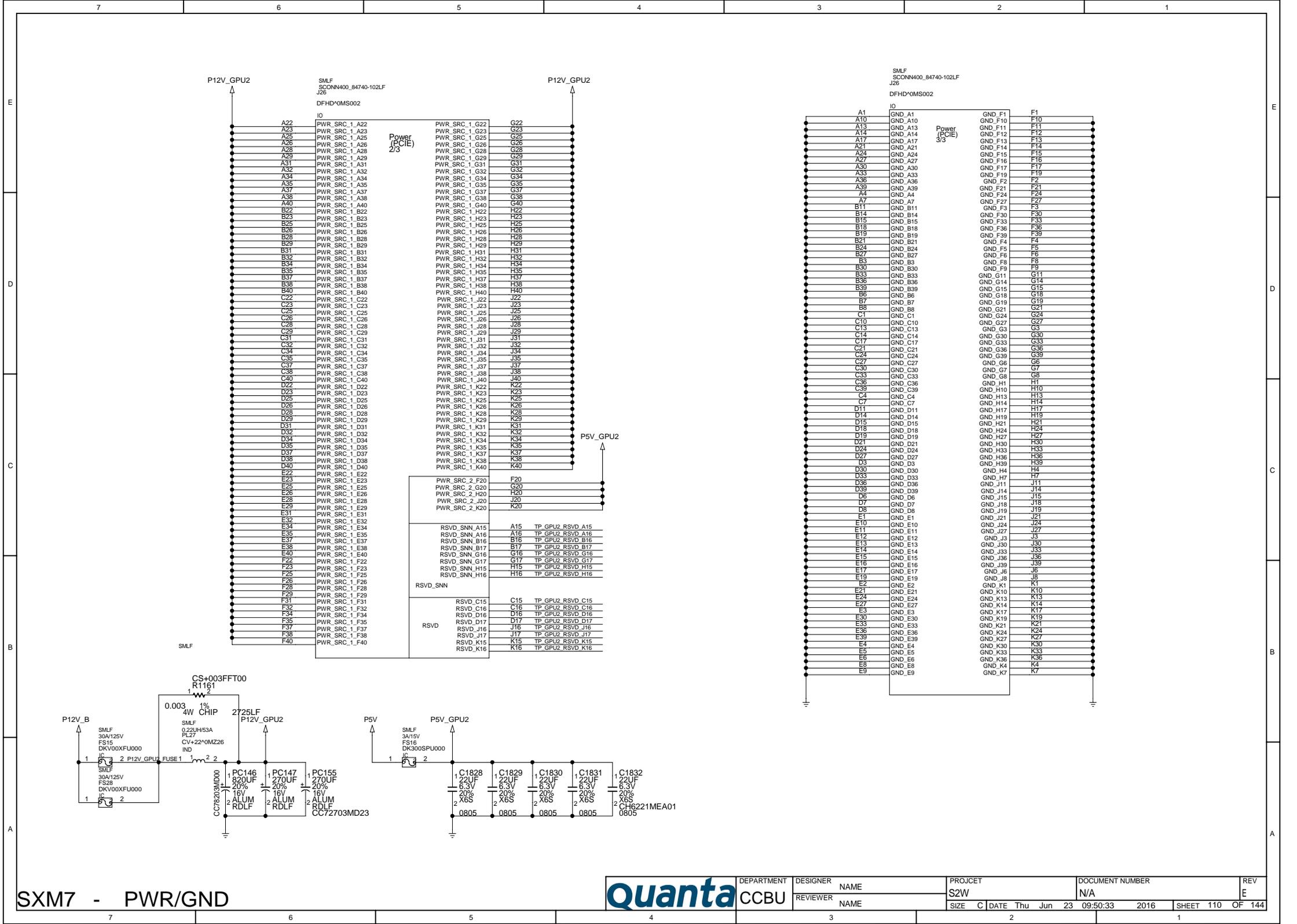
SMLF
SCQNN400_84740-102LF
J25

DFHD\OMS002





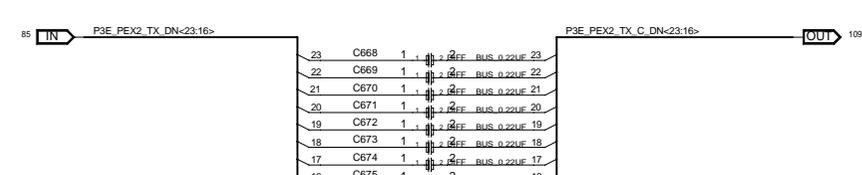
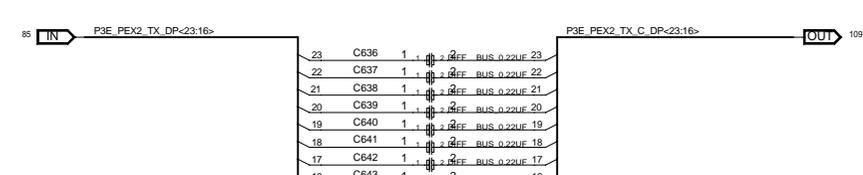
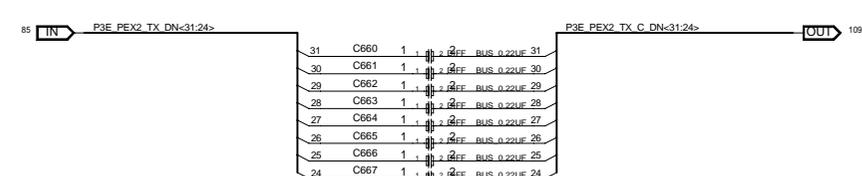
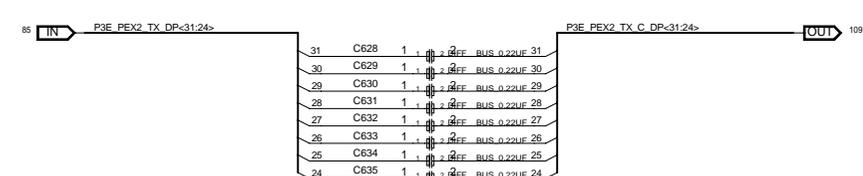
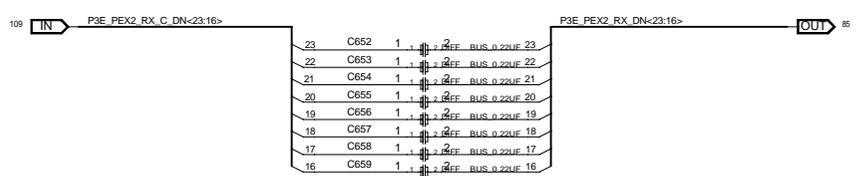
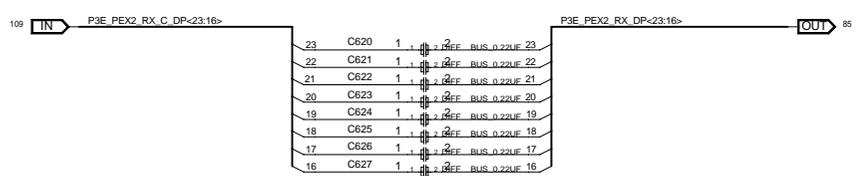
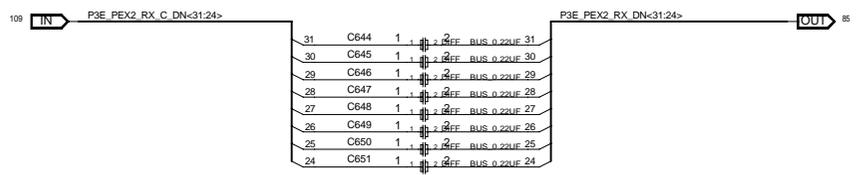
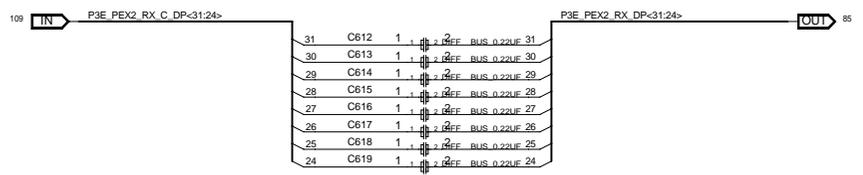
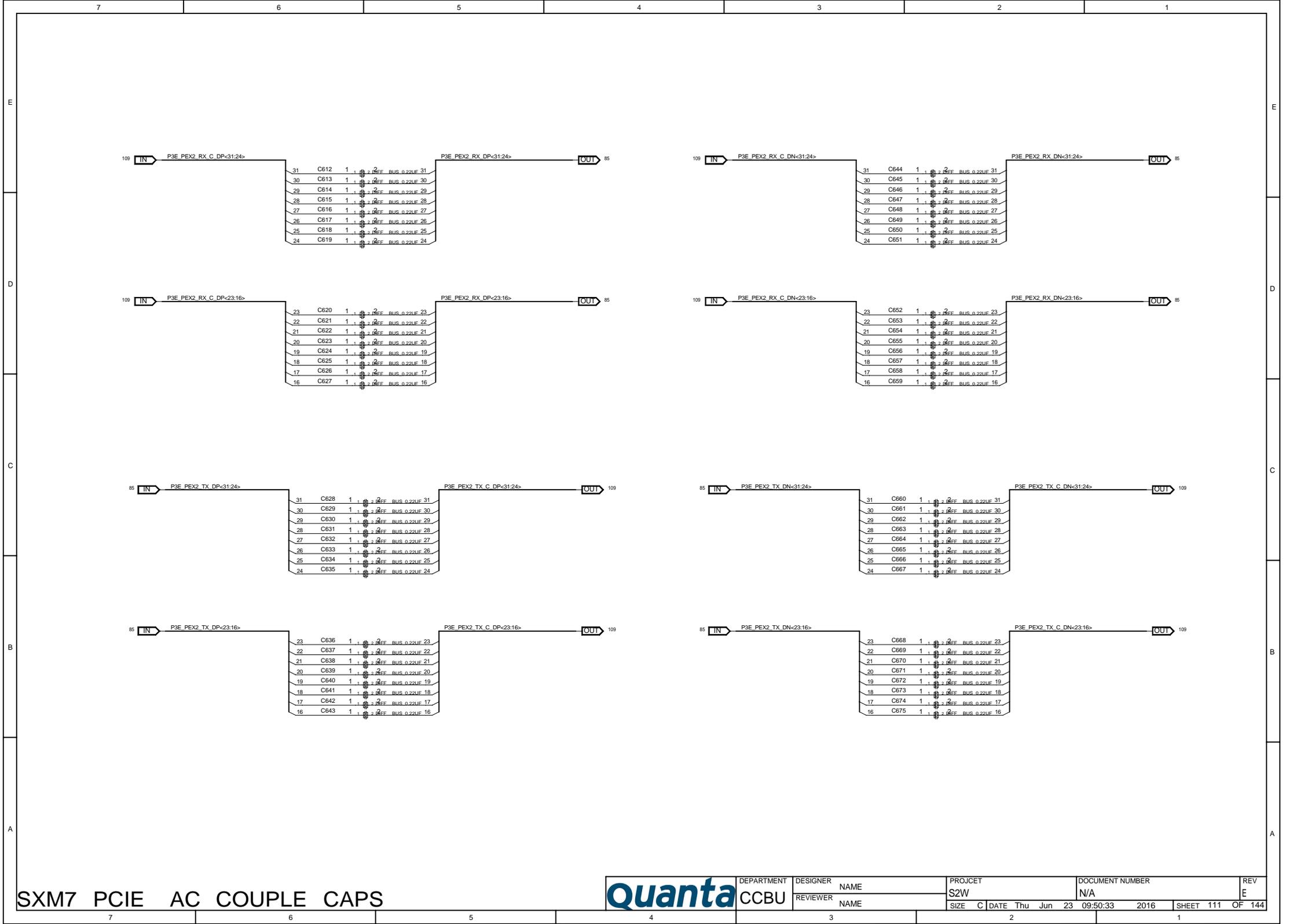


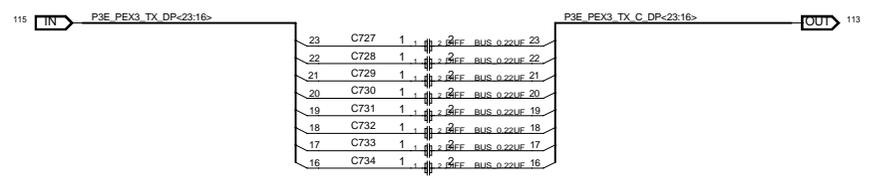
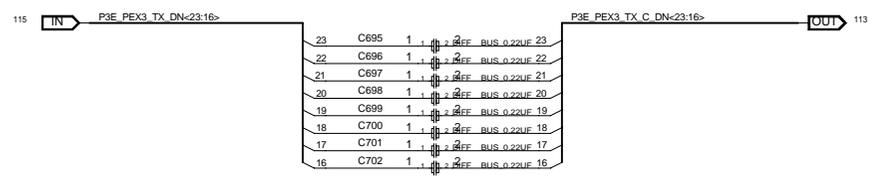
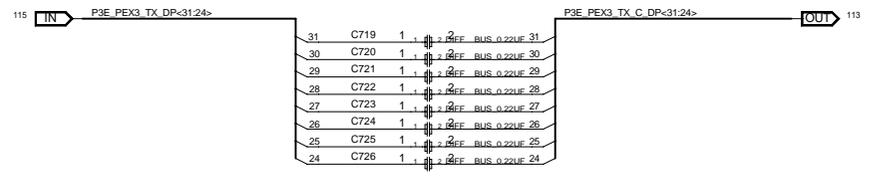
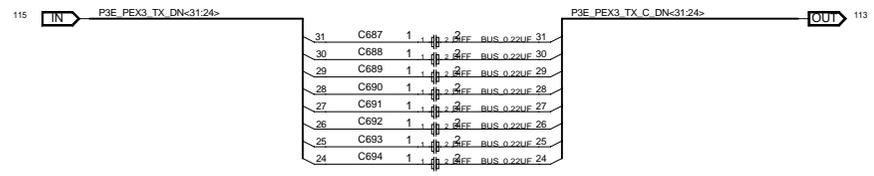


SXM7 - PWR/GND



DEPARTMENT	DESIGNER	PROJECT	DOCUMENT NUMBER	REV
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REVIEWER	NAME	SIZE	DATE	SHEET
		C	Thu Jun 23 09:50:33 2016	110 OF 144

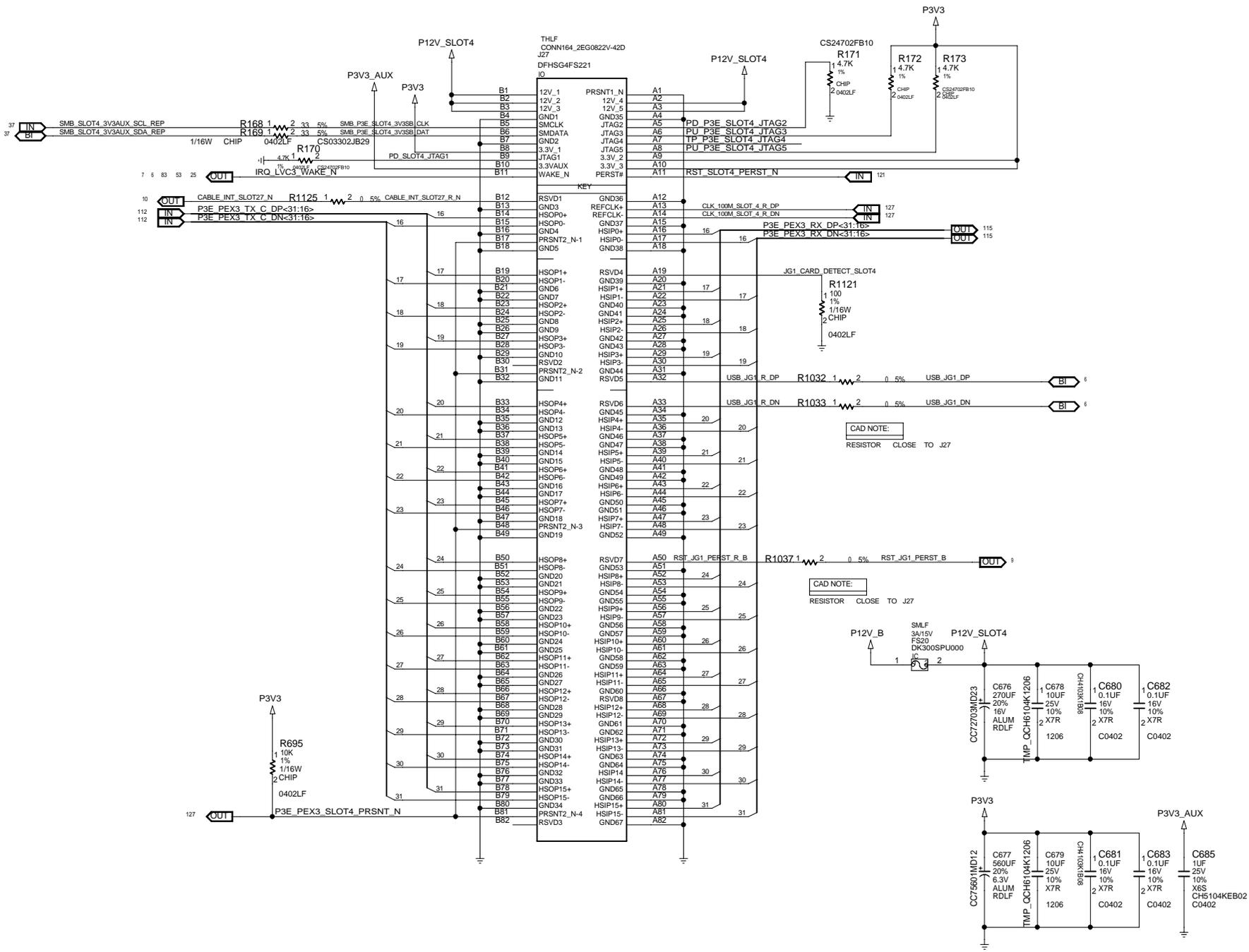




PCIE SLOT4 AC COUPLE CAPS



DEPARTMENT	DESIGNER	PROJECT	DOCUMENT NUMBER	REV
CCBU	NAME	S2W	N/A	E
REVIEWER	NAME	SIZE	DATE	2016
		C	Thu Jun 23 09:50:51	2016
				SHEET 112 OF 144



PCIE X16 SLOT4



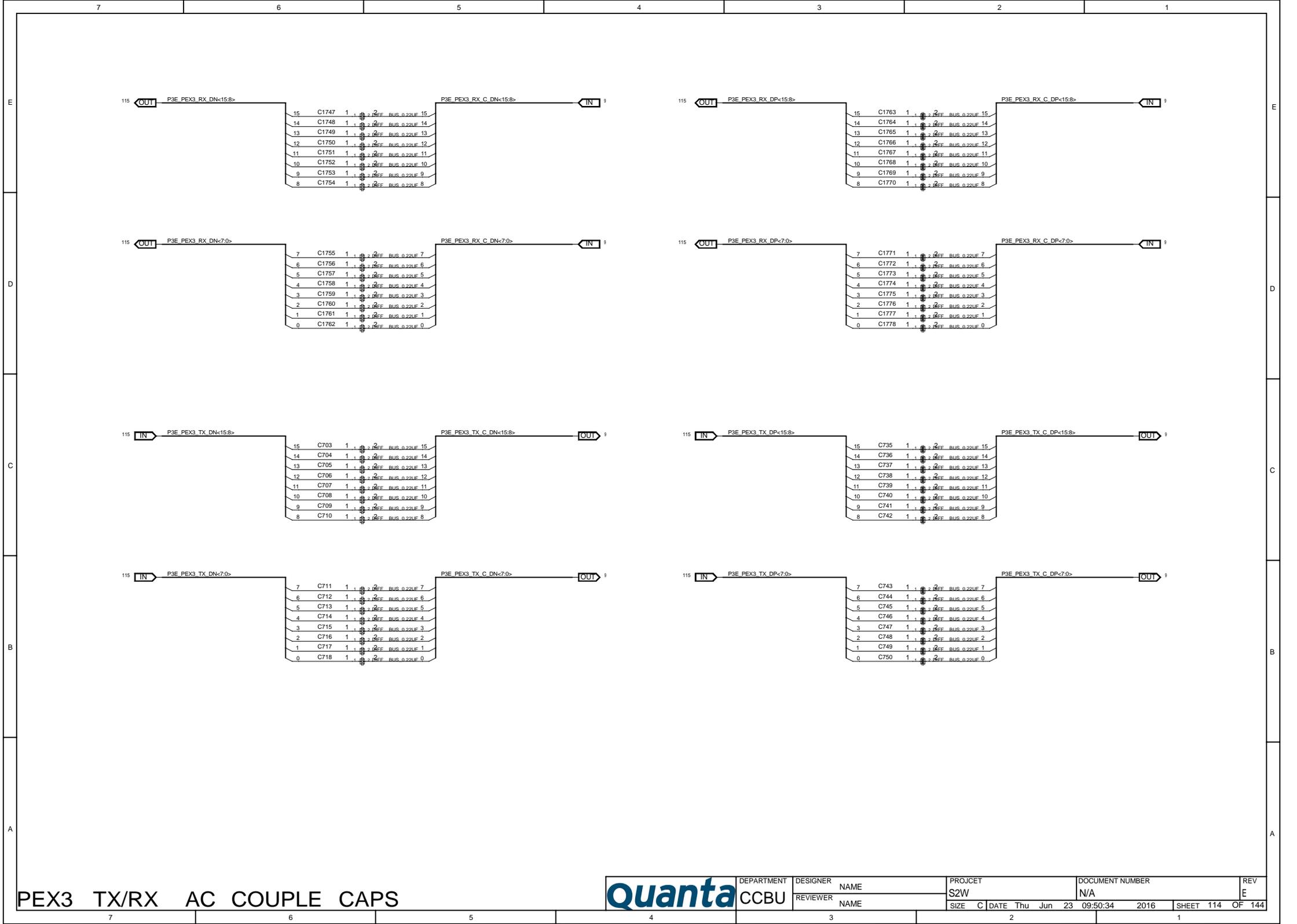
DEPARTMENT CCBU

DESIGNER NAME
REVIEWER NAME

PROJECT S2W
SIZE C DATE Thu Jun 23 09:50:33

DOCUMENT NUMBER N/A
SHEET 113 OF 144

REV E

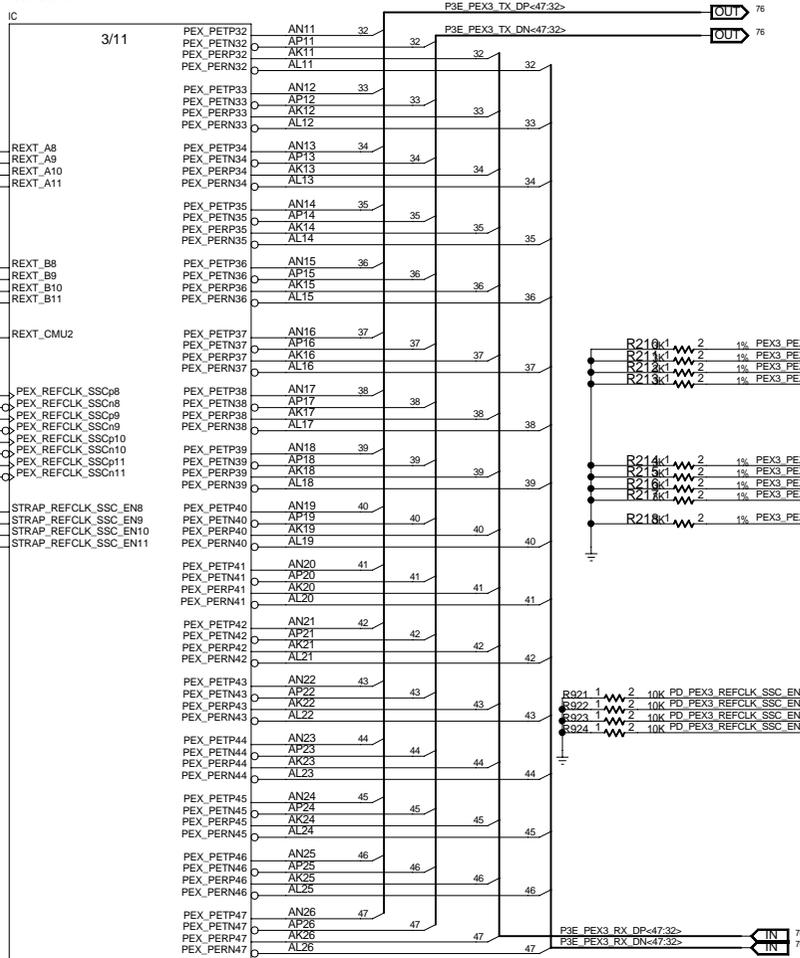


PEX3 TX/RX AC COUPLE CAPS



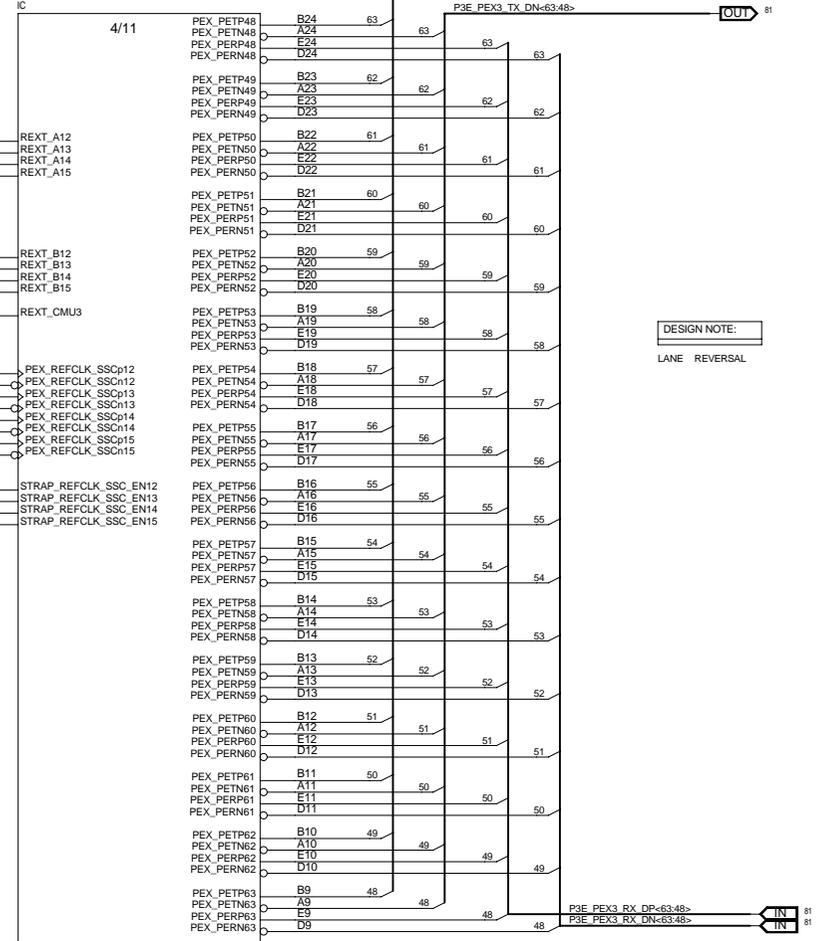
DEPARTMENT CCBU	DESIGNER NAME	PROJECT S2W	DOCUMENT NUMBER N/A	REV E
REVIEWER NAME	DATE Thu Jun 23 09:50:34 2016	SIZE C	SHEET 114 OF 144	

SMLF
PEX8764-AB80BI
US
AJ087640T01



PLX TO GPU4

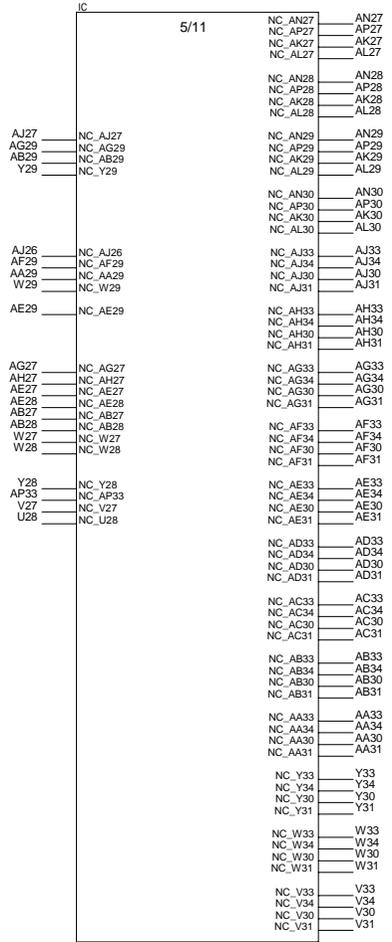
SMLF
PEX8764-AB80BI
US
AJ087640T01



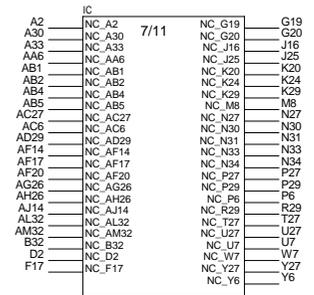
DESIGN NOTE:
LANE REVERSAL

PLX TO GPU5

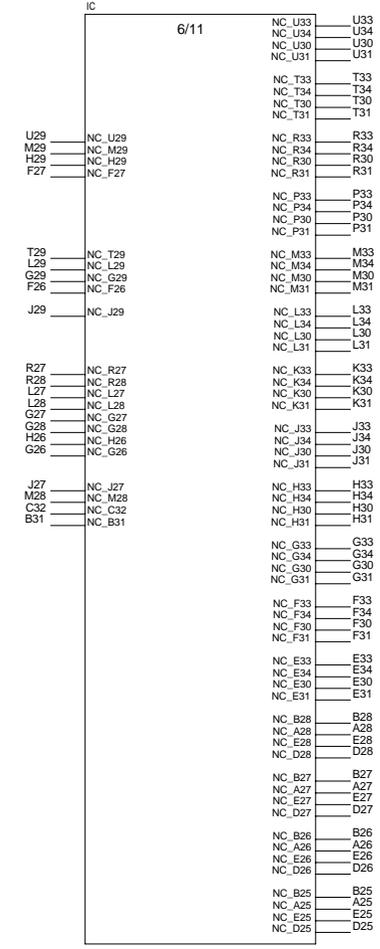
SMLF
PEX8764-AB80BI G
U5
AJ087640T01

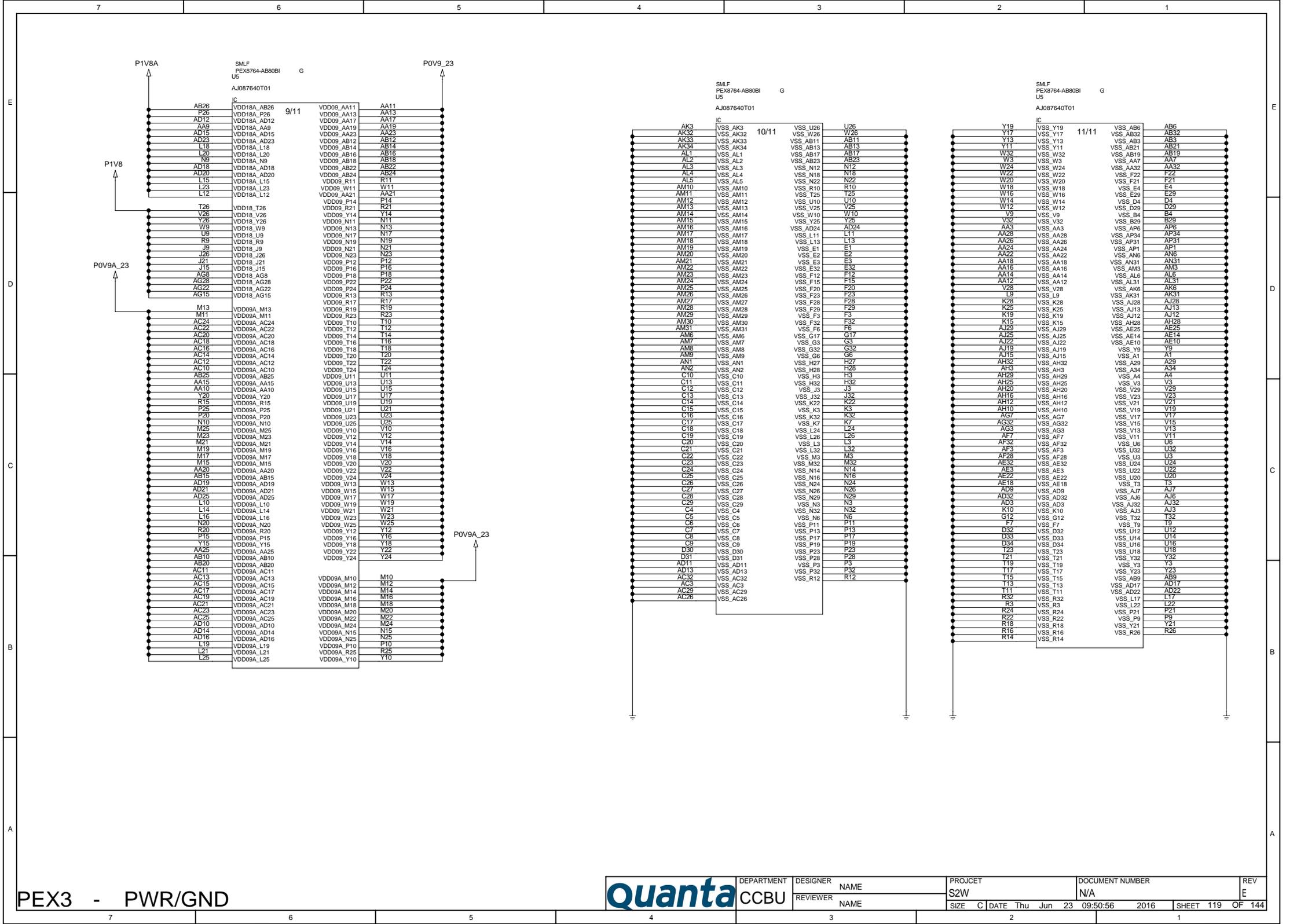


SMLF
PEX8764-AB80BI G
U5
AJ087640T01



SMLF
PEX8764-AB80BI G
U5
AJ087640T01





PEX3 - PWR/GND



DEPARTMENT
CCBU

DESIGNER NAME
REVIEWER NAME

PROJECT
S2W

DOCUMENT NUMBER
N/A

REV
E



PEX3 POWER DECOUPLING



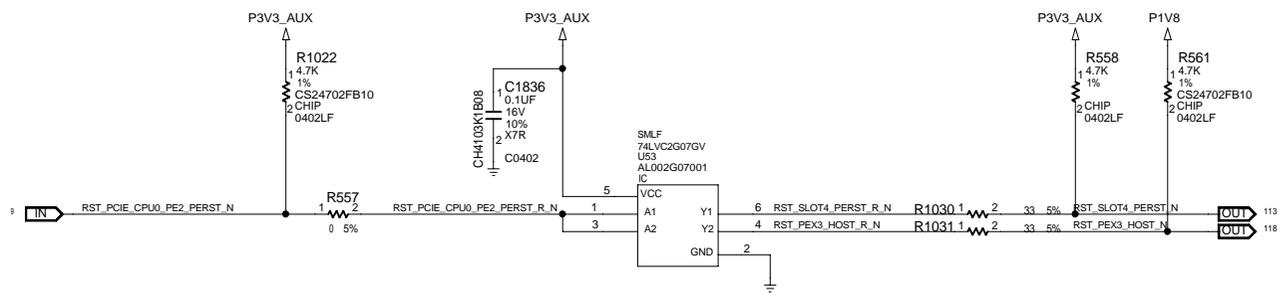
DEPARTMENT
CCBU

DESIGNER
NAME
REVIEWER
NAME

PROJECT
S2W

DOCUMENT NUMBER
N/A

REV
E

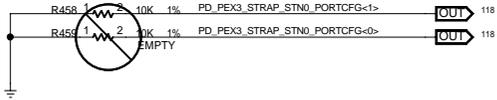


PEX3 PERST LEVEL SHIFT

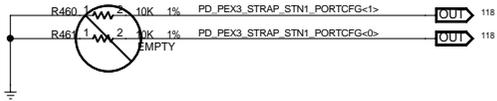


DEPARTMENT	DESIGNER	PROJECT	DOCUMENT NUMBER	REV
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REVIEWER	NAME	SIZE	DATE	SHEET
		C	Thu Jun 23 09:50:57 2016	121 OF 144

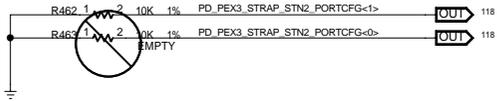
STATION0 PORT CONFIG
CONTROL THRU EEPROM
STN0: 300H[2:0]=001B=X16
STRAP_STN0_PORTCFG[1:0]=0Z=X16



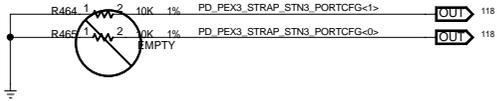
STATION1 PORT CONFIG
CONTROL THRU EEPROM
STN1: 300H[5:3]=001B=X16
STRAP_STN1_PORTCFG[1:0]=0Z=X16



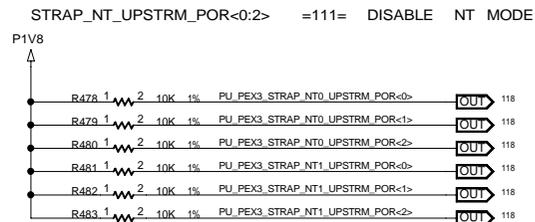
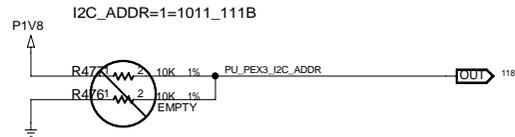
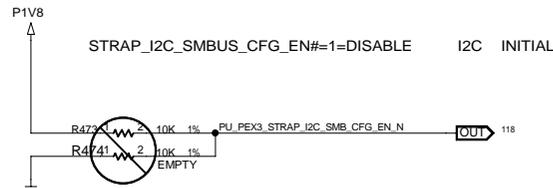
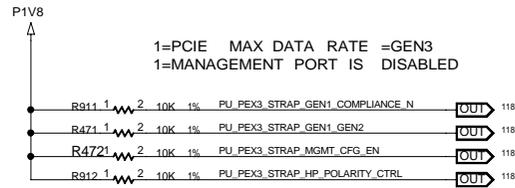
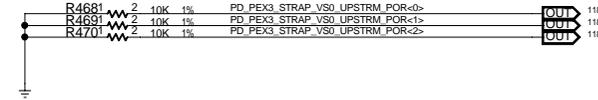
STATION2 PORT CONFIG
CONTROL THRU EEPROM
STN2: 300H[8:6]=001B=X16
STRAP_STN2_PORTCFG[1:0]=0Z=X16



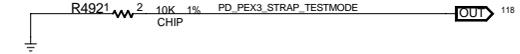
STATION3 PORT CONFIG
CONTROL THRU EEPROM
STN3: 300H[11:9]=001B=X16
STRAP_STN3_PORTCFG[1:0]=0Z=X16



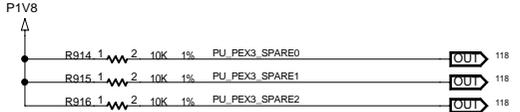
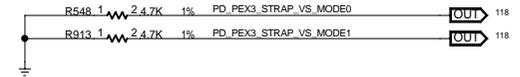
UPSTREAM PORT SELECT
CONTROL THRU EEPROM
360H[4:0]=0_0000B=PORT 0
STRAP_UPSTRM_PORTSEL[2:0]=000=PORT 0



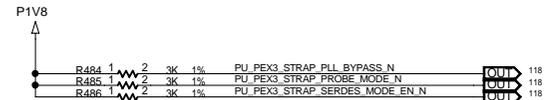
BASE MODE: TEST MODE=0
=PORT_GOODX# + GPIO INPUT

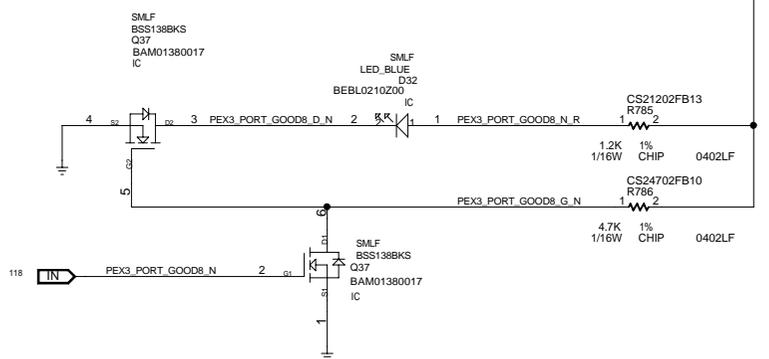
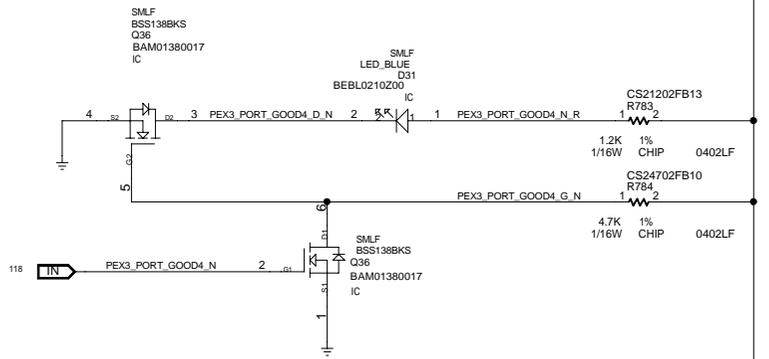
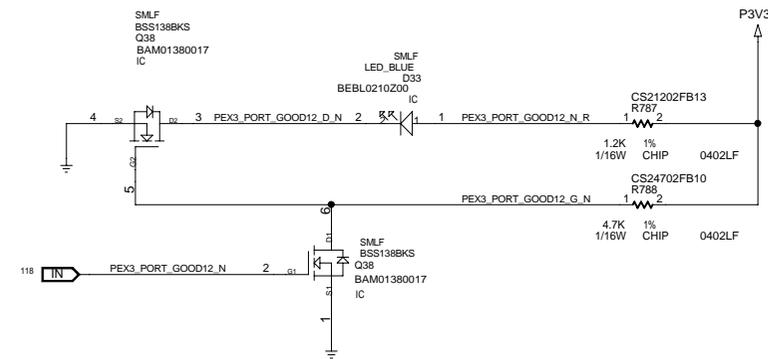
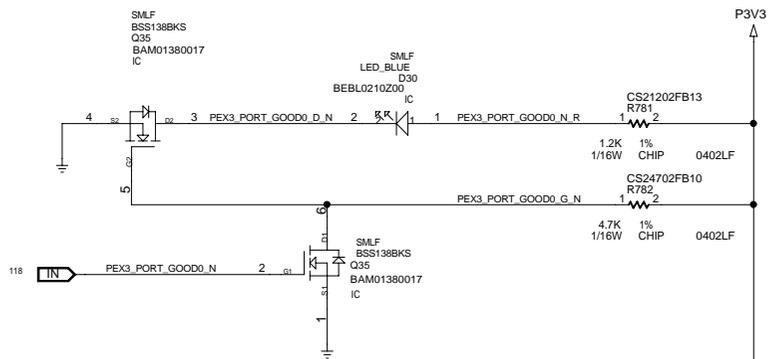
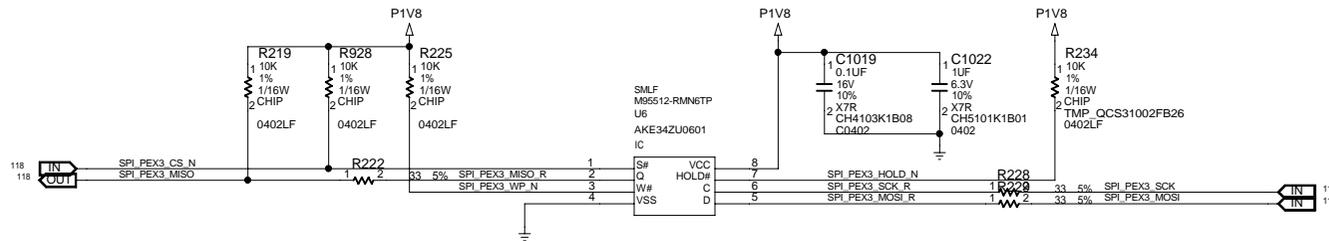


BASE MODE: LL(00)=SINGLE SWITCH



FOR FACTORY TEST ONLY

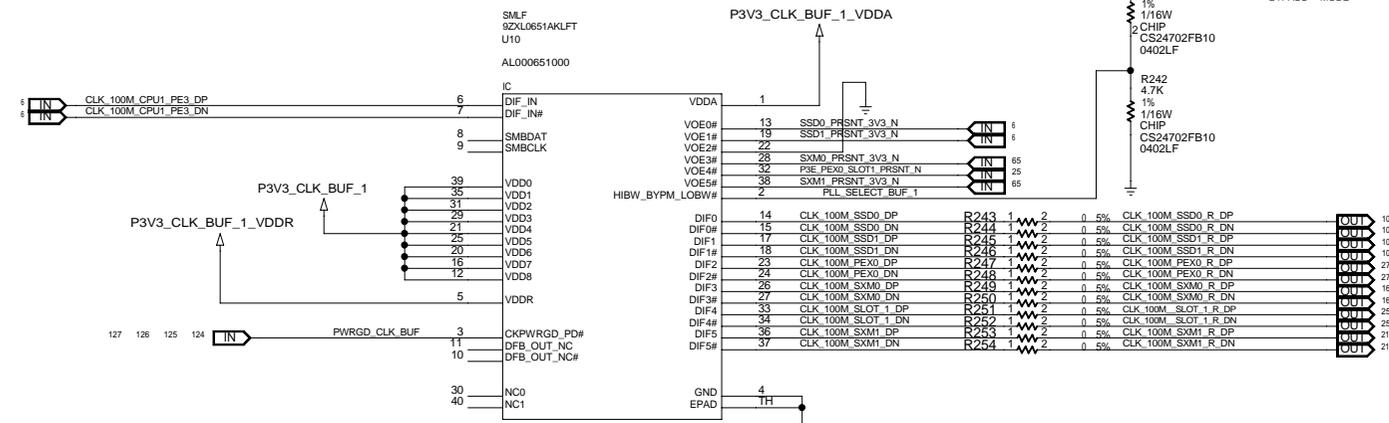
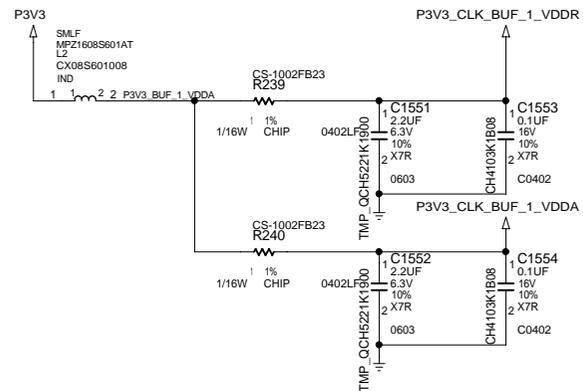
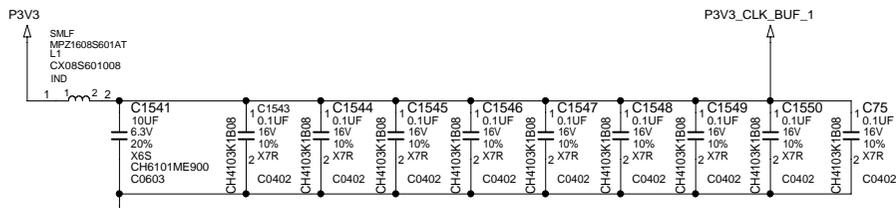




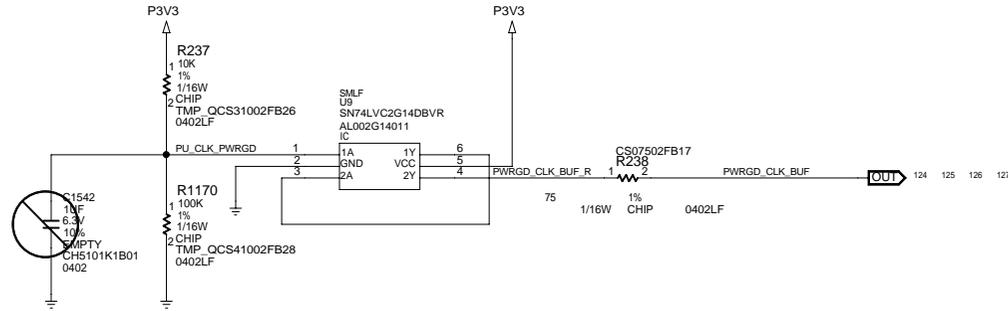
PEX3 EEPROM & PORT LED



DEPARTMENT	DESIGNER	PROJECT	DOCUMENT NUMBER	REV
CBCU	NAME	S2W	N/A	E
REVIEWER	NAME	SIZE	C DATE	Thu Jun 23 09:50:53 2016
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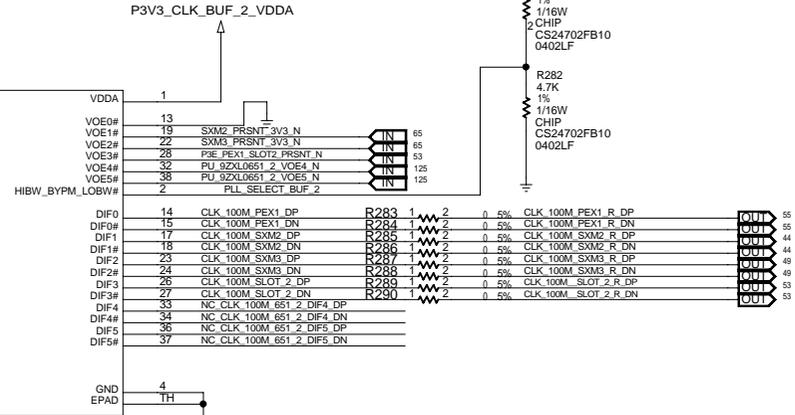
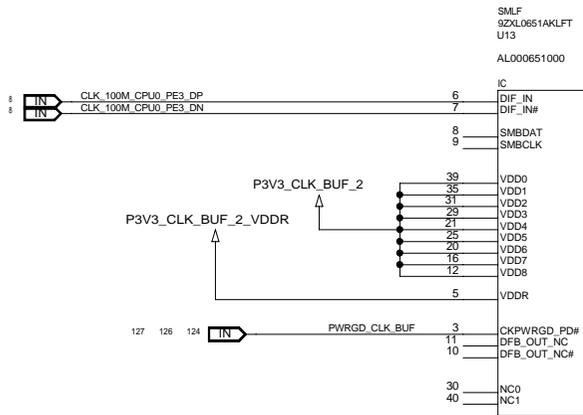
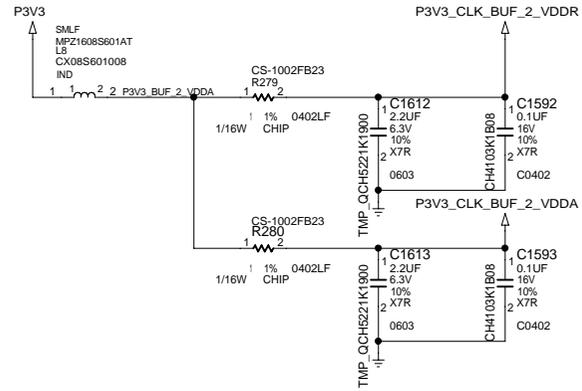
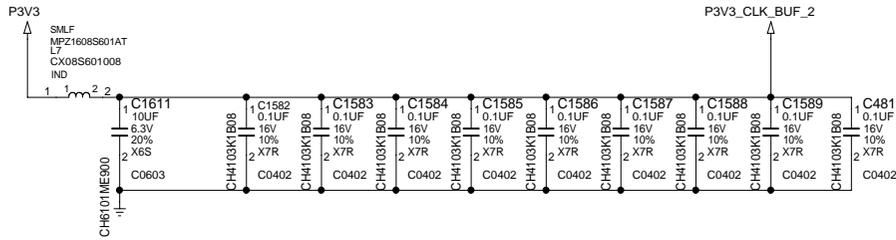
DESIGN NOTE:
BYPASS MODE



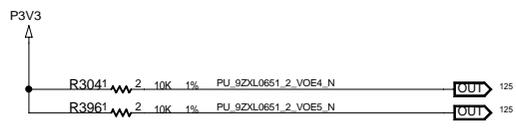
CLOCK BUFFER - PEX0



DEPARTMENT	DESIGNER	PROJECT	DOCUMENT NUMBER	REV
CCBU	NAME	S2W	N/A	E
REVIEWER	NAME	SIZE	DATE	SHEET
		C	Thu Jun 23 09:50:15 2016	124 OF 144



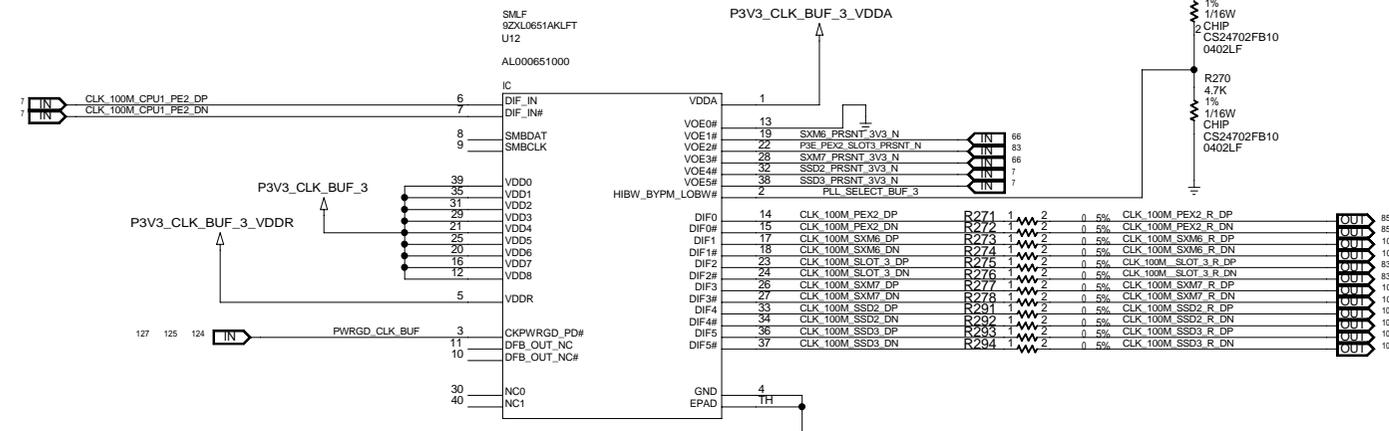
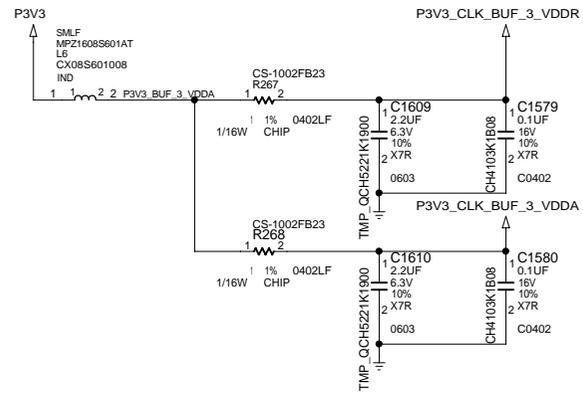
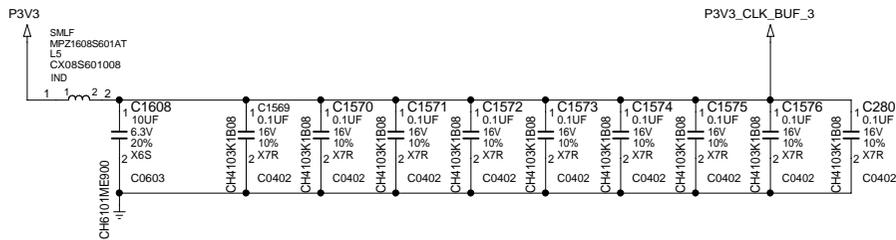
DESIGN NOTE:
BYPASS MODE



CLOCK BUFFER - PEX1

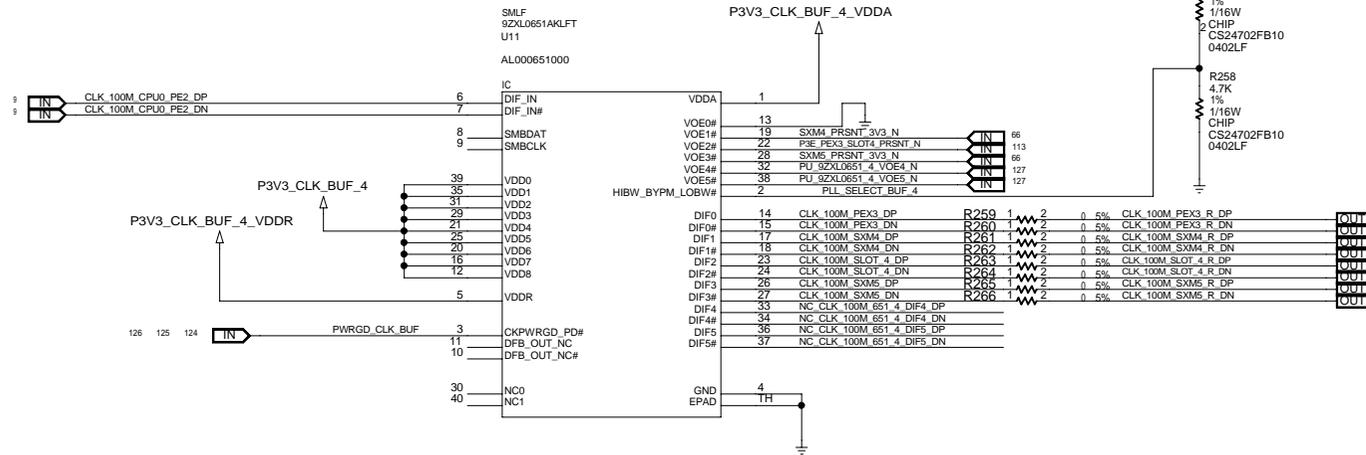
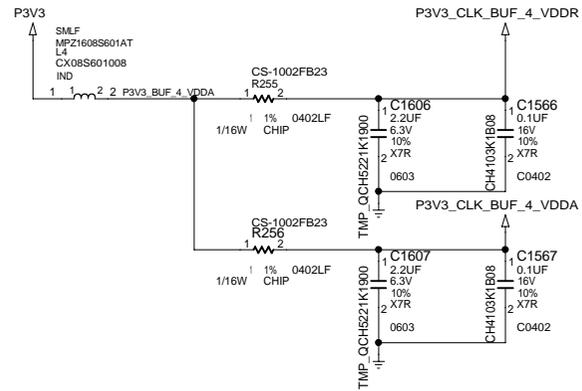
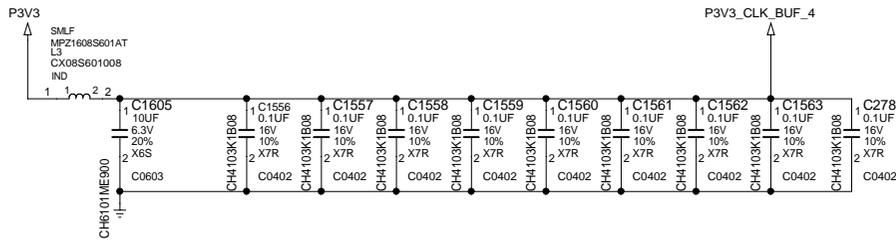


DEPARTMENT CCBU	DESIGNER NAME	PROJECT S2W	DOCUMENT NUMBER N/A	REV E
REVIEWER NAME	DATE Thu Jun 23 09:50:37 2016	SHEET 125 OF 144		

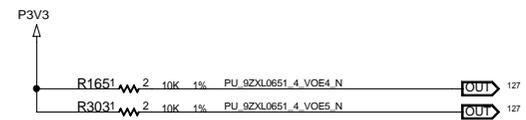


DESIGN NOTE:
BYPASS MODE

CLOCK BUFFER - PEX2



DESIGN NOTE:
BYPASS MODE



CLOCK BUFFER - PEX3



DEPARTMENT	DESIGNER	PROJECT	DOCUMENT NUMBER	REV
CCBU	NAME	S2W	N/A	E
REVIEWER	NAME	SIZE	C DATE	TH Jun 23 09:50:38 2016 SHEET 127 OF 144

7 6 5 4 3 2 1

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UNTITLED



DEPARTMENT	DESIGNER NAME	PROJECT	DOCUMENT NUMBER	REV
CCBU		S2W	N/A	E
REVIEWER NAME	SIZE	C	DATE	Mon Aug 03 09:39:16 2015
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7 6 5 4 3 2 1

7 6 5 4 3 2 1

E
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UNTITLED



DEPARTMENT	DESIGNER NAME	PROJECT	DOCUMENT NUMBER	REV
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REVIEWER NAME	SIZE	C	DATE	Mon Aug 03 09:39:14 2015
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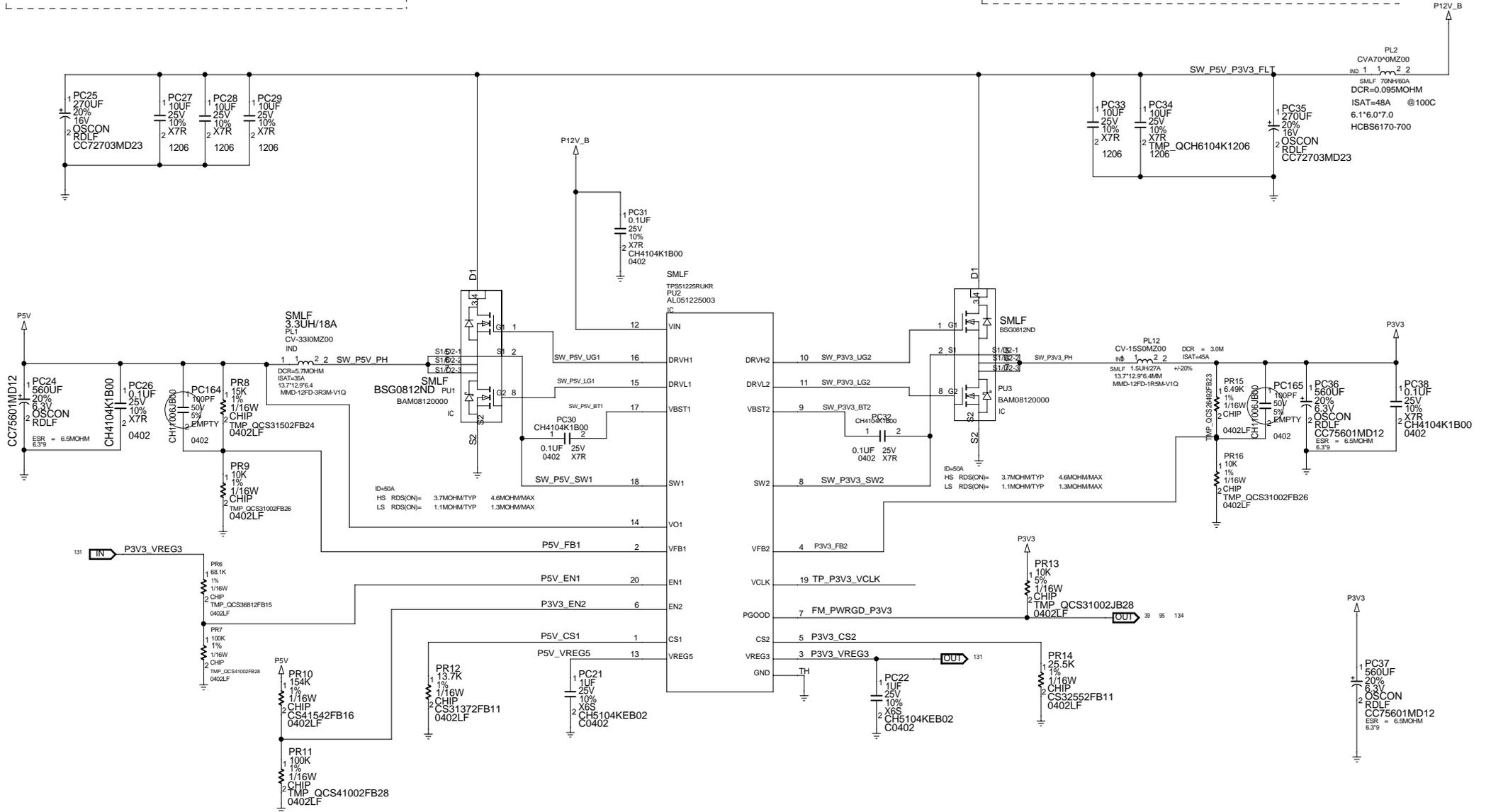
7 6 5 4 3 2 1

DESIGN SPECIFICATION

OUTPUT VOLTAGE = 5.0V+/-5%
 OUTPUT RIPPLE & NOISE < 50MV
 TRANSIENT TOLERANCE = 500MV
 TDC = 8A
 MAX CURRENT = 14A
 OCP(IMAX*130%) = 18.2A
 CURRENT STEP = 0.5A
 SLEW RATE = 0.5A/US
 WORK FREQUENCY = 300KHZ
 EFFICIENCY > 90% @TDC

DESIGN SPECIFICATION

OUTPUT VOLTAGE = 3.3V+/-5%
 OUTPUT RIPPLE & NOISE < 50MV
 TRANSIENT TOLERANCE = 330MV
 TDC = 14.6A
 MAX CURRENT = 20A
 OCP(IMAX*130%) = 26A
 CURRENT STEP = 2.5A
 SLEW RATE = 2.5A/US
 WORK FREQUENCY = 355KHZ
 EFFICIENCY > 90% @TDC



TPS51225/P5V & P3V3



DEPARTMENT	DESIGNER	PROJECT	DOCUMENT NUMBER	REV
CCBU	S2W	S2W	N/A	E
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NAME	Thu Jun 23	09:50:41	2016	SHEET 131 OF 144

7 6 5 4 3 2 1

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UNTITLED



DEPARTMENT	DESIGNER NAME	PROJECT	DOCUMENT NUMBER	REV
CCBU		S2W	N/A	E
REVIEWER NAME	SIZE	DATE	Mon Aug 10 17:43:57 2015	SHEET 132 OF 144
	C			1

7 6 5 4 3 2 1

7 6 5 4 3 2 1

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UNTITLED

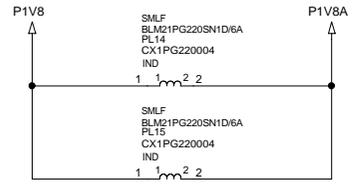
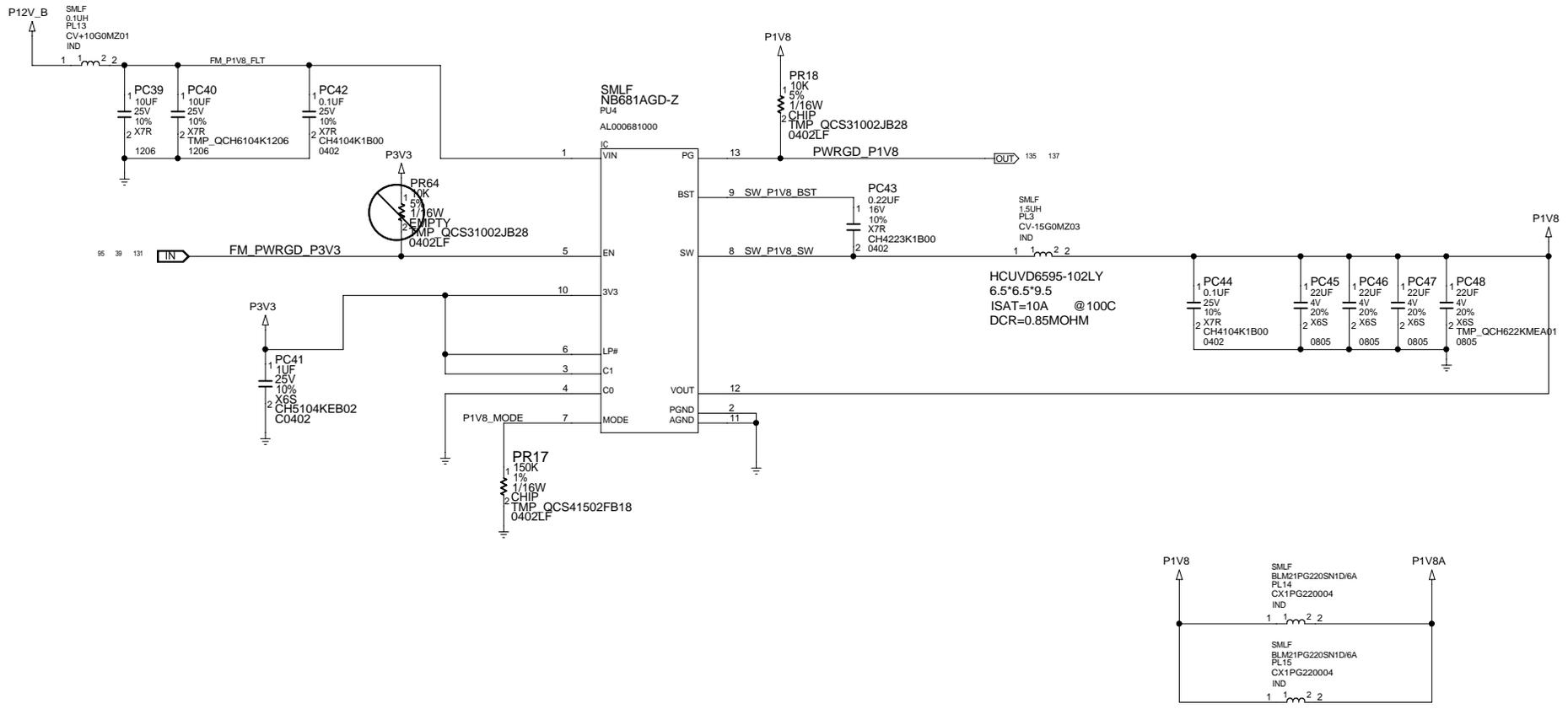


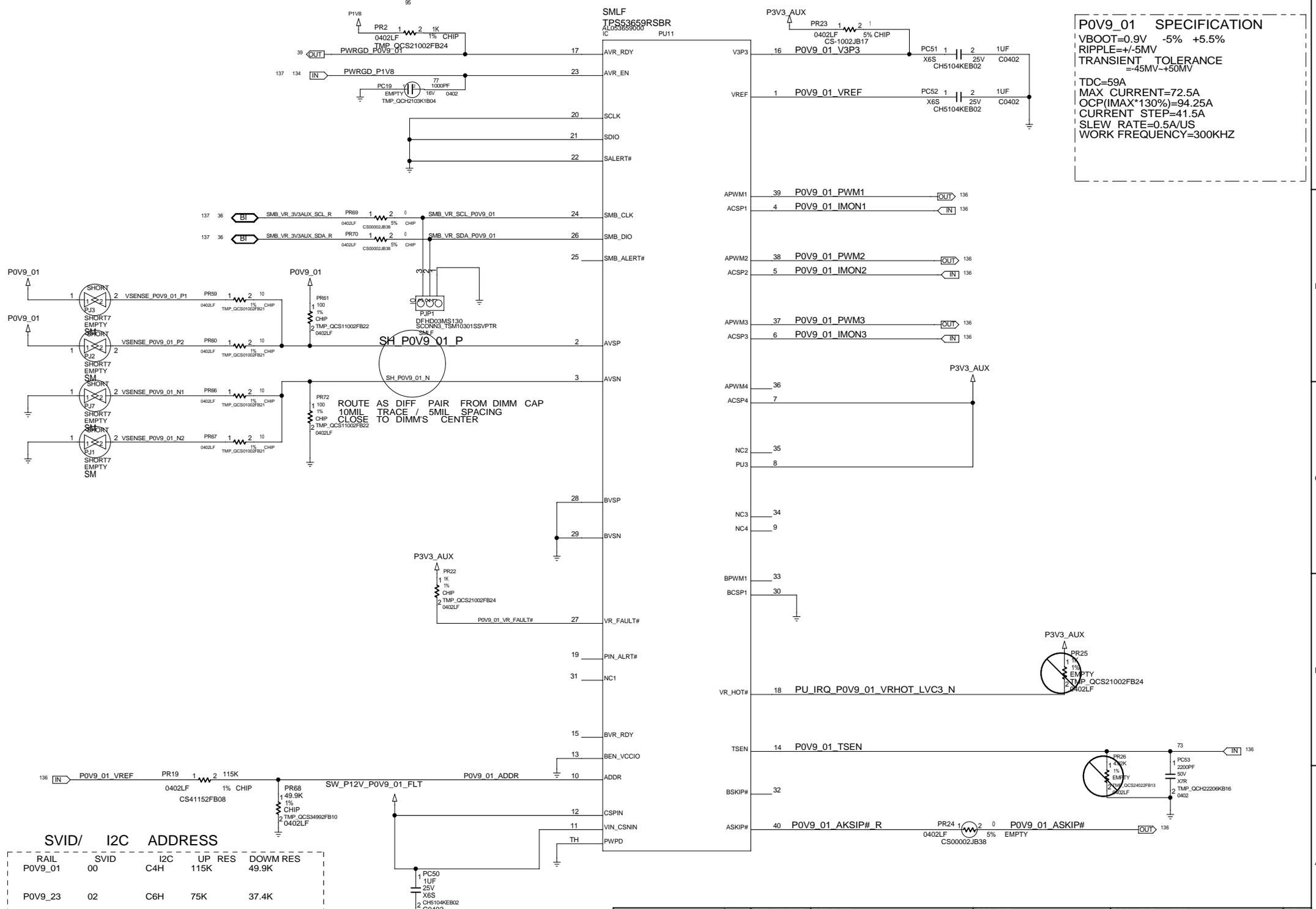
DEPARTMENT	DESIGNER NAME	PROJECT	DOCUMENT NUMBER	REV
CCBU		S2W	N/A	E
REVIEWER NAME	SIZE	DATE	Mon Aug 10 17:44:22 2015	SHEET 133 OF 144
	C			

7 6 5 4 3 2 1

DESIGN SPECIFICATION
 OUTPUT VOLTAGE=1.8V -5% +8%
 OUTPUT RIPPLE<30MV
 TRANSIENT TOLERANCE=-90MV+144MV
 TDC=5.2A
 MAX CURRENT=5.73A
 OVER CURRENT PROTECTION(IC RATING)=7A
 CURRENT STEP=2A
 SLEW RATE=0.5A/US
 WORK FREQUENCY=750KHZ
 EFFICIENCY>85%@TDC

P1V8



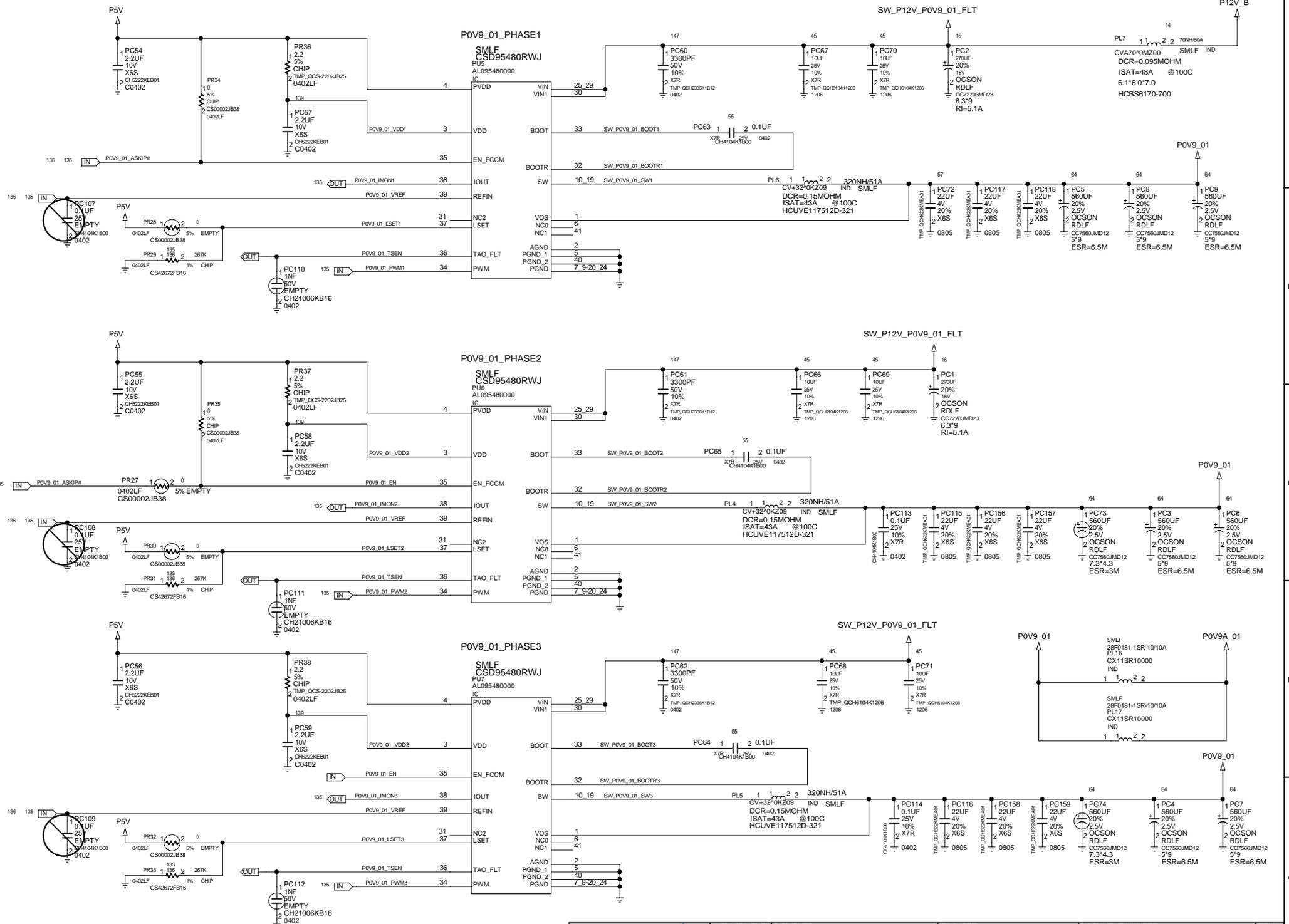


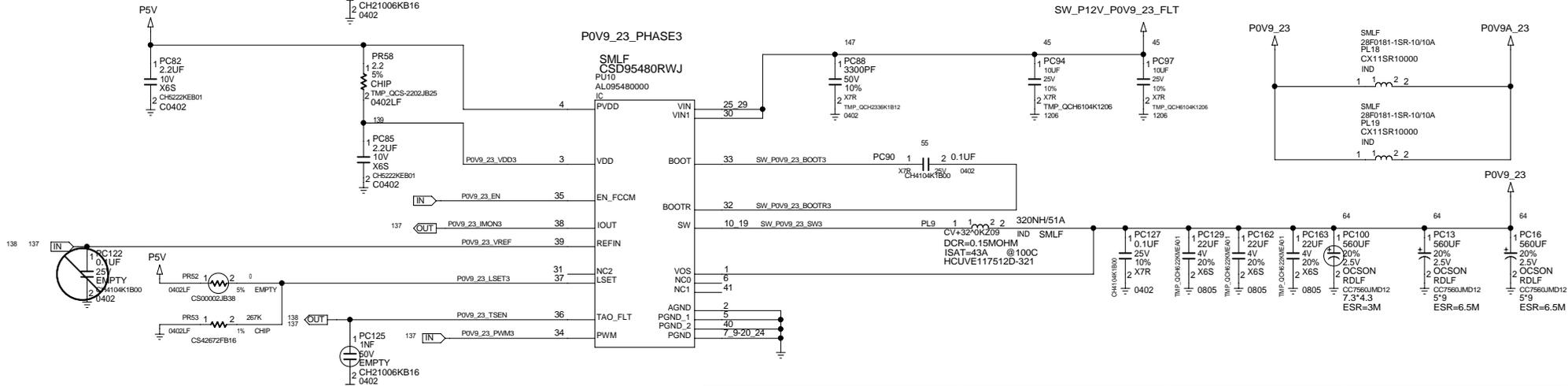
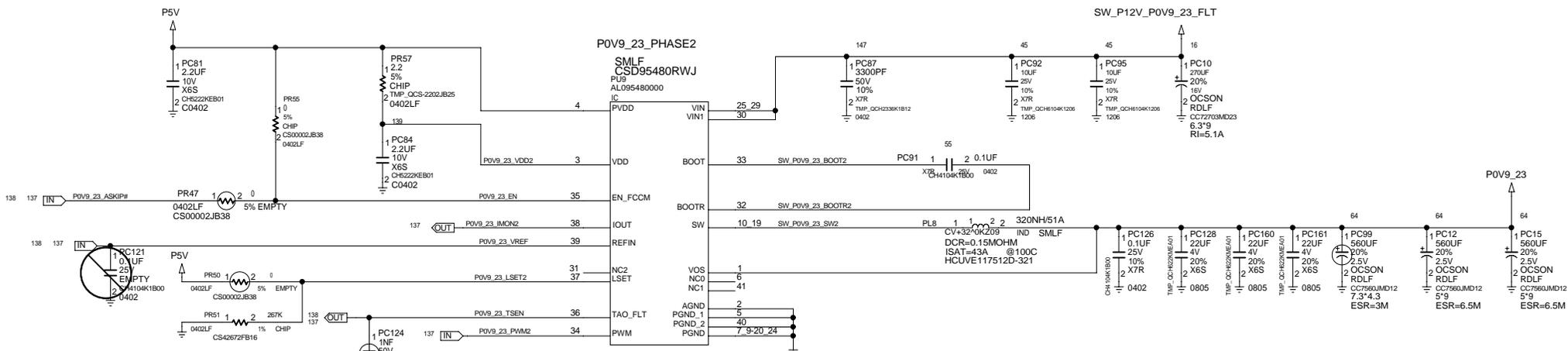
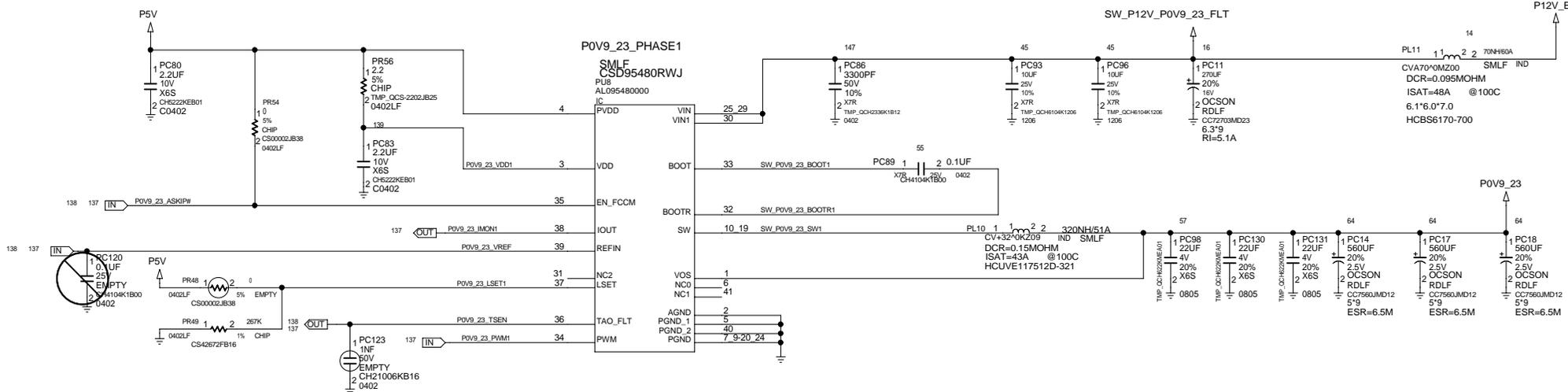
POV9_01 SPECIFICATION
 VBOOT=0.9V -5% +5.5%
 RIPPLE=+/-5MV
 TRANSIENT TOLERANCE
 =45MV+50MV
 TDC=59A
 MAX CURRENT=72.5A
 OCP(IMAX*130%)=94.25A
 CURRENT STEP=41.5A
 SLEW RATE=0.5A/US
 WORK FREQUENCY=300KHZ

RAIL	SVID	I2C	UP RES	DOWM RES
POV9_01	00	C4H	115K	49.9K
POV9_23	02	C6H	75K	37.4K



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REVIEWER NAME	DATE Thu Jun 23 09:50:41 2016	SIZE C	SHEET 135	OF 144



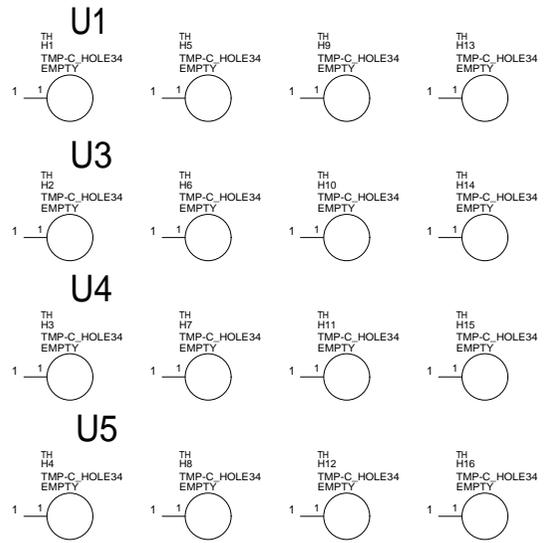


<p>7</p> <p>QUANTA_LOGO QCT_LOGO</p> <p>MECH QCT_LOGO_12X12 DM1</p> <p>DUMMY13</p> <p>EMPTY</p> <p>DUMMY_SYMBOL 1</p>	<p>6</p> <p>WEEE</p> <p>MECH WEEE DM2</p> <p>DUMMY2</p> <p>EMPTY</p> <p>DUMMY_SYMBOL 1</p>	<p>5</p> <p>PB-E1</p> <p>MECH PB-E1_SMALL DM4</p> <p>DUMMY3</p> <p>EMPTY</p> <p>DUMMY_SYMBOL 1</p>	<p>4</p> <p>PCBA_LABEL</p> <p>MECH PCBA_LABEL_15X5 DM6</p> <p>DUMMY4</p> <p>MECH</p> <p>DUMMY_SYMBOL 1</p>	<p>3</p> <p>BIOS-BMCLABEL</p>	<p>2</p> <p>BARCODE</p> <p>MECH BARCODE_20X6 DM16</p> <p>DUMMY15</p> <p>MECH</p> <p>DUMMY_SYMBOL 1</p> <p>MECH BARCODE_20X6 DM17</p> <p>DUMMY15</p> <p>MECH</p> <p>DUMMY_SYMBOL 1</p>	<p>1</p> <p>PCB_VENDOR_LOGO</p> <p>MECH PCB_VENDOR_LOGO_15X8 DM9</p> <p>DUMMY7</p> <p>EMPTY</p> <p>DUMMY_SYMBOL 1</p>
<p>D</p> <p>BMC_FLASH</p>	<p>BIOS_FLASH</p>	<p>MECHANIC_SYMBOL</p> <p>HANDLE BAR</p> <p>EBS4R010010 MECH MECHANIC_SYMBOL DM3</p> <p>DUMMY10</p> <p>MECH</p> <p>DUMMY_SYMBOL 1</p> <p>THUMB SCREW</p> <p>FBS2Z042010 MECH MECHANIC_SYMBOL DM10</p> <p>DUMMY10</p> <p>MECH</p> <p>DUMMY_SYMBOL 1</p> <p>EBS4R010010 MECH MECHANIC_SYMBOL DM5</p> <p>DUMMY10</p> <p>MECH</p> <p>DUMMY_SYMBOL 1</p> <p>FBS2Z042010 MECH MECHANIC_SYMBOL DM11</p> <p>DUMMY10</p> <p>MECH</p> <p>DUMMY_SYMBOL 1</p>	<p>HEATSINK</p> <p>PEX_HS</p> <p>FBS2W003010 MECH THERMAL_SYMBOL DM12</p> <p>DUMMY11</p> <p>MECH</p> <p>DUMMY_SYMBOL 1</p> <p>FBS2W003010 MECH THERMAL_SYMBOL DM14</p> <p>DUMMY11</p> <p>MECH</p> <p>DUMMY_SYMBOL 1</p> <p>FBS2W003010 MECH THERMAL_SYMBOL DM13</p> <p>DUMMY11</p> <p>MECH</p> <p>DUMMY_SYMBOL 1</p> <p>FBS2W003010 MECH THERMAL_SYMBOL DM15</p> <p>DUMMY11</p> <p>MECH</p> <p>DUMMY_SYMBOL 1</p>	<p>BATTERY_SYMBOL</p>	<p>LASER_MARK</p> <p>MECH LASER_MARK_LABELS_10X10B DM7</p> <p>DUMMY17</p> <p>EMPTY</p> <p>DUMMY_SYMBOL 1</p> <p>MECH LASER_MARK_LABELS_10X10B DM8</p> <p>DUMMY17</p> <p>EMPTY</p> <p>DUMMY_SYMBOL 1</p>	
<p>C</p>						
<p>B</p>						
<p>A</p> <p>DUMMY SYMBOL</p>						

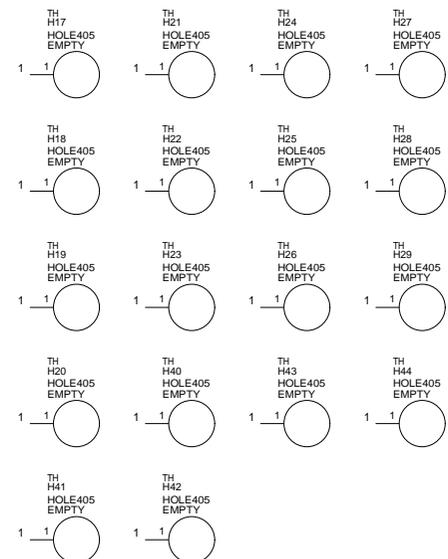


DEPARTMENT	DESIGNER	NAME	PROJECT	DOCUMENT NUMBER	REV
CCBU			S2W	N/A	E
REVIEWER	NAME	DATE	TIME	SHEET	OF
		Thu Jun 23	09:50:47	139	144

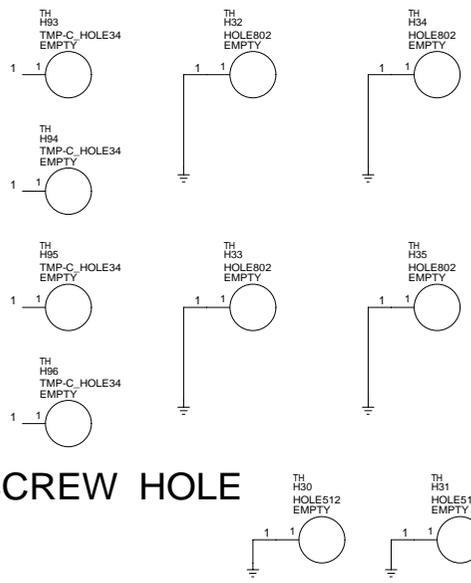
PLX HEATSINK HOLE



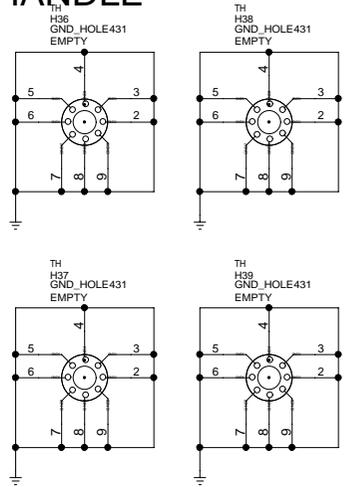
OVAL HOLE



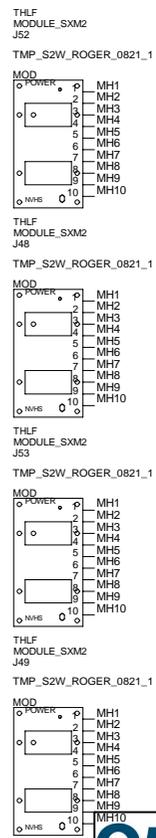
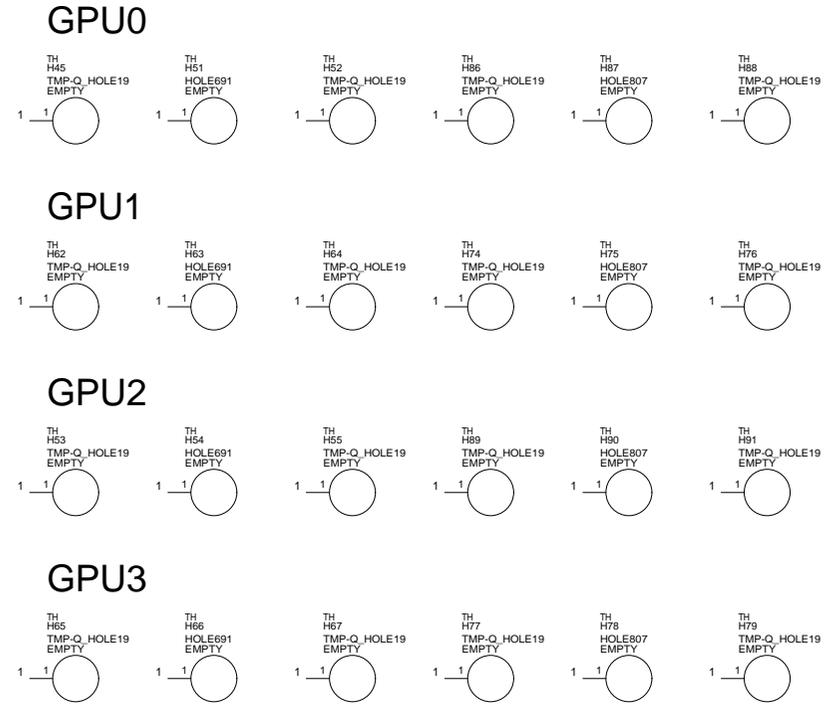
GUIDE HOLE



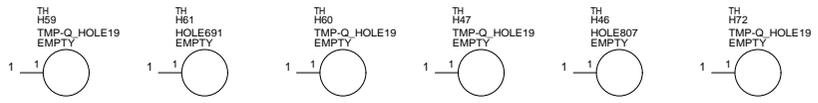
HANDLE



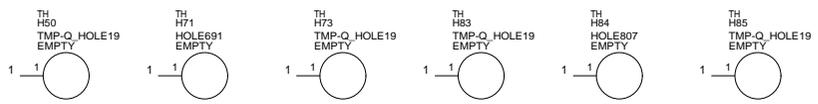
GPU SCREW HOLE



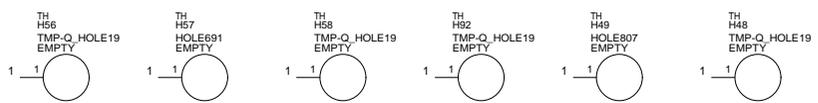
GPU4



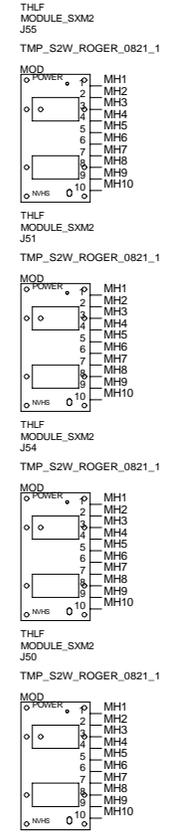
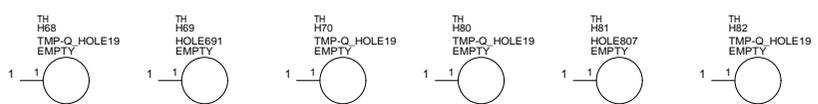
GPU5



GPU6



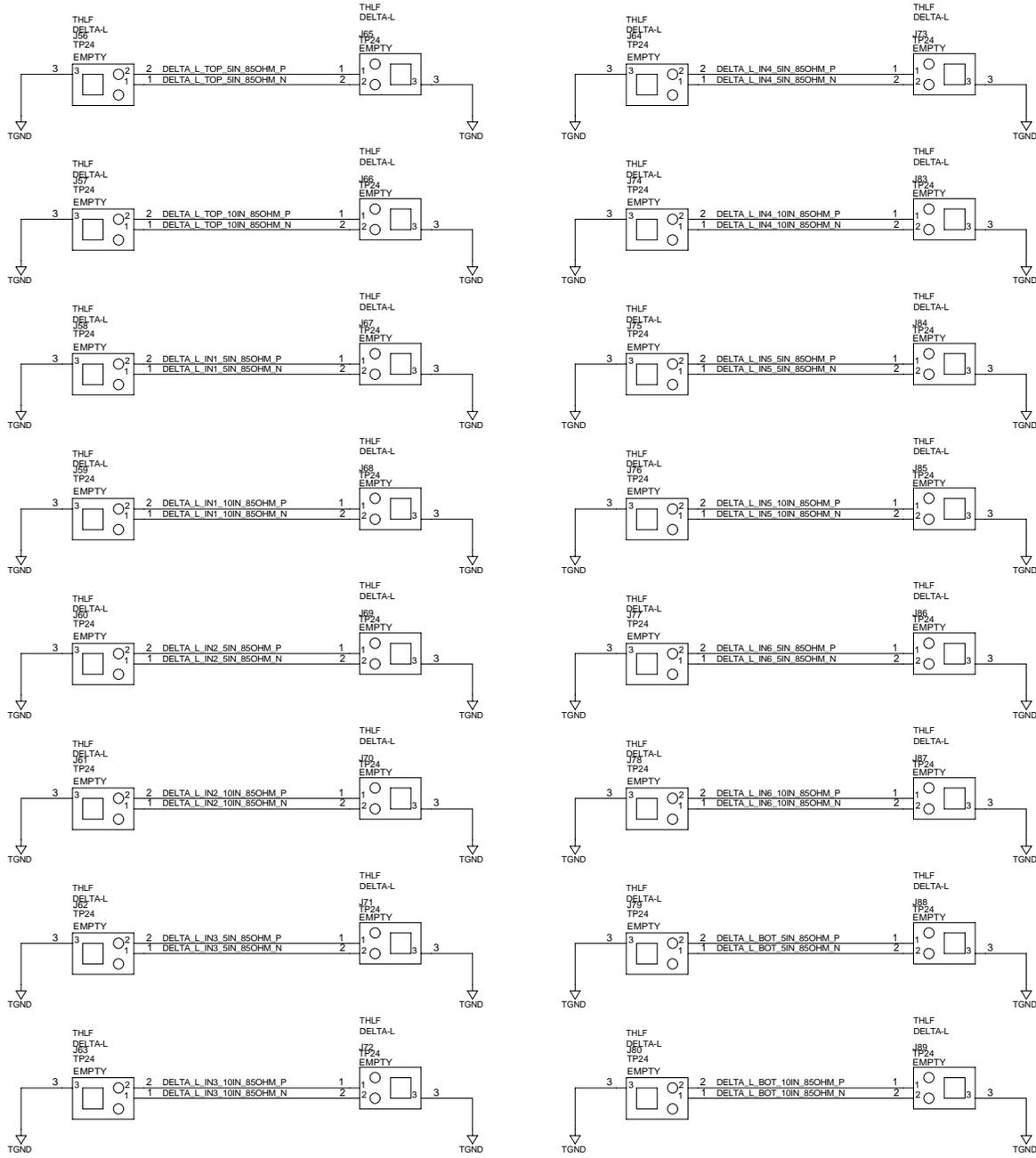
GPU7



MOUNTING HOLE



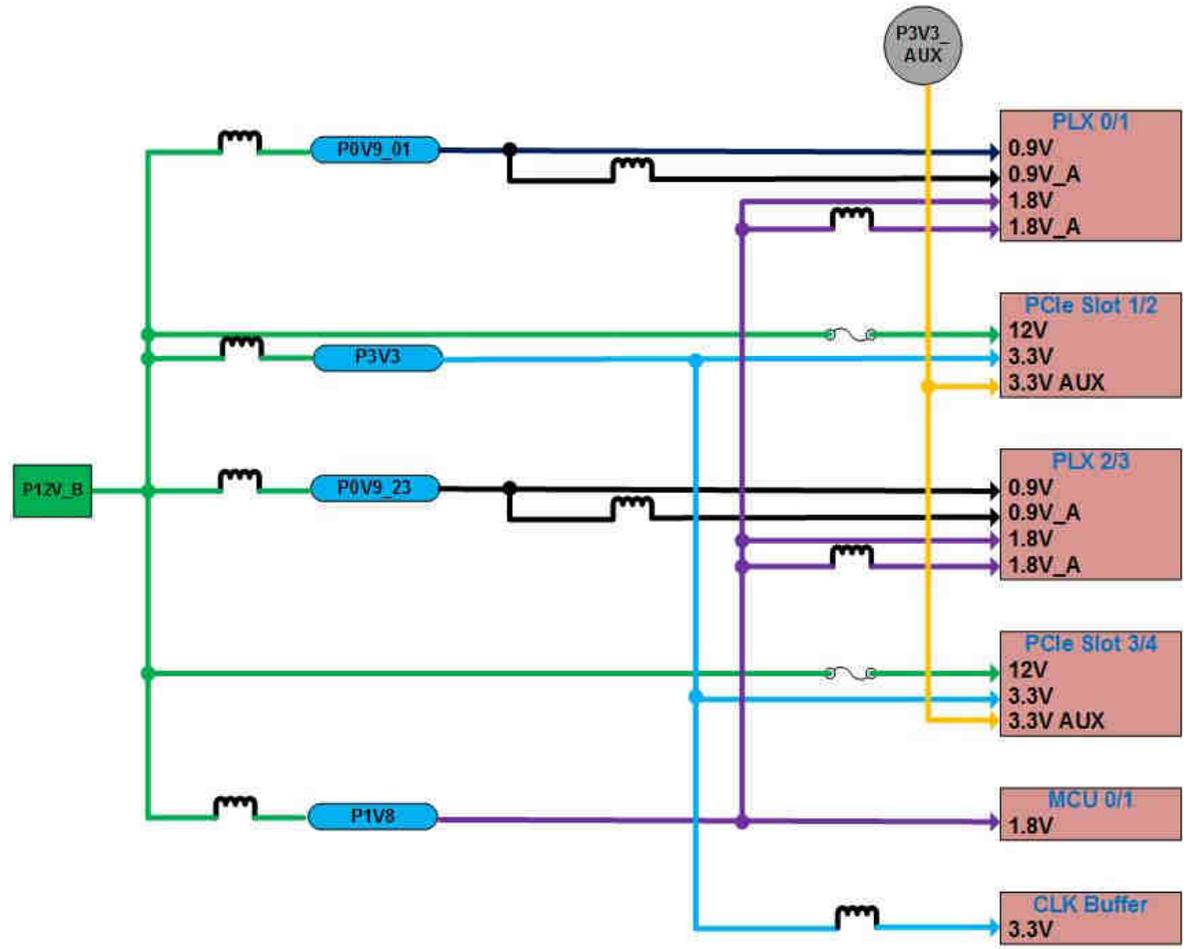
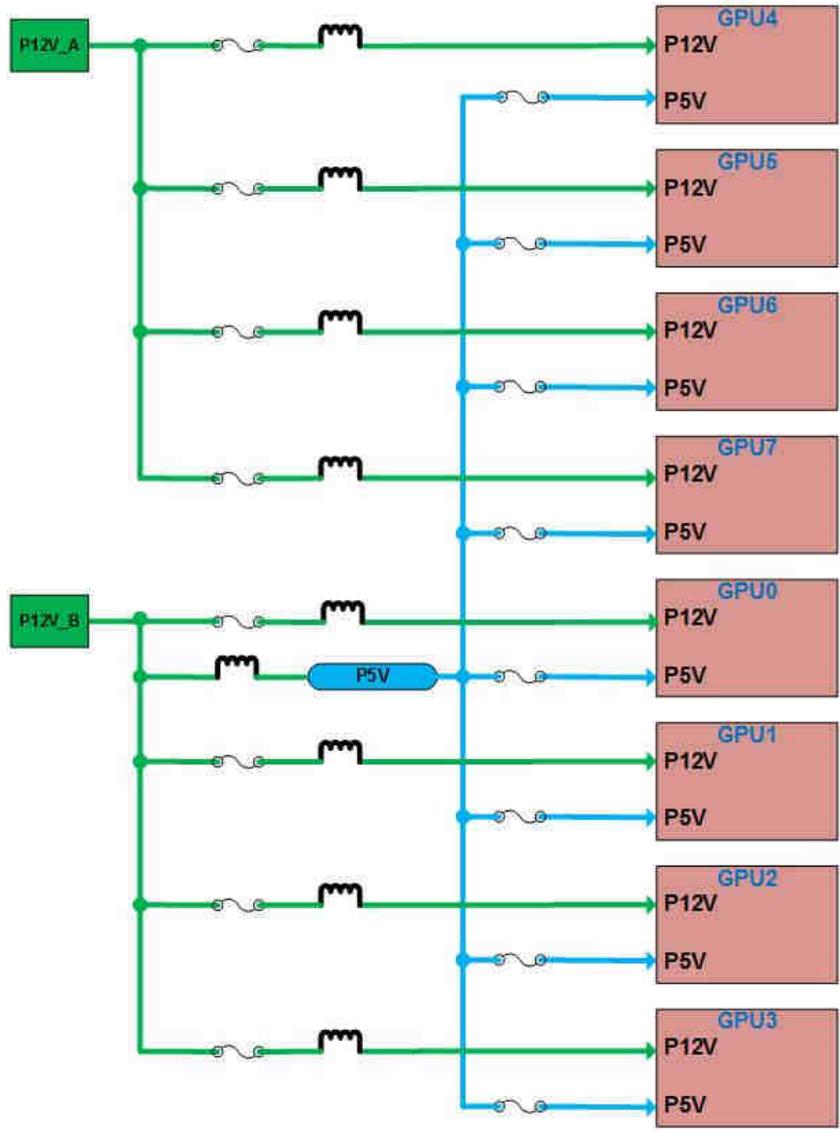
DEPARTMENT	DESIGNER	NAME	PROJECT	DOCUMENT NUMBER	REV
CCBU	REVIEWER	NAME	S2W	N/A	E
			SIZE	C	DATE
			140	Thu Jun 23	09:50:48 2016
			SHEET		OF
			140		144



DEPARTMENT	DESIGNER	PROJECT	DOCUMENT NUMBER	REV
CCBU	NAME	S2W	N/A	E
REVIEWER	NAME	SIZE	DATE	SHEET
		C	Thu Jun 23 09:50:57 2016	141 OF 144

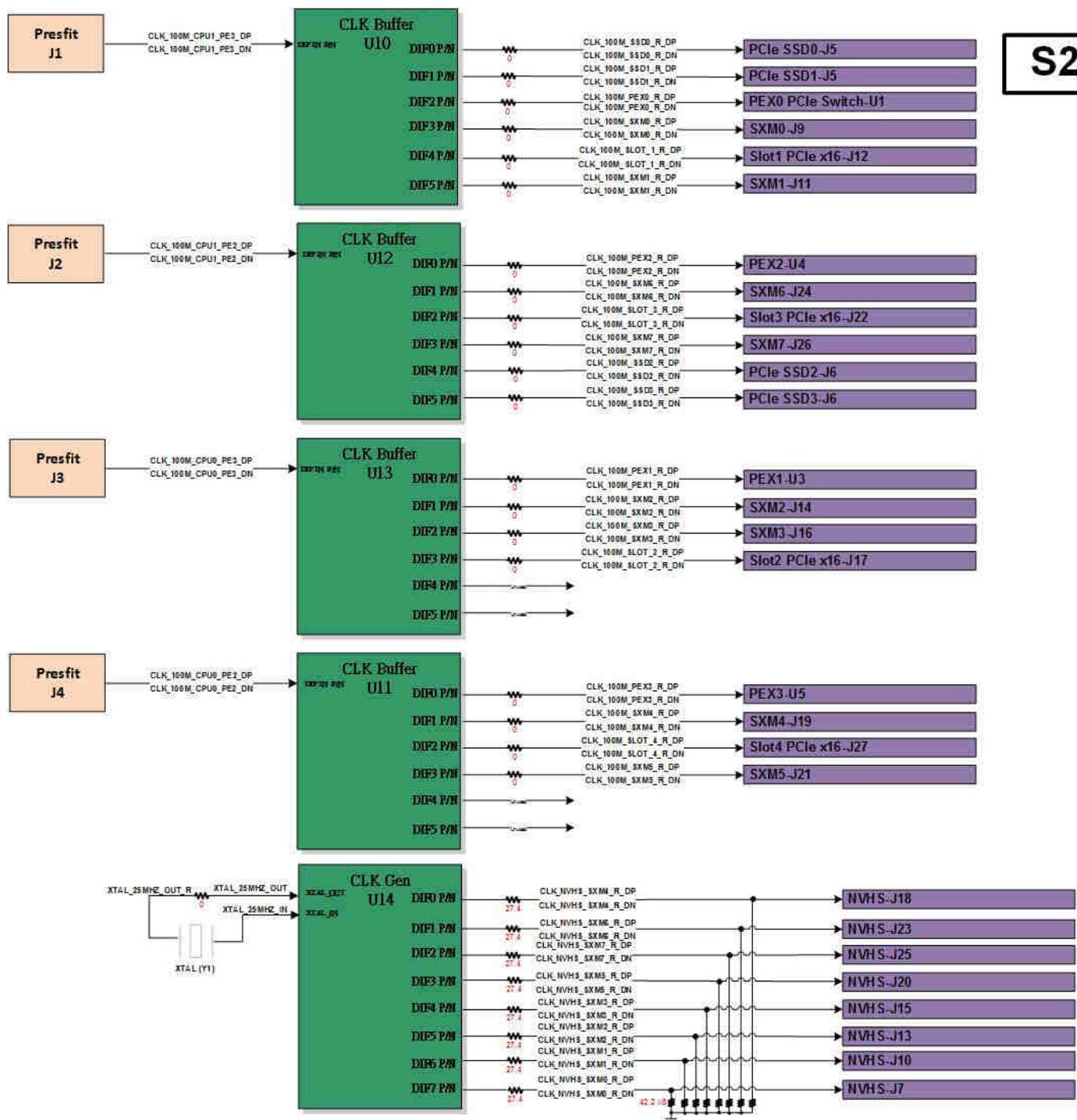
S2W BB VR Diagram

Rev. 1.3 2016/04/20



S2W BB CLK Diagram

Rev. 1.1 2016/01/28



S2W BB SMB Diagram

Rev. 1.2 2016/03/31

