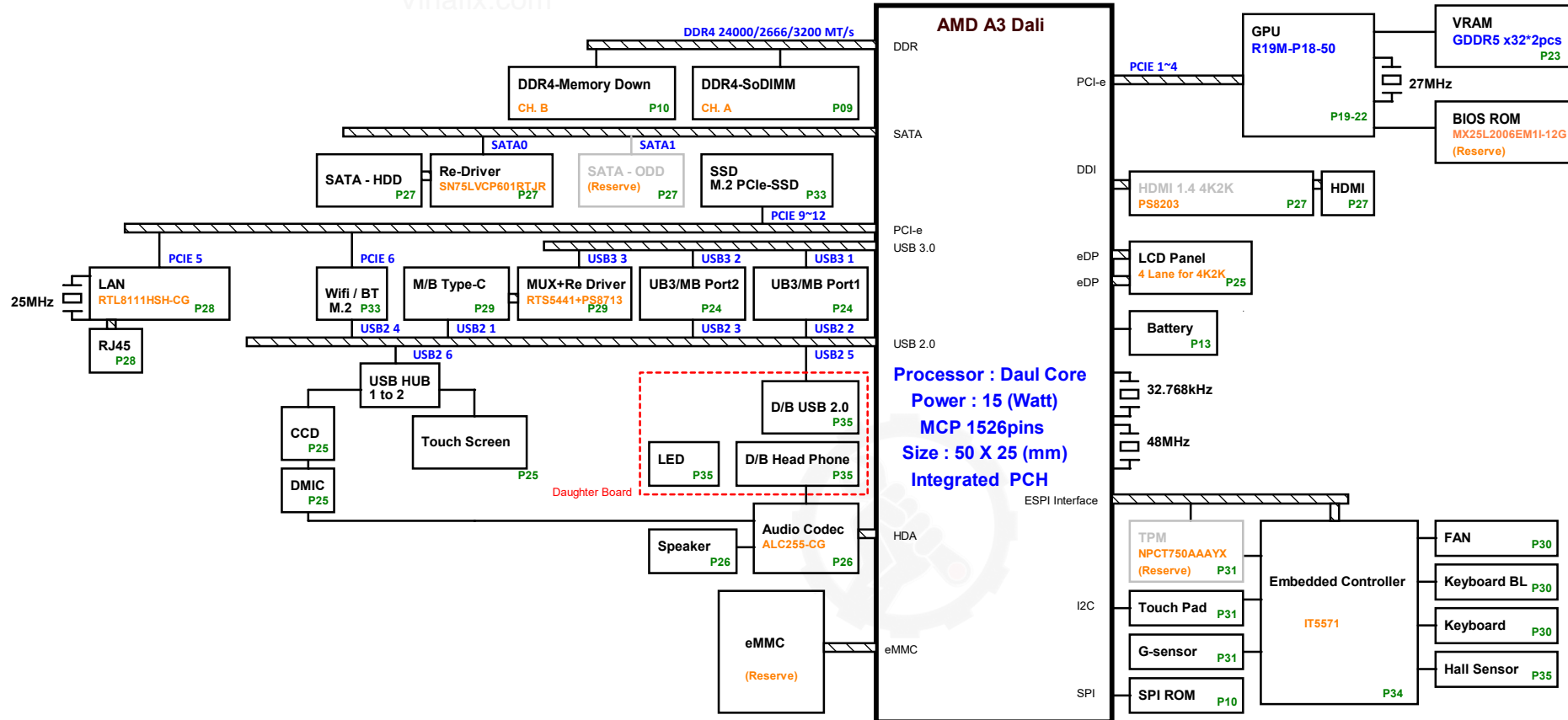


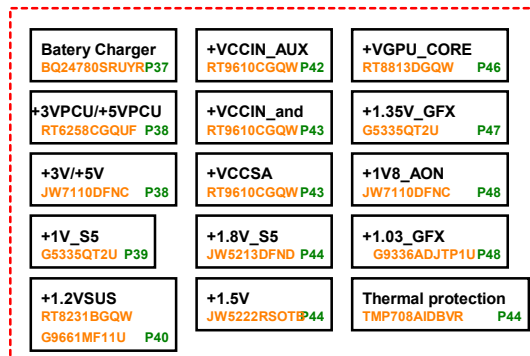
Z8E AMD A3 Platform Block Diagram

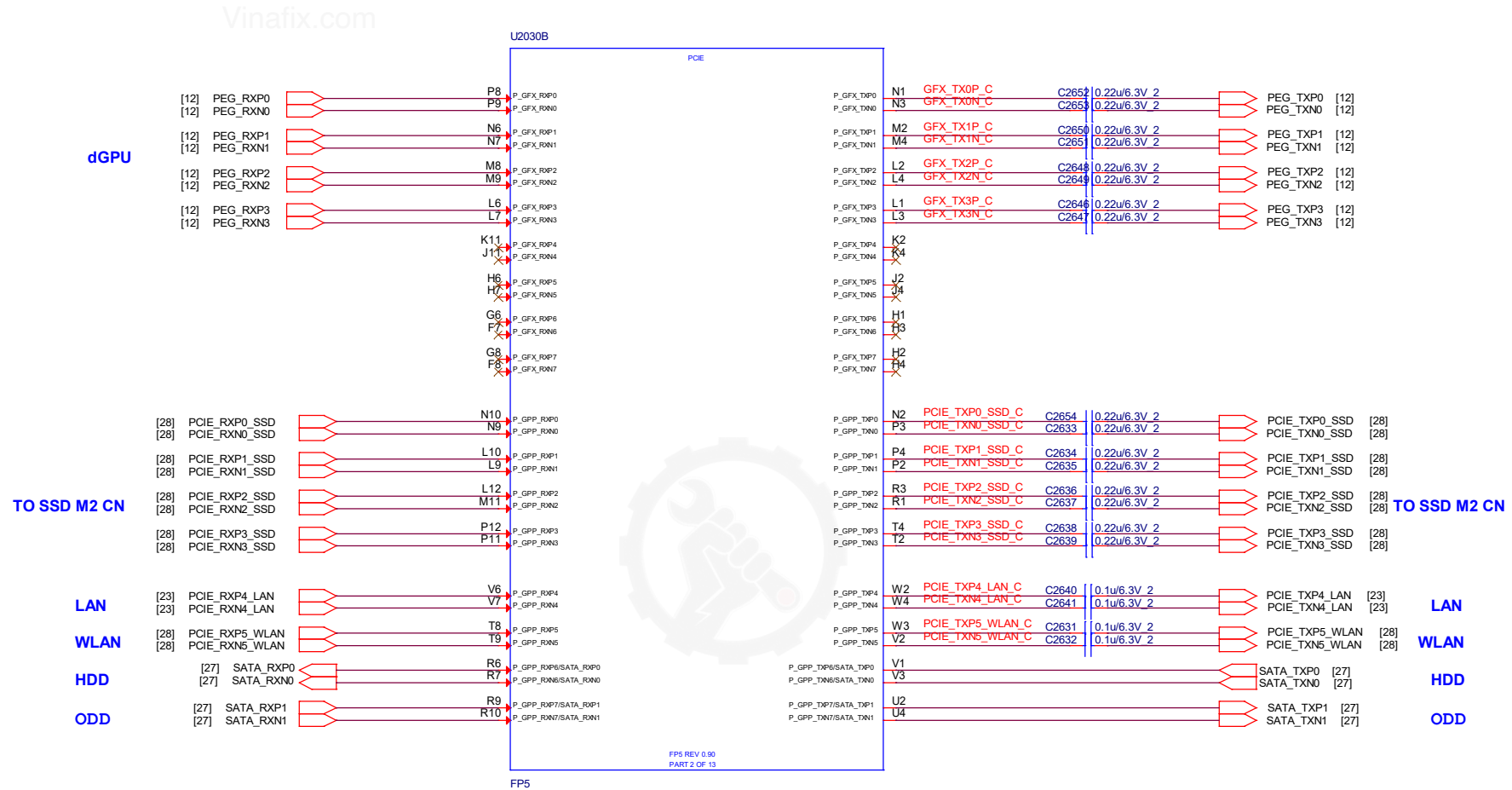
01

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Power solution

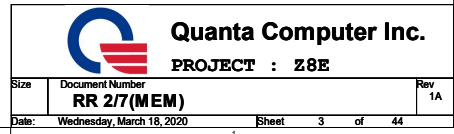


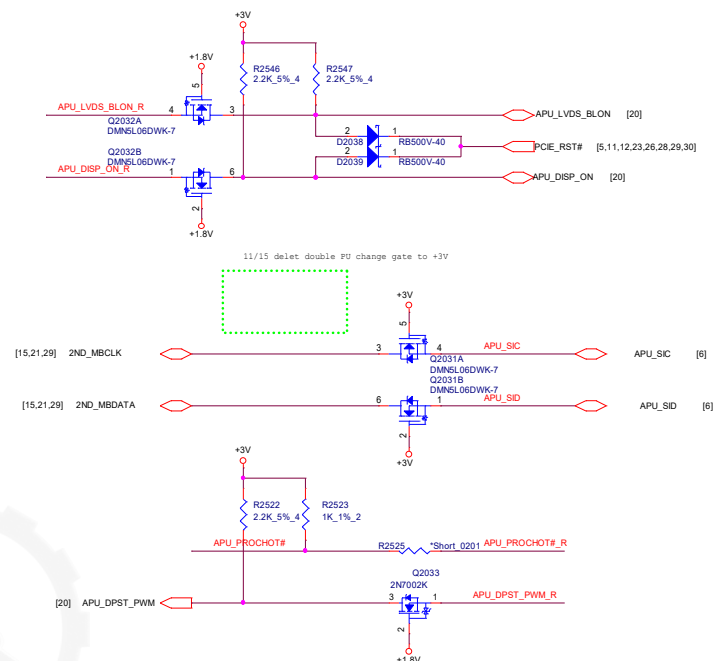


AMD APU	TOP BSQ	QBCON
Ryzen 5-2500U	AJ02500UT03	AJ02500UT02
Ryzen 3-2300UQ	AJ02300UT04	AJ02300UT05
Ryzen 3-2200U	AJ02200RT01	AJ02200RT02

**Quanta Computer Inc.**
PROJECT : Z8E

Size	Document Number	Rev
	RR 1/7(PCIE)	1A
Date:	Wednesday, March 18, 2020	Sheet 2 of 44





Signal	Pin	Function	Notes
SVT_APU	R2514	*Short_0201	APU_SVT [35]
SVC_APU	R2515	*Short_0201	APU_SVC [35]
SVD_APU	R2516	*Short_0201	APU_SVD [35]
APU_PWRGD	R2517	*Short_0201	APU_PWRGD_SVD_REG [35]

SVC	SVD	VOLTAGE
0	0	1.1
0	1	1.0
1	0	0.9
1	1	0.8

EC H_PROCHOT#

[31..35] CORE_PWM_PROCHOT#

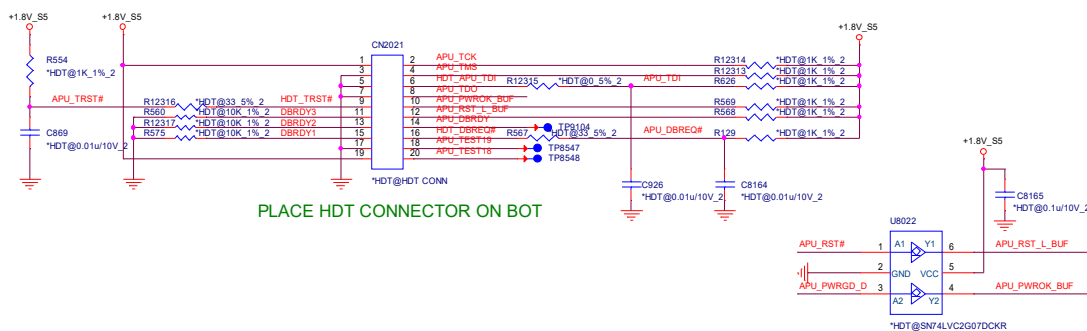
R2508 *Short_0201

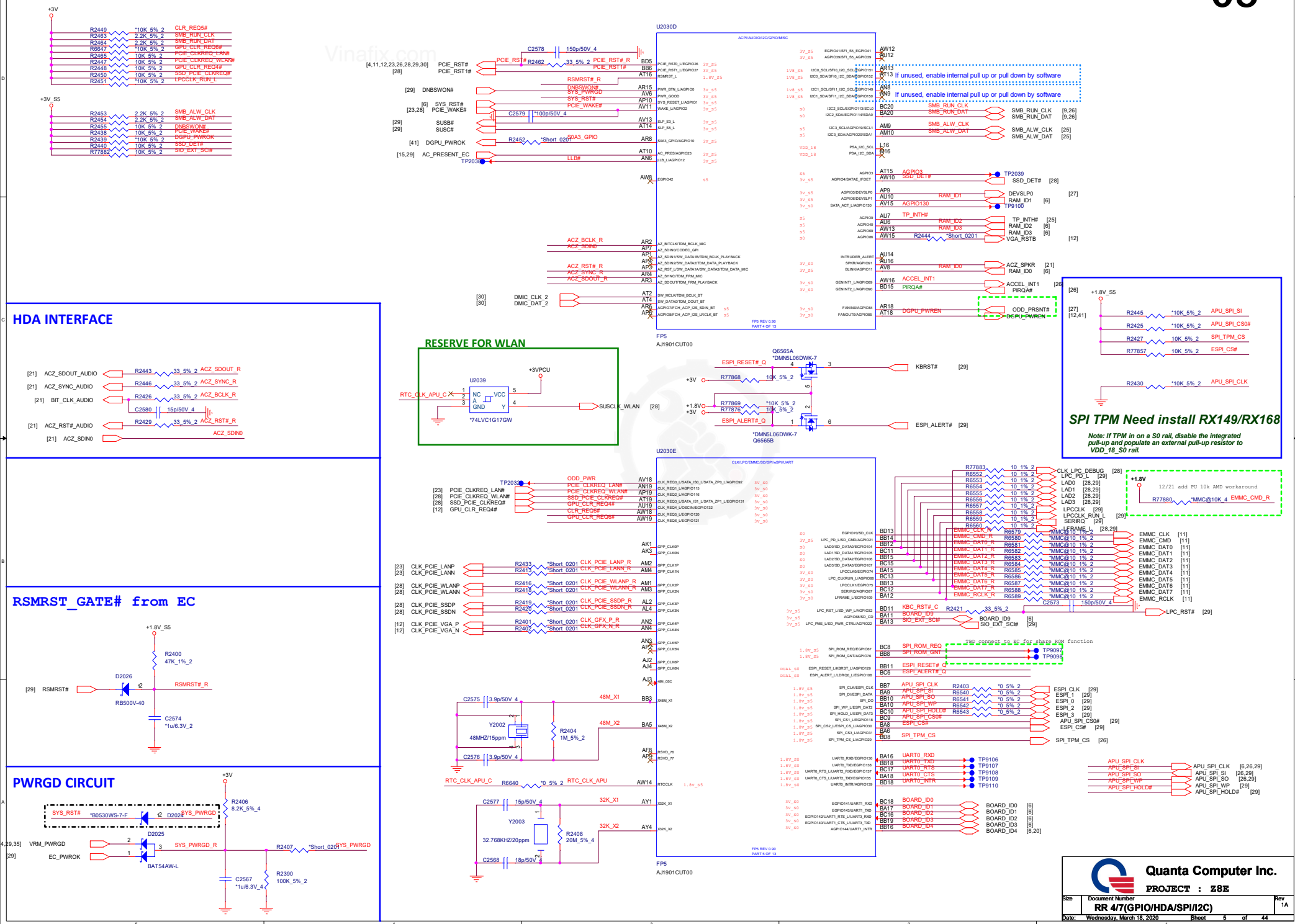
[29] H_PROCHOT#

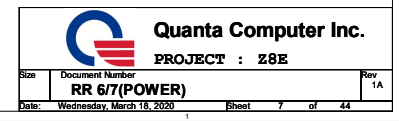
R2496 *Short_0201

C2596 220p/25V 2

APU_PROCHOT#







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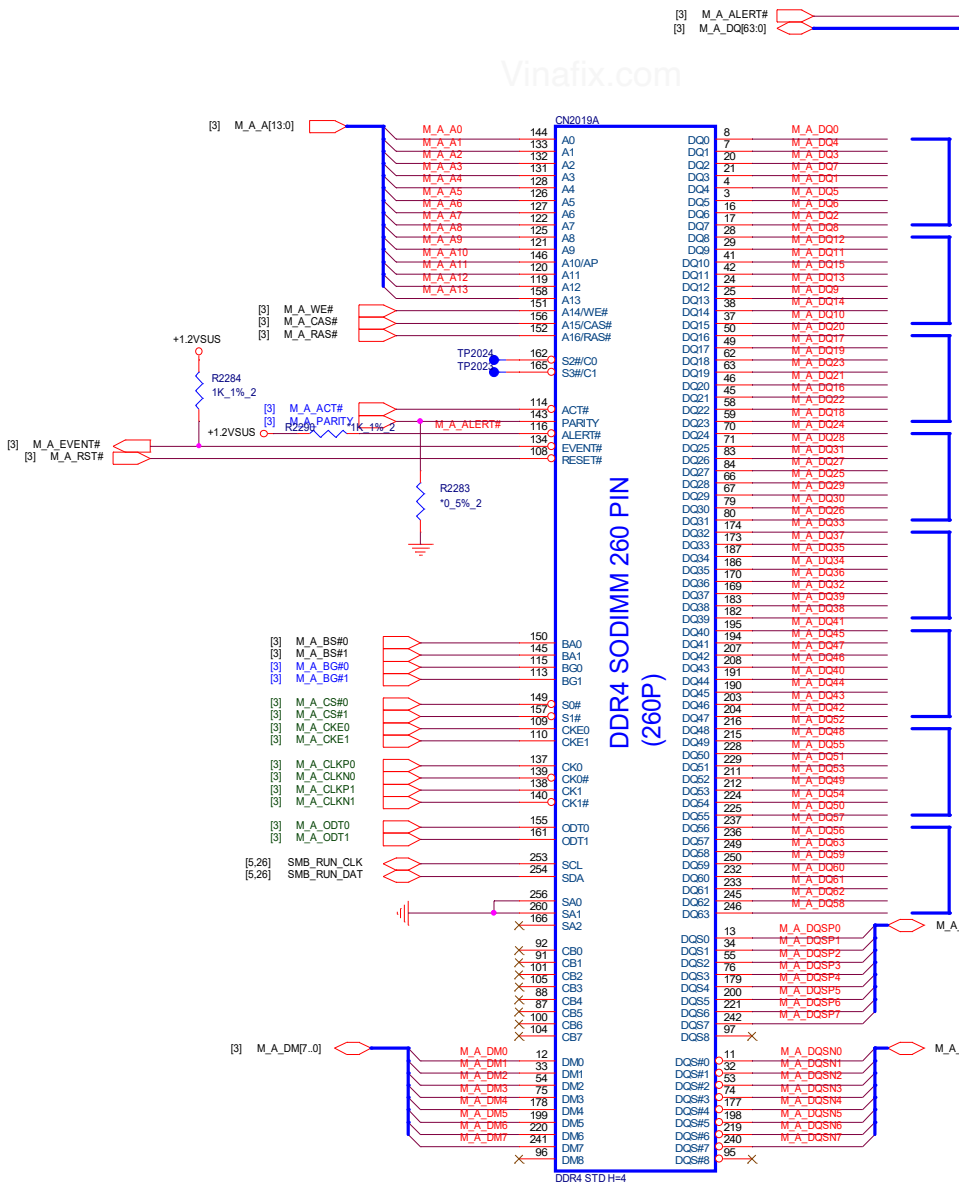


Quanta Computer Inc.

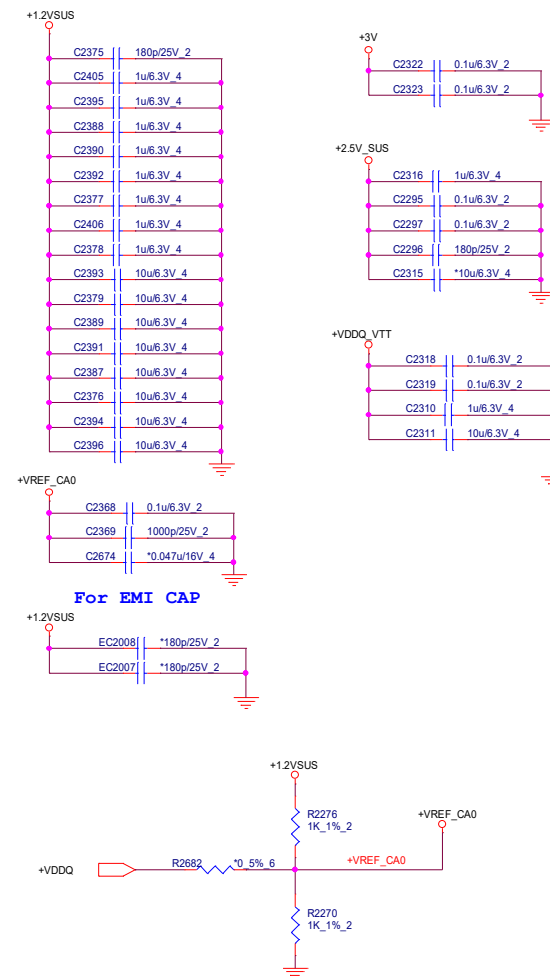
PROJECT : Z8E

Size	Document Number	Rev
	RR 7/7(GND/RSVD)	1A

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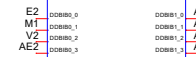
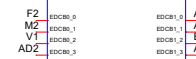
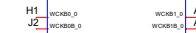
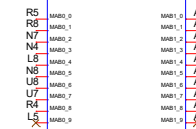
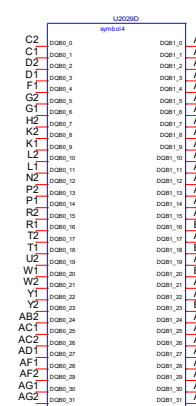
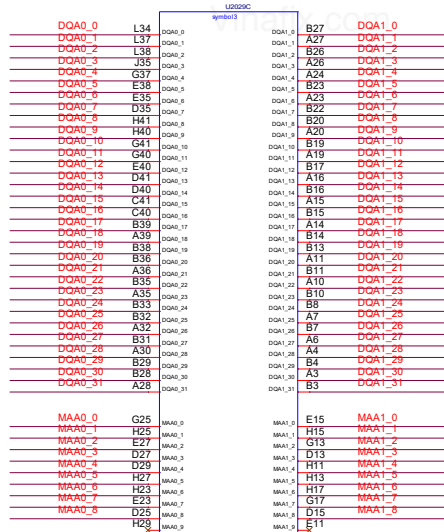
Place these Caps near SODIMM
1uF/10uF 4pcs on each side of SODIMM





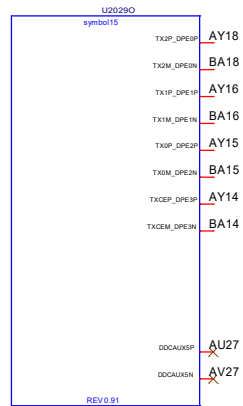
[18] DQA0_[31:0]
[18] MAA0_[8:0]

DQA1_[31:0] [18]
MAA1_[8:0] [18]

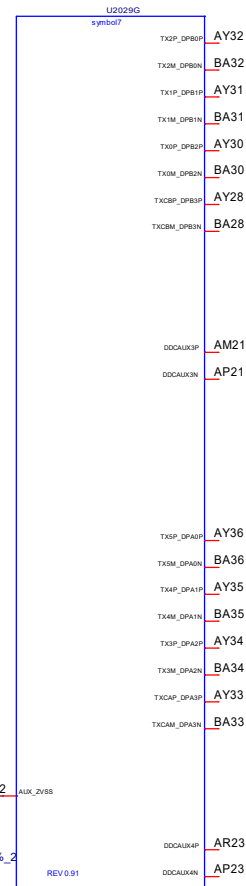


Need Voltage divider on MVREFDB ball for Polaris 24.

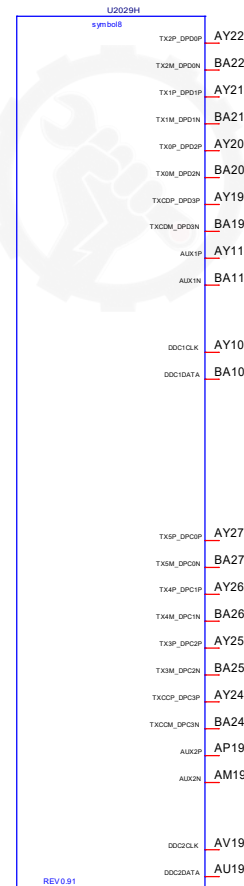
ASIC - TMDP (E)




ASIC - TMDP (A/B)

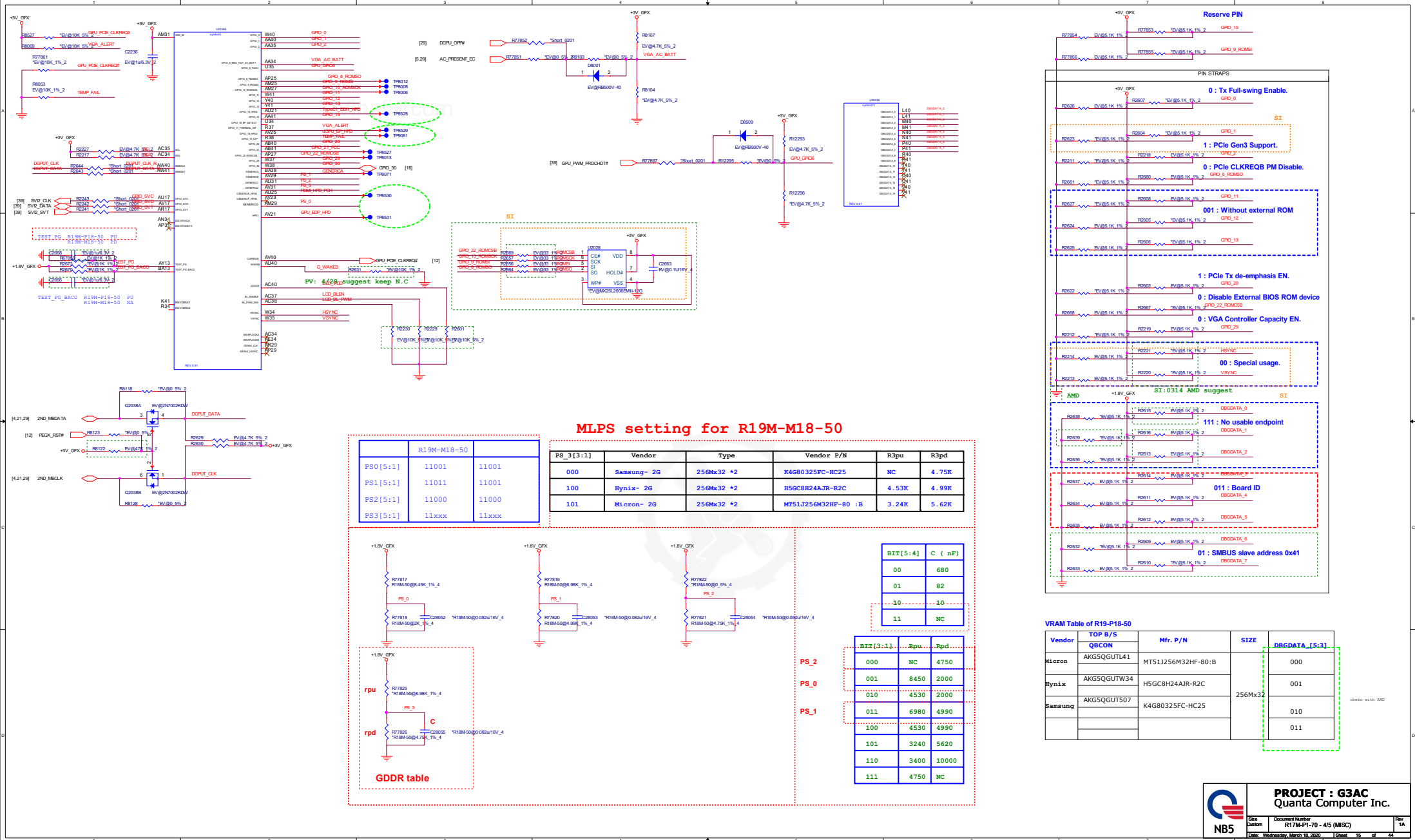


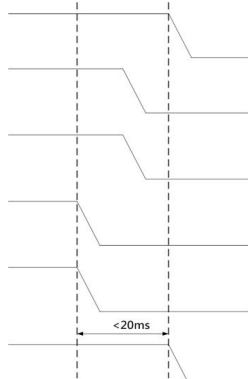
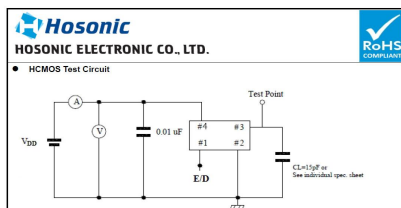
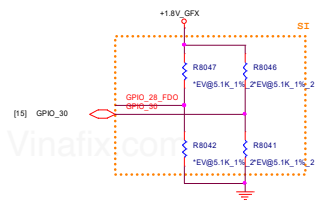
ASIC - TMDP (C/D)




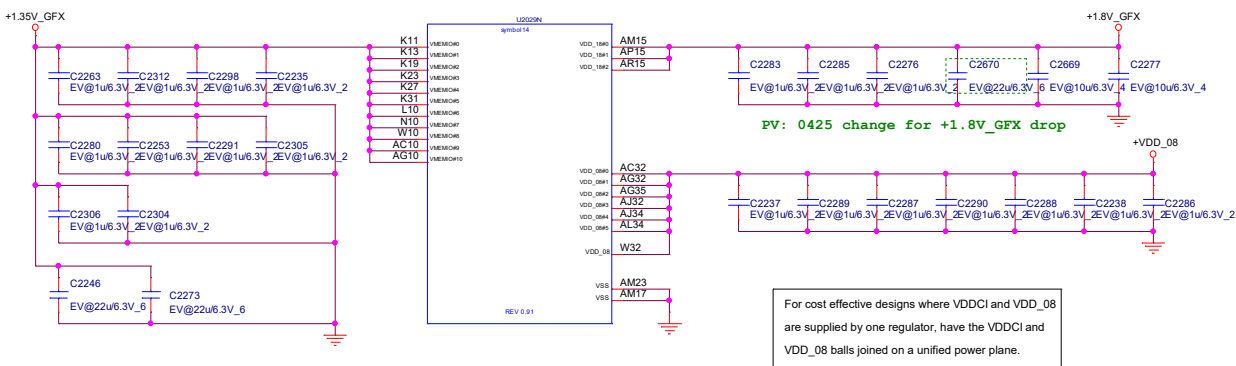
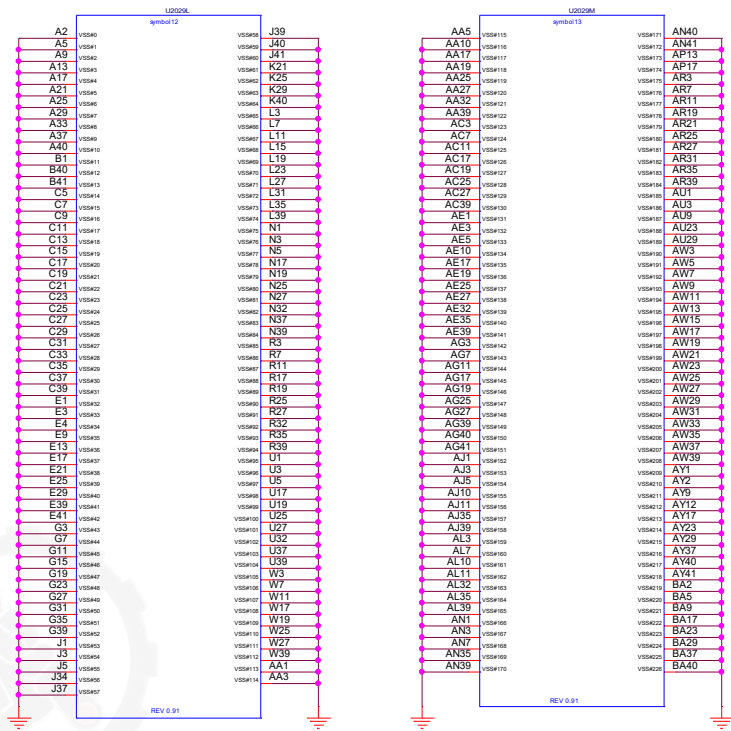
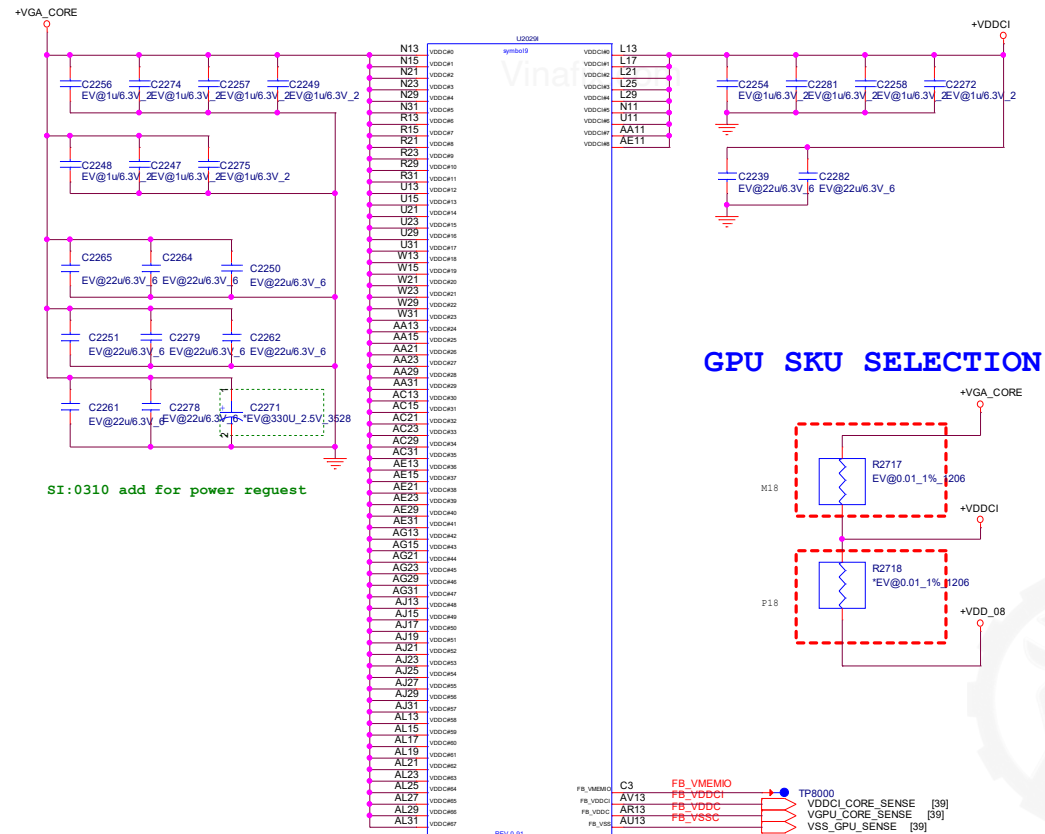
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	PROJECT : G3AC Quanta Computer Inc.		
	Size A3	Document Number R17M-P1-70- 3/5 (Display)	Rev 1A
	Date: Wednesday, March 18, 2020 Sheet 14 of 44		



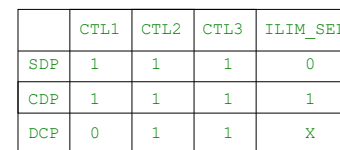



PROJECT : G3AC
Quanta Computer Inc.
 Size Custom Document Number R17M-P1-70 - 4/5 (MISC-2) Re 1
 Date: Wednesday March 18 2020 Sheet 16 of 44



For cost effective designs where VDDCI and VDD_08 are supplied by one regulator, have the VDDCI and VDD_08 balls joined on a unified power plane.

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RILIM_LO is optional and the RILIM_LO pin may be left unconnected if the following conditions are met:

1. ILMSEL is always set high.
2. Load Detection - Port Power Management is not used

Mouse / Keyboard wake function is not used

If conditions 1 and 2 are met but the mouse / keyboard wake function is also desired, it is recommended to use $RILIM_LO < 80.6\text{ k}\Omega$.

The following equation programs the typical current limit:


$$RILIM_XX \text{ corresponds to either } RILIM_HI \text{ or } RILIM_LO \text{ as appropriate.}$$

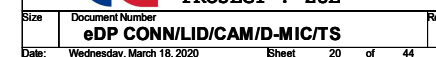
$$I_{OS_typ}(mA) = 50,250 / (RILIM_XX)$$

$$\text{IOS_typ(mA)} = 50,250 / \{\text{RILIM_XX(K}\Omega\text{)} + 0.1\}$$

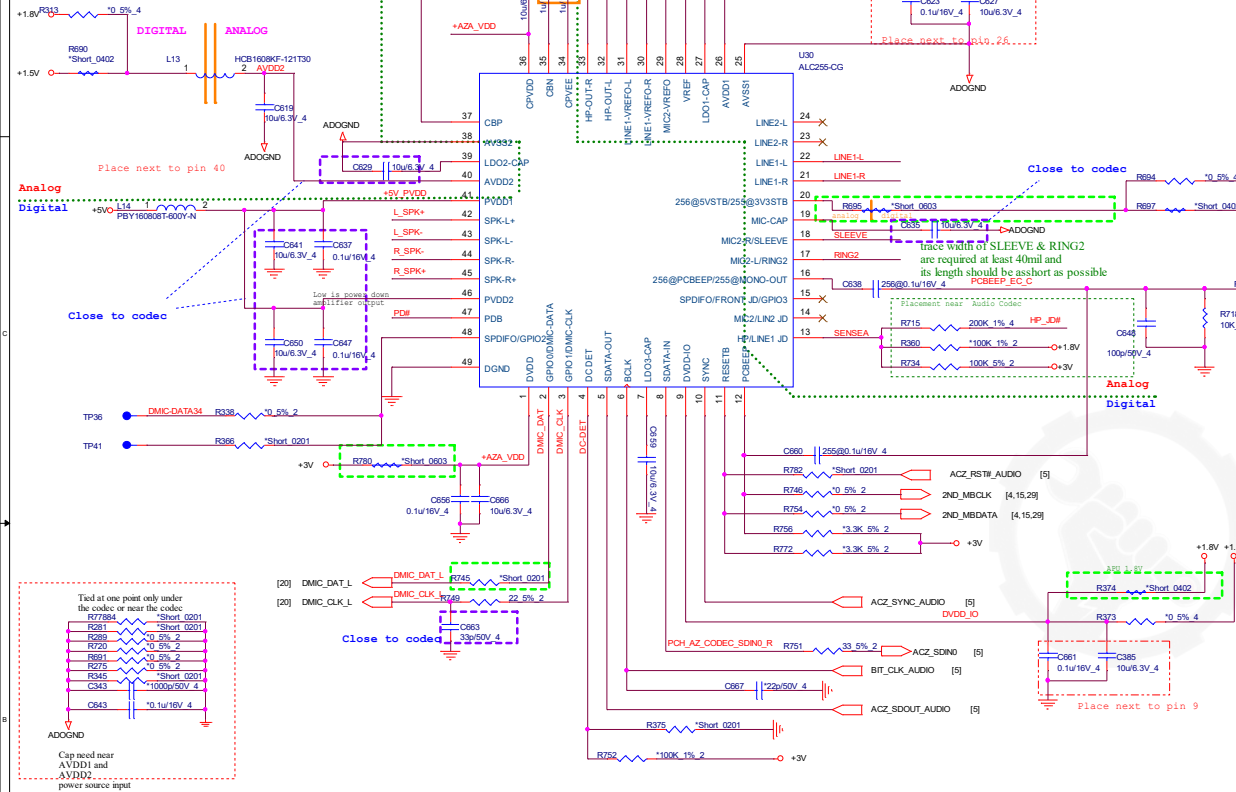
The diagrams illustrate the connection of USB protection diodes for different USB pins. Each diagram includes a USB connector pin header, a USB protection diode (U1, U11, U12, U13), and various passive components like resistors and capacitors.

Diagram 1 (U14): Shows the connection for USB1+ and USB1- pins. The diode U14 is connected to USB1+ and USB1-. The circuit includes resistors R210, R217, R218, R219, R220, R221, R222, R223, R224, R225, R226, R227, R228, R229, R230, R231, R232, R233, R234, R235, R236, R237, R238, R239, R240, R241, R242, R243, R244, R245, R246, R247, R248, R249, R250, R251, R252, R253, R254, R255, R256, R257, R258, R259, R260, R261, R262, R263, R264, R265, R266, R267, R268, R269, R270, R271, R272, R273, R274, R275, R276, R277, R278, R279, R280, R281, R282, R283, R284, R285, R286, R287, R288, R289, R290, R291, R292, R293, R294, R295, R296, R297, R298, R299, R300, R301, R302, R303, R304, R305, R306, R307, R308, R309, R310, R311, R312, R313, R314, R315, R316, R317, R318, R319, R320, R321, R322, R323, R324, R325, R326, R327, R328, R329, R330, R331, R332, R333, R334, R335, R336, R337, R338, R339, R340, R341, R342, R343, R344, R345, R346, R347, R348, R349, R350, R351, R352, R353, R354, R355, R356, R357, R358, R359, R360, R361, R362, R363, R364, R365, R366, R367, R368, R369, R370, R371, R372, R373, R374, R375, R376, R377, R378, R379, R380, R381, R382, R383, R384, R385, R386, R387, R388, R389, R390, R391, R392, R393, R394, R395, R396, R397, R398, R399, R400, R401, R402, R403, R404, R405, R406, R407, R408, R409, R410, R411, R412, R413, R414, R415, R416, R417, R418, R419, R420, R421, R422, R423, R424, R425, R426, R427, R428, R429, R430, R431, R432, R433, R434, R435, R436, R437, R438, R439, R440, R441, R442, R443, R444, R445, R446, R447, R448, R449, R450, R451, R452, R453, R454, R455, R456, R457, R458, R459, R460, R461, R462, R463, R464, R465, R466, R467, R468, R469, R470, R471, R472, R473, R474, R475, R476, R477, R478, R479, R480, R481, R482, R483, R484, R485, R486, R487, R488, R489, R490, R491, R492, R493, R494, R495, R496, R497, R498, R499, R500, R501, R502, R503, R504, R505, R506, R507, R508, R509, R510, R511, R512, R513, R514, R515, R516, R517, R518, R519, R520, R521, R522, R523, R524, R525, R526, R527, R528, R529, R530, R531, R532, R533, R534, R535, R536, R537, R538, R539, R540, R541, R542, R543, R544, R545, R546, R547, R548, R549, R550, R551, R552, R553, R554, R555, R556, R557, R558, R559, R560, R561, R562, R563, R564, R565, R566, R567, R568, R569, R570, R571, R572, R573, R574, R575, R576, R577, R578, R579, R580, R581, R582, R583, R584, R585, R586, R587, R588, R589, R590, R591, R592, R593, R594, R595, R596, R597, R598, R599, R600, R601, R602, R603, R604, R605, R606, R607, R608, R609, R610, R611, R612, R613, R614, R615, R616, R617, R618, R619, R620, R621, R622, R623, R624, R625, R626, R627, R628, R629, R630, R631, R632, R633, R634, R635, R636, R637, R638, R639, R640, R641, R642, R643, R644, R645, R646, R647, R648, R649, R650, R651, R652, R653, R654, R655, R656, R657, R658, R659, R660, R661, R662, R663, R664, R665, R666, R667, R668, R669, R670, R671, R672, R673, R674, R675, R676, R677, R678, R679, R680, R681, R682, R683, R684, R685, R686, R687, R688, R689, R690, R691, R692, R693, R694, R695, R696, R697, R698, R699, R700, R701, R702, R703, R704, R705, R706, R707, R708, R709, R710, R711, R712, R713, R714, R715, R716, R717, R718, R719, R720, R721, R722, R723, R724, R725, R726, R727, R728, R729, R730, R731, R732, R733, R734, R735, R736, R737, R738, R739, R740, R741, R742, R743, R744, R745, R746, R747, R748, R749, R750, R751, R752, R753, R754, R755, R756, R757, R758, R759, R760, R761, R762, R763, R764, R765, R766, R767, R768, R769, R770, R771, R772, R773, R774, R775, R776, R777, R778, R779, R780, R781, R782, R783, R784, R785, R786, R787, R788, R789, R790, R791, R792, R793, R794, R795, R796, R797, R798, R799, R800, R801, R802, R803, R804, R805, R806, R807, R808, R809, R810, R811, R812, R813, R814, R815, R816, R817, R818, R819, R820, R821, R822, R823, R824, R825, R826, R827, R828, R829, R830, R831, R832, R833, R834, R835, R836, R837, R838, R839, R840, R841, R842, R843, R844, R845, R846, R847, R848, R849, R850, R851, R852, R853, R854, R855, R856, R857, R858, R859, R860, R861, R862, R863, R864, R865, R866, R867, R868, R869, R870, R871, R872, R873, R874, R875, R876, R877, R878, R879, R880, R881, R882, R883, R884, R885, R886, R887, R888, R889, R890, R891, R892, R893, R894, R895, R896, R897, R898, R899, R900, R901, R902, R903, R904, R905, R906, R907, R908, R909, R910, R911, R912, R913, R914, R915, R916, R917, R918, R919, R920, R921, R922, R923, R924, R925, R926, R927, R928, R929, R930, R931, R932, R933, R934, R935, R936, R937, R938, R939, R940, R941, R942, R943, R944, R945, R946, R947, R948, R949, R950, R951, R952, R953, R954, R955, R956, R957, R958, R959, R960, R961, R962, R963, R964, R965, R966, R967, R968, R969, R970, R971, R972, R973, R974, R975, R976, R977, R978, R979, R980, R981, R982, R983, R984, R985, R986, R987, R988, R989, R990, R991, R992, R993, R994, R99

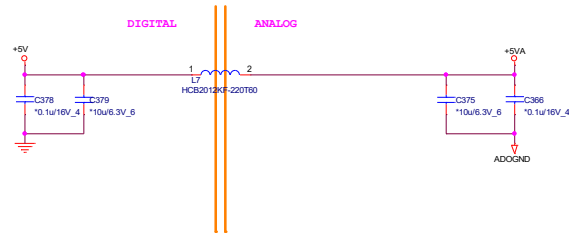
 Quanta Computer Inc. PROJECT : Z8E		Rev 1/
Size	Document Number	
USB3/Charger		
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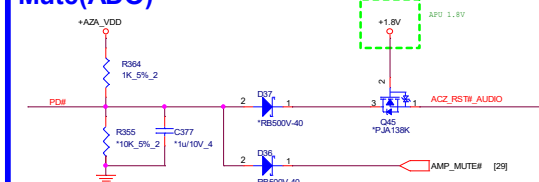
Codec PWR 1.5V(ADO)



Codec PWR 5V(ADO)



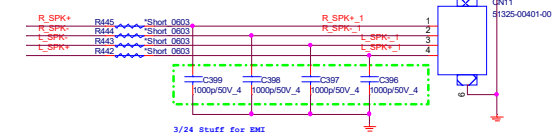
Mute(ADO)



Internal Speaker

4 ohm : 40mil for each signal

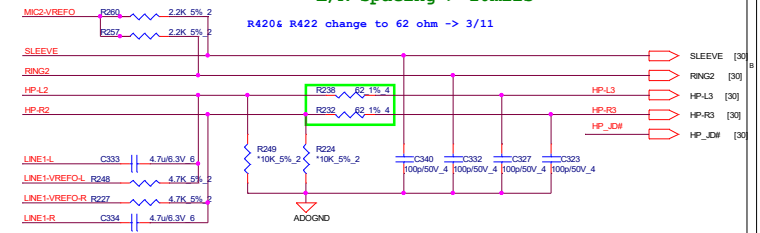
40mil for each signal



Universal Audio Jack HEADPHONE/MIC/LINE combo (ADO)

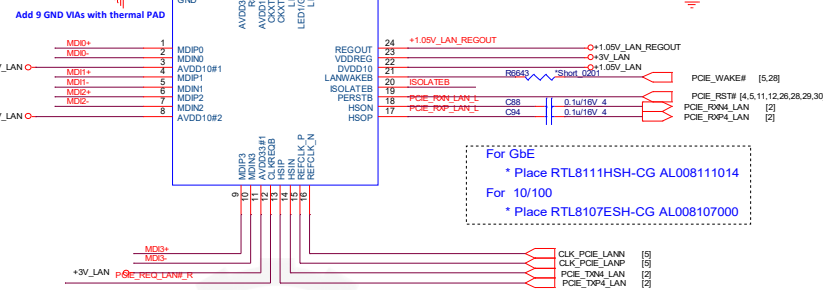
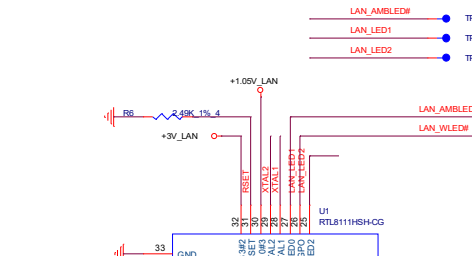
SLEEVE/RING2 trace > 40mils
HP/LINE trace > 10mils
L/R spacing > 10mils

R420& R422 change to 62 ohm -> 3/11



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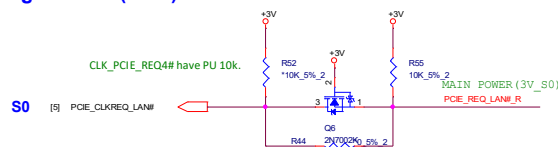
* Place Cg,Ch for RTL8107ESH-CG/RTL8111HSH-CG close to each VDD10 pin-- 22(reserved)



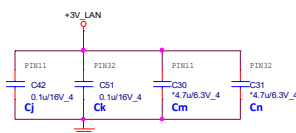
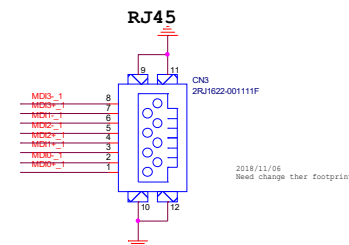
For GbE
* Place RTL8111HSH-CG AL008111014

For 10/100
* Place RTL8107ESH-CG AL008107000

CLK_PCIE_REQ4# have PU 10k.



* For surge improvement, place Cm and Cn, close to each VDD33 pin-- 11, 32(optional)

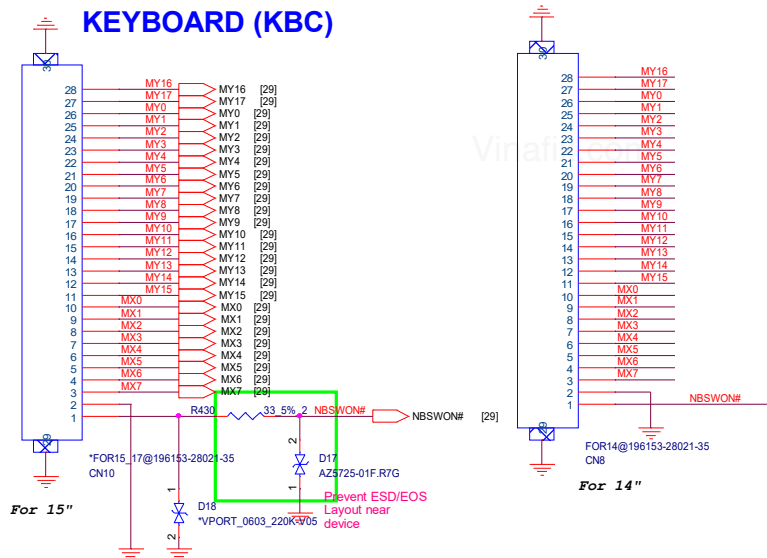
[illegible]

2018/11/06
Need change ther footprint

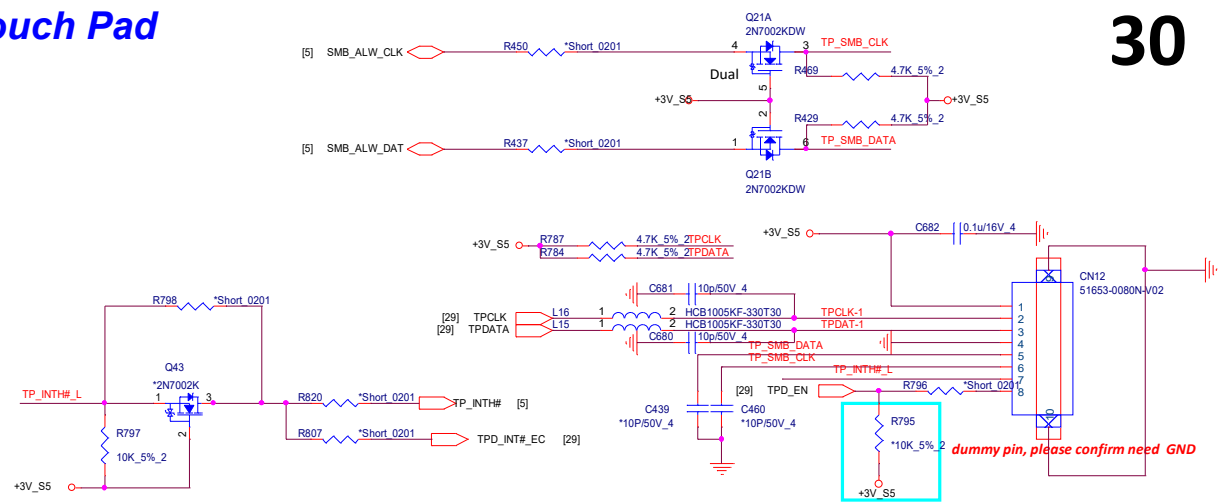
Reserve IOAC No Stuff

The diagram shows a circuit for the Reserve IOAC. It features a +3V_PCU input connected to a 0.1uF/16V_4 capacitor (C28) and a 10K_5%_2 resistor (R5). The output of R5 is connected to the base of a BC107 NPN transistor (Q2). The emitter of Q2 is connected to ground through a 10K_5%_2 resistor (R14) and a 1000pF/50V_4 capacitor (C37). The collector of Q2 is connected to a +3V_LAN input through a 10uF/3V_5 capacitor (C23). The +3V_LAN input is also connected to a 10.1uF/16V_4 capacitor (C24) and a 10.1uF/16V_4 capacitor (C29). The output of the circuit is connected to a +3V_S5 input through a 10.1uF/16V_4 capacitor (C25). The +3V_S5 input is also connected to a 10.1uF/16V_4 capacitor (C24) and a 10.1uF/16V_4 capacitor (C29).

KEYBOARD (KBC)

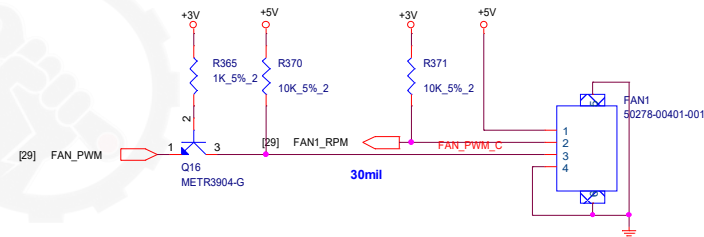


Touch Pad



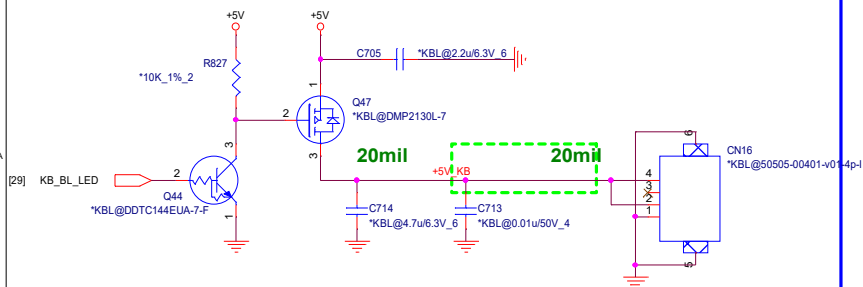
30

FAN check pin define

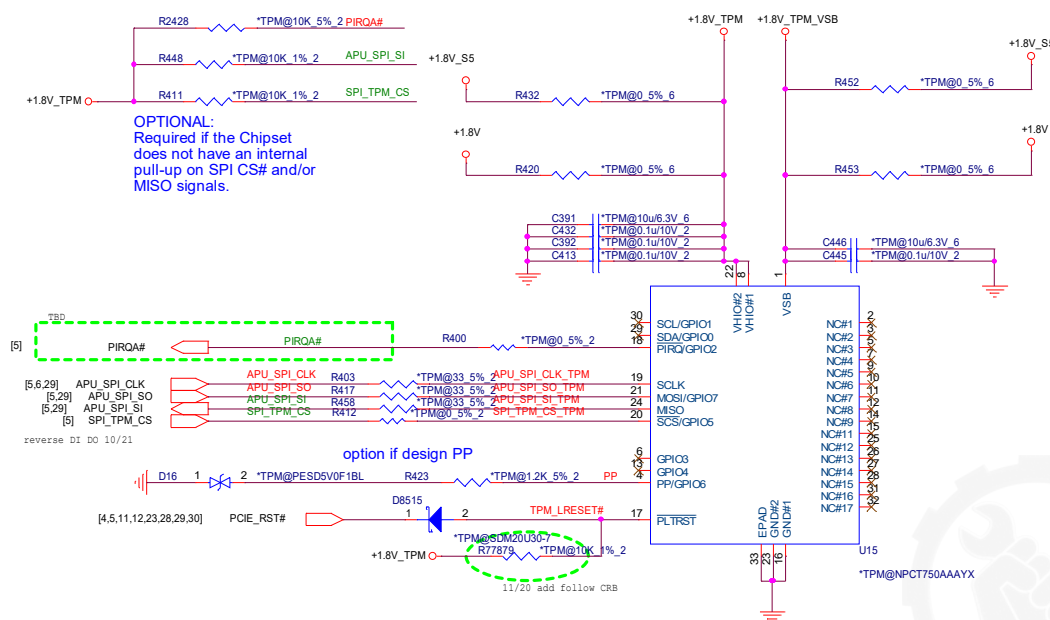


MY5	C414	220p/25V_2
MY6	C415	220p/25V_2
MY3	C410	220p/25V_2
MY7	C416	220p/25V_2
MY8	C417	220p/25V_2
MY9	C419	220p/25V_2
MY10	C418	220p/25V_2
MY11	C420	220p/25V_2
MY1	C408	220p/25V_2
MY2	C409	220p/25V_2
MY4	C411	220p/25V_2
MY0	C407	220p/25V_2
MX4	C405	220p/25V_2
MX6	C402	220p/25V_2
MX3	C404	220p/25V_2
MX2	C406	220p/25V_2
MX7	C403	220p/25V_2
MX0	C412	220p/25V_2
MX5	C401	220p/25V_2
MX1	C424	220p/25V_2
MY12	C421	220p/25V_2
MY13	C422	220p/25V_2
MY14	C423	220p/25V_2
MY15	C427	220p/25V_2
MY16	C400	220p/25V_2
MY17	C394	220p/25V_2

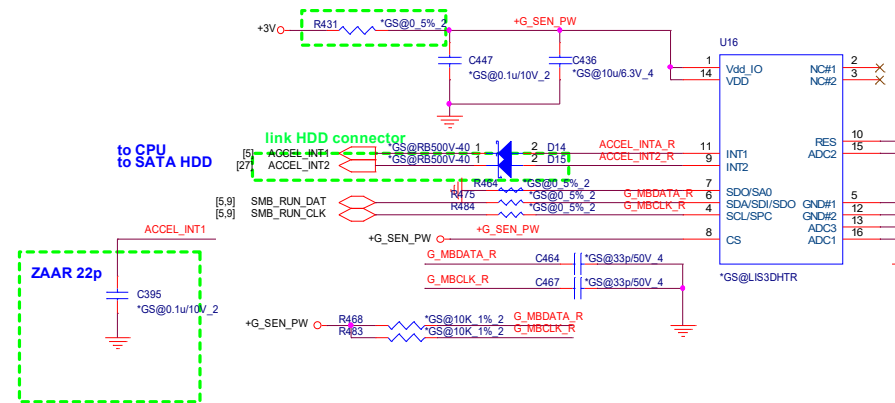
KB_BL LED (KBL@)



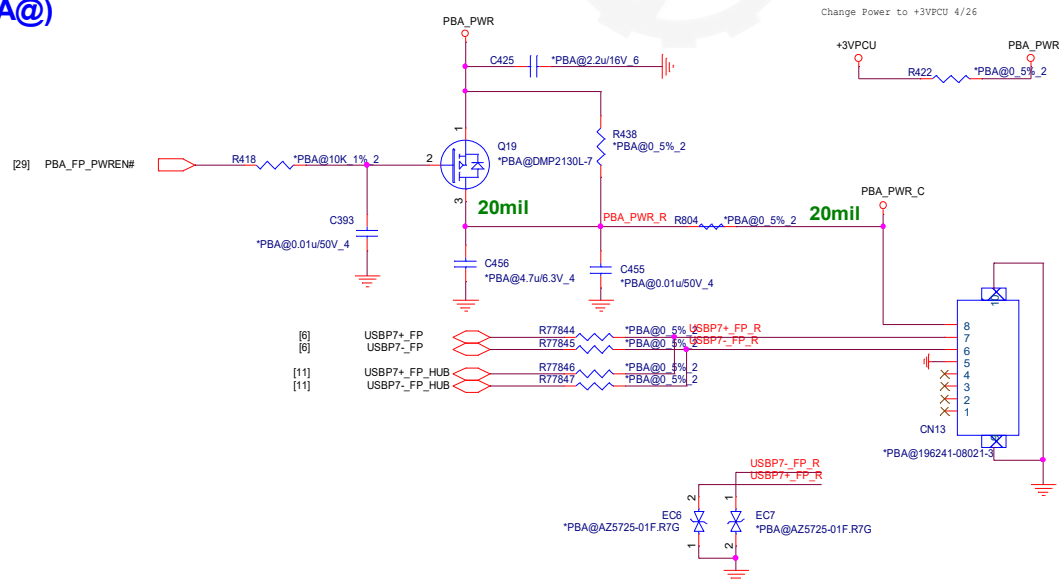
TPM NPCT750



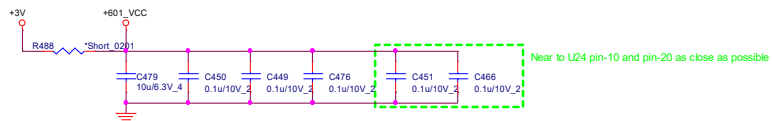
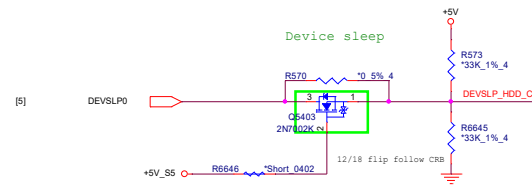
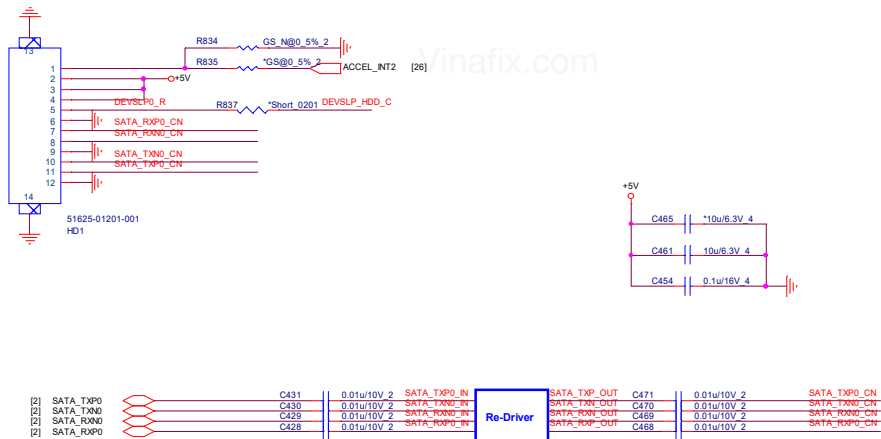
G-sensor (GS@)



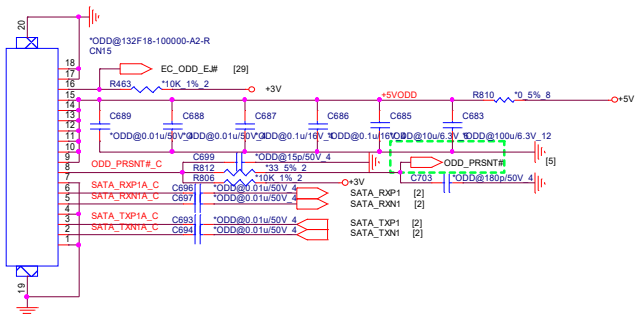
PBA (PBA@)



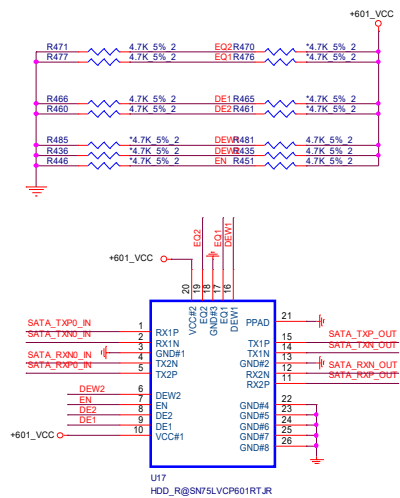
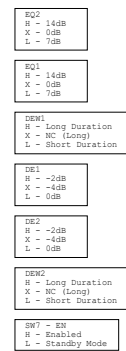
SATA HDD & LED



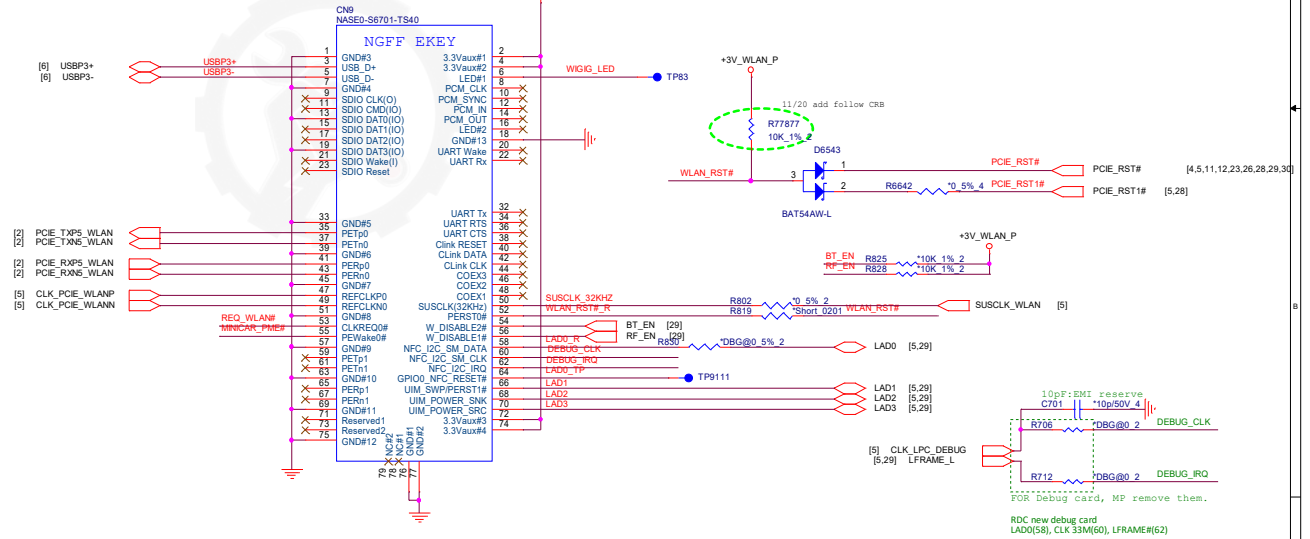
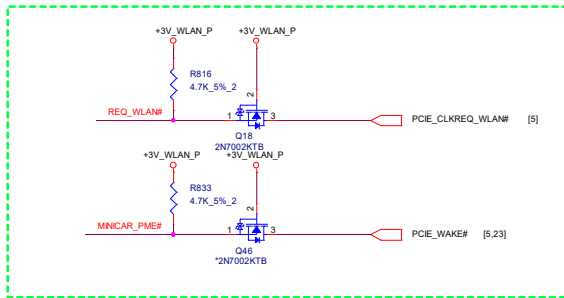
SATA ODD (ODD@)



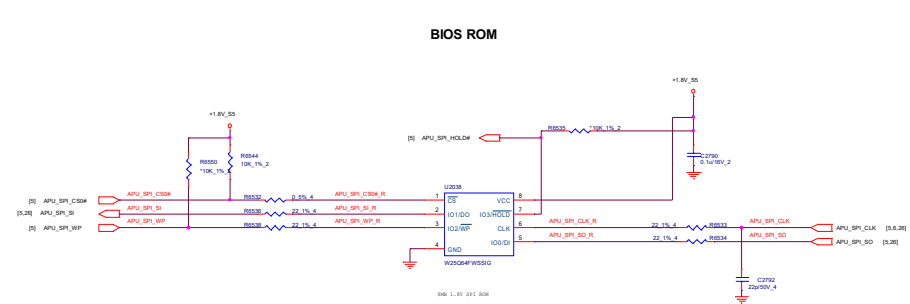
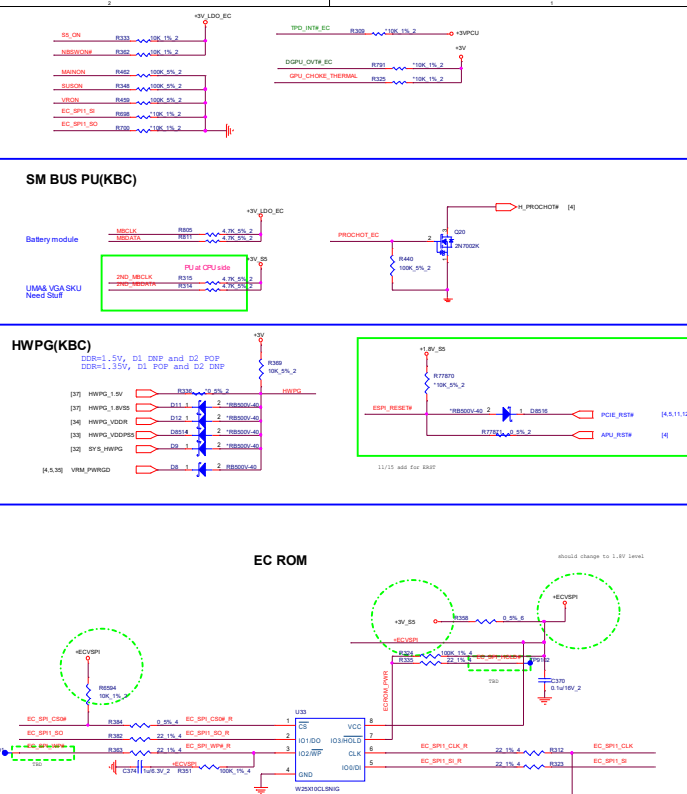
SATA HDD Re-driver



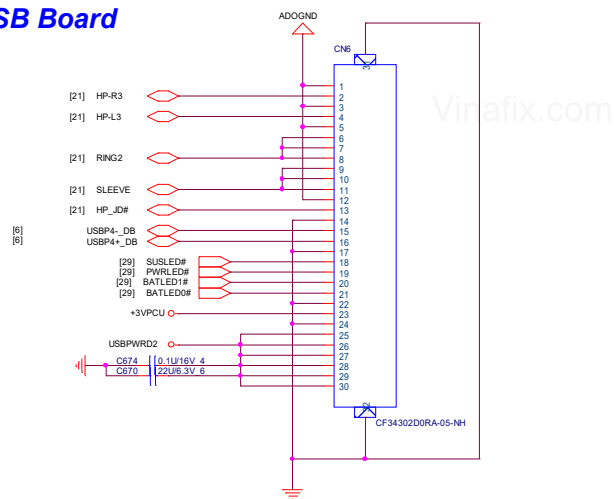
WLAN



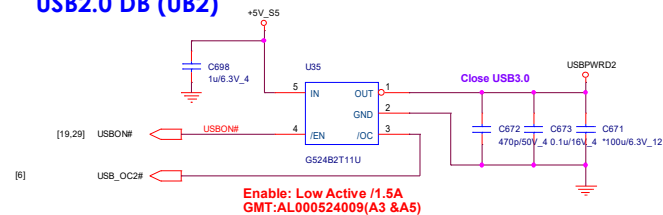
N.2 CNV1 MODES
LOW-> INTEGRATED CNV1 ENABLE
HIGH-> INTEGRATED CNV1 DISABLE



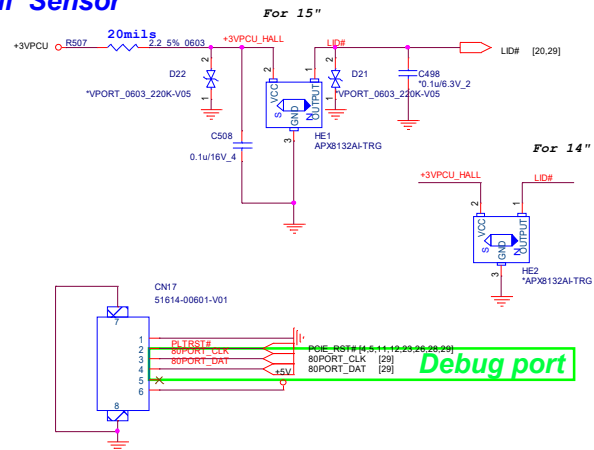
USB Board



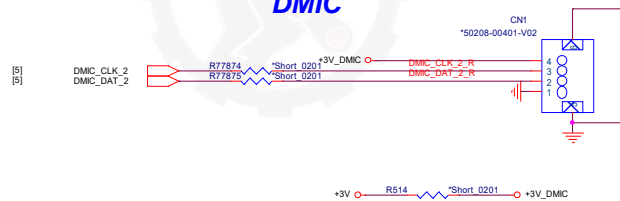
USB2.0 DB (UB2)



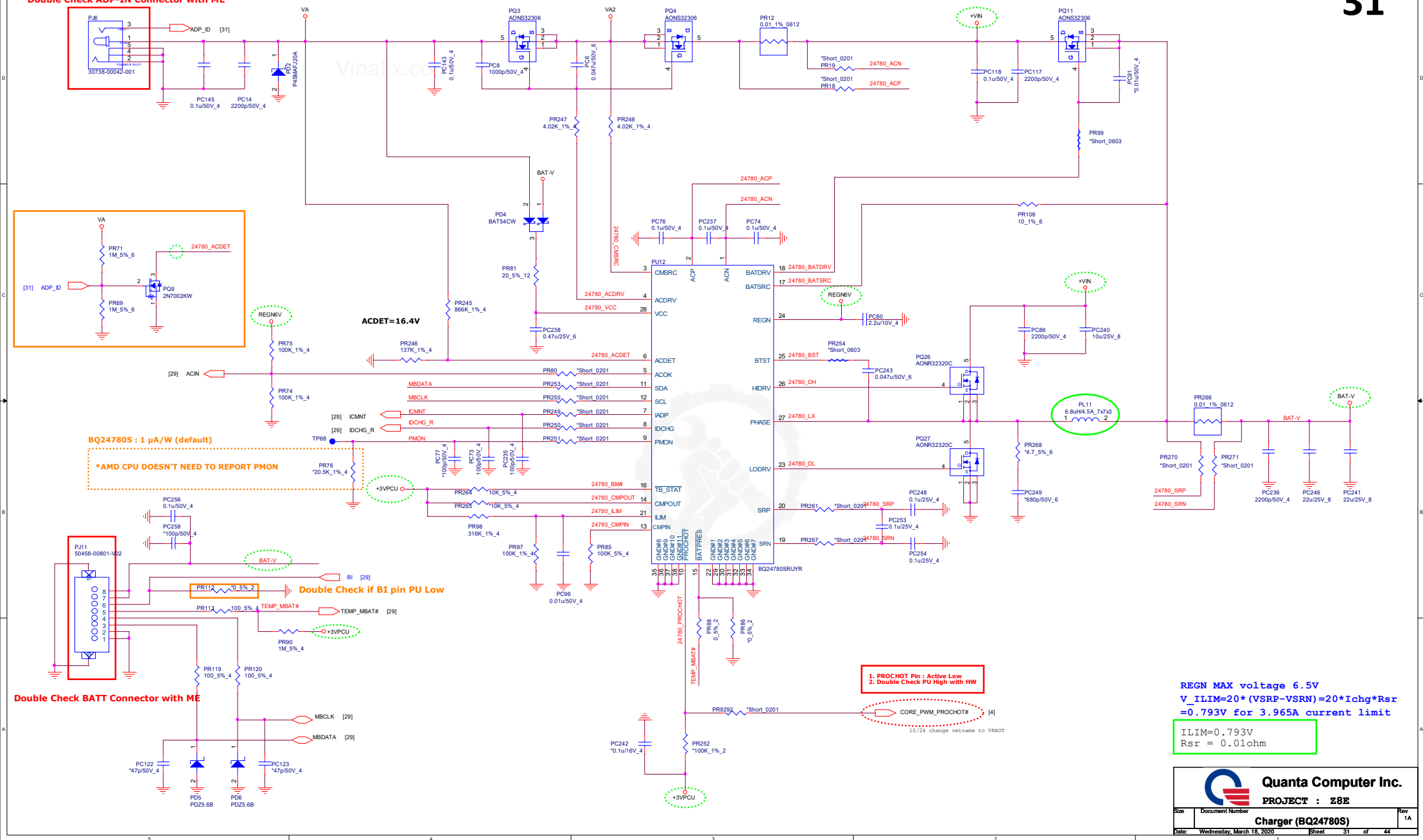
Hall Sensor

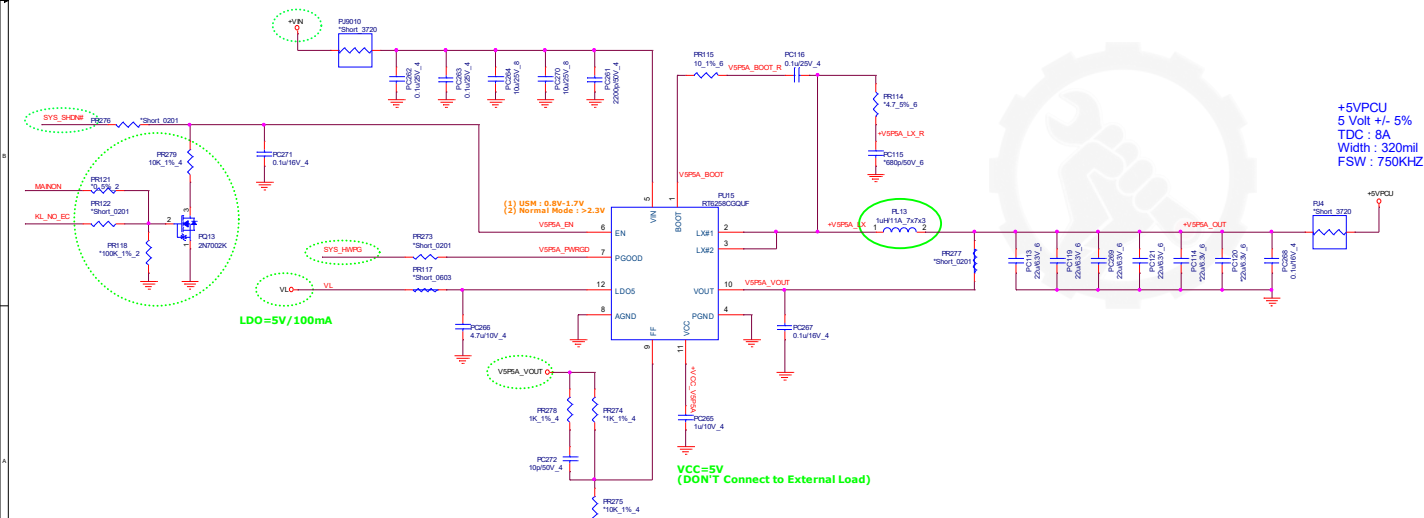
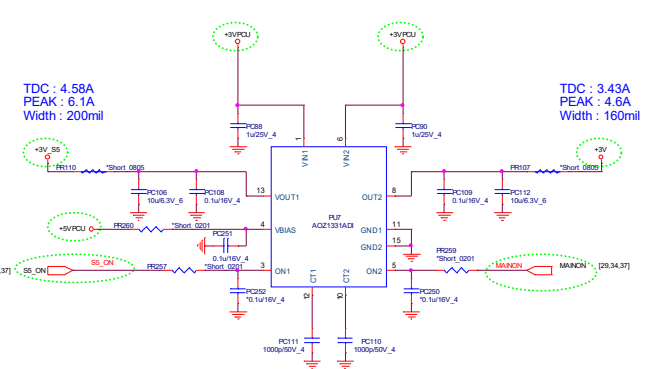
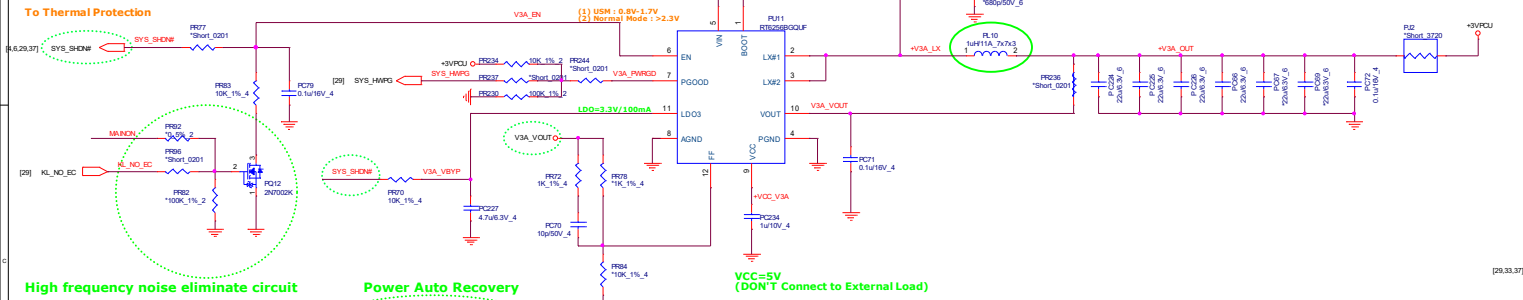


DMIC



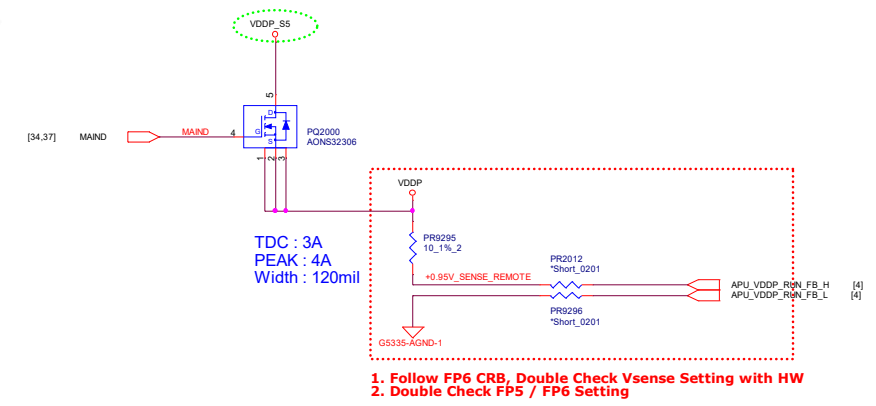
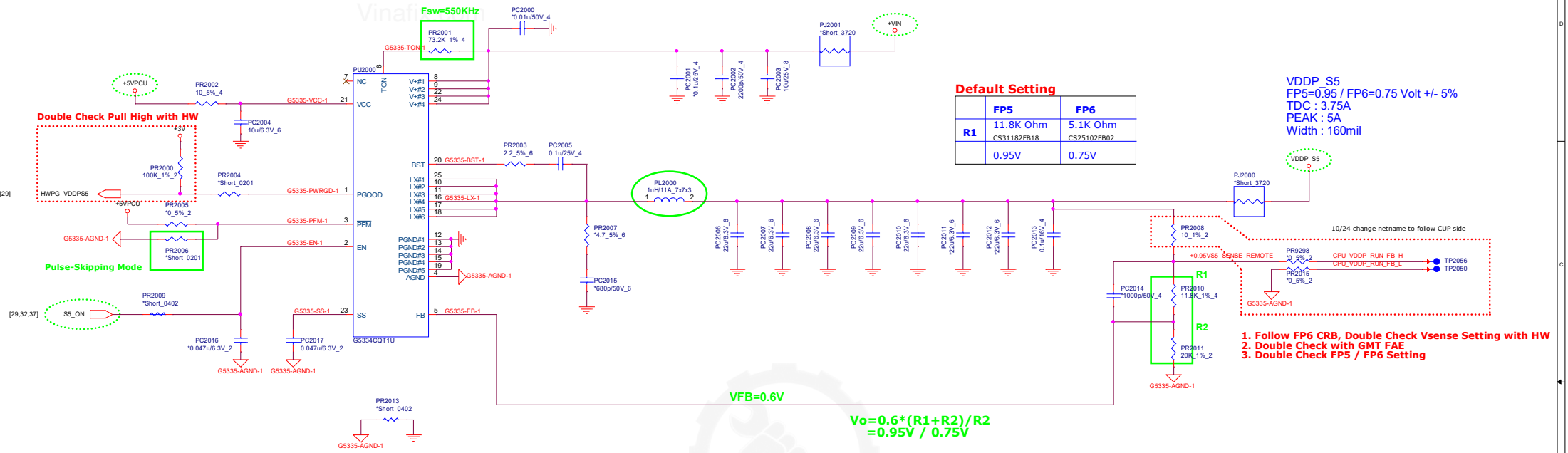
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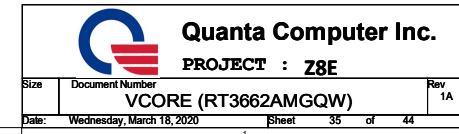


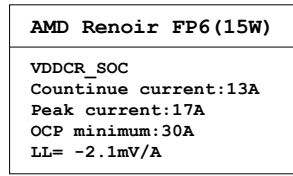
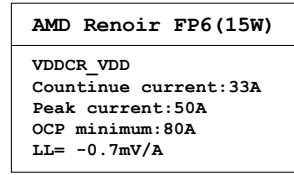


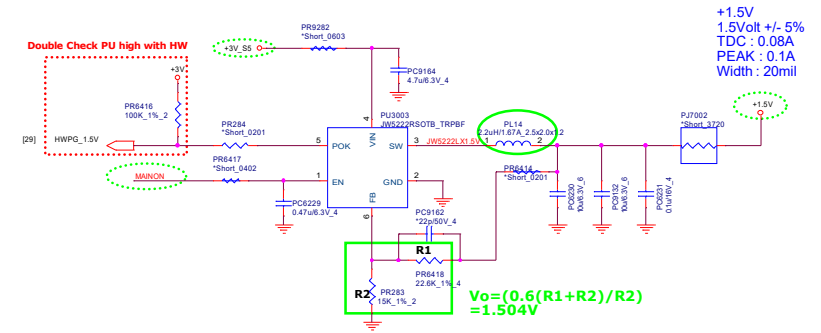
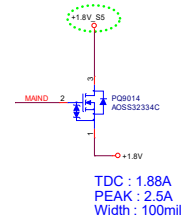
+VIN
VDDP_S5
VDDP
+5VPCU
+3V

[20,31,32,34,36,37,38,39,40,41]
[7]
[4,7,37]
[19,21,32,41]
[4,5,6,7,9,11,12,20,21,22,23,24,25,26,27,28,29,30,32,34,35,37,41]

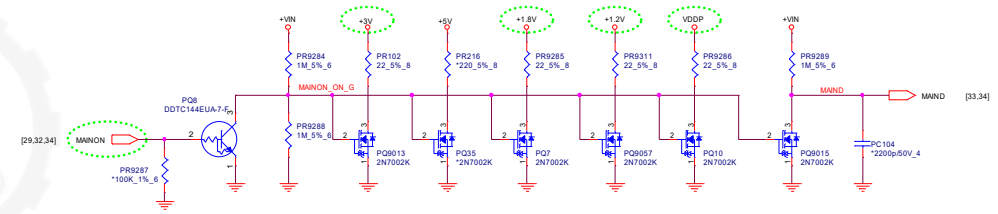
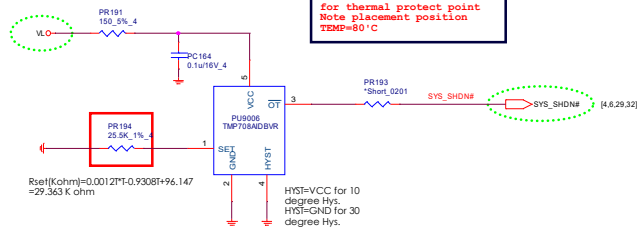






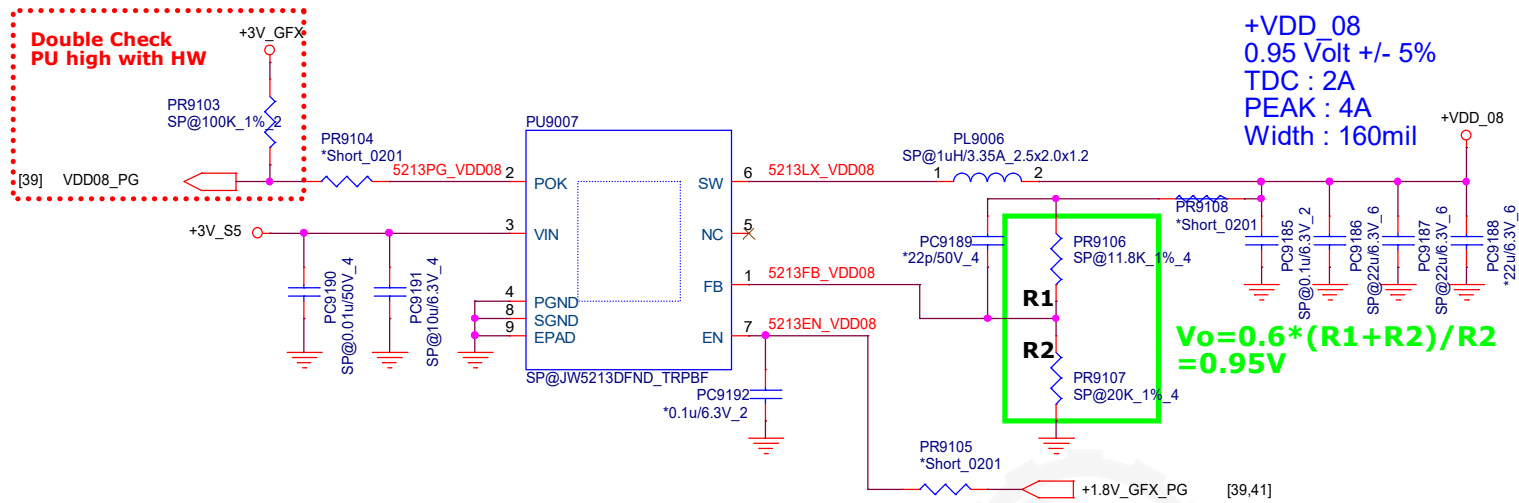


Need fine tune
for thermal protect point
Note placement position
TEMP=80'C



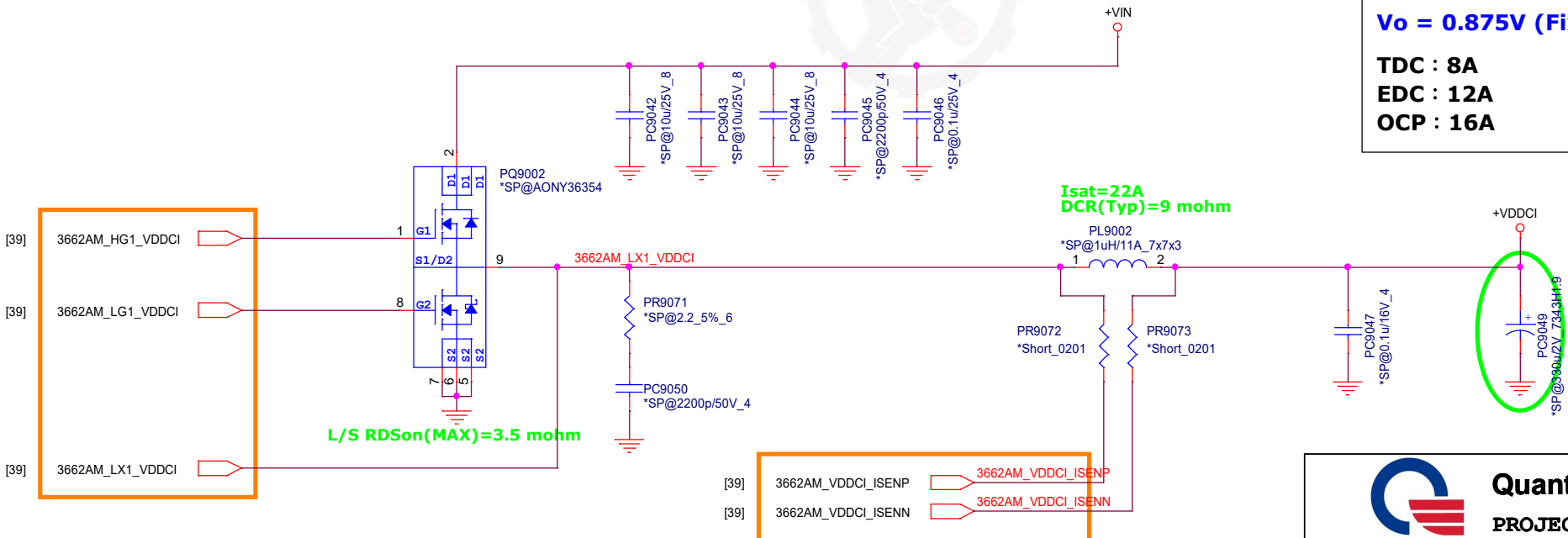
Design Reserved

Vinafix.com



R19M-P18-50 no stuff:
PR9103, PR9104, PC9190, PC9191, PU9007, PL9006, PR9106, PR9107, PR9105, PC9185, PC9186, PC9187

R19M-P18-50 stuff:
PJ9000, PC9046, PC9045, PC9043, PC9042, PQ9002, PL9002, PR9072, PR9073, PC9047, PC9049



Quanta Computer Inc.

PROJECT :

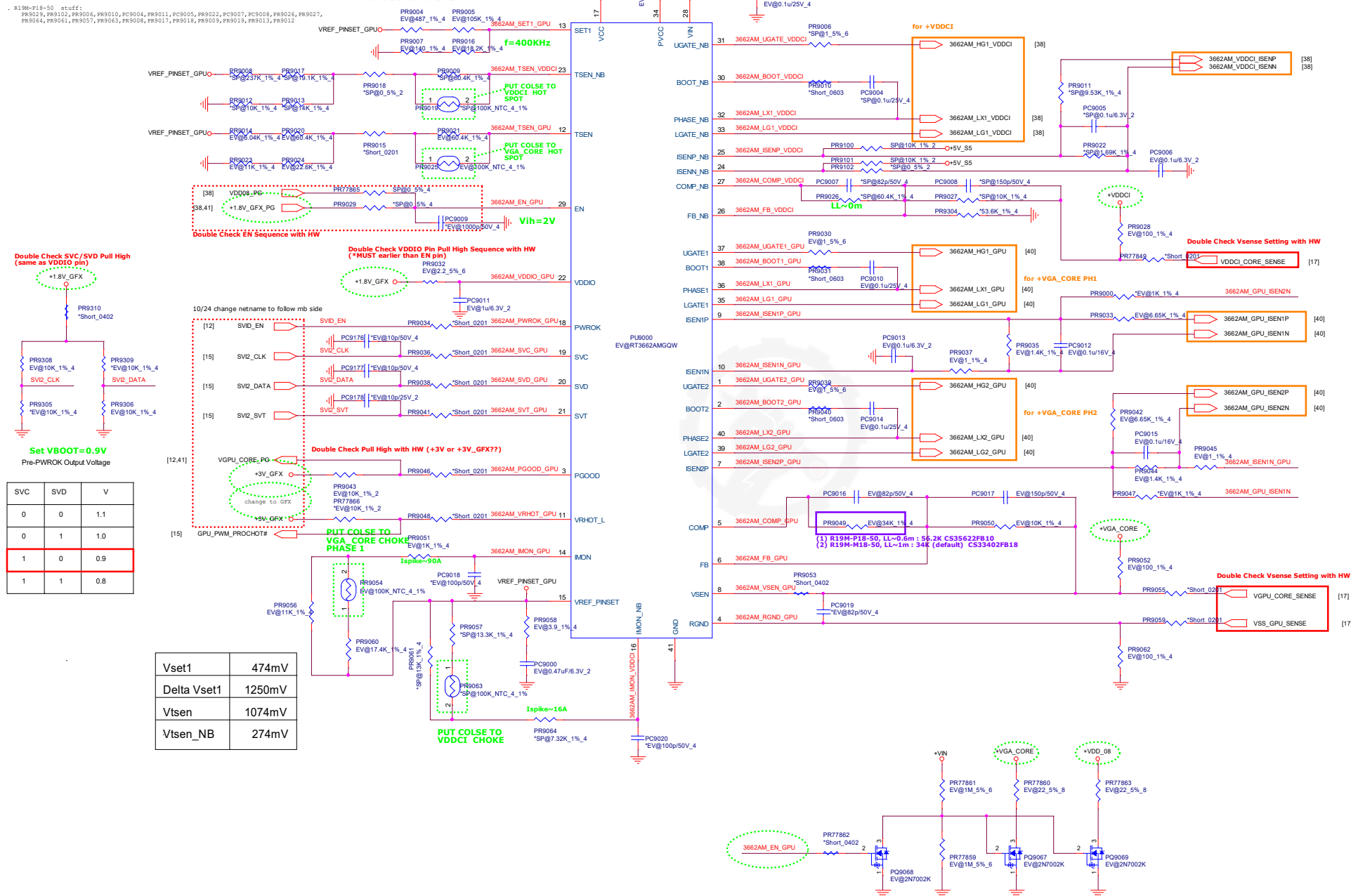
LED Panel (TPS61087)

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		1A


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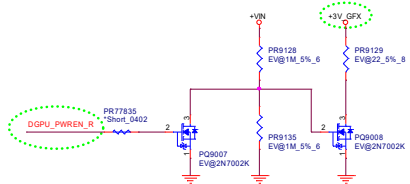
R19M-P18-50 no stuff:
FR9100,FR9101,FR77865

. R19M-P18-50 stuff:
PR9029, PR9102, PR9006, PR9010, PC9004, PR9011, PC9005, PR9022, PC9007, PC9008, PR9026, PR9027,
PR9064, PR9061, PR9057, PR9063, PR9008, PR9017, PR9018, PR9009, PR9019, PR9013, PR9012

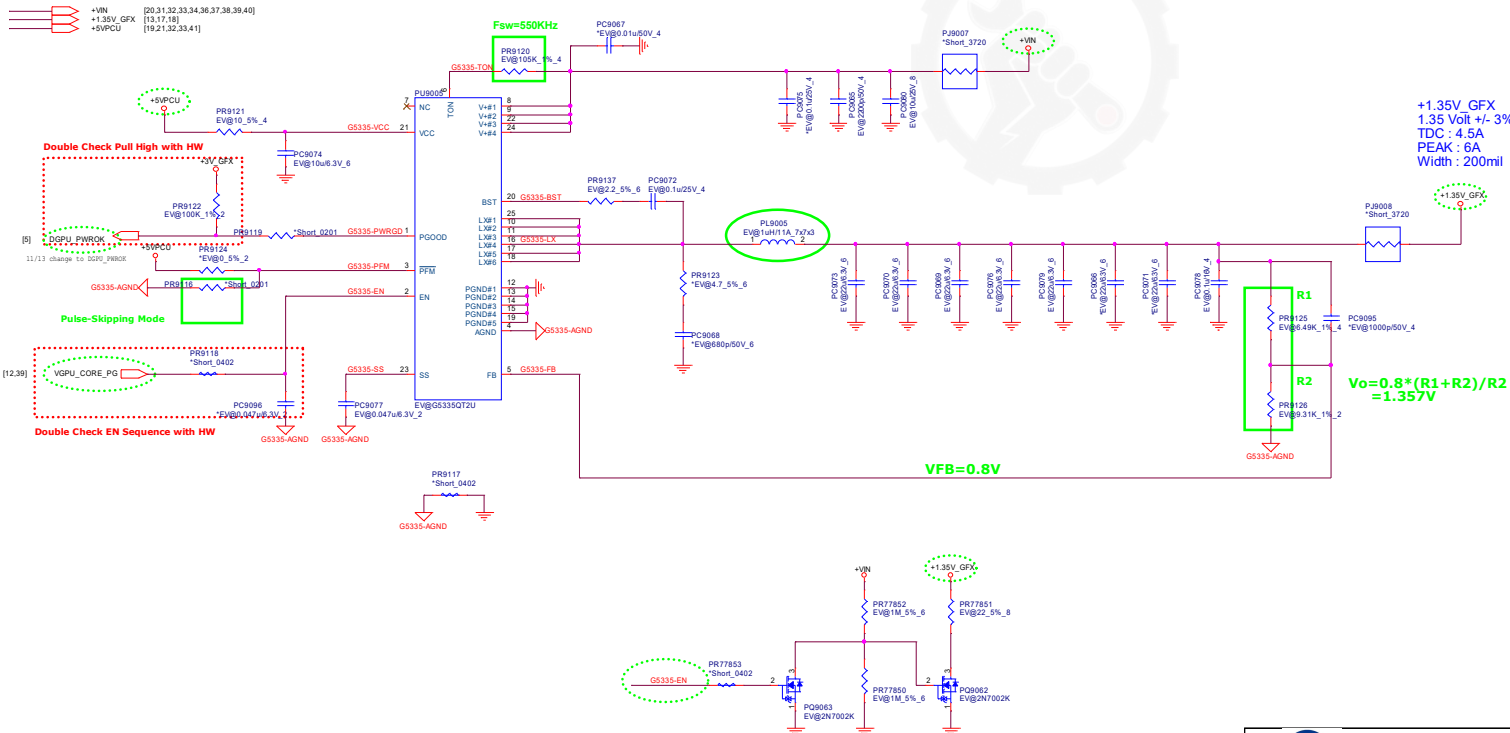
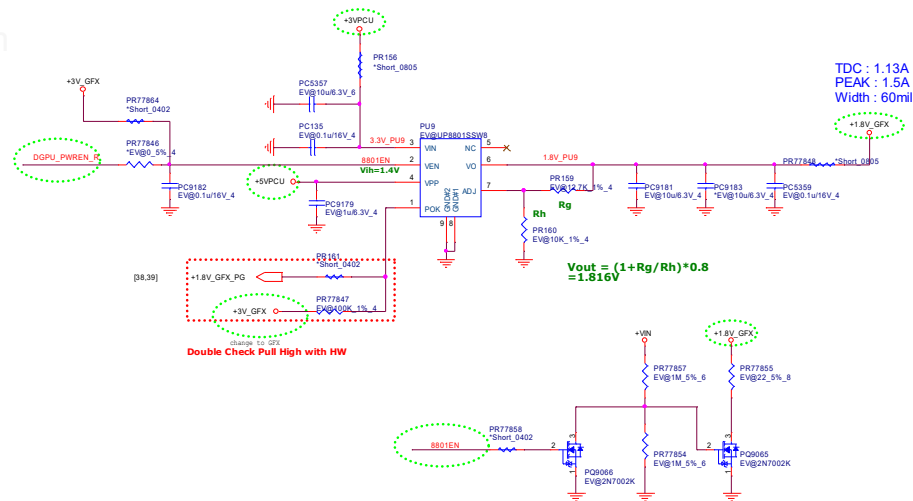


TDC : 25A
EDC : 60A
OCP : 90A
LL=-1m

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	VGACORE2 (RT3662AMGQW)	
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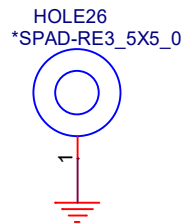
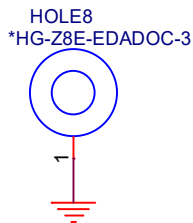
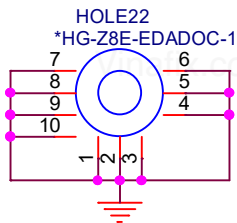
Double Check Pull High with HW


$$V_o = 0.8 \cdot (R_1 + R_2) / R_2 = 1.357V$$

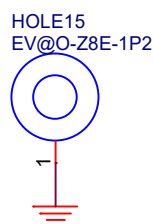
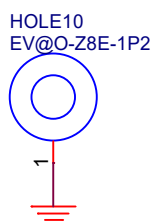
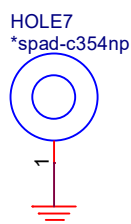
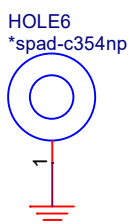
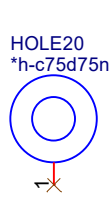
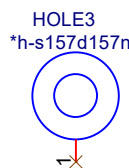
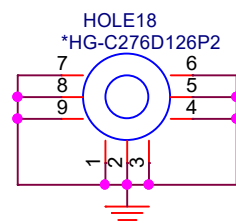
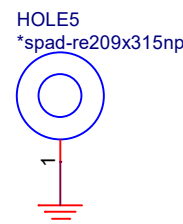
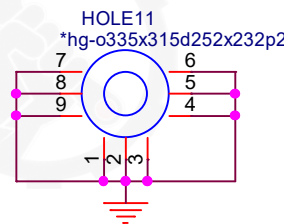
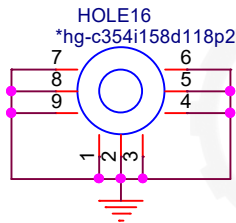
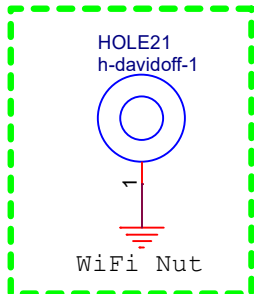
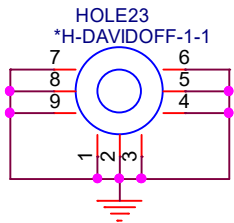
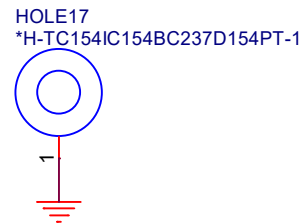
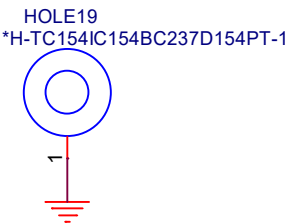
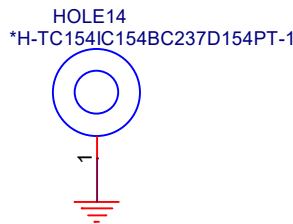
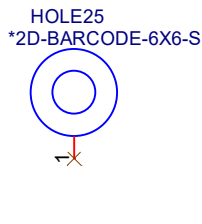
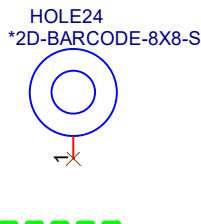
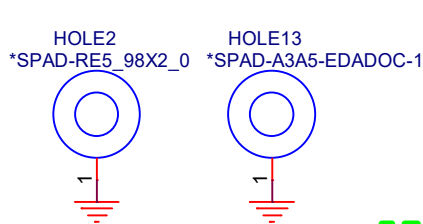
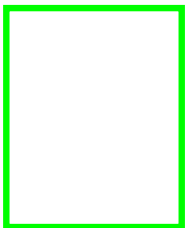
VFB=0.8V

Hole

45



remove HOLE12 as Z8E



Quanta Computer Inc.

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	Hole	1A
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Stage	Date	CHANGE LIST
A	20191005	1.first released
C		
MP		