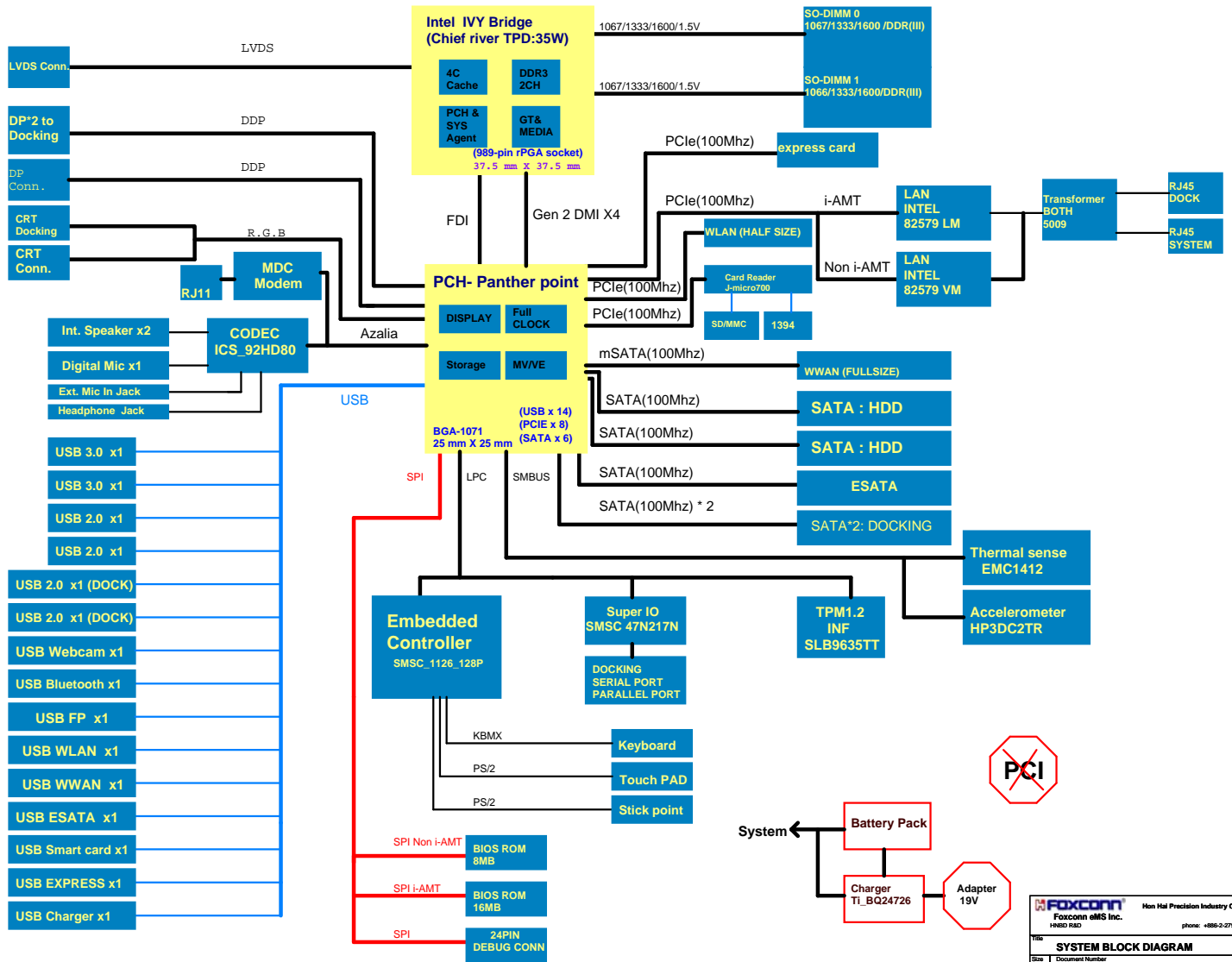


CASPER UMA PV_D

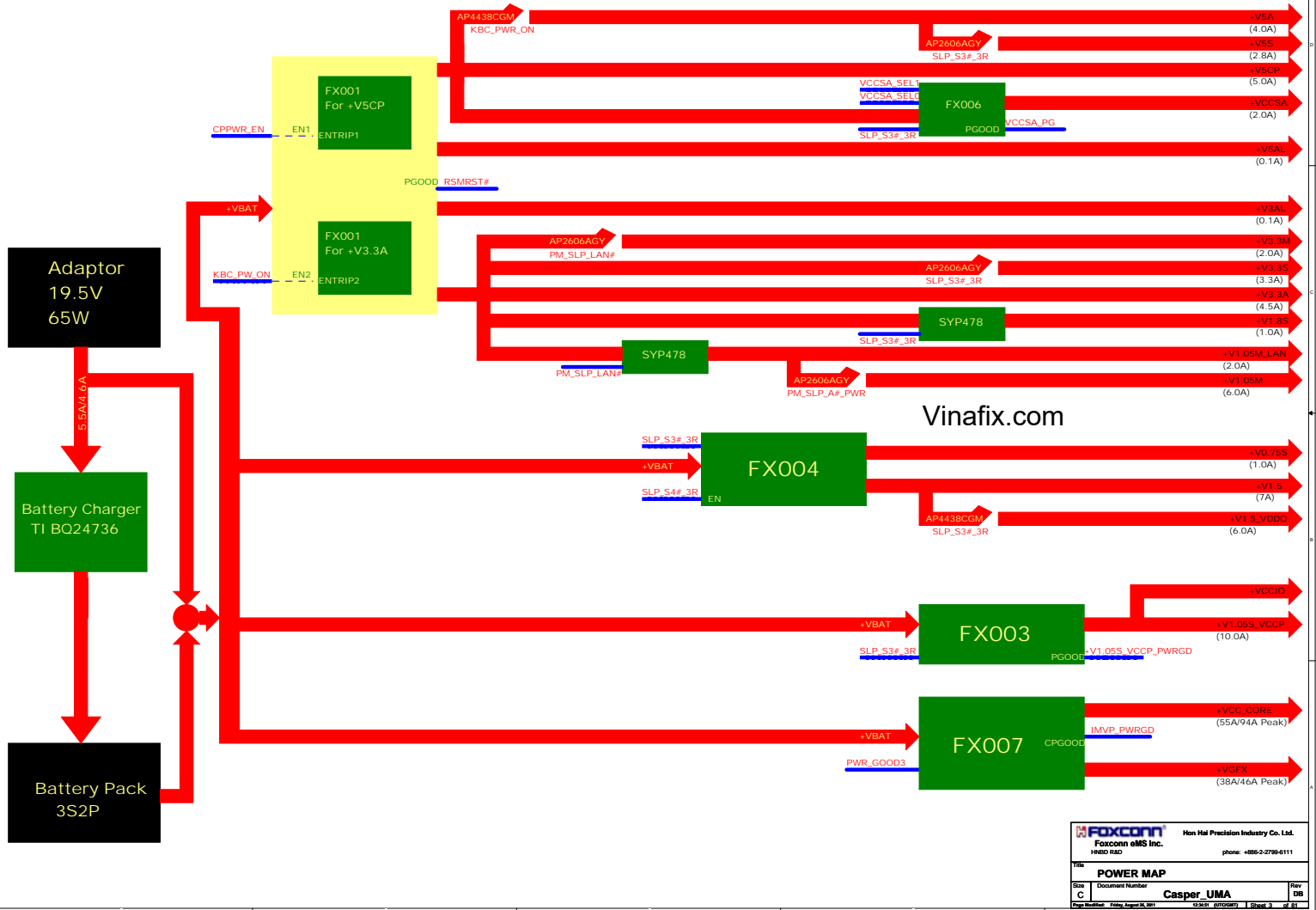
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19 -- EMPTY	59 -- CARD READER
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37 -- EMPTY	77 -- EMPTY
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39 -- EMPTY	79 -- RF CAP
40 -- EMPTY	80 -- CHANGE HISTORY

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POWER MAP



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Foxconn eMS Inc.		H9800 RD0	
Title		POWER MAP	
Size	Document Number	Rev	DB
C		Casper_UMA	
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Power up

S0

S3

S4

S5

RESET

PLT_RSTN
(PCH to CPU)

SPS_PWRGD

MRP_PWRGD
(To PCH)

VSPFX_CORE

VSPC_CORE

VR_VDDOUT

PCH_CLK_OUT

PRECPWRGD

UNCORPWVRGD

H_CPU_PWRGD
(PCH to CPU)

DRAM_PWRGD

SM_DRAMPWRGD

PM_DRAM_PWRGD
(PCH to CPU)

PM_PWRGD_M_PWRGD
(PCH to CPU)

PMR_GOOD

(To EC, MRPT)

V0.75, V0.5, V0.35, V0.3, SLP_S3M_3R, PMR_M_PWRGD

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PM_SLP_A4

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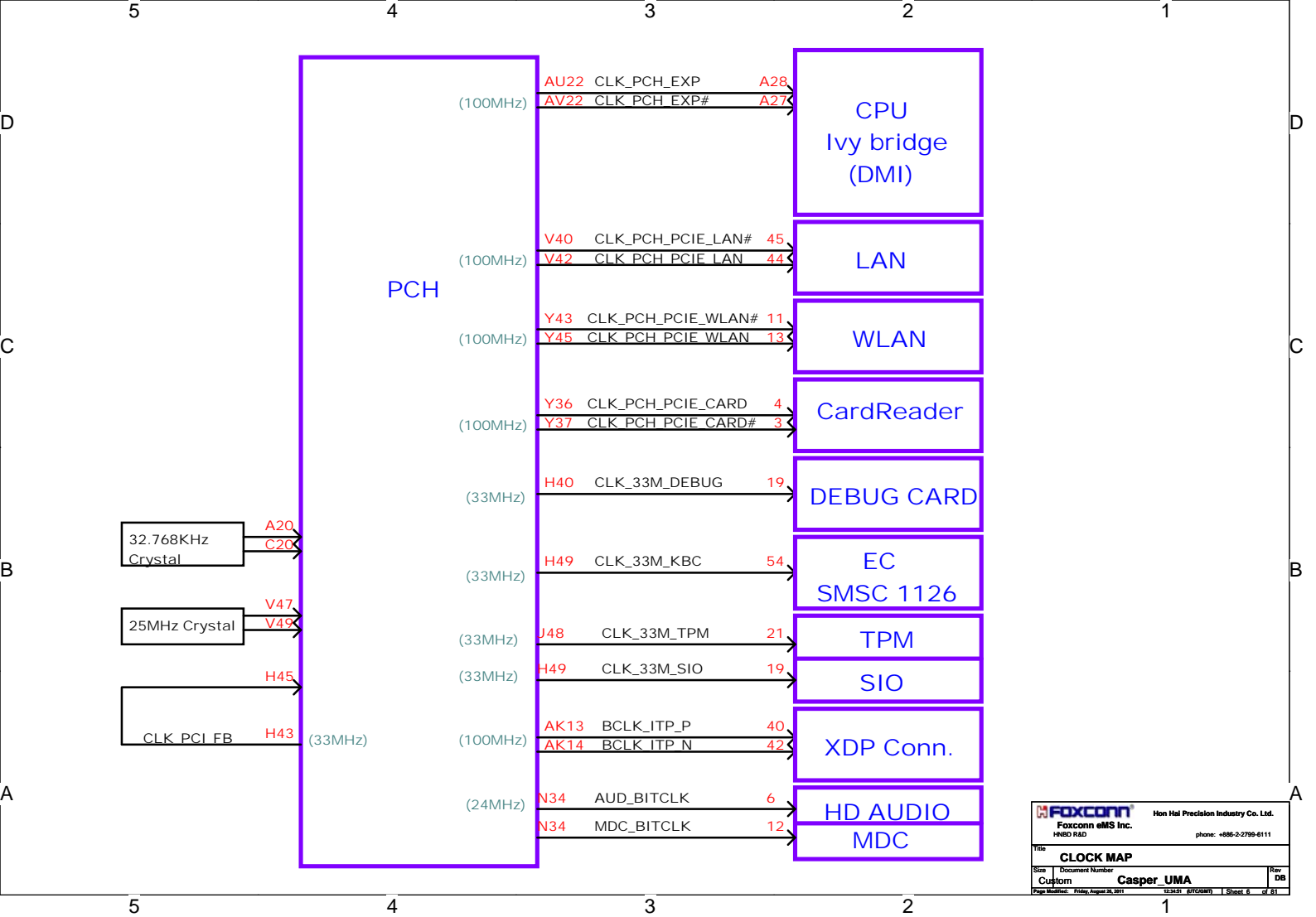
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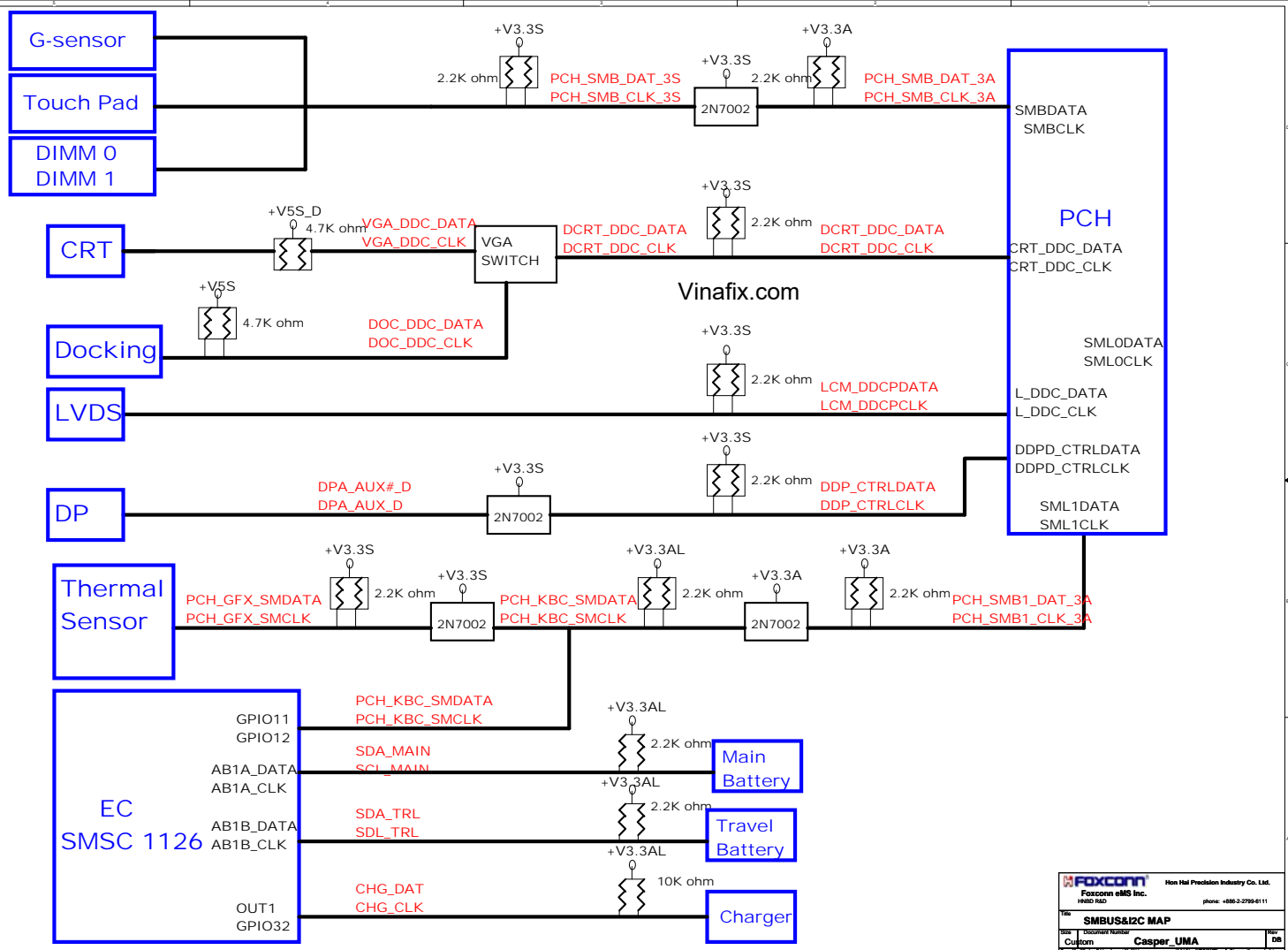
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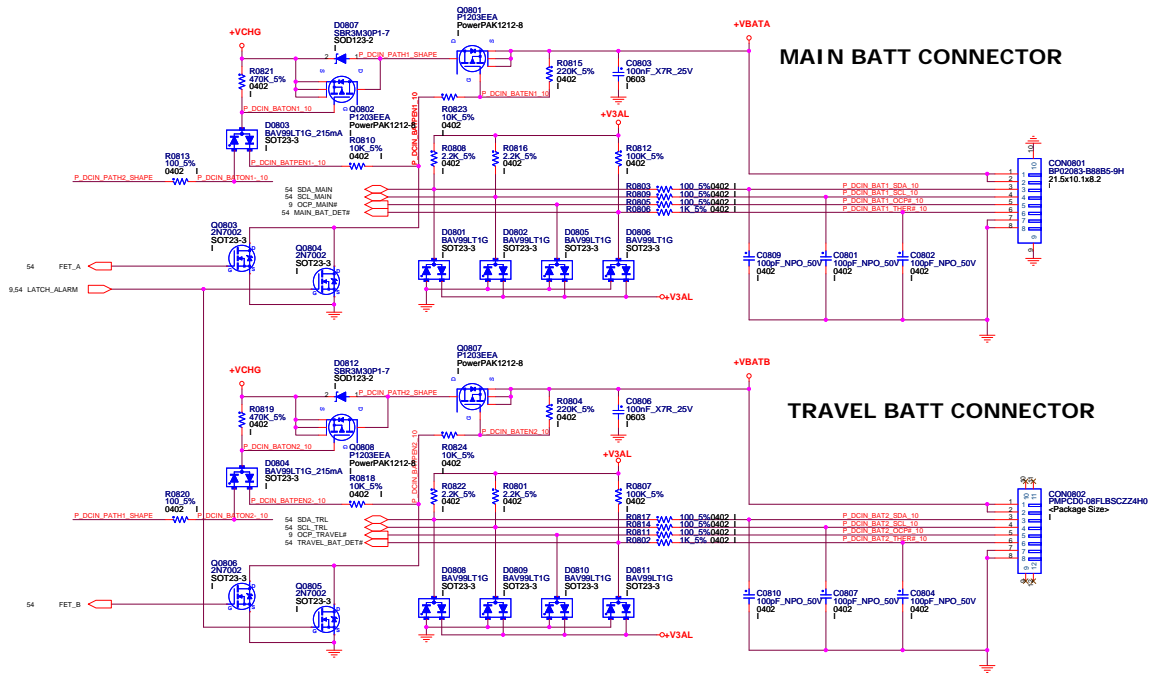
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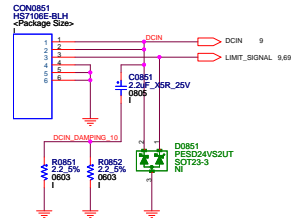




08: DC-IN & BATTERY CONNECTOR



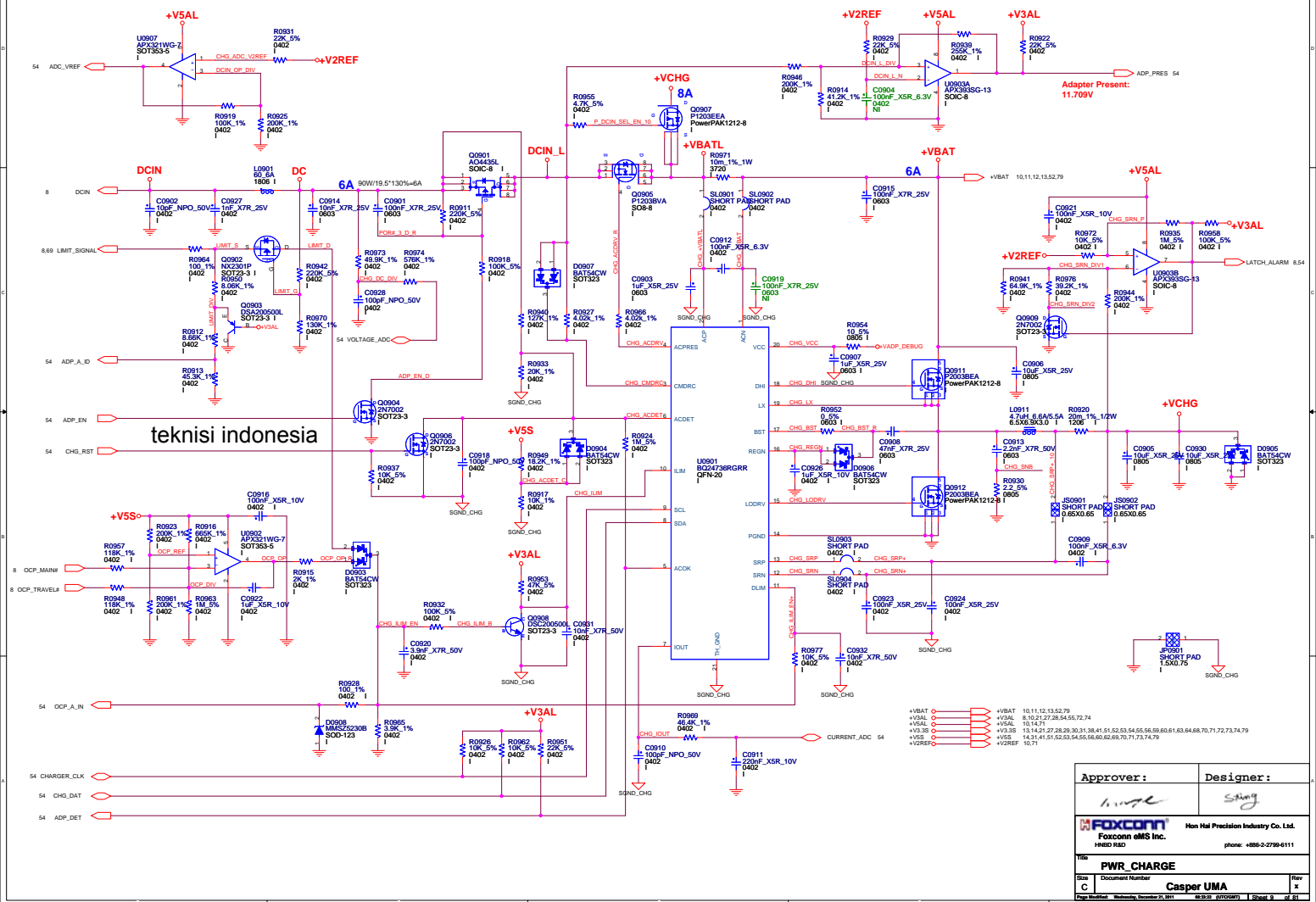
DC IN CONNECTOR



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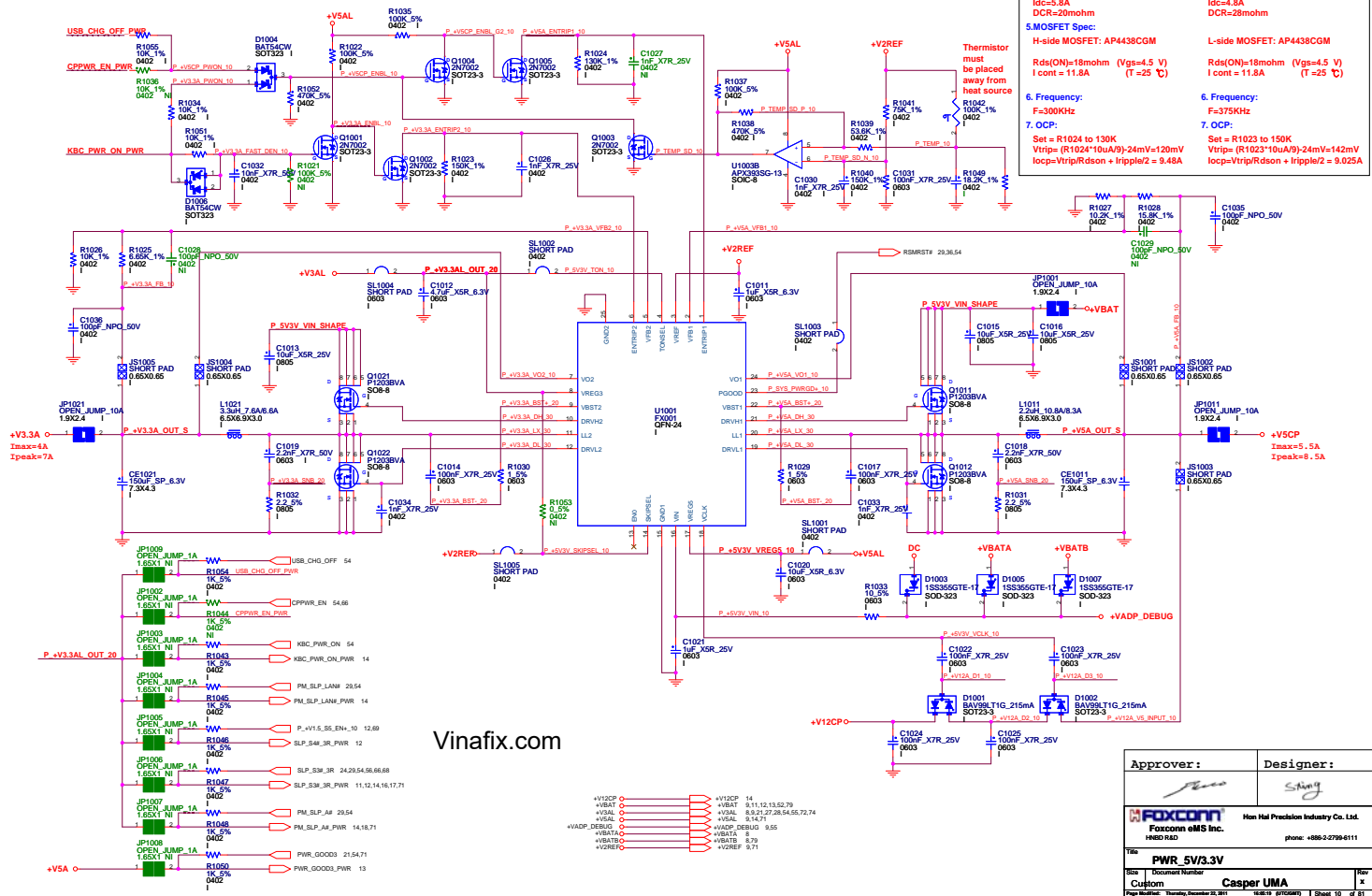
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Page Number: 1	Revision: 1

09: BATTERY CHARGER

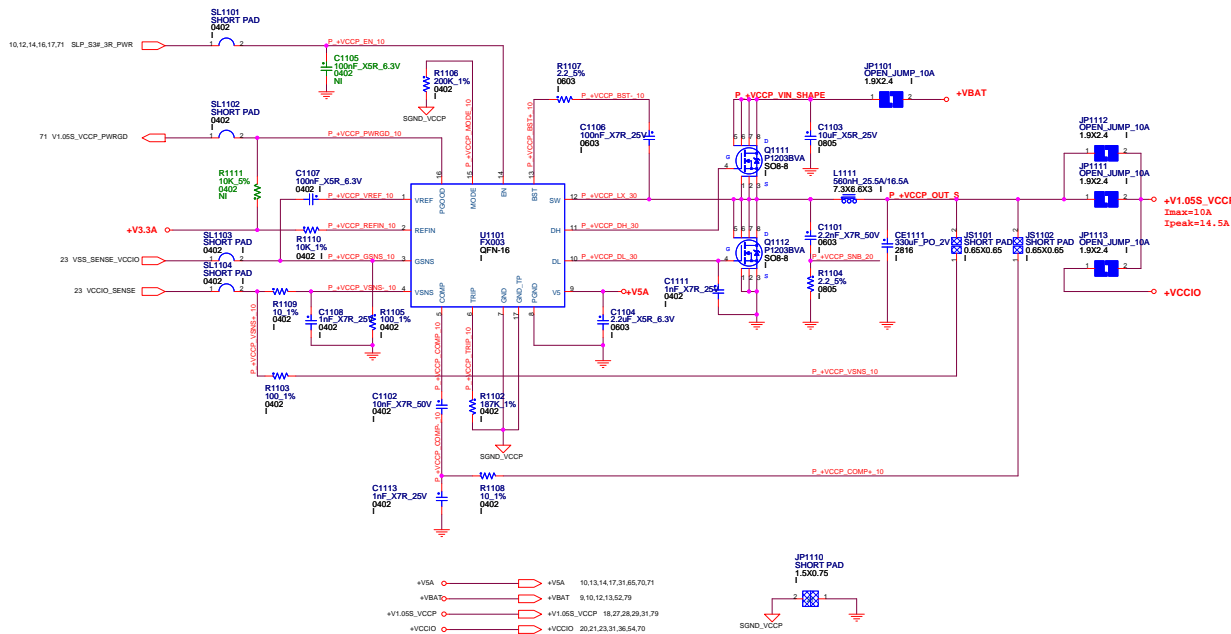





10: +V5CP / +V3.3A POWER SUPPLY

- | | |
|--|---|
| <p>+V5CP:</p> <p>1. I/P Current:
line=Vo/Io(0.75*Vin)=4.07A</p> <p>2. Ripple Current:
Irip=5.58A</p> <p>3. Ripple Voltage:
ESR/I=15mohm
Vrip=63.7mV</p> <p>4. Inductor Spec:
Isat=10A
Ide=4.6A
DCR=28mohm</p> <p>5. MOSFET Spec:
H-side MOSFET: AP4438CGM
L-side MOSFET: AP4438CGM
Rds(ON)=18mohm (Vgs=4.5 V)
I cont = 11.8A (T = 25 °C)</p> <p>6. Frequency:
F=300KHz</p> <p>7. OCP:
Set = R1024 to 130K
Vrip= (R1024*10uA/9)-24mV=120mV
Iocp=Vrip/Rds(on) + Irip/I2 = 9.48A</p> | <p>+V3.3A:</p> <p>1. I/P Current:
line=Vo/Io(0.75*Vin)=1.95A</p> <p>2. Ripple Current:
Irip=2.2A</p> <p>3. Ripple Voltage:
ESR/I=15mohm
Vrip=33mV</p> <p>4. Inductor Spec:
Isat=10A
Ide=4.6A
DCR=28mohm</p> <p>5. MOSFET Spec:
H-side MOSFET: AP4438CGM
L-side MOSFET: AP4438CGM
Rds(ON)=18mohm (Vgs=4.5 V)
I cont = 11.8A (T = 25 °C)</p> <p>6. Frequency:
F=375KHz</p> <p>7. OCP:
Set = R1023 to 150K
Vrip= (R1023*10uA/9)-24mV=142mV
Iocp=Vrip/Rds(on) + Irip/I2 = 9.025A</p> |
|--|---|



+v1.05S_VCCP;
 1. **IP Current:**
 line=V*Io/(0.75*Vin)=1.56A
 2. **Ripple Current:**
 Irrip=5.9A
 3. **Ripple Voltage:**
 ESR/I=5mohm
 Vrip=53.1mV
 4. **Inductor Spec:**
 Isat=25.5A
 Idc=16.5A
 DCR=5mohm
 5. **MOSFET Spec:**
 H-side MOSFET: AP4438CGM
 Rds(O_N)=18mohm (Vgs=4.5 V)
 I cont = 11.8A (T < 25 °C)
 L-side MOSFET: AP4438CGM
 Rds(O_N)=18mohm (Vgs=4.5 V)
 I cont = 11.8A (T < 25 °C)
 6. **Frequency:**
 F=300KHz (R1106=100k ohm)
 7. **QCP:**
 Set = R1102 to 187K
 Vtrips: R1102*10uA/8=233.75mV
 Icp=(Vtrip/Rds(on) + Irrip/2E = 15.93A



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Title PWR_VCCP			
Document Number Casper UMA			
Sheet 1	Of 1		Rev 01
Page Number Documenting December 21, 2011 40-232 (C)2007 Sheet 11 of 81			


```

>V1:5;
1. IP Current:
line=Vo/Io(0.75*Vin)=1.56A

2. Ripple Current:
Irip=.41A

3. Ripple Voltage:
ESR1=.9mohm
Vrip=.41.49mV

4. Inductor Spec:
Isat=12.7A
Idc=.95A
DCR=.9mohm




5. MOSFET Spec:
H-side MOSFET: AP4438C8M
Rds(ON)=1mohm (Vgs=4.5 V)
Ic=11.8A (T=25 °C)
L-side MOSFET: AP4438C8M
Rds(ON)=1mohm (Vgs=4.5 V)
Ic=11.8A (T=25 °C)

6. Frequency:
F=300KHz (R1204=100kohm)

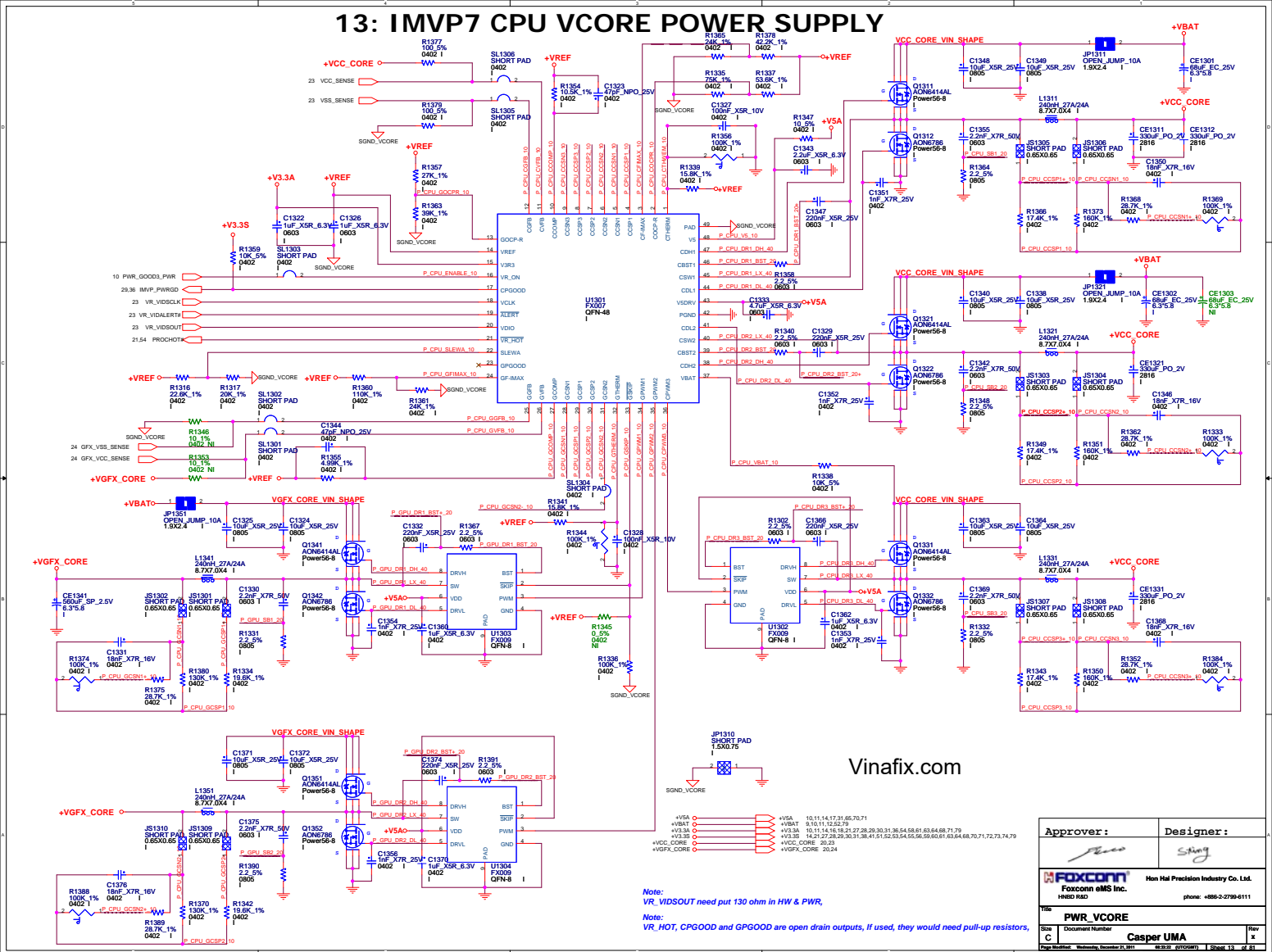
7. OCP:
Set = R1203 to 147K
Vrip = R1203*IoA/R=.1625mV
Iocp=(Vrip/RdsOn) + Irip/leak = 12.5A

```






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Title PWR 1.5V/0.75S	Document Number Casper UMA		Rev 1
Page Number: Thursday, December 20, 2011 10:40:42 (UTC+08:00) Sheet 12 of 81			

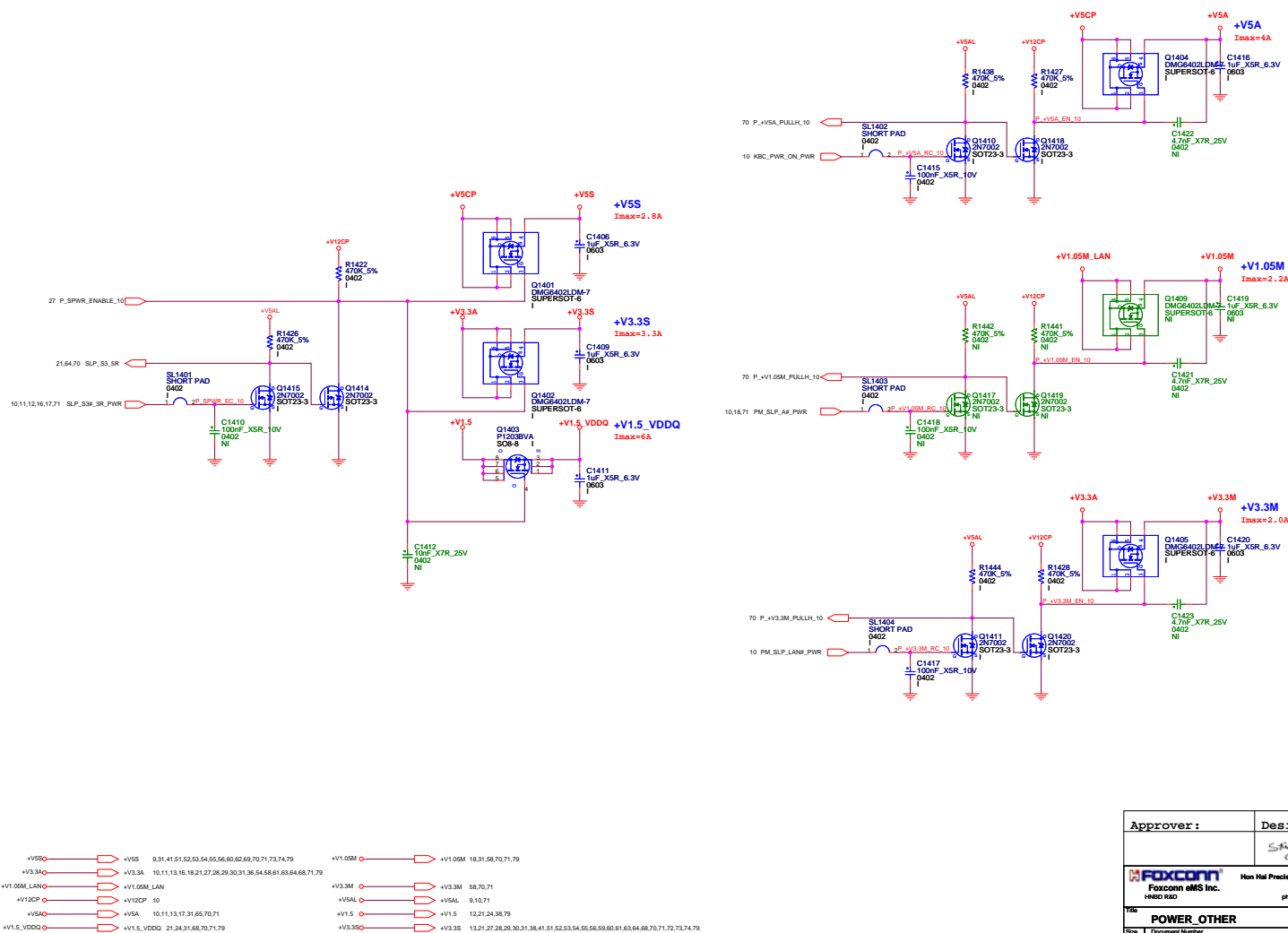
13: IMVP7 CPU VCORE POWER SUPPLY





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Title PWR_VCORE			
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Page Document Number: 462829 (C700007)		Sheet 13 of 81	

14: OTHER POWER



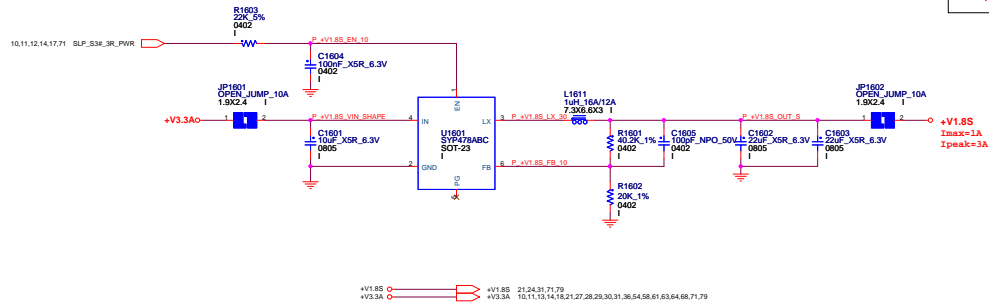
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PWR_ATVDD			
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Page Number: 1		Page Total: 1	

16: +V1.8S POWER SUPPLY




- +V1.8S:
1. IP Current:
line=Vo/Io(0.75*Vin)=0.48A
 2. Ripple Current:
Irip=0.53A
 3. Ripple Voltage:
ESR/3=3.3mohm
Vrip=1.75mV
 4. Inductor Spec:
Isat=26A
Idc=17.5A
DCR=4.2mohm
 5. MOSFET Spec:
H-side P-MOSFET: L-side N-MOSFET:
Rds(ON)=100mohm (Vgs=4.5 V) Rds(ON)=80mohm (Vgs=4.5 V)
 6. Frequency:
F=1MHz
 7. OCP:
Iocp=3.5A(min)



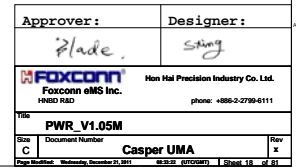
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Title: PWR_1.8VS	
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- VCCSA: 1. IP Current:
 $I_{IP} = V_{OL}(0.75 \cdot V_{IN}) / 0.727 A$
- 2. Ripple Current:
 $I_{rip} = 1.36 A$
- 3. Ripple Voltage:
 $ESR = 1.3 \mu m\Omega$
 $V_{rip} = 4.488 mV$
- 4. Inductor Spec:
 $I_{sat} = 26 A$
 $I_{dc} = 17.5 A$
 $DCR = 4.2 m\Omega$
- 5. MOSFET Spec:
H-side P-MOSFET:
 $R_{ds(ON)} = 100 m\Omega$ ($V_{gs} = 4.5 V$)
L-side N-MOSFET:
 $R_{ds(ON)} = 80 m\Omega$ ($V_{gs} = 4.5 V$)
- 6. Frequency:
 $F = 1 MHz$
- 7. OCP:
 $I_{ocp} = 6 A (min \ 7.5 A (typ))$




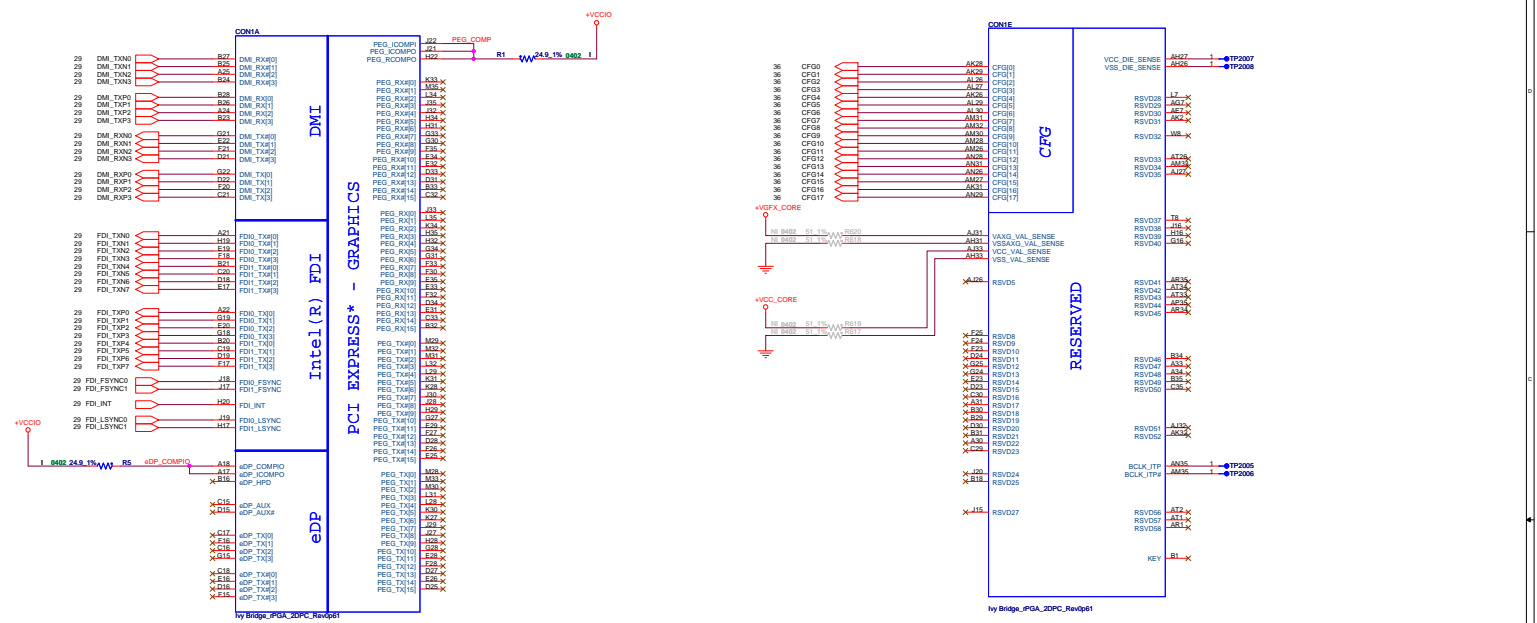
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Title PWR_VCCSA			
Doc Number Casper UMA		Rev x	
Page 1		of 81	

1. **IP Current:**
 $I_{in} = V_o / (0.75 \cdot V_{in}) = 0.84A$
2. **Ripple Current:**
 $I_{rip} = 0.325A$
3. **Ripple Voltage:**
 $ESR = 3.3m\Omega$
 $V_{rip} = 1.07mV$
4. **Inductor Spec:**
 $I_{sat} = 26A$
 $I_{dc} = 17.5A$
 $DCR = 4.2m\Omega$
5. **MOSFET Spec:**
H-side P-MOSFET:
 $R_{ds(ON)} = 85m\Omega$ ($V_{gs} = 4.5V$)
L-side N-MOSFET:
 $R_{ds(ON)} = 65m\Omega$ ($V_{gs} = 4.5V$)
6. **Frequency:**
 $F = 1MHz$
7. **OCF:**
 $I_{ocp} = 4A(\min)$



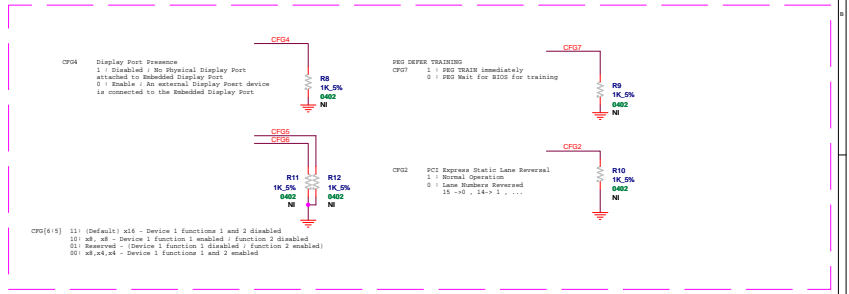
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Title BLANK			
Size C	Document Number Casper_UMA		Rev DB
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Note for Layout : Embedded DisplayPort Compensation Signal Routing Guideline

Signal	Trace Width	Trace Spacing to other Signals	Routing Length	Resistance
DP_ICOMPO	12 mils(0.305mm)	15 mils(0.381mm)	500 mils(12.7mm)	
DP_COMPIO	4 mils(0.102mm)	15 mils(0.381mm)	500 mils(12.7mm)	
R5				24.9 +/- 1%



STRAP PIN

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19880 RAO
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Title: Ivy bridge (DMI,PEG,FDI)

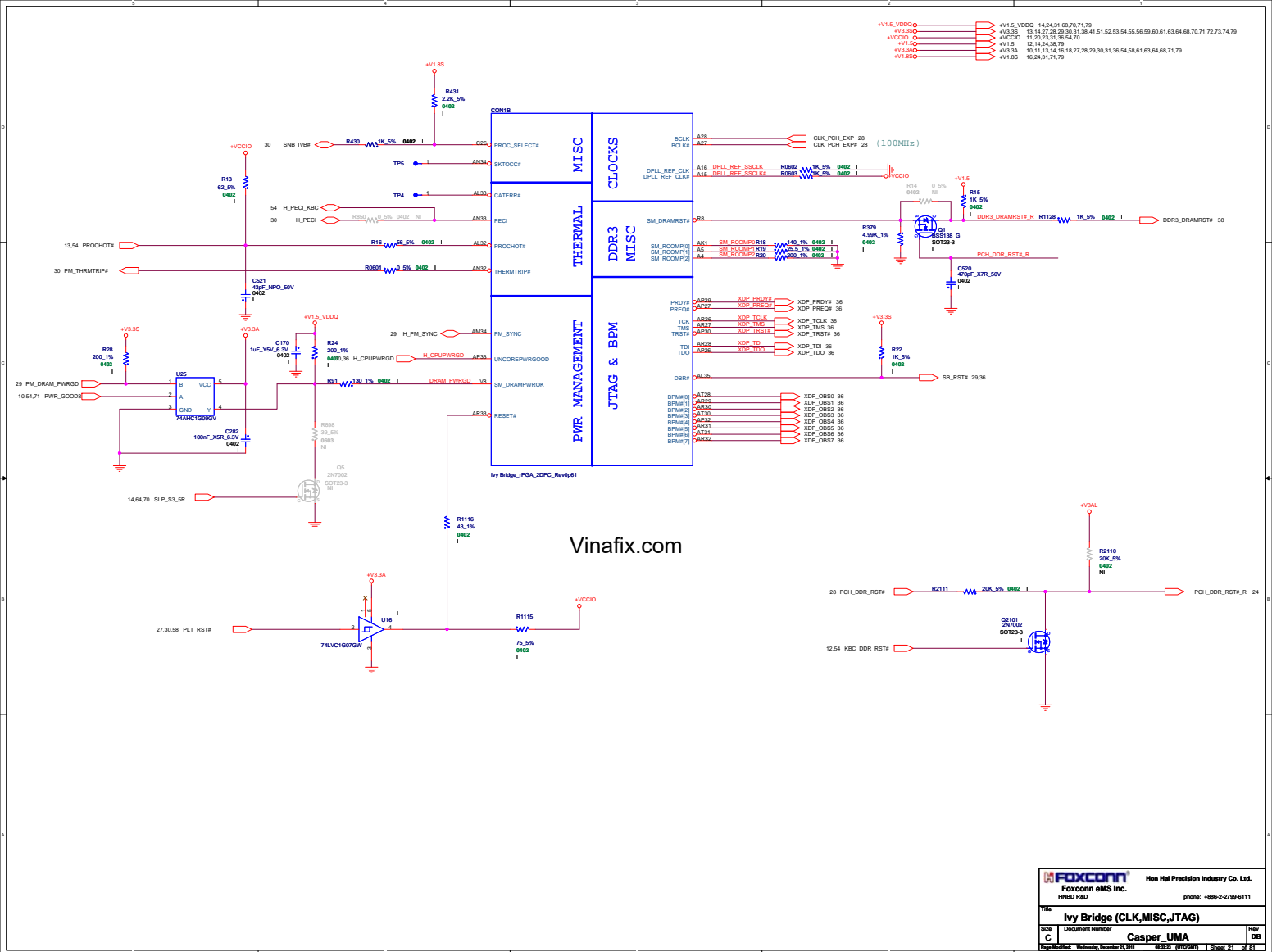
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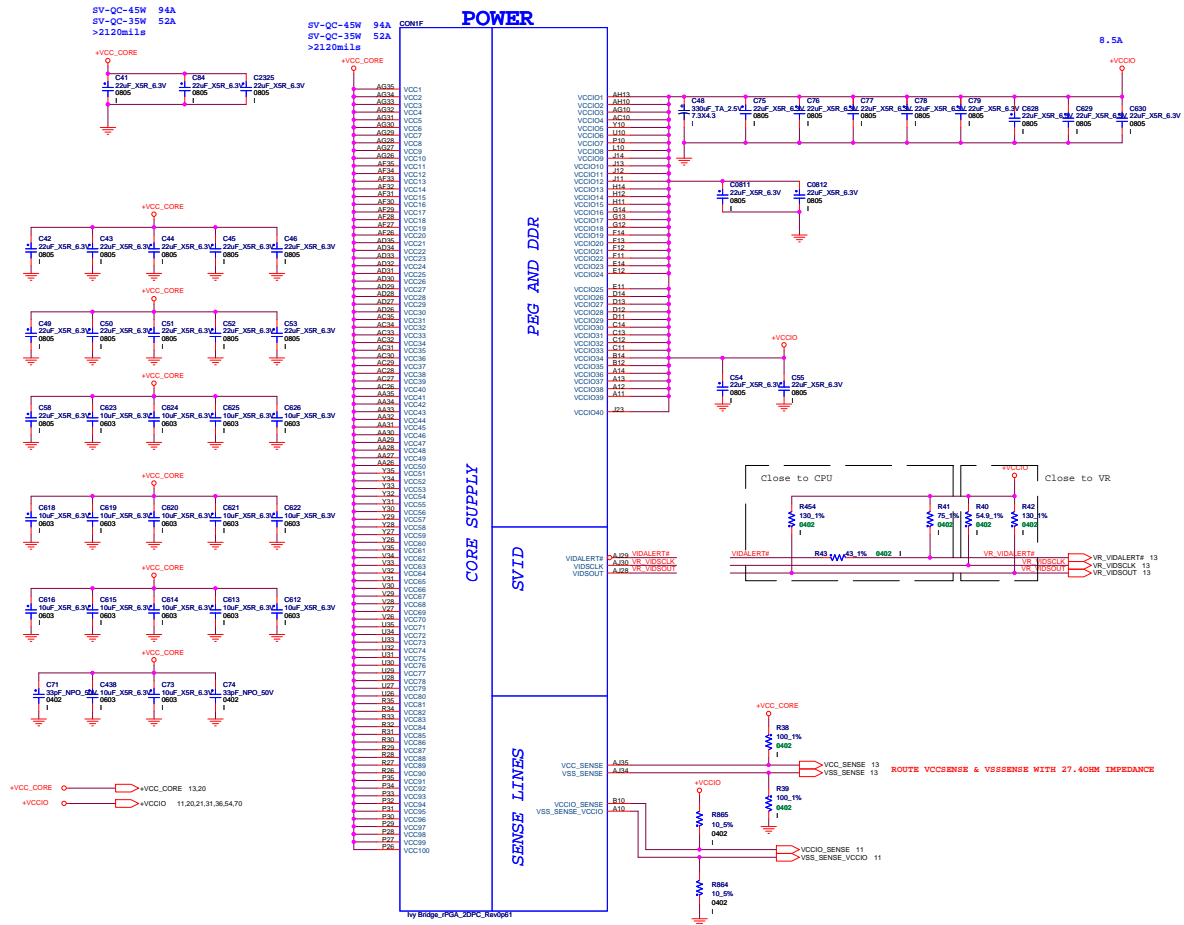
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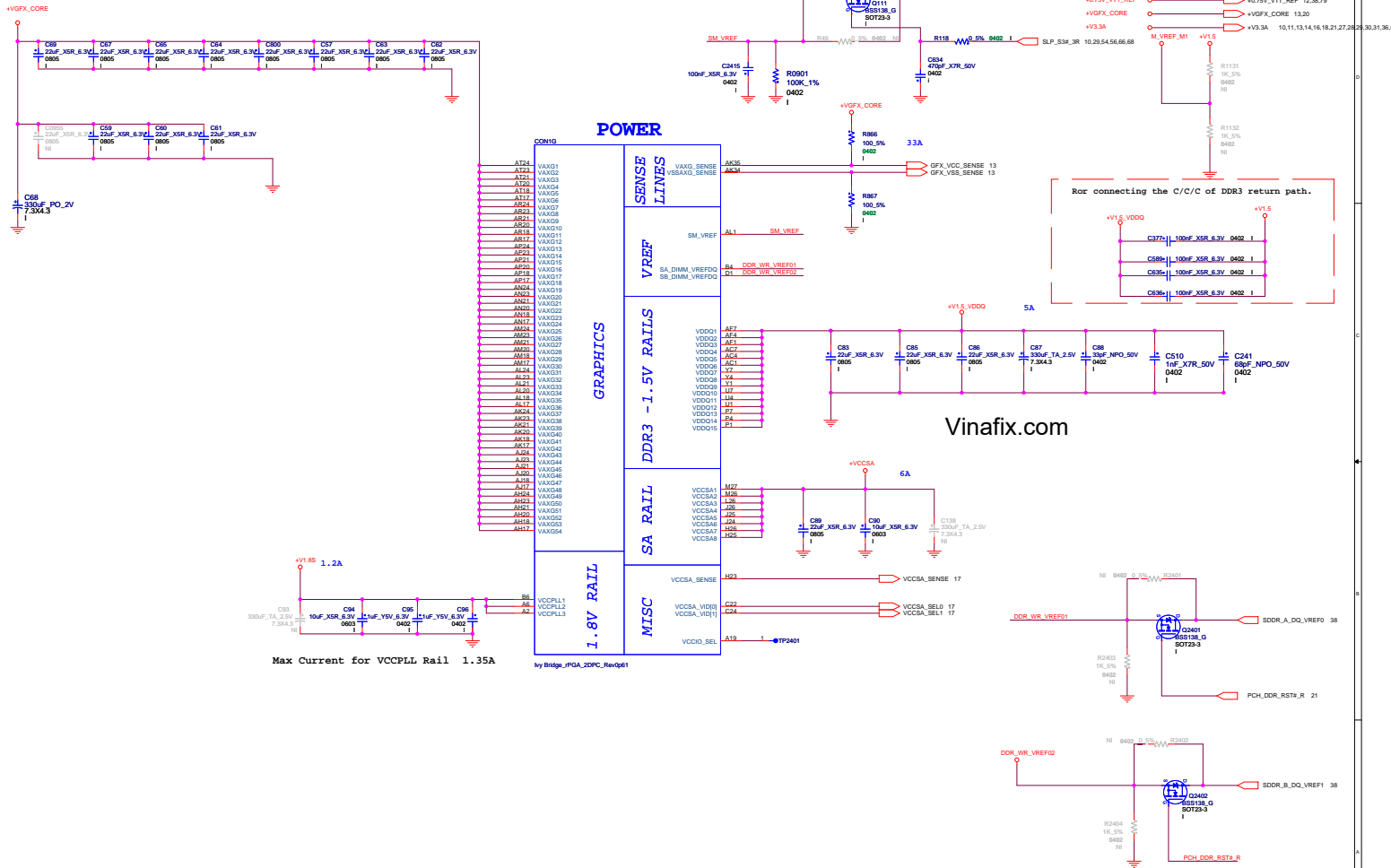
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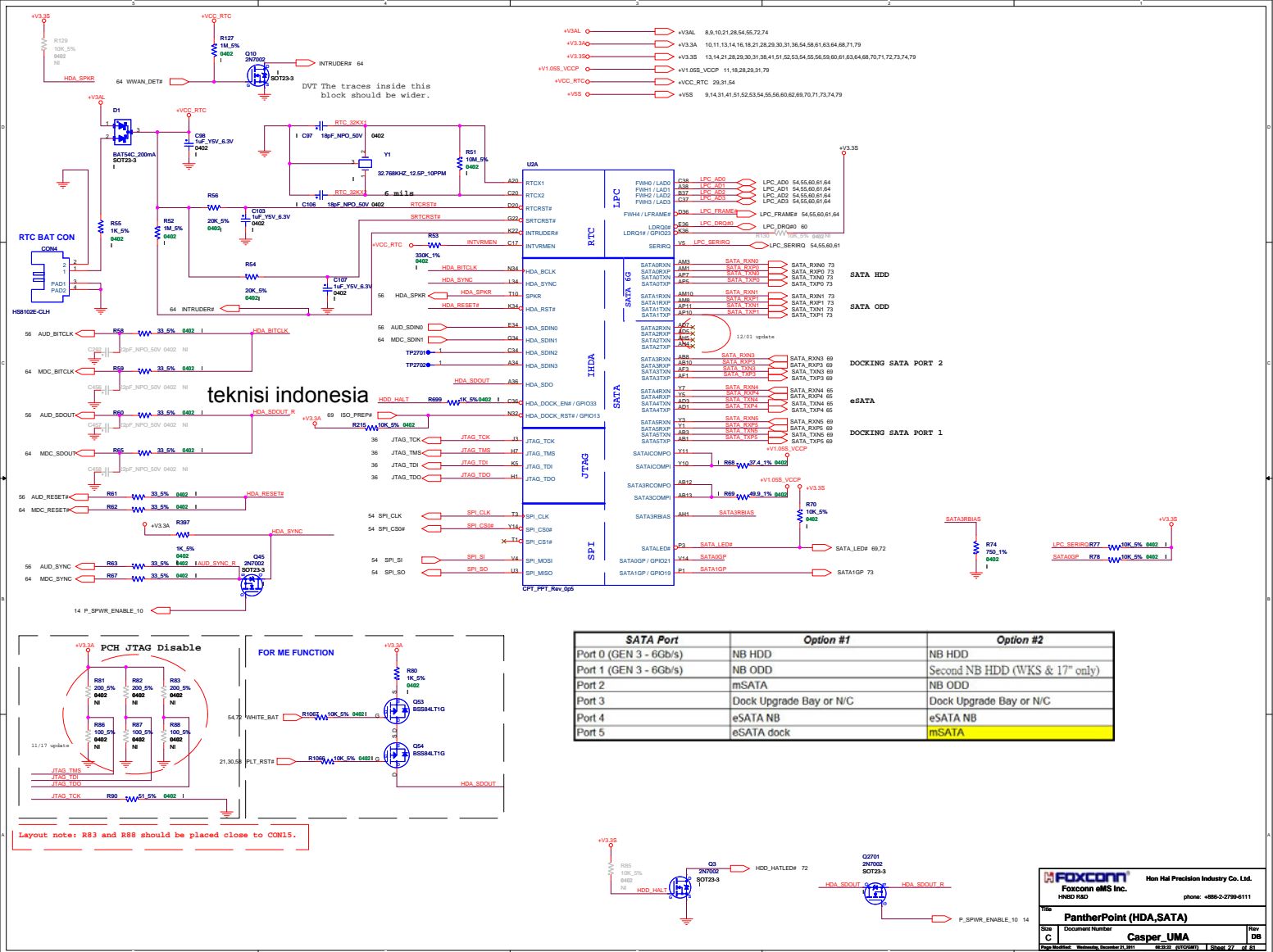


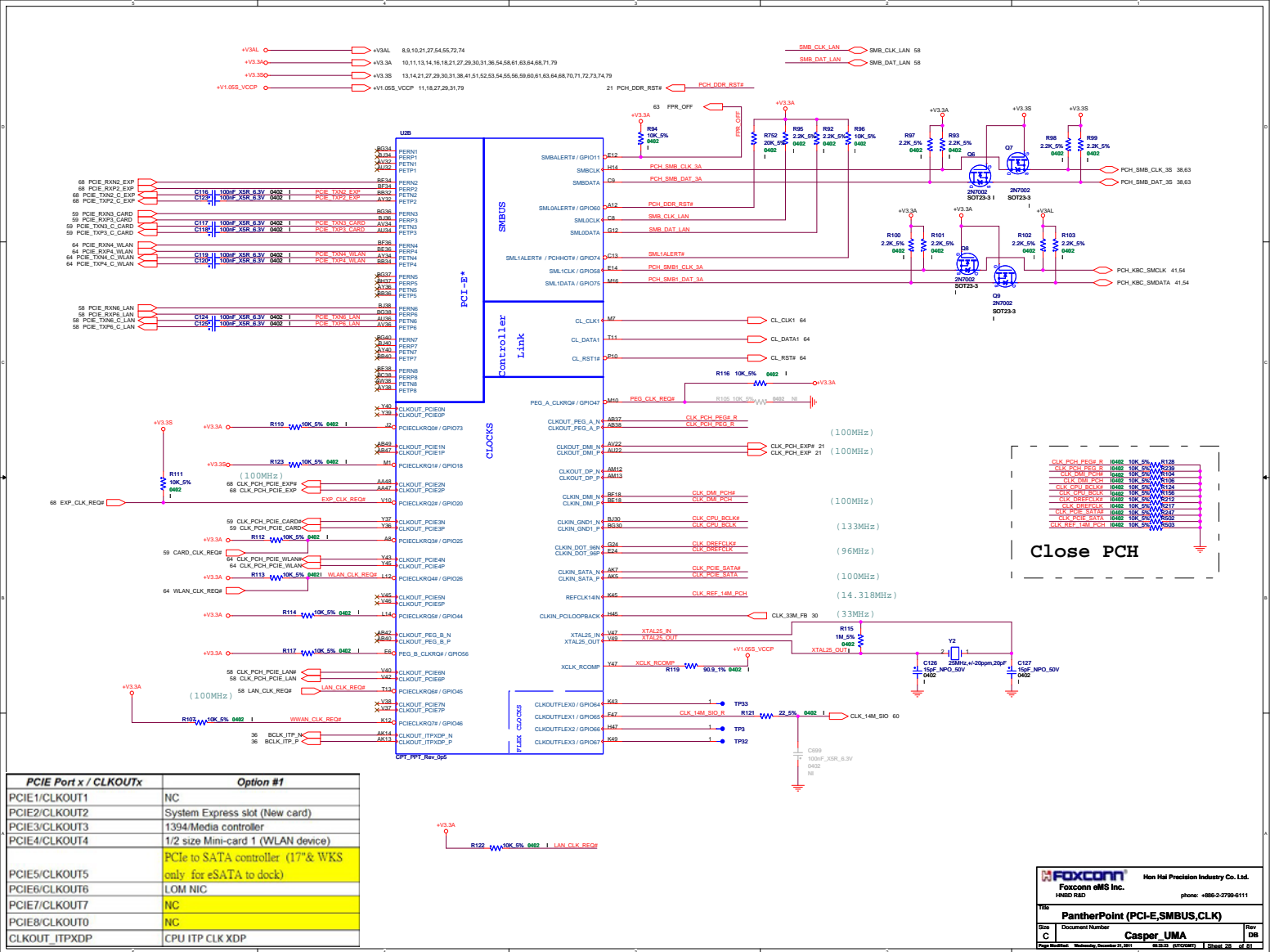
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SY-QC (35W) --- 33A
SV-DC (GT2), SV-SC (GT2) --- 33A

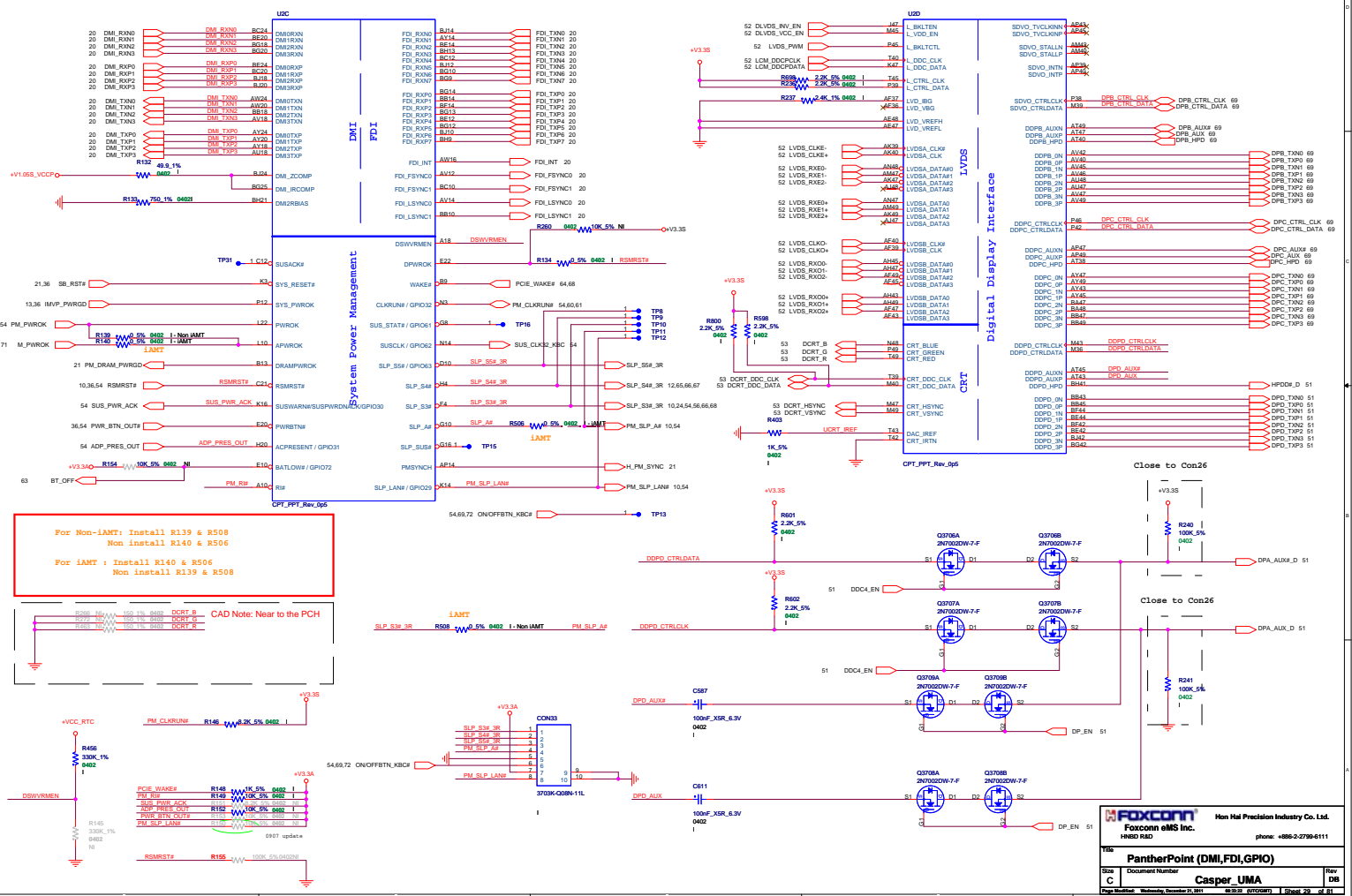


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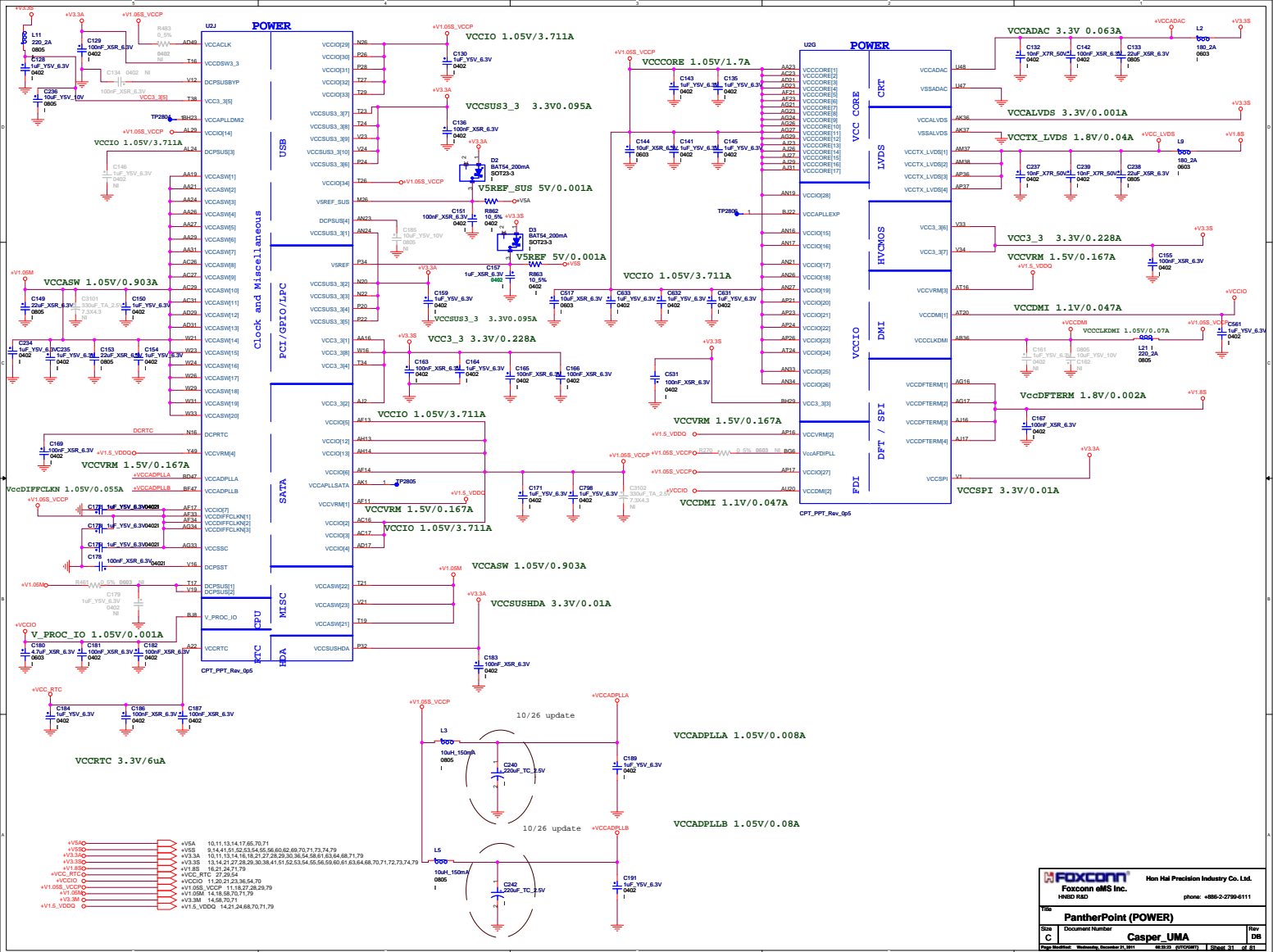
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U20	
AF1	VS0150
AF2	VS0160
AF6	VS0160
AF8	VS0161
B11	VS0163
B15	VS0164
B19	VS0165
B23	VS0166
B27	VS0167
B31	VS0168
B35	VS0169
B39	VS0170
B7	VS0171
F45	VS0172
B812	VS0173
B816	VS0174
B820	VS0175
B824	VS0176
B828	VS0177
B832	VS0178
B836	VS0179
B840	VS0180
B844	VS0181
BC14	VS0182
BC18	VS0183
BC22	VS0184
BC26	VS0185
BC30	VS0186
BC34	VS0187
BC38	VS0188
BC42	VS0189
BC46	VS0190
BC50	VS0191
BC54	VS0192
BC58	VS0193
BC62	VS0194
BC66	VS0195
BE02	VS0196
BE06	VS0197
BE10	VS0198
BE14	VS0199
BE18	VS0200
BE22	VS0201
BE26	VS0202
BE30	VS0203
BE34	VS0204
BE38	VS0205
BE42	VS0206
BE46	VS0207
BE50	VS0208
BE54	VS0209
BE58	VS0210
BE62	VS0211
BE66	VS0212
BE70	VS0213
BE74	VS0214
BE78	VS0215
BE82	VS0216
BE86	VS0217
BE90	VS0218
BE94	VS0219
BE98	VS0220
BE02	VS0221
BE06	VS0222
BE10	VS0223
BE14	VS0224
BE18	VS0225
BE22	VS0226
BE26	VS0227
BE30	VS0228
BE34	VS0229
BE38	VS0230
BE42	VS0231
BE46	VS0232
BE50	VS0233
BE54	VS0234
BE58	VS0235
BE62	VS0236
BE66	VS0237
BE70	VS0238
BE74	VS0239
BE78	VS0240
BE82	VS0241
BE86	VS0242
BE90	VS0243
BE94	VS0244
BE98	VS0245
BE02	VS0246
BE06	VS0247
BE10	VS0248
BE14	VS0249
BE18	VS0250
BE22	VS0251
BE26	VS0252
BE30	VS0253
BE34	VS0254
BE38	VS0255
BE42	VS0256
BE46	VS0257
BE50	VS0258

U21	
AE	VS0301
AA17	VS0302
AA2	VS0303
AA3	VS0304
AA33	VS0305
AA34	VS0306
AA35	VS0307
AA36	VS0308
AA37	VS0309
AA38	VS0310
AA39	VS0311
AA4	VS0312
AA43	VS0313
AA44	VS0314
AA45	VS0315
AA46	VS0316
AA47	VS0317
AA48	VS0318
AA49	VS0319
AA5	VS0320
AA51	VS0321
AA52	VS0322
AA53	VS0323
AA54	VS0324
AA55	VS0325
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AA57	VS0327
AA58	VS0328
AA59	VS0329
AA6	VS0330
AA61	VS0331
AA62	VS0332
AA63	VS0333
AA64	VS0334
AA65	VS0335
AA66	VS0336
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AA68	VS0338
AA69	VS0339
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AA85	VS0355
AA86	VS0356
AA87	VS0357
AA88	VS0358
AA89	VS0359
AA9	VS0360
AA91	VS0361
AA92	VS0362
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AA99	VS0369
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AA05	VS0375
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AA08	VS0378
AA09	VS0379
AA1	VS0380
AA11	VS0381
AA12	VS0382
AA13	VS0383
AA14	VS0384
AA15	VS0385
AA16	VS0386
AA17	VS0387
AA18	VS0388
AA19	VS0389
AA2	VS0390
AA21	VS0391
AA22	VS0392
AA23	VS0393
AA24	VS0394
AA25	VS0395
AA26	VS0396
AA27	VS0397
AA28	VS0398
AA29	VS0399
AA3	VS0400
AA31	VS0401
AA32	VS0402
AA33	VS0403
AA34	VS0404
AA35	VS0405
AA36	VS0406
AA37	VS0407
AA38	VS0408
AA39	VS0409
AA4	VS0410
AA41	VS0411
AA42	VS0412
AA43	VS0413
AA44	VS0414
AA45	VS0415
AA46	VS0416
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AA08	VS0478
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AA1	VS0480
AA11	VS0481
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AA13	VS0483
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AA15	VS0485
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AA2	VS0490
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AA25	VS0495
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AA29	VS0499
AA3	VS0500


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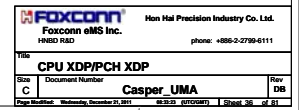
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19850 R&D		phone: +886-2-2799-6111	
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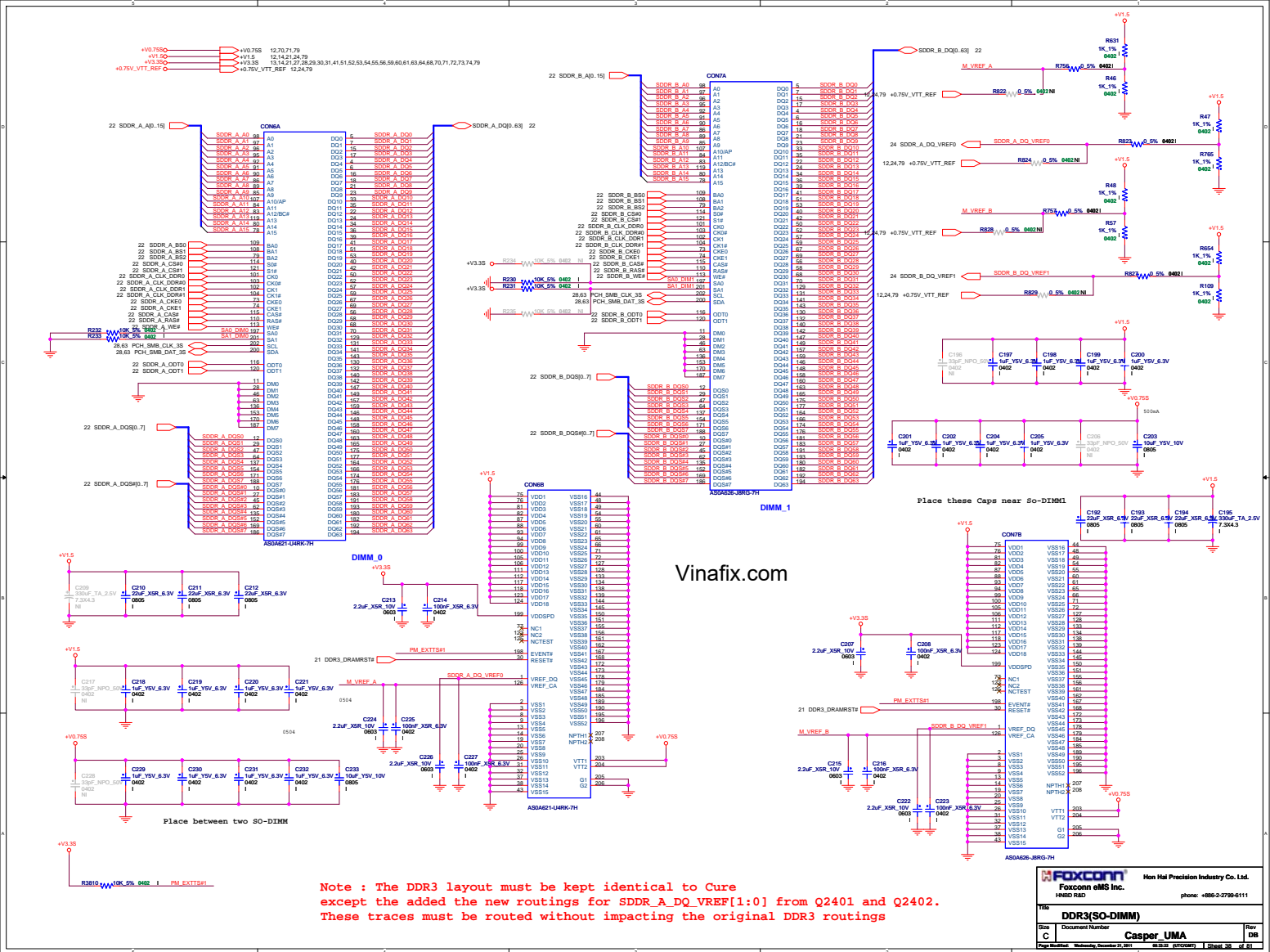
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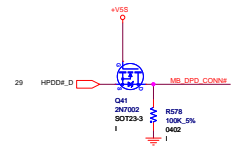
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Make characteristic impedance $Z_0=50$ Ohm

29 DCRT_HSYNC
29 DCRT_VSYNC

Make characteristic impedance $Z_0=50$ Ohm

29 DCRT_DDC_CLK
29 DCRT_DDC_DATA

VGA SWITCH

+V3_3D0
+V3S 0

Priority/SEL
Pin 30 is Low, port1 is chosen
Pin30 is High, port2 is chosen

Make characteristic impedance $Z_0=37.5$ Ohm

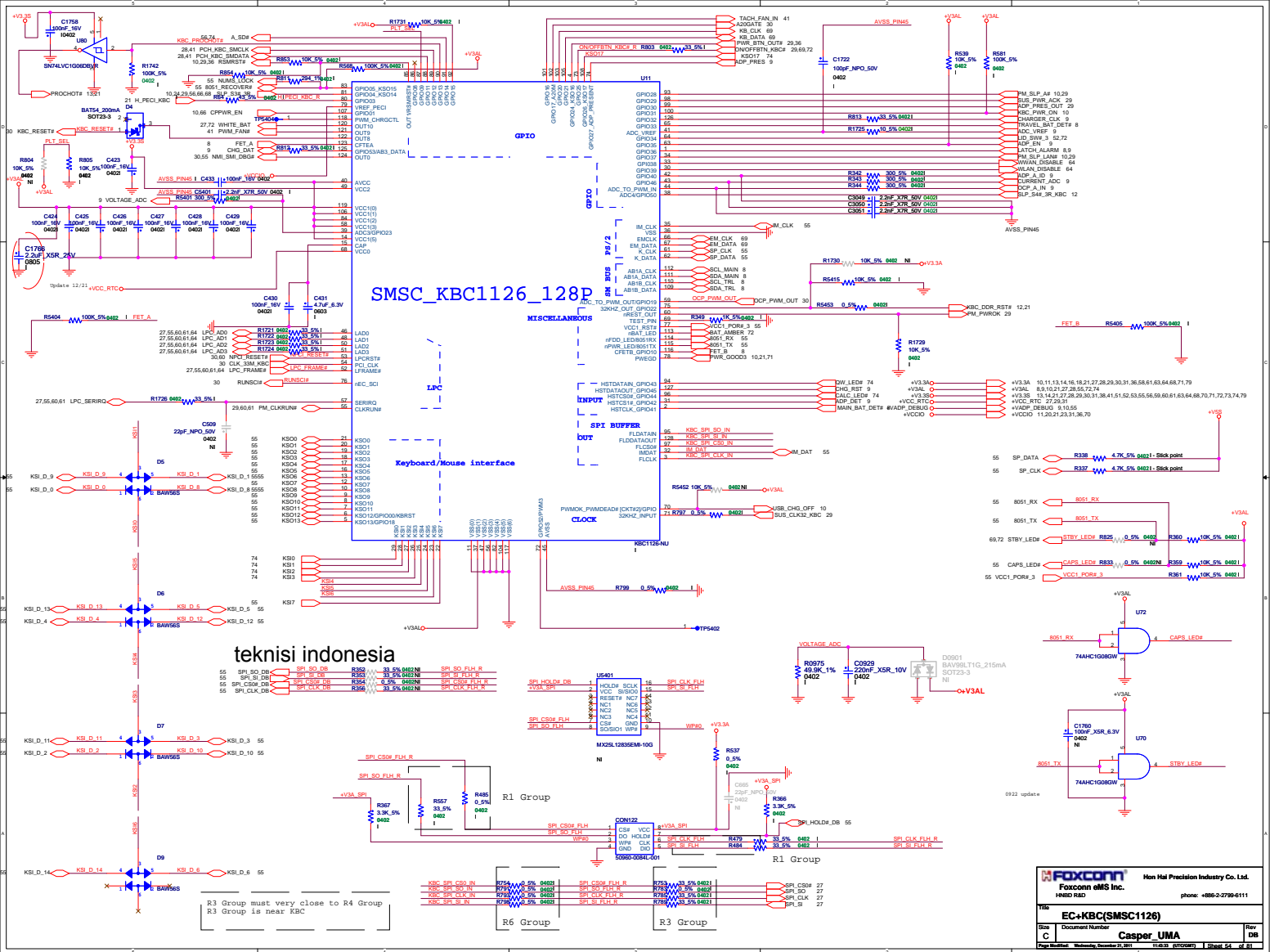
Make Characteristic Impedance $Z_0=37.5$ Ohm

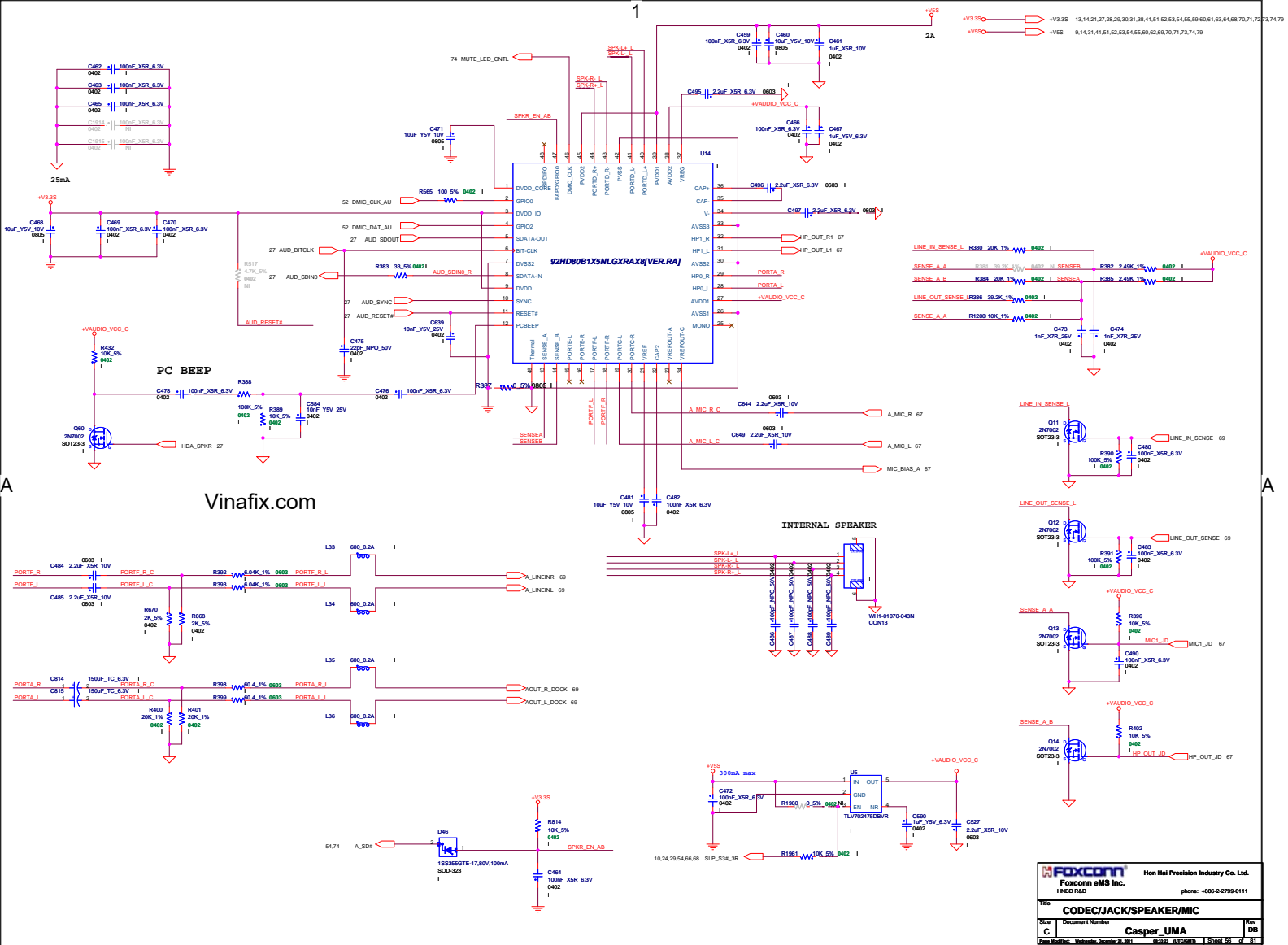
For DOCK_[R, G, B] traces from U23 to docking connector.
(Note : not including DOCK_HSYNC and DOCK_VSYNC)

Put three termination R495-497 close to CON29 as possible

Make characteristic impedance $Z_0=50$ Ohm

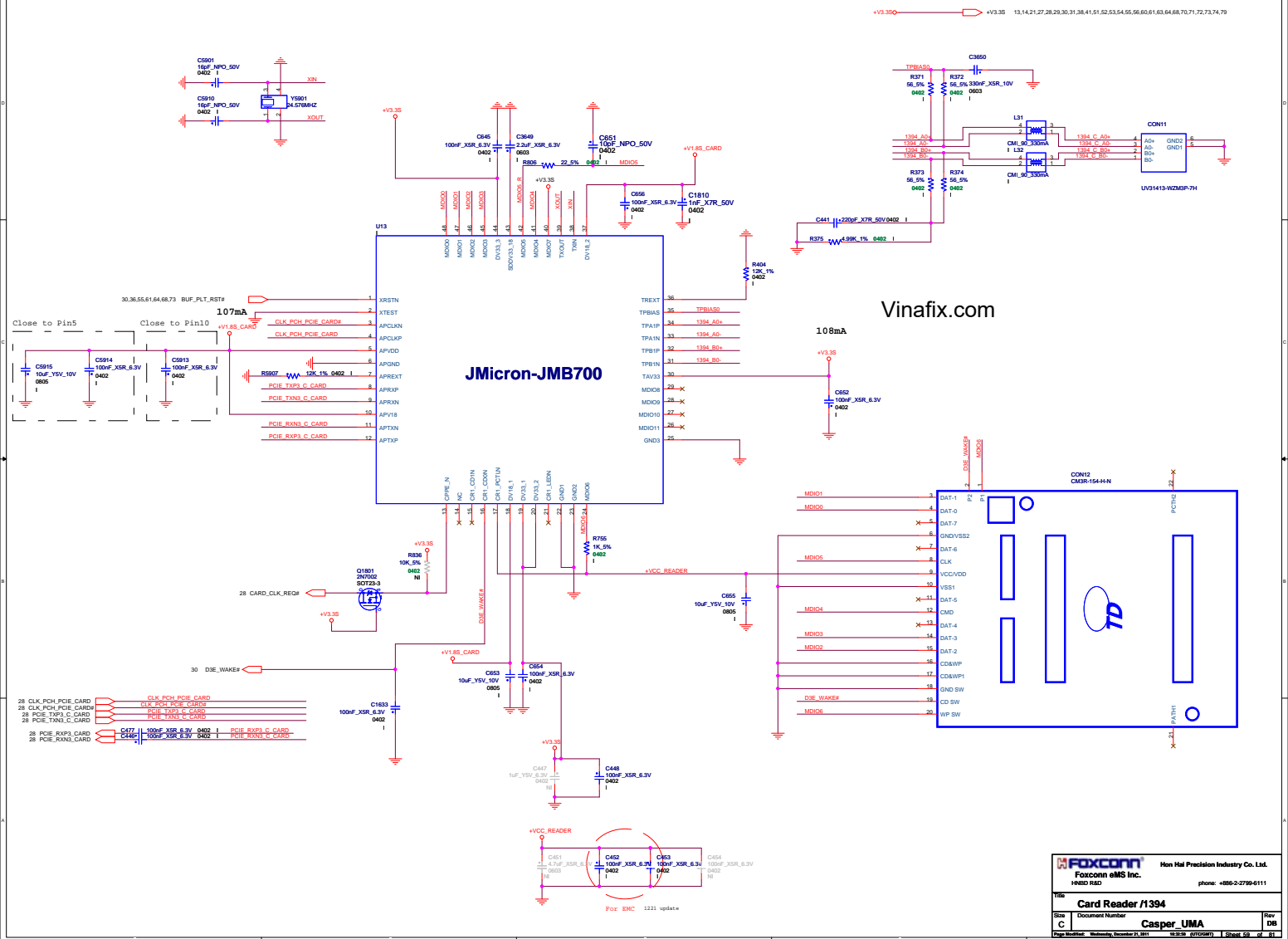
VGA CONNECTOR

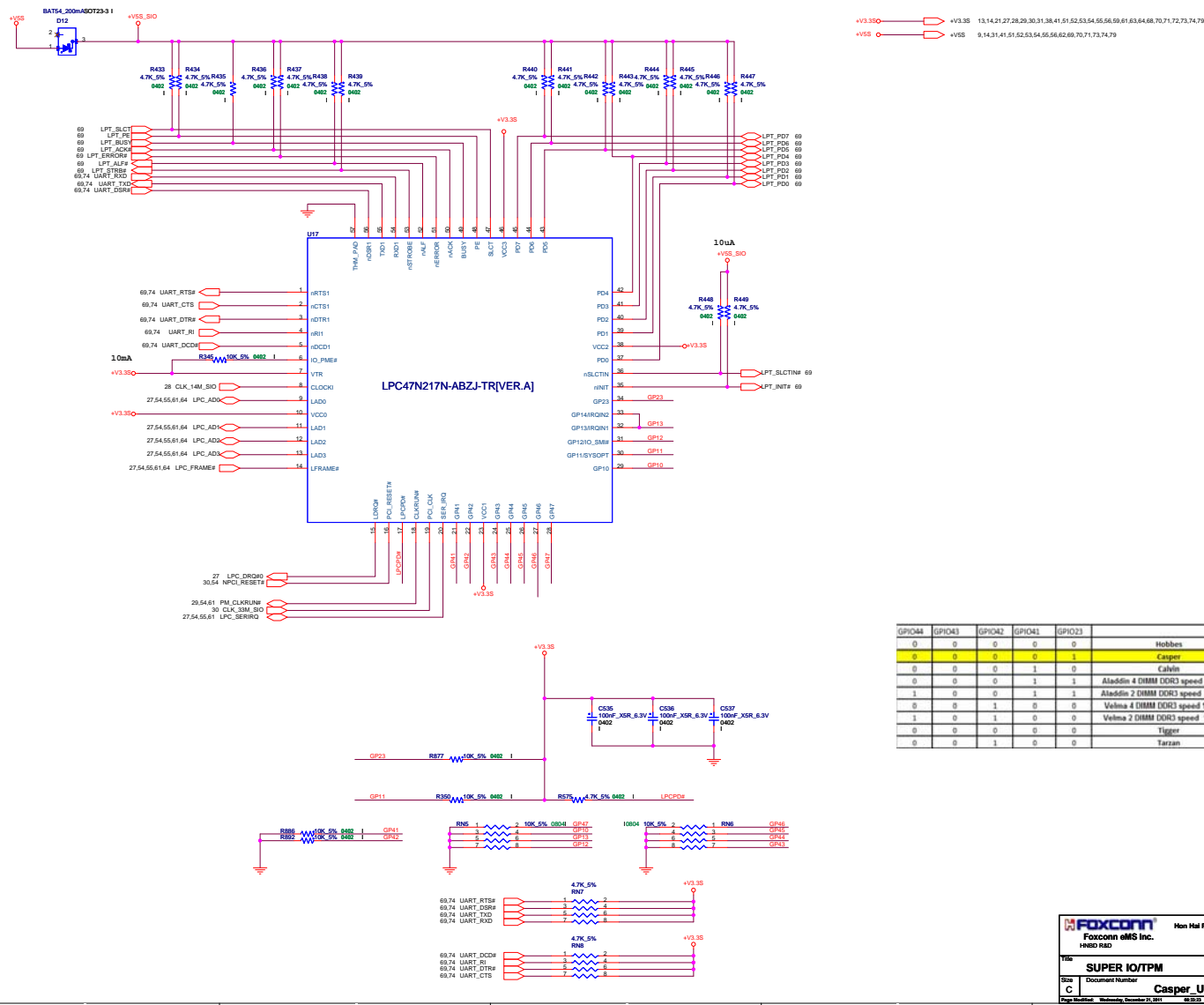




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Title AUDIO I/O			
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GPIO4	GPIO3	GPIO2	GPIO1	GPIO23	
0	0	0	0	0	Hobbes
0	0	0	0	1	Casper
0	0	0	1	0	Calvin
0	0	0	1	1	Aladdin 4 DHMA DOR3 speed 1333MHz
1	0	0	1	1	Aladdin 2 DHMA DOR3 speed 16000Hz
0	0	1	0	0	Velma 4 DHMA DOR3 speed 1333MHz
1	0	1	0	0	Velma 2 DHMA DOR3 speed 16000Hz
0	0	0	0	0	Tigger
0	0	1	0	0	Taran

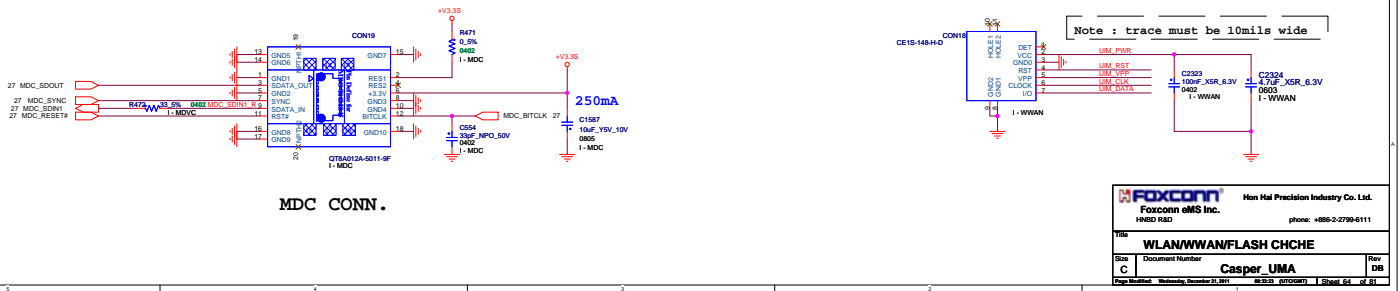
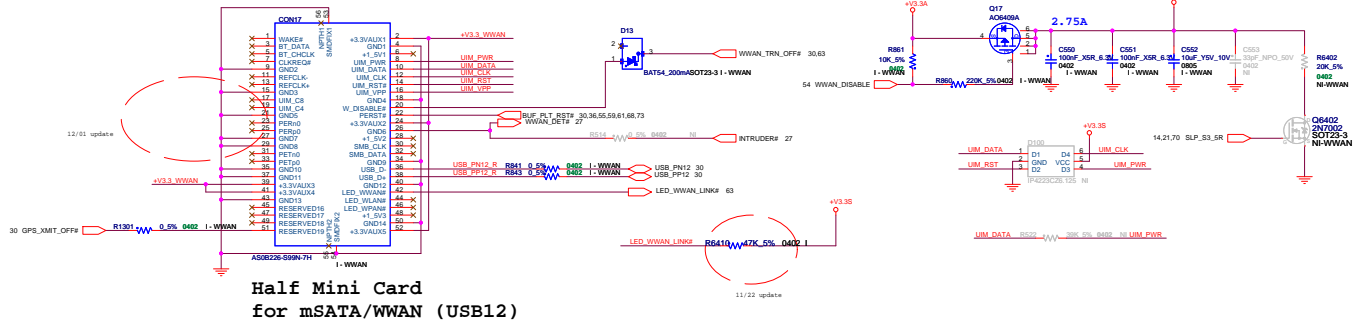
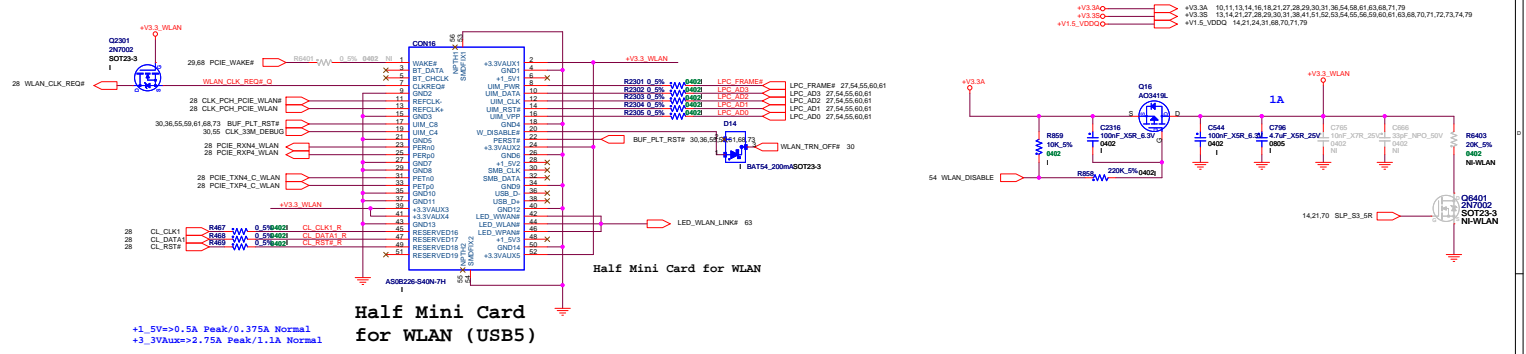
Pin	Signal	Value
13	V3.3S	13
14	V3.3S	14
21	V3.3S	21
27	V3.3S	27
28	V3.3S	28
29	V3.3S	29
30	V3.3S	30
31	V3.3S	31
38	V3.3S	38
41	V3.3S	41
51	V3.3S	51
52	V3.3S	52
53	V3.3S	53
54	V3.3S	54
55	V3.3S	55
56	V3.3S	56
59	V3.3S	59
60	V3.3S	60
63	V3.3S	63
64	V3.3S	64
68	V3.3S	68
70	V3.3S	70
71	V3.3S	71
72	V3.3S	72
73	V3.3S	73
74	V3.3S	74
79	V3.3S	79

Pin	Signal	Value
10	V3.3A	10
11	V3.3A	11
13	V3.3A	13
14	V3.3A	14
16	V3.3A	16
18	V3.3A	18
21	V3.3A	21
27	V3.3A	27
28	V3.3A	28
29	V3.3A	29
30	V3.3A	30
31	V3.3A	31
36	V3.3A	36
54	V3.3A	54
58	V3.3A	58
63	V3.3A	63
64	V3.3A	64
68	V3.3A	68
71	V3.3A	71
79	V3.3A	79

Update 10/27

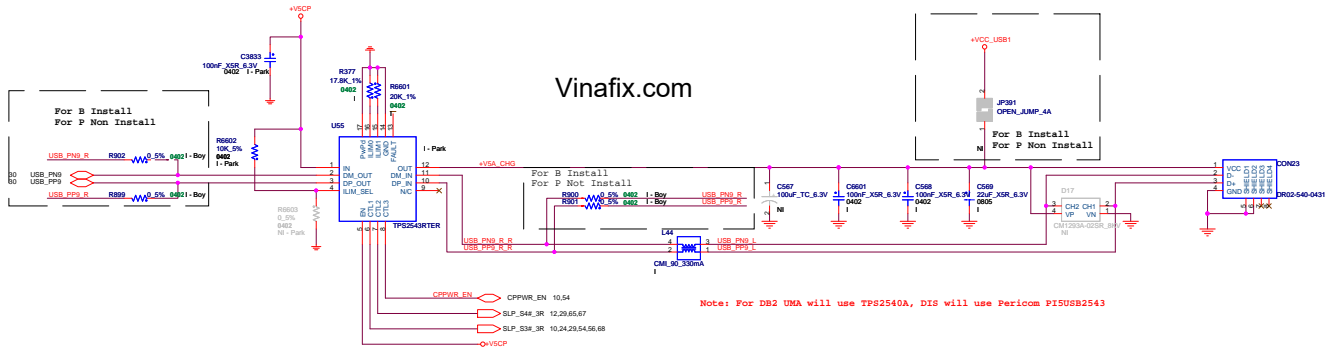


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USB2 Charger

+V500
+V3.3A
+V5A
10,11,13,14,17,31,65,70,71
10,11,13,14,16,18,21,27,28,29,30,31,36,54,58,61,63,64,68,71,79



	R377	R6601	R6602	R6603	C567	C569
TP82540/A	17.8K	NI	NI	0 Ohm	NI	22uF
TP82543	17.8K	20K	10K	NI	NI	22uF
PISUSB2543ZHE	17.8K	NI	NI	0 Ohm	100uF	NI

Pericom 2543

R value	Current limit +/-5%
210Kohm	170mA
180Kohm	200mA
160Kohm	230mA
140Kohm	270mA
120Kohm	320mA
100Kohm	400mA
80Kohm	500mA
50Kohm	850mA
26Kohm	1,600mA
20Kohm	2,000mA
16Kohm	2,400mA

Input Logic Level				Logic Output	
CTL1	CTL2	CTL3	ILIM_SEL	Charging Mode	WAKE Output (active low)
0	0	0	x	OUT discharge, power switch off	off
0	x	1	0	Dedicated charging port, auto-detect	off
0	x	1	1	Dedicated charging port, auto-detect, w/ Mouse/Keyboard detect + pass through enabled (back to auto detect when detached)	active low if DCP load present
x	1	0	x	Standard downstream port, USB 2.0 Mode	off
-1	0	0	x	Dedicated charging port, BC1.2 only	off
-1	0	1	x	Dedicated charging port, divider	off
-1	-1	-1	0	Standard downstream port, USB 2.0 Mode	off
1	1	1	1	Charging downstream port, BC1.2	active low if CDP load present

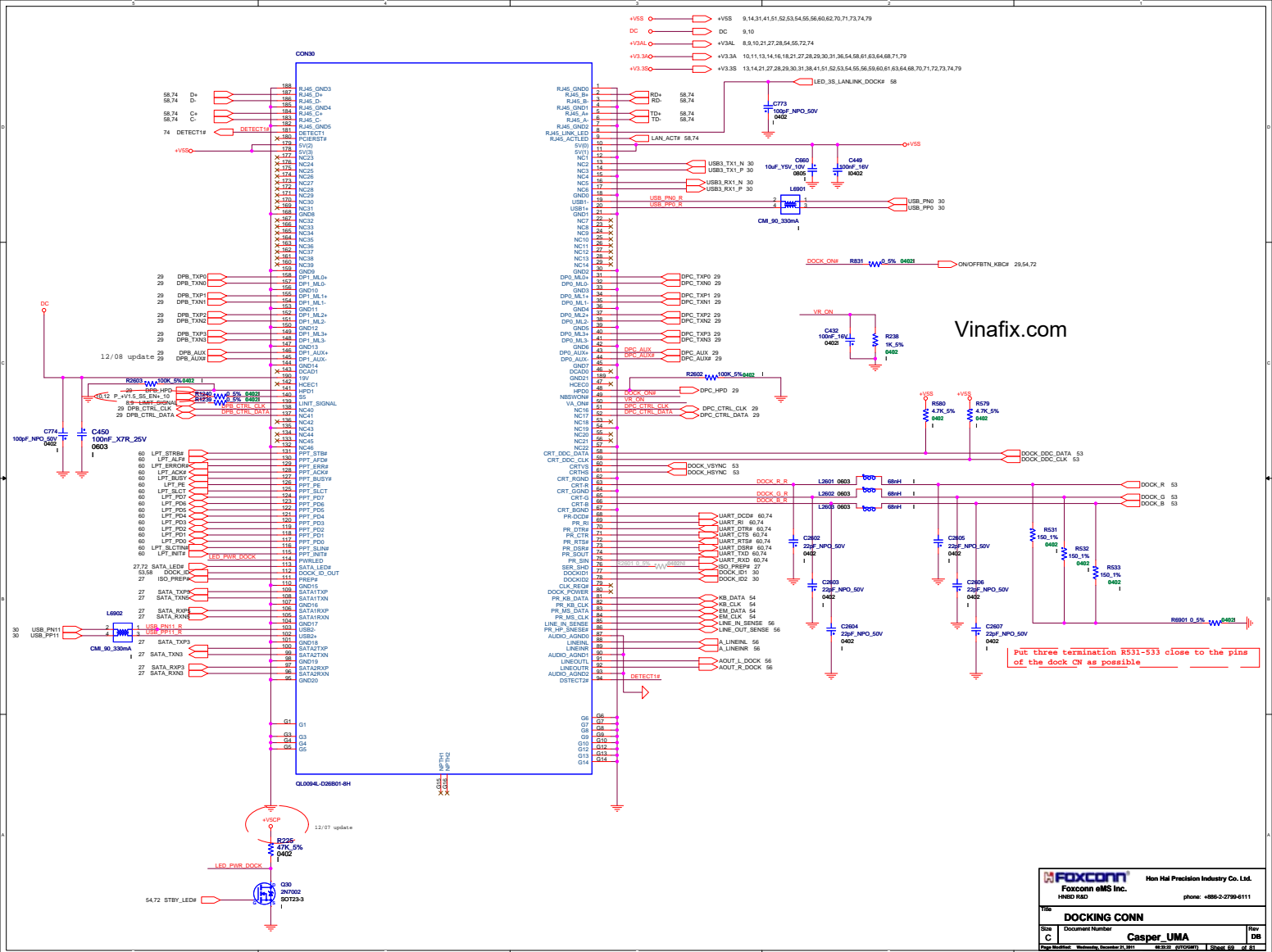
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Foxconn eMS Inc.
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19850 ROAD

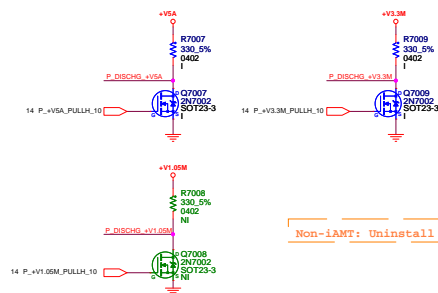
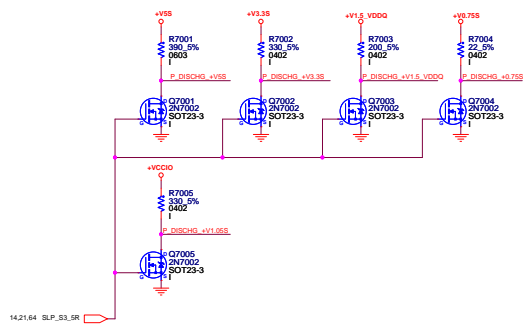
USB CHARGER

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DISCHARGE CIRCUITS



Non-iAMT: Uninstall R7008 and Q7008

+VSS	+VSS	9,14,31,41,51,52,53,54,55,56,60,62,69,71,73,74,79
+V0.75S	+V0.75S	12,38,71,79
+VCCIO	+VCCIO	11,20,21,23,31,36,54
+V1.5_VDDQ	+V1.5_VDDQ	14,21,24,31,68,71,79

+V3.35 +V3.35 13,14,21,27,28,29,30,31,38,41,51,52,53,54,55,56,59,60,61,63,64,68,71,72,73,74,79

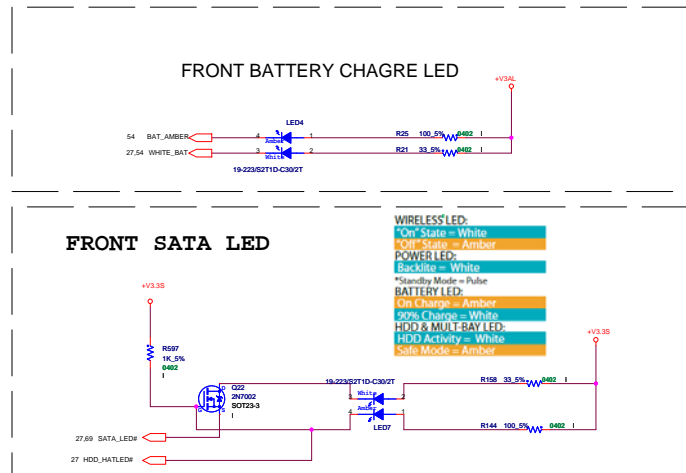
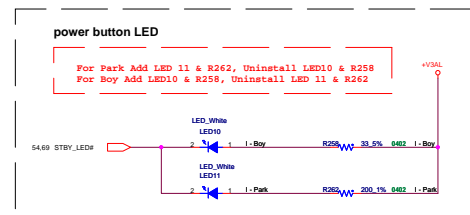
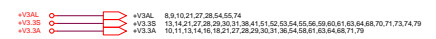
+V5A		+V5A	10,11,13,14,17,31,65,71
+V1.05M		+V1.05M	14,18,31,58,71,79
+V3.3M		+V3.3M	14,58,71

POWER SEQUENCE

iAMT

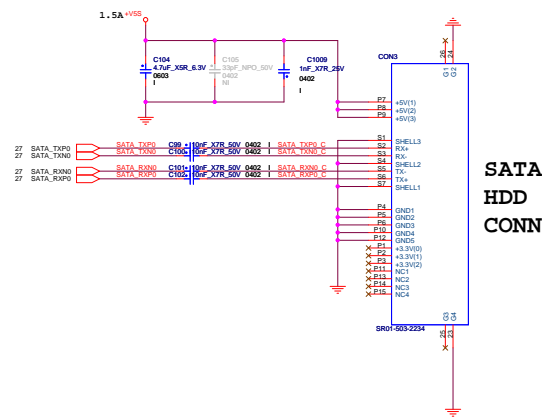
iAMT

+V2REF	9,10
+V5A	10,11,13,14,17,31,65,70
+V5S	9,14,31,41,51,52,53,54,55,56,60,62,69,70,73,74,79
+V3.3S	13,14,21,27,28,29,30,31,38,41,51,52,53,54,55,56,59,60,61,63,64,68,70,73,74,79
+V1.5_VDDQ	14,21,24,31,68,70,79
+V0.75S	12,38,70,79
+V1.05S_VCCP	11,18,27,28,29,31,79
+V1.8S	16,21,24,31,79
+V3AL	8,9,10,21,27,28,54,55,72,74
+V5AL	9,10,14
+V3.3A	10,11,13,14,16,18,21,27,28,29,30,31,38,64,68,61,63,64,68,79
+V1.05M	14,18,31,58,70,79
+V3.3M	14,58,70

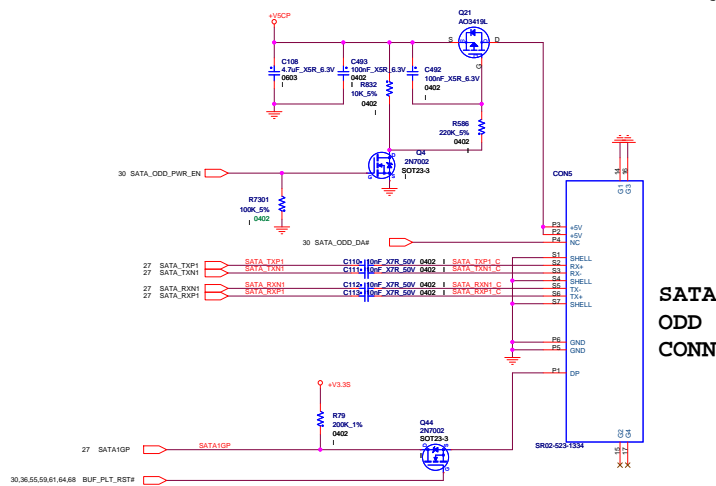


WIRELESS LED:
 "On" State = White
 "Off" State = Amber
POWER LED:
 Backlit = White
 *Standby Mode = Pulse
BATTERY LED:
 On Charge = Amber
 90% Charge = White
HDD & MULT-BAY LED:
 HDD Activity = White
 Safe Mode = Amber

SATA HDD

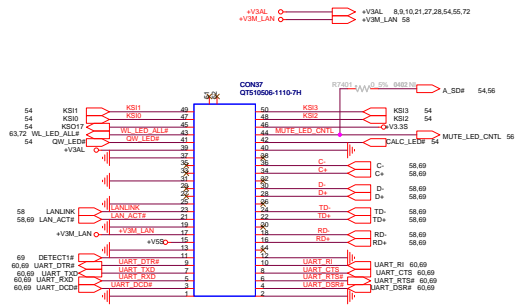


Note: The total trace length HDD 7 Inch




Note: The total trace length ODD 8 Inch

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HDD/ODD			
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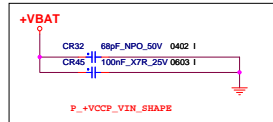
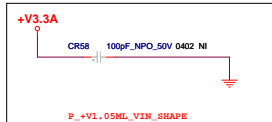
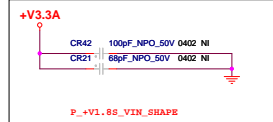
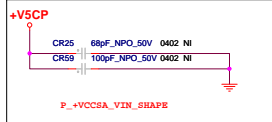
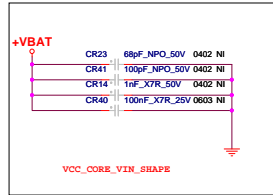
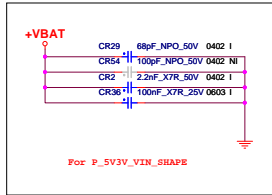
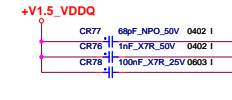
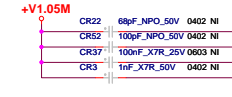
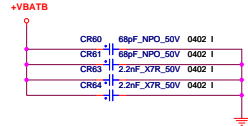
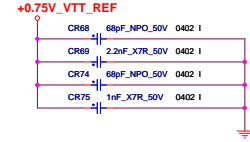
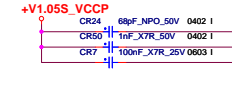
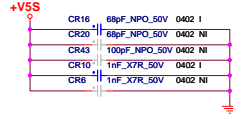
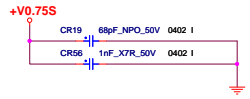
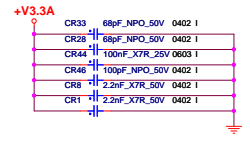
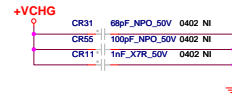
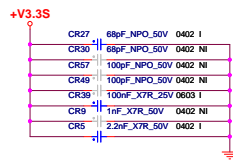
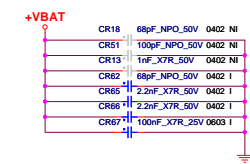
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0607

1. Change LC to CLC filter at docking connector(C2605,C2606,C2607)
2. SERIRQ - Known issue on HS platforms. Add series resistor and shunt decoupling cap (R1726 33ohm ,C509 22pF)
3. PCIe changed to SATA interface on MLAN mini-card conn pin 23 25 31 33
4. Change PCR XDP CONN. form 60pin to 26 pin just like IEC design.

0608

1. Change GPIO8 pull high to +V3.3A with 10 K register(R308) and re-name to GPI_INV_LIDWAKE, also add 0 ohm NI(R1330) resistor between GPIO8 and RUNSCIO#_3

0609

1. Move the CLK_SIO14 CLK from the current CLKOUTFLEX1 location to CLKOUTFLEX1.This will help reduce clock signal integrity issues that can be related to PCR power jitter.

0610

1. Change con38(USB3.0 board) from 40pin to 30pin(follow Toto design). page67:con38
2. Move Mute LED control mosfet from MB to function board(follow Toto design). page56 :U14
3. Add Keyboard Connector & backlight circuit. page55:add con5501,R676,R679,R688,R692,Q73,Q74
4. Change 5V hp logo control signal from LID_SW#_3 to HL_Enable. page52:con28
5. Accelerometer: Change from HP3DC to HP3DC2. footprint compatible. page63:u40
6. PCIe changed to SATA interface on MLAN mini-card conn. page64:con6402
7. PWM/Change from SLB9635 to SLB9655 but it has an issue so will use 9635 for DB1,add option resistance to change SLB9635 or SLB9655. page61:u18
8. Change function board RS-232 Transceivers control signal(follow Toto design) ,from SER_SHD to DETECT18.page69:con30
9. Add R234 10K to +V3.3S on SA0_DIM1, and add R235 10K pull down on SA1_DIM1

0613

1. Change Q111, Q2401 and Q2402 from ZW7002 to SS8138 with much less Vgs at around 0.8V typ. 1.2V max compare to ZW7002 at 2.1V typ. and 2.5V max.
2. Change R822, R824, R828 and R829 to NO INSTALL. Change R756, R823, R757 and R827 to INSTALL. We will use M1 and M3 for VREF voltages to DDR3.
3. Add back C217 ,C196, C206 33pF (NI)
4. Install C2605, C2606 and C2607 Connect R531.2, R532.2 and R533.2 to pins CON30.62, CON30.64 and CON30.67 directly and name it DOCK_CRT_GND. Add a 0 ohm (INSTALL) to connect DOCK_CRT_GND to DQND and place it near the docking connector.
5. Delete R1577 and R147 Delete R833, Q200A, Q200B, R544 and C445 Try overlay 0 ohm resistors for L2604 and L2605 CM chokes and use 0 ohm resistors on DB1(R6902,R6903,R6904,R6905 0ohm)
6. Change C138 to NI
7. Change R206 to NI
8. Change R297 from 10K to 200K
9. Change R804 from 0ohm to 10K and change I, and R805 change to NI
10. Change R796 from 0 ohm to test point

0614

1. Change U65 U66 to NI for DB1
2. Change U21 to NI for DB1

0615

1. Change R3637 from 61.9K to 30.1K
2. Change R3627 from 3.3K to 41.2K
3. Change C563 and C574 from 150uF to 100uF

0616

1. Connect VDDI-3 of U23 together, and add C5301 pull-down 0.1uF-cap there.
2. For the VGA, add a R and CRT_GND by connecting pins 5,6,7 and three termination ground terminals together
3. Remove R3631 and R3632, and change VL_R# PG to +V1.8S at R3627
4. Add R1335 (NI) connect GPIO8 to control for 1.35v and 1.5v selection.
5. Del F1, Q20 C1235, Add FB11

0617

1. Change C210, C211, C212, C192, C193 and C194 from 10 uFto 22uF.
2. Change R6902 R6903 from 0420 size to 0603 size
3. Change R0601 from 1K to 0 ohm
4. Change C93 from 22uF to 330uF (NI)
5. Del R464 0 ohm, C547 10uF, C548 100nF, C549 33pF
6. Add R6603 0ohm(NI), R6602 0ohm(I), R6601 0ohm(NI)
7. Change R898 & Q5 to NI
8. Change R22 from 1.1K_1k to 1K_5k

0620

1. Del R880,R881,R882 100K,R887,R888,R889,R896 0ohm, C659 100nF
2. Del R3825, R895, R891 and R890 0ohm
3. Del C1309 10 nF, c1307 1uF,C1311 100nF,R1411 R1412 R1413 0ohm, C1308 C1313 C1312 C1310 10nF, R1414 R1415 R1407 R1408 20ohm,R1409 R1410 0ohm, and also del U66

0621

1. U11.39 (VOLTAGE_ADC) add C5401 2.2nF X7R 50V decoupling cap to AVSS_PIN45
2. Change CON30.190 net from DCIN to DC
3. U11.31 GP1042 should change to ADP_DET, U11.92 GP1015 should change to CHRG_ADP_DET
4. Change R154 10K to NI, R150 0 ohm to 1

0622

1. Change C567 from 150uF to 100uF, and change C569 from 47pF to 22uF.
2. Add C5201 1uF, C5202 10nF, C5203 47pF,C5204 100nF(NI), C5205 100nF(NI), C5206 100nF(NI)

0623

1. Add U70 U72 74LVC1G170W
2. Add R3005 10K
3. Del R834, R835 0 ohm
4. Add R82 R83 R84 200 ohm, R86 R87 R88 100 ohm
5. Del R71 0ohm
6. Change C377, C589, C635 and C636 to INSTALL
7. Change C814 C815 from 47uF to 150uF

0624

1. Change R698 from 10K to 2.2K
2. Change R236 from 10K to 2.2K

0627

1. Add R5401 between VOLTAGE_ADC and C5401/U11-39.
2. Add C6601 beside C568
3. Change CON10.7 to PCH_SMB_DAT_3S and CON10.8 to PCH_SMB_CLK_3S

0628

1. Delete Q73, Q74, R676 and CON5501. Backlit keyboard support dropped.
2. Change R864 & R865 from 100 ohm to 10 ohm and install
3. Change R836 to NI
4. Add R3650 1K_5k
5. Connect PCH-GPIO61 (U2_G8) to AU9540.Pin26-PWRSV_SEL(U4308.26) with 0 ohm (NI) R3711 serial resistor and name this net with SC_PWRSV#. Add 0 ohm (I) R3712 pull down to GND on AU9540.Pin26(U4308.26)
6. Add R1730 on U11 pin 75 pull to +V3.3A

0629

1. Del R1210 R1209 R5901 R1850 R378 R348 R3710 R1010 R1009 R1001 R370 C82 R1002
2. Change R431 from 1K to 2.2K

0630

1. Change U19.2 and U19.3 from +V5A to +V5CP. This will eliminate the need for +V5A plane cut on VCC layer for the USB port at the left rear.
2. Change U25 Pin1 pull up from +V3.3S to +V3.3A

0701

1. Change U25 Pin1 pull up from +V3.3A to +V3.3S

0706

1. Q1011 chnange reference part to Q2701

0713

1. Add R7301 10 K ohm, Change Q21 pin4 from +V5S to +V5CP, and add R7301 100K pull down at Q4.G,change CON38[27,28,29,30]pins from +V5A to +V5CP

0714

1. Change R814 pull up from +VAUDIO_VCC_C to +V3.3S
2. Change C0903 from 100nF_X7R_25V to 1uF_X5R_25V

0718

1. Change R6103 & R6104 from 0 ohm to 4.7K
2. Add C1110 10uF_V5V_10V

0719

1. Delete TP5403
2. Add R1731 10K

[illegible]