HSF Property:ROHS or Halogen-Free

CYCLONE DISCRETE

DB BUILD

2012.11.26

DATE	CHANGE NO.	REV
26-NOV-2012	2012-ECO-XXXXXX	A

	EE	DATE	POWER	DATE
DRAWER	CHANG,YUNGYU	26-NOV-2012	HSIEH,ALAN	26-NOV-2012
DESIGN	TSENG,PAUL	26-NOV-2012	HSIEH,ALAN	26-NOV-2012
CHECK	YEN,ALEX	26-NOV-2012	HSIEH,ALAN	26-NOV-2012
RESPONSIBLE	DU,DAVID	26-NOV-2012	HSIEH,ALAN	26-NOV-2012

SIZE= A3 VER: X01
FILE NAME: CYCLONED-6050A2566401-MB-X01.BRD
P/N 6050A2566401 XXX

INVENTEC

TITLE CYCLONE_DIS
SHARKBAY MAIN BOARD

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664-0-ALG	X01

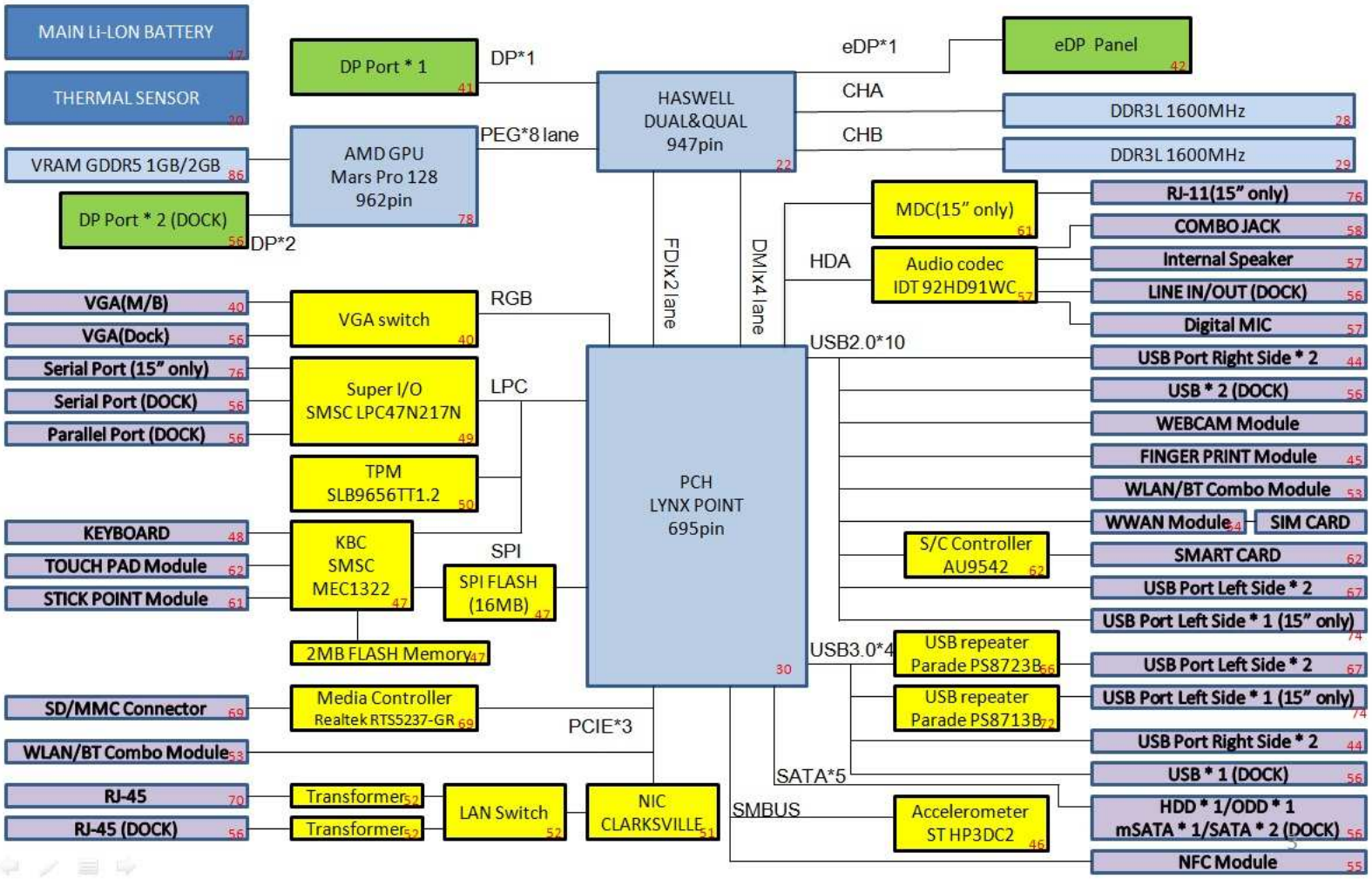
TABLE OF CONTENTS

CHANGE by	xxx	DATE	26-NOV-2012

INVENTEC

TITLE	CYCLONE_DIS TABLE OF CONTENTS		
SIZE A3	CODE CS	DOC.NUMBER 1310A256640 1-0-ALG	REV X01
		SHEET 2 of 90	

DIS – Block Diagram

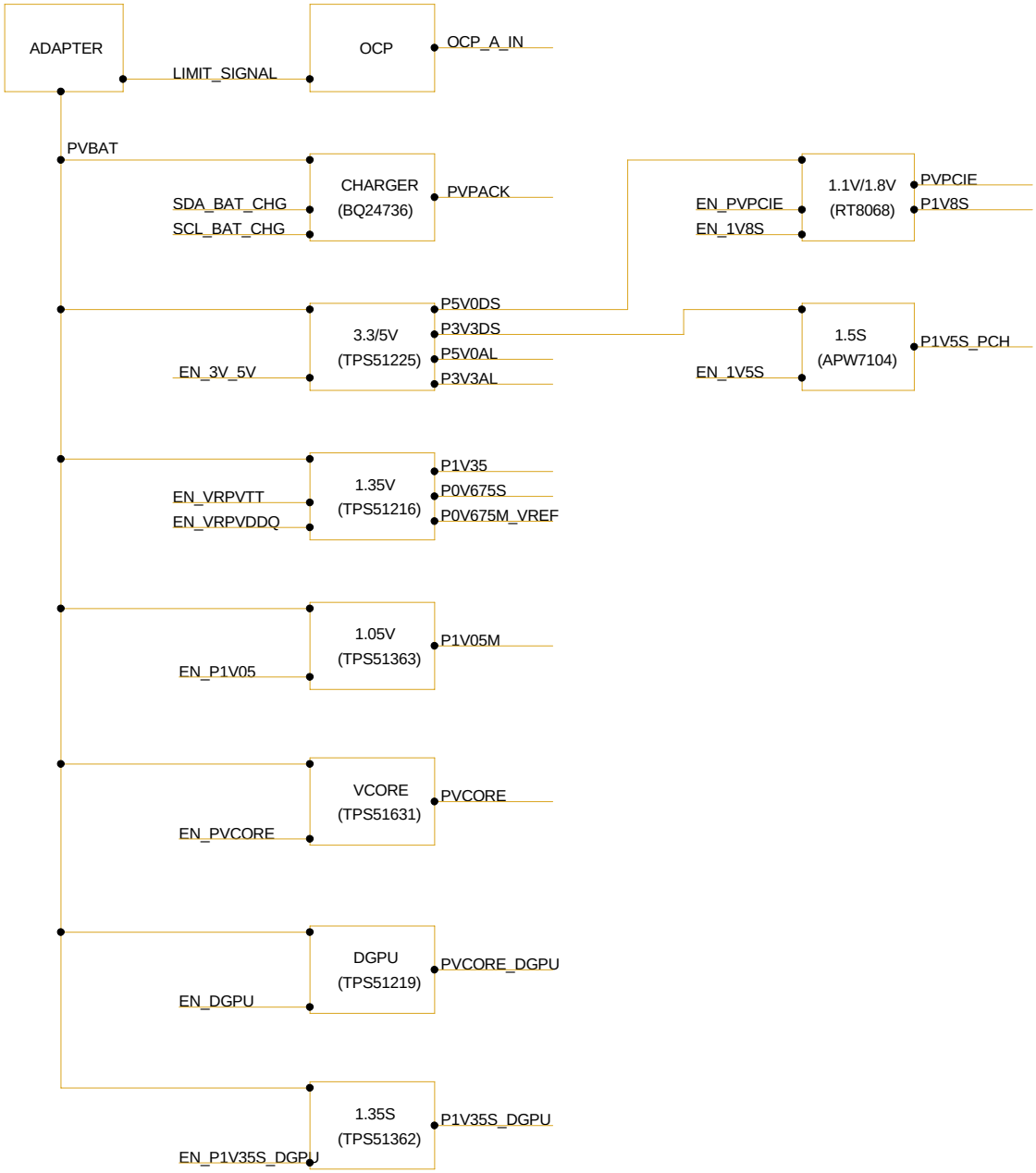


INVENTEC

CYCLONE_DIS
Block Diagram

SIZE	CODE	DOC.NUMBER	REV
C	CS	1310AZ5664	X01

CHANGE by XXX DATE 26-NOV-2012 SHEET 3 of 90



INVENTEC

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Block Diagram

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

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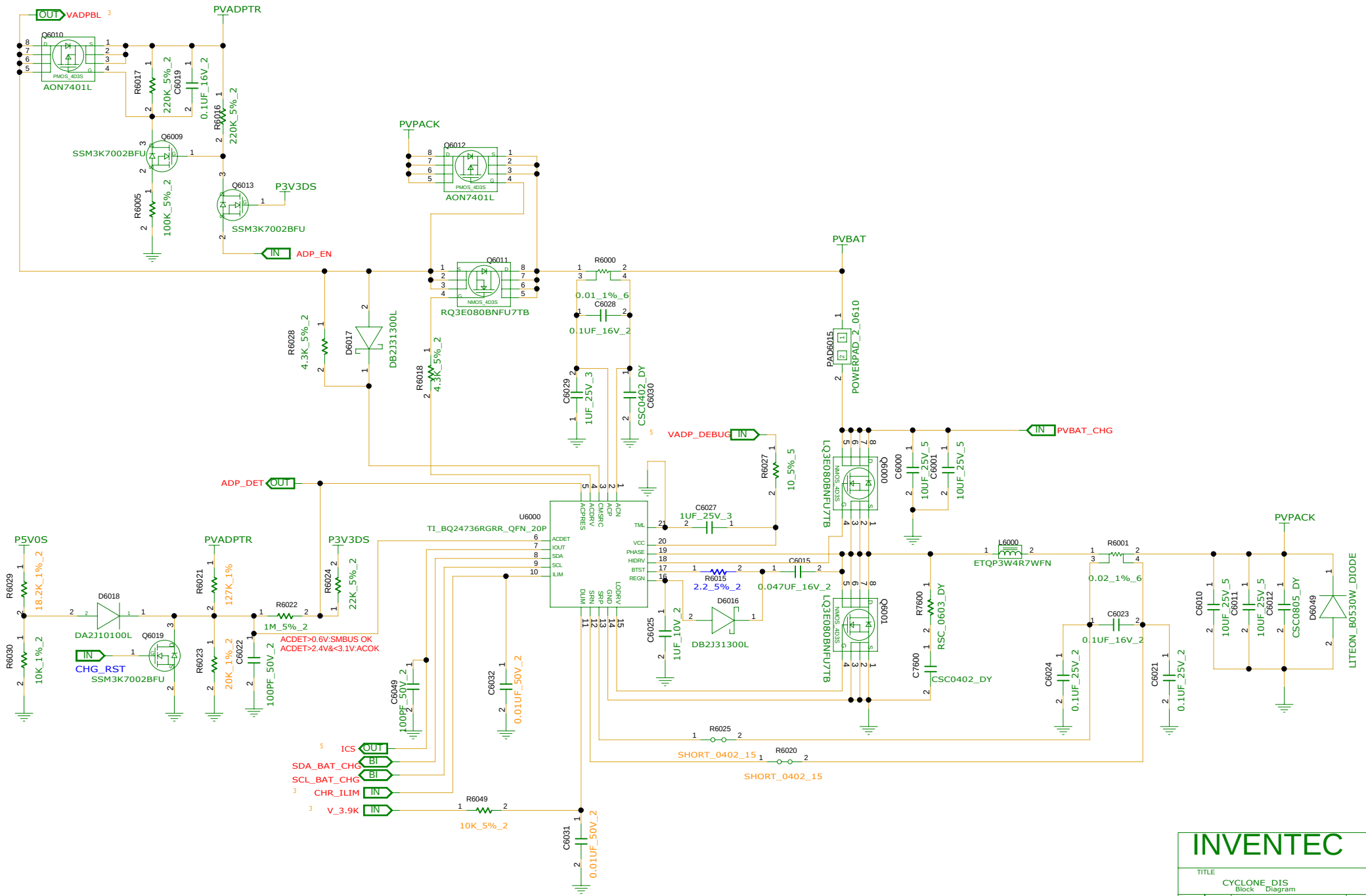
OUT VADPBL
PVADPTR
Q6010
AON7401L
R6017 220K_5%_2
C6019 0.1UF_16V_2
R6016 220K_5%_2
Q6009
SSM3K7002BFU
R6005 100K_5%_2
Q6013
SSM3K7002BFU
P3V3DS
IN ADP_EN
PVPACK
Q6012
AON7401L
Q6011
RQ3E080BNFU7TB
R6000
0.01_1%_6
C6028 0.1UF_16V_2
PVBAT
PAD6015 POWERPAD_2_0610
R6028 4.3K_5%_2
D6017 DB2J31300L
R6018 4.3K_5%_2
C6029 1UF_25V_3
C6030 CSC0402_DY
VADP_DEBUG IN
R6027 10_5%_5
IN PVBAT_CHG
C6000 10UF_25V_5
C6001 10UF_25V_5
Q6000 LQ3E080BNFU7TB
ADP_DET OUT
U6000
TI_BQ24736RGRR_QFN_20P
C6027 1UF_25V_3
R6015 2.2_5%_2
C6015 0.047UF_16V_2
D6016 DB2J31300L
C6025 1UF_10V_2
Q6001 LQ3E080BNFU7TB
L6000 ETQP3W4R7WFN
R6001 0.02_1%_6
C6023 0.1UF_16V_2
R7600 RSC_0603_DY
C7600 CSC0402_DY
C6024 0.1UF_25V_2
C6021 0.1UF_25V_2
C6010 10UF_25V_5
C6011 10UF_25V_5
C6012 CSC0805_DY
D6049 LITEON_B0530W_DIODE
P5V0S
R6029 18.2K_1%_2
D6018 DA2J10100L
R6030 10K_1%_2
IN CHG_RST
Q6019 SSM3K7002BFU
PVADPTR
R6021 127K_1%
R6023 20K_1%_2
C6022 100PF_50V_2
P3V3DS
R6024 22K_5%_2
R6022 1M_5%_2
ACDET>0.6V:SMBUS OK
ACDET>2.4V&<3.1V:ACOK
C6049 100PF_50V_2
C6032 0.01UF_50V_2
R6025 SHORT_0402_15
R6020 SHORT_0402_15
ICS OUT
SDA_BAT_CHG BI
SCL_BAT_CHG BI
CHR_ILIM IN
V_3.9K IN
R6049 10K_5%_2
C6031 0.01UF_50V_2
INVENTEC
TITLE
CYCLONE_DIS
Block Diagram
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
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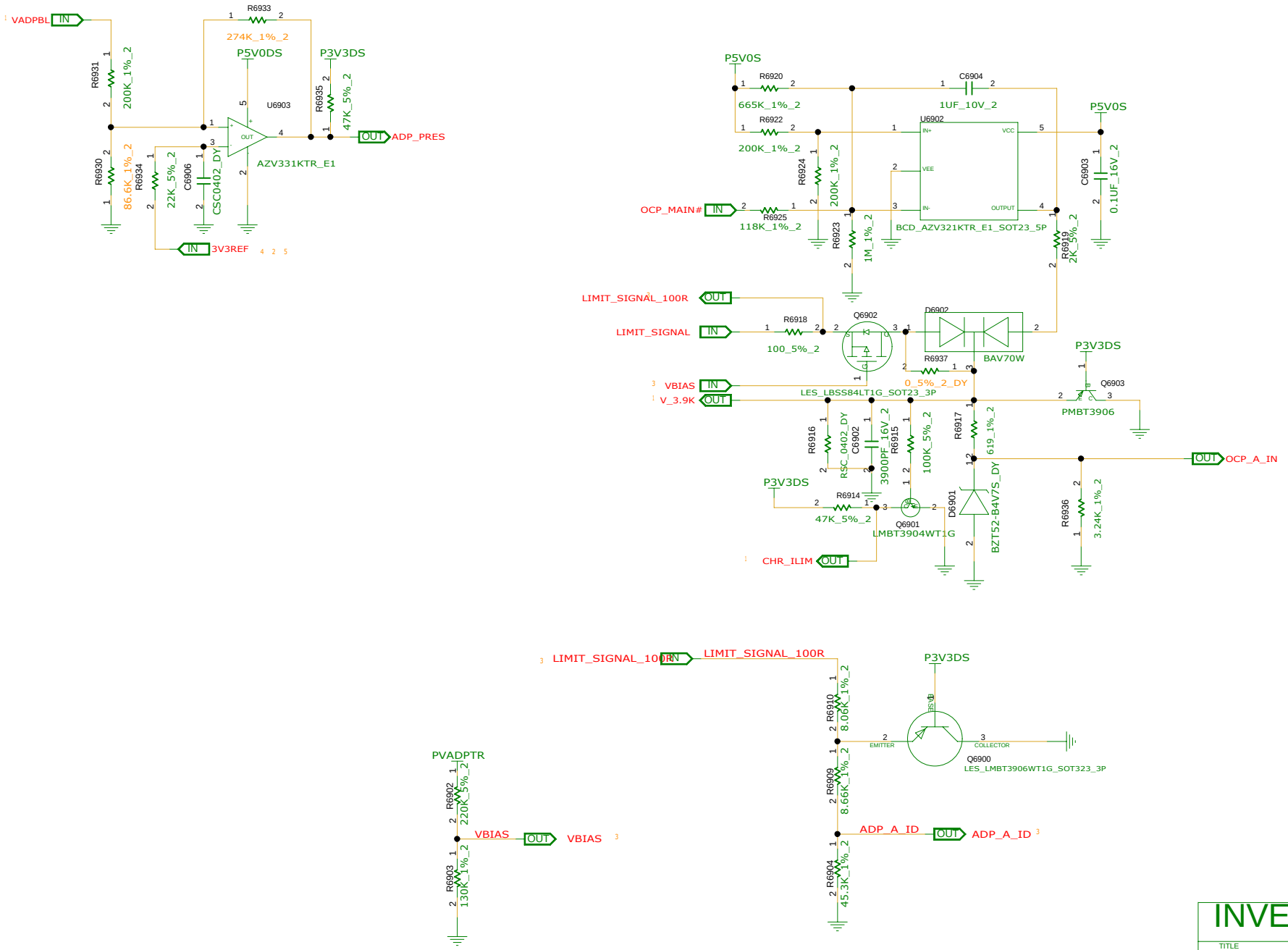
VADPBL
IN
R6931
200K_1%_2
R6930
86.6K_1%_2
R6933
274K_1%_2
P5V0DS
P3V3DS
U6903
R6935
47K_5%_2
OUT
ADP_PRES
AZV331KTR_E1
R6934
22K_5%_2
C6906
CSC0402_DY
IN
3V3REF
P5V0S
R6920
665K_1%_2
C6904
1UF_10V_2
R6922
200K_1%_2
U6902
IN+
VCC
VEE
IN-
OUTPUT
BCD_AZV321KTR_E1_SOT23_5P
R6924
200K_1%_2
C6903
0.1UF_16V_2
OCP_MAIN#
R6925
118K_1%_2
R6923
1M_1%_2
R6926
2K_5%_2
LIMIT_SIGNAL_100R
LIMIT_SIGNAL
R6918
100_5%_2
Q6902
D6902
BAV70W
R6937
0_5%_2_DY
VBIAS
V_3.9K
LES_LBSS84LT1G_SOT23_3P
P3V3DS
Q6903
PMBT3906
R6916
RSC_0402_DY
C6902
3900PF_16V_2
R6915
100K_5%_2
R6917
619_1%_2
OUT
OCP_A_IN
P3V3DS
R6914
47K_5%_2
Q6901
LMBT3904WT1G
D6901
BZT52-B4V7S_DY
R6936
3.24K_1%_2
CHR_ILIM
OUT
LIMIT_SIGNAL_100R
IN
LIMIT_SIGNAL_100R
P3V3DS
R6910
8.06K_1%_2
EMITTER
COLLECTOR
Q6900
LES_LMBT3906WT1G_SOT323_3P
PVADPTR
R6902
220K_5%_2
VBIAS
OUT
VBIAS
R6909
8.66K_1%_2
ADP_A_ID
OUT
ADP_A_ID
R6903
130K_1%_2
R6904
45.3K_1%_2
INVENTEC
TITLE
CYCLONE_DIS
Block Diagram
SIZE
A3
CODE
CS
DOC.NUMBER
1310A25664
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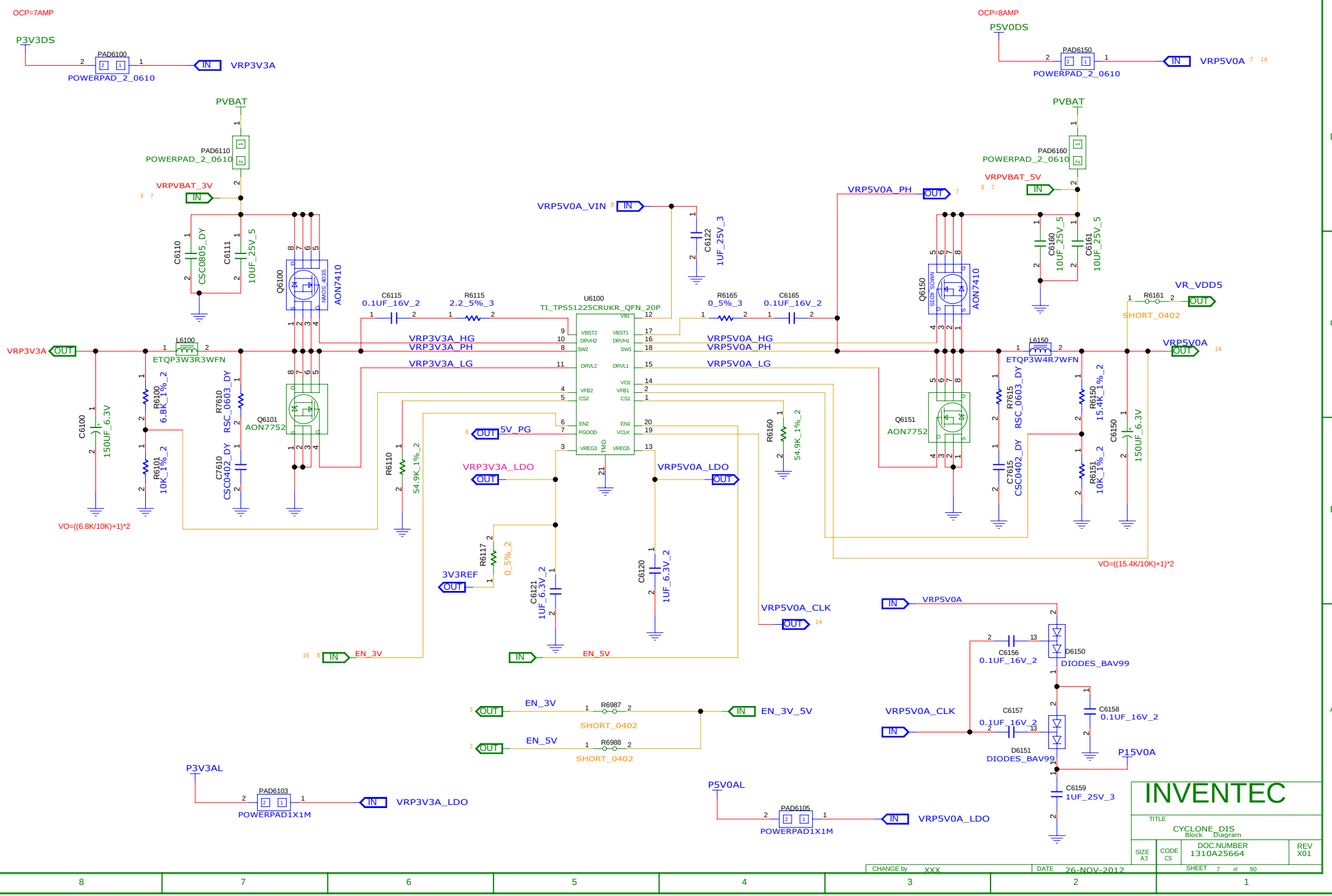
XXX
DATE
26-NOV-2012


OCP=7AMP
P3V3DS
PAD6100
POWERPAD_2_0610
VRP3V3A
PVBAT
PAD6110
POWERPAD_2_0610
VRPVBAT_3V
C6110
CSC0805_DY
C6111
10UF_25V_5
Q6100
AON7410
C6115
0.1UF_16V_2
R6115
2.2_5%_3
U6100
TI_TPS51225CRUKR_QFN_20P
VRP5V0A_VIN
C6122
1UF_25V_3
R6165
0_5%_3
C6165
0.1UF_16V_2
VRP3V3A_HG
VRP3V3A_PH
VRP3V3A_LG
VRP5V0A_HG
VRP5V0A_PH
VRP5V0A_LG
L6100
ETQP3W3R3WFN
VRP3V3A
C6100
150UF_6.3V
R6100
6.8K_1%_2
R6101
10K_1%_2
R7610
RSC_0603_DY
C7610
CSC0402_DY
Q6101
AON7752
VO=((6.8K/10K)+1)*2
R6110
54.9K_1%_2
5V_PG
VRP3V3A_LDO
VRP5V0A_LDO
R6160
54.9K_1%_2
3V3REF
R6117
0_5%_2
C6121
1UF_6.3V_2
C6120
1UF_6.3V_2
EN_3V
EN_5V
VRP5V0A_CLK
OCP=8AMP
P5V0DS
PAD6150
POWERPAD_2_0610
VRP5V0A
PAD6160
POWERPAD_2_0610
VRPVBAT_5V
C6160
10UF_25V_5
C6161
10UF_25V_5
Q6150
AON7410
VR_VDD5
R6161
SHORT_0402
L6150
ETQP3W4R7WFN
R7615
RSC_0603_DY
C7615
CSC0402_DY
R6150
15.4K_1%_2
R6151
10K_1%_2
C6150
150UF_6.3V
Q6151
AON7752
VO=((15.4K/10K)+1)*2
EN_3V
R6987
SHORT_0402
EN_3V_5V
EN_5V
R6988
SHORT_0402
P3V3AL
PAD6103
POWERPAD1X1M
VRP3V3A_LDO
P5V0AL
PAD6105
POWERPAD1X1M
VRP5V0A_LDO
D6150
DIODES_BAV99
C6156
0.1UF_16V_2
C6157
0.1UF_16V_2
C6158
0.1UF_16V_2
D6151
DIODES_BAV99
P15V0A
C6159
1UF_25V_3
INVENTEC
CYCLONE_DIS
Block Diagram
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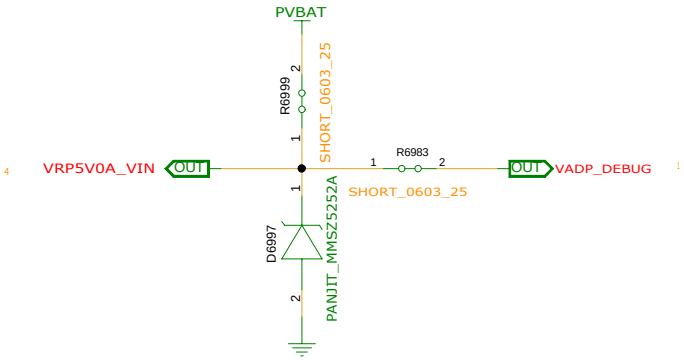
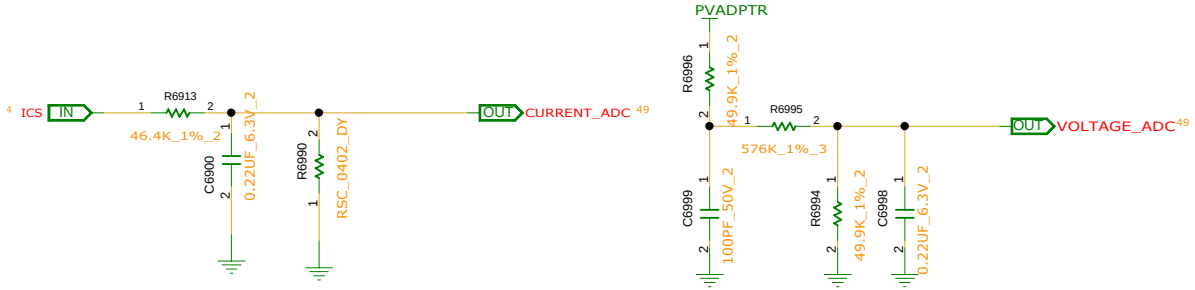
PMC





INVENTEC

TITLE: CYCLONE_DIS Block Diagram			
SIZE A3	CODE CS	DOC.NUMBER 1310A25664	REV X01
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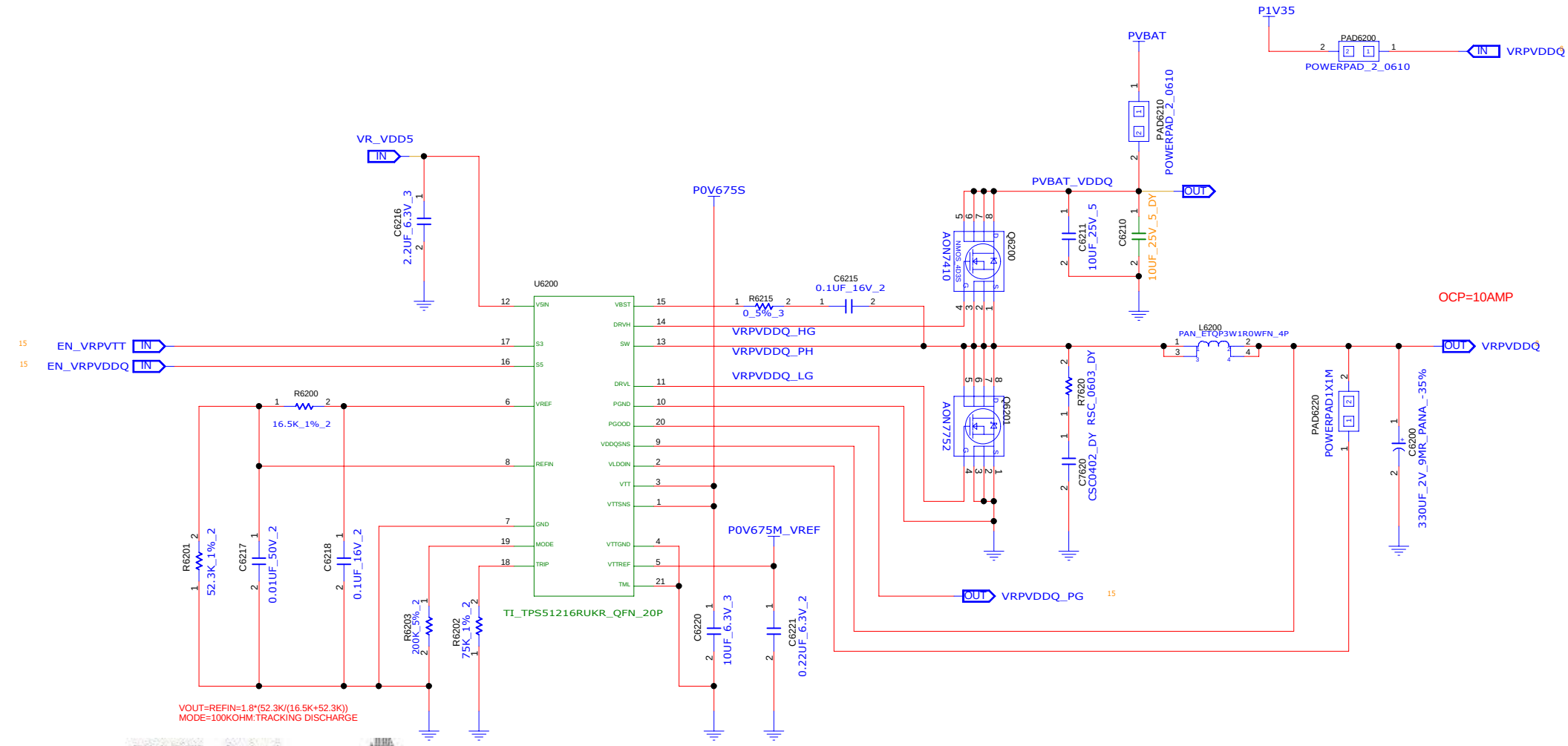

Table 1. S3/S5 Power State Control

STATE	S3	S5	VREF	VDDQ	VTTREF	VTT
S0	HI	HI	ON	ON	ON	ON
S3	LO	HI	ON	ON	ON	OFF(High-Z)
S4/S5	LO	LO	OFF	OFF(Discharge)	OFF(Discharge)	OFF(Discharge)

INVENTEC

TITLE: CYCLONE_DIS Block Diagram

SIZE A3 | CODE CS | DOC.NUMBER 1310A25664 | REV X01

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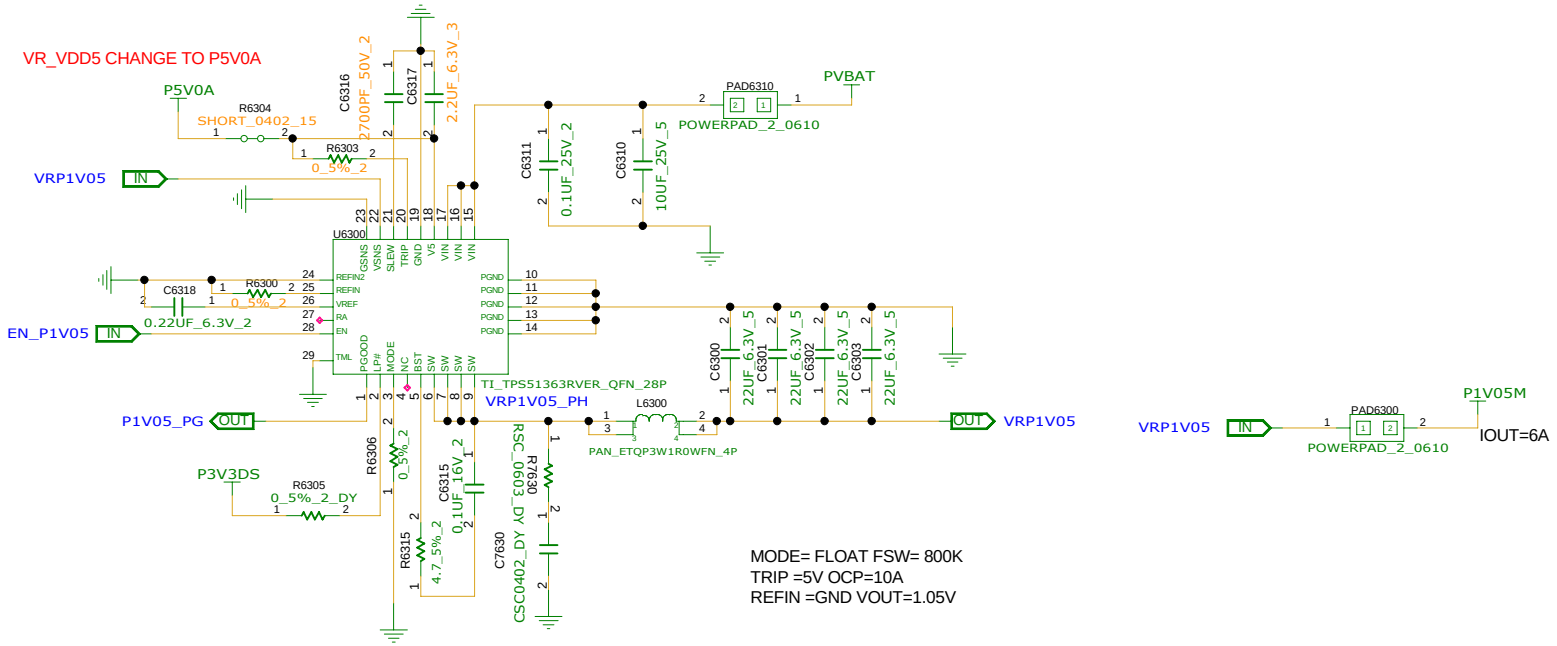

INVENTEC

TITLE
CYCLONE_DIS
Block Diagram

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

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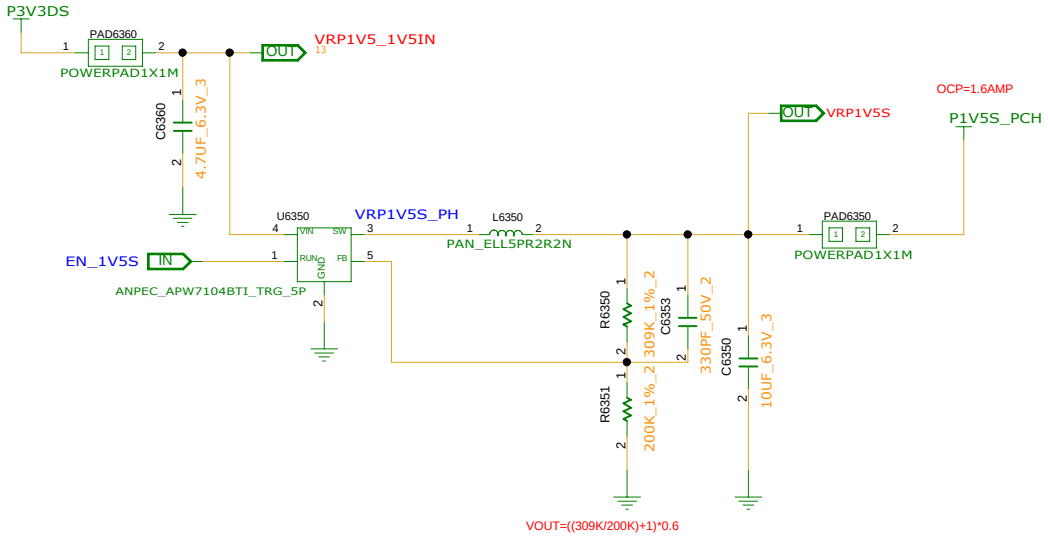

INVENTEC

TITLE
CYCLONE_DIS
Block Diagram

SIZE	CODE	DOC.NUMBER	REV
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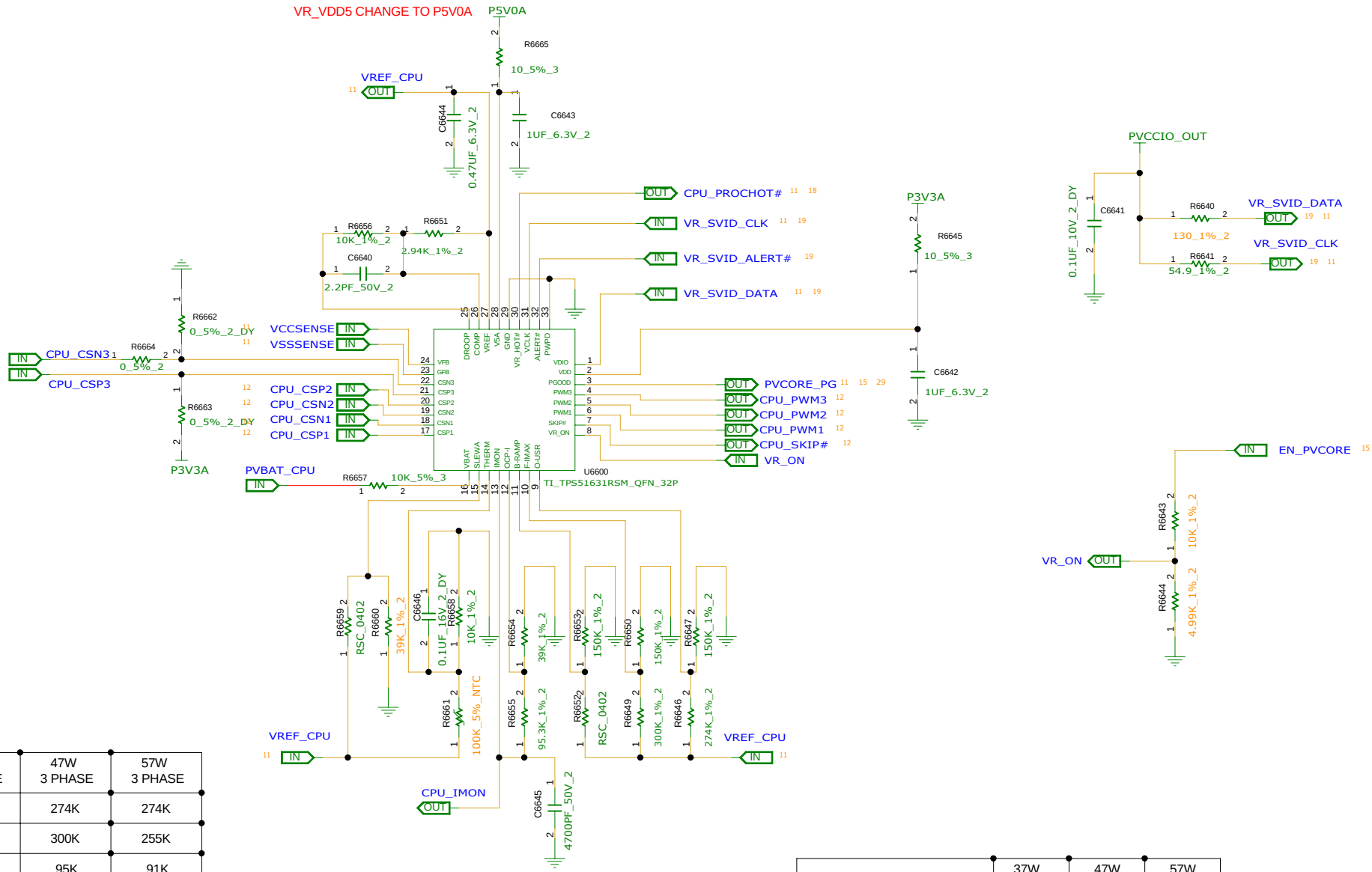

	37W 2 PHASE	47W 3 PHASE	57W 3 PHASE
R6646	487K	274K	274K
R6649	549K	300K	255K
R6655	178K	95K	91K
R6662	POP	DNP	DNP
R6663	POP	DNP	DNP
R6619 R6629 R6639	17.8K	17.8K	17.8K
R6651	2.94K	2.94K	2.94K

	37W	47W	57W
INPUT VOLTAGE RANGE	9V TO 20V	9V TO 20V	9V TO 20V
MAX CURRENT	55A	85A	95A
THERMAL DESIGN CURRENT	21A	27A	33A
DYNAMIC CURRENT	35A	60A	60A
OVER CURRENT LEVEL	70A	105A	105A
SWITCHING FREQUENCY	1MHZ	1MHZ	1MHZ
BOOT VOLTAGE	1.7V	1.7V	1.7V
DC LOAD-LINE	1.5MOHM	1.5MOHM	1.5MOHM

PS: TOTAL OUTPUT CAPACITOR IS 38X22UF (0805) WITH 1MHZ SWITCHING FREQUENCY IS DEPEND ON -2.85MV/A DROOP SPEC

INVENTEC

TITLE: CYCLONE_DIS
Block Diagram

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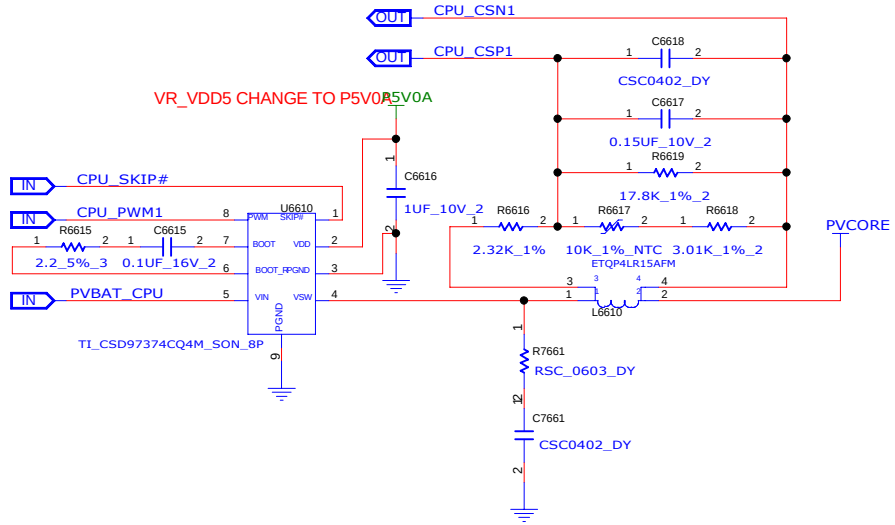

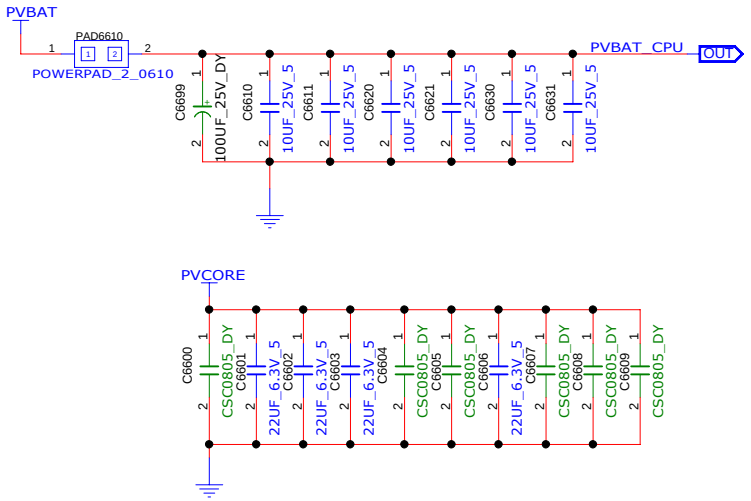

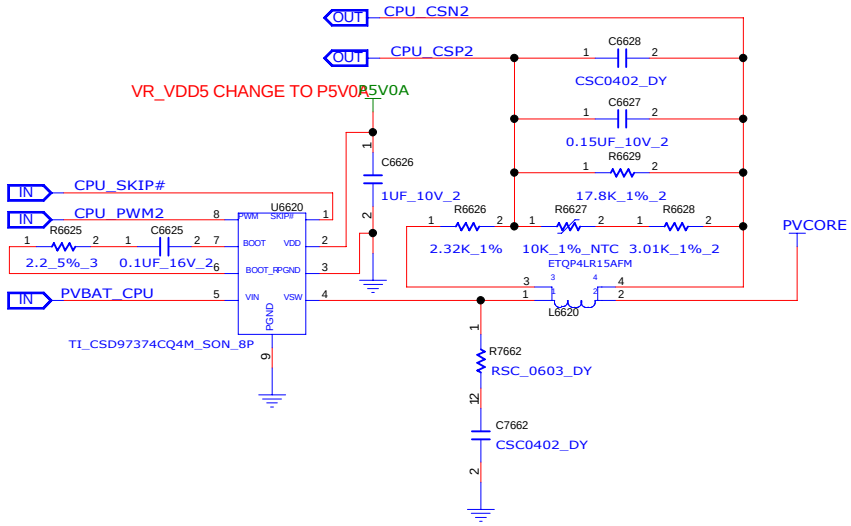

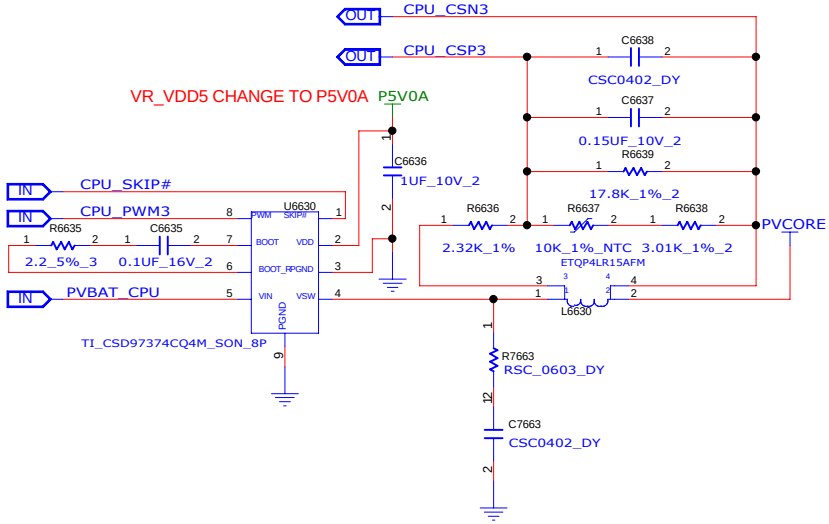

INVENTEC

TITLE: CYCLONE_DIS Block Diagram			
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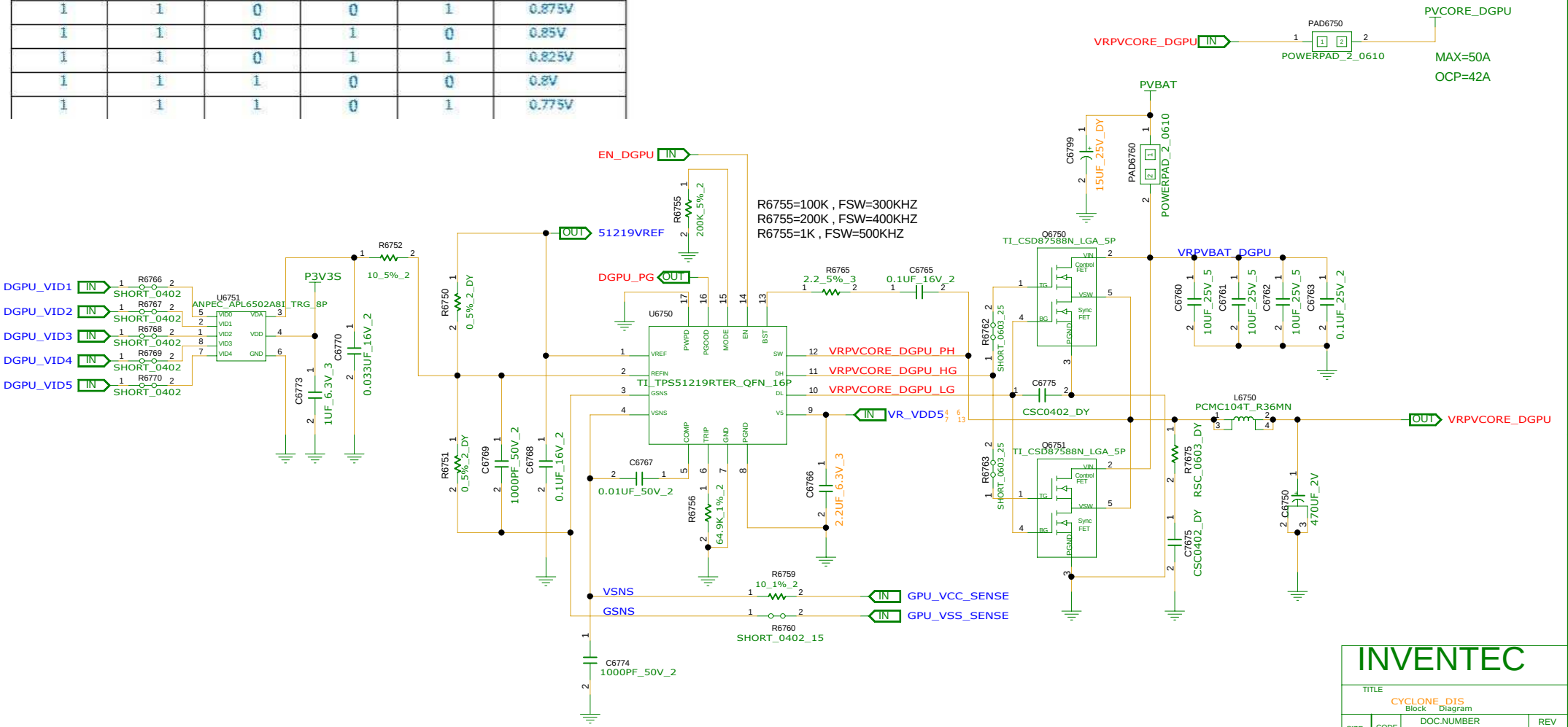
GPU_VID5 GPIO_10	GPU_VID4 GPIO_14	GPU_VID3 GPIO_15	GPU_VID2 GPIO_16	GPU_VID1 GPIO_20	Core Voltage Level
0	1	1	1	1	1.125V
1	0	0	0	0	1.1V
1	0	0	0	1	1.075V
1	0	0	1	0	1.05V
1	0	0	1	1	1.025V
1	0	1	0	0	1.0V
1	0	1	0	1	0.975V
1	0	1	1	0	0.95V
1	0	1	1	1	0.925V
1	1	0	0	0	0.9V
1	1	0	0	1	0.875V
1	1	0	1	0	0.85V
1	1	0	1	1	0.825V
1	1	1	0	0	0.8V
1	1	1	0	1	0.775V

	C6762	C6752	L6750	Q6751	R6756
17W	OPEN	OPEN	ETQP4LR36AFM 6014B0164501	OPEN	80.6K_1% 6013A0072901
25W	install	install	PCMC104T-R36MN 6014B0024003	install	42.2K_1% 6013A0017701



INVENTEC

TITLE: CYCLONE_DIS Block Diagram

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

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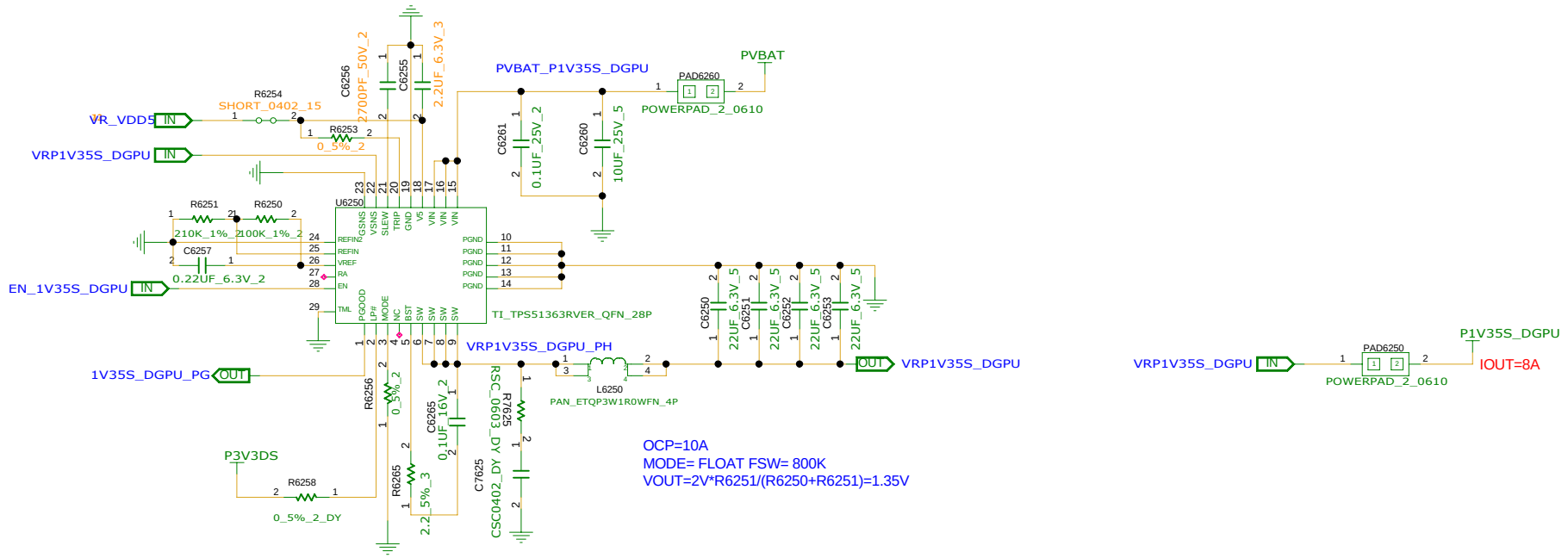

INVENTEC

TITLE: CYCLONE_DIS Block Diagram

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

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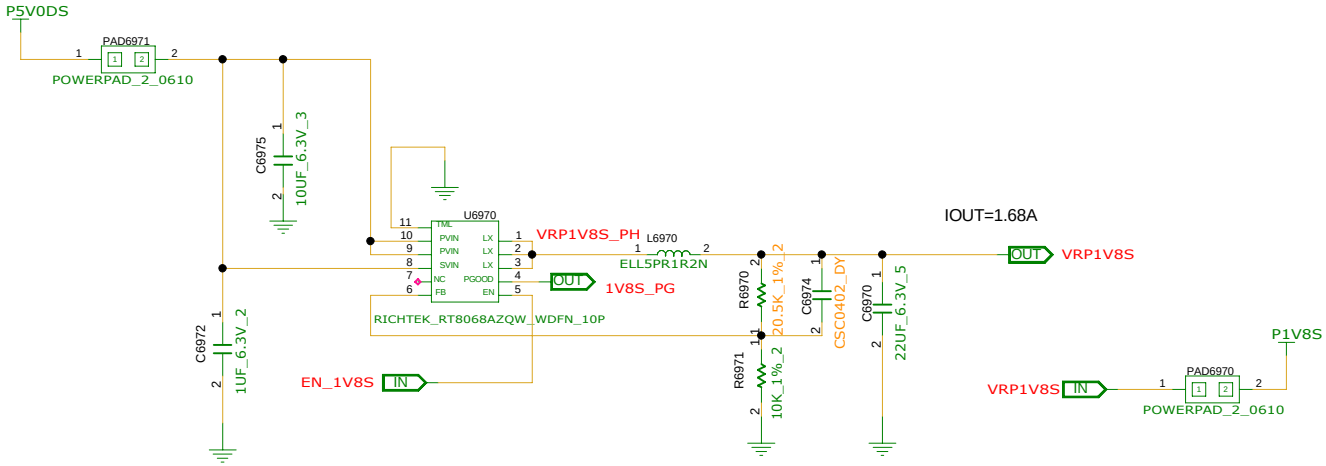

VREF=0.6V
15K=1.5V
10K=1.2V
20.5K=1.83V

MODE= FLOAT=SKIP MODE
MODE=VIN=FCCM MODE

INVENTEC

TITLE
CYCLONE_DIS
Block Diagram

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

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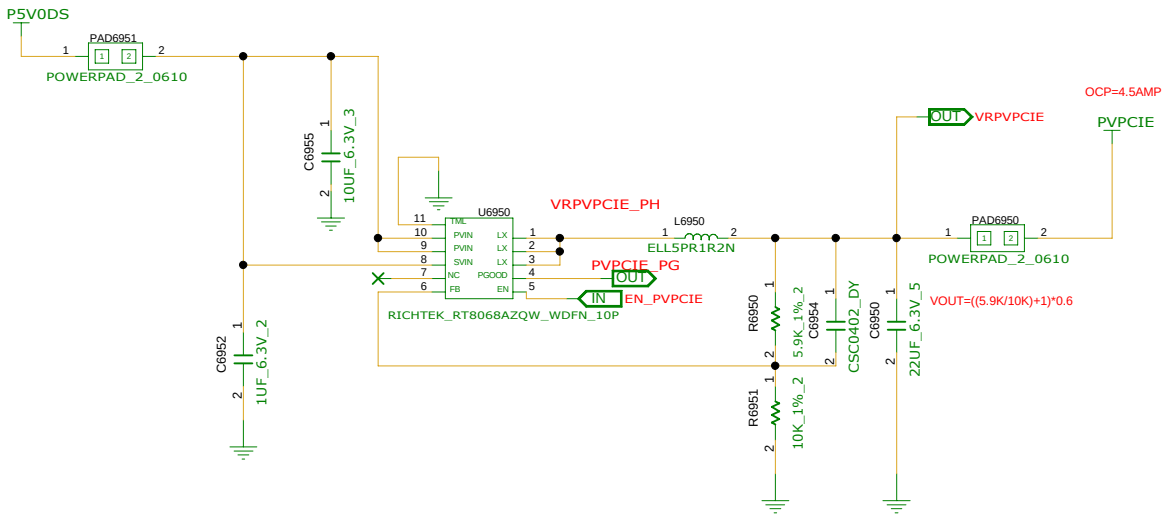

INVENTEC

TITLE
CYCLONE_DIS
Block Diagram

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

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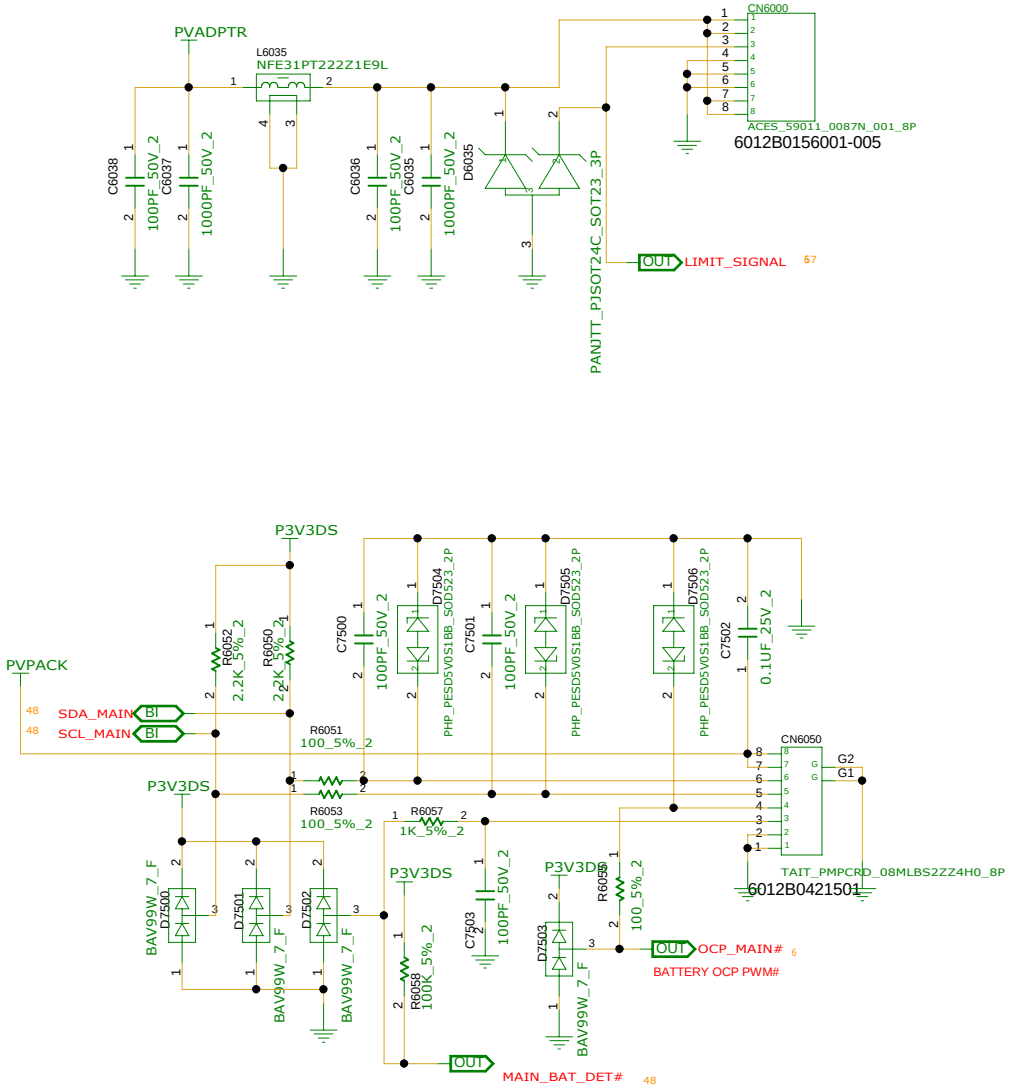

INVENTEC

TITLE
CYCLONE_DIS
Block Diagram

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

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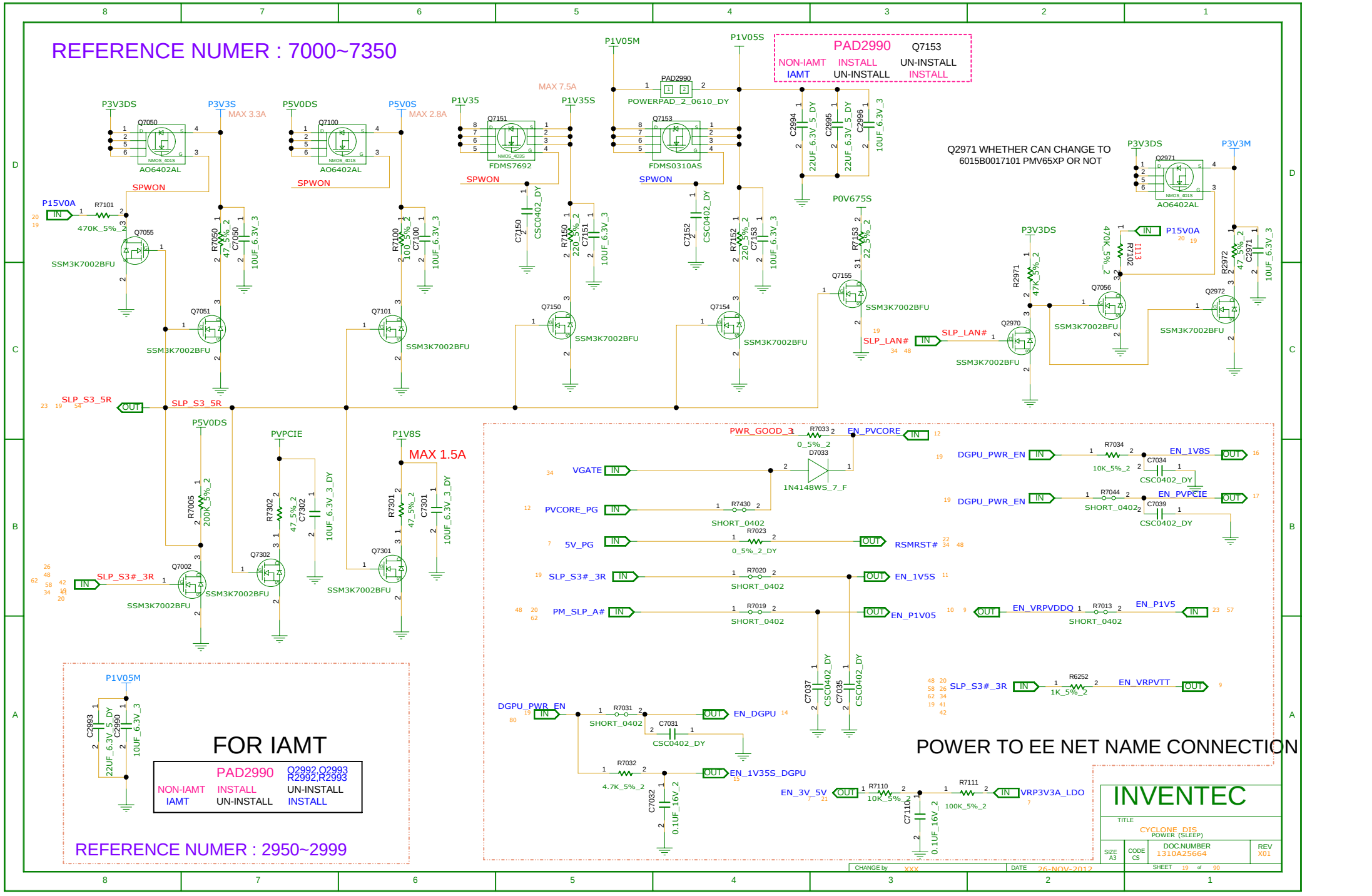
REFERENCE NUMER : 7000~7350
PAD2990 Q7153
NON-IAMT INSTALL UN-INSTALL
IAMT UN-INSTALL INSTALL
Q2971 WHETHER CAN CHANGE TO 6015B0017101 PMV65XP OR NOT
P3V3DS
P3V3S
MAX 3.3A
P5V0DS
P5V0S
MAX 2.8A
P1V35
P1V35S
MAX 7.5A
P1V05M
P1V05S
P3V3M
P15V0A
P0V675S
AO6402AL
FDMS7692
FDMS0310AS
POWERPAD_2_0610_DY
SSM3K7002BFU
SPWON
SLP_S3_5R
SLP_S3#_3R
SLP_LAN#
PVPCIE
P1V8S
MAX 1.5A
PWR_GOOD_3
EN_PVCORE
VGATE
PVCORE_PG
5V_PG
RSMRST#
EN_1V5S
EN_P1V05
EN_VRPVDDQ
EN_P1V5
EN_VRPVTT
DGPU_PWR_EN
EN_1V8S
EN_PVPCIE
EN_DGPU
EN_1V35S_DGPU
EN_3V_5V
VRP3V3A_LDO
1N4148WS_7_F
SHORT_0402
CSC0402_DY
POWER TO EE NET NAME CONNECTION
FOR IAMT
PAD2990 Q2992,Q2993 R2992,R2993
NON-IAMT INSTALL UN-INSTALL
IAMT UN-INSTALL INSTALL
REFERENCE NUMER : 2950~2999
INVENTEC
TITLE
CYCLONE_DIS
POWER (SLEEP)
SIZE A3
CODE CS
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DATE 26-NOV-2012
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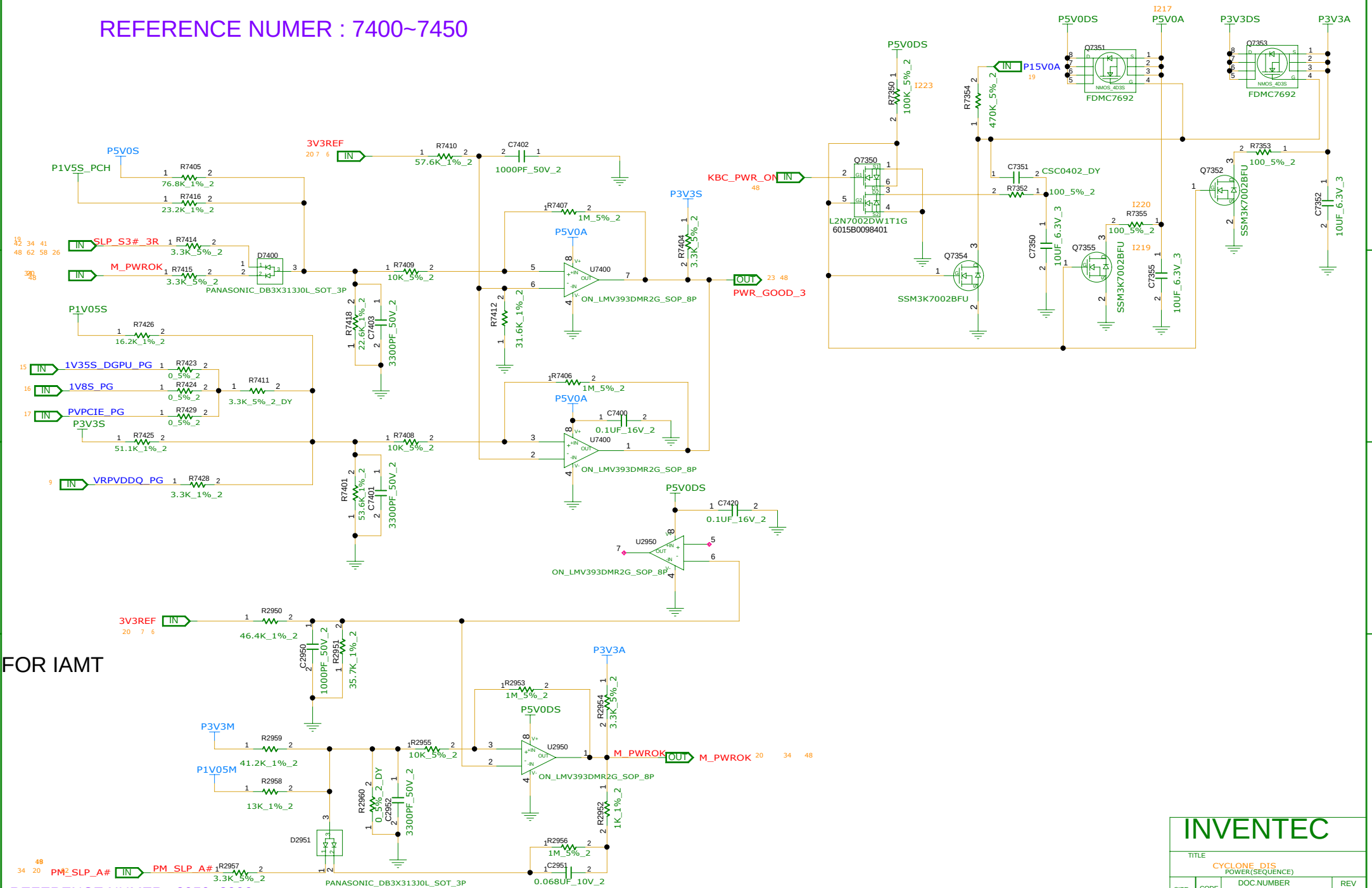
REFERENCE NUMER : 7400~7450

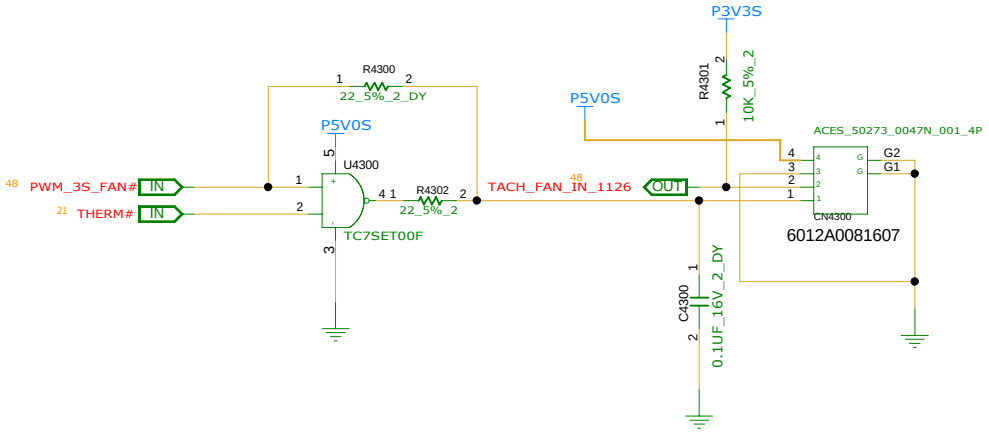


FOR IAMT

REFERENCE NUMER : 2950~2999

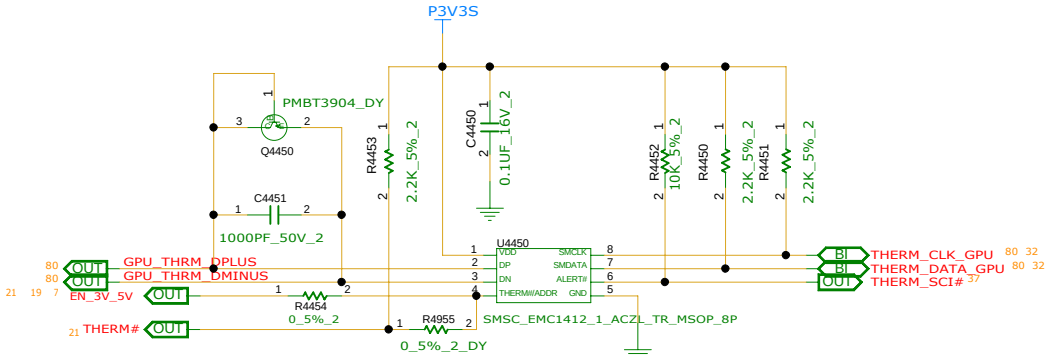
INVENTEC			
TITLE: CYCLONE_DIS POWER(SEQUENCE)			
SIZE A3	CODE CS	DOC.NUMBER 1310A25664	REV X01
CHANGE by XXX	DATE 26-NOV-2012	SHEET 20 of 90	

REFERENCE NUMBER:4400~4349



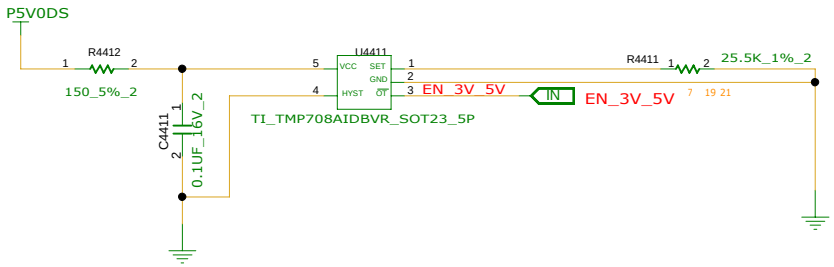
REFERENCE NUMBER:4450~4499

THERM SENSOR



	* CYCLONE-DIS	CYCLONE-UMA
Q4450	UNINSTALL	INSTALL

AMBIENT TEMP SENSE

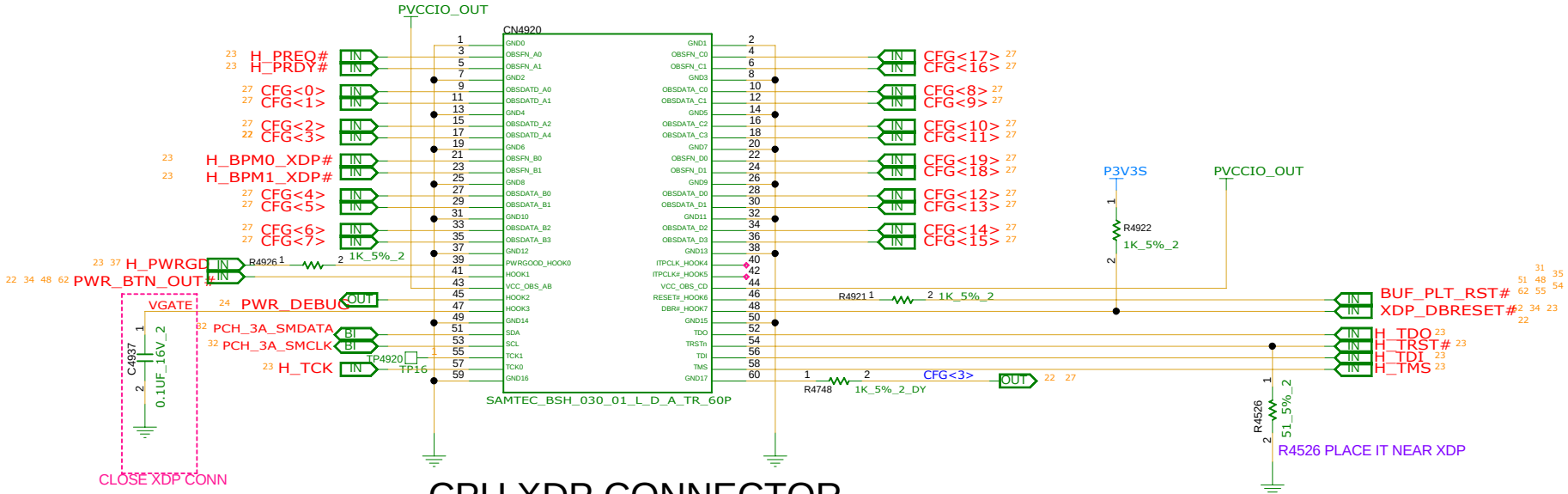


RSET (K OHM) = 0.0012T^2 - 0.9308T + 96.147
THERMAL SHUTDOWN AT 85 DEG.

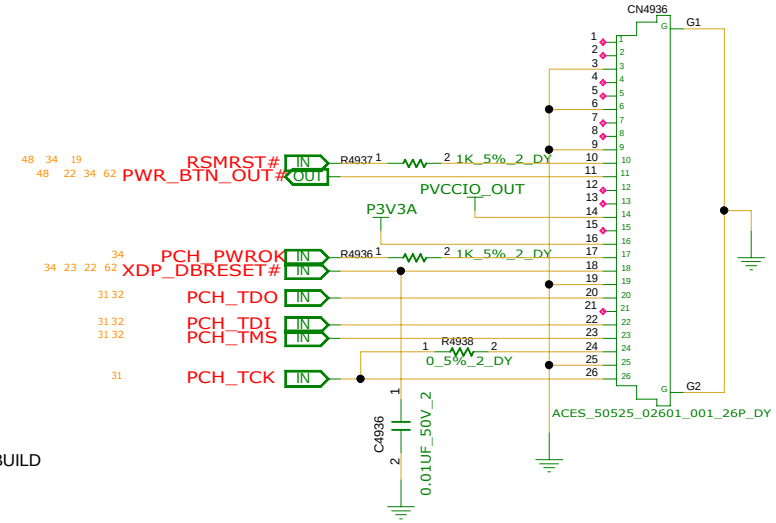
REFERENCE NUMBER:4411~4449

INVENTEC

TITLE			
CYCLONE_DIS FAN & THERMAL			
SIZE A3	CODE CS	DOC.NUMBER 1310A25664	REV X01
CHANGE by XXX	DATE 26-NOV-2012	SHEET 21 of 90	



CPU XDP CONNECTOR



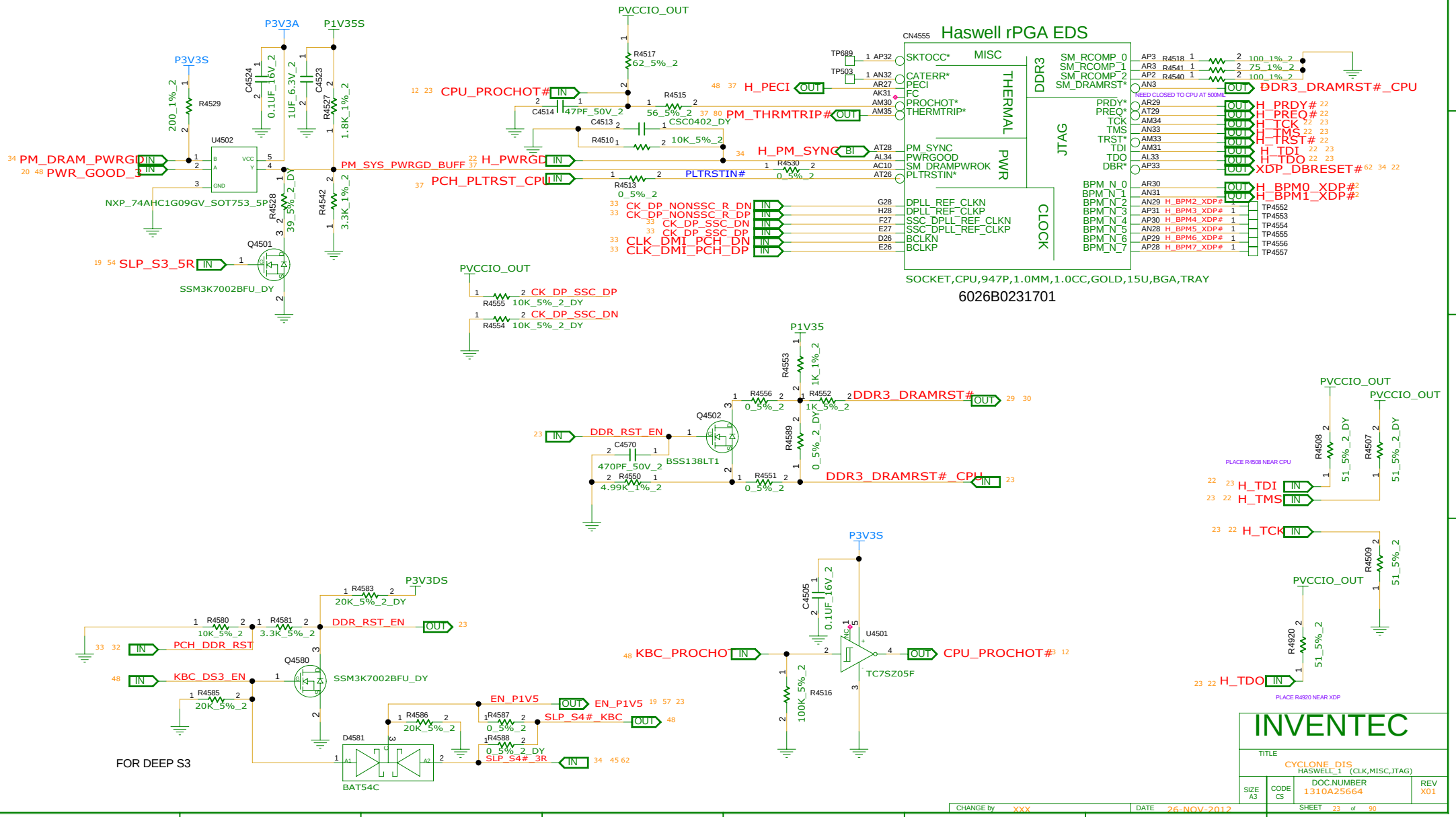
PCH XDP CONNECTOR

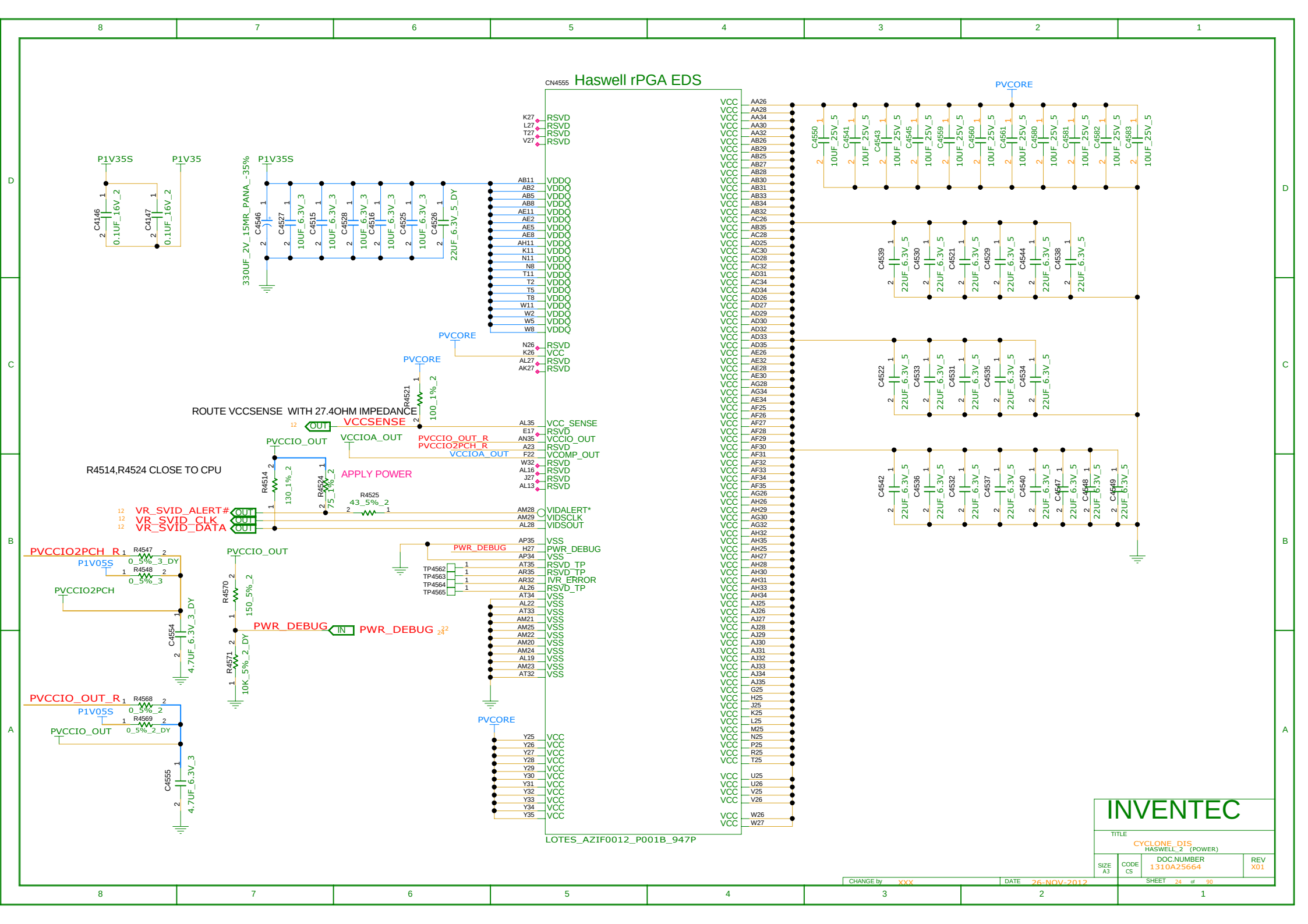
NON-INSTALL CN4936,R4937,R4936 ON PV BUILD

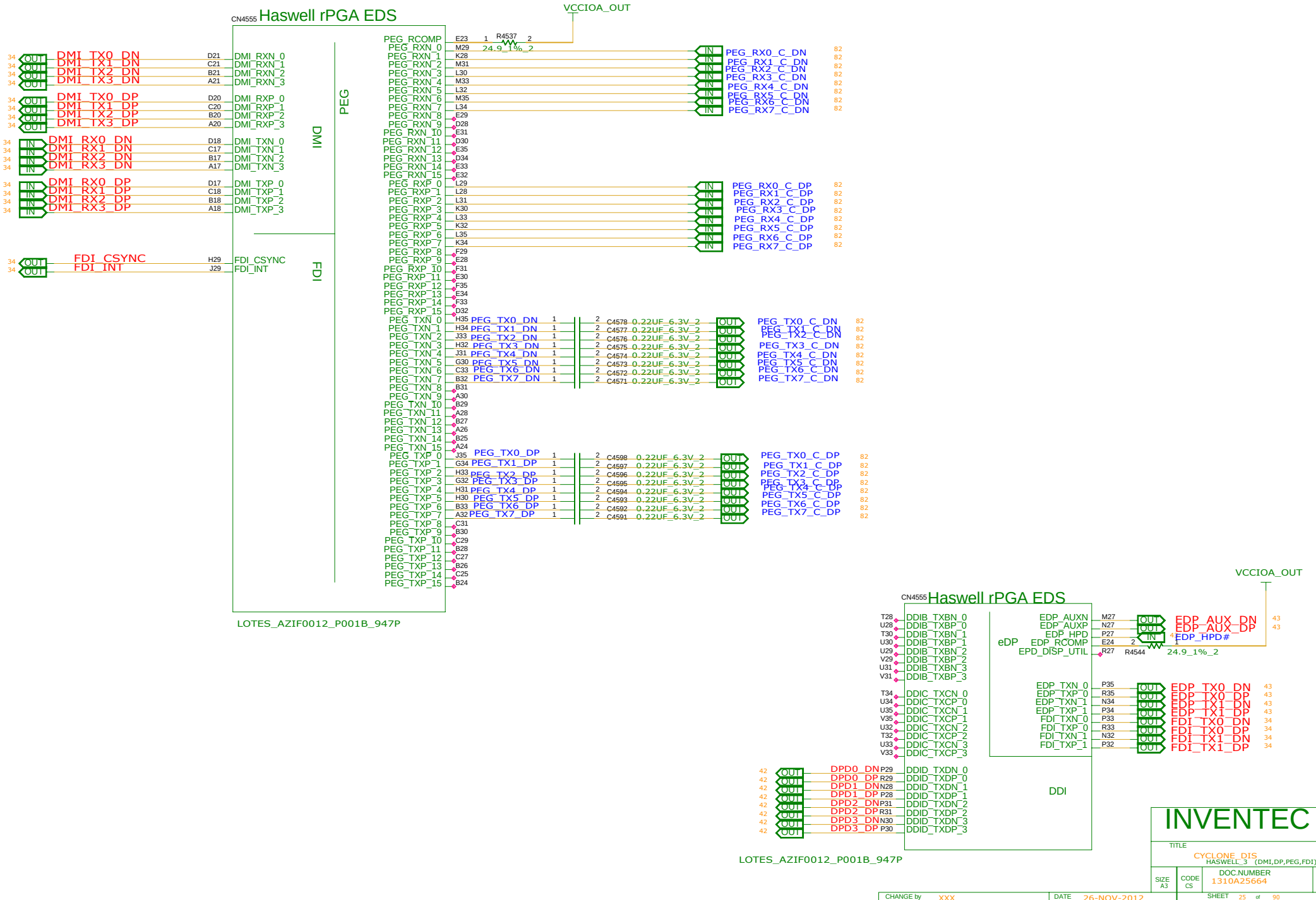
INVENTEC

TITLE: CYCLONE_DIS XDP_CONN			
SIZE: A3	CODE: CS	DOC.NUMBER: 1310A25664	REV: X01
CHANGE by: XXX	DATE: 26-NOV-2012	SHEET: 22 of 90	

REFERENCE NUMBER:4500~4699




CN4555
Haswell rPGA EDS
LOTES_AZIF0012_P001B_947P
P1V35S
P1V35
330UF_2V_15MR_PANA_-35%
PVCORE
ROUTE VCCSENSE WITH 27.4OHM IMPEDANCE
VCCSENSE
VCC_SENSE
VCCIO_OUT
VCCIOA_OUT
PVCCIO_OUT_R
PVCCIO2PCH_R
VCOMP_OUT
R4514,R4524 CLOSE TO CPU
APPLY POWER
VR_SVID_ALERT#
VR_SVID_CLK
VR_SVID_DATA
VIDALERT*
VIDSCLK
VIDSOUT
PWR_DEBUG
PVCCIO2PCH_R
PVCCIO2PCH
PVCCIO_OUT_R
P1V05S
IVR_ERROR
RSVD_TP
VSS
VCC
VDDQ
RSVD
INVENTEC
CYCLONE_DIS
HASWELL_2 (POWER)
DOC.NUMBER
1310A25664
REV
X01
SIZE
A3
CODE
CS
SHEET 24 of 90
CHANGE by XXX
DATE 26-NOV-2012


CN4555 Haswell rPGA EDS
VCCIOA_OUT
R4537 24.9_1%_2
DMI
PEG
FDI
DMI_TX0_DN
DMI_TX1_DN
DMI_TX2_DN
DMI_TX3_DN
DMI_TX0_DP
DMI_TX1_DP
DMI_TX2_DP
DMI_TX3_DP
DMI_RX0_DN
DMI_RX1_DN
DMI_RX2_DN
DMI_RX3_DN
DMI_RX0_DP
DMI_RX1_DP
DMI_RX2_DP
DMI_RX3_DP
FDI_CSYNC
FDI_INT
PEG_RCOMP
PEG_RXN_0
PEG_RXN_1
PEG_RXN_2
PEG_RXN_3
PEG_RXN_4
PEG_RXN_5
PEG_RXN_6
PEG_RXN_7
PEG_RXN_8
PEG_RXN_9
PEG_RXN_10
PEG_RXN_11
PEG_RXN_12
PEG_RXN_13
PEG_RXN_14
PEG_RXN_15
PEG_RXP_0
PEG_RXP_1
PEG_RXP_2
PEG_RXP_3
PEG_RXP_4
PEG_RXP_5
PEG_RXP_6
PEG_RXP_7
PEG_RXP_8
PEG_RXP_9
PEG_RXP_10
PEG_RXP_11
PEG_RXP_12
PEG_RXP_13
PEG_RXP_14
PEG_RXP_15
PEG_TXN_0
PEG_TXN_1
PEG_TXN_2
PEG_TXN_3
PEG_TXN_4
PEG_TXN_5
PEG_TXN_6
PEG_TXN_7
PEG_TXN_8
PEG_TXN_9
PEG_TXN_10
PEG_TXN_11
PEG_TXN_12
PEG_TXN_13
PEG_TXN_14
PEG_TXN_15
PEG_TXP_0
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PEG_TXP_8
PEG_TXP_9
PEG_TXP_10
PEG_TXP_11
PEG_TXP_12
PEG_TXP_13
PEG_TXP_14
PEG_TXP_15
PEG_RX0_C_DN
PEG_RX1_C_DN
PEG_RX2_C_DN
PEG_RX3_C_DN
PEG_RX4_C_DN
PEG_RX5_C_DN
PEG_RX6_C_DN
PEG_RX7_C_DN
PEG_RX0_C_DP
PEG_RX1_C_DP
PEG_RX2_C_DP
PEG_RX3_C_DP
PEG_RX4_C_DP
PEG_RX5_C_DP
PEG_RX6_C_DP
PEG_RX7_C_DP
PEG_TX0_DN
PEG_TX1_DN
PEG_TX2_DN
PEG_TX3_DN
PEG_TX4_DN
PEG_TX5_DN
PEG_TX6_DN
PEG_TX7_DN
0.22UF_6.3V_2
PEG_TX0_C_DN
PEG_TX1_C_DN
PEG_TX2_C_DN
PEG_TX3_C_DN
PEG_TX4_C_DN
PEG_TX5_C_DN
PEG_TX6_C_DN
PEG_TX7_C_DN
PEG_TX0_DP
PEG_TX1_DP
PEG_TX2_DP
PEG_TX3_DP
PEG_TX4_DP
PEG_TX5_DP
PEG_TX6_DP
PEG_TX7_DP
PEG_TX0_C_DP
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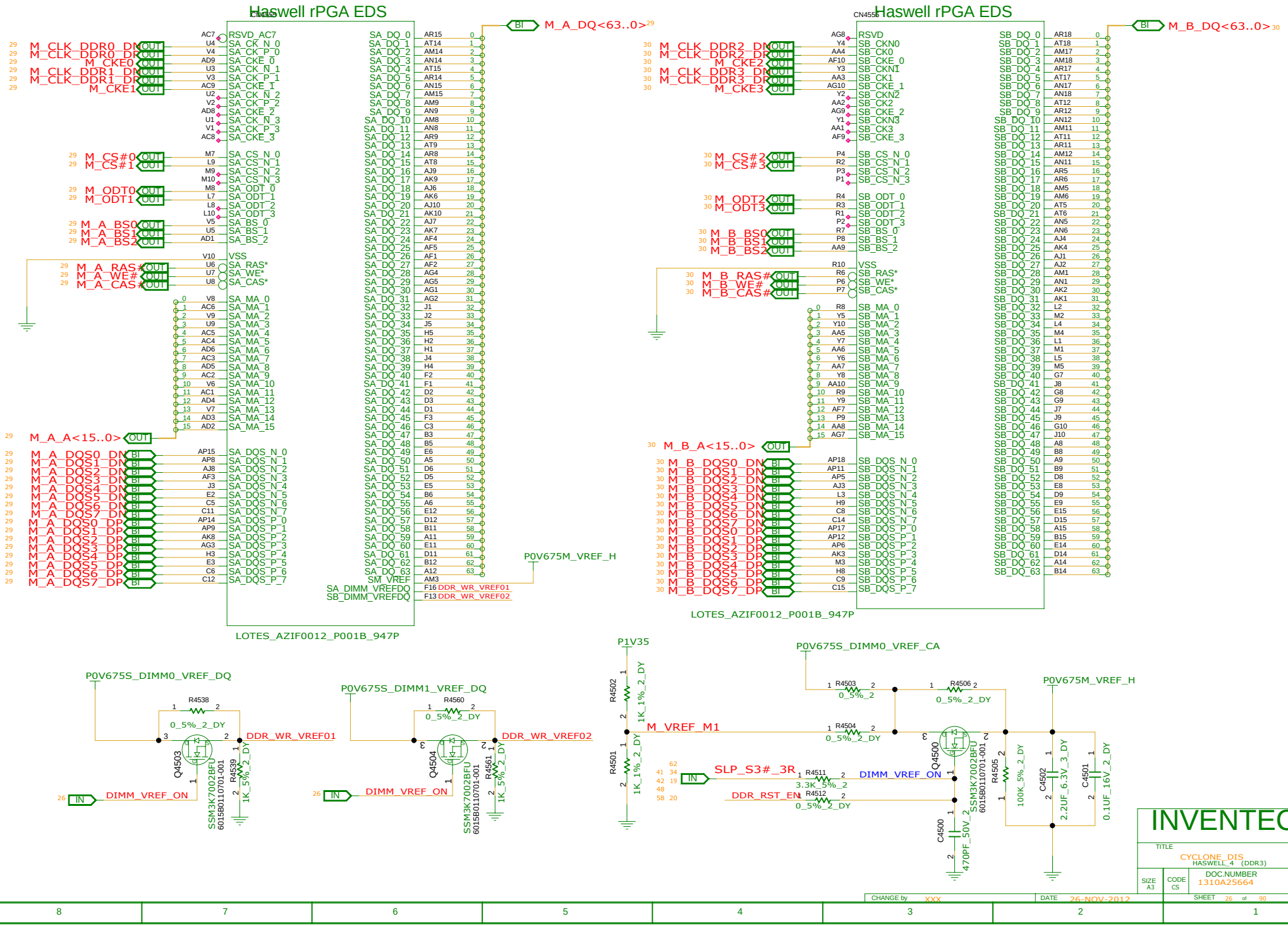
PEG_TX2_C_DP
PEG_TX3_C_DP
PEG_TX4_C_DP
PEG_TX5_C_DP
PEG_TX6_C_DP
PEG_TX7_C_DP
LOTES_AZIF0012_P001B_947P
CN4555 Haswell rPGA EDS
VCCIOA_OUT
eDP
DDI
EDP_AUXN
EDP_AUXP
EDP_HPD
EDP_RCOMP
EPD_DISP_UTIL
EDP_HPD#
R4544 24.9_1%_2
EDP_AUX_DN
EDP_AUX_DP
EDP_TXN_0
EDP_TXP_0
EDP_TXN_1
EDP_TXP_1
FDI_TXN_0
FDI_TXP_0
FDI_TXN_1
FDI_TXP_1
EDP_TX0_DN
EDP_TX0_DP
EDP_TX1_DN
EDP_TX1_DP
FDI_TX0_DN
FDI_TX0_DP
FDI_TX1_DN
FDI_TX1_DP
DDIB_TXBN_0
DDIB_TXBP_0
DDIB_TXBN_1
DDIB_TXBP_1
DDIB_TXBN_2
DDIB_TXBP_2
DDIB_TXBN_3
DDIB_TXBP_3
DDIC_TXCN_0
DDIC_TXCP_0
DDIC_TXCN_1
DDIC_TXCP_1
DDIC_TXCN_2
DDIC_TXCP_2
DDIC_TXCN_3
DDIC_TXCP_3
DDID_TXDN_0
DDID_TXDP_0
DDID_TXDN_1
DDID_TXDP_1
DDID_TXDN_2
DDID_TXDP_2
DDID_TXDN_3
DDID_TXDP_3
DPD0_DN
DPD0_DP
DPD1_DN
DPD1_DP
DPD2_DN
DPD2_DP
DPD3_DN
DPD3_DP
LOTES_AZIF0012_P001B_947P
INVENTEC
TITLE
CYCLONE_DIS
HASWELL_3 (DMI,DP,PEG,FDI)
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
SHEET 25 of 90


Haswell rPGA EDS
CN4555
M_CLK_DDR0_DN
M_CLK_DDR0_DP
M_CKE0
M_CLK_DDR1_DN
M_CLK_DDR1_DP
M_CKE1
M_CS#0
M_CS#1
M_ODT0
M_ODT1
M_A_BS0
M_A_BS1
M_A_BS2
M_A_RAS#
M_A_WE#
M_A_CAS#
M_A_A<15..0>
M_A_DQS0_DN
M_A_DQS1_DN
M_A_DQS2_DN
M_A_DQS3_DN
M_A_DQS4_DN
M_A_DQS5_DN
M_A_DQS6_DN
M_A_DQS7_DN
M_A_DQS0_DP
M_A_DQS1_DP
M_A_DQS2_DP
M_A_DQS3_DP
M_A_DQS4_DP
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P0V675M_VREF_H
LOTES_AZIF0012_P001B_947P
Haswell rPGA EDS
M_CLK_DDR2_DN
M_CLK_DDR2_DP
M_CKE2
M_CLK_DDR3_DN
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M_B_BS1
M_B_BS2
M_B_RAS#
M_B_WE#
M_B_CAS#
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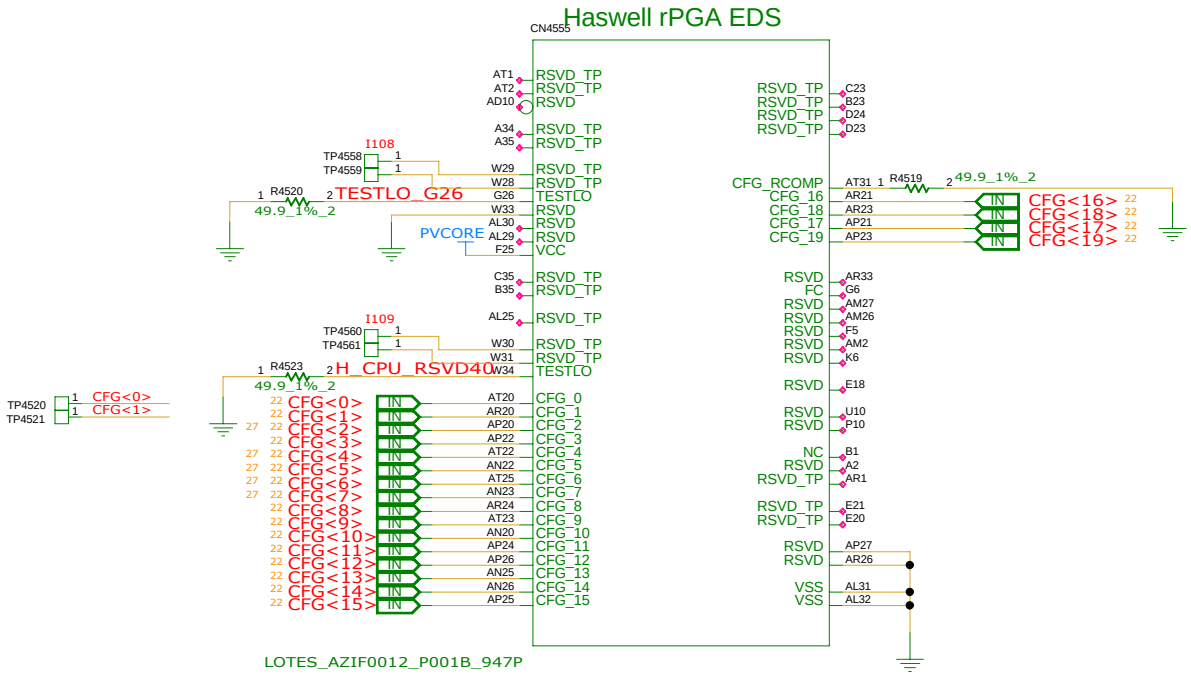
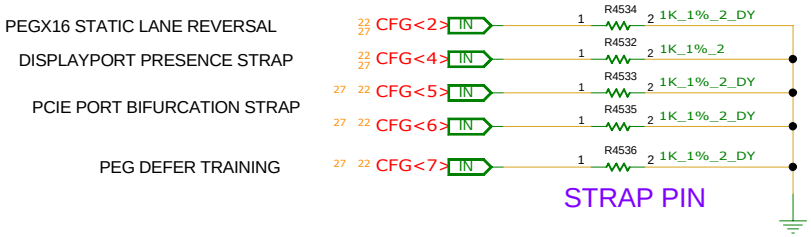
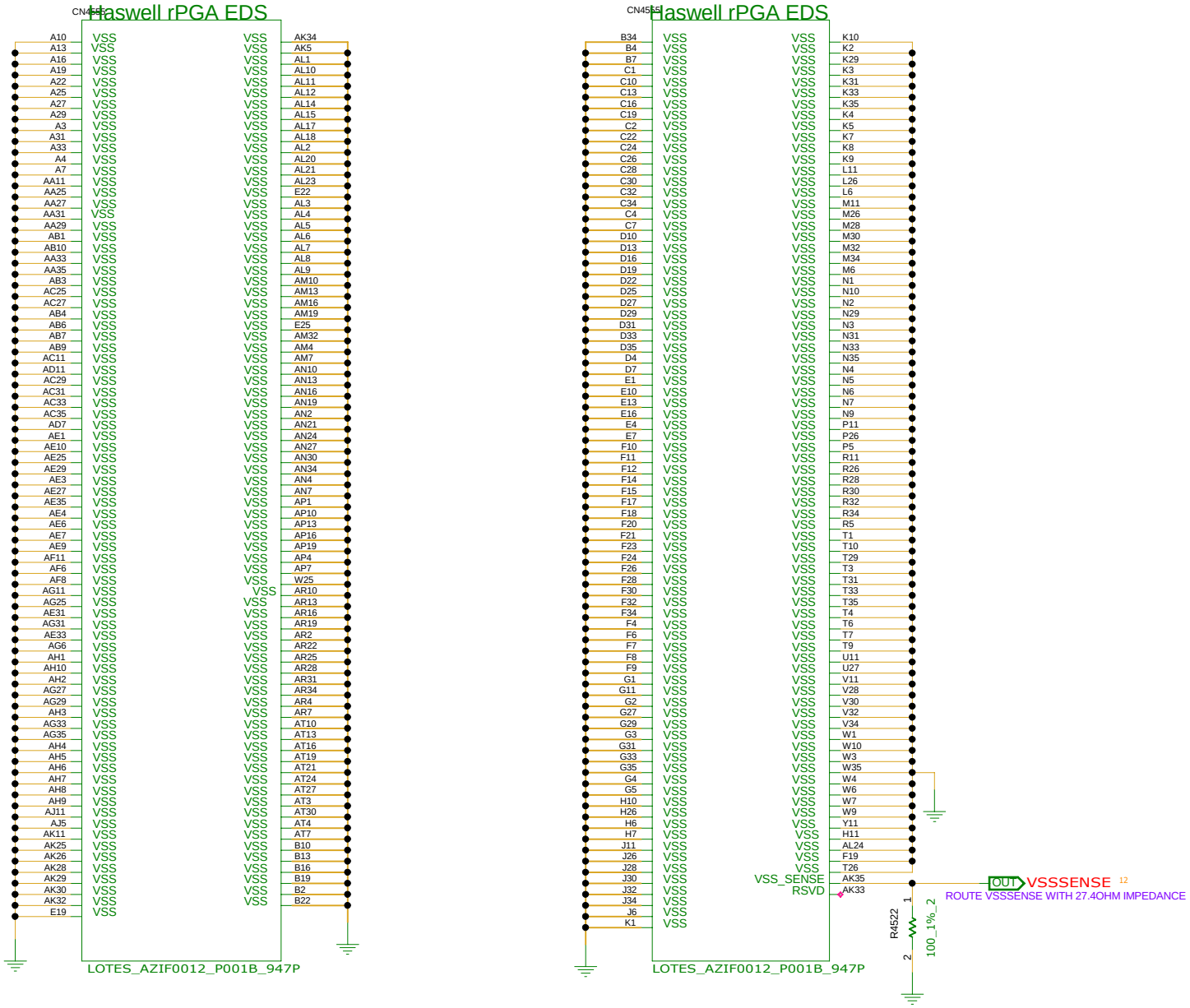
M_B_DQS0_DN
M_B_DQS1_DN
M_B_DQS2_DN
M_B_DQS3_DN
M_B_DQS4_DN
M_B_DQS5_DN
M_B_DQS6_DN
M_B_DQS7_DN
M_B_DQS0_DP
M_B_DQS1_DP
M_B_DQS2_DP
M_B_DQS3_DP
M_B_DQS4_DP
M_B_DQS5_DP
M_B_DQS6_DP
M_B_DQS7_DP
M_B_DQ<63..0>
LOTES_AZIF0012_P001B_947P
P0V675S_DIMM0_VREF_DQ
R4538
0_5%_2_DY
DDR_WR_VREF01
Q4503
SSM3K7002BFU
6015B0110701-001
R4539
1K_5%_2_DY
DIMM_VREF_ON
P0V675S_DIMM1_VREF_DQ
R4560
0_5%_2_DY
DDR_WR_VREF02
Q4504
SSM3K7002BFU
6015B0110701-001
R4561
1K_5%_2_DY
DIMM_VREF_ON
P1V35
R4502
1K_1%_2_DY
M_VREF_M1
R4501
1K_1%_2_DY
P0V675S_DIMM0_VREF_CA
R4503
0_5%_2
R4506
0_5%_2_DY
R4504
0_5%_2_DY
SLP_S3#_3R
R4511
3.3K_5%_2
DDR_RST_EN
R4512
0_5%_2_DY
DIMM_VREF_ON
Q4500
SSM3K7002BFU
6015B0110701-001
R4505
100K_5%_2_DY
C4500
470PF_50V_2
C4502
2.2UF_6.3V_3_DY
C4501
0.1UF_16V_2_DY
P0V675M_VREF_H
INVENTEC
TITLE
CYCLONE_DIS
HASWELL_4 (DDR3)
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
SHEET 26 of 90
CHANGE by XXX
DATE 26-NOV-2012

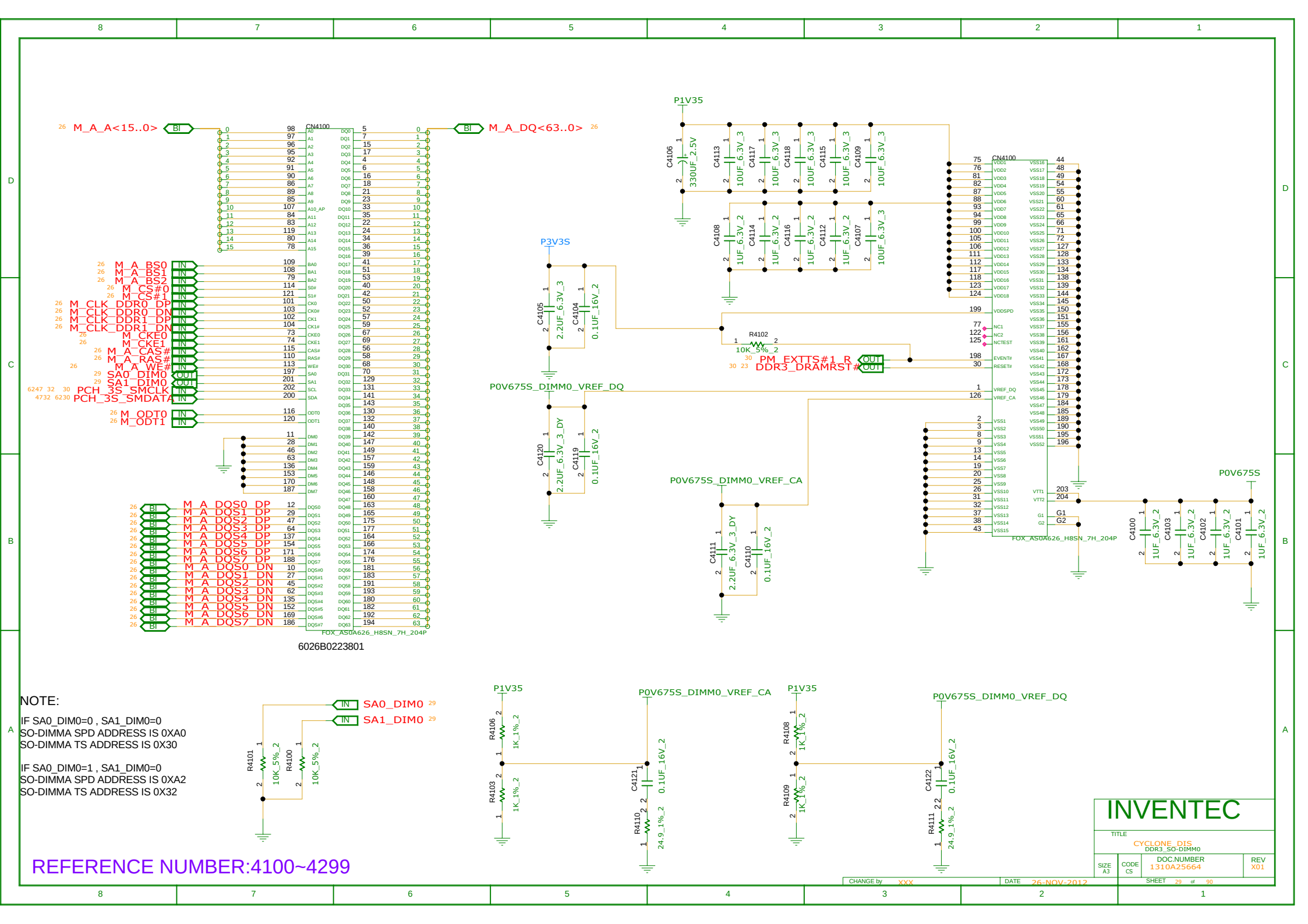




INVENTEC

TITLE: CYCLONE_DIS HASWELL_5 (CFG)			
SIZE A3	CODE CS	DOC.NUMBER 1310A25664	REV X01
CHANGE by XXX	DATE 26-NOV-2012	SHEET 27 of 90	


CN4555
Haswell rPGA EDS
A10 A13 A16 A19 A22 A25 A27 A29 A3 A31 A33 A4 A7 AA11 AA25 AA27 AA31 AA29 AB1 AB10 AA33 AA35 AB3 AC25 AC27 AB4 AB6 AB7 AB9 AC11 AD11 AC29 AC31 AC33 AC35 AD7 AE1 AE10 AE25 AE29 AE3 AE27 AE35 AE4 AE6 AE7 AE9 AF11 AF6 AF8 AG11 AG25 AE31 AG31 AE33 AG6 AH1 AH10 AH2 AG27 AG29 AH3 AG33 AG35 AH4 AH5 AH6 AH7 AH8 AH9 AJ11 AJ5 AK11 AK25 AK26 AK28 AK29 AK30 AK32 E19
VSS
AK34 AK5 AL1 AL10 AL11 AL12 AL14 AL15 AL17 AL18 AL2 AL20 AL21 AL23 E22 AL3 AL4 AL5 AL6 AL7 AL8 AL9 AM10 AM13 AM16 AM19 E25 AM32 AM4 AM7 AN10 AN13 AN16 AN19 AN2 AN21 AN24 AN27 AN30 AN34 AN4 AN7 AP1 AP10 AP13 AP16 AP19 AP4 AP7 W25 AR10 AR13 AR16 AR19 AR2 AR22 AR25 AR28 AR31 AR34 AR4 AR7 AT10 AT13 AT16 AT19 AT21 AT24 AT27 AT3 AT30 AT4 AT7 B10 B13 B16 B19 B2 B22
LOTES_AZIF0012_P001B_947P
CN4555
Haswell rPGA EDS
B34 B4 B7 C1 C10 C13 C16 C19 C2 C22 C24 C26 C28 C30 C32 C34 C4 C7 D10 D13 D16 D19 D22 D25 D27 D29 D31 D33 D35 D4 D7 E1 E10 E13 E16 E4 E7 F10 F11 F12 F14 F15 F17 F18 F20 F21 F23 F24 F26 F28 F30 F32 F34 F4 F6 F7 F8 F9 G1 G11 G2 G27 G29 G3 G31 G33 G35 G4 G5 H10 H26 H6 H7 J11 J26 J28 J30 J32 J34 J6 K1
VSS
K10 K2 K29 K3 K31 K33 K35 K4 K5 K7 K8 K9 L11 L26 L6 M11 M26 M28 M30 M32 M34 M6 N1 N10 N2 N29 N3 N31 N33 N35 N4 N5 N6 N7 N9 P11 P26 P5 R11 R26 R28 R30 R32 R34 R5 T1 T10 T29 T3 T31 T33 T35 T4 T6 T7 T9 U11 U27 V11 V28 V30 V32 V34 W1 W10 W3 W35 W4 W6 W7 W9 Y11 H11 AL24 F19 T26
VSS_SENSE AK35
RSVD AK33
LOTES_AZIF0012_P001B_947P
OUT VSSSENSE 12
ROUTE VSSSENSE WITH 27.4OHM IMPEDANCE
R4522
1
2
100_1%_2
INVENTEC
TITLE
CYCLONE_DIS
HASWELL_6 (GND,RESERVED)
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
SHEET 28 of 90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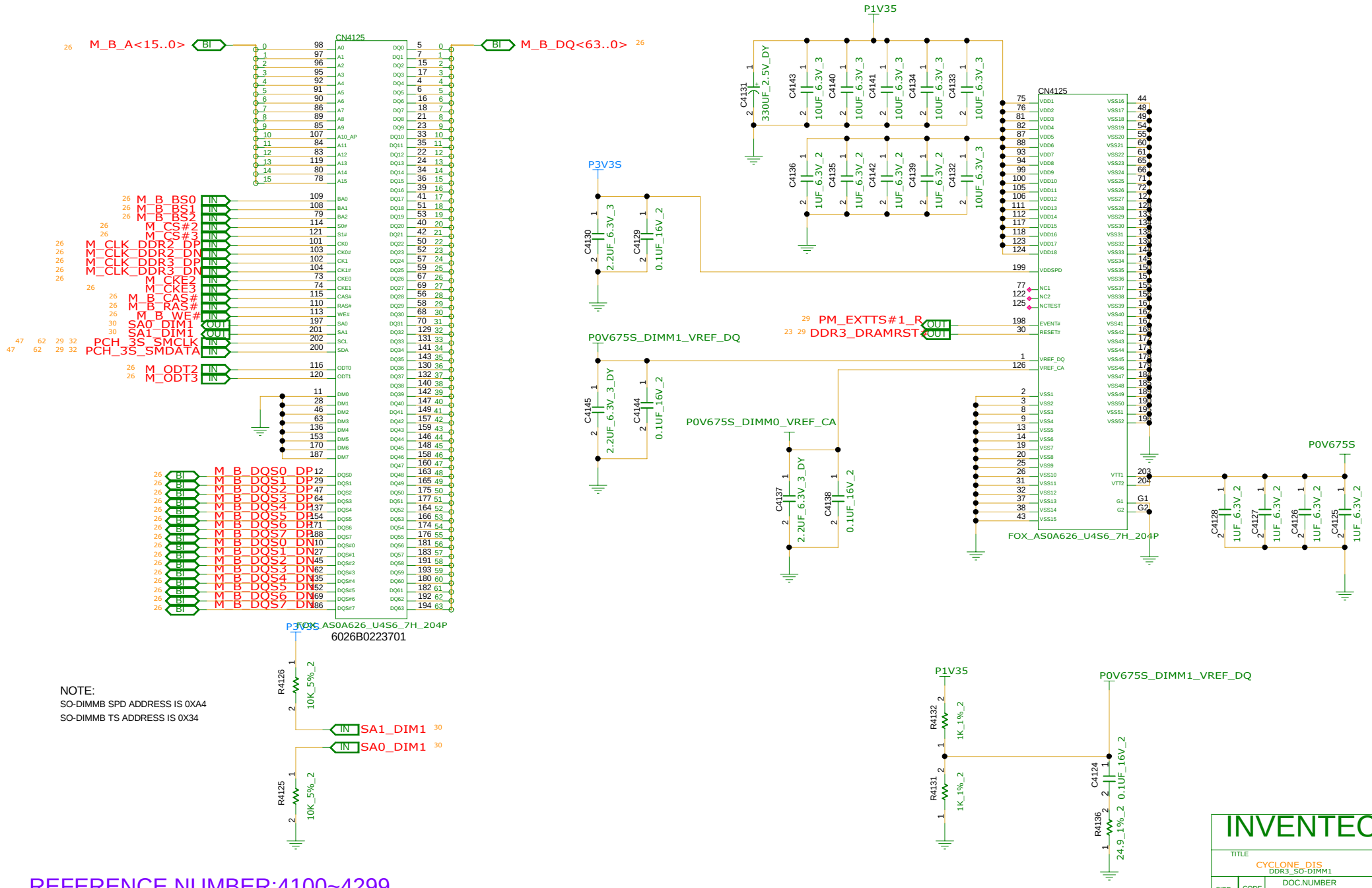
M_A_BS1
M_A_BS2
M_CS#0
M_CS#1
M_CLK_DDR0_DP
M_CLK_DDR0_DN
M_CLK_DDR1_DP
M_CLK_DDR1_DN
M_CKE0
M_CKE1
M_A_CAS#
M_A_RAS#
M_A_WE#
SA0_DIM0
SA1_DIM0
PCH_3S_SMCLK
PCH_3S_SMDATA
M_ODT0
M_ODT1
M_A_DQS0_DP
M_A_DQS1_DP
M_A_DQS2_DP
M_A_DQS3_DP
M_A_DQS4_DP
M_A_DQS5_DP
M_A_DQS6_DP
M_A_DQS7_DP
M_A_DQS0_DN
M_A_DQS1_DN
M_A_DQS2_DN
M_A_DQS3_DN
M_A_DQS4_DN
M_A_DQS5_DN
M_A_DQS6_DN
M_A_DQS7_DN
P1V35
P3V3S
P0V675S_DIMM0_VREF_DQ
P0V675S_DIMM0_VREF_CA
P0V675S
R4102
10K_5%_2
PM_EXTTS#1_R
DDR3_DRAMRST#
6026B0223801
NOTE:
IF SA0_DIM0=0 , SA1_DIM0=0
SO-DIMMA SPD ADDRESS IS 0XA0
SO-DIMMA TS ADDRESS IS 0X30
IF SA0_DIM0=1 , SA1_DIM0=0
SO-DIMMA SPD ADDRESS IS 0XA2
SO-DIMMA TS ADDRESS IS 0X32
R4101
R4100
10K_5%_2
R4106
R4103
R4108
R4109
1K_1%_2
R4110
R4111
24.9_1%_2
C4121
C4122
0.1UF_16V_2
REFERENCE NUMBER:4100~4299
INVENTEC
TITLE
CYCLONE_DIS
DDR3_SO-DIMM0
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
SHEET 29 of 90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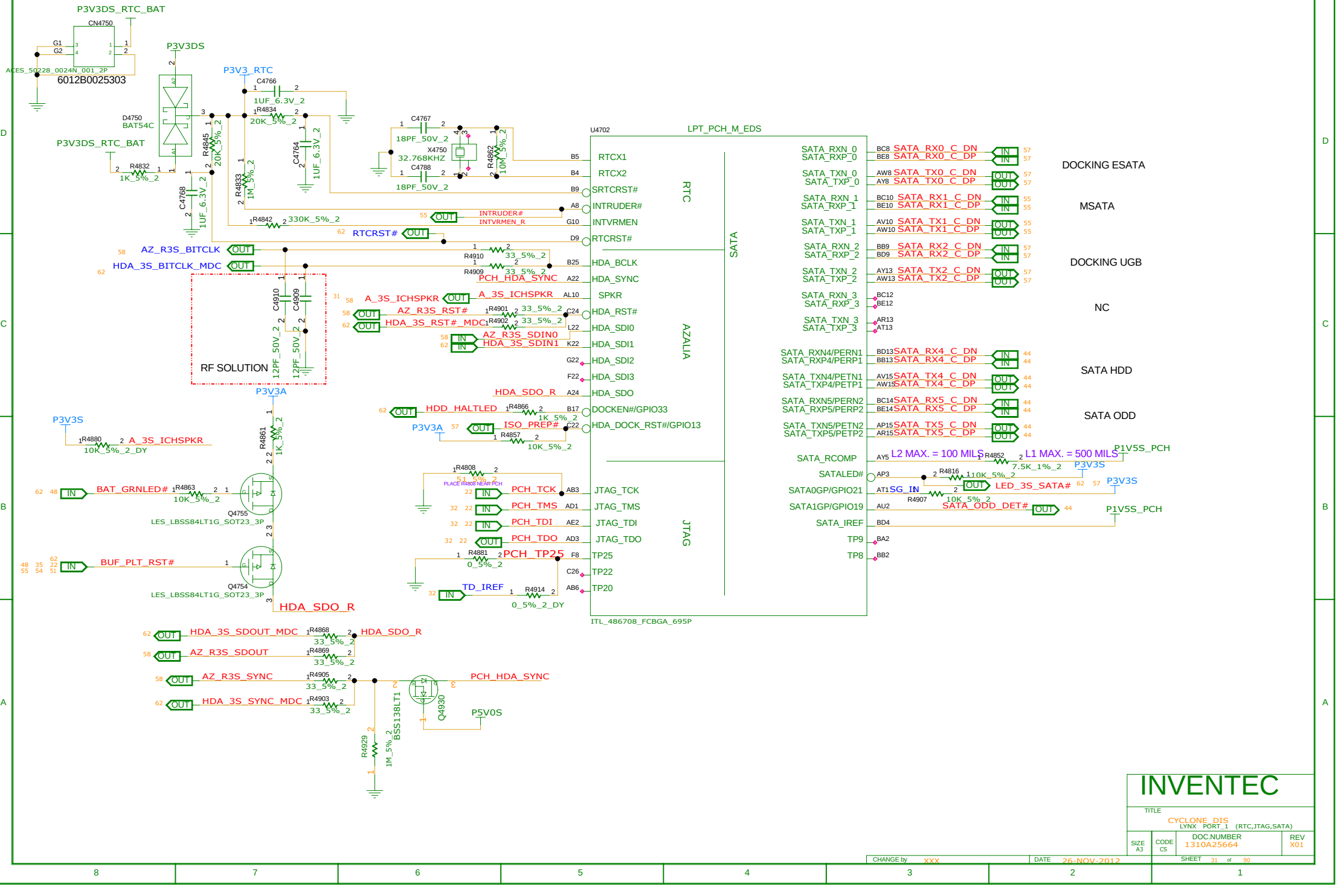
P0V675S_DIMM1_VREF_DQ
P0V675S_DIMM0_VREF_CA
P0V675S
PM_EXTTS#1_R
DDR3_DRAMRST#
M_B_BS0
M_B_BS1
M_B_BS2
M_CS#2
M_CS#3
M_CLK_DDR2_DP
M_CLK_DDR2_DN
M_CLK_DDR3_DP
M_CLK_DDR3_DN
M_CKE2
M_CKE3
M_B_CAS#
M_B_RAS#
M_B_WE#
SA0_DIM1
SA1_DIM1
PCH_3S_SMCLK
PCH_3S_SMDATA
M_ODT2
M_ODT3
M_B_DQS0_DP
M_B_DQS1_DP
M_B_DQS2_DP
M_B_DQS3_DP
M_B_DQS4_DP
M_B_DQS5_DP
M_B_DQS6_DP
M_B_DQS7_DP
M_B_DQS0_DN
M_B_DQS1_DN
M_B_DQS2_DN
M_B_DQS3_DN
M_B_DQS4_DN
M_B_DQS5_DN
M_B_DQS6_DN
M_B_DQS7_DN
R4126
10K_5%_2
R4125
10K_5%_2
R4132
1K_1%_2
R4131
1K_1%_2
R4136
24.9_1%_2
C4124
0.1UF_16V_2
NOTE:
SO-DIMMB SPD ADDRESS IS 0XA4
SO-DIMMB TS ADDRESS IS 0X34
REFERENCE NUMBER:4100~4299
INVENTEC
TITLE
CYCLONE_DIS
DDR3_SO-DIMM1
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
SHEET 30 of 90


P3V3DS_RTC_BAT
CN4750
6012B0025303
P3V3DS
P3V3_RTC
D4750
BAT54C
C4766
1UF_6.3V_2
R4834
20K_5%_2
R4845
20K_5%_2
C4764
1UF_6.3V_2
R4832
1K_5%_2
R4833
1M_5%_2
C4768
1UF_6.3V_2
C4767
18PF_50V_2
X4750
32.768KHZ
C4788
18PF_50V_2
R4862
10M_5%_2
U4702
LPT_PCH_M_EDS
RTCX1
RTCX2
SRTCRST#
INTRUDER#
INTVRMEN
RTCRST#
HDA_BCLK
HDA_SYNC
SPKR
HDA_RST#
HDA_SDI0
HDA_SDI1
HDA_SDI2
HDA_SDI3
HDA_SDO
DOCKEN#/GPIO33
HDA_DOCK_RST#/GPIO13
JTAG_TCK
JTAG_TMS
JTAG_TDI
JTAG_TDO
TP25
TP22
TP20
RTC
AZALIA
JTAG
SATA
ITL_486708_FCBGA_695P
INTRUDER#
INTVRMEN_R
RTCRST#
AZ_R3S_BITCLK
HDA_3S_BITCLK_MDC
R4910
33_5%_2
R4909
33_5%_2
PCH_HDA_SYNC
A_3S_ICHSPKR
AZ_R3S_RST#
HDA_3S_RST#_MDC
R4901
33_5%_2
R4902
33_5%_2
AZ_R3S_SDIN0
HDA_3S_SDIN1
C4910
C4909
12PF_50V_2
12PF_50V_2
RF SOLUTION
HDA_SDO_R
HDD_HALTLED
R4866
1K_5%_2
ISO_PREP#
R4857
10K_5%_2
P3V3A
P3V3S
R4880
10K_5%_2_DY
A_3S_ICHSPKR
R4861
1K_5%_2
BAT_GRNLED#
R4863
10K_5%_2
Q4755
LES_LBSS84LT1G_SOT23_3P
BUF_PLT_RST#
Q4754
LES_LBSS84LT1G_SOT23_3P
R4808
51_5%_2
PLACE R4808 NEAR PCH
PCH_TCK
PCH_TMS
PCH_TDI
PCH_TDO
R4881
0_5%_2
PCH_TP25
TD_IREF
R4914
0_5%_2_DY
HDA_3S_SDOUT_MDC
R4868
33_5%_2
AZ_R3S_SDOUT
R4869
33_5%_2
AZ_R3S_SYNC
R4905
33_5%_2
HDA_3S_SYNC_MDC
R4903
33_5%_2
Q4930
BSS138LT1
R4929
1M_5%_2
P5V0S
SATA_RXN_0
SATA_RXP_0
SATA_TXN_0
SATA_TXP_0
SATA_RXN_1
SATA_RXP_1
SATA_TXN_1
SATA_TXP_1
SATA_RXN_2
SATA_RXP_2
SATA_TXN_2
SATA_TXP_2
SATA_RXN_3
SATA_RXP_3
SATA_TXN_3
SATA_TXP_3
SATA_RXN4/PERN1
SATA_RXP4/PERP1
SATA_TXN4/PETN1
SATA_TXP4/PETP1
SATA_RXN5/PERN2
SATA_RXP5/PERP2
SATA_TXN5/PETN2
SATA_TXP5/PETP2
SATA_RCOMP
SATALED#
SATA0GP/GPIO21
SATA1GP/GPIO19
SATA_IREF
TP9
TP8
DOCKING ESATA
MSATA
DOCKING UGB
NC
SATA HDD
SATA ODD
L2 MAX. = 100 MILS
L1 MAX. = 500 MILS
R4852
7.5K_1%_2
P1V5S_PCH
R4816
10K_5%_2
LED_3S_SATA#
R4907
10K_5%_2
SATA_ODD_DET#
P1V5S_PCH
INVENTEC
TITLE
CYCLONE_DIS
LYNX_PORT_1 (RTC,JTAG,SATA)
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
SHEET 31 of 90

LAYOUT NOTE:JTAG_TMS TERMINATIONS NEED TO BE PLACED NEAR PCH
LAYOUT NOTE:JTAG_TDI TERMINATIONS NEED TO BE PLACED NEAR PCH
LAYOUT NOTE:JTAG_TDO TERMINATIONS NEED TO BE PLACED NEAR XDP

PLACEMENT NOTE

P3V3A

R4807 2 1 210_1%_2
R4886 2 1 210_1%_2
R4891 2 1 210_1%_2
R4806 2 1 100_1%_2
R4885 2 1 100_1%_2
R4889 2 1 100_1%_2

PCH_TDI OUT 22 31
PCH_TMS OUT 22 31
PCH_TDO OUT 22 31

P3V3S

Q4751
1 THERM_CLK_GPU IN 21 80
6 PCH_KBC_SMCLK
3 PCH_KBC_SMDATA
4 THERM_DATA_GPU IN 21 80
R4829 2.2K_5%_2
R4826 2.2K_5%_2
L2N7002DW1T1G
6015B0098401
P3V3DS

P3V3A

Q4753
IN PCH_SML1CLK 32
6 PCH_KBC_SMCLK IN 48
3 PCH_KBC_SMDATA IN 48
4 IN PCH_SML1DATA 32
R4827 2.2K_5%_2
R4856 2.2K_5%_2
L2N7002DW1T1G
6015B0098401

P3V3S

Q4752
1 PCH_3S_SMCLK IN 29 30 47 62
6 PCH_3A_SMCLK
3 PCH_3A_SMDATA
4 PCH_3S_SMDATA IN 29 30 47 62
R4913 2.2K_5%_2
R4830 2.2K_5%_2
R4792 2.2K_5%_2
R4828 2.2K_5%_2
L2N7002DW1T1G
6015B0098401
P3V3A
P3V3S

P3V3S

Q4759
NFC_3S_SMCLK IN 56
6 PCH_3M_SMCLK
3 PCH_3M_SMDATA
NFC_3S_SMDATA IN 56
R4814 2.2K_5%_2
R4815 499_1%_2
R4818 499_1%_2
R4819 2.2K_5%_2
L2N7002DW1T1G
6015B0098401
P3V3A
P3V3S

U4702 LPT_PCH_M_EDS

LPC
LPC_3S_AD(0) BI 51 50 48 A20 LAD_0
LPC_3S_AD(1) BI 51 50 48 C20 LAD_1
LPC_3S_AD(2) BI 51 50 48 A18 LAD_2
LPC_3S_AD(3) BI 51 50 48 C18 LAD_3
LPC_3S_FRAME# OUT 51 50 48 B21 LFRAME#
LPC_3S_DRQ0# IN 50 D21 LDRQ0#
PLT_ID2 G20 LDRQ1#/GPIO23
PCI_3S_SERIRQ OUT 51 50 48 AL11 SERIRQ

P3V3S
R4912 2 1 10K_5%_2
R4906 10K_5%_2_DY

SPI
SPI_CLK_FLH OUT 48 R4794 33_5%_2 R_SPI_CLK_FLH AJ11 SPI_CLK
SPI_CS0#_FLH IN 48 R4795 33_5%_2 R_SPI_CS0#_FLH AJ7 SPI_CS0#
TP739 AL7 SPI_CS1#
TP740 AJ10 SPI_CS2#
SPI_SI_FLH OUT 48 R4796 33_5%_2 R_SPI_SI_FLH AH1 SPI_MOSI
SPI_SO_FLH IN 48 R4799 0_5%_2 R_SPI_SO_FLH AH3 SPI_MISO
SPI_WP# IN 48 R4759 33_5%_2 R_SPI_WP# AJ4 SPI_IO2
SPI_HOLD#_DB IN 48 R4762 33_5%_2 R_SPI_HOLD#_DB AJ3 SPI_IO3

SMBus
SMBALERT#/GPIO11 N7 FPR_OFF IN 46
SMBCLK R10 PCH_3A_SMCLK OUT 22
SMBDATA U11 PCH_3A_SMDATA BI 22
SML0ALERT#/GPIO60 N8 PCH_DDR_RST OUT 23 33
SML0CLK U8 PCH_3M_SMCLK OUT 52
SML0DATA R7 PCH_3M_SMDATA BI 52
SML1ALERT#/PCHHOT#/GPIO74 H6
SML1CLK/GPIO58 K6 PCH_SML1CLK OUT 32
SML1DATA/GPIO75 N11 PCH_SML1DATA BI 32

C-Link
CL_CLK AF11 CL_CLK1 BI 54
CL_DATA AF10 CL_DATA1 BI 54
CL_RST# AF7 CL_RST#1 OUT 54

Thermal
TP1 BA45
TP2 BC45
TP4 BE43
TP3 BE44
TD_IREF AY43 R4841 8.2K_5%_2 OUT TD_IREF 31

P3V3A
NFC_RST# OUT 56 R4840 10K_5%_2

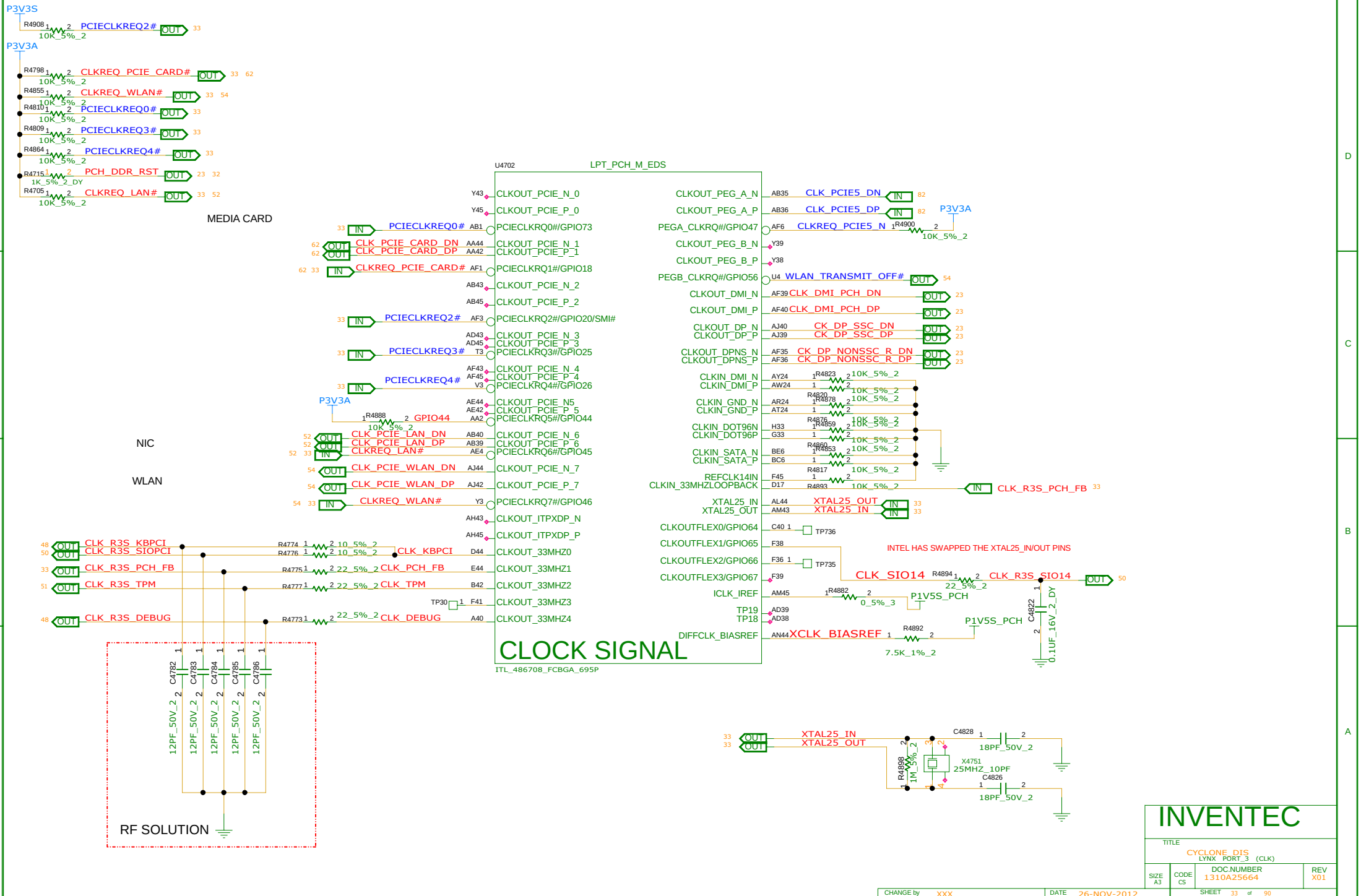
ITL_486708_FCBGA_695P

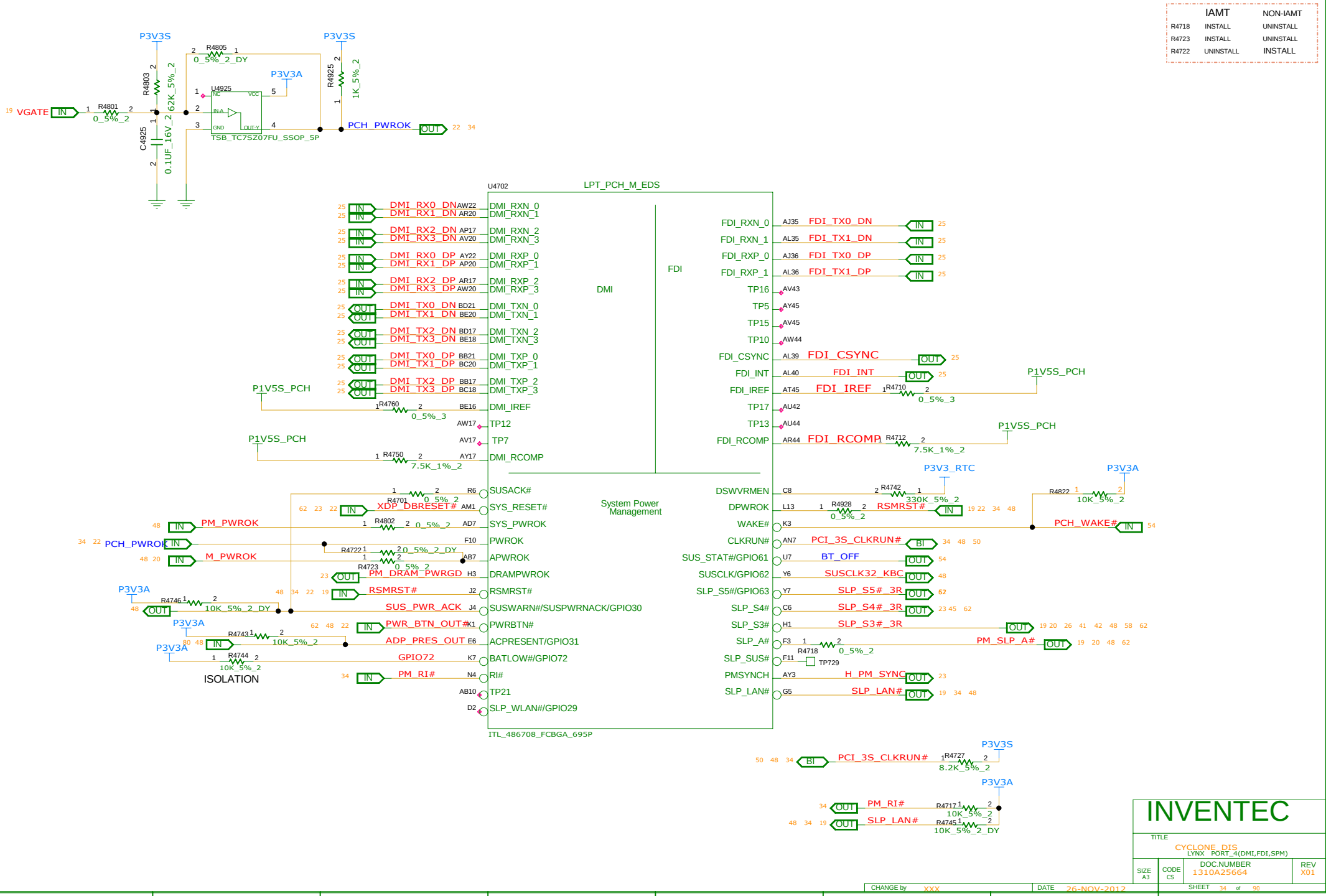
INVENTEC

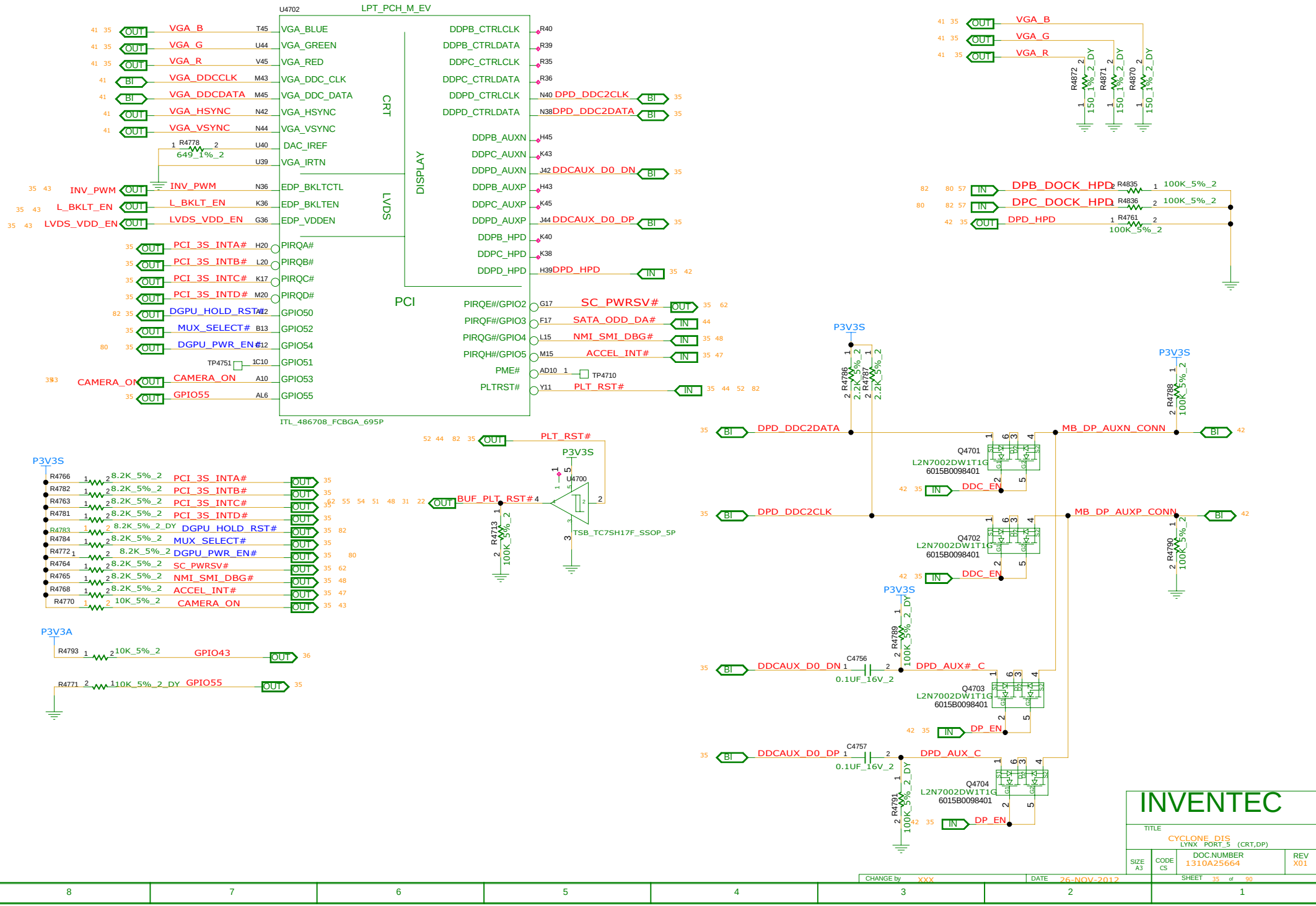
TITLE
CYCLONE_DIS
LYNX_PORT_2 (SPI,SMBUS,CL)

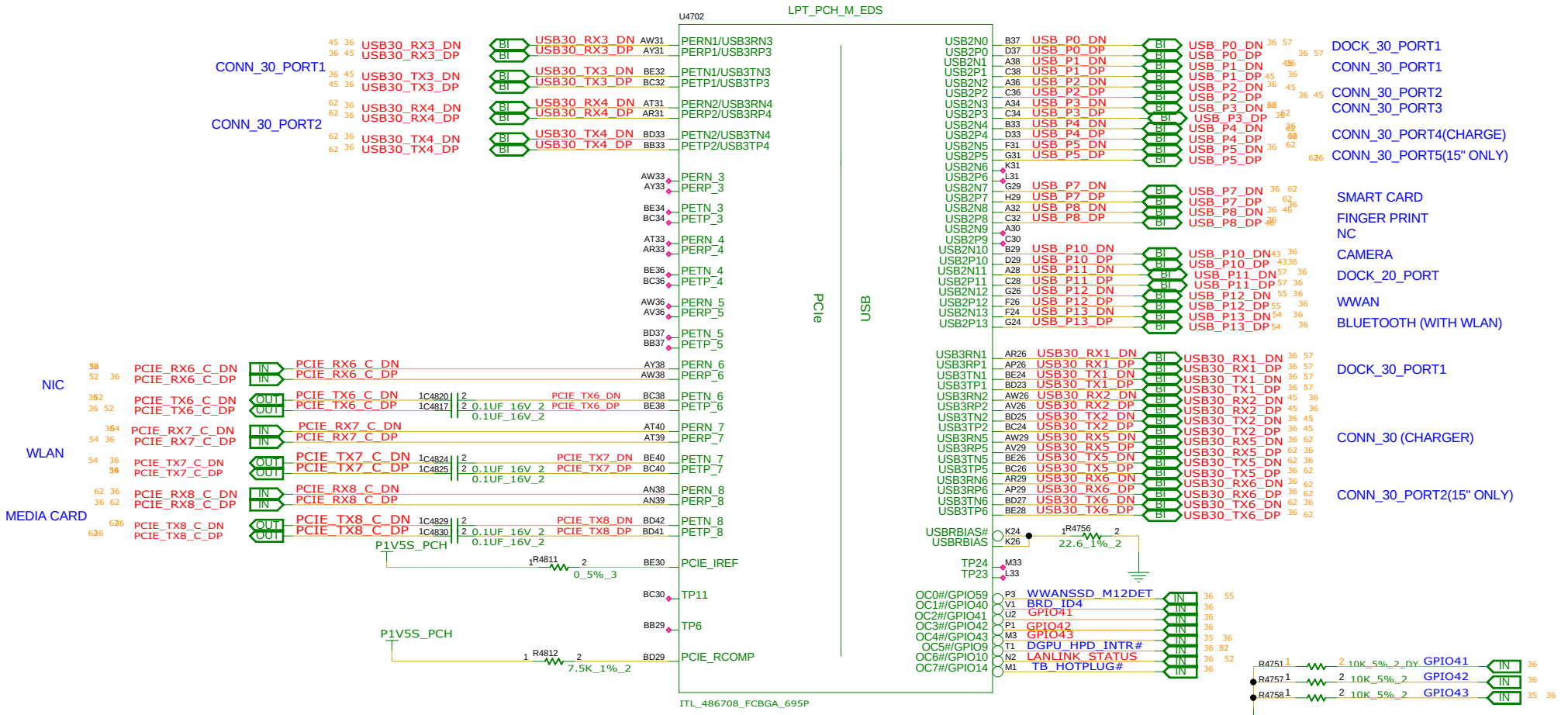
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX DATE 26-NOV-2012 SHEET 32 of 90


P3V3S
R4908 10K_5%_2 PCIECLKREQ2# OUT 33
P3V3A
R4798 10K_5%_2 CLKREQ_PCIE_CARD# OUT 33 62
R4855 10K_5%_2 CLKREQ_WLAN# OUT 33 54
R4810 10K_5%_2 PCIECLKREQ0# OUT 33
R4809 10K_5%_2 PCIECLKREQ3# OUT 33
R4864 10K_5%_2 PCIECLKREQ4# OUT 33
R4715 1K_5%_2_DY PCH_DDR_RST OUT 23 32
R4705 10K_5%_2 CLKREQ_LAN# OUT 33 52
MEDIA CARD
NIC
WLAN
U4702
LPT_PCH_M_EDS
CLOCK SIGNAL
ITL_486708_FCBGA_695P
CLKOUT_PCIE_N_0
CLKOUT_PCIE_P_0
PCIECLKRQ0#/GPIO73
CLKOUT_PCIE_N_1
CLKOUT_PCIE_P_1
PCIECLKRQ1#/GPIO18
CLKOUT_PCIE_N_2
CLKOUT_PCIE_P_2
PCIECLKRQ2#/GPIO20/SMI#
CLKOUT_PCIE_N_3
CLKOUT_PCIE_P_3
PCIECLKRQ3#/GPIO25
CLKOUT_PCIE_N_4
CLKOUT_PCIE_P_4
PCIECLKRQ4#/GPIO26
CLKOUT_PCIE_N5
CLKOUT_PCIE_P_5
PCIECLKRQ5#/GPIO44
CLKOUT_PCIE_N_6
CLKOUT_PCIE_P_6
PCIECLKRQ6#/GPIO45
CLKOUT_PCIE_N_7
CLKOUT_PCIE_P_7
PCIECLKRQ7#/GPIO46
CLKOUT_ITPXDP_N
CLKOUT_ITPXDP_P
CLKOUT_33MHZ0
CLKOUT_33MHZ1
CLKOUT_33MHZ2
CLKOUT_33MHZ3
CLKOUT_33MHZ4
CLKOUT_PEG_A_N
CLKOUT_PEG_A_P
PEGA_CLKRQ#/GPIO47
CLKOUT_PEG_B_N
CLKOUT_PEG_B_P
PEGB_CLKRQ#/GPIO56
CLKOUT_DMI_N
CLKOUT_DMI_P
CLKOUT_DP_N
CLKOUT_DP_P
CLKOUT_DPNS_N
CLKOUT_DPNS_P
CLKIN_DMI_N
CLKIN_DMI_P
CLKIN_GND_N
CLKIN_GND_P
CLKIN_DOT96N
CLKIN_DOT96P
CLKIN_SATA_N
CLKIN_SATA_P
REFCLK14IN
CLKIN_33MHZLOOPBACK
XTAL25_IN
XTAL25_OUT
CLKOUTFLEX0/GPIO64
CLKOUTFLEX1/GPIO65
CLKOUTFLEX2/GPIO66
CLKOUTFLEX3/GPIO67
ICLK_IREF
TP19
TP18
DIFFCLK_BIASREF
CLK_PCIE5_DN
CLK_PCIE5_DP
CLKREQ_PCIE5_N
WLAN_TRANSMIT_OFF#
CLK_DMI_PCH_DN
CLK_DMI_PCH_DP
CK_DP_SSC_DN
CK_DP_SSC_DP
CK_DP_NONSSC_R_DN
CK_DP_NONSSC_R_DP
CLK_R3S_PCH_FB
XTAL25_OUT
XTAL25_IN
XCLK_BIASREF
INTEL HAS SWAPPED THE XTAL25_IN/OUT PINS
CLK_SIO14
CLK_R3S_SIO14
P1V5S_PCH
CLK_R3S_KBPCI
CLK_R3S_SIOPCI
CLK_KBPCI
CLK_R3S_PCH_FB
CLK_PCH_FB
CLK_R3S_TPM
CLK_TPM
CLK_R3S_DEBUG
CLK_DEBUG
RF SOLUTION
C4782 C4783 C4784 C4785 C4786 12PF_50V_2
X4751 25MHZ_10PF
C4828 C4826 18PF_50V_2
R4498 1M_5%_2
C4822 0.1UF_16V_2_DY
INVENTEC
TITLE
CYCLONE_DIS
LYNX_PORT_3 (CLK)
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
SHEET 33 of 90


IAMT NON-IAMT
R4718 INSTALL UNINSTALL
R4723 INSTALL UNINSTALL
R4722 UNINSTALL INSTALL
U4702 LPT_PCH_M_EDS
DMI
FDI
System Power Management
ITL_486708_FCBGA_695P
TSB_TC7SZ07FU_SSOP_5P
ISOLATION
INVENTEC
TITLE
CYCLONE_DIS
LYNX_PORT_4(DMI,FDI,SPM)
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
SHEET 34 of 90


U4702
LPT_PCH_M_EV
VGA_B
VGA_G
VGA_R
VGA_DDCCLK
VGA_DDCDATA
VGA_HSYNC
VGA_VSYNC
R4778
649_1%_2
DAC_IREF
VGA_IRTN
INV_PWM
L_BKLT_EN
LVDS_VDD_EN
PCI_3S_INTA#
PCI_3S_INTB#
PCI_3S_INTC#
PCI_3S_INTD#
DGPU_HOLD_RST#
MUX_SELECT#
DGPU_PWR_EN#
TP4751
CAMERA_ON
GPIO55
VGA_BLUE
VGA_GREEN
VGA_RED
VGA_DDC_CLK
VGA_DDC_DATA
VGA_HSYNC
VGA_VSYNC
EDP_BKLTCTL
EDP_BKLTEN
EDP_VDDEN
PIRQA#
PIRQB#
PIRQC#
PIRQD#
GPIO50
GPIO52
GPIO54
GPIO51
GPIO53
GPIO55
CRT
LVDS
DISPLAY
PCI
DDPB_CTRLCLK
DDPB_CTRLDATA
DDPC_CTRLCLK
DDPC_CTRLDATA
DDPD_CTRLCLK
DDPD_CTRLDATA
DDPD_DDC2CLK
DDPD_DDC2DATA
DDPB_AUXN
DDPC_AUXN
DDPD_AUXN
DDPB_AUXP
DDPC_AUXP
DDPD_AUXP
DDCAUX_D0_DN
DDCAUX_D0_DP
DDPB_HPD
DDPC_HPD
DDPD_HPD
DPD_HPD
PIRQE#/GPIO2
PIRQF#/GPIO3
PIRQG#/GPIO4
PIRQH#/GPIO5
PME#
PLTRST#
SC_PWRSV#
SATA_ODD_DA#
NMI_SMI_DBG#
ACCEL_INT#
TP4710
PLT_RST#
ITL_486708_FCBGA_695P
P3V3S
R4766 8.2K_5%_2 PCI_3S_INTA#
R4782 8.2K_5%_2 PCI_3S_INTB#
R4763 8.2K_5%_2 PCI_3S_INTC#
R4781 8.2K_5%_2 PCI_3S_INTD#
R4783 8.2K_5%_2_DY DGPU_HOLD_RST#
R4784 8.2K_5%_2 MUX_SELECT#
R4772 8.2K_5%_2 DGPU_PWR_EN#
R4764 8.2K_5%_2 SC_PWRSV#
R4765 8.2K_5%_2 NMI_SMI_DBG#
R4768 8.2K_5%_2 ACCEL_INT#
R4770 10K_5%_2 CAMERA_ON
P3V3A
R4793 10K_5%_2 GPIO43
R4771 10K_5%_2_DY GPIO55
PLT_RST#
BUF_PLT_RST#
R4713 100K_5%_2
U4700
TSB_TC7SH17F_SSOP_5P
VGA_B
VGA_G
VGA_R
R4872 150_1%_2_DY
R4871 150_1%_2_DY
R4870 150_1%_2_DY
DPB_DOCK_HPD
DPC_DOCK_HPD
DPD_HPD
R4835 100K_5%_2
R4836 100K_5%_2
R4761 100K_5%_2
P3V3S
R4786 2.2K_5%_2
R4787 2.2K_5%_2
DPD_DDC2DATA
DPD_DDC2CLK
Q4701
L2N7002DW1T1G
6015B0098401
DDC_EN
MB_DP_AUXN_CONN
MB_DP_AUXP_CONN
R4788 100K_5%_2
R4790 100K_5%_2
R4789 100K_5%_2_DY
C4756 0.1UF_16V_2
C4757 0.1UF_16V_2
DPD_AUX#_C
DPD_AUX_C
Q4703
Q4704
DP_EN
R4791 100K_5%_2_DY
INVENTEC
TITLE
CYCLONE_DIS
LYNX_PORT_5 (CRT,DP)
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
SHEET 35 of 90



Platform IDs (Super I/O GPIOs)

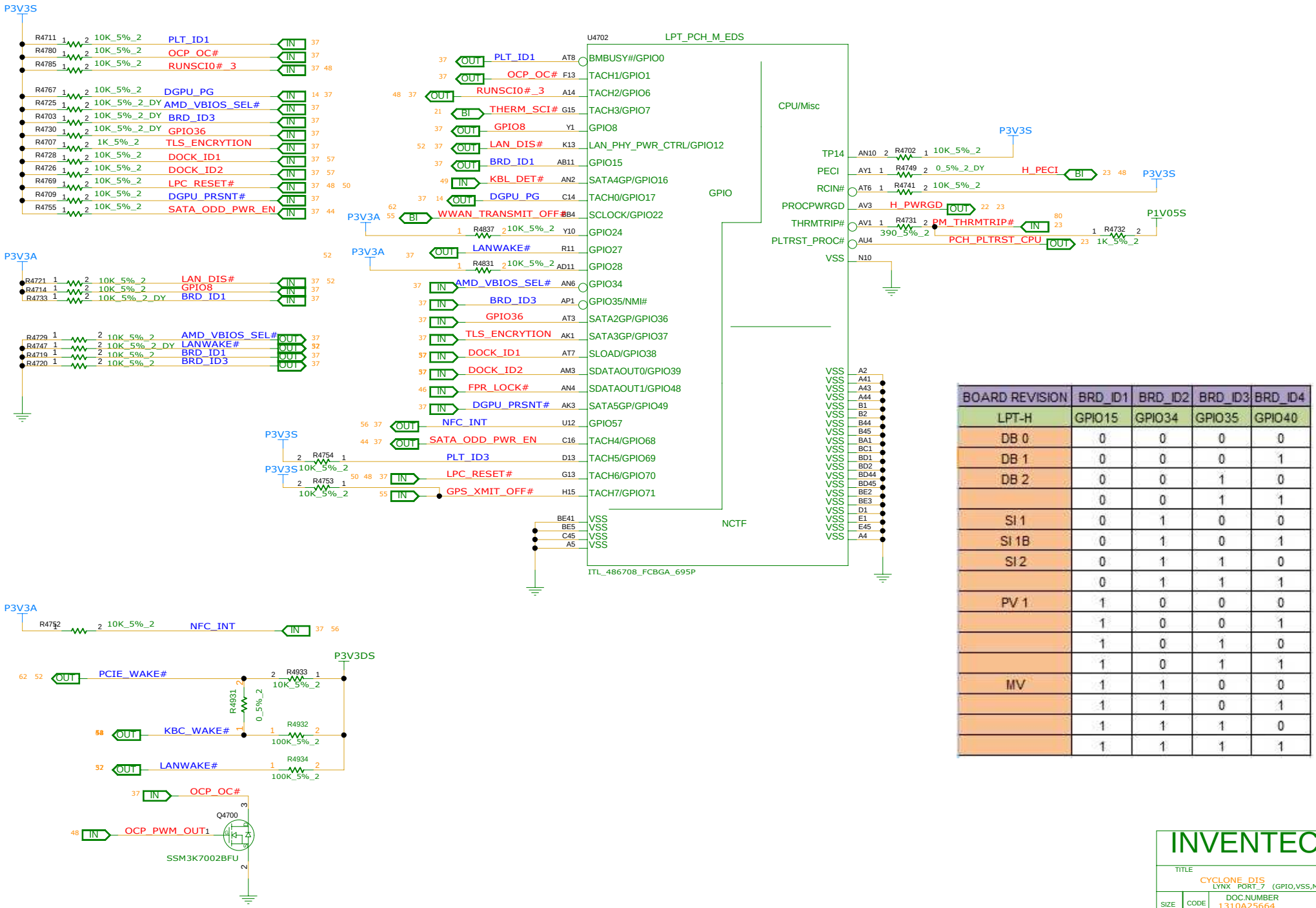
PLT_ID1	PLT_ID2	PLT_ID3					
GPIO43	GPIO42	GPIO41	PLATFORM	Series	ODM	CPU	Dock	COMMON BIOS
0	0	0	Titan 14"	B	TBD	AMD	Common	6
0	0	1	Cyclone 14"	B	TBD	Haswell	Common	7
0	1	0	Cyclone 15"	B	TBD	Haswell	Common	7
0	1	1	Cyclone 14"	W	TBD	Haswell	Common	7

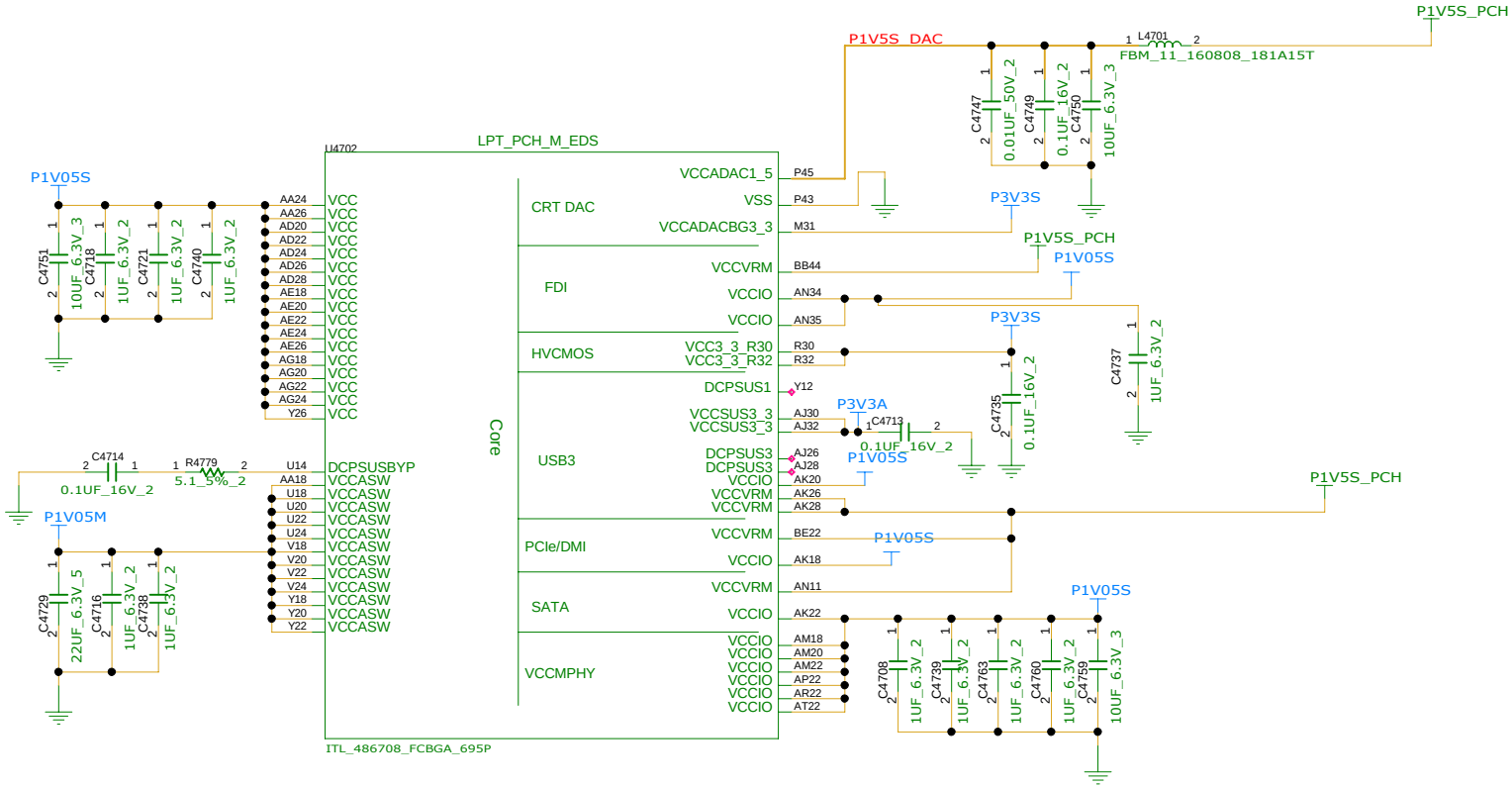
INVENTEC

TITLE: CYCLONE_DIS
LYNX_PORT_6 (PCIE,USB)

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX | DATE 26-NOV-2012 | SHEET 36 of 90


P3V3S
R4711 10K_5%_2 PLT_ID1
R4780 10K_5%_2 OCP_OC#
R4785 10K_5%_2 RUNSCI0#_3
R4767 10K_5%_2 DGPU_PG
R4725 10K_5%_2_DY AMD_VBIOS_SEL#
R4703 10K_5%_2_DY BRD_ID3
R4730 10K_5%_2_DY GPIO36
R4707 1K_5%_2 TLS_ENCRYTION
R4728 10K_5%_2 DOCK_ID1
R4726 10K_5%_2 DOCK_ID2
R4769 10K_5%_2 LPC_RESET#
R4709 10K_5%_2 DGPU_PRSNT#
R4755 10K_5%_2 SATA_ODD_PWR_EN
P3V3A
R4721 10K_5%_2 LAN_DIS#
R4714 10K_5%_2 GPIO8
R4733 10K_5%_2_DY BRD_ID1
R4729 10K_5%_2 AMD_VBIOS_SEL#
R4747 10K_5%_2_DY LANWAKE#
R4719 10K_5%_2 BRD_ID1
R4720 10K_5%_2 BRD_ID3
P3V3A
R4752 10K_5%_2 NFC_INT
P3V3DS
PCIE_WAKE#
R4933 10K_5%_2
R4931 0_5%_2
KBC_WAKE#
R4932 100K_5%_2
LANWAKE#
R4934 100K_5%_2
OCP_OC#
Q4700
OCP_PWM_OUT
SSM3K7002BFU
U4702
LPT_PCH_M_EDS
PLT_ID1 AT8 BMBUSY#/GPIO0
OCP_OC# F13 TACH1/GPIO1
RUNSCI0#_3 A14 TACH2/GPIO6
THERM_SCI# G15 TACH3/GPIO7
GPIO8 Y1 GPIO8
LAN_DIS# K13 LAN_PHY_PWR_CTRL/GPIO12
BRD_ID1 AB11 GPIO15
KBL_DET# AN2 SATA4GP/GPIO16
DGPU_PG C14 TACH0/GPIO17
WWAN_TRANSMIT_OFF# BB4 SCLOCK/GPIO22
R4837 10K_5%_2 Y10 GPIO24
LANWAKE# R11 GPIO27
R4831 10K_5%_2 AD11 GPIO28
AMD_VBIOS_SEL# AN6 GPIO34
BRD_ID3 AP1 GPIO35/NMI#
GPIO36 AT3 SATA2GP/GPIO36
TLS_ENCRYTION AK1 SATA3GP/GPIO37
DOCK_ID1 AT7 SLOAD/GPIO38
DOCK_ID2 AM3 SDATAOUT0/GPIO39
FPR_LOCK# AN4 SDATAOUT1/GPIO48
DGPU_PRSNT# AK3 SATA5GP/GPIO49
NFC_INT U12 GPIO57
SATA_ODD_PWR_EN C16 TACH4/GPIO68
PLT_ID3 D13 TACH5/GPIO69
LPC_RESET# G13 TACH6/GPIO70
GPS_XMIT_OFF# H15 TACH7/GPIO71
BE41 VSS
BE5 VSS
C45 VSS
A5 VSS
GPIO
NCTF
ITL_486708_FCBGA_695P
CPU/Misc
TP14 AN10 R4702 10K_5%_2
PECI AY1 R4749 0_5%_2_DY H_PECI
RCIN# AT6 R4741 10K_5%_2
PROCPWRGD AV3 H_PWRGD
THRMTRIP# AV1 R4731 390_5%_2 PM_THRMTRIP#
PLTRST_PROC# AU4 PCH_PLTRST_CPU R4732 1K_5%_2
VSS N10
P3V3S
P1V05S
VSS A2 A41 A43 A44 B1 B2 B44 B45 BA1 BC1 BD1 BD2 BD44 BD45 BE2 BE3 D1 E1 E45 A4
BOARD REVISION | BRD_ID1 | BRD_ID2 | BRD_ID3 | BRD_ID4
LPT-H | GPIO15 | GPIO34 | GPIO35 | GPIO40
DB 0 | 0 | 0 | 0 | 0
DB 1 | 0 | 0 | 0 | 1
DB 2 | 0 | 0 | 1 | 0
0 | 0 | 1 | 1
SI 1 | 0 | 1 | 0 | 0
SI 1B | 0 | 1 | 0 | 1
SI 2 | 0 | 1 | 1 | 0
0 | 1 | 1 | 1
PV 1 | 1 | 0 | 0 | 0
1 | 0 | 0 | 1
1 | 0 | 1 | 0
1 | 0 | 1 | 1
MV | 1 | 1 | 0 | 0
1 | 1 | 0 | 1
1 | 1 | 1 | 0
1 | 1 | 1 | 1
INVENTEC
TITLE
CYCLONE_DIS
LYNX_PORT_7 (GPIO,VSS,MISC)
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
SHEET 37 of 90

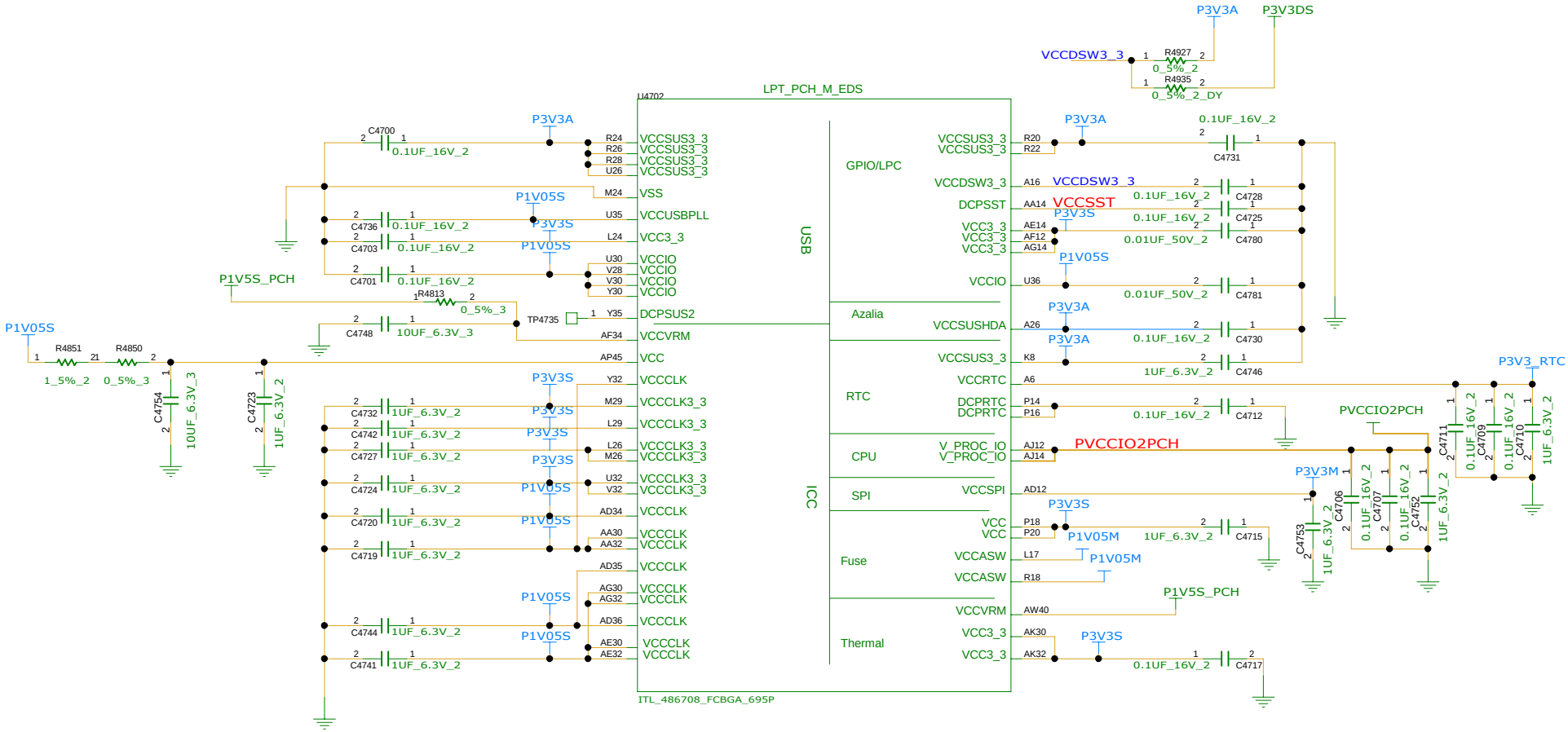


INVENTEC

TITLE: CYCLONE_DIS
LYNX_PORT_8 (POWER)

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX | DATE 26-NOV-2012 | SHEET 38 of 90

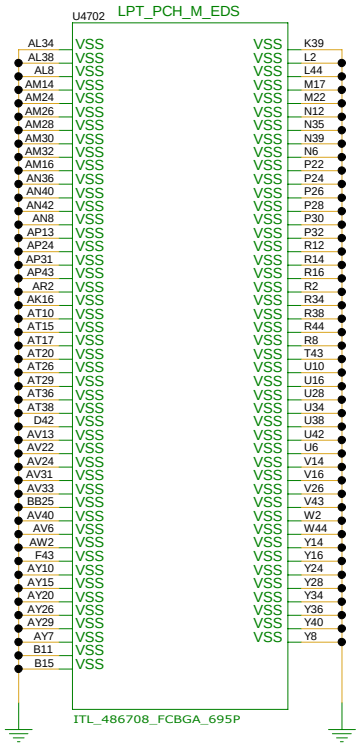


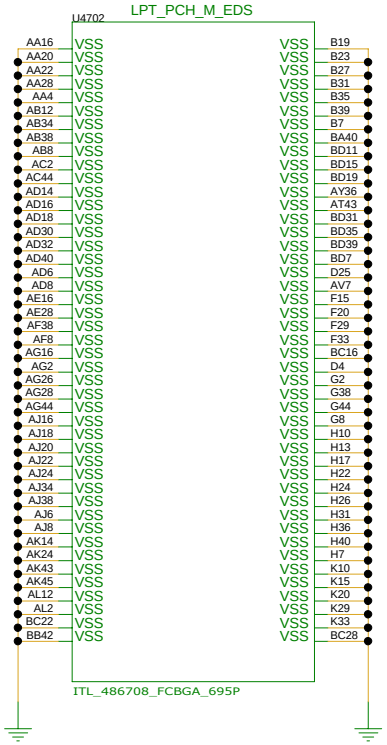
INVENTEC

TITLE: CYCLONE_DIS
LYNX_PORT_9(POWER)

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX | DATE 26-NOV-2012 | SHEET 39 of 90





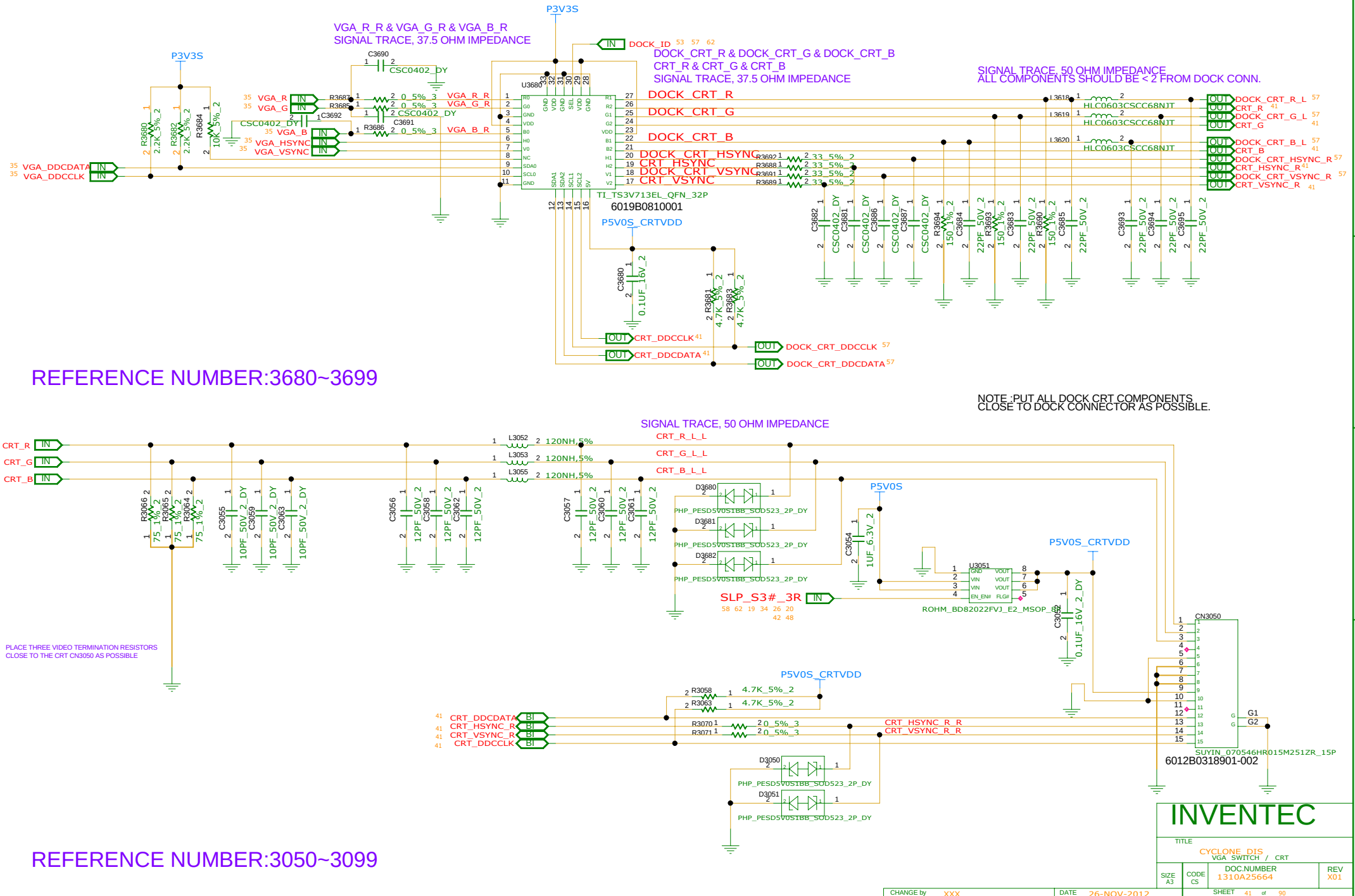
INVENTEC

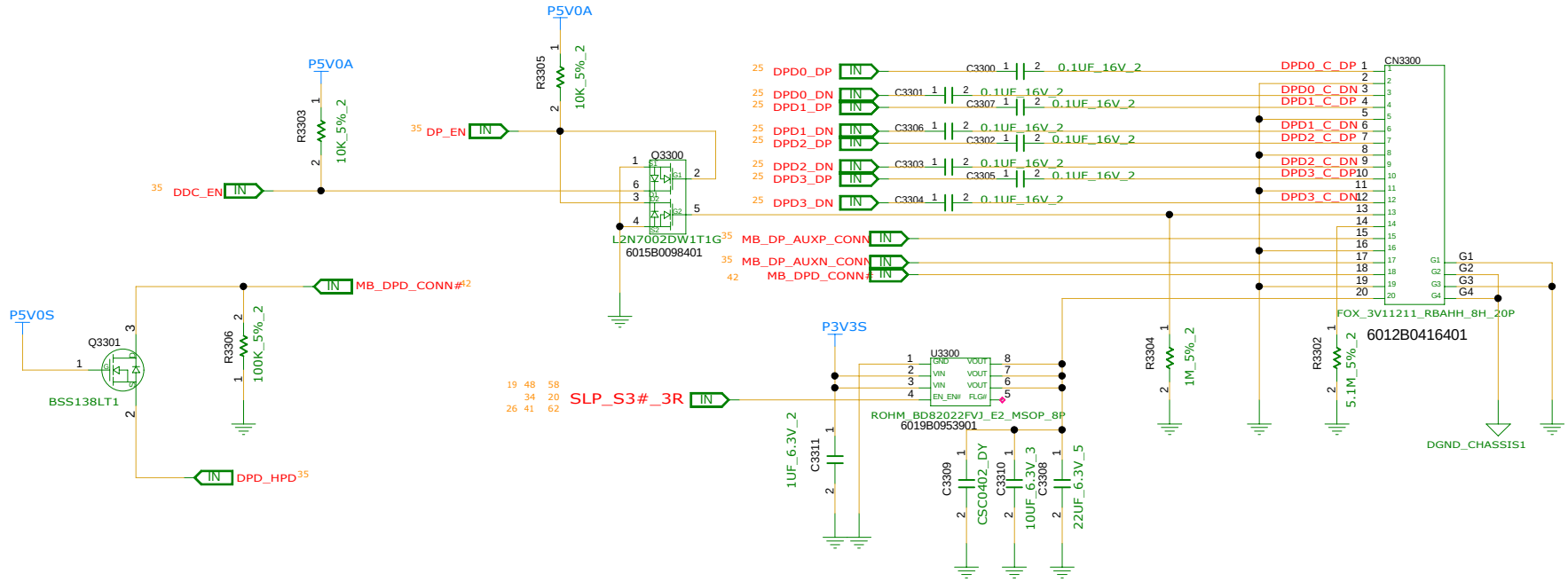
TITLE
CYCLONE_DIS
LYNX_PORT_10 (GND)

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

SHEET 40 of 90

CHANGE by	DATE
XXX	26-NOV-2012


VGA_R_R & VGA_G_R & VGA_B_R
SIGNAL TRACE, 37.5 OHM IMPEDANCE
P3V3S
DOCK_ID
DOCK_CRT_R & DOCK_CRT_G & DOCK_CRT_B
CRT_R & CRT_G & CRT_B
SIGNAL TRACE, 37.5 OHM IMPEDANCE
SIGNAL TRACE, 50 OHM IMPEDANCE
ALL COMPONENTS SHOULD BE < 2 FROM DOCK CONN.
DOCK_CRT_R
DOCK_CRT_G
DOCK_CRT_B
DOCK_CRT_HSYNC
CRT_HSYNC
DOCK_CRT_VSYNC
CRT_VSYNC
TI_TS3V713EL_QFN_32P
6019B0810001
P5V0S_CRTVDD
HLC0603CSCC68NJT
REFERENCE NUMBER:3680~3699
NOTE :PUT ALL DOCK CRT COMPONENTS
CLOSE TO DOCK CONNECTOR AS POSSIBLE.
SIGNAL TRACE, 50 OHM IMPEDANCE
CRT_R_L_L
CRT_G_L_L
CRT_B_L_L
120NH,5%
PHP_PESD5V0S1BB_SOD523_2P_DY
P5V0S
P5V0S_CRTVDD
SLP_S3#_3R
ROHM_BD82022FVJ_E2_MSOP_8
PLACE THREE VIDEO TERMINATION RESISTORS
CLOSE TO THE CRT CN3050 AS POSSIBLE
CRT_DDCDATA
CRT_HSYNC_R
CRT_VSYNC_R
CRT_DDCCLK
CRT_HSYNC_R_R
CRT_VSYNC_R_R
CN3050
SUYIN_070546HR015M251ZR_15P
6012B0318901-002
REFERENCE NUMBER:3050~3099
INVENTEC
CYCLONE_DIS
VGA SWITCH / CRT
DOC.NUMBER
1310A25664
REV
X01
CHANGE by
XXX
DATE
26-NOV-2012
SHEET
41 of 90



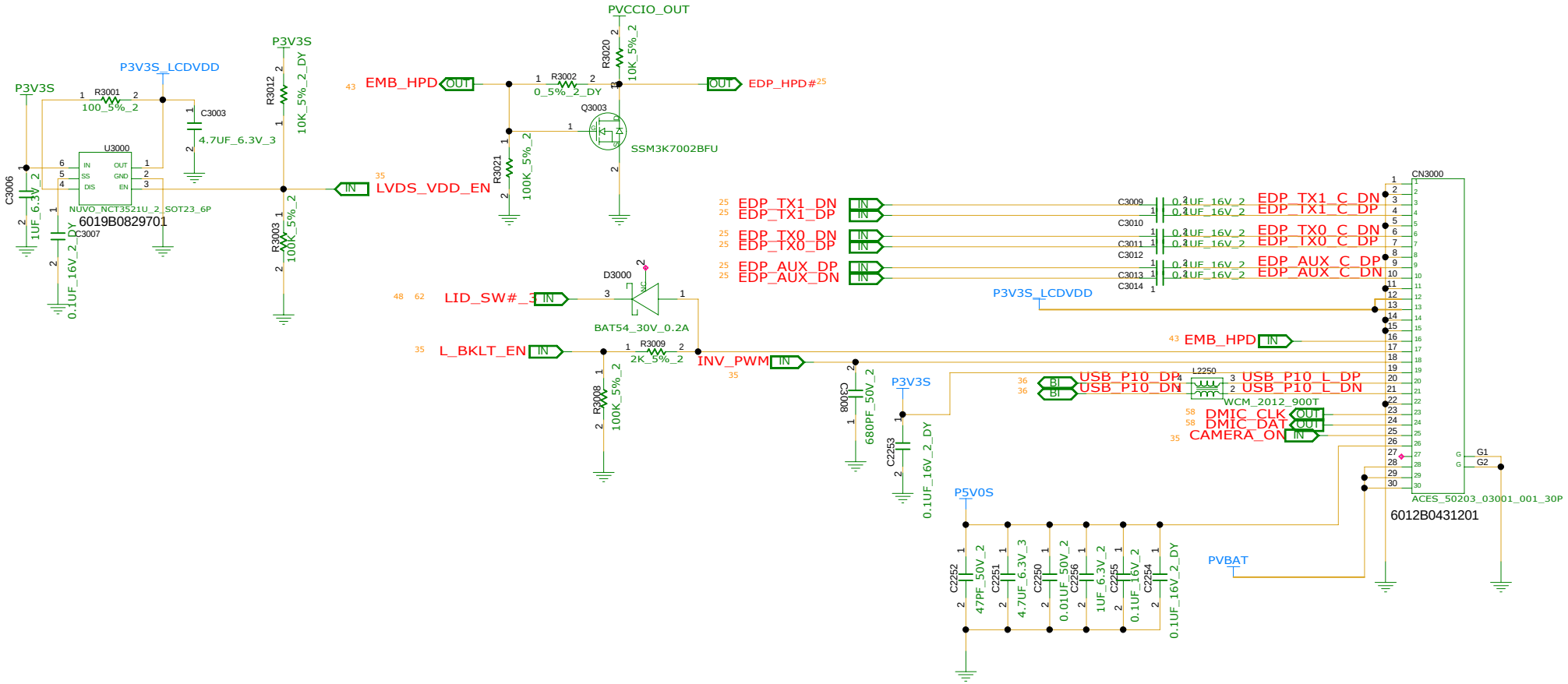
REFERENCE NUMBER:3300~3399

INVENTEC

TITLE
CYCLONE_DIS
DISPLAY_PORT_CNTR

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX DATE 26-NOV-2012 SHEET 42 of 90



EDP CONN

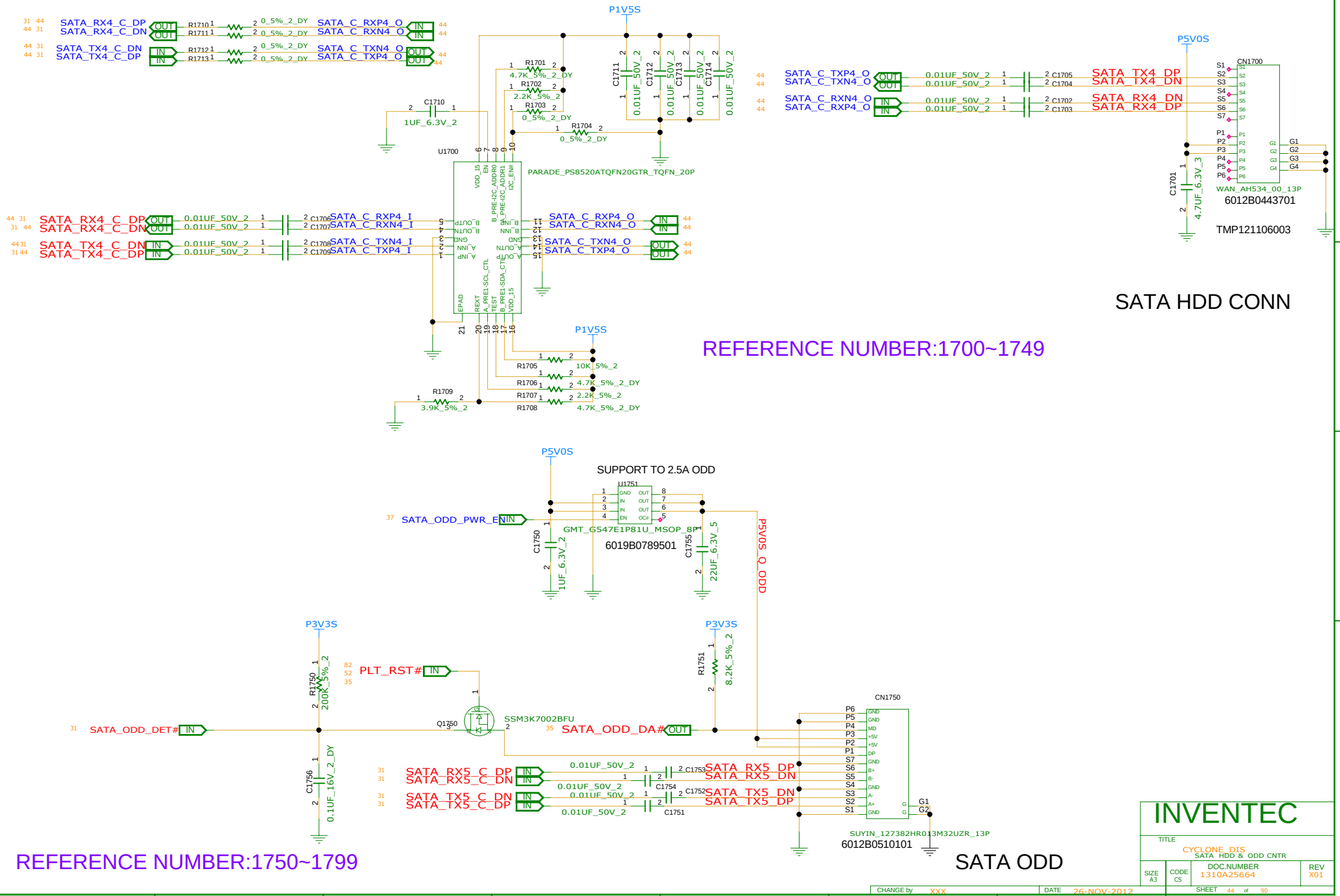
REFERENCE NUMBER:3000~3049

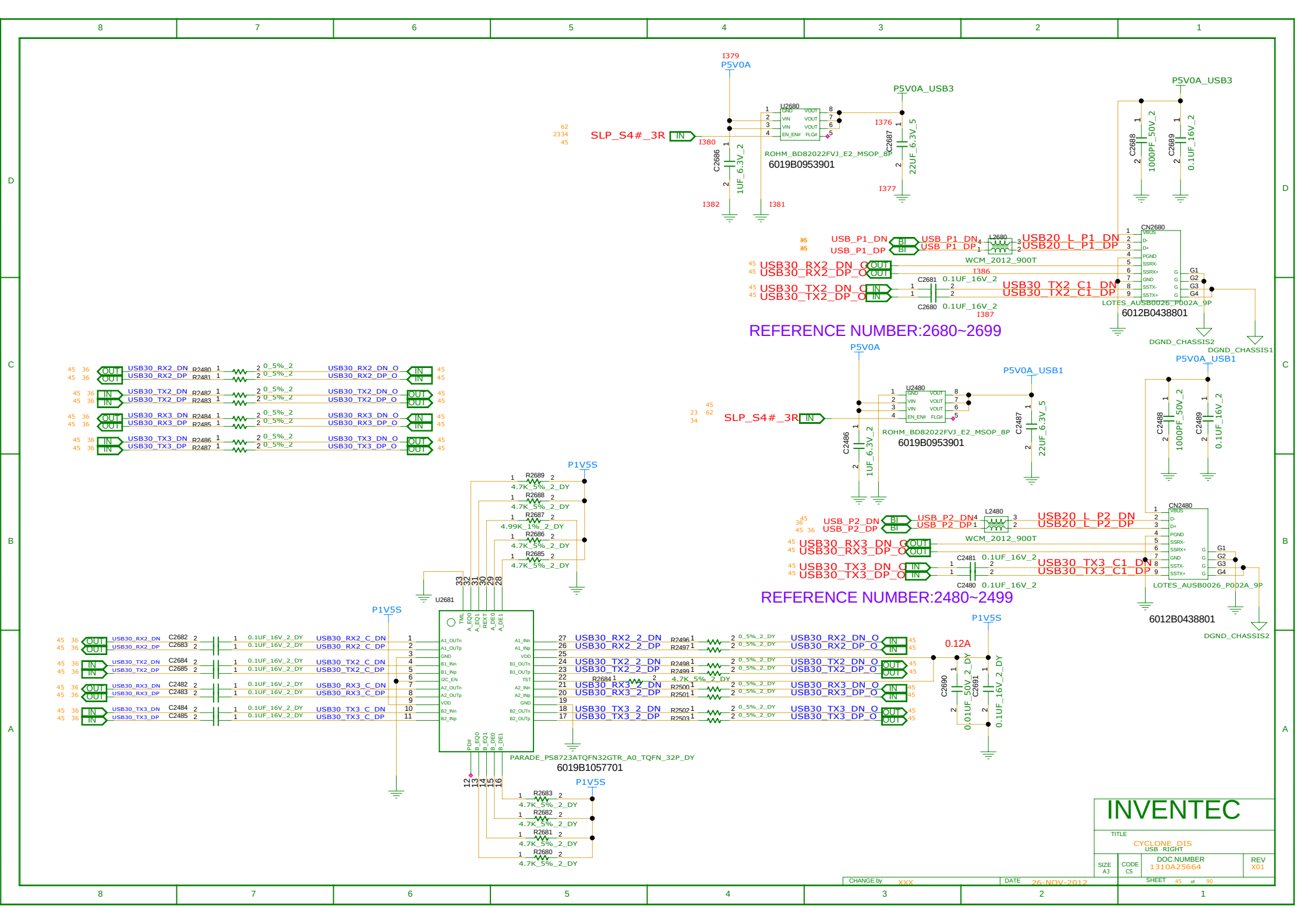
INVENTEC

TITLE: CYCLONE_DIS EDP & WEBCAM

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX DATE 26-NOV-2012 SHEET 43 of 90


SATA_RX4_C_DP
SATA_RX4_C_DN
SATA_TX4_C_DN
SATA_TX4_C_DP
R1710
R1711
R1712
R1713
0_5%_2_DY
SATA_C_RXP4_O
SATA_C_RXN4_O
SATA_C_TXN4_O
SATA_C_TXP4_O
P1V5S
R1701
4.7K_5%_2_DY
R1702
2.2K_5%_2
R1703
0_5%_2_DY
R1704
0_5%_2_DY
C1710
1UF_6.3V_2
C1711
C1712
C1713
C1714
0.01UF_50V_2
U1700
PARADE_PS8520ATQFN20GTR_TQFN_20P
0.01UF_50V_2
C1706
C1707
C1708
C1709
SATA_C_RXP4_I
SATA_C_RXN4_I
SATA_C_TXN4_I
SATA_C_TXP4_I
R1705
10K_5%_2
R1706
4.7K_5%_2_DY
R1707
2.2K_5%_2
R1708
4.7K_5%_2_DY
R1709
3.9K_5%_2
P5V0S
CN1700
SATA_TX4_DP
SATA_TX4_DN
SATA_RX4_DN
SATA_RX4_DP
C1701
4.7UF_6.3V_3
WAN_AH534_00_13P
6012B0443701
TMP121106003
SATA HDD CONN
REFERENCE NUMBER:1700~1749
SUPPORT TO 2.5A ODD
U1751
SATA_ODD_PWR_EN
GMT_G547E1P81U_MSOP_8P
6019B0789501
C1750
1UF_6.3V_2
C1755
22UF_6.3V_5
P5V0S_O_ODD
P3V3S
R1750
200K_5%_2
PLT_RST#
SATA_ODD_DET#
Q1750
SSM3K7002BFU
SATA_ODD_DA#
R1751
8.2K_5%_2
C1756
0.1UF_16V_2_DY
SATA_RX5_C_DP
SATA_RX5_C_DN
SATA_TX5_C_DN
SATA_TX5_C_DP
C1753
C1754
C1752
C1751
SATA_RX5_DP
SATA_RX5_DN
SATA_TX5_DN
SATA_TX5_DP
CN1750
SUYIN_127382HR013M32UZR_13P
6012B0510101
SATA ODD
REFERENCE NUMBER:1750~1799
INVENTEC
TITLE
CYCLONE_DIS
SATA_HDD & ODD CNTR
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
SHEET 44 of 90


I379
P5V0A
P5V0A_USB3
SLP_S4#_3R
I380
U2680
ROHM_BD82022FVJ_E2_MSOP_8P
6019B0953901
C2686 1UF_6.3V_2
C2687 22UF_6.3V_5
I376
I377
I382
I381
C2688 1000PF_50V_2
C2689 0.1UF_16V_2
USB_P1_DN
USB_P1_DP
L2680
WCM_2012_900T
USB20_L_P1_DN
USB20_L_P1_DP
USB30_RX2_DN_O
USB30_RX2_DP_O
I386
C2681 0.1UF_16V_2
C2680 0.1UF_16V_2
USB30_TX2_DN_O
USB30_TX2_DP_O
I387
USB30_TX2_C1_DN
USB30_TX2_C1_DP
CN2680
LOTES_AUSB0026_P002A_9P
6012B0438801
DGND_CHASSIS2
DGND_CHASSIS1
REFERENCE NUMBER:2680~2699
P5V0A_USB1
C2487 22UF_6.3V_5
C2486 1UF_6.3V_2
C2488 1000PF_50V_2
C2489 0.1UF_16V_2
USB_P2_DN
USB_P2_DP
L2480
USB20_L_P2_DN
USB20_L_P2_DP
USB30_RX3_DN_O
USB30_RX3_DP_O
C2481 0.1UF_16V_2
C2480 0.1UF_16V_2
USB30_TX3_DN_O
USB30_TX3_DP_O
USB30_TX3_C1_DN
USB30_TX3_C1_DP
CN2480
LOTES_AUSB0026_P002A_9P
6012B0438801
DGND_CHASSIS2
REFERENCE NUMBER:2480~2499
USB30_RX2_DN
USB30_RX2_DP
USB30_TX2_DN
USB30_TX2_DP
USB30_RX3_DN
USB30_RX3_DP
USB30_TX3_DN
USB30_TX3_DP
R2480 0_5%_2
R2481 0_5%_2
R2482 0_5%_2
R2483 0_5%_2
R2484 0_5%_2
R2485 0_5%_2
R2486 0_5%_2
R2487 0_5%_2
P1V5S
R2689 4.7K_5%_2_DY
R2688 4.7K_5%_2_DY
R2687 4.99K_1%_2_DY
R2686 4.7K_5%_2_DY
R2685 4.7K_5%_2_DY
U2681
PARADE_PS8723ATQFN32GTR_A0_TQFN_32P_DY
6019B1057701
C2682 0.1UF_16V_2_DY
C2683 0.1UF_16V_2_DY
C2684 0.1UF_16V_2_DY
C2685 0.1UF_16V_2_DY
C2482 0.1UF_16V_2_DY
C2483 0.1UF_16V_2_DY
C2484 0.1UF_16V_2_DY
C2485 0.1UF_16V_2_DY
USB30_RX2_C_DN
USB30_RX2_C_DP
USB30_TX2_C_DN
USB30_TX2_C_DP
USB30_RX3_C_DN
USB30_RX3_C_DP
USB30_TX3_C_DN
USB30_TX3_C_DP
USB30_RX2_2_DN
USB30_RX2_2_DP
USB30_TX2_2_DN
USB30_TX2_2_DP
USB30_RX3_2_DN
USB30_RX3_2_DP
USB30_TX3_2_DN
USB30_TX3_2_DP
R2496 0_5%_2_DY
R2497 0_5%_2_DY
R2498 0_5%_2_DY
R2499 0_5%_2_DY
R2500 0_5%_2_DY
R2501 0_5%_2_DY
R2502 0_5%_2_DY
R2503 0_5%_2_DY
R2684 4.7K_5%_2_DY
R2683 4.7K_5%_2_DY
R2682 4.7K_5%_2_DY
R2681 4.7K_5%_2_DY
R2680 4.7K_5%_2_DY
0.12A
C2690 0.01UF_50V_2_DY
C2691 0.1UF_16V_2_DY
INVENTEC
TITLE
CYCLONE_DIS
USB_RIGHT
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
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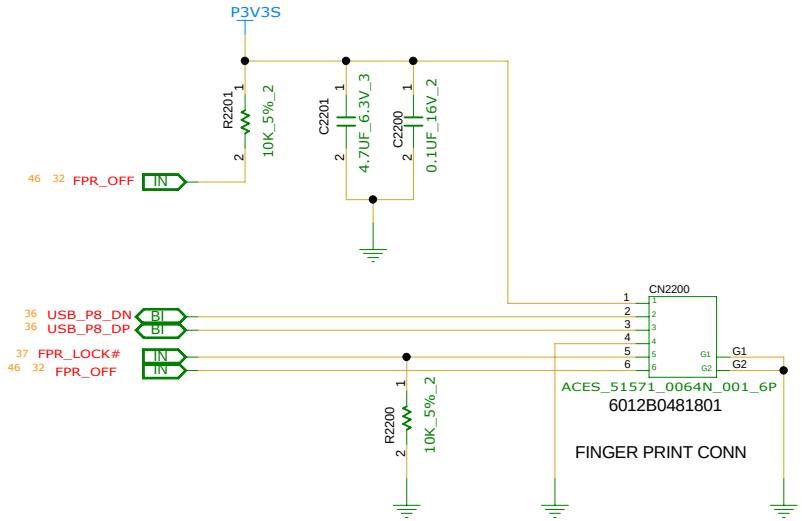
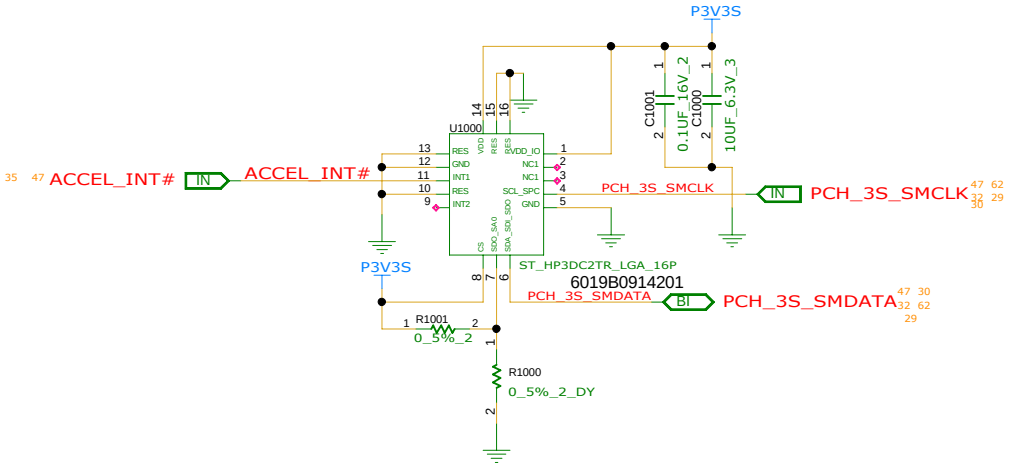


REFERENCE:2200~2249

INVENTEC			
TITLE: CYCLONE_DIS FINGER PRINTER CNTR			
SIZE A3	CODE CS	DOC.NUMBER 1310A25664	REV X01
CHANGE by XXX	DATE 26-NOV-2012	SHEET 46 of 90	

LAYOUT NOTE

FOLLOW DESIGNATED PIN1 ORIENTATION WIN8 SUPPORT APPS

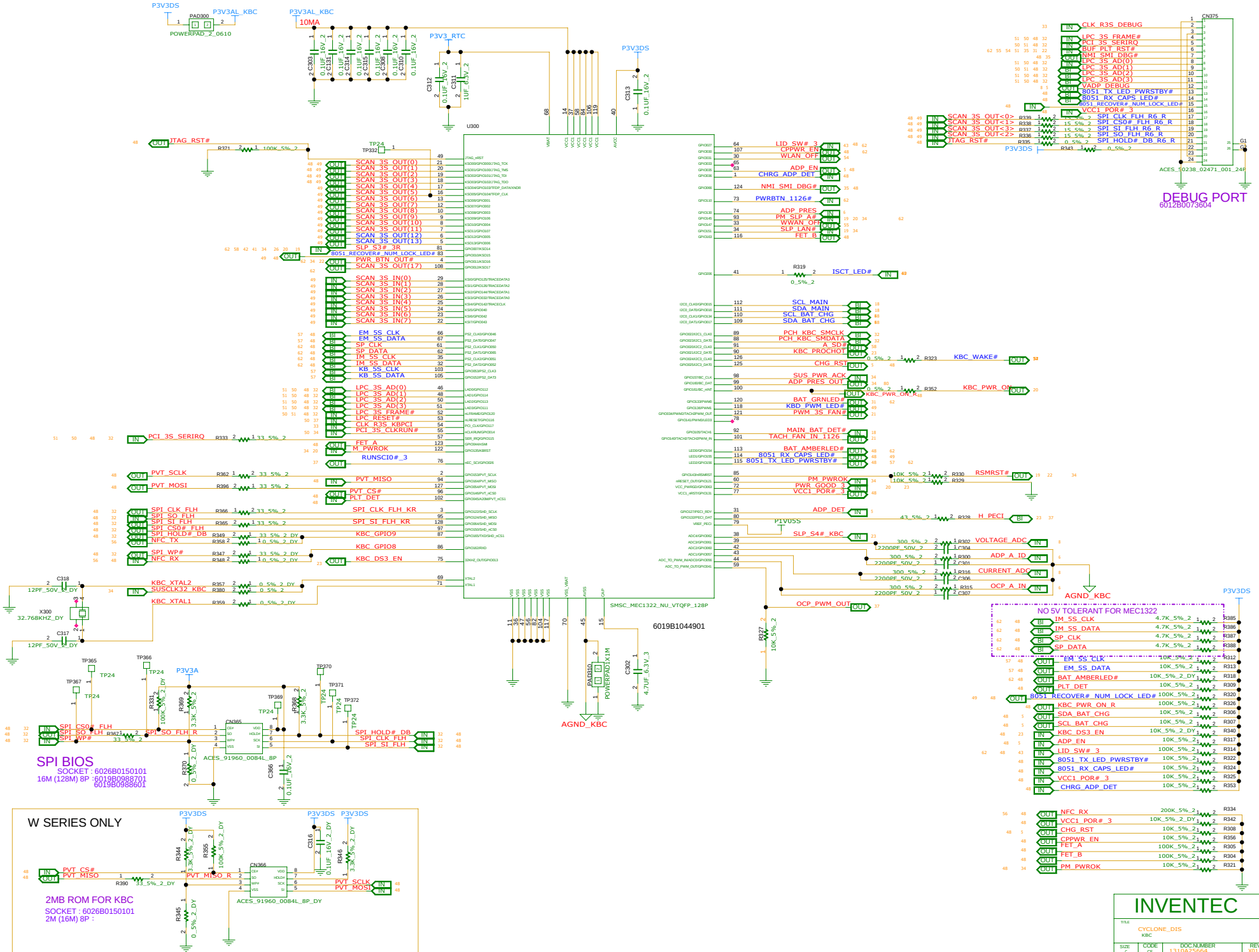


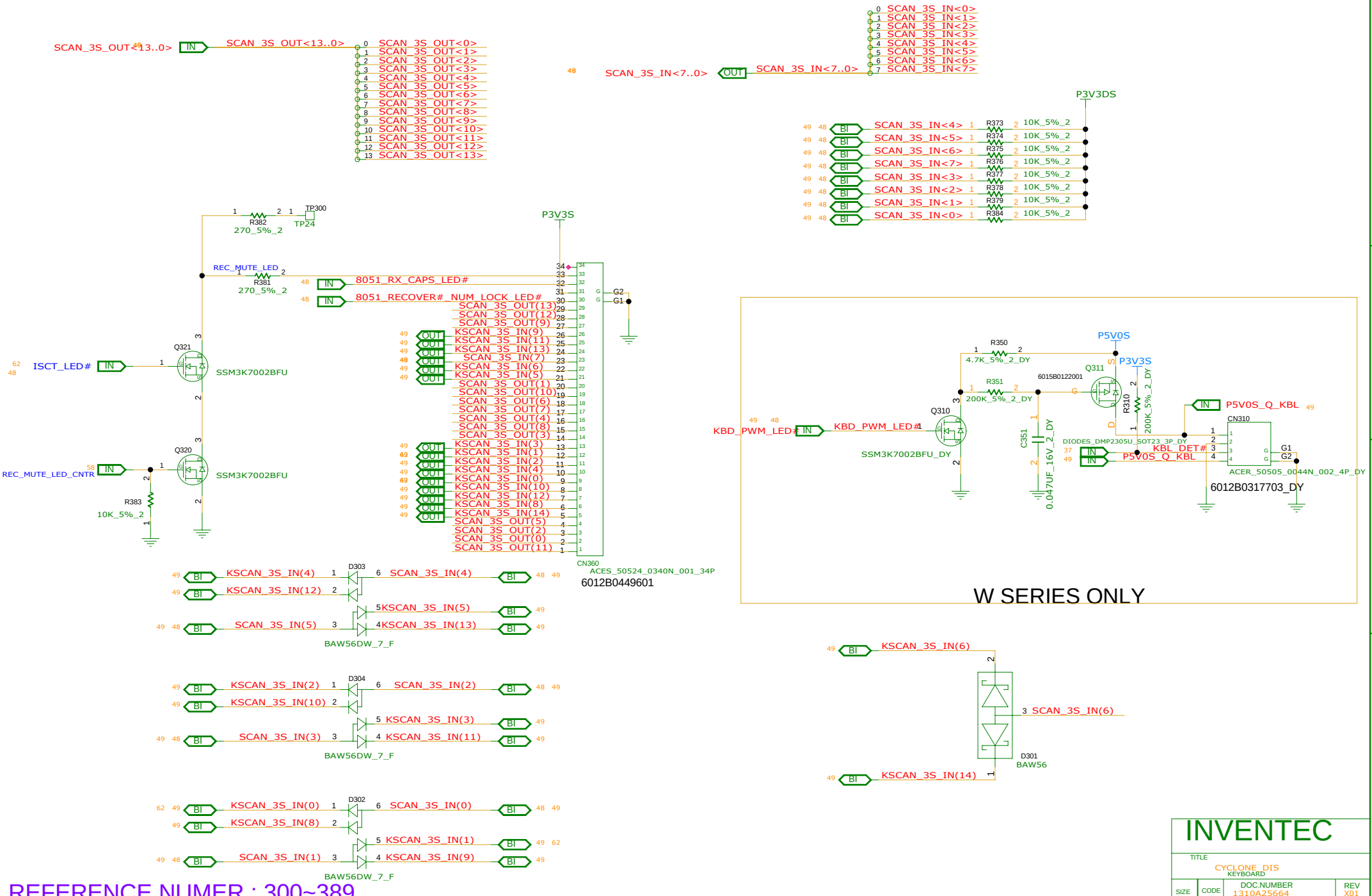
ACCELEMETOR

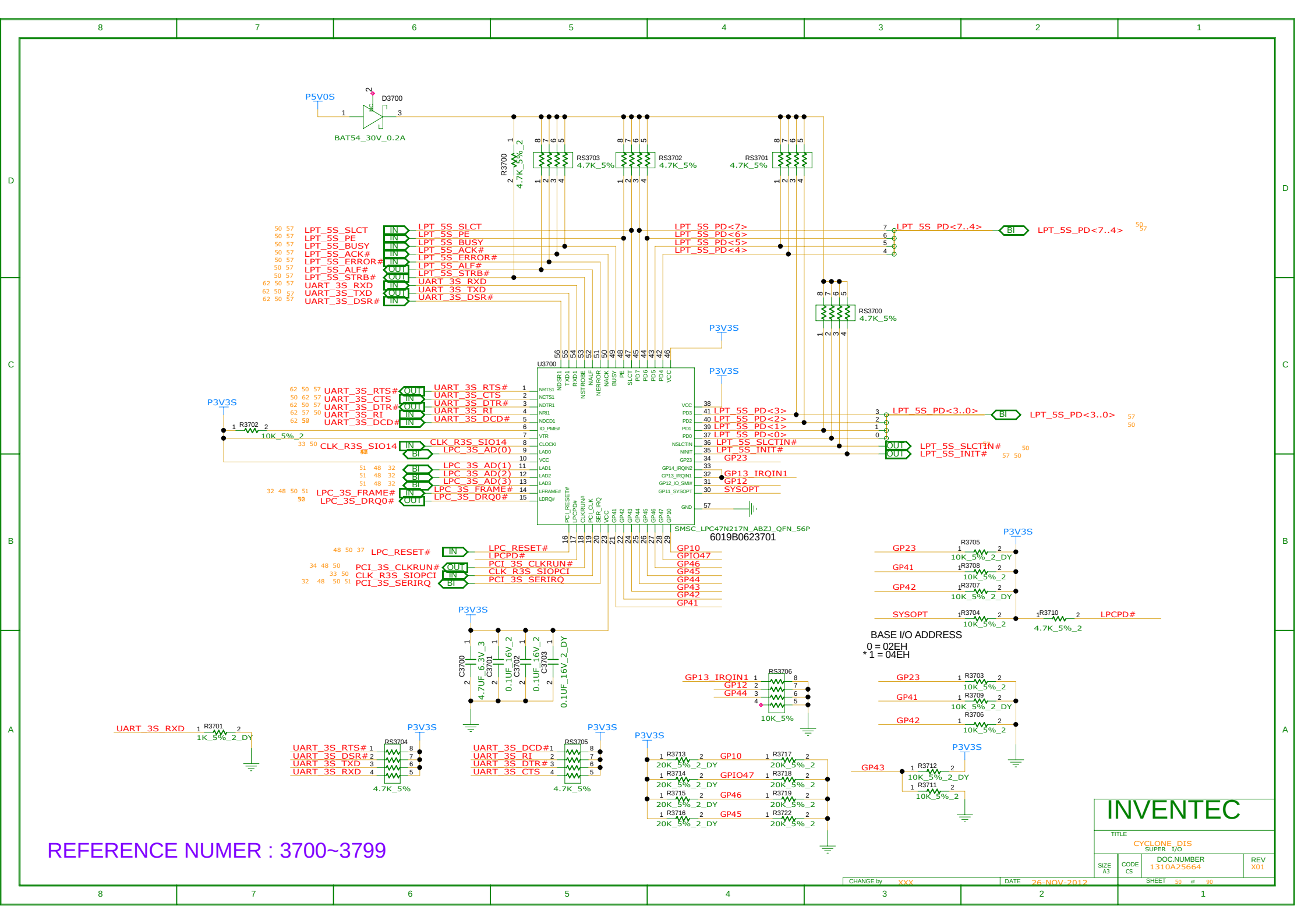
REFERENCE NUMER : 1000~1099

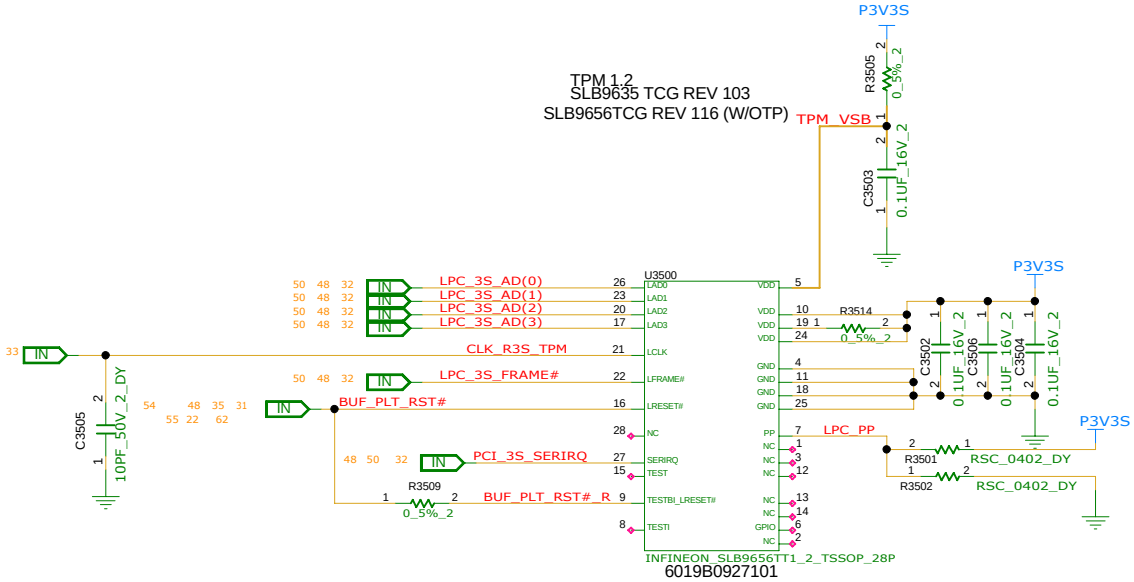
INVENTEC			
TITLE: CYCLONE_DIS ACCELEMETOR			
SIZE A3	CODE CS	DOC.NUMBER 1310A25664	REV X01
CHANGE by XXX	DATE 26-NOV-2012	SHEET 47 of 90	

REFERENCE NUMER : 300~399




SCAN_3S_OUT<13..0>
SCAN_3S_OUT<0>
SCAN_3S_OUT<1>
SCAN_3S_OUT<2>
SCAN_3S_OUT<3>
SCAN_3S_OUT<4>
SCAN_3S_OUT<5>
SCAN_3S_OUT<6>
SCAN_3S_OUT<7>
SCAN_3S_OUT<8>
SCAN_3S_OUT<9>
SCAN_3S_OUT<10>
SCAN_3S_OUT<11>
SCAN_3S_OUT<12>
SCAN_3S_OUT<13>
SCAN_3S_IN<7..0>
SCAN_3S_IN<0>
SCAN_3S_IN<1>
SCAN_3S_IN<2>
SCAN_3S_IN<3>
SCAN_3S_IN<4>
SCAN_3S_IN<5>
SCAN_3S_IN<6>
SCAN_3S_IN<7>
P3V3DS
R373 10K_5%_2
R374 10K_5%_2
R375 10K_5%_2
R376 10K_5%_2
R377 10K_5%_2
R378 10K_5%_2
R379 10K_5%_2
R384 10K_5%_2
TP300
TP24
R382 270_5%_2
P3V3S
REC_MUTE_LED
R381 270_5%_2
8051_RX_CAPS_LED#
8051_RECOVER#_NUM_LOCK_LED#
SCAN_3S_OUT(13)
SCAN_3S_OUT(12)
SCAN_3S_OUT(9)
KSCAN_3S_IN(9)
KSCAN_3S_IN(11)
KSCAN_3S_IN(13)
SCAN_3S_IN(7)
KSCAN_3S_IN(6)
KSCAN_3S_IN(5)
SCAN_3S_OUT(1)
SCAN_3S_OUT(10)
SCAN_3S_OUT(6)
SCAN_3S_OUT(7)
SCAN_3S_OUT(4)
SCAN_3S_OUT(8)
SCAN_3S_OUT(3)
KSCAN_3S_IN(3)
KSCAN_3S_IN(1)
KSCAN_3S_IN(2)
KSCAN_3S_IN(4)
KSCAN_3S_IN(0)
KSCAN_3S_IN(10)
KSCAN_3S_IN(12)
KSCAN_3S_IN(8)
KSCAN_3S_IN(14)
SCAN_3S_OUT(5)
SCAN_3S_OUT(2)
SCAN_3S_OUT(0)
SCAN_3S_OUT(11)
CN360
ACES_50524-0340N-001_34P
6012B0449601
ISCT_LED#
Q321
SSM3K7002BFU
REC_MUTE_LED_CNTR
Q320
SSM3K7002BFU
R383 10K_5%_2
D303
KSCAN_3S_IN(4)
KSCAN_3S_IN(12)
SCAN_3S_IN(5)
KSCAN_3S_IN(5)
KSCAN_3S_IN(13)
SCAN_3S_IN(4)
BAW56DW_7_F
D304
KSCAN_3S_IN(2)
KSCAN_3S_IN(10)
SCAN_3S_IN(3)
KSCAN_3S_IN(3)
KSCAN_3S_IN(11)
SCAN_3S_IN(2)
BAW56DW_7_F
D302
KSCAN_3S_IN(0)
KSCAN_3S_IN(8)
SCAN_3S_IN(1)
KSCAN_3S_IN(1)
KSCAN_3S_IN(9)
SCAN_3S_IN(0)
BAW56DW_7_F
P5V0S
P3V3S
R350 4.7K_5%_2_DY
R351 200K_5%_2_DY
Q311
6015B0122001
R310 200K_5%_2_DY
KBD_PWM_LED#
Q310
SSM3K7002BFU_DY
C351 0.047UF_16V_2_DY
P5V0S_Q_KBL
KBL_DET#
DIODES_DMP2305U_SOT23_3P_DY
CN310
ACER_50505_0044N_002_4P_DY
6012B0317703_DY
W SERIES ONLY
KSCAN_3S_IN(6)
SCAN_3S_IN(6)
KSCAN_3S_IN(14)
D301
BAW56
REFERENCE NUMER : 300~389
INVENTEC
TITLE
CYCLONE_DIS
KEYBOARD
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
SHEET 49 of 90

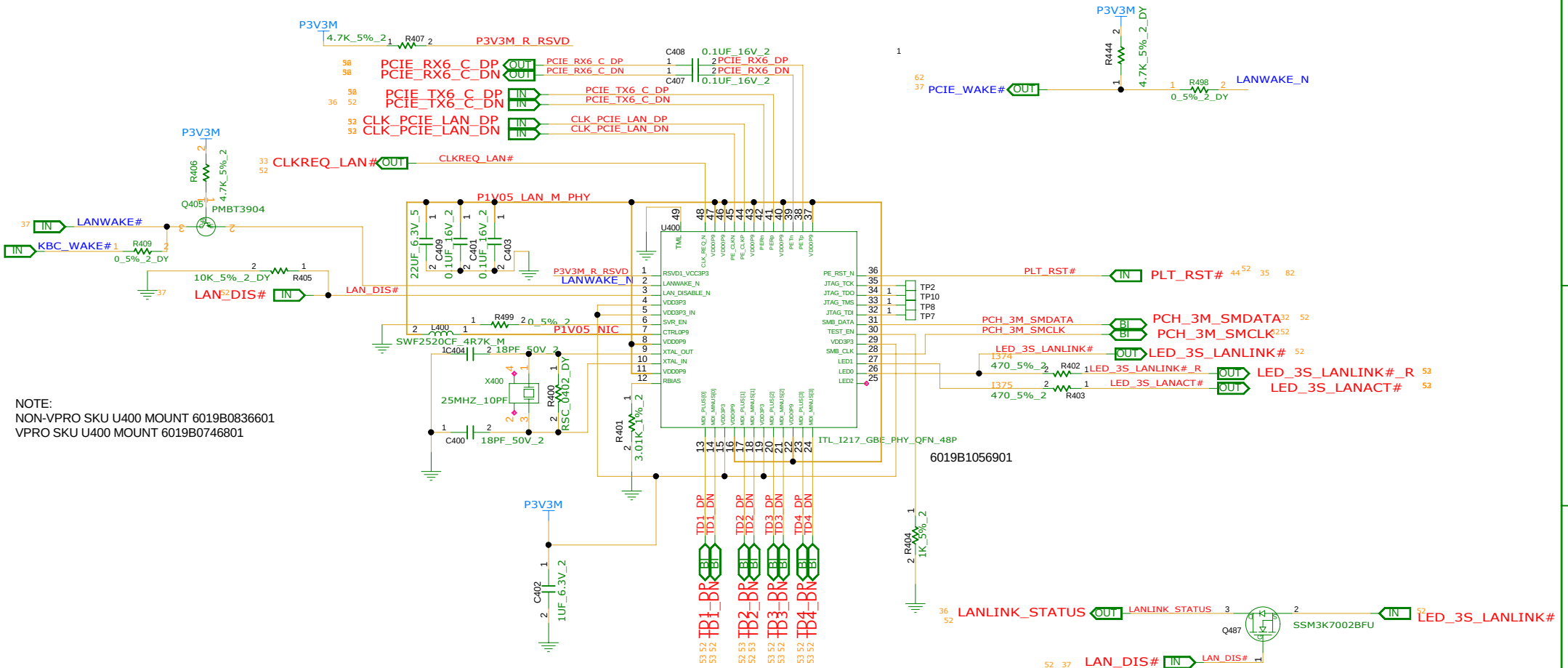

P5V0S
D3700
BAT54_30V_0.2A
R3700 4.7K_5%_2
RS3703 4.7K_5%
RS3702 4.7K_5%
RS3701 4.7K_5%
RS3700 4.7K_5%
LPT_5S_SLCT
LPT_5S_PE
LPT_5S_BUSY
LPT_5S_ACK#
LPT_5S_ERROR#
LPT_5S_ALF#
LPT_5S_STRB#
UART_3S_RXD
UART_3S_TXD
UART_3S_DSR#
LPT_5S_PD<7>
LPT_5S_PD<6>
LPT_5S_PD<5>
LPT_5S_PD<4>
LPT_5S_PD<7..4>
LPT_5S_PD<3..0>
P3V3S
U3700
SMSC_LPC47N217N_ABZJ_QFN_56P
6019B0623701
UART_3S_RTS#
UART_3S_CTS
UART_3S_DTR#
UART_3S_RI
UART_3S_DCD#
R3702 10K_5%_2
CLK_R3S_SIO14
LPC_3S_AD(0)
LPC_3S_AD(1)
LPC_3S_AD(2)
LPC_3S_AD(3)
LPC_3S_FRAME#
LPC_3S_DRQ0#
LPT_5S_PD<3>
LPT_5S_PD<2>
LPT_5S_PD<1>
LPT_5S_PD<0>
LPT_5S_SLCTIN#
LPT_5S_INIT#
GP23
GP13_IRQIN1
GP12
SYSOPT
GND
LPC_RESET#
LPCPD#
PCI_3S_CLKRUN#
CLK_R3S_SIOPCI
PCI_3S_SERIRQ
GP10
GPIO47
GP46
GP45
GP44
GP43
GP42
GP41
C3700 4.7UF_6.3V_3
C3701 0.1UF_16V_2
C3702 0.1UF_16V_2
C3703 0.1UF_16V_2_DY
R3705 10K_5%_2_DY
R3708 10K_5%_2
R3707 10K_5%_2_DY
R3704 10K_5%_2
R3710 4.7K_5%_2
BASE I/O ADDRESS
0 = 02EH
* 1 = 04EH
RS3706 10K_5%
R3703 10K_5%_2
R3709 10K_5%_2_DY
R3706 10K_5%_2
R3701 1K_5%_2_DY
RS3704 4.7K_5%
RS3705 4.7K_5%
R3713 20K_5%_2_DY
R3714 20K_5%_2_DY
R3715 20K_5%_2_DY
R3716 20K_5%_2_DY
R3717 20K_5%_2
R3718 20K_5%_2
R3719 20K_5%_2
R3722 20K_5%_2
R3712 10K_5%_2_DY
R3711 10K_5%_2
REFERENCE NUMER : 3700~3799
INVENTEC
TITLE
CYCLONE_DIS
SUPER I/O
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
SHEET 50 of 90



TPM1.2

REFERENCE NUMER : 3500~3549

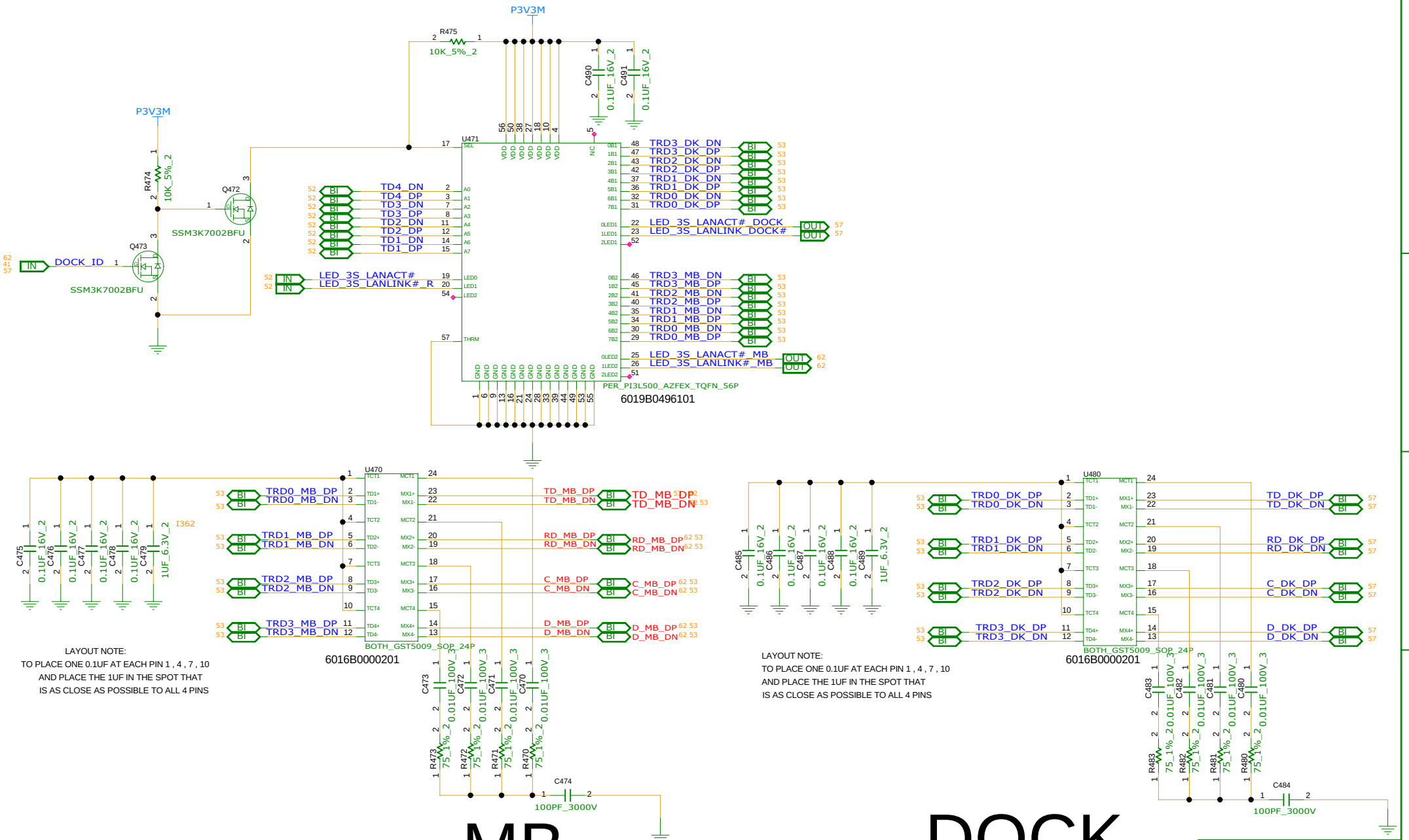
INVENTEC			
TITLE: CYCLONE_DIS TPM			
SIZE: A3	CODE: CS	DOC.NUMBER: 1310A25664	REV: X01
CHANGE by: XXX	DATE: 26-NOV-2012	SHEET: 51 of 90	



NOTE:
NON-VPRO SKU U400 MOUNT 6019B0836601
VPRO SKU U400 MOUNT 6019B0746801

REFERENCE NUMER : 400~469

INVENTEC			
TITLE: CYCLONE_DIS LAN (NIC)			
SIZE: A3	CODE: CS	DOC.NUMBER: 1310A25664	REV: X01
CHANGE by: XXX	DATE: 26-NOV-2012	SHEET: 52 of 90	



REFERENCE NUMER : 470~499

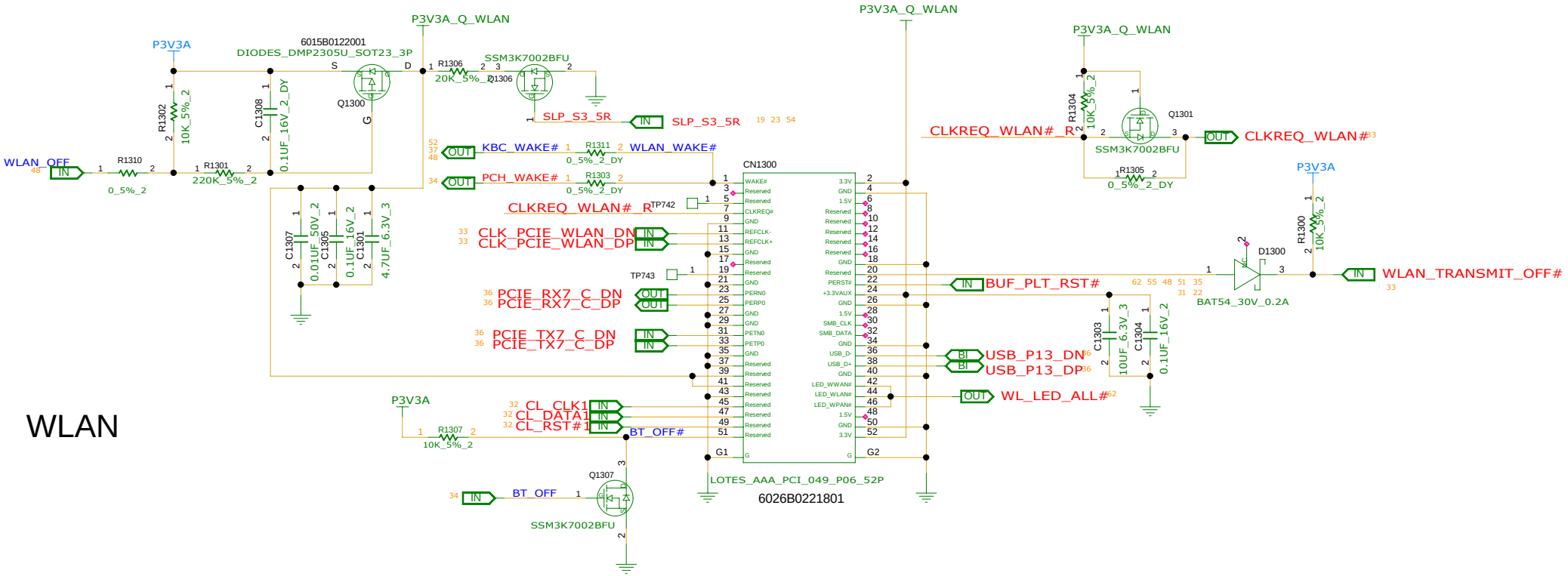
INVENTEC

TITLE: CYCLONE_DIS LAN (SWITCH,TRANSFORMER)

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

SHEET 53 of 90

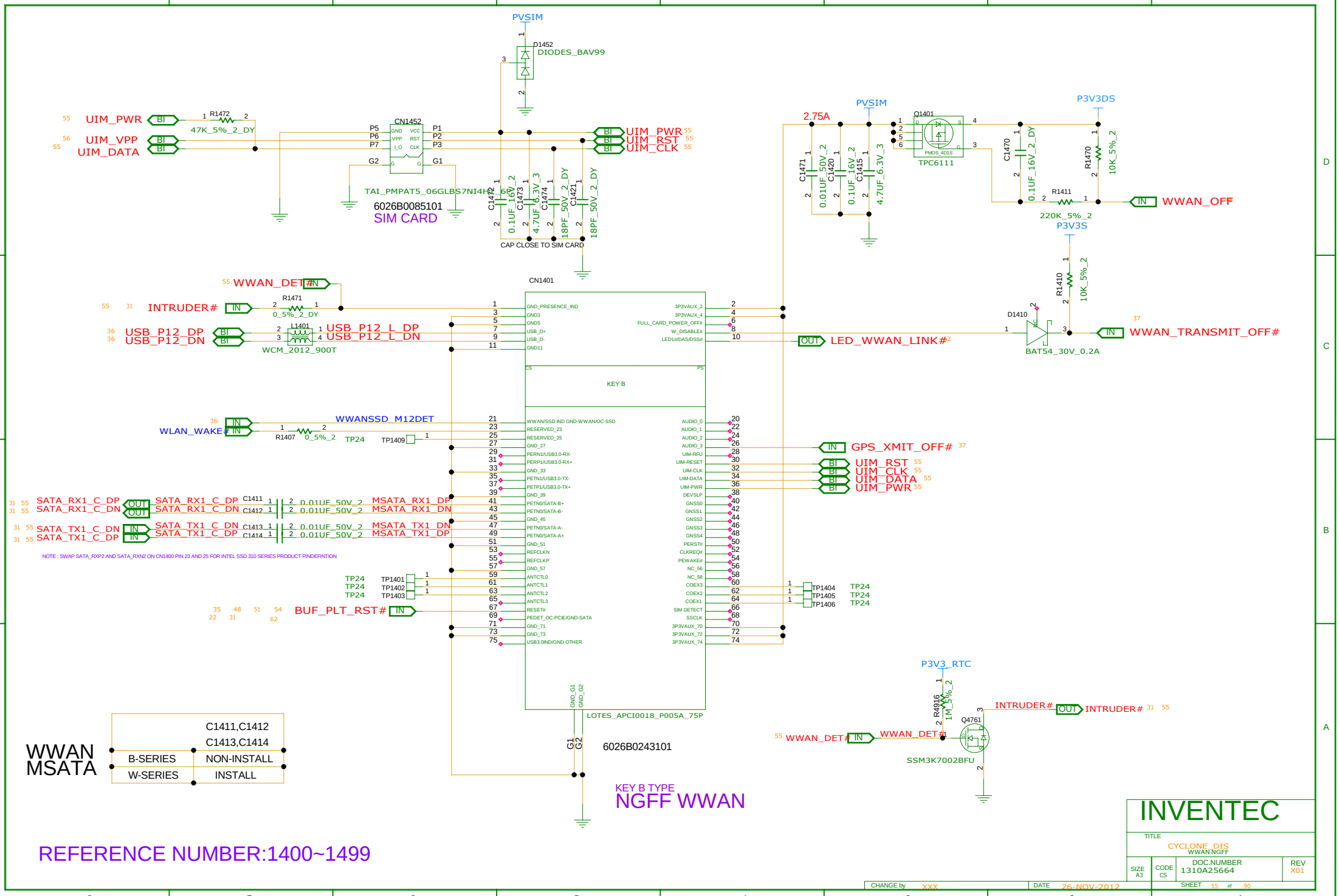
CHANGE by XXX DATE 26-NOV-2012



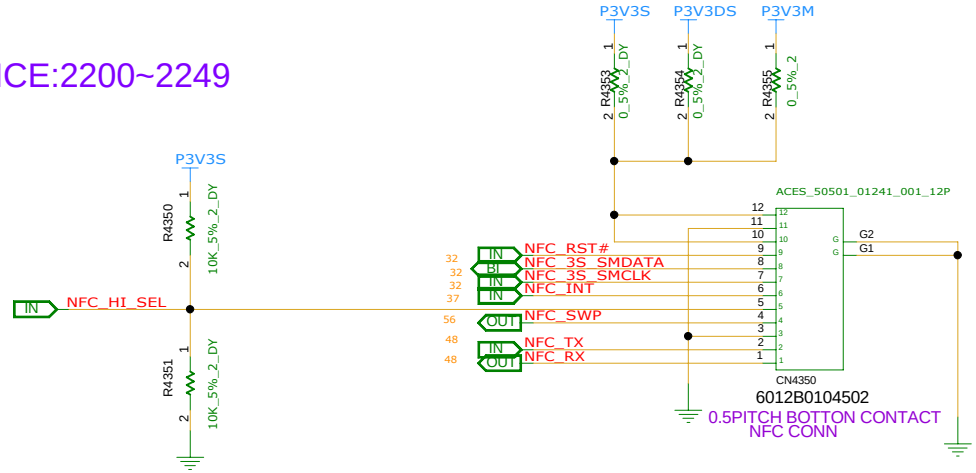
WLAN

REFERENCE NUMBER:1300~1349

INVENTEC			
TITLE: CYCLONE_DIS WLAN			
SIZE: A3	CODE: CS	DOC.NUMBER: 1310A25664	REV: X01
CHANGE by: XXX	DATE: 26-NOV-2012	SHEET: 54 of 90	


PVSIM
D1452
DIODES_BAV99
UIM_PWR
UIM_VPP
UIM_DATA
R1472
47K_5%_2_DY
CN1452
TAI_PMPAT5_06GLBS7NI4H2_6V
6026B0085101
SIM CARD
C1472 0.1UF_16V_2
C1473 4.7UF_6.3V_3
C1474 18PF_50V_2_DY
C1421 18PF_50V_2_DY
CAP CLOSE TO SIM CARD
UIM_PWR
UIM_RST
UIM_CLK
2.75A
Q1401
TPC6111
PMOS_4D1S
C1471 0.01UF_50V_2
C1420 0.1UF_16V_2
C1415 4.7UF_6.3V_3
C1470 0.1UF_16V_2_DY
R1470 10K_5%_2
R1411 220K_5%_2
P3V3DS
WWAN_OFF#
P3V3S
R1410 10K_5%_2
D1410
BAT54_30V_0.2A
WWAN_TRANSMIT_OFF#
WWAN_DET#
INTRUDER#
R1471 0_5%_2_DY
USB_P12_DP
USB_P12_DN
L1401
WCM_2012_900T
USB_P12_L_DP
USB_P12_L_DN
CN1401
KEY B
LOTES_APCI0018_P005A_75P
LED_WWAN_LINK#
WWANSSD_M12DET
WLAN_WAKE#
R1407 0_5%_2
TP24
TP1409
GPS_XMIT_OFF#
SATA_RX1_C_DP
SATA_RX1_C_DN
C1411 0.01UF_50V_2
C1412 0.01UF_50V_2
MSATA_RX1_DP
MSATA_RX1_DN
SATA_TX1_C_DN
SATA_TX1_C_DP
C1413 0.01UF_50V_2
C1414 0.01UF_50V_2
MSATA_TX1_DN
MSATA_TX1_DP
NOTE : SWAP SATA_RXP2 AND SATA_RXN2 ON CN1400 PIN 23 AND 25 FOR INTEL SSD 310 SERIES PRODUCT PINDEFINTION
TP1401
TP1402
TP1403
TP1404
TP1405
TP1406
BUF_PLT_RST#
P3V3_RTC
R4916 1M_5%_2
Q4761
SSM3K7002BFU
INTRUDER#
WWAN_DET#
WWAN MSATA
B-SERIES
W-SERIES
C1411,C1412
C1413,C1414
NON-INSTALL
INSTALL
6026B0243101
KEY B TYPE
NGFF WWAN
REFERENCE NUMBER:1400~1499
INVENTEC
TITLE
CYCLONE_DIS
WWAN NGFF
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
SHEET 55 of 90

REFERENCE:2200~2249



NFC_HI_SEL	R4350	R4351
HIGH (UART)	INSTALL	
LOW (I2C)		INSTALL

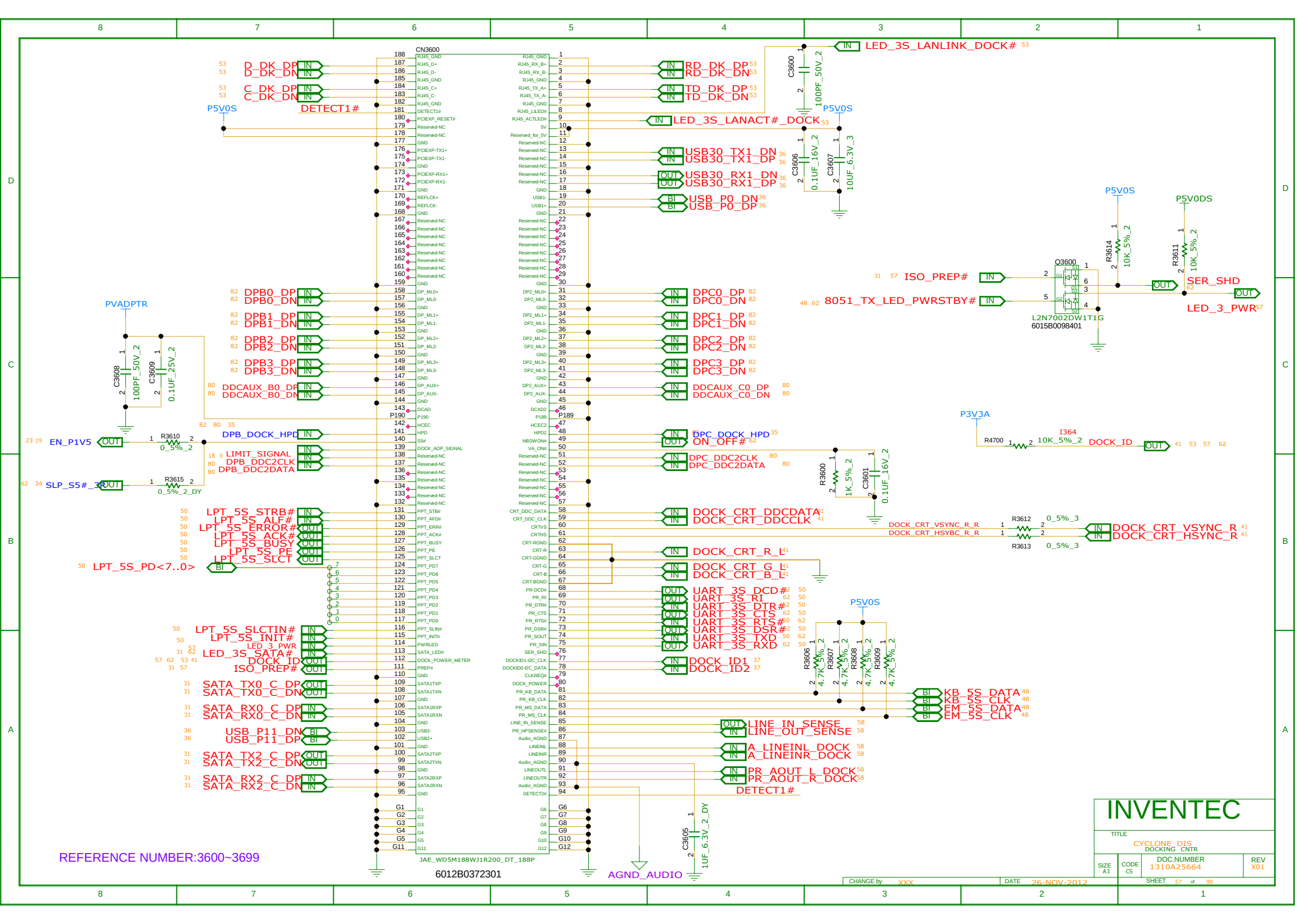
REFERENCE:4350~4399

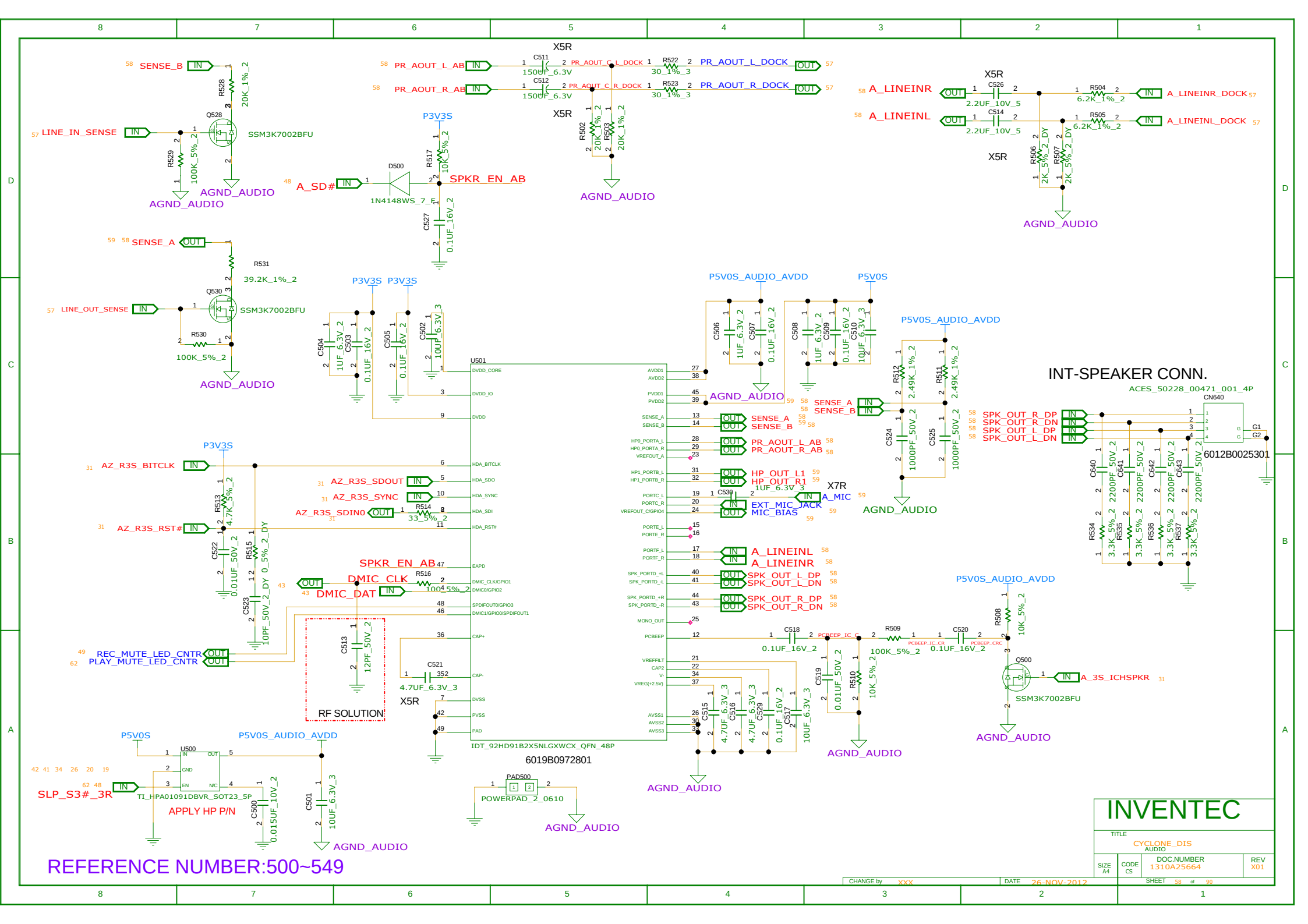
INVENTEC

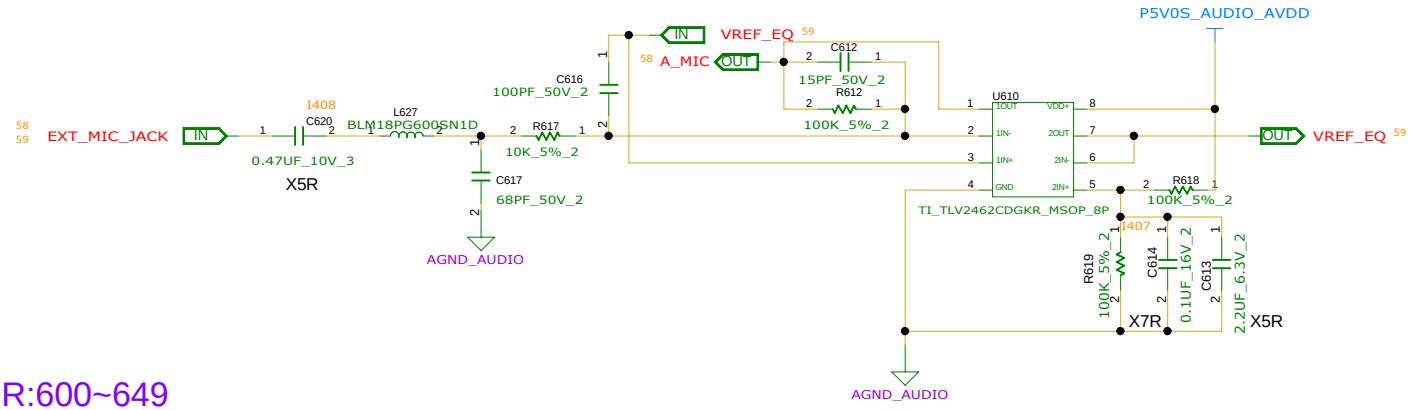
TITLE
CYCLONE_DIS
NFC

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

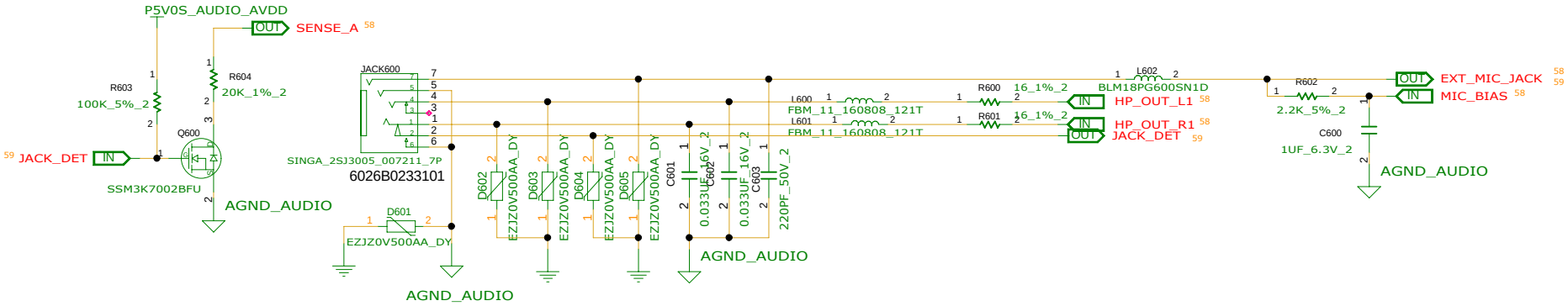
CHANGE by XXX DATE 26-NOV-2012 SHEET 56 of 90


CN3600
JAE_WD5M188WJ1R200_DT_188P
6012B0372301
REFERENCE NUMBER:3600~3699
D_DK_DP
D_DK_DN
C_DK_DP
C_DK_DN
DETECT1#
RD_DK_DP
RD_DK_DN
TD_DK_DP
TD_DK_DN
LED_3S_LANLINK_DOCK#
LED_3S_LANACT#_DOCK
USB30_TX1_DN
USB30_TX1_DP
USB30_RX1_DN
USB30_RX1_DP
USB_P0_DN
USB_P0_DP
DPB0_DP
DPB0_DN
DPB1_DP
DPB1_DN
DPB2_DP
DPB2_DN
DPB3_DP
DPB3_DN
DDCAUX_B0_DP
DDCAUX_B0_DN
DPB_DOCK_HPD
LIMIT_SIGNAL
DPB_DDC2CLK
DPB_DDC2DATA
DPC0_DP
DPC0_DN
DPC1_DP
DPC1_DN
DPC2_DP
DPC2_DN
DPC3_DP
DPC3_DN
DDCAUX_C0_DP
DDCAUX_C0_DN
DPC_DOCK_HPD
ON_OFF#
DPC_DDC2CLK
DPC_DDC2DATA
EN_P1V5
SLP_S5#_3
LPT_5S_STRB#
LPT_5S_ALF#
LPT_5S_ERROR#
LPT_5S_ACK#
LPT_5S_BUSY
LPT_5S_PE
LPT_5S_SLCT
LPT_5S_PD<7..0>
LPT_5S_SLCTIN#
LPT_5S_INIT#
LED_3_PWR
LED_3S_SATA#
DOCK_ID
ISO_PREP#
SATA_TX0_C_DP
SATA_TX0_C_DN
SATA_RX0_C_DP
SATA_RX0_C_DN
USB_P11_DN
USB_P11_DP
SATA_TX2_C_DP
SATA_TX2_C_DN
SATA_RX2_C_DP
SATA_RX2_C_DN
DOCK_CRT_R_L
DOCK_CRT_G_L
DOCK_CRT_B_L
DOCK_CRT_DDCDATA
DOCK_CRT_DDCCLK
DOCK_CRT_VSYNC_R_R
DOCK_CRT_HSYNC_R_R
DOCK_CRT_VSYNC_R
DOCK_CRT_HSYNC_R
UART_3S_DCD#
UART_3S_RI
UART_3S_DTR#
UART_3S_CTS
UART_3S_RTS#
UART_3S_DSR#
UART_3S_TXD
UART_3S_RXD
DOCK_ID1
DOCK_ID2
KB_5S_DATA
KB_5S_CLK
EM_5S_DATA
EM_5S_CLK
LINE_IN_SENSE
LINE_OUT_SENSE
A_LINEINL_DOCK
A_LINEINR_DOCK
PR_AOUT_L_DOCK
PR_AOUT_R_DOCK
DETECT1#
ISO_PREP#
8051_TX_LED_PWRSTBY#
L2N7002DW1T1G
6015B0098401
SER_SHD
LED_3_PWR
DOCK_ID
I364
AGND_AUDIO
P5V0S
P5V0DS
P3V3A
PVADPTR
INVENTEC
TITLE
CYCLONE_DIS
DOCKING_CNTR
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
SHEET 57 of 90
CHANGE by XXX
DATE 26-NOV-2012


SENSE_B
R528 20K_1%_2
Q528 SSM3K7002BFU
LINE_IN_SENSE
R529 100K_5%_2
AGND_AUDIO
PR_AOUT_L_AB
PR_AOUT_R_AB
C511 150UF_6.3V
C512 150UF_6.3V
X5R
R522 30_1%_3
R523 30_1%_3
PR_AOUT_L_DOCK
PR_AOUT_R_DOCK
R502 20K_1%_2
R503 20K_1%_2
A_LINEINR
A_LINEINL
C526 2.2UF_10V_5
C514 2.2UF_10V_5
R504 6.2K_1%_2
R505 6.2K_1%_2
A_LINEINR_DOCK
A_LINEINL_DOCK
R506 2K_5%_2_DY
R507 2K_5%_2_DY
A_SD#
D500 1N4148WS_7_F
R517 10K_5%_2
SPKR_EN_AB
C527 0.1UF_16V_2
P3V3S
SENSE_A
R531 39.2K_1%_2
Q530 SSM3K7002BFU
LINE_OUT_SENSE
R530 100K_5%_2
C504 1UF_6.3V_2
C503 0.1UF_16V_2
C505 0.1UF_16V_2
C502 10UF_6.3V_3
U501
DVDD_CORE
DVDD_IO
DVDD
HDA_BITCLK
HDA_SDO
HDA_SYNC
HDA_SDI
HDA_RST#
EAPD
DMIC_CLK/GPIO1
DMIC0/GPIO2
SPDIFOUT0/GPIO3
DMIC1/GPIO0/SPDIFOUT1
CAP+
CAP-
DVSS
PVSS
PAD
AZ_R3S_BITCLK
AZ_R3S_SDOUT
AZ_R3S_SYNC
AZ_R3S_SDIN0
AZ_R3S_RST#
R513 4.7K_5%_2
R514 33_5%_2
R515 0_5%_2_DY
C522 0.01UF_50V_2
C523 10PF_50V_2_DY
SPKR_EN_AB
DMIC_CLK
DMIC_DAT
R516 100_5%_2
C513 12PF_50V_2
RF SOLUTION
C521 4.7UF_6.3V_3
X5R
REC_MUTE_LED_CNTR
PLAY_MUTE_LED_CNTR
P5V0S_AUDIO_AVDD
P5V0S
C506 1UF_6.3V_2
C507 0.1UF_16V_2
C508 1UF_6.3V_2
C509 0.1UF_16V_2
C510 10UF_6.3V_3
AVDD1
AVDD2
PVDD1
PVDD2
SENSE_A
SENSE_B
HP0_PORTA_L
HP0_PORTA_R
VREFOUT_A
HP1_PORTB_L
HP1_PORTB_R
PORTC_L
PORTC_R
VREFOUT_C/GPIO4
PORTE_L
PORTE_R
PORTF_L
PORTF_R
SPK_PORTD_+L
SPK_PORTD_-L
SPK_PORTD_+R
SPK_PORTD_-R
MONO_OUT
PCBEEP
VREFFILT
CAP2
V-
VREG(+2.5V)
AVSS1
AVSS2
AVSS3
C515 4.7UF_6.3V_3
C516 4.7UF_6.3V_3
C529 0.1UF_16V_2
C517 10UF_6.3V_3
IDT_92HD91B2X5NLGXWCX_QFN_48P
6019B0972801
PAD500
POWERPAD_2_0610
R512 2.49K_1%_2
R511 2.49K_1%_2
C524 1000PF_50V_2
C525 1000PF_50V_2
X7R
C530 1UF_6.3V_3
A_MIC
EXT_MIC_JACK
MIC_BIAS
HP_OUT_L1
HP_OUT_R1
PR_AOUT_L_AB
PR_AOUT_R_AB
SENSE_A
SENSE_B
A_LINEINL
A_LINEINR
SPK_OUT_L_DP
SPK_OUT_L_DN
SPK_OUT_R_DP
SPK_OUT_R_DN
INT-SPEAKER CONN.
ACES_50228_00471_001_4P
CN640
6012B0025301
C640 2200PF_50V_2
C641 2200PF_50V_2
C642 2200PF_50V_2
C643 2200PF_50V_2
R534 3.3K_5%_2
R535 3.3K_5%_2
R536 3.3K_5%_2
R537 3.3K_5%_2
C518 0.1UF_16V_2
R509 100K_5%_2
C520 0.1UF_16V_2
C519 0.01UF_50V_2
R510 10K_5%_2
R508 10K_5%_2
Q500 SSM3K7002BFU
A_3S_ICHSPKR
SLP_S3#_3R
U500 TI_HPA01091DBVR_SOT23_5P
APPLY HP P/N
C500 0.015UF_10V_2
C501 10UF_6.3V_3
REFERENCE NUMBER:500~549
INVENTEC
TITLE
CYCLONE_DIS
AUDIO
SIZE A4
CODE CS
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
SHEET 58 of 90



REFERENCE NUMBER:600~649



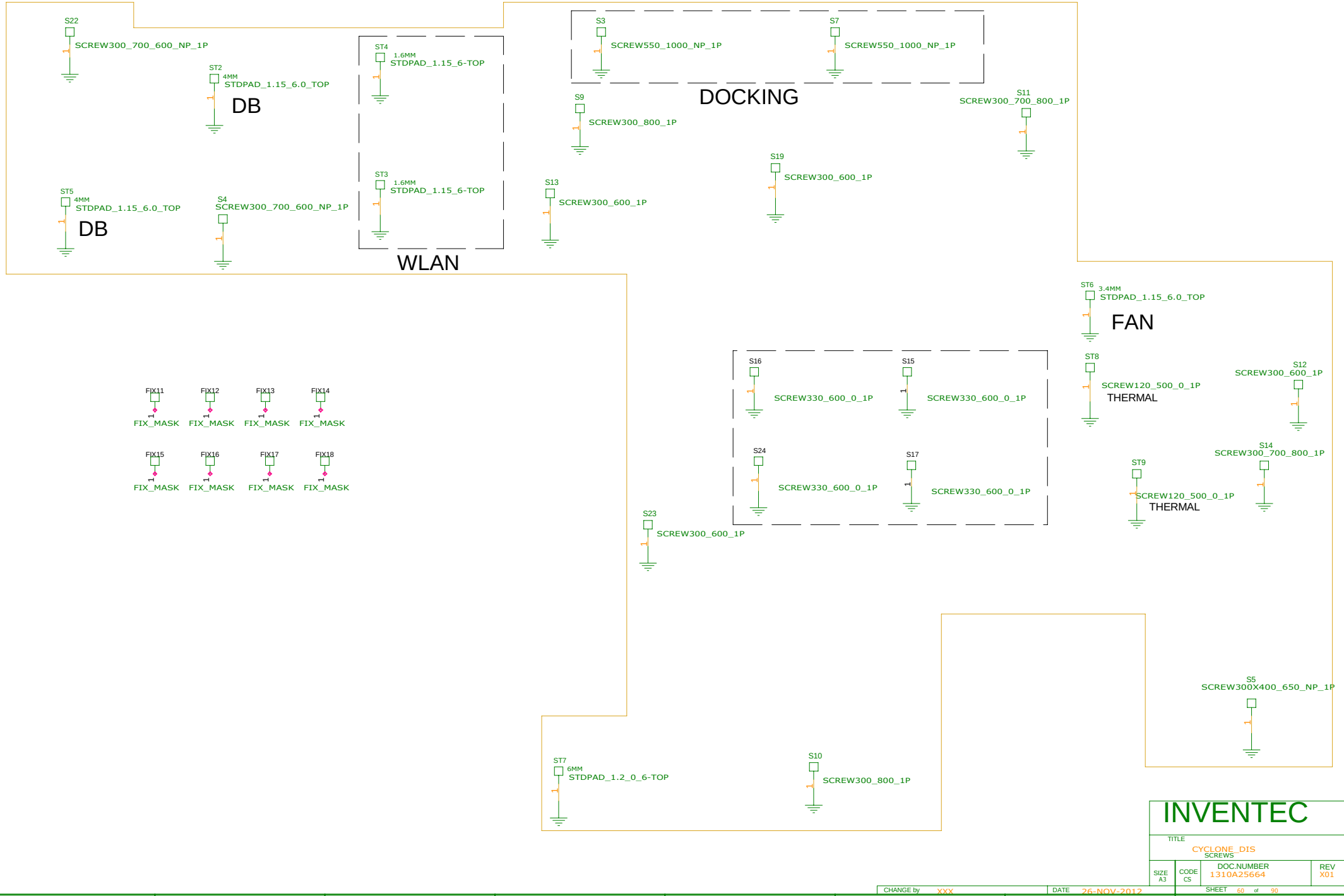
REFERENCE NUMBER:600~610

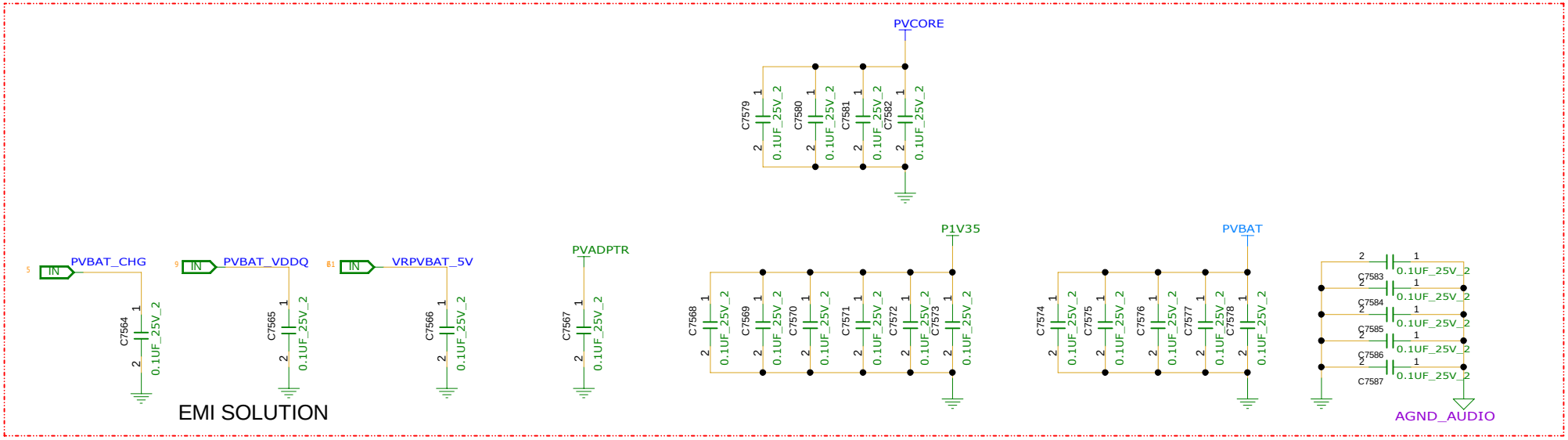
INVENTEC

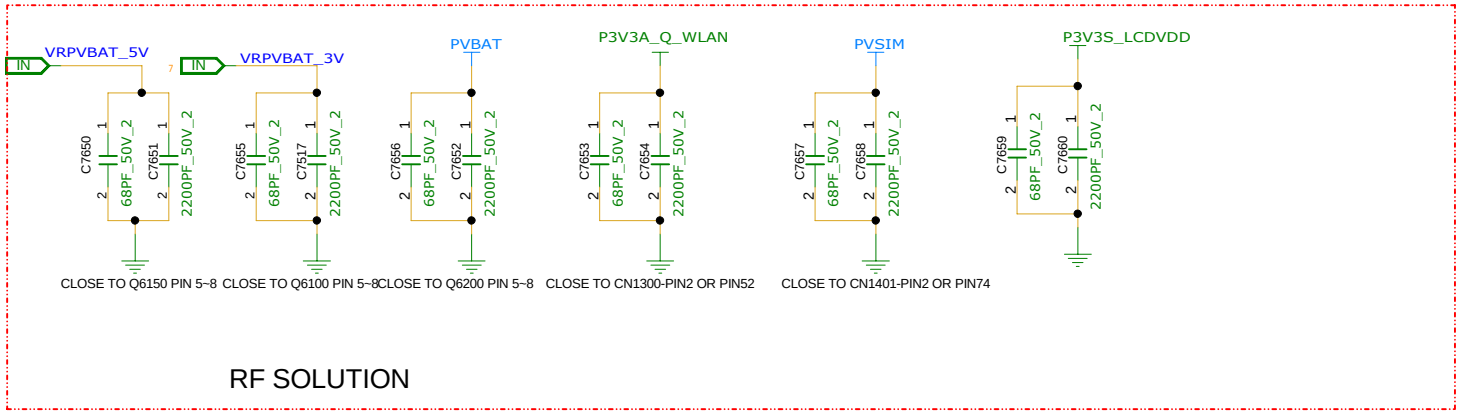
TITLE
CYCLONE_DIS
EXT.MIC / MIC / HP

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX DATE 26-NOV-2012 SHEET 59 of 90

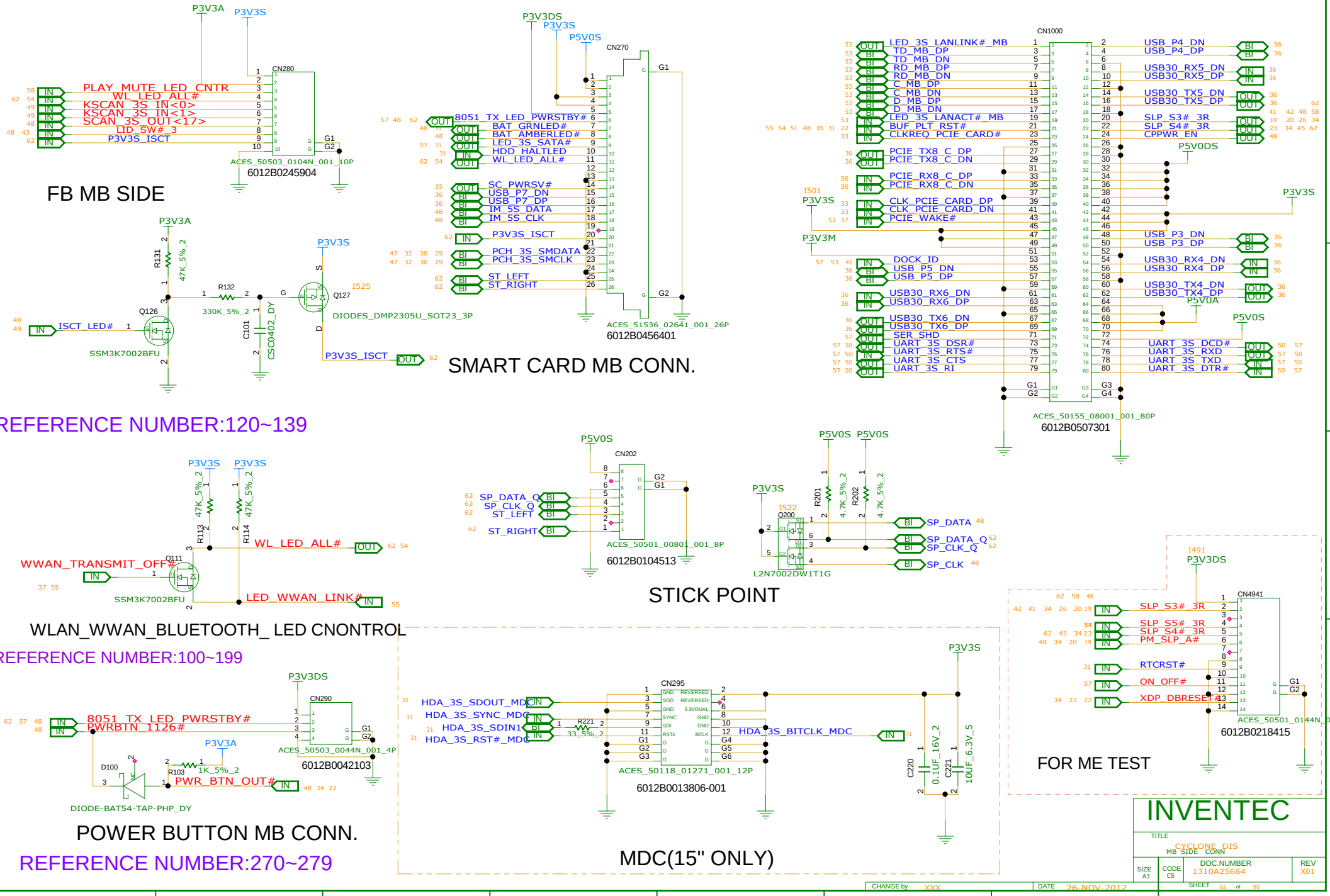

S22
SCREW300_700_600_NP_1P
ST2
4MM
STDPAD_1.15_6.0_TOP
DB
ST5
4MM
STDPAD_1.15_6.0_TOP
DB
S4
SCREW300_700_600_NP_1P
ST4
1.6MM
STDPAD_1.15_6-TOP
ST3
1.6MM
STDPAD_1.15_6-TOP
WLAN
S3
SCREW550_1000_NP_1P
S7
SCREW550_1000_NP_1P
DOCKING
S9
SCREW300_800_1P
S11
SCREW300_700_800_1P
S13
SCREW300_600_1P
S19
SCREW300_600_1P
ST6
3.4MM
STDPAD_1.15_6.0_TOP
FAN
ST8
SCREW120_500_0_1P
THERMAL
S12
SCREW300_600_1P
S16
SCREW330_600_0_1P
S15
SCREW330_600_0_1P
S24
SCREW330_600_0_1P
S17
SCREW330_600_0_1P
S23
SCREW300_600_1P
ST9
SCREW120_500_0_1P
THERMAL
S14
SCREW300_700_800_1P
FIX11
FIX_MASK
FIX12
FIX_MASK
FIX13
FIX_MASK
FIX14
FIX_MASK
FIX15
FIX_MASK
FIX16
FIX_MASK
FIX17
FIX_MASK
FIX18
FIX_MASK
S5
SCREW300X400_650_NP_1P
ST7
6MM
STDPAD_1.2_0_6-TOP
S10
SCREW300_800_1P
INVENTEC
TITLE
CYCLONE_DIS
SCREWS
SIZE
A3
CODE
CS
DOC.NUMBER
1310A25664
REV
X01
CHANGE by
XXX
DATE
26-NOV-2012
SHEET
60
of
90

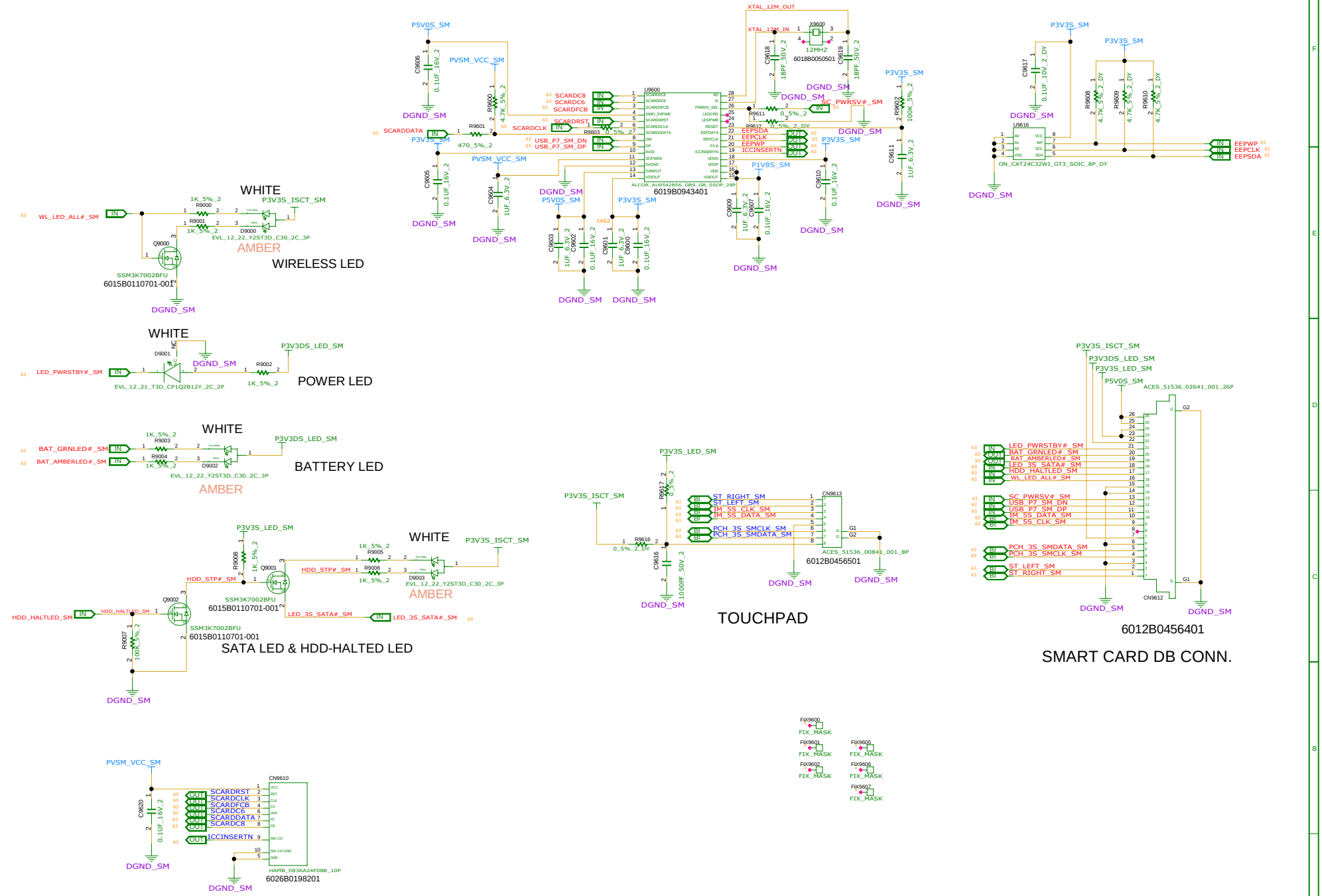




INVENTEC

TITLE: CYCLONE_DIS EMI & RF SOLUTION			
SIZE A3	CODE CS	DOC.NUMBER 1310A25664	REV X01
CHANGE by XXX	DATE 26-NOV-2012	SHEET 61 of 90	


FB MB SIDE
6012B0245904
SMART CARD MB CONN.
6012B0456401
6012B0507301
REFERENCE NUMBER:120~139
STICK POINT
6012B0104513
WLAN_WWAN_BLUETOOTH_ LED CNONTROL
REFERENCE NUMBER:100~199
POWER BUTTON MB CONN.
6012B0042103
REFERENCE NUMBER:270~279
MDC(15" ONLY)
6012B0013806-001
FOR ME TEST
6012B0218415
INVENTEC
CYCLONE_DIS
MB_SIDE_CONN
DOC.NUMBER
1310A25664
REV
X01
SIZE
A3
CODE
CS
SHEET
62
of
90
CHANGE by
XXX
DATE
26-NOV-2012



REFERENCE NUMBER:9600~9699

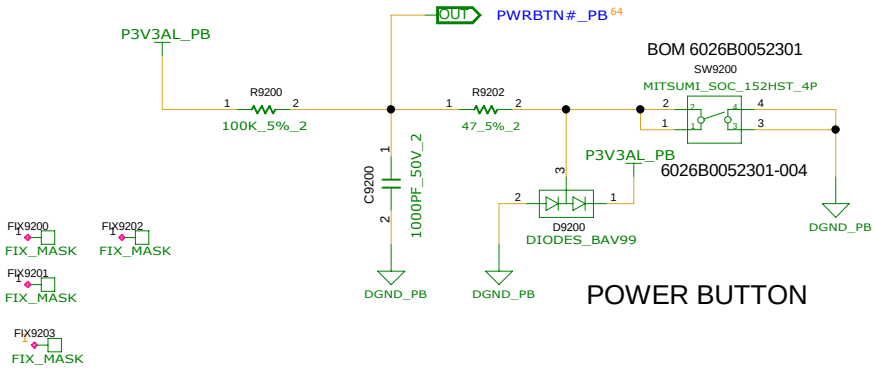
SMART CARD DAUGHTER BOARD

INVENTEC

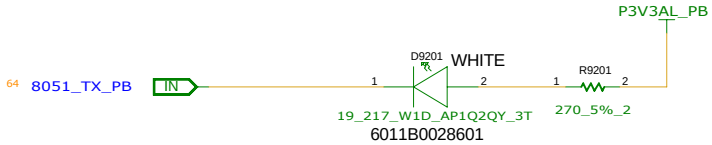
SIZE C	CODE CS	DOC.NUMBER 1310A25664	REV X01

CYCLONE_DIS
SMART CARD

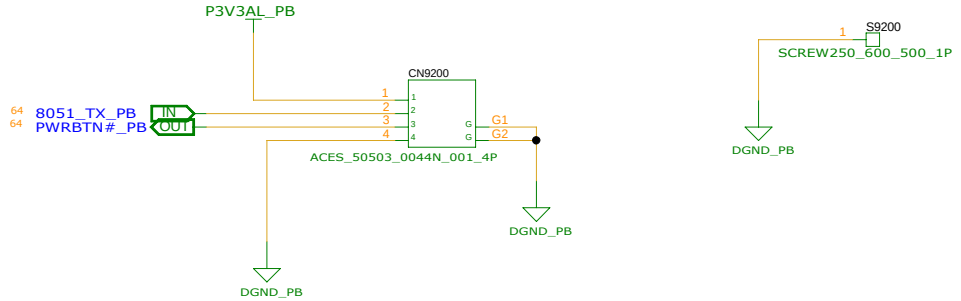
CHANGE by XXX DATE 26-NOV-2012 SHEET 63 of 90



POWER BUTTON

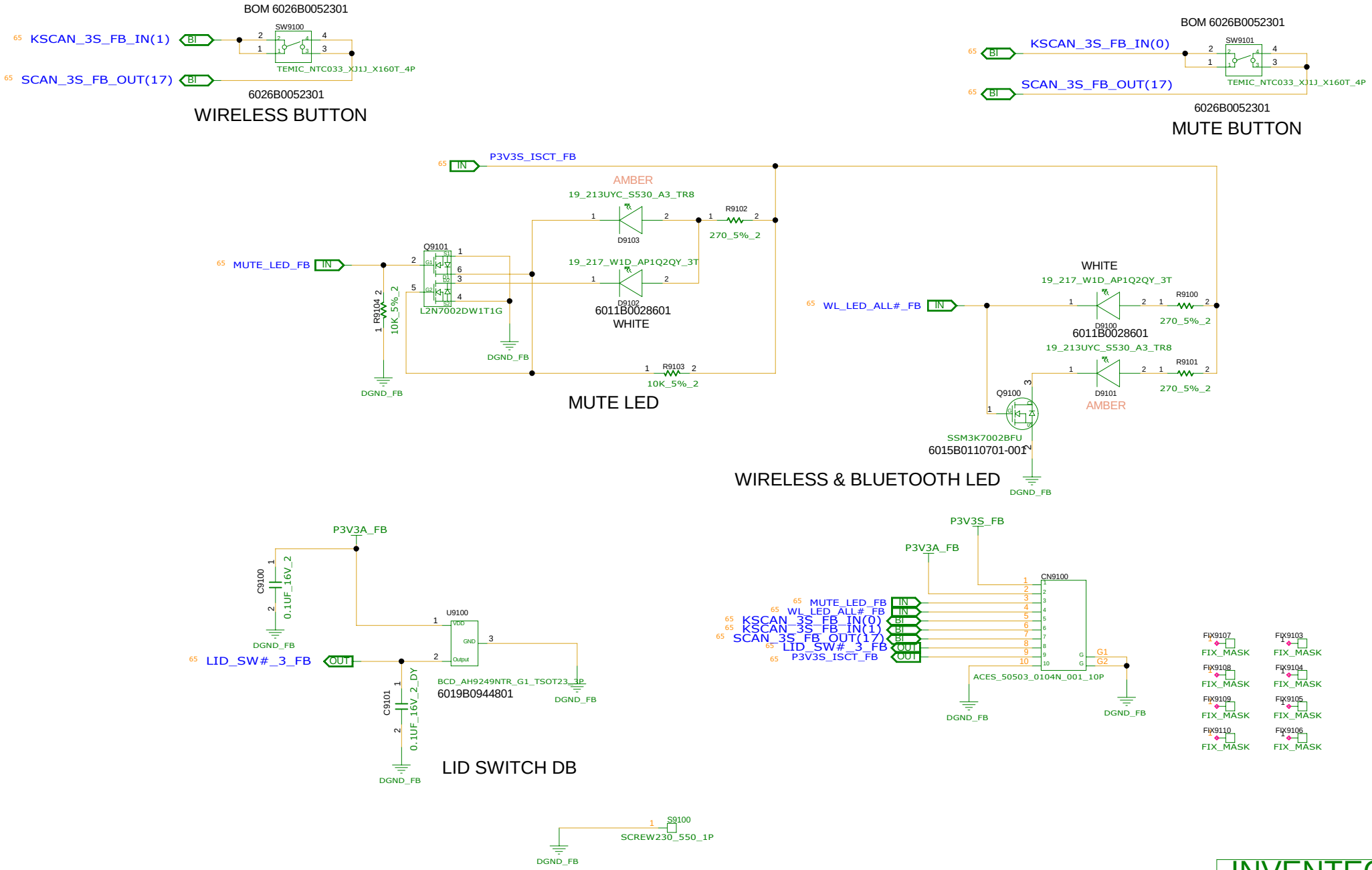


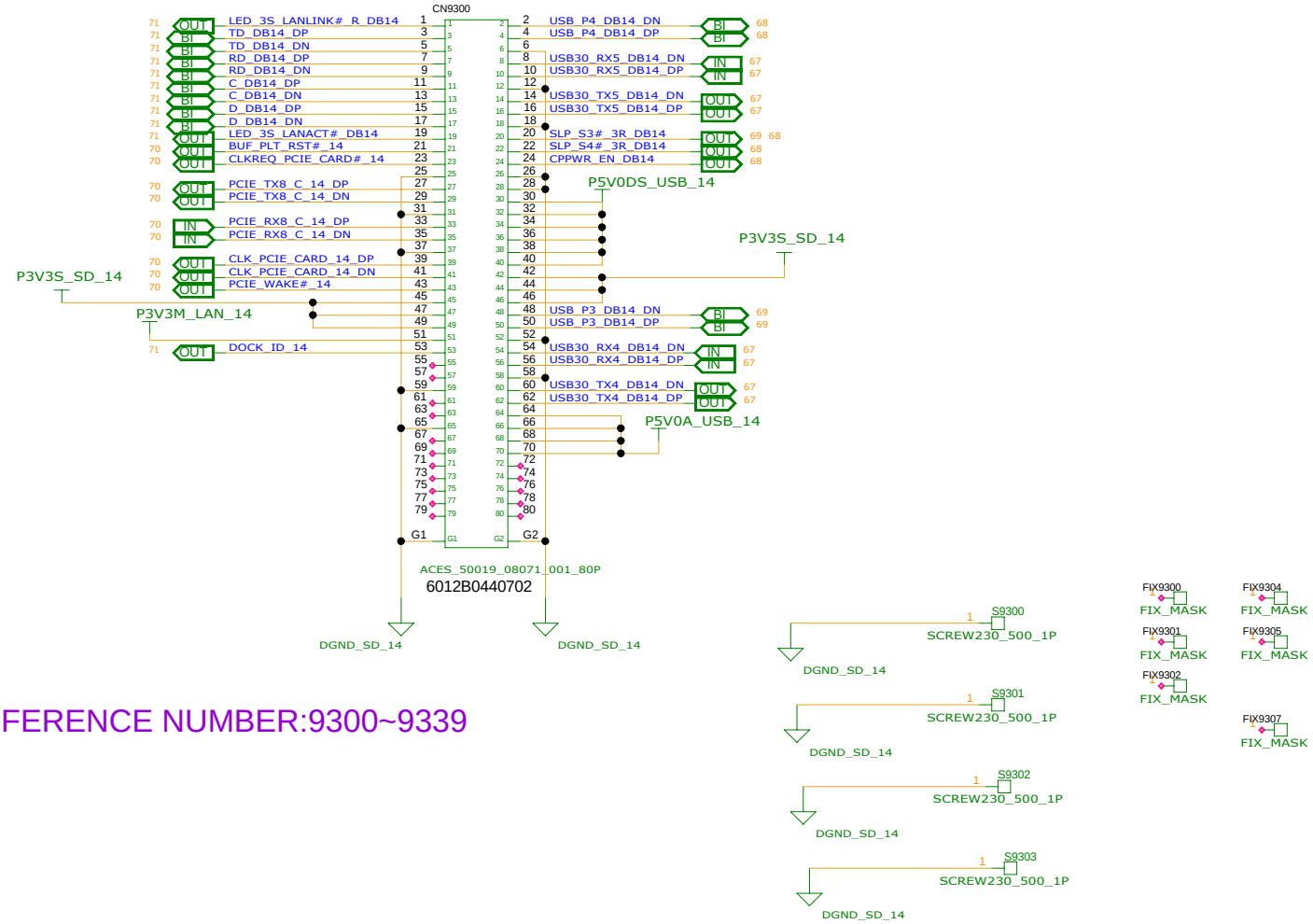
POWER LED



POWER BUTTON BOARD

INVENTEC			
TITLE: CYCLONE_DIS POWER BUTTON BOARD			
SIZE A3	CODE CS	DOC.NUMBER 1310A25664	REV X01
CHANGE by XXX	DATE 26-NOV-2012	SHEET 64 of 90	

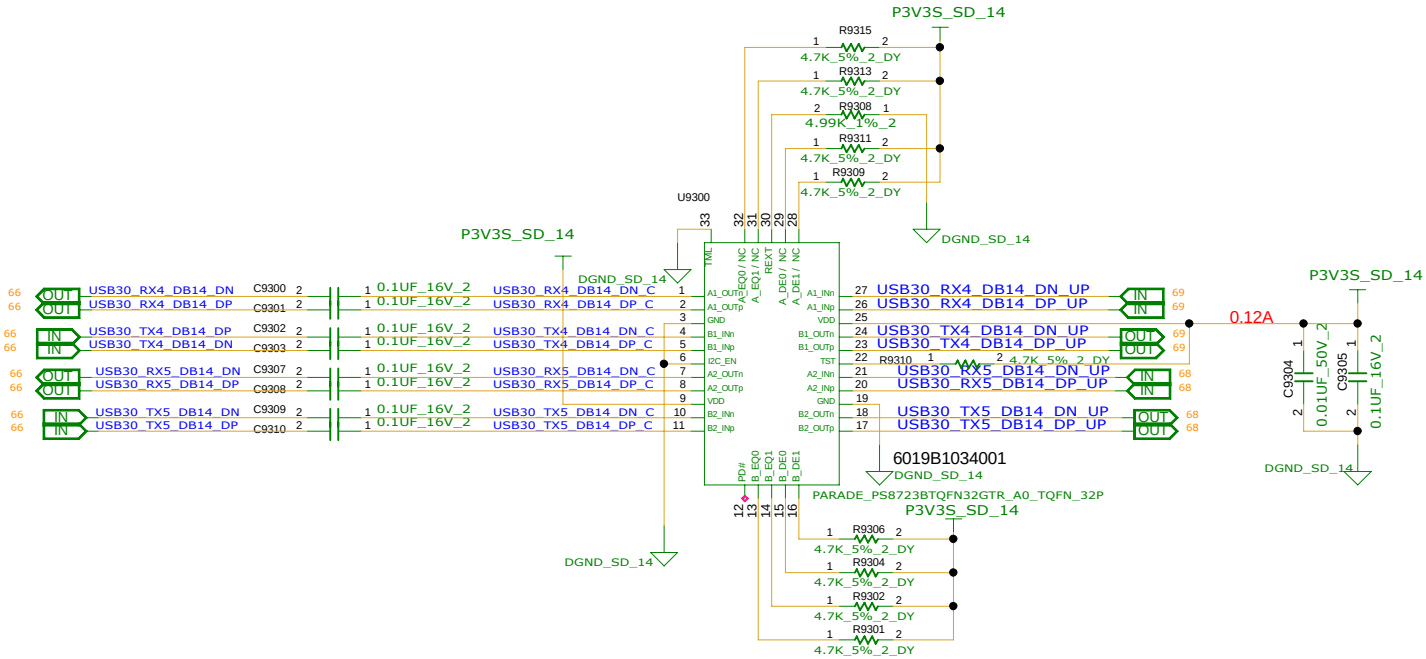

BOM 6026B0052301
65 KSCAN_3S_FB_IN(1) BI
65 SCAN_3S_FB_OUT(17) BI
SW9100
TEMIC_NTC033_XJ1J_X160T_4P
6026B0052301
WIRELESS BUTTON
BOM 6026B0052301
65 KSCAN_3S_FB_IN(0) BI
65 SCAN_3S_FB_OUT(17) BI
SW9101
TEMIC_NTC033_XJ1J_X160T_4P
6026B0052301
MUTE BUTTON
65 P3V3S_ISCT_FB IN
AMBER
19_213UYC_S530_A3_TR8
D9103
R9102
270_5%_2
65 MUTE_LED_FB IN
Q9101
L2N7002DW1T1G
R9104 10K_5%_2
19_217_W1D_AP1Q2QY_3T
D9102
6011B0028601
WHITE
R9103 10K_5%_2
DGND_FB
MUTE LED
WHITE
19_217_W1D_AP1Q2QY_3T
D9100
R9100
270_5%_2
6011B0028601
19_213UYC_S530_A3_TR8
D9101
R9101
270_5%_2
AMBER
65 WL_LED_ALL#_FB IN
Q9100
SSM3K7002BFU
6015B0110701-001
WIRELESS & BLUETOOTH LED
P3V3A_FB
C9100 0.1UF_16V_2
U9100
VDD
GND
Output
BCD_AH9249NTR_G1_TSOT23_3P
6019B0944801
65 LID_SW#_3_FB OUT
C9101 0.1UF_16V_2_DY
LID SWITCH DB
P3V3S_FB
P3V3A_FB
CN9100
65 MUTE_LED_FB IN
65 WL_LED_ALL#_FB IN
65 KSCAN_3S_FB_IN(0) BI
65 KSCAN_3S_FB_IN(1) BI
65 SCAN_3S_FB_OUT(17) BI
65 LID_SW#_3_FB OUT
65 P3V3S_ISCT_FB OUT
ACES_50503_0104N_001_10P
G1
G2
FIX9107 FIX_MASK
FIX9103 FIX_MASK
FIX9108 FIX_MASK
FIX9104 FIX_MASK
FIX9109 FIX_MASK
FIX9105 FIX_MASK
FIX9110 FIX_MASK
FIX9106 FIX_MASK
S9100
SCREW230_550_1P
DGND_FB
INVENTEC
TITLE
CYCLONE_DIS
FUNCTION_BUTTON_BOARD
SIZE A3
CODE CS
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
SHEET 65 of 90
FUNCTION BUTTON BOARD



REFERENCE NUMBER:9300~9339

14" USB DAUGHTER BOARD

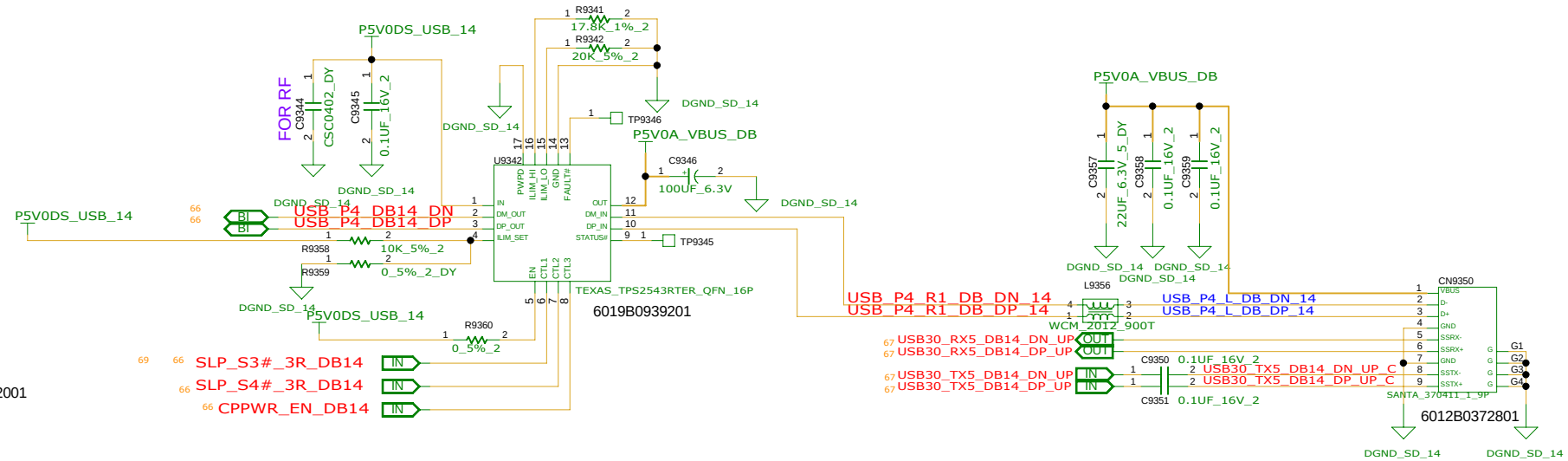
INVENTEC			
TITLE: CYCLONE_DIS 14 B TO B CONN			
SIZE A3	CODE CS	DOC.NUMBER 1310A25664	REV X01
CHANGE by XXX	DATE 26-NOV-2012	SHEET 66 of 90	



REFERENCE NUMBER:9300~9339

14" USB DAUGHTER BOARD

INVENTEC	
TITLE	CYCLONE_DIS 14 USB30 REDRIVER
SIZE A3	CODE CS
DOC.NUMBER	1310A25664
REV	X01
CHANGE by	XXX
DATE	26-NOV-2012
SHEET	67 of 90



TI TPS2543 P/N:6019B0939201
PERICOM PI5USB2543 P/N:6019B0932001

	R9358	R9359	R9342
* TPS2543	10K	NI	20K
PI5USB2543	NI	0	0

REFERENCE NUMBER:9340~9359

14" USB DAUGHTER BOARD

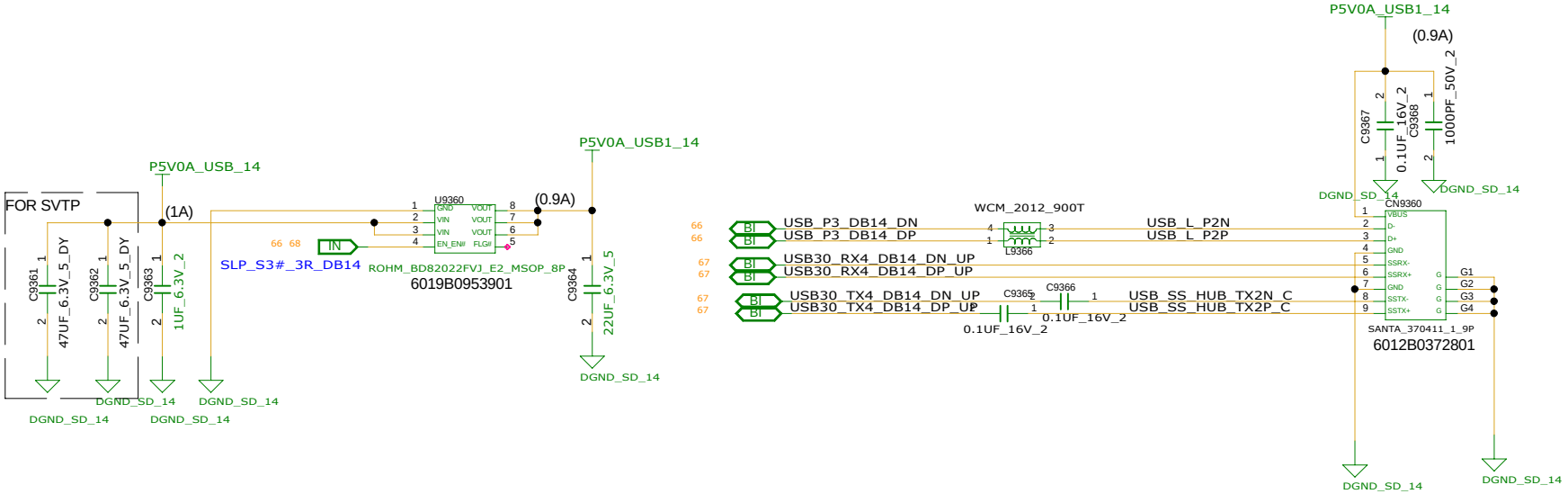
USB CNTR

INVENTEC

TITLE
CYCLONE_DIS
14 USB CHARGER

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX DATE 26-NOV-2012 SHEET 68 of 90

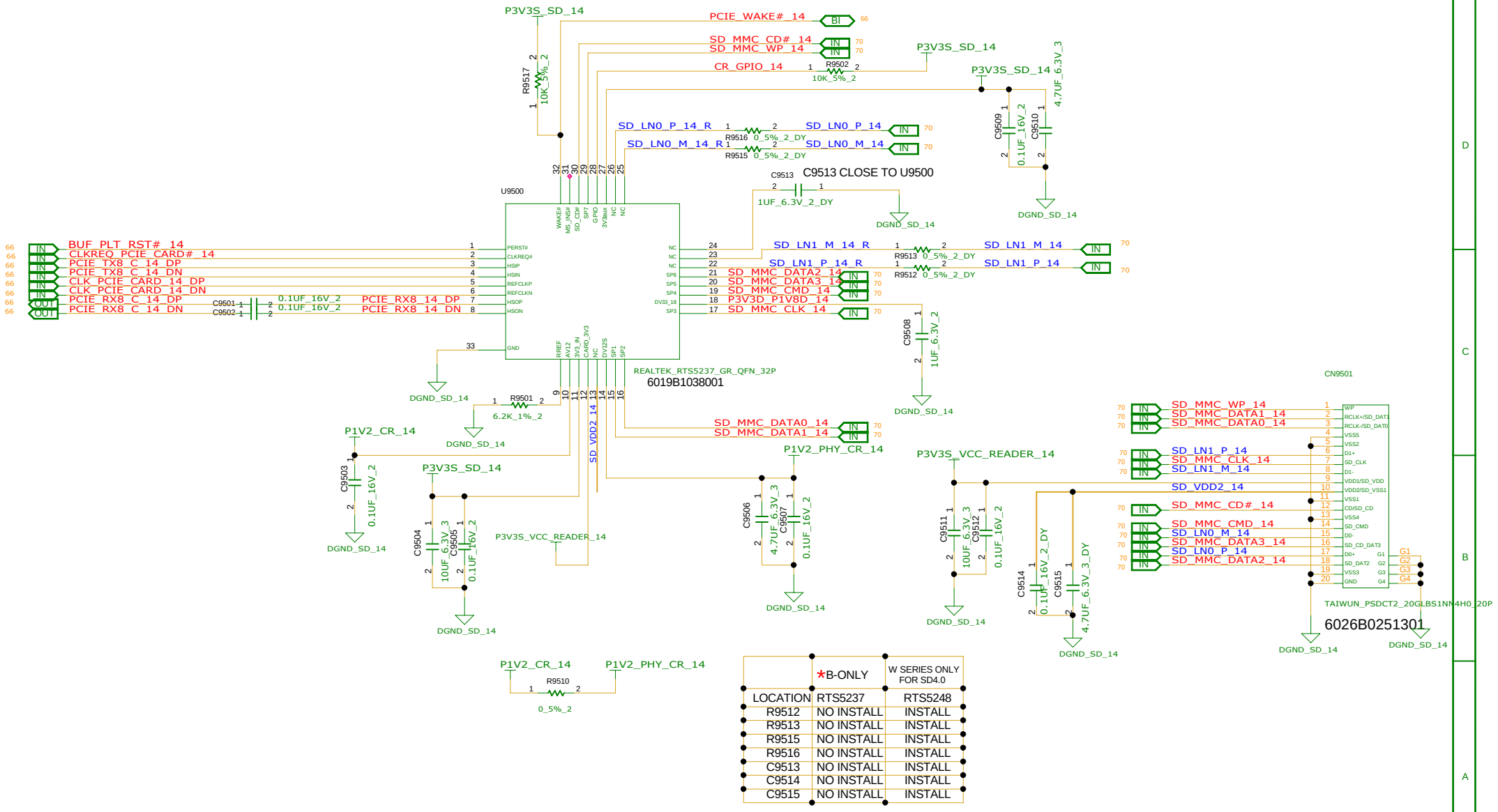


REFERENCE NUMBER: 9360~9369

14" USB DAUGHTER BOARD

INVENTEC

TITLE	CYCLONE_DIS 14 USB CONN		
SIZE A3	CODE CS	DOC.NUMBER 1310A25664	REV X01
CHANGE by XXX	DATE 26-NOV-2012	SHEET 69 of 90	



	*B-ONLY	W SERIES ONLY FOR SD4.0
LOCATION	RTS5237	RTS5248
R9512	NO INSTALL	INSTALL
R9513	NO INSTALL	INSTALL
R9515	NO INSTALL	INSTALL
R9516	NO INSTALL	INSTALL
C9513	NO INSTALL	INSTALL
C9514	NO INSTALL	INSTALL
C9515	NO INSTALL	INSTALL

REFERENCE NUMBER:9500~9529

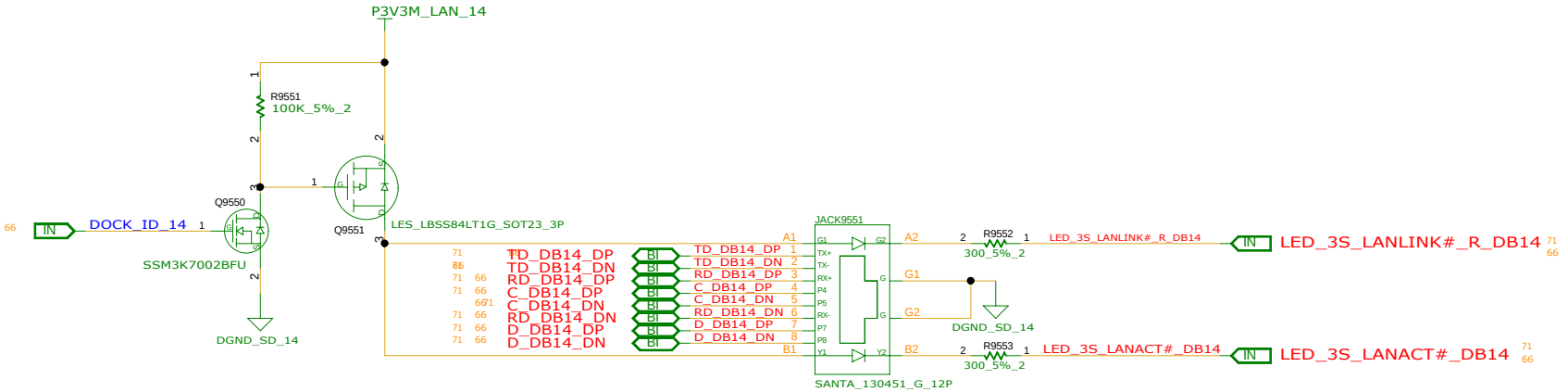
14" USB DAUGHTER BOARD

INVENTEC

TITLE: CYCLONE_DIS 14_CARD_READER

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX | DATE 26-NOV-2012 | SHEET 70 of 90



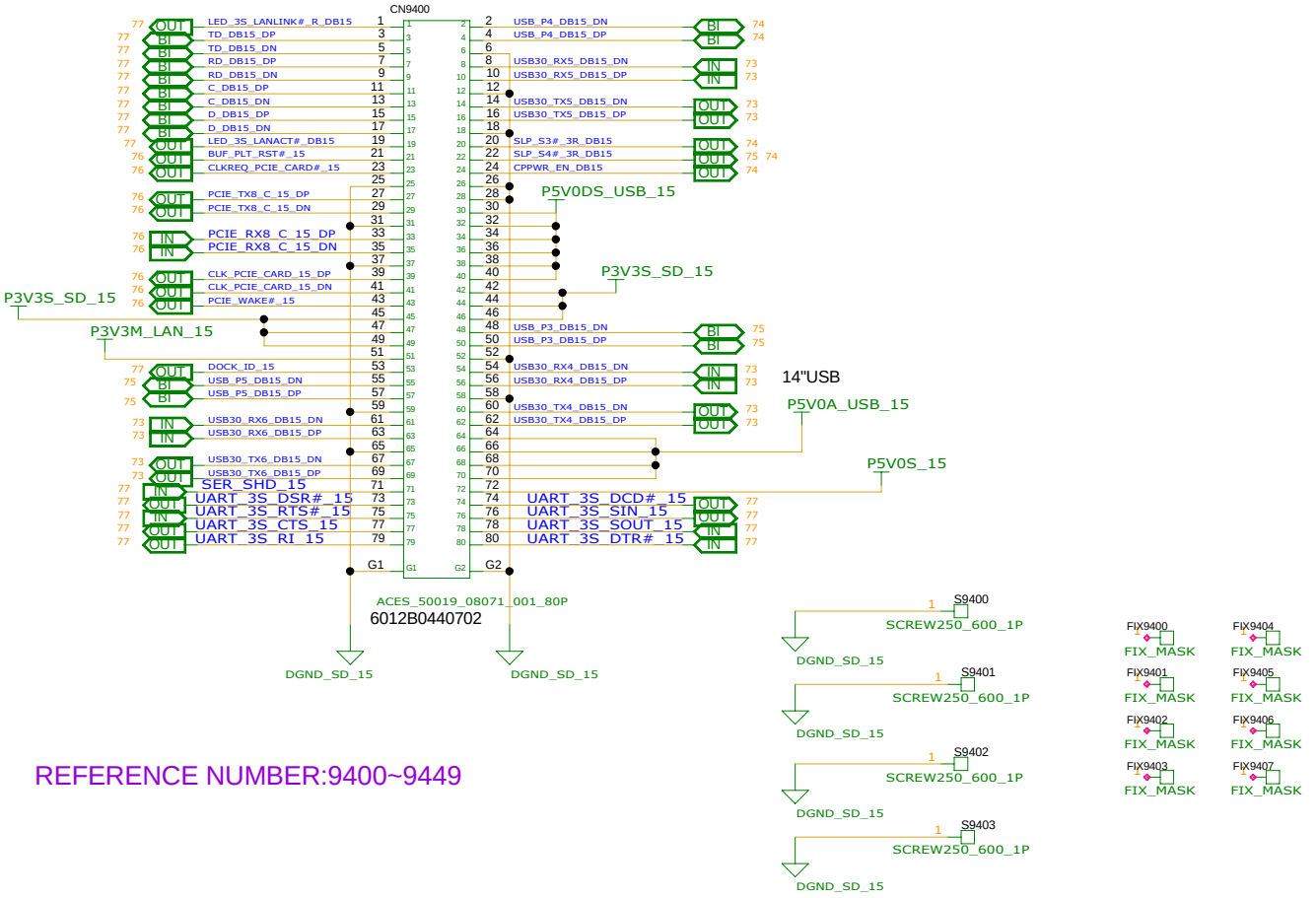
6026B0187001

REFERENCE NUMBER:9550~9569

14" USB DAUGHTER BOARD

INVENTEC

TITLE: CYCLONE_DIS 14 RJ45 CONN			
SIZE A3	CODE CS	DOC.NUMBER 1310A25664	REV X01
CHANGE by XXX	DATE 26-NOV-2012	SHEET 71 of 90	

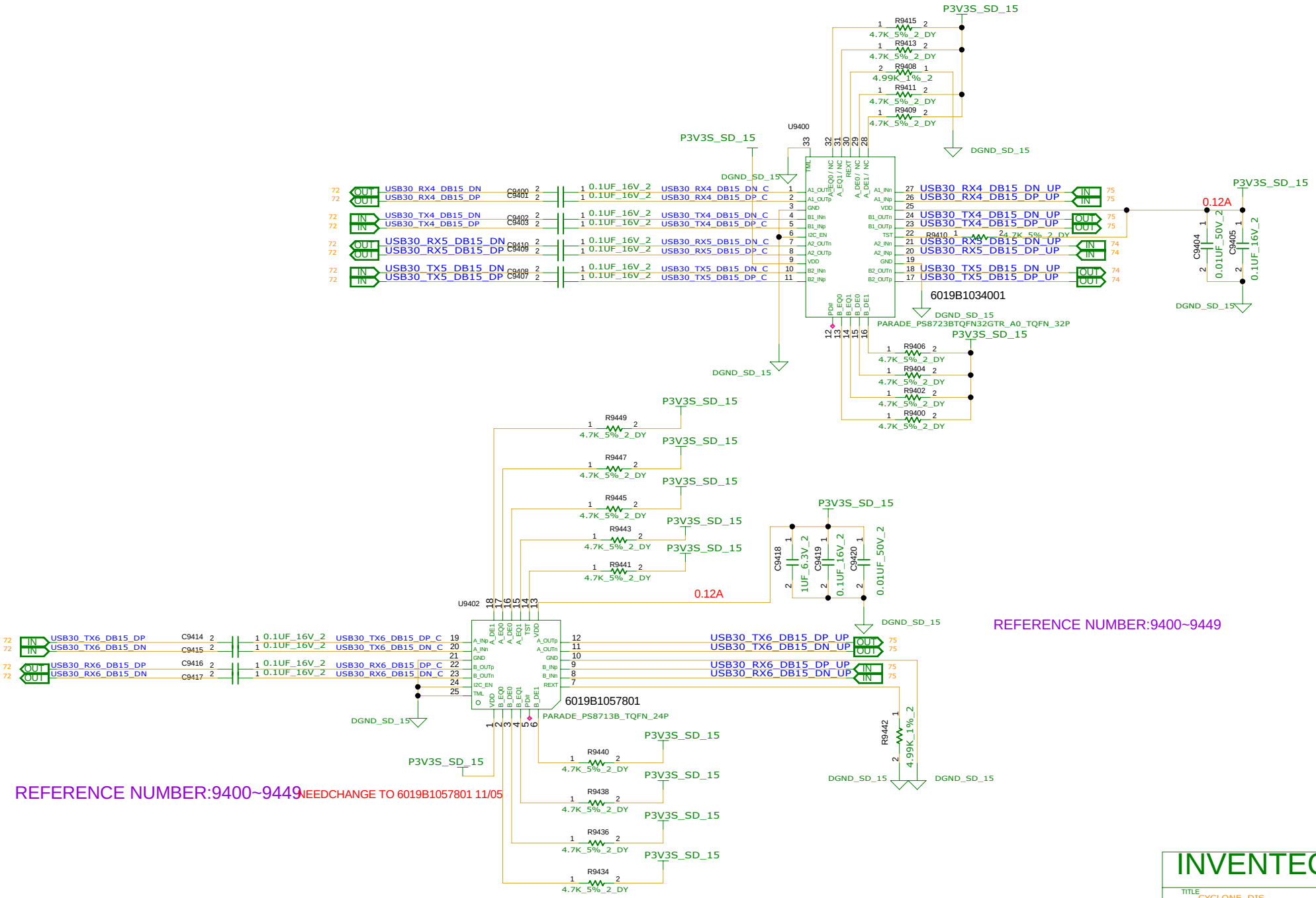


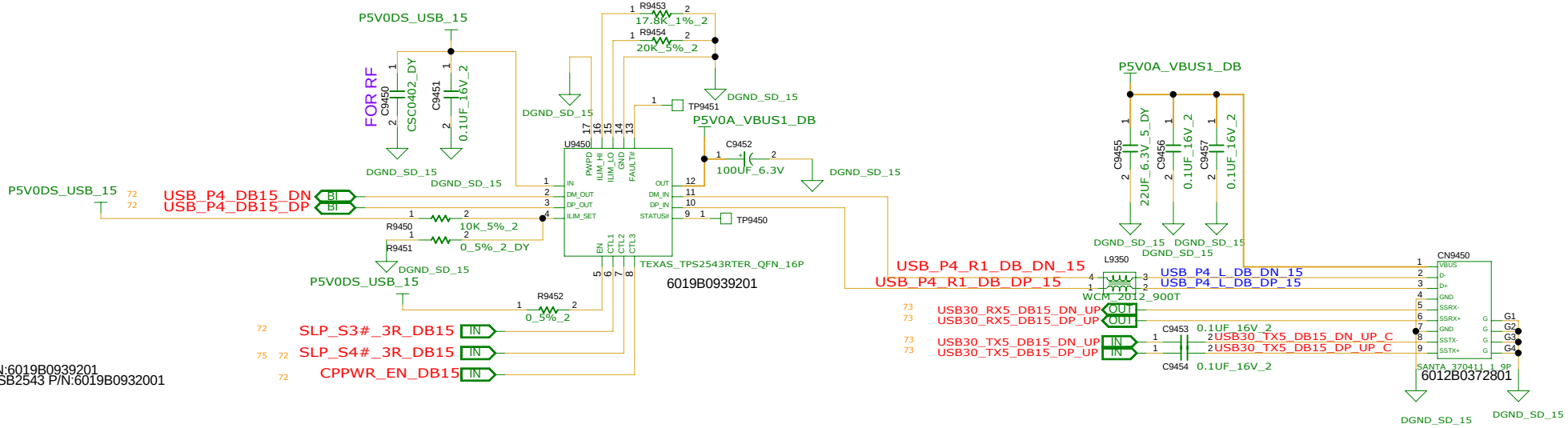
REFERENCE NUMBER:9400~9449

15" USB DAUGHTER BOARD

INVENTEC

TITLE	CYCLONE_DIS 15 B TO B CONN		
SIZE A3	CODE CS	DOC.NUMBER 1310A25664	REV X01
CHANGE by XXX	DATE 26-NOV-2012	SHEET 72 of 90	


P3V3S_SD_15
U9400
6019B1034001
PARADE_PS8723BTQFN32GTR_A0_TQFN_32P
DGND_SD_15
0.12A
USB30_RX4_DB15_DN
USB30_RX4_DB15_DP
USB30_TX4_DB15_DN
USB30_TX4_DB15_DP
USB30_RX5_DB15_DN
USB30_RX5_DB15_DP
USB30_TX5_DB15_DN
USB30_TX5_DB15_DP
USB30_RX4_DB15_DN_UP
USB30_RX4_DB15_DP_UP
USB30_TX4_DB15_DN_UP
USB30_TX4_DB15_DP_UP
USB30_RX5_DB15_DN_UP
USB30_RX5_DB15_DP_UP
USB30_TX5_DB15_DN_UP
USB30_TX5_DB15_DP_UP
U9402
6019B1057801
PARADE_PS8713B_TQFN_24P
USB30_TX6_DB15_DP
USB30_TX6_DB15_DN
USB30_RX6_DB15_DP
USB30_RX6_DB15_DN
USB30_TX6_DB15_DP_UP
USB30_TX6_DB15_DN_UP
USB30_RX6_DB15_DP_UP
USB30_RX6_DB15_DN_UP
REFERENCE NUMBER:9400~9449
REFERENCE NUMBER:9400~9449NEEDCHANGE TO 6019B1057801 11/05
15" USB DAUGHTER BOARD
INVENTEC
CYCLONE_DIS
15 USB30 REDRIVER
DOC.NUMBER 1310A25664
REV X01
CHANGE by XXX
DATE 26-NOV-2012
SHEET 73 of 90



TI TPS2543 P/N:6019B0939201
PERICOM PI5USB2543 P/N:6019B0932001

	R9450	R9451	R9454
* TPS2543	10K	NI	20K
PI5USB2543	NI	0	0

USB CNTR

REFERENCE NUMBER:9450~9499

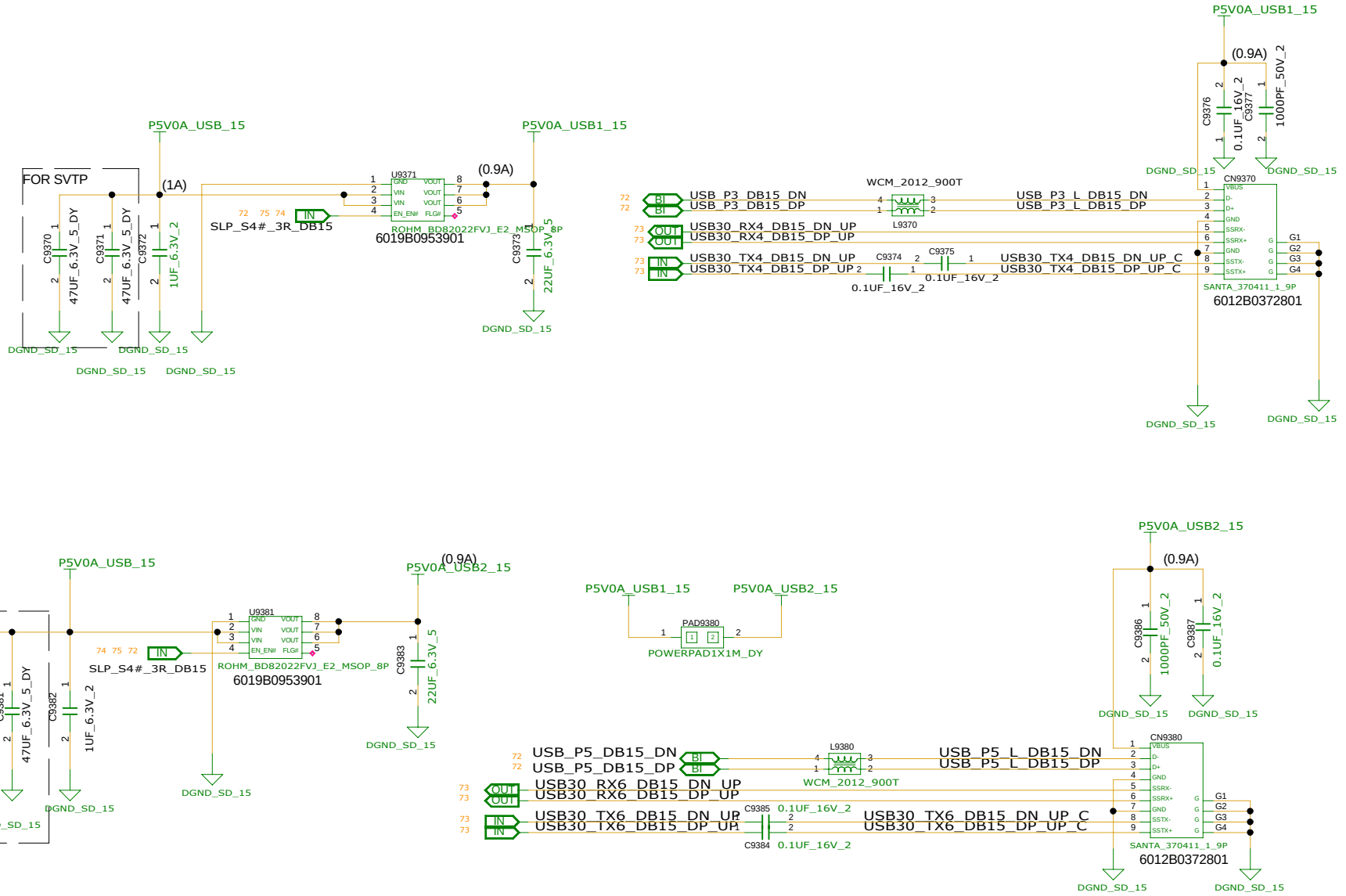
15" USB DAUGHTER BOARD

INVENTEC

TITLE: CYCLONE_DIS
15_USB_CHARGER

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX DATE 26-NOV-2012 SHEET 74 of 90

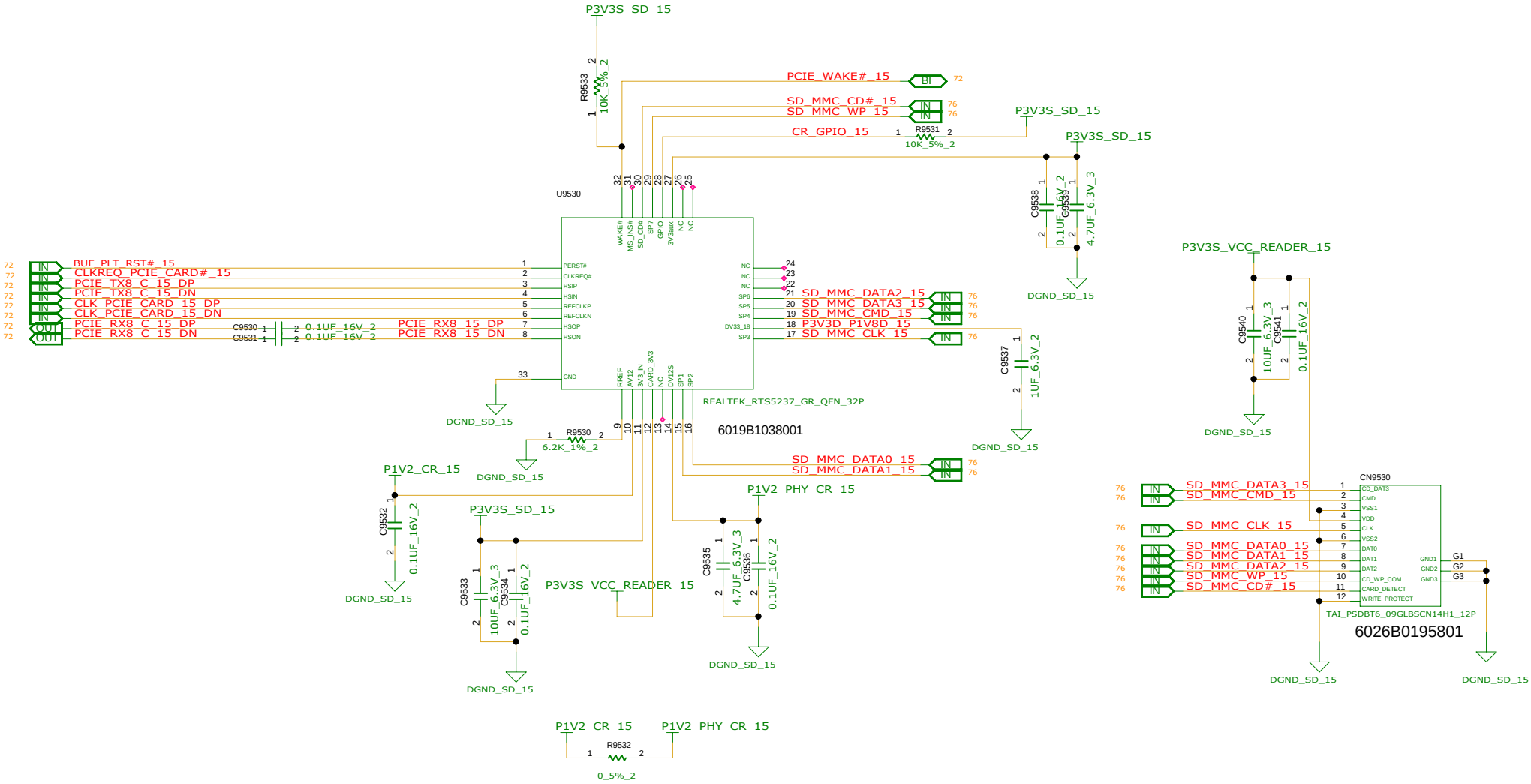


REFERENCE NUMBER:9370~9399

15" USB DAUGHTER BOARD

INVENTEC

TITLE: CYCLONE_DIS 15_USB_CONN			
SIZE: A3	CODE: CS	DOC.NUMBER: 1310A25664	REV: X01
CHANGE by: XXX	DATE: 26-NOV-2012	SHEET: 75 of 90	

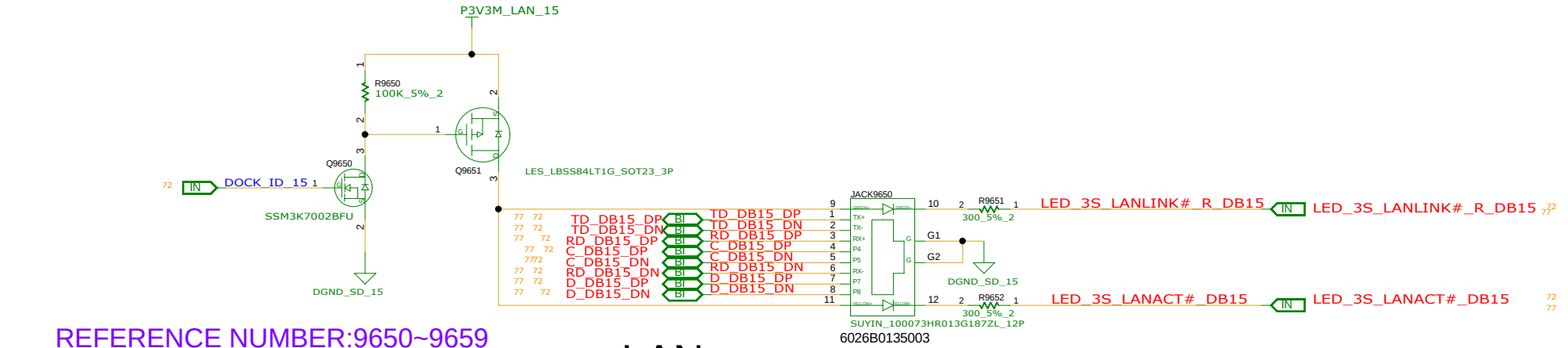


REFERENCE NUMBER:9530~9549

15" USB DAUGHTER BOARD

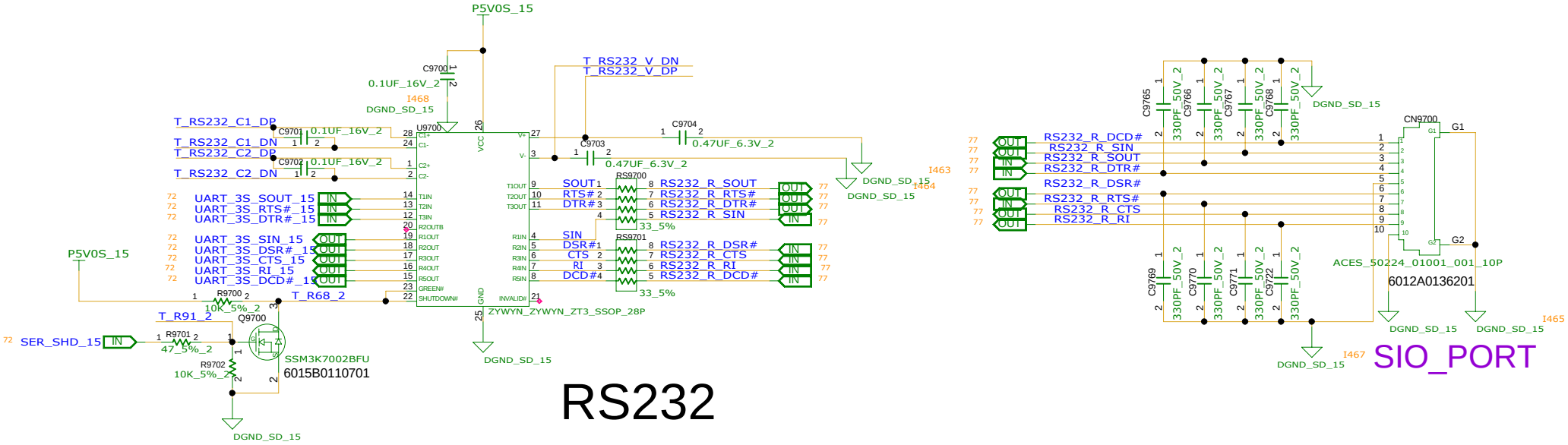
INVENTEC

TITLE: CYCLONE_DIS 15_CARD_READER			
SIZE: A3	CODE: CS	DOC.NUMBER: 1310A25664	REV: X01
CHANGE by: XXX	DATE: 26-NOV-2012	SHEET: 76 of 90	



REFERENCE NUMBER:9650~9659

LAN



REFERENCE NUMBER:9600~9649

RS232

SIO_PORT

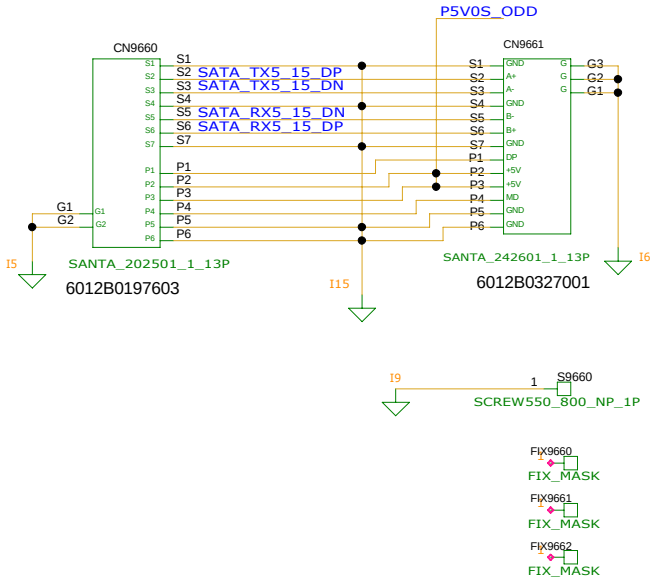
15" USB DAUGHTER BOARD

INVENTEC

TITLE: CYCLONE_DIS
15 RJ45 CONN/SERIAL PORT

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX | DATE 26-NOV-2012 | SHEET 77 of 90



REFERENCE NUMBER:9660~9669

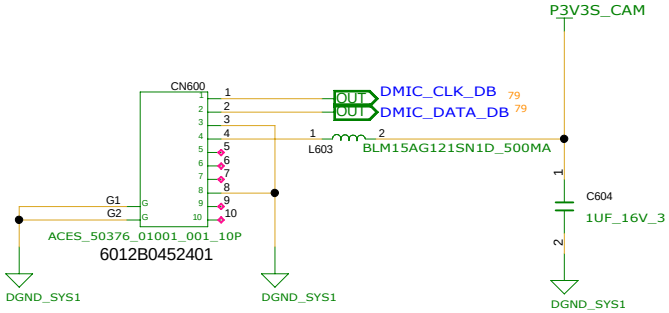
15" SATA ODD BOARD

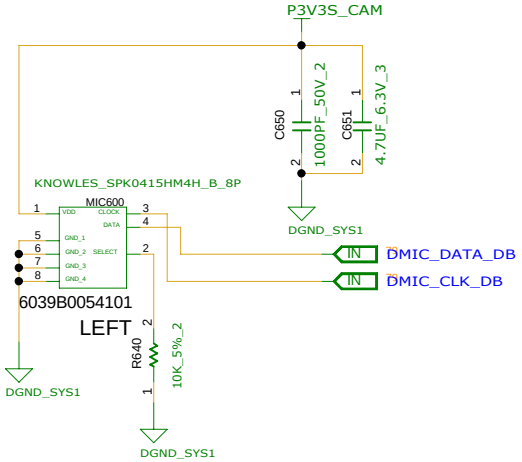
INVENTEC

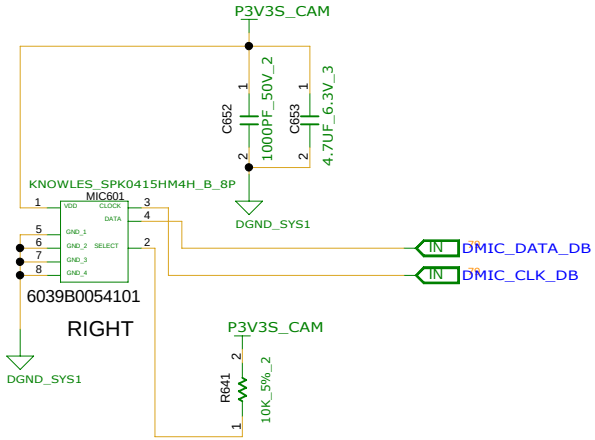
TITLE: CYCLONE_DIS
15_SATA_ODD_DB

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX | DATE 26-NOV-2012 | SHEET 78 of 90







FIX600
FIX_MASK

FIX601
FIX_MASK

REFERENCE NUMBER:600~649

MIC DOUGHTER BOARD

INVENTEC

TITLE
CYCLONE_DIS
MIC BOARD

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX DATE 26-NOV-2012 SHEET 79 of 90

MLPS TABLE

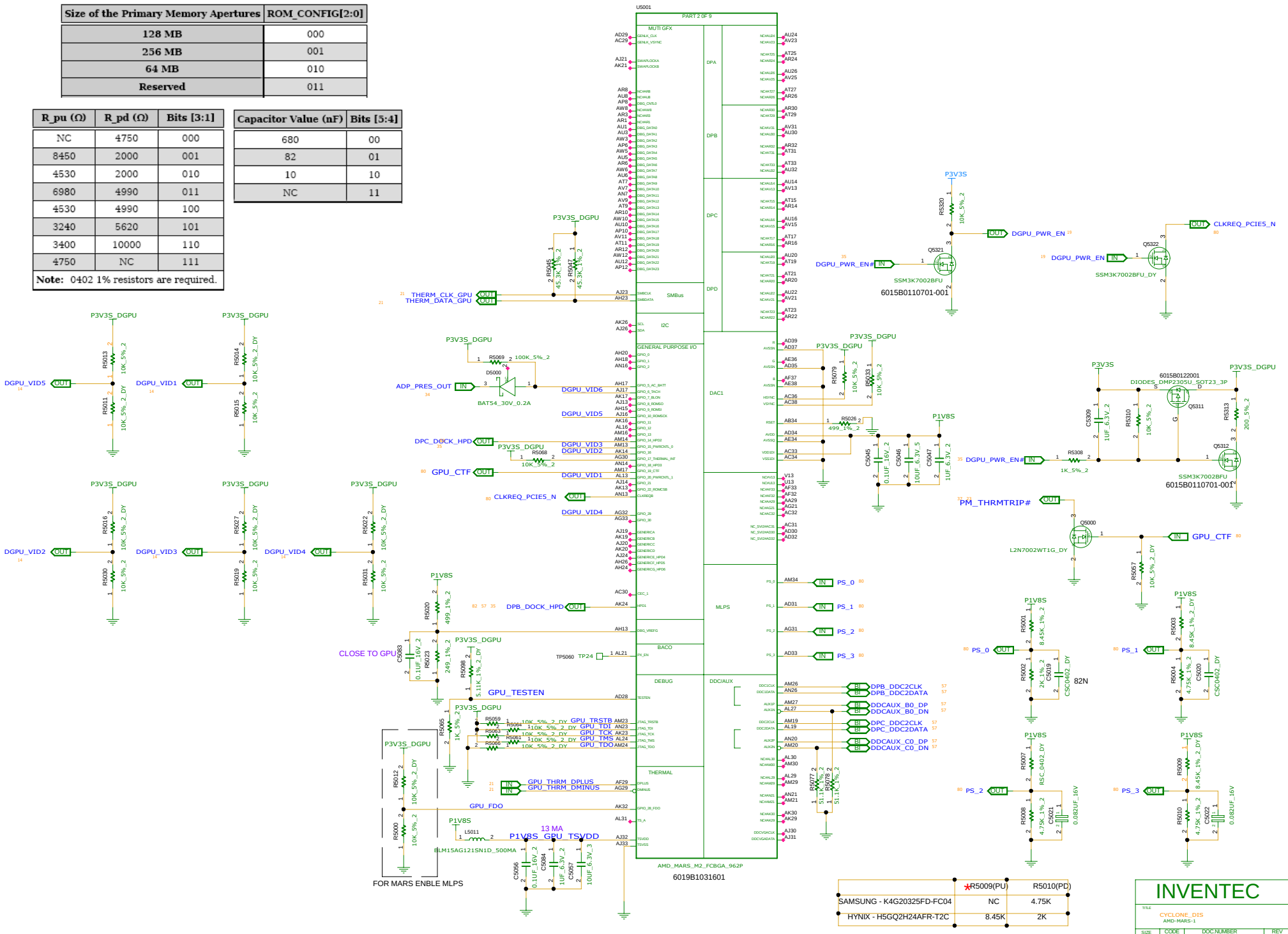
Size of the Primary Memory Apertures	ROM_CONFIG[2:0]
128 MB	000
256 MB	001
64 MB	010
Reserved	011

R_pu (Ω)	R_pd (Ω)	Bits [3:1]
NC	4750	000
8450	2000	001
4530	2000	010
6980	4990	011
4530	4990	100
3240	5620	101
3400	10000	110
4750	NC	111

Note: 0402 1% resistors are required.

Capacitor Value (nF)	Bits [5:4]
680	00
82	01
10	10
NC	11

THERM SENSOR



	R*5009(PU)	R5010(PD)
SAMSUNG - K4G20325FD-FC04	NC	4.75K
HYNIX - H5GQ2H24AFR-T2C	8.45K	2K

INVENTEC

TITLE			
CYCLONE_DIS			
AMD-MARS-1			
SIZE C	CODE CS	DOC.NUMBER 1310A2564	REV X01
CHANGE by YYY	DATE 26-NOV-2012	SHEET 80 of 90	

MLPS Bit	Strap Name	Description
PS_0[1]	ROM_CONFIG[0]	See Primary Memory Aperture Sizes.
PS_0[2]	ROM_CONFIG[1]	
PS_0[3]	ROM_CONFIG[2]	
PS_0[4]	N/A	Reserved for internal use only. **Must be 1 at reset.**
PS_0[5]	AUD_PORT_CONN_PINSTRAP[0]	The LSB (least significant bit) of thestrap option that indicates thenumber of audio-capable displayoutputs.
PS_1[1]	STRAP_BIF_GEN3_EN_A	PCIe GEN3 capability. **1 = PCIe GEN3 is supported.**
PS_1[2]	STRAP_BIF_CLK_PM_EN	Determines whether or not thePCIe reference clock powermanagement capability is reportedin the PCI configuration space(otherwise known as CLKREQB). **0 = The CLKREQB powermanagement capability is disabled**
PS_1[3]	N/A	Reserved for internal use only. **Must be 0 at reset.**
PS_1[4]	STRAP_TX_CFG_DRV_FULL_SWING	Control the transmitter full-/half-swing mode **1 = The transmitter full-swing isenabled**
PS_1[5]	STRAP_TX_DEEMPH_EN	PCI EXPRESS® transmitter, de-emphasis enable. **1 = Tx deemphasis enabled.**
PS_2[1]	N/A	Reserved.
PS_2[2]	N/A	Reserved.
PS_2[3]	STRAP_BIOS_ROM_EN	To enable the external BIOS ROMdevice. **0 = Disable the external BIOS ROMdevice.**
PS_2[4]	STRAP_BIF_VGA_DIS	VGA disable determines whether ornot the card will be recognized asthe system's VGA controller(through the SUBCLASS field in thePCI configuration space). **0 = VGA controller capacityenabled.**
PS_2[1]	N/A	Reserved.
PS_2[2]	N/A	Reserved.
PS_2[3]	STRAP_BIOS_ROM_EN	To enable the external BIOS ROMdevice. **0 = Disable the external BIOS ROMdevice.**
PS_2[4]	STRAP_BIF_VGA_DIS	VGA disable determines whether ornot the card will be recognized asthe system's VGA controller(through the SUBCLASS field in thePCI configuration space). **0 = VGA controller capacityenabled.**
PS_2[5]	N/A	Reserved
PS_3[1]	BOARD_CONFIG[0]	See **Board** configuration relatedstrapping, such as for **memory ID.**
PS_3[2]	BOARD_CONFIG[1]	
PS_3[3]	BOARD_CONFIG[2]	
PS_3[4]	AUD_PORT_CONN_PINSTRAP[1]	Determines the maximum numberof digital display audio endpointsthat will be presented to the OS anduser. 111 = No usable endpoints. 110 = One usable endpoint. **101 = Two usable endpoints.** 100 = Three usable endpoints. 011 = Four usable endpoints. 010 = Five usable endpoints. 001 = Six usable endpoints. 000 = All endpoints are usable.
PS_3[5]	AUD_PORT_CONN_PINSTRAP[2]	
Note : AUD[1] (on HYSNC) and AUD[0] (on VSYNC) still need to be properly pin strapped evenin a MLPS-based design.		

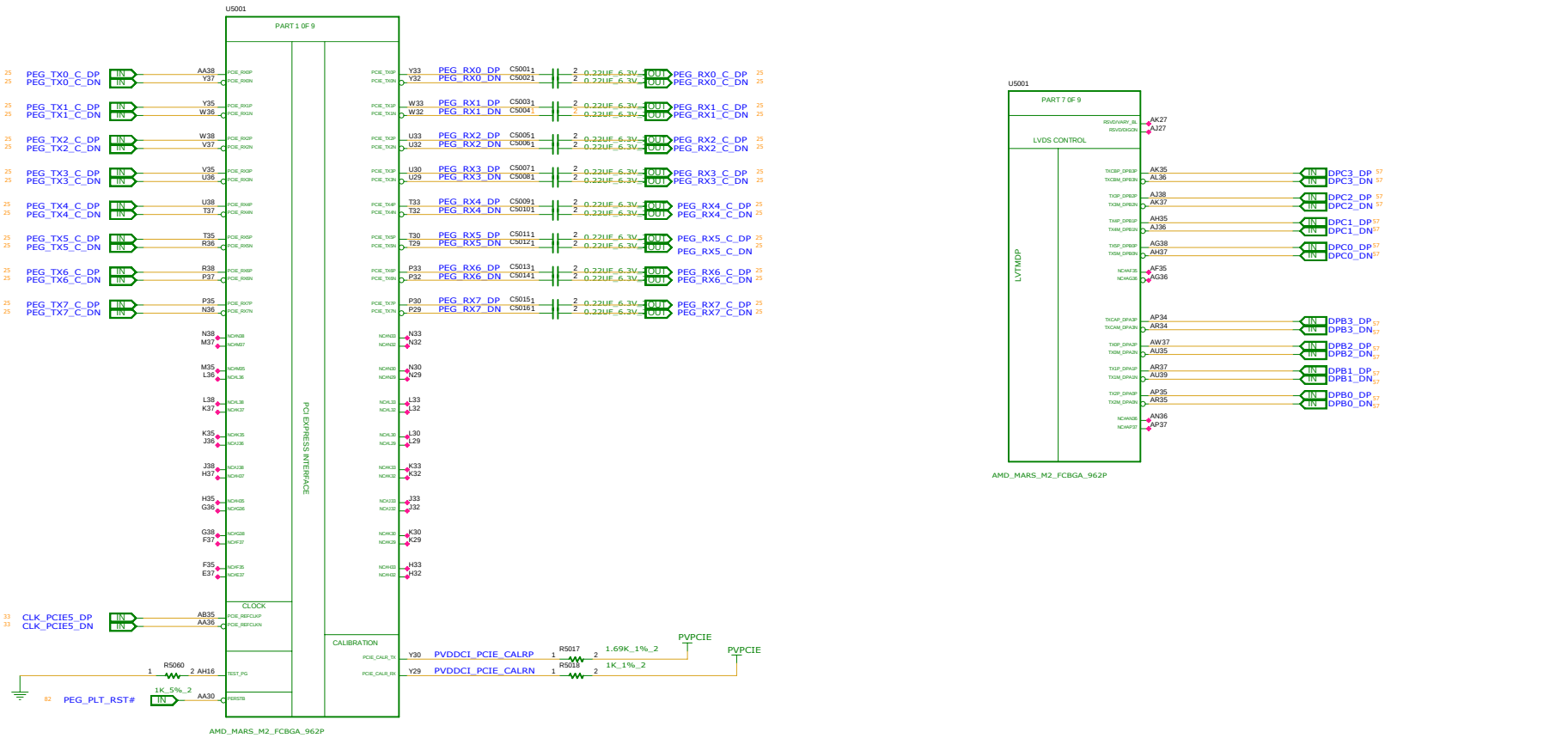
LPT-LP GPIO 34	MARS MLPS Bit: PS_3 [3:1]			R_pu (Ω)	R_pd (Ω)	Vendor & PN	Die Ver.	
0	0	0	0	NC	4750	Samsung - K4G20325FD-FC04	D	GDDR5 - 64Mx32/128Mx16, 1.5V/1.35V, 5.0Gbps/4Gbps
	0	0	1	8450	2000	Hynix - H5GQ2H24AFR-T2C	A (Gemma)	GDDR5 - 64Mx32/128Mx16, 1.5V/1.35V, 5.0Gbps/4Gbps
1	1	1	0	3400	10000	*Samsung - K4G41325FC-HC04	C	*GDDR5 - 128Mx32/256Mx16, 1.5V/1.35V, 5.0Gbps/4Gbps
	1	1	1	4759	NC	*Hynix - H5GC4H24MFR-T0C	Huma	*GDDR5 - 128Mx32/256Mx16, 1.5V/1.35V, 5.0Gbps/4Gbps
VBIOS selection : 0 : VBIOS 1, 64Mx32 for 1GB sku 1 : VBIOS 2, 128Mx32 for 2GB sku	Vram configuration 00: 64Mx32 (2Gb) 11: 128Mx32 (4Gb)		Vendor ID 0: Samsung 1: Hynix	Resistor Divider Lookup Table		Vram information * 2GB sku, TBD		

INVENTEC

TITLE: CYCLONE_DIS
AMD-MARS-2

SIZE	CODE	DOC.NUMBER	REV
C	CS	1310A25664	X01

CHANGE by YXX DATE 26-NOV-2012 SHEET 81 of 90

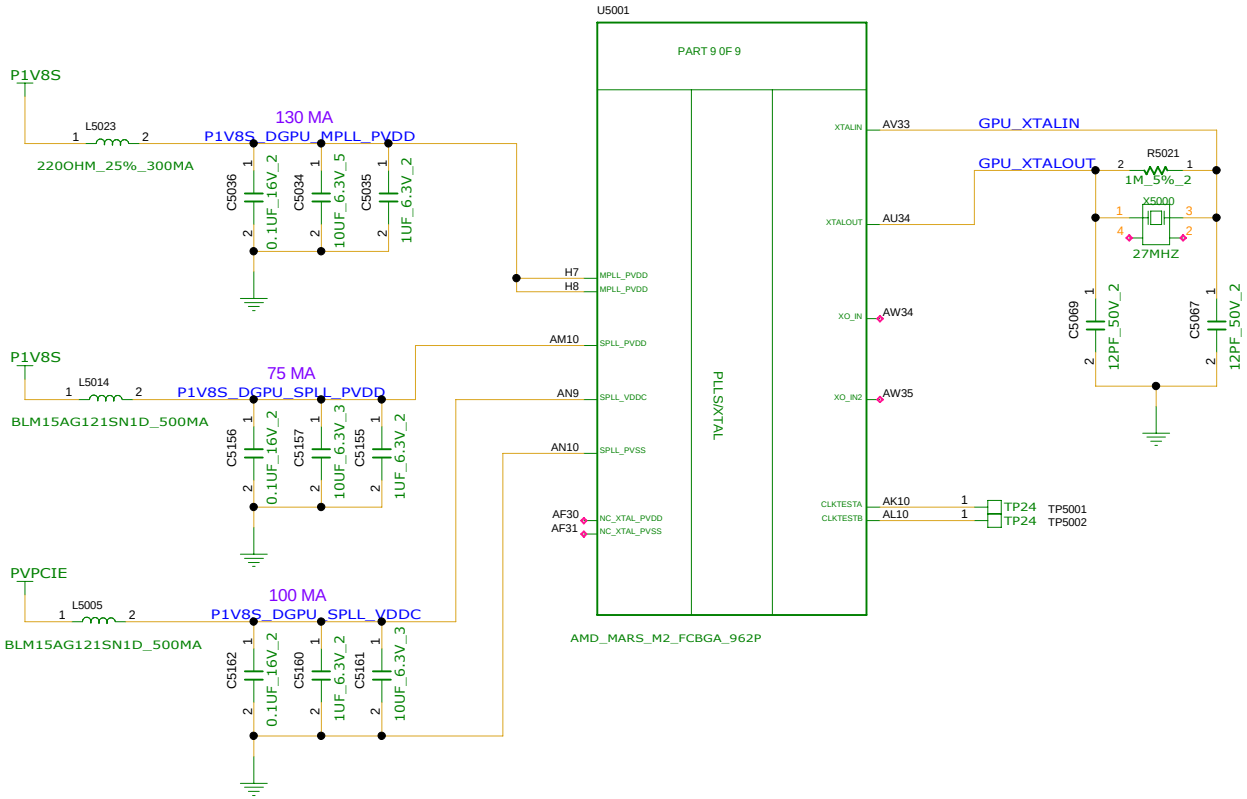


INVENTEC

TITLE: CYCLONE_DIS
AMD-MARS-3

SIZE	CODE	DOC.NUMBER	REV
C	CS	1310A25664	X01

CHANGE by: XXX
DATE: 26-NOV-2012
SHEET 82 of 90

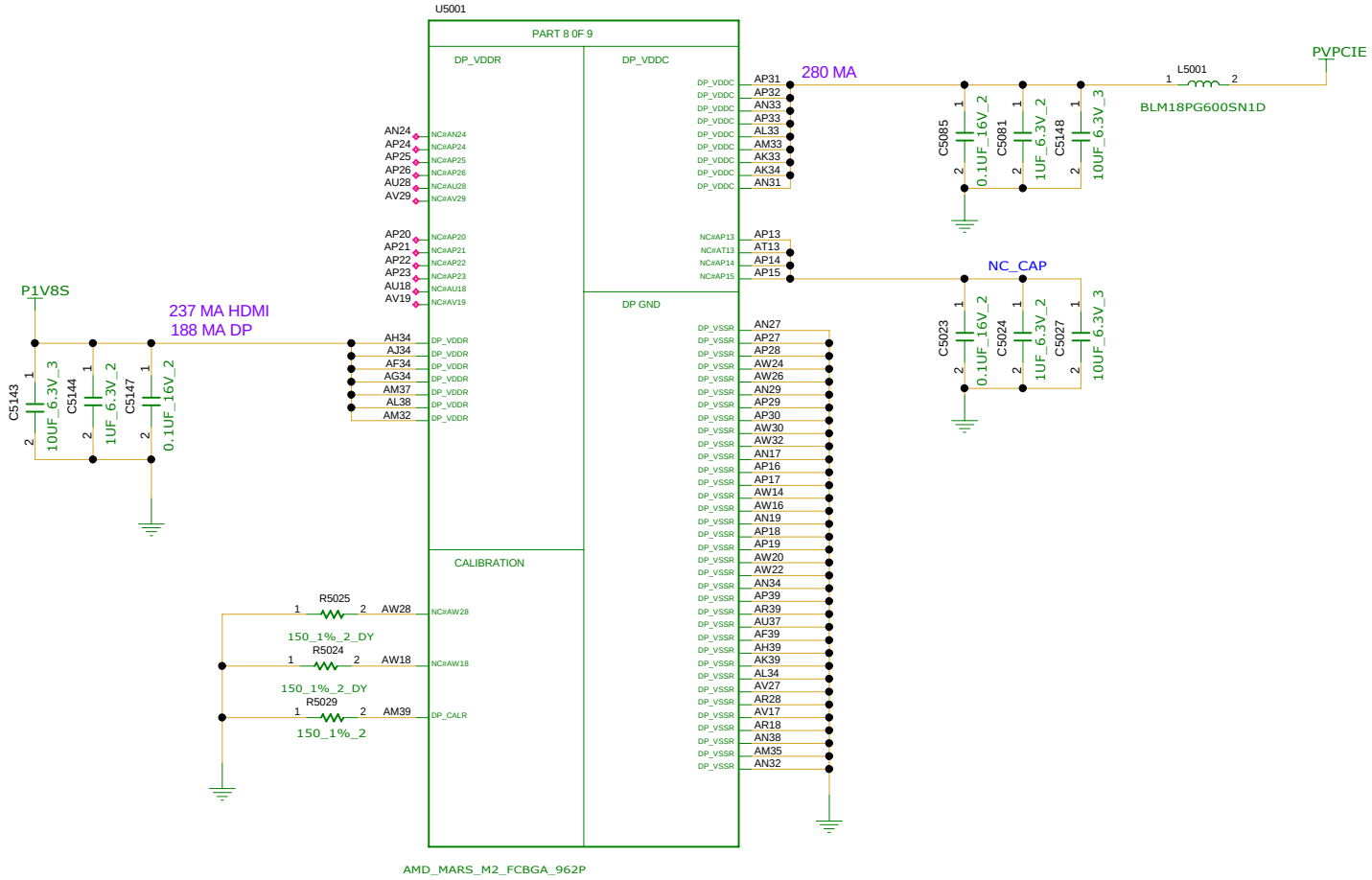


INVENTEC

TITLE
CYCLONE_DIS
AMD-MARS-4

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX DATE 26-NOV-2012 SHEET 83 of 90

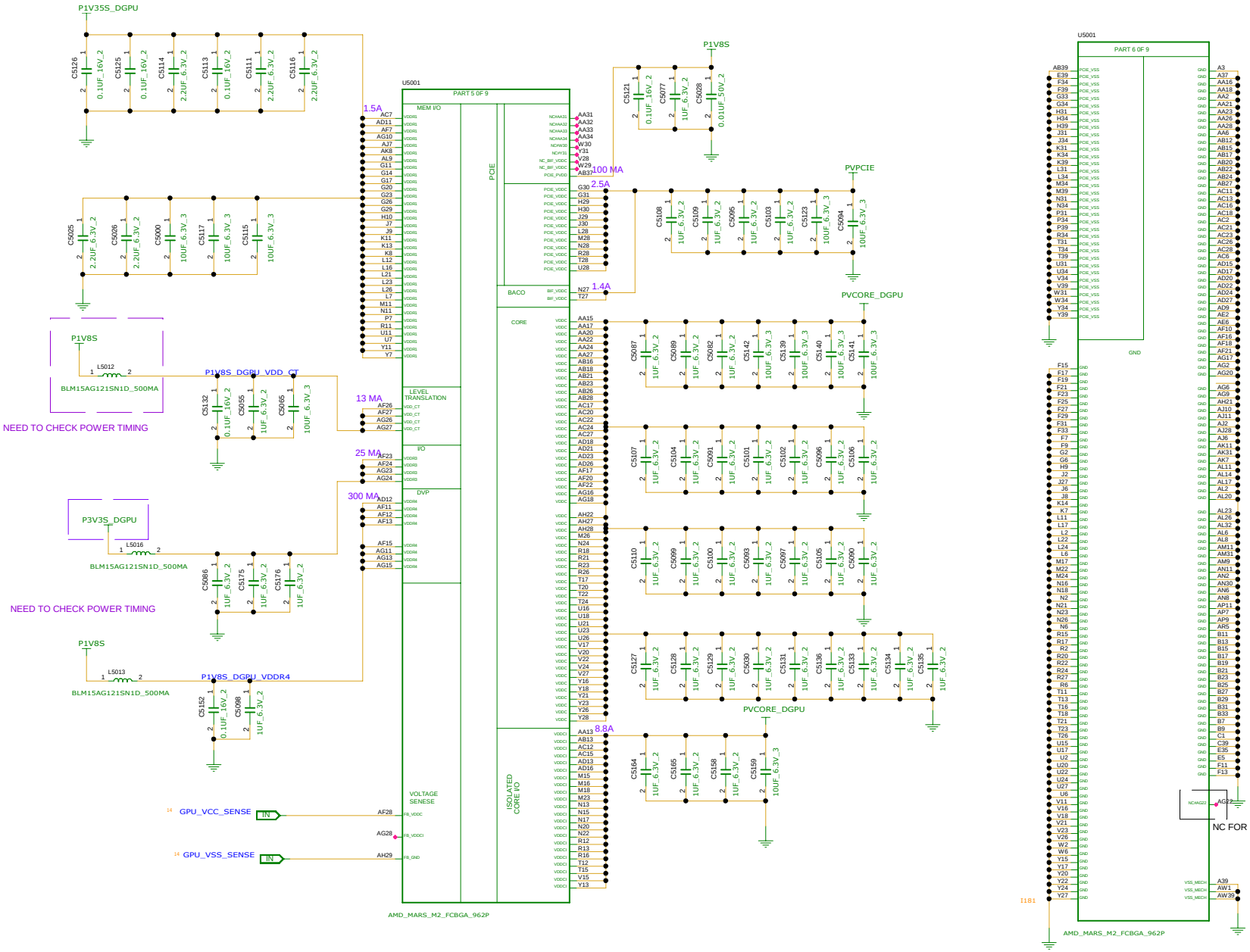


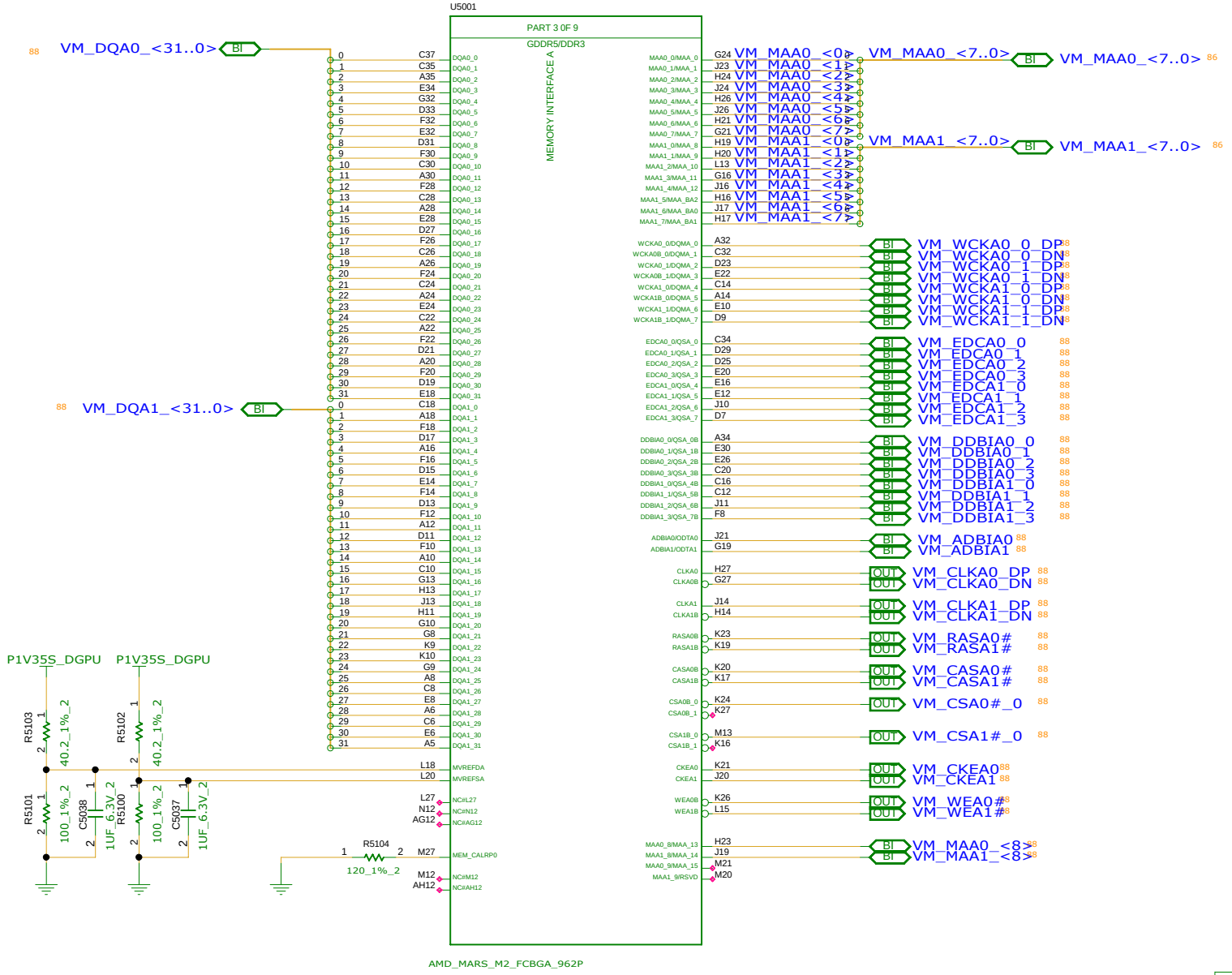
INVENTEC

TITLE
CYCLONE_DIS
AMD-MARS-5

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX DATE 26-NOV-2012 SHEET 84 of 90


P1V35S_DGPU
U5001
PART 5 0F 9
MEM I/O
PCIE
BACO
CORE
LEVEL TRANSLATION
I/O
DVP
VOLTAGE SENESE
ISOLATED CORE I/O
1.5A
100 MA
2.5A
1.4A
13 MA
25 MA
300 MA
8.8A
P1V8S
P1V8S_DGPU_VDD_CT
P3V3S_DGPU
P1V8S_DGPU_VDDR4
BLM18AG121SN1D_500MA
BLM15AG121SN1D_500MA
NEED TO CHECK POWER TIMING
NEED TO CHECK POWER TIMING
PVPCIE
PVCORE_DGPU
PVCORE_DGPU
GPU_VCC_SENSE
GPU_VSS_SENSE
AMD_MARS_M2_FCBGA_962P
U5001
PART 6 0F 9
GND
NC FOR MARS
AMD_MARS_M2_FCBGA_962P
INVENTEC
CYCLONE_DIS
AMD-MARS-6
SIZE C
CODE CS
DOC.NUMBER 1310A25664
REV X01
SHEET 85 of 90
CHANGE by XXX
DATE 26-NOV-2012

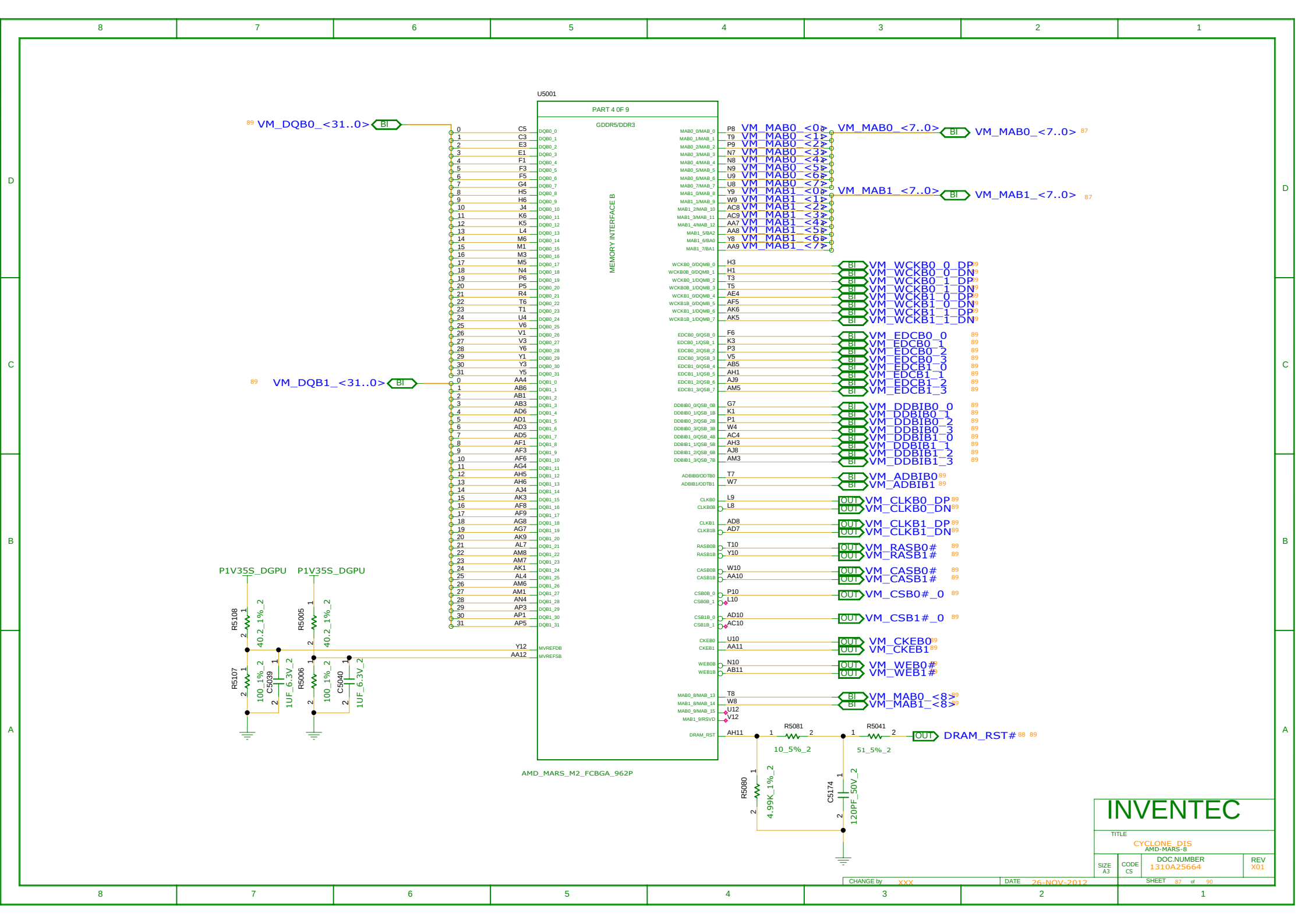


INVENTEC

TITLE: CYCLONE_DIS
AMD-MARS-7

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310A25664	X01

CHANGE by XXX | DATE 26-NOV-2012 | SHEET 86 of 90


U5001
PART 4 0F 9
GDDR5/DDR3
MEMORY INTERFACE B
AMD_MARS_M2_FCBGA_962P
89 VM_DQB0_<31..0> BI
89 VM_DQB1_<31..0> BI
P1V35S_DGPU
P1V35S_DGPU
R5108 40.2_1%_2
R5005 40.2_1%_2
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R5006 100_1%_2
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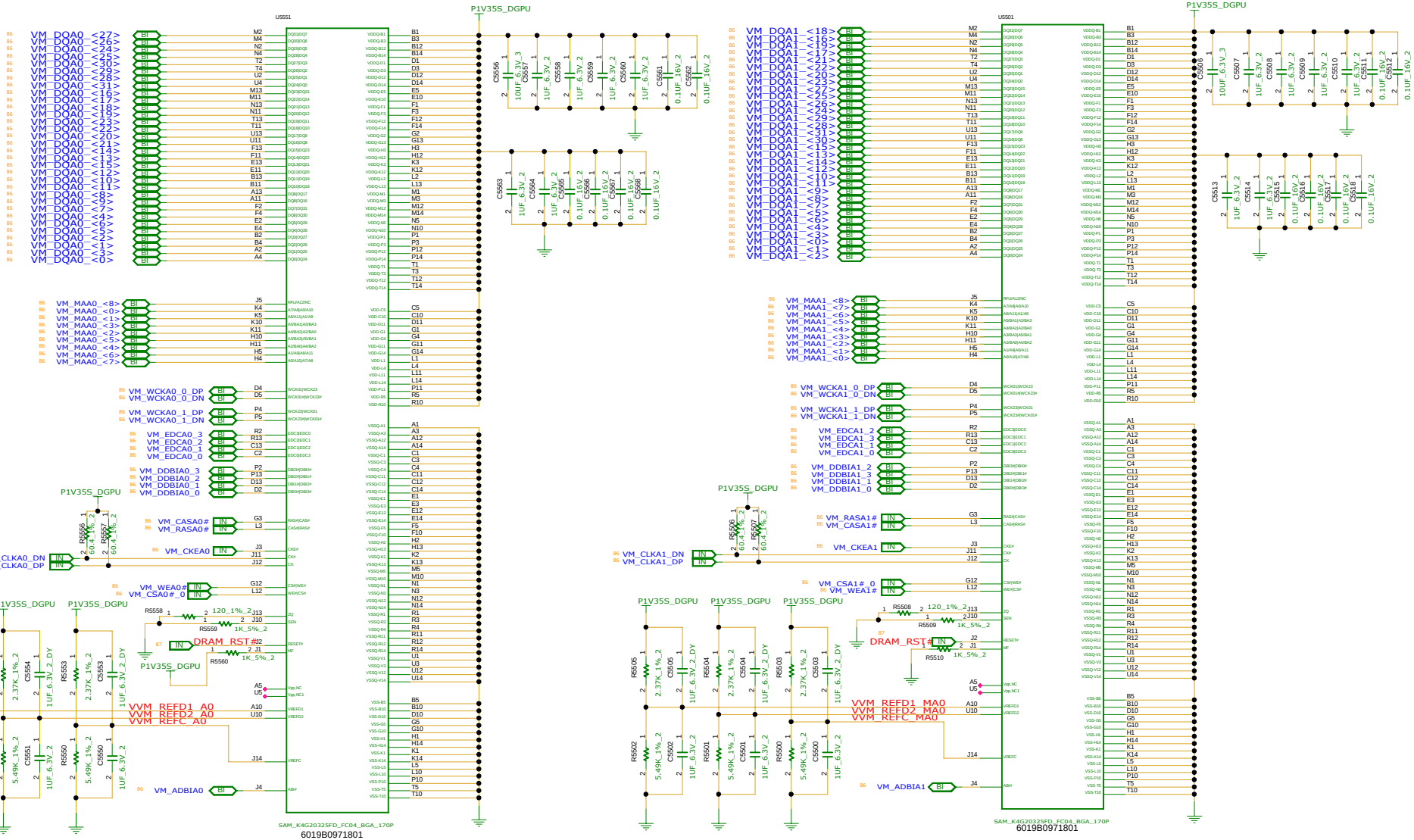
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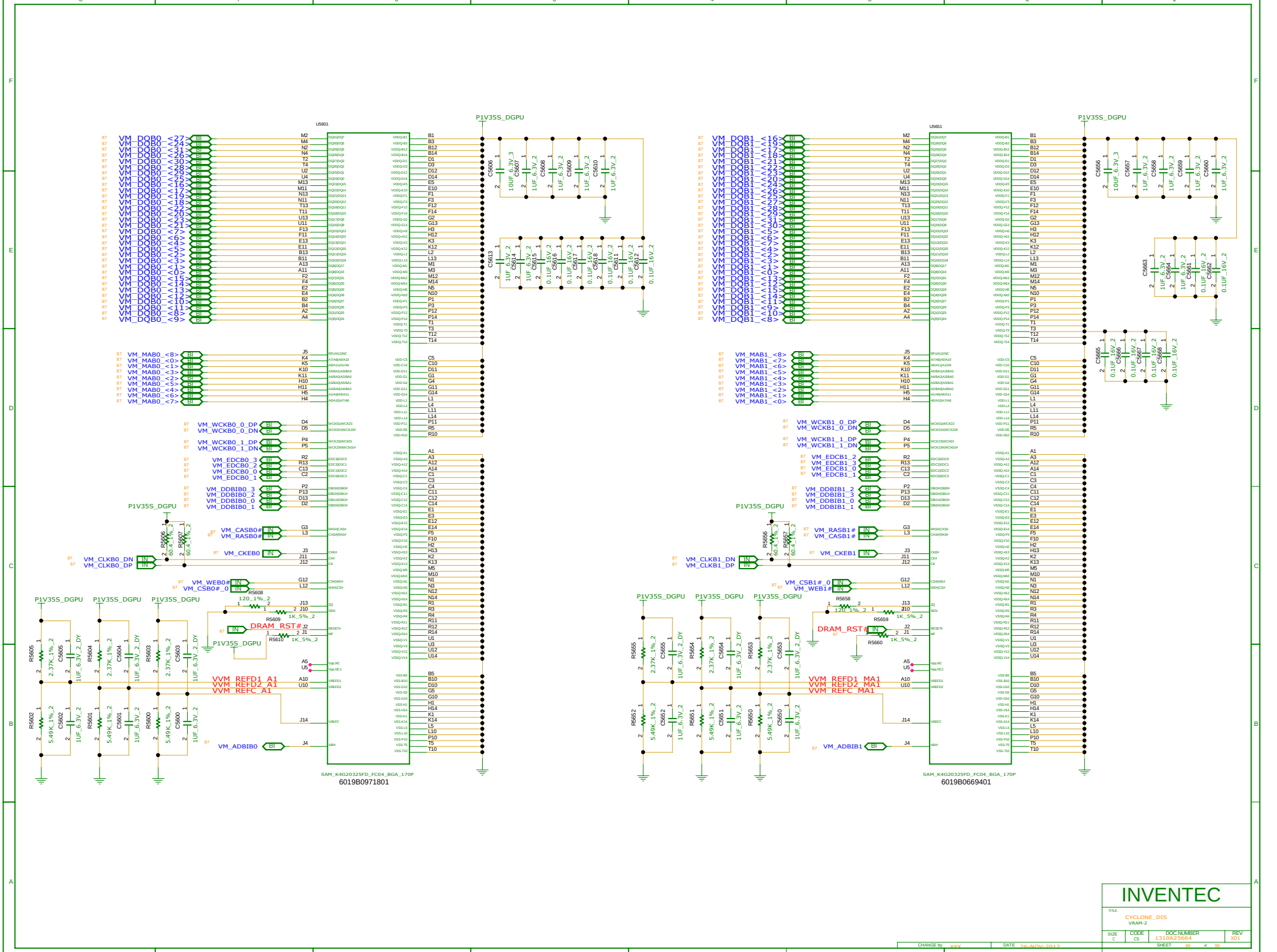
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CYCLONE_DIS
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SIZE C
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DOC.NUMBER 1310A25664
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INVENTEC

TITLE
CYCLONE_DIS
Block Diagram

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