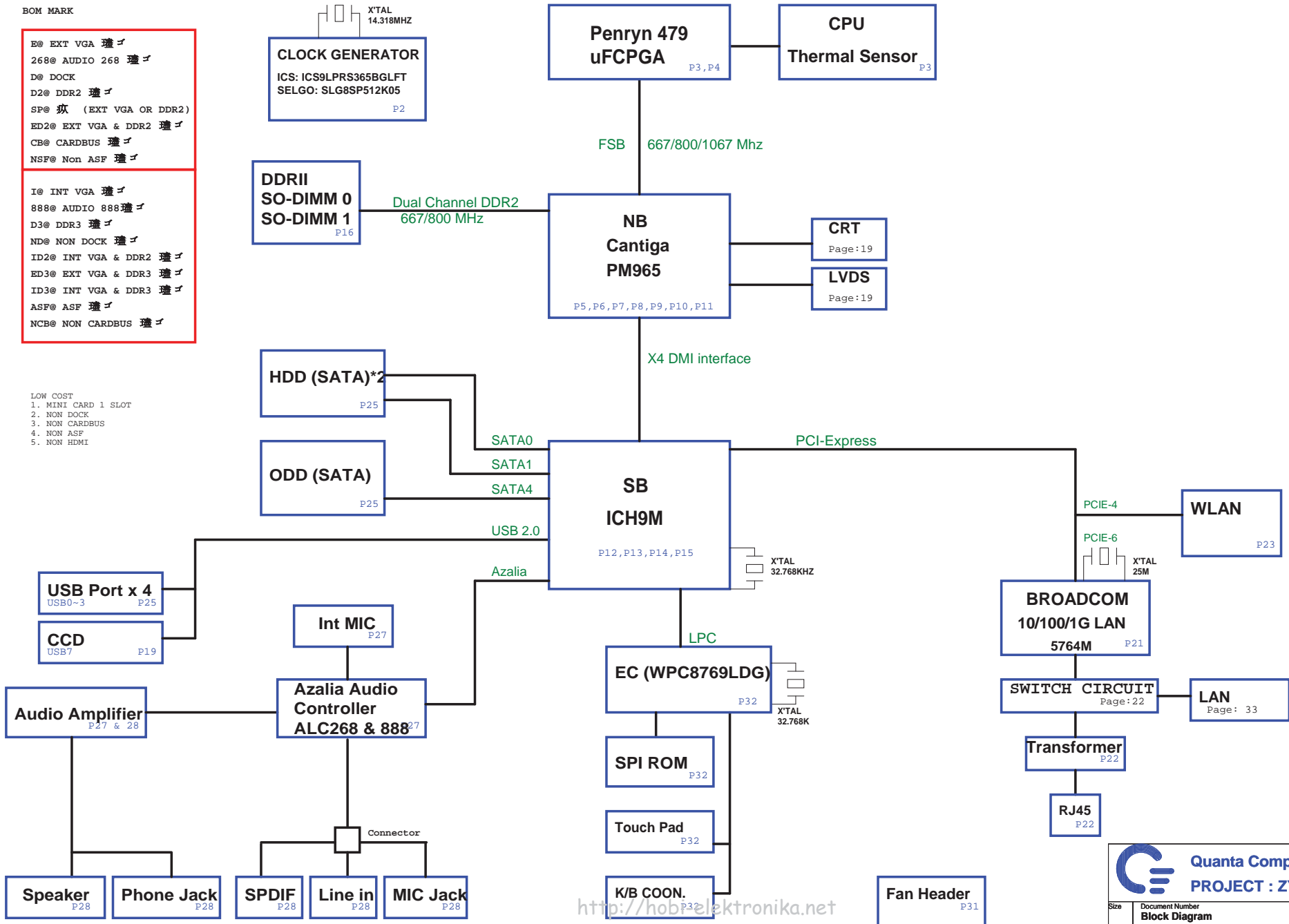


ZY6D SYSTEM BLOCK DIAGRAM

BOM MARK

- E@ EXT VGA 璫 ㄣ
 - 268@ AUDIO 268 璫 ㄣ
 - D@ DOCK
 - D2@ DDR2 璫 ㄣ
 - SP@ 痲 (EXT VGA OR DDR2)
 - ED2@ EXT VGA & DDR2 璫 ㄣ
 - CB@ CARDBUS 璫 ㄣ
 - NSF@ Non ASF 璫 ㄣ
-
- I@ INT VGA 璫 ㄣ
 - 888@ AUDIO 888璫 ㄣ
 - D3@ DDR3 璫 ㄣ
 - ND@ NON DOCK 璫 ㄣ
 - ID2@ INT VGA & DDR2 璫 ㄣ
 - ED3@ EXT VGA & DDR3 璫 ㄣ
 - ID3@ INT VGA & DDR3 璫 ㄣ
 - ASF@ ASF 璫 ㄣ
 - NCB@ NON CARDBUS 璫 ㄣ

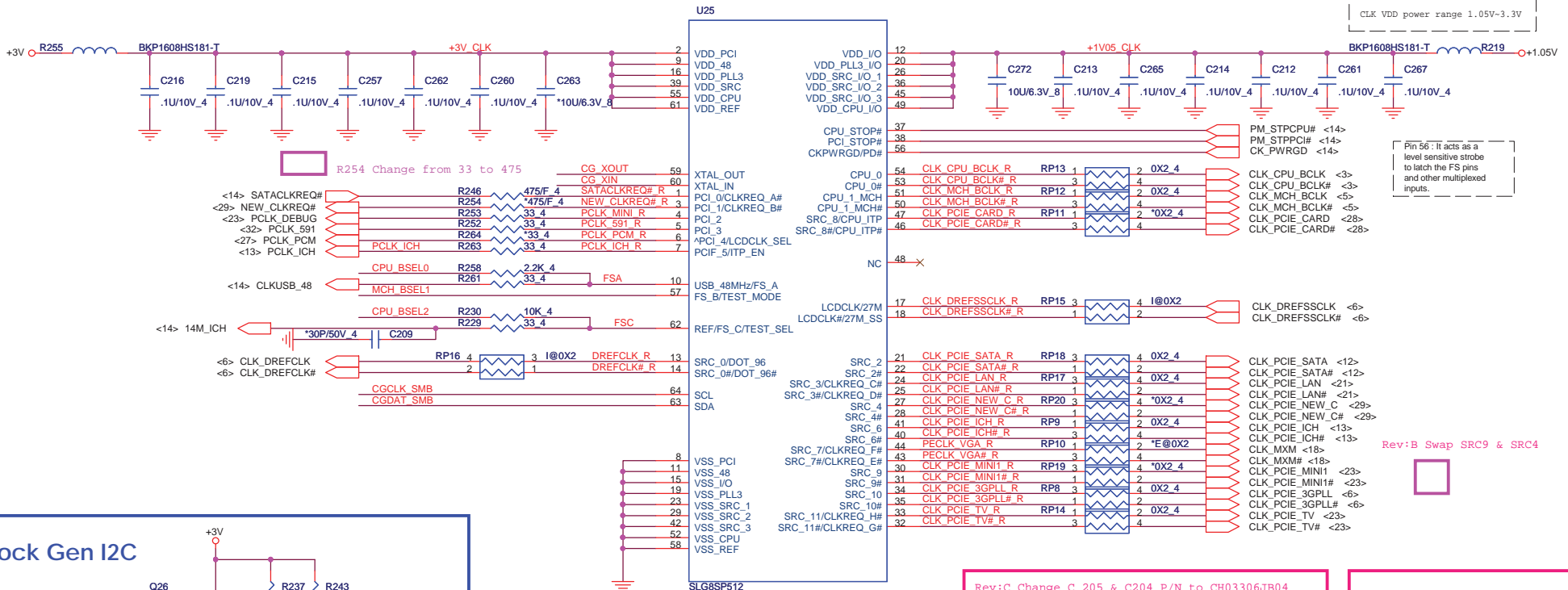
- LOW COST
1. MINI CARD 1 SLOT
 2. NON DOCK
 3. NON CARDBUS
 4. NON ASF
 5. NON HDMI



Quanta Computer Inc.
PROJECT : ZY6D

| | | |
|---------------------------------|-----------------|-----|
| Size | Document Number | Rev |
| Date: Thursday, August 28, 2008 | Block Diagram | 1A |
| Sheet | 1 of 40 | |

Clock Generator

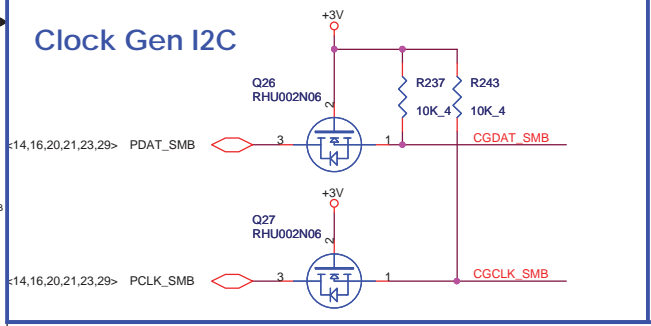


CLK VDD power range 1.05V-3.3V

Pin 56: It acts as a level sensitive strobe to latch the FS pins and other multiplexed inputs.

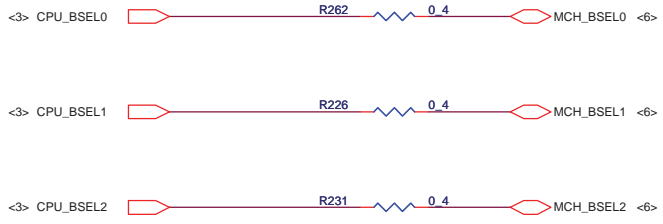
Rev:B Swap SRC9 & SRC4

Clock Gen I2C



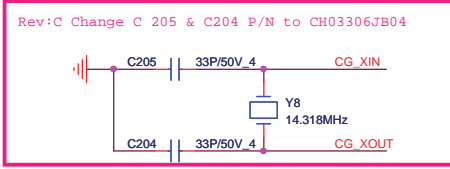
CPU Clock select

Pin 10/57/62: For Pin CPU frequency selection

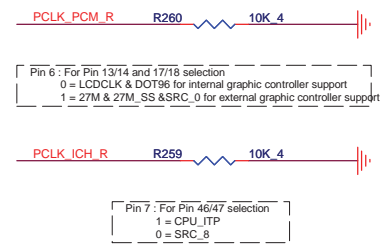


BSEL Frequency Select Table

| FSC | FSB | FSA | Frequency |
|-----|-----|-----|-----------|
| 0 | 0 | 0 | 266Mhz |
| 0 | 0 | 1 | 133Mhz |
| 0 | 1 | 1 | 166Mhz |
| 0 | 1 | 0 | 200Mhz |
| 1 | 1 | 0 | 400Mhz |
| 1 | 1 | 1 | Reserved |
| 1 | 0 | 1 | 100Mhz |
| 1 | 0 | 0 | 333Mhz |

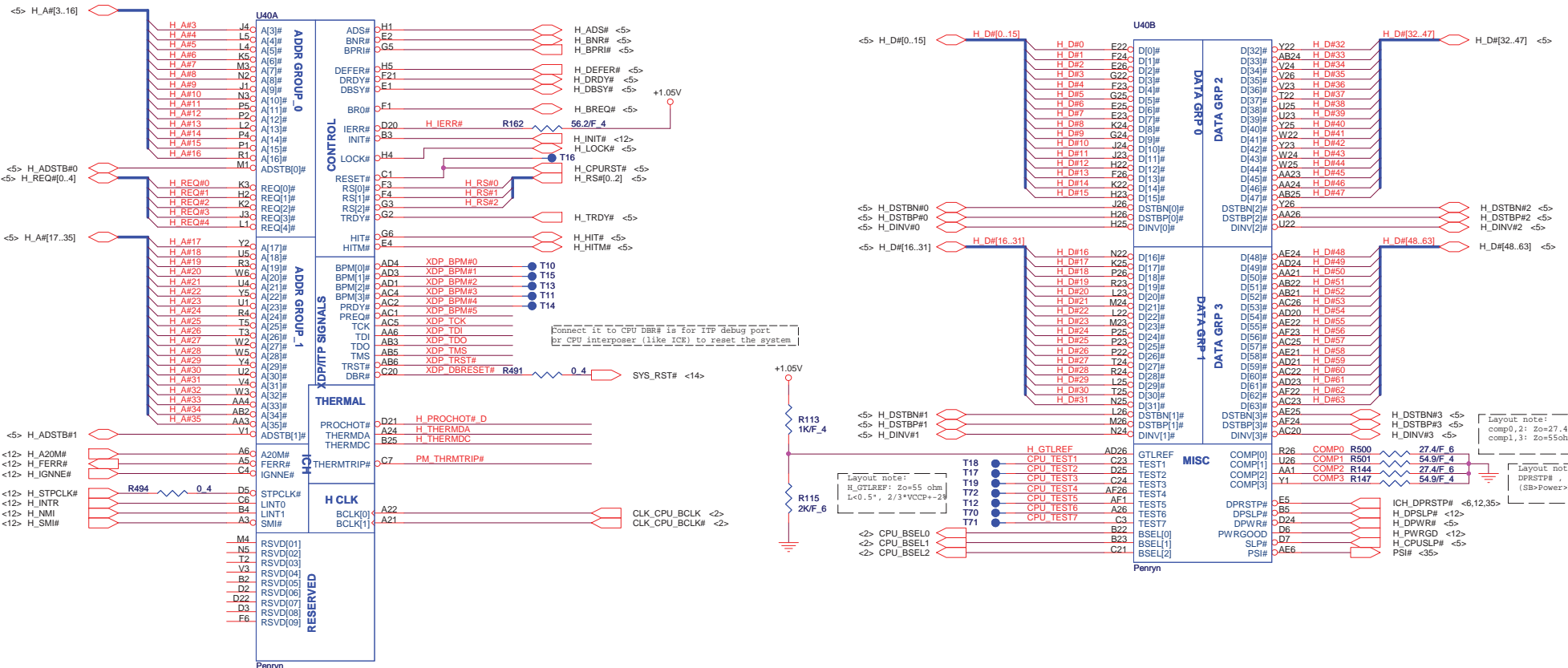


Strap table

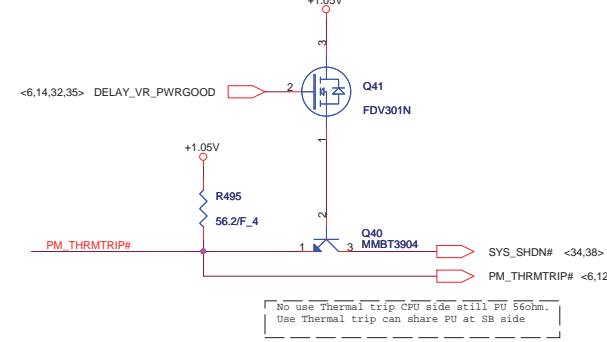


Quanta Computer Inc.
PROJECT : ZY2 & ZY6

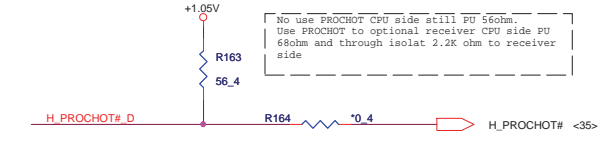
| | | |
|-------|--|---------------|
| Size | Document Number | Rev |
| | CLOCK GENERATOR CK505 W/REGULATOR | 1A |
| Date: | Thursday, August 26, 2008 | Sheet 2 of 40 |



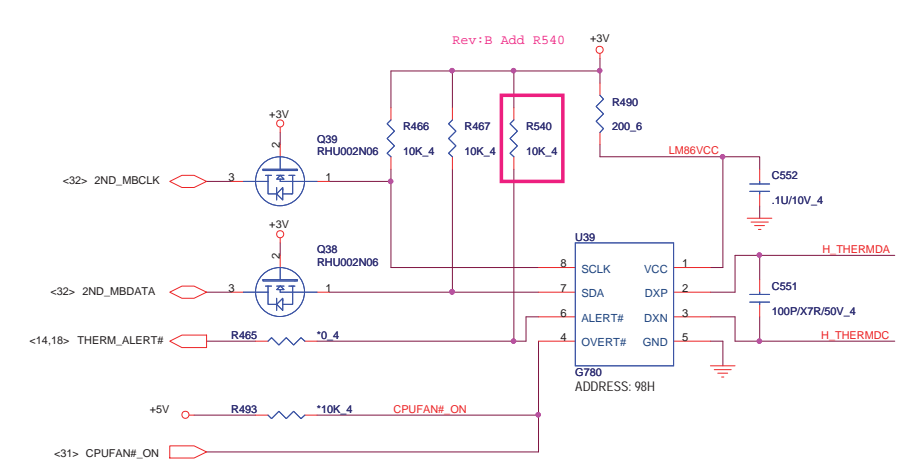
Thermal Trip



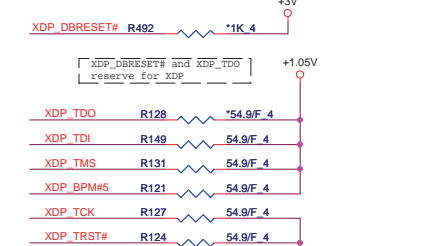
Processor hot



CPU Thermal monitor

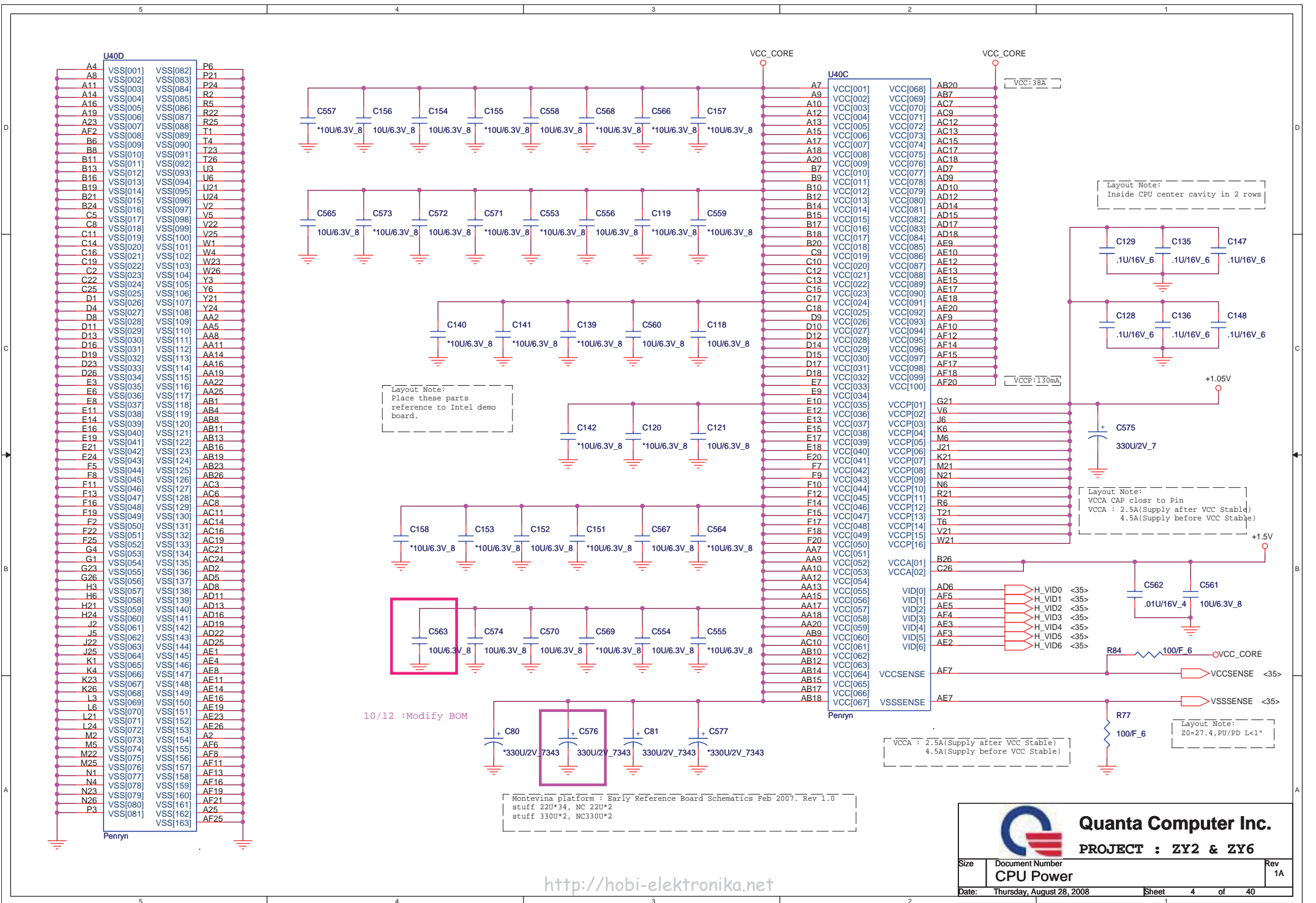


XDP PU/PD



Quanta Computer Inc.
PROJECT : ZY2 & ZY6

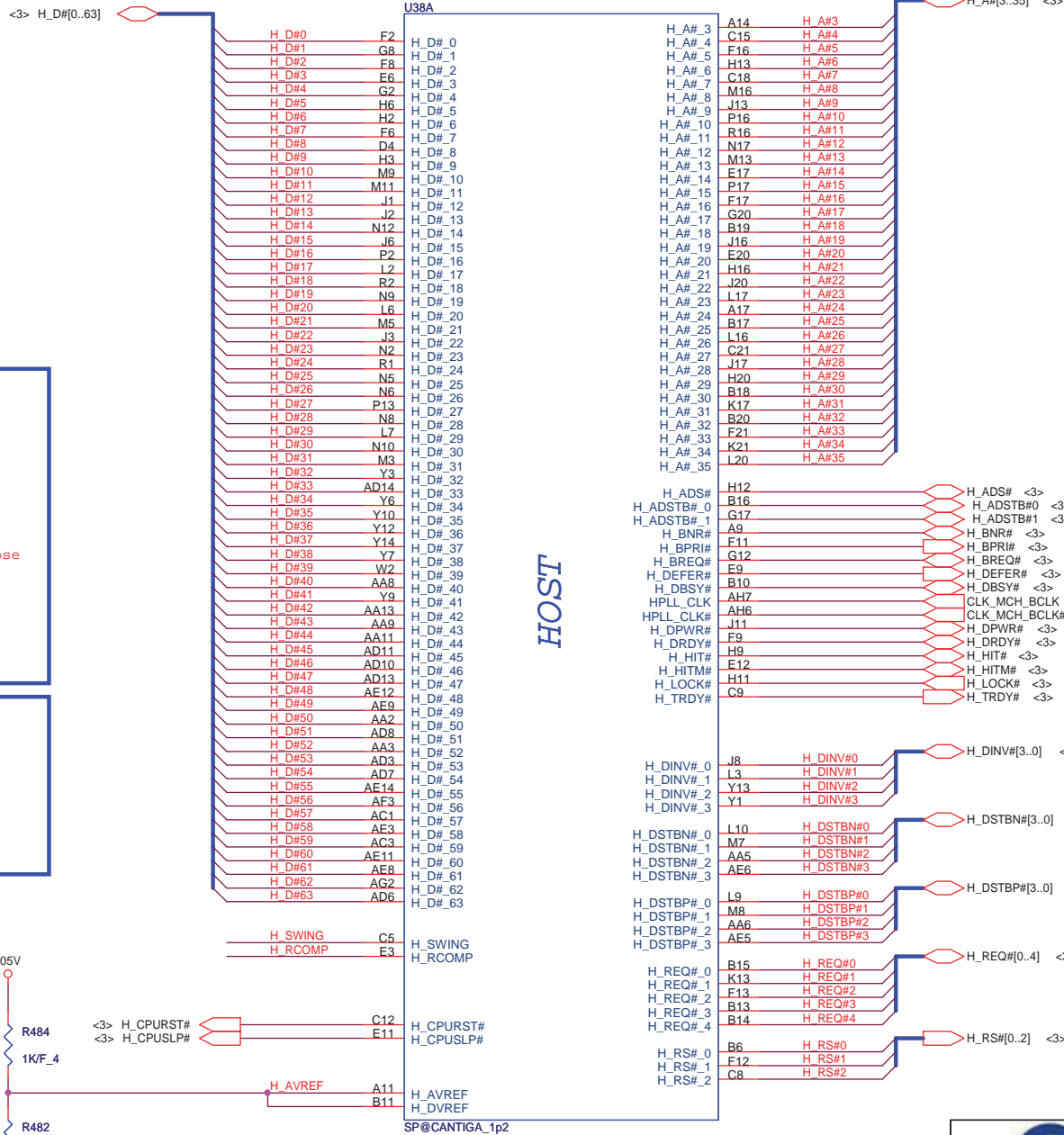
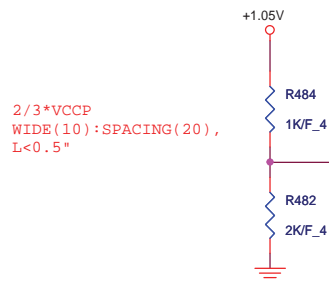
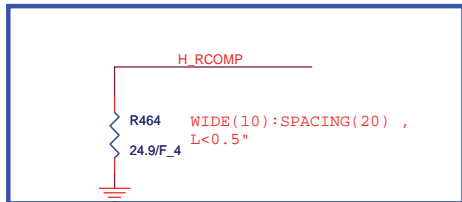
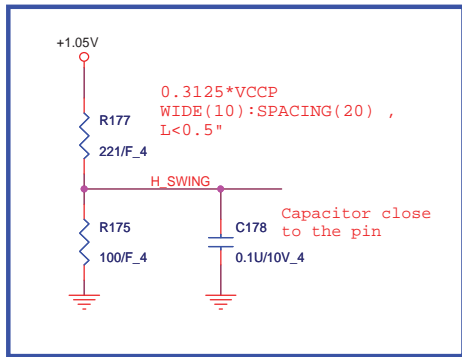
| | | |
|-------|---------------------------|---------------|
| Size | Document Number | Rev |
| | CPU Host Bus | 1A |
| Date: | Thursday, August 28, 2008 | Sheet 3 of 40 |




Quanta Computer Inc.
PROJECT : ZY2 & ZY6

| | | |
|-------|---------------------------|---------------|
| Size | Document Number | Rev |
| | CPU Power | 1A |
| Date: | Thursday, August 28, 2008 | Sheet 4 of 40 |

| | |
|--------------------|-------------|
| | QCI P/N |
| Intel Cantiga (G)M | AJSLB940T04 |
| Intel Cantiga (P)M | AJSLB970T06 |

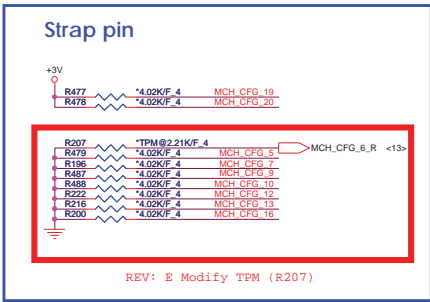


<http://hobi-elektronika.net>

| | | | | |
|---|---------------------------|-------|-----------------|-----|
|  Quanta Computer Inc. PROJECT : ZY2 & ZY6 | | Size | Document Number | Rev |
| | | | GMCH HOST | 1A |
| Date: | Thursday, August 28, 2008 | Sheet | 5 of 40 | |

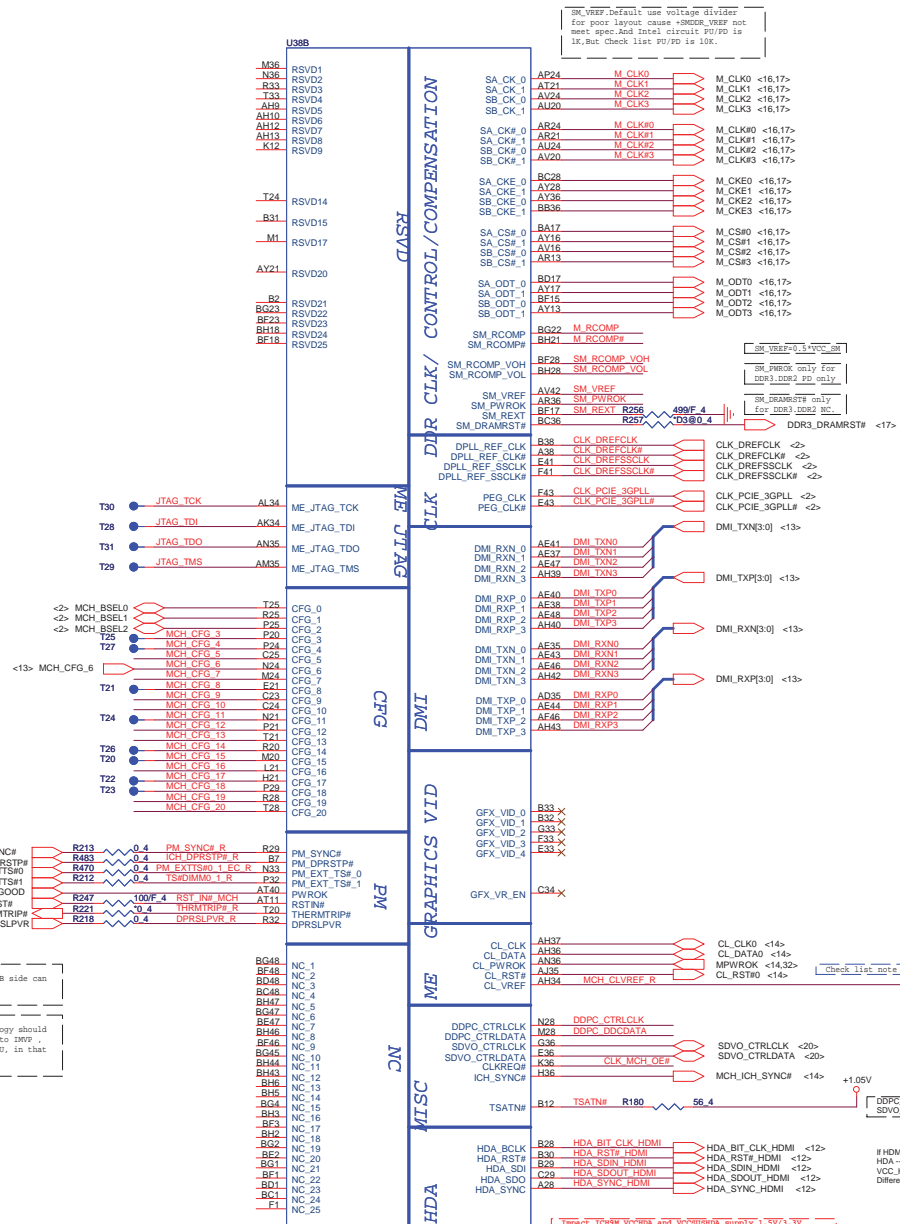
Strap table

| Pin Name | Strap description | Configuration |
|---------------|--|---|
| CFG[2:0] | FSB Frequency Select | 000 = FSB 1066MHz 010 = FSB 800MHz 011 = FSB 667MHz |
| CFG[4:3] | Reserved | |
| CFG5 | DMI X2 Select | 0 = DMI X2 1 = DMI X4(Default) |
| CFG6 | iTPM Host Interface | 0 = iTPM Host interface is enabled 1 = iTPM Host interface is disabled(Default) |
| CFG7 | M TLS confidentiality | 0 = AMT Firmware will use TLS cipher suite with no confidentiality 1 = AMT Firmware will use TLS cipher suite with confidentiality(Default) |
| CFG8 | Reserved | |
| CFG9 | PCIe Graphics Lane Reversal | 0 = Reverse Lanes 1 = Normal operation(Default) |
| CFG10 | PCIe Loopback enable | 0 = Enabled 1 = Disabled (Default) |
| CFG11 | Reserved | |
| CFG12 | ALLZ | 0 = ALLZ mode enable 1 = disable(Default) |
| CFG13 | XOR | 0 = XOR mode enable 1 = disable(Default) |
| CFG[15:14] | Reserved | |
| CFG16 | FSB Dynamic ODT | 0 = Dynamic ODT disable 1 = Dynamic ODT Enable(Default) |
| CFG[18:17] | Reserved | |
| CFG19 | DMI Lane Reversal | 0 = Normal (Default) 1 = Lanes Reversed |
| CFG20 | Digital Display Port (SDVO/DP/HDMI) Concurrent with PCIe | 0 = Only Digital Display port (SDVO/DP/HDMI) or PCIe is operational (Default) 1 = Digital display port (SDVO/DP/HDMI) and PCIe are operating simultaneously via PEG port |
| SDVO_CTRLDATA | SDVO Present | 0 = No SDVO/HDMI Device Present(Default) 1 = SDVO/HDMI Device present |
| DDPC_CTRLDATA | Digital Display Present | 0 = Digital display(HDMI/DP) device absent(Default) 1 = Digital display(HDMI/DP) device present |

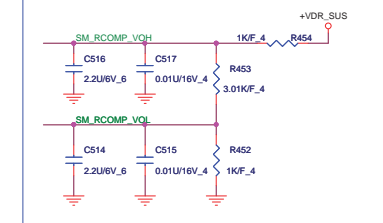
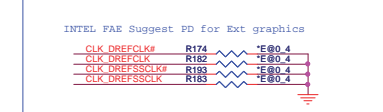
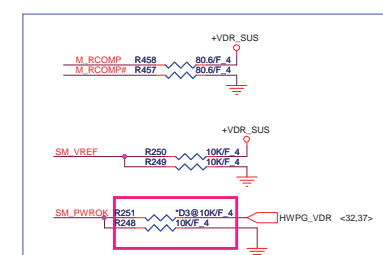


HS thermal trip pin
No use thermal trip HS side can NC. (HS has ODT)

TRDPRSTP#
The delay chain topology should be routed from ICH9M to IMVP, then to (G)ICHM and CPU, in that order.



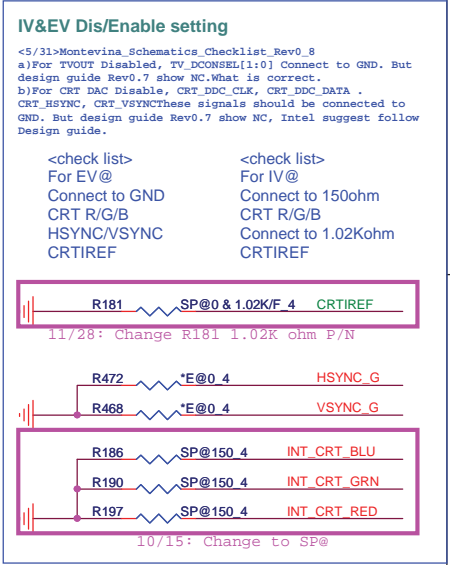
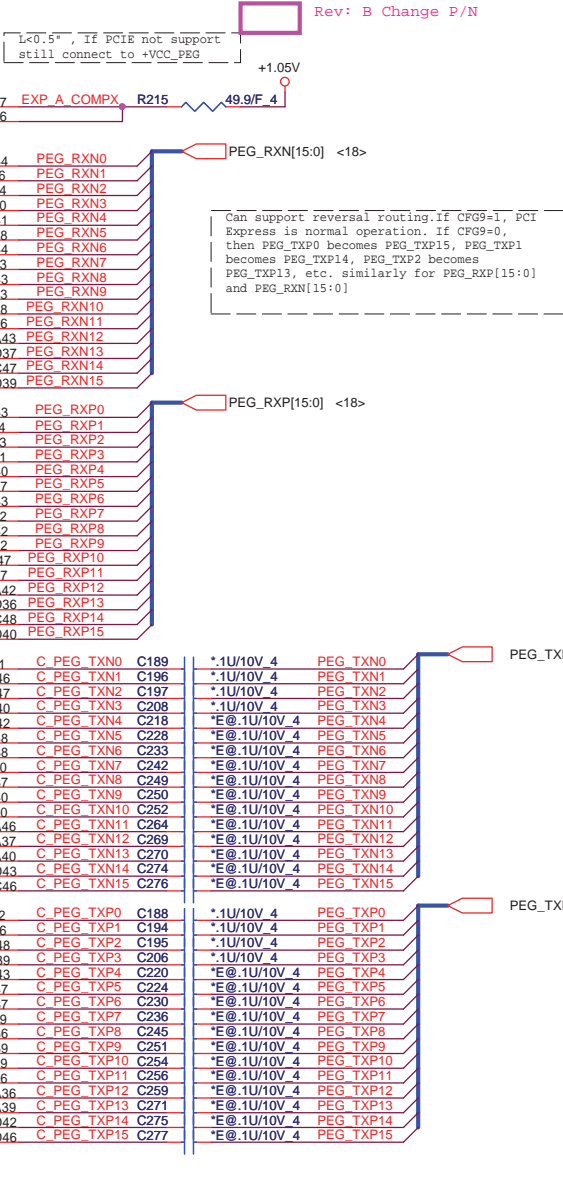
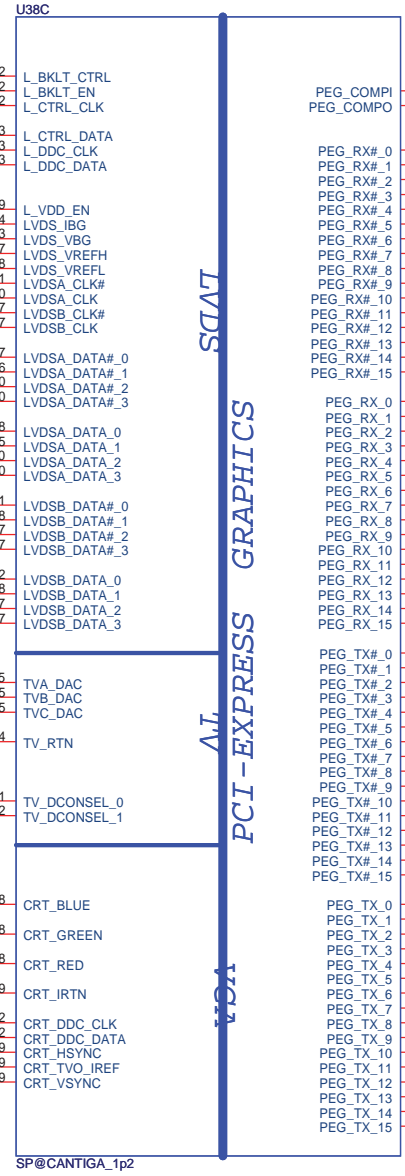
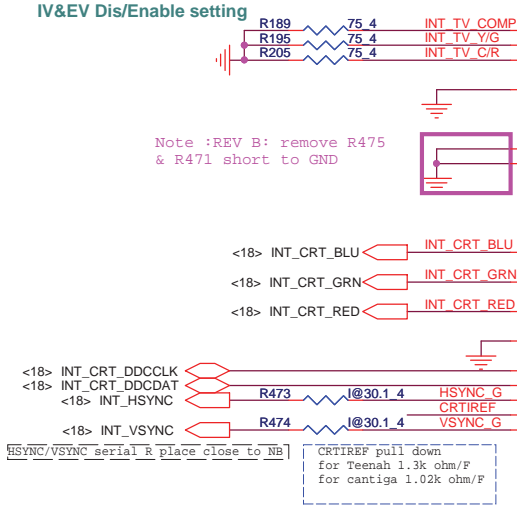
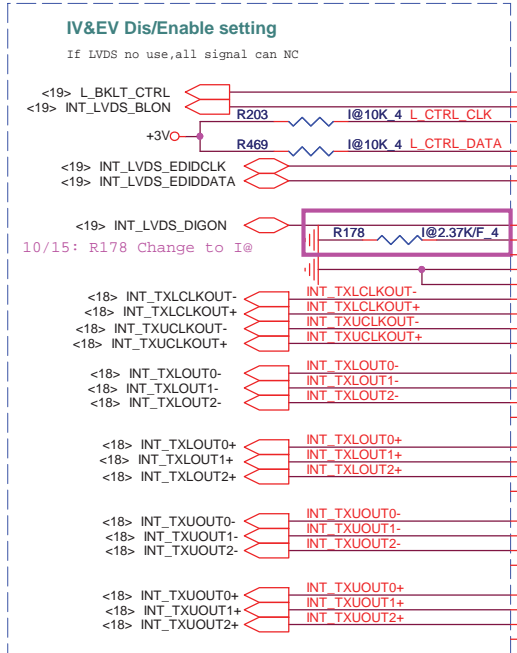
SR_VREF Default use voltage divider for poor layout cause +SMDCR_VREF not meet spec. Add Intel circuit PU/PD is 1K, but check list PU/PD is 10K.



Checklist verid a:
If TSATN# is not used, then it must be terminated with a 50-ohm pull-up resistor to VCCP.

Pin out check issue:
Change EOS 0.7 change Ball B12 to TSATN# from TSATN#

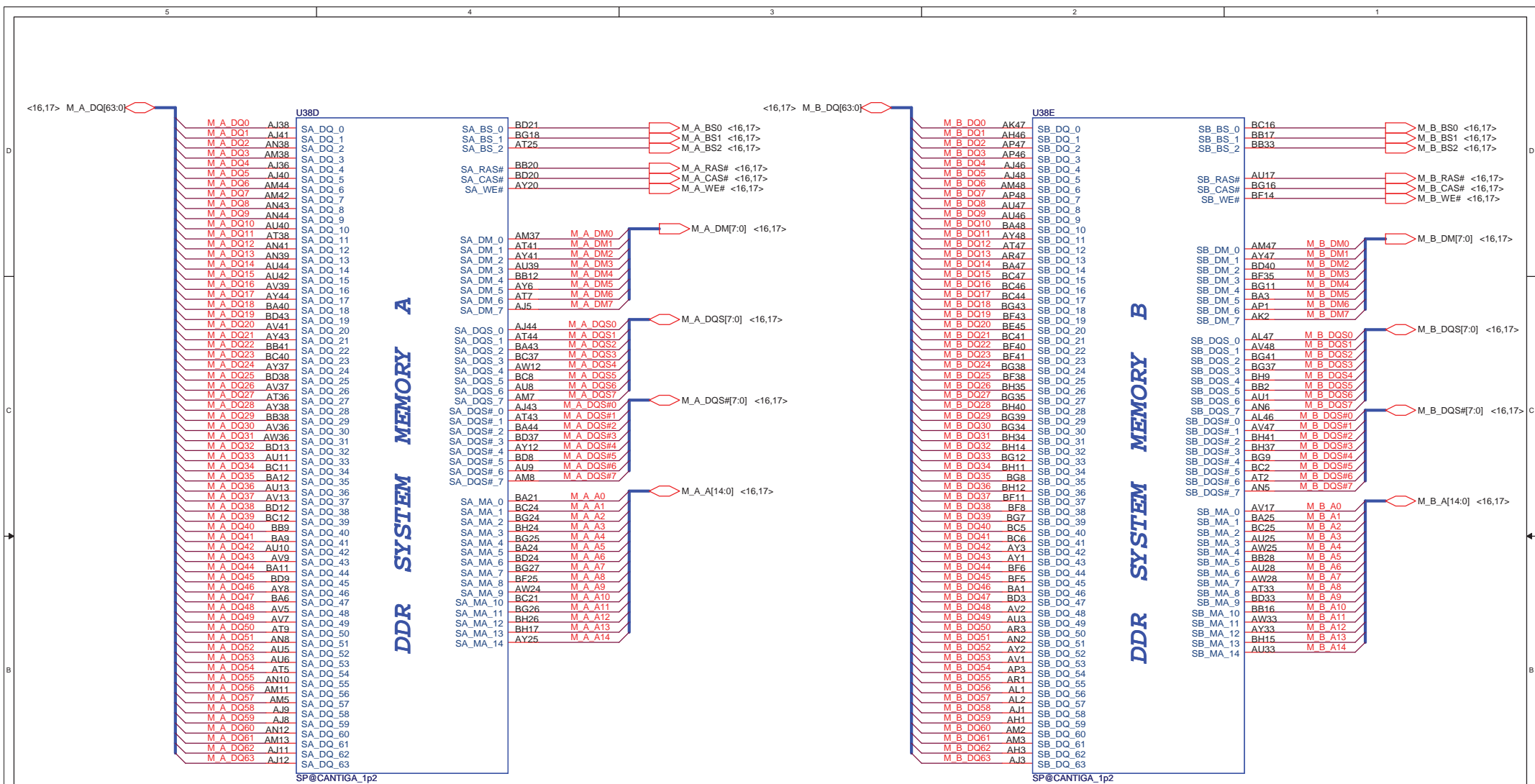
NOTE:
If (G)ICHM's HD Audio signals are connected to ICH9M for HDMI, VCCBDA and VCCSIBBDA on ICH9M should be only on 1.5V. These power pins on ICH9M can be supplied with 3.3V if and only if (G)ICHM's HDA is not connected to ICH9M. Consequently, only 1.5V audio/modem codecs can be used on the platform.



Quanta Computer Inc.
PROJECT : ZY2 & ZY6


Size Document Number Rev
GMCH VGA 1A

Date: Thursday, August 28, 2008 Sheet 7 of 40



SP@CANTIGA_1p2

SP@CANTIGA_1p2


Quanta Computer Inc.
PROJECT : ZY2 & ZY6
 Size: Document Number: **GMCH DDRII** Rev: 1A
 Date: Thursday, August 28, 2008 Sheet: 8 of 40

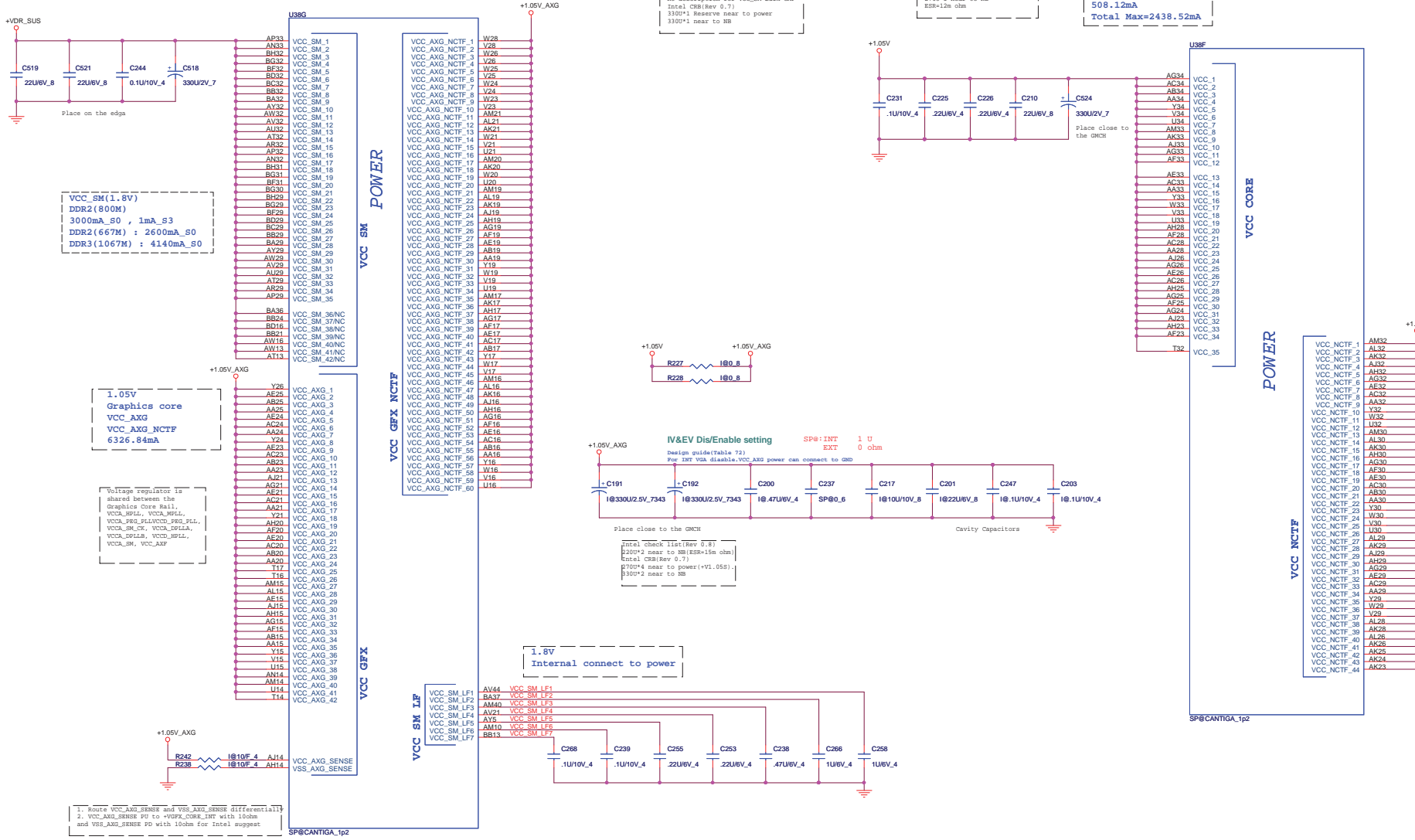
Power consumption reference to Intel
644135 Cantiga chipset EDS Volumel.
Section 10

GM TDP 10.5-12W
GS TDP 7-8W
PM TDP 7W

Intel check list(Rev 0.8)
No description for VCC_SM bulk cap
3300µF Reserve near to power
3300µF Reserve near to power
3300µF Reserve near to NB

Intel check list(Rev 0.8)
2700µF near to power(+V1.05M).
2700µF near to NB
Intel CR8(Rev 0.7)
2700µF near to power(+V1.05M).
2700µF near to NB
ESR=12m ohm

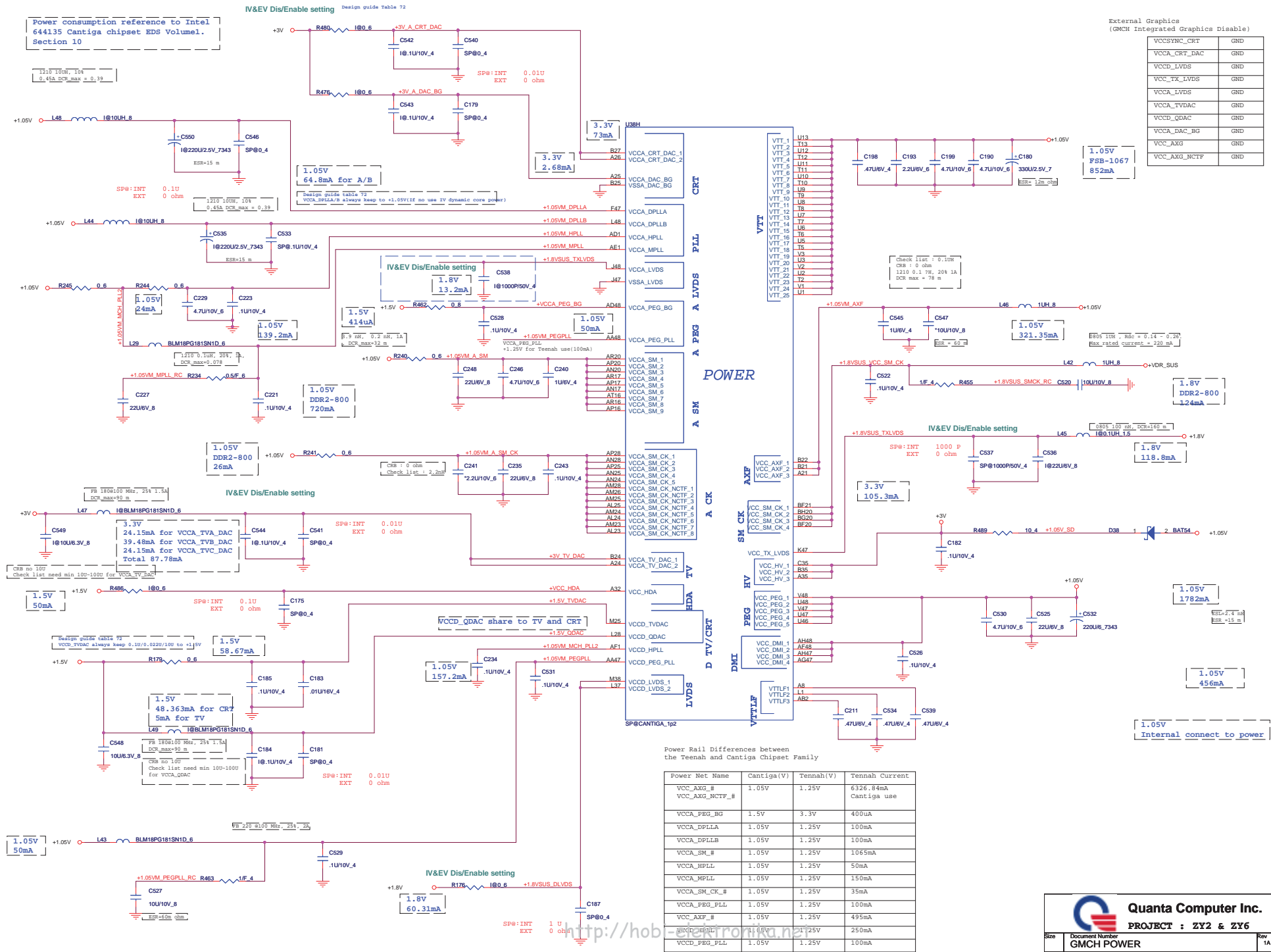
VCC
VCC_NCTF
1210.34mA_EV
1930.4mA_IV
ME Engine
508.12mA
Total Max=2438.52mA



VCC_SM(1.5V)
DDR2(800M)
3000mA_S0, 1mA_S3
DDR2(667M) : 2600mA_S0
DDR3(1067M) : 4140mA_S0

1.05v
Graphics core
VCC_AGX
VCC_AGX_NCTF
6326.84mA

To keep regulator is shared between the Graphics Core Ball,
VCCA_P0, VCCA_P1, VCCA_P2, VCCA_P3, VCCA_P4, VCCA_P5, VCCA_P6, VCCA_P7, VCCA_P8, VCCA_P9, VCCA_P10, VCCA_P11, VCCA_P12, VCCA_P13, VCCA_P14, VCCA_P15, VCCA_P16, VCCA_P17, VCCA_P18, VCCA_P19, VCCA_P20, VCCA_P21, VCCA_P22, VCCA_P23, VCCA_P24, VCCA_P25, VCCA_P26, VCCA_P27, VCCA_P28, VCCA_P29, VCCA_P30, VCCA_P31, VCCA_P32, VCCA_P33, VCCA_P34, VCCA_P35, VCCA_P36, VCCA_P37, VCCA_P38, VCCA_P39, VCCA_P40, VCCA_P41, VCCA_P42, VCCA_P43, VCCA_P44, VCCA_P45, VCCA_P46, VCCA_P47, VCCA_P48, VCCA_P49, VCCA_P50, VCCA_P51, VCCA_P52, VCCA_P53, VCCA_P54, VCCA_P55, VCCA_P56, VCCA_P57, VCCA_P58, VCCA_P59, VCCA_P60, VCCA_P61, VCCA_P62, VCCA_P63, VCCA_P64, VCCA_P65, VCCA_P66, VCCA_P67, VCCA_P68, VCCA_P69, VCCA_P70, VCCA_P71, VCCA_P72, VCCA_P73, VCCA_P74, VCCA_P75, VCCA_P76, VCCA_P77, VCCA_P78, VCCA_P79, VCCA_P80, VCCA_P81, VCCA_P82, VCCA_P83, VCCA_P84, VCCA_P85, VCCA_P86, VCCA_P87, VCCA_P88, VCCA_P89, VCCA_P90, VCCA_P91, VCCA_P92, VCCA_P93, VCCA_P94, VCCA_P95, VCCA_P96, VCCA_P97, VCCA_P98, VCCA_P99, VCCA_P100, VCCA_P101, VCCA_P102, VCCA_P103, VCCA_P104, VCCA_P105, VCCA_P106, VCCA_P107, VCCA_P108, VCCA_P109, VCCA_P110, VCCA_P111, VCCA_P112, VCCA_P113, VCCA_P114, VCCA_P115, VCCA_P116, VCCA_P117, VCCA_P118, VCCA_P119, VCCA_P120, VCCA_P121, VCCA_P122, VCCA_P123, VCCA_P124, VCCA_P125, VCCA_P126, VCCA_P127, VCCA_P128, VCCA_P129, VCCA_P130, VCCA_P131, VCCA_P132, VCCA_P133, VCCA_P134, VCCA_P135, VCCA_P136, VCCA_P137, VCCA_P138, VCCA_P139, VCCA_P140, VCCA_P141, VCCA_P142, VCCA_P143, VCCA_P144, VCCA_P145, VCCA_P146, VCCA_P147, VCCA_P148, VCCA_P149, VCCA_P150, VCCA_P151, VCCA_P152, VCCA_P153, VCCA_P154, VCCA_P155, VCCA_P156, VCCA_P157, VCCA_P158, VCCA_P159, VCCA_P160, VCCA_P161, VCCA_P162, VCCA_P163, VCCA_P164, VCCA_P165, VCCA_P166, VCCA_P167, VCCA_P168, VCCA_P169, VCCA_P170, VCCA_P171, VCCA_P172, VCCA_P173, VCCA_P174, VCCA_P175, VCCA_P176, VCCA_P177, VCCA_P178, VCCA_P179, VCCA_P180, VCCA_P181, VCCA_P182, VCCA_P183, VCCA_P184, VCCA_P185, VCCA_P186, VCCA_P187, VCCA_P188, VCCA_P189, VCCA_P190, VCCA_P191, VCCA_P192, VCCA_P193, VCCA_P194, VCCA_P195, VCCA_P196, VCCA_P197, VCCA_P198, VCCA_P199, VCCA_P200, VCCA_P201, VCCA_P202, VCCA_P203, VCCA_P204, VCCA_P205, VCCA_P206, VCCA_P207, VCCA_P208, VCCA_P209, VCCA_P210, VCCA_P211, VCCA_P212, VCCA_P213, VCCA_P214, VCCA_P215, VCCA_P216, VCCA_P217, VCCA_P218, VCCA_P219, VCCA_P220, VCCA_P221, VCCA_P222, VCCA_P223, VCCA_P224, VCCA_P225, VCCA_P226, VCCA_P227, VCCA_P228, VCCA_P229, VCCA_P230, VCCA_P231, VCCA_P232, VCCA_P233, VCCA_P234, VCCA_P235, VCCA_P236, VCCA_P237, VCCA_P238, VCCA_P239, VCCA_P240, VCCA_P241, VCCA_P242, VCCA_P243, VCCA_P244, VCCA_P245, VCCA_P246, VCCA_P247, VCCA_P248, VCCA_P249, VCCA_P250, VCCA_P251, VCCA_P252, VCCA_P253, VCCA_P254, VCCA_P255, VCCA_P256, VCCA_P257, VCCA_P258, VCCA_P259, VCCA_P260, VCCA_P261, VCCA_P262, VCCA_P263, VCCA_P264, VCCA_P265, VCCA_P266, VCCA_P267, VCCA_P268, VCCA_P269, VCCA_P270, VCCA_P271, VCCA_P272, VCCA_P273, VCCA_P274, VCCA_P275, VCCA_P276, VCCA_P277, VCCA_P278, VCCA_P279, VCCA_P280, VCCA_P281, VCCA_P282, VCCA_P283, VCCA_P284, VCCA_P285, VCCA_P286, VCCA_P287, VCCA_P288, VCCA_P289, VCCA_P290, VCCA_P291, VCCA_P292, VCCA_P293, VCCA_P294, VCCA_P295, VCCA_P296, VCCA_P297, VCCA_P298, VCCA_P299, VCCA_P300, VCCA_P301, VCCA_P302, VCCA_P303, VCCA_P304, VCCA_P305, VCCA_P306, VCCA_P307, VCCA_P308, VCCA_P309, VCCA_P310, VCCA_P311, VCCA_P312, VCCA_P313, VCCA_P314, VCCA_P315, VCCA_P316, VCCA_P317, VCCA_P318, VCCA_P319, VCCA_P320, VCCA_P321, VCCA_P322, VCCA_P323, VCCA_P324, VCCA_P325, VCCA_P326, VCCA_P327, VCCA_P328, VCCA_P329, VCCA_P330, VCCA_P331, VCCA_P332, VCCA_P333, VCCA_P334, VCCA_P335, VCCA_P336, VCCA_P337, VCCA_P338, VCCA_P339, VCCA_P340, VCCA_P341, VCCA_P342, VCCA_P343, VCCA_P344, VCCA_P345, VCCA_P346, VCCA_P347, VCCA_P348, VCCA_P349, VCCA_P350, VCCA_P351, VCCA_P352, VCCA_P353, VCCA_P354, VCCA_P355, VCCA_P356, VCCA_P357, VCCA_P358, VCCA_P359, VCCA_P360, VCCA_P361, VCCA_P362, VCCA_P363, VCCA_P364, VCCA_P365, VCCA_P366, VCCA_P367, VCCA_P368, VCCA_P369, VCCA_P370, VCCA_P371, VCCA_P372, VCCA_P373, VCCA_P374, VCCA_P375, VCCA_P376, VCCA_P377, VCCA_P378, VCCA_P379, VCCA_P380, VCCA_P381, VCCA_P382, VCCA_P383, VCCA_P384, VCCA_P385, VCCA_P386, VCCA_P387, VCCA_P388, VCCA_P389, VCCA_P390, VCCA_P391, VCCA_P392, VCCA_P393, VCCA_P394, VCCA_P395, VCCA_P396, VCCA_P397, VCCA_P398, VCCA_P399, VCCA_P400, VCCA_P401, VCCA_P402, VCCA_P403, VCCA_P404, VCCA_P405, VCCA_P406, VCCA_P407, VCCA_P408, VCCA_P409, VCCA_P410, VCCA_P411, VCCA_P412, VCCA_P413, VCCA_P414, VCCA_P415, VCCA_P416, VCCA_P417, VCCA_P418, VCCA_P419, VCCA_P420, VCCA_P421, VCCA_P422, VCCA_P423, VCCA_P424, VCCA_P425, VCCA_P426, VCCA_P427, VCCA_P428, VCCA_P429, VCCA_P430, VCCA_P431, VCCA_P432, VCCA_P433, VCCA_P434, VCCA_P435, VCCA_P436, VCCA_P437, VCCA_P438, VCCA_P439, VCCA_P440, VCCA_P441, VCCA_P442, VCCA_P443, VCCA_P444, VCCA_P445, VCCA_P446, VCCA_P447, VCCA_P448, VCCA_P449, VCCA_P450, VCCA_P451, VCCA_P452, VCCA_P453, VCCA_P454, VCCA_P455, VCCA_P456, VCCA_P457, VCCA_P458, VCCA_P459, VCCA_P460, VCCA_P461, VCCA_P462, VCCA_P463, VCCA_P464, VCCA_P465, VCCA_P466, VCCA_P467, VCCA_P468, VCCA_P469, VCCA_P470, VCCA_P471, VCCA_P472, VCCA_P473, VCCA_P474, VCCA_P475, VCCA_P476, VCCA_P477, VCCA_P478, VCCA_P479, VCCA_P480, VCCA_P481, VCCA_P482, VCCA_P483, VCCA_P484, VCCA_P485, VCCA_P486, VCCA_P487, VCCA_P488, VCCA_P489, VCCA_P490, VCCA_P491, VCCA_P492, VCCA_P493, VCCA_P494, VCCA_P495, VCCA_P496, VCCA_P497, VCCA_P498, VCCA_P499, VCCA_P500, VCCA_P501, VCCA_P502, VCCA_P503, VCCA_P504, VCCA_P505, VCCA_P506, VCCA_P507, VCCA_P508, VCCA_P509, VCCA_P510, VCCA_P511, VCCA_P512, VCCA_P513, VCCA_P514, VCCA_P515, VCCA_P516, VCCA_P517, VCCA_P518, VCCA_P519, VCCA_P520, VCCA_P521, VCCA_P522, VCCA_P523, VCCA_P524, VCCA_P525, VCCA_P526, VCCA_P527, VCCA_P528, VCCA_P529, VCCA_P530, VCCA_P531, VCCA_P532, VCCA_P533, VCCA_P534, VCCA_P535, VCCA_P536, VCCA_P537, VCCA_P538, VCCA_P539, VCCA_P540, VCCA_P541, VCCA_P542, VCCA_P543, VCCA_P544, VCCA_P545, VCCA_P546, VCCA_P547, VCCA_P548, VCCA_P549, VCCA_P550, VCCA_P551, VCCA_P552, VCCA_P553, VCCA_P554, VCCA_P555, VCCA_P556, VCCA_P557, VCCA_P558, VCCA_P559, VCCA_P560, VCCA_P561, VCCA_P562, VCCA_P563, VCCA_P564, VCCA_P565, VCCA_P566, VCCA_P567, VCCA_P568, VCCA_P569, VCCA_P570, VCCA_P571, VCCA_P572, VCCA_P573, VCCA_P574, VCCA_P575, VCCA_P576, VCCA_P577, VCCA_P578, VCCA_P579, VCCA_P580, VCCA_P581, VCCA_P582, VCCA_P583, VCCA_P584, VCCA_P585, VCCA_P586, VCCA_P587, VCCA_P588, VCCA_P589, VCCA_P590, VCCA_P591, VCCA_P592, VCCA_P593, VCCA_P594, VCCA_P595, VCCA_P596, VCCA_P597, VCCA_P598, VCCA_P599, VCCA_P600, VCCA_P601, VCCA_P602, VCCA_P603, VCCA_P604, VCCA_P605, VCCA_P606, VCCA_P607, VCCA_P608, VCCA_P609, VCCA_P610, VCCA_P611, VCCA_P612, VCCA_P613, VCCA_P614, VCCA_P615, VCCA_P616, VCCA_P617, VCCA_P618, VCCA_P619, VCCA_P620, VCCA_P621, VCCA_P622, VCCA_P623, VCCA_P624, VCCA_P625, VCCA_P626, VCCA_P627, VCCA_P628, VCCA_P629, VCCA_P630, VCCA_P631, VCCA_P632, VCCA_P633, VCCA_P634, VCCA_P635, VCCA_P636, VCCA_P637, VCCA_P638, VCCA_P639, VCCA_P640, VCCA_P641, VCCA_P642, VCCA_P643, VCCA_P644, VCCA_P645, VCCA_P646, VCCA_P647, VCCA_P648, VCCA_P649, VCCA_P650, VCCA_P651, VCCA_P652, VCCA_P653, VCCA_P654, VCCA_P655, VCCA_P656, VCCA_P657, VCCA_P658, VCCA_P659, VCCA_P660, VCCA_P661, VCCA_P662, VCCA_P663, VCCA_P664, VCCA_P665, VCCA_P666, VCCA_P667, VCCA_P668, VCCA_P669, VCCA_P670, VCCA_P671, VCCA_P672, VCCA_P673, VCCA_P674, VCCA_P675, VCCA_P676, VCCA_P677, VCCA_P678, VCCA_P679, VCCA_P680, VCCA_P681, VCCA_P682, VCCA_P683, VCCA_P684, VCCA_P685, VCCA_P686, VCCA_P687, VCCA_P688, VCCA_P689, VCCA_P690, VCCA_P691, VCCA_P692, VCCA_P693, VCCA_P694, VCCA_P695, VCCA_P696, VCCA_P697, VCCA_P698, VCCA_P699, VCCA_P700, VCCA_P701, VCCA_P702, VCCA_P703, VCCA_P704, VCCA_P705, VCCA_P706, VCCA_P707, VCCA_P708, VCCA_P709, VCCA_P710, VCCA_P711, VCCA_P712, VCCA_P713, VCCA_P714, VCCA_P715, VCCA_P716, VCCA_P717, VCCA_P718, VCCA_P719, VCCA_P720, VCCA_P721, VCCA_P722, VCCA_P723, VCCA_P724, VCCA_P725, VCCA_P726, VCCA_P727, VCCA_P728, VCCA_P729, VCCA_P730, VCCA_P731, VCCA_P732, VCCA_P733, VCCA_P734, VCCA_P735, VCCA_P736, VCCA_P737, VCCA_P738, VCCA_P739, VCCA_P740, VCCA_P741, VCCA_P742, VCCA_P743, VCCA_P744, VCCA_P745, VCCA_P746, VCCA_P747, VCCA_P748, VCCA_P749, VCCA_P750, VCCA_P751, VCCA_P752, VCCA_P753, VCCA_P754, VCCA_P755, VCCA_P756, VCCA_P757



External Graphics
(GMCH Integrated Graphics Disable)

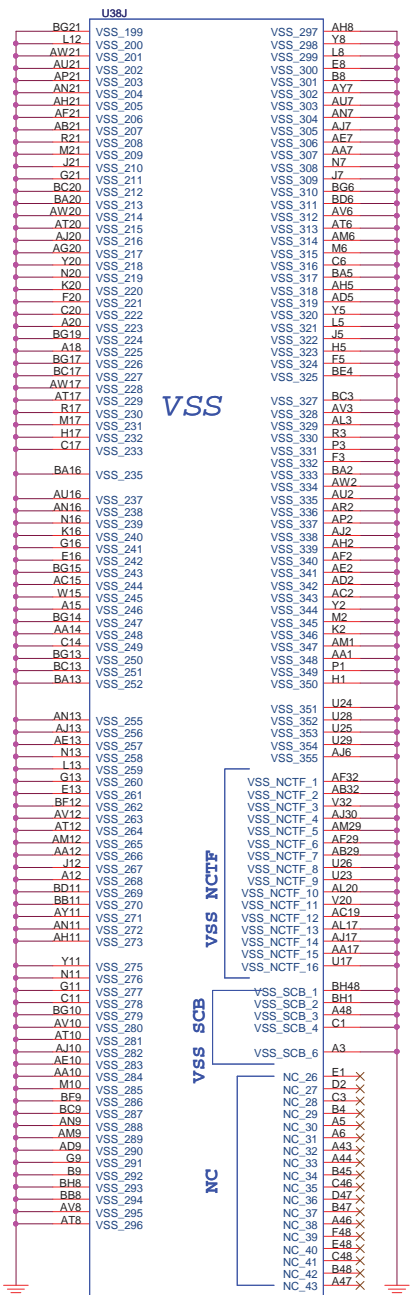
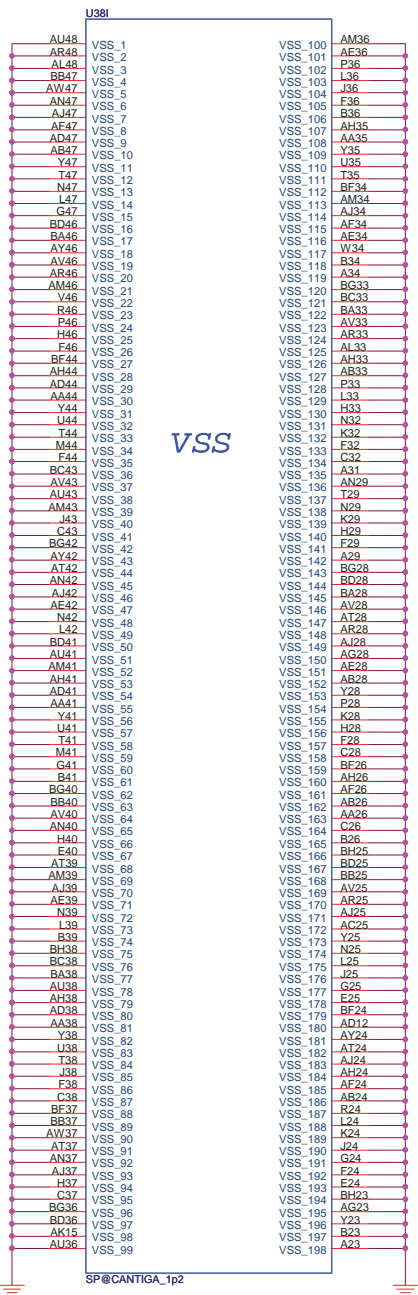
| | |
|--------------|-----|
| VCCSYNC_CRT | GND |
| VCCA_CRT_DAC | GND |
| VCCD_LVDS | GND |
| VCC_FX_LVDS | GND |
| VCCA_LVDS | GND |
| VCCA_TV_DAC | GND |
| VCCD_QDAC | GND |
| VCCA_DAC_BG | GND |
| VCC_AXG | GND |
| VCC_AXG_NCTF | GND |


Power Rail Differences between the Tenah and Cantiga Chipset Family

| Power Net Name | Cantiga(V) | Tenah(V) | Tenah Current |
|----------------|------------|----------|---------------|
| VCC_AXG_# | 1.05V | 1.25V | 6326.84mA |
| VCC_AXG_NCTF_# | | | Cantiga use |
| VCCA_PEG_BG | 1.5V | 3.3V | 400uA |
| VCCA_DPLLA | 1.05V | 1.25V | 100mA |
| VCCA_DPLLB | 1.05V | 1.25V | 100mA |
| VCCA_SM_# | 1.05V | 1.25V | 1065mA |
| VCCA_HPPLL | 1.05V | 1.25V | 50mA |
| VCCA_MPLL | 1.05V | 1.25V | 150mA |
| VCCA_SM_CK_# | 1.05V | 1.25V | 35mA |
| VCCA_PEG_PLL | 1.05V | 1.25V | 100mA |
| VCC_AXF_# | 1.05V | 1.25V | 495mA |
| VCC_PEG_# | 1.05V | 1.25V | 250mA |
| VCCD_PEG_PLL | 1.05V | 1.25V | 100mA |

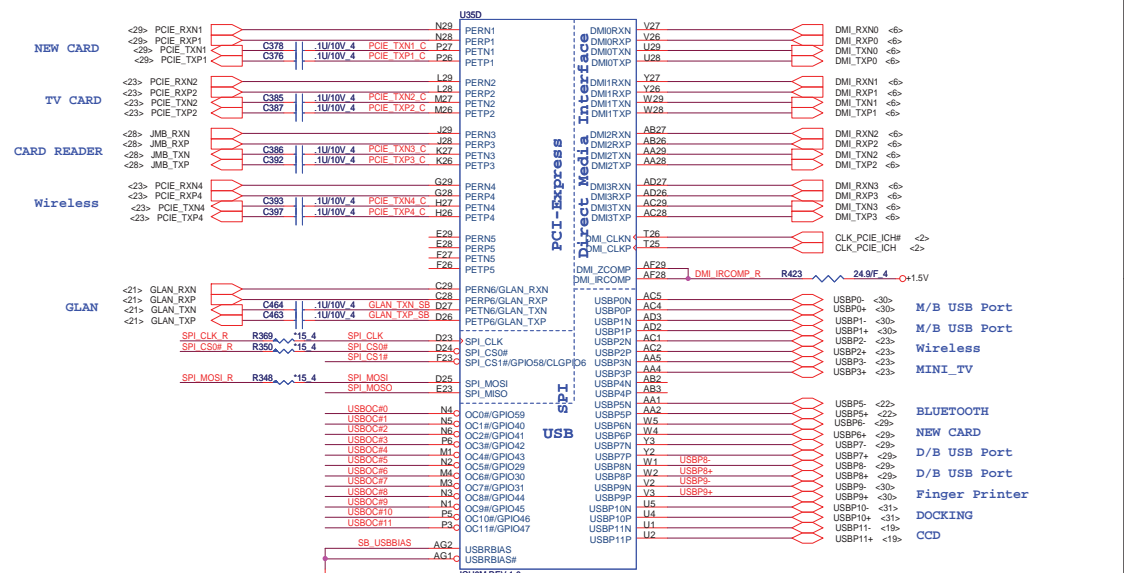
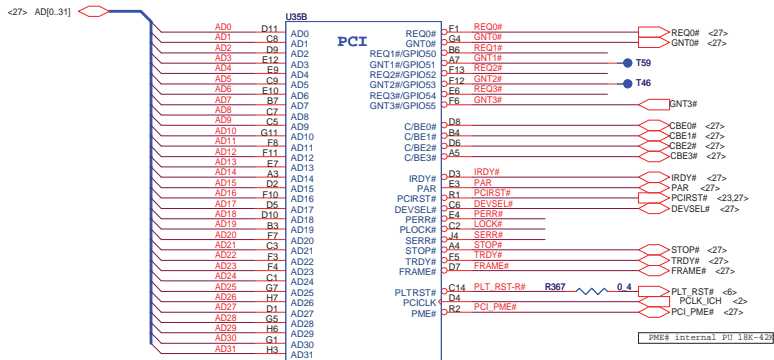
Quanta Computer Inc.
PROJECT : ZY2 & ZY6

| | | |
|------|---------------------------|----------------|
| Size | Document Number | Rev |
| | GMCH POWER | 1A |
| Date | Thursday, August 28, 2008 | Sheet 10 of 40 |

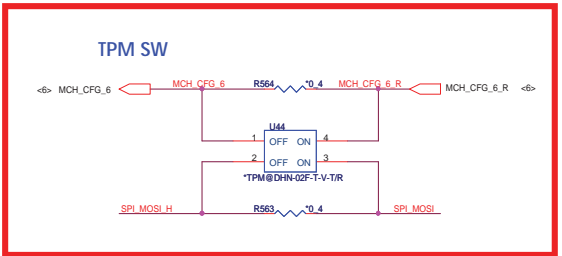
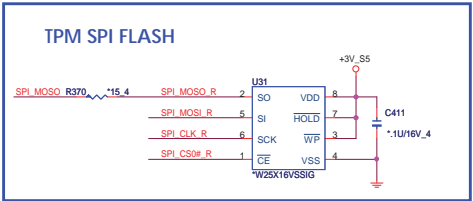
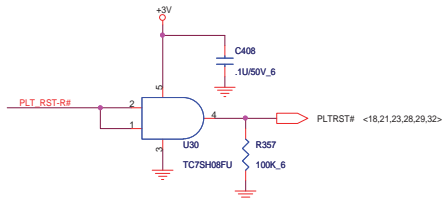


 **Quanta Computer Inc.**
PROJECT : ZY2 & ZY6

| | | |
|-------|---------------------------|----------------|
| Size | Document Number | Rev |
| | GMCH VSS | 1A |
| Date: | Thursday, August 28, 2008 | Sheet 11 of 40 |



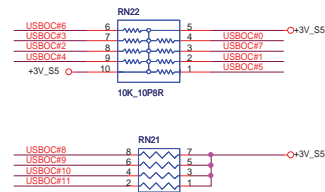
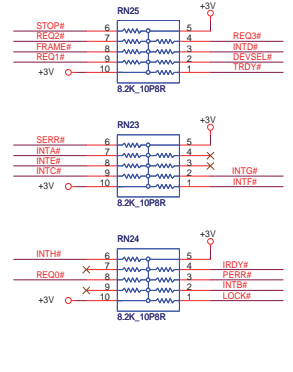
| | |
|----------|---|
| TM & AS | Y |
| LOW COST | N |



South Bridge Strap Pin (2/3)

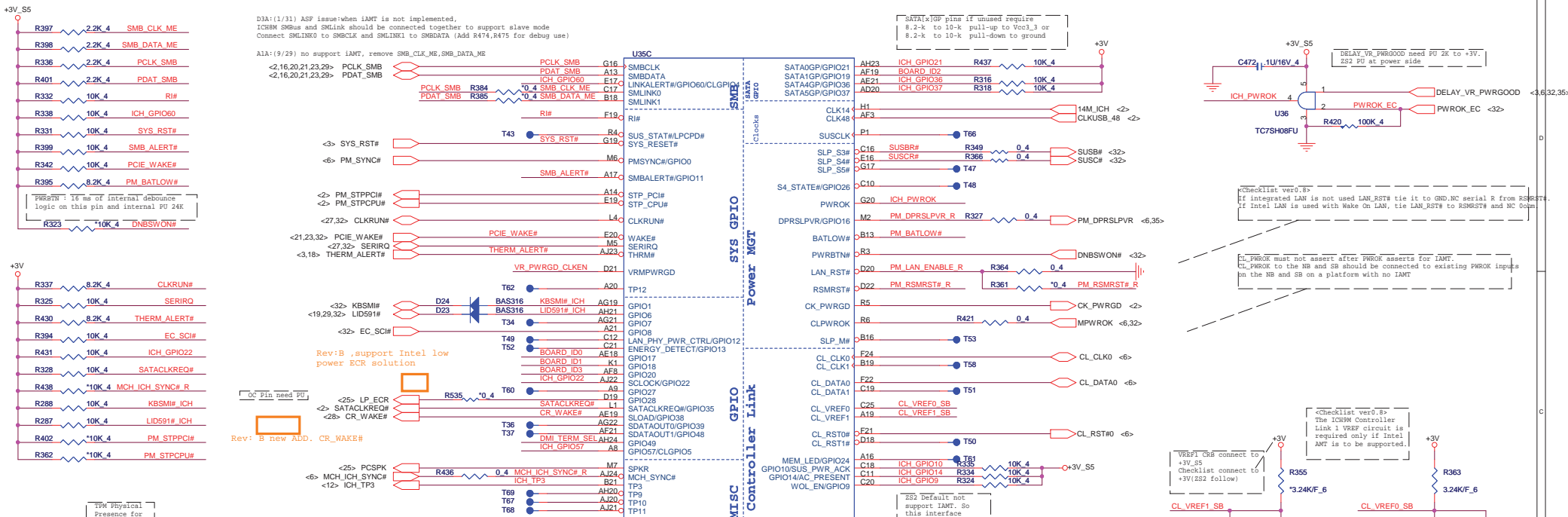
| Pin Name | Strap description | Sampled | Configuration | PU/PD | | | | | | | | | |
|-----------------------------|--|---------------|--|------------------------------------|----------|---------------|---|---|--------------|------------------|---|-----|---------------------|
| HDA_SYNC | PCI Express Port Config 1 bit 0 (Port 1-4) | PWROK | 0 = Default 1 = Setting bit 0 | | | | | | | | | | |
| GNT2# / GPIO53 | PCI Express Port Config 2 bit 2 (Port 5-6) | PWROK | 0 = Setting bit 2 1 = Default | | | | | | | | | | |
| GNT1# / GPIO51 | ESI Strap(Server Only) | PWROK | 0 = DMI for ESI-compatible 1 = Default | | | | | | | | | | |
| GNT3# / GPIO55 | Top-Block Swap Override | PWROK | 0 = "top-block swap" mode 1 = Default | GNT3# R347 *1K_4 | | | | | | | | | |
| SPI_MOSI | Integrated TPM Enable | CLPWROK | 0 = INT TPM disable(Default) 1 = INT TPM enable | SPI_MOSI_H R329 *TPM@10K_4 >+3V_S5 | | | | | | | | | |
| GNT0# | Boot BIOS Selection 0 | PWROK | <table border="1"> <tr> <th>PCI_GNT#0</th> <th>SPI_CS#1</th> <th>Boot Location</th> </tr> <tr> <td>0</td> <td>1</td> <td>SPI(Default)</td> </tr> </table> | PCI_GNT#0 | SPI_CS#1 | Boot Location | 0 | 1 | SPI(Default) | GNT0# R344 *1K_4 | | | |
| PCI_GNT#0 | SPI_CS#1 | Boot Location | | | | | | | | | | | |
| 0 | 1 | SPI(Default) | | | | | | | | | | | |
| SPI_CS1# / GPIO58 / CLGPIO6 | Boot BIOS Selection 1 | CLPWROK | <table border="1"> <tr> <th>PCI_GNT#0</th> <th>SPI_CS#1</th> <th>Boot Location</th> </tr> <tr> <td>1</td> <td>0</td> <td>PCI</td> </tr> <tr> <td>1</td> <td>1</td> <td>LPC</td> </tr> </table> | PCI_GNT#0 | SPI_CS#1 | Boot Location | 1 | 0 | PCI | 1 | 1 | LPC | SPI_CS1# R340 *1K_4 |
| PCI_GNT#0 | SPI_CS#1 | Boot Location | | | | | | | | | | | |
| 1 | 0 | PCI | | | | | | | | | | | |
| 1 | 1 | LPC | | | | | | | | | | | |

| PCI ROUTING TABLE | IDSEL | INTERUPT | DEVICE |
|-------------------|-------|----------|--------|
| REQ0# / GNT0# | AD20 | INTA# | OZ601T |



Quanta Computer Inc.
 PROJECT : ZY2 & ZY6
 Size: Document Number: ICH9M PCI / USB
 Date: Thursday, August 28, 2008 Sheet: 13 of 40 Rev: 1A

<http://hobi-elektronika.net>



Checklist ver0.8
If integrated LAN is not used LAN_RST# tie it to GND. NO serial R from RSMRST# to the SB and SB should be connected to existing PWROK inputs on the SB and SB on a platform with no IAMP.

Checklist ver0.8
The ICH9M Controller Link 1 VREF circuit is required only if Intel IAMP is to be supported.

VREF1 ChB connect to +3V_S5
Checklist connect to +3V_S5 (see follow)

SDI INTEL FAB (GE/TF)
Add RSMRST# isolation (important!!! See Rev22 Santa Rosa MoM)
*default stuff for Tenah(Interposer) chipset
*SDI Intel FAB suggestion to add for to protect R2C/SDS data from corruption when system encounters an abnormal power down sequence

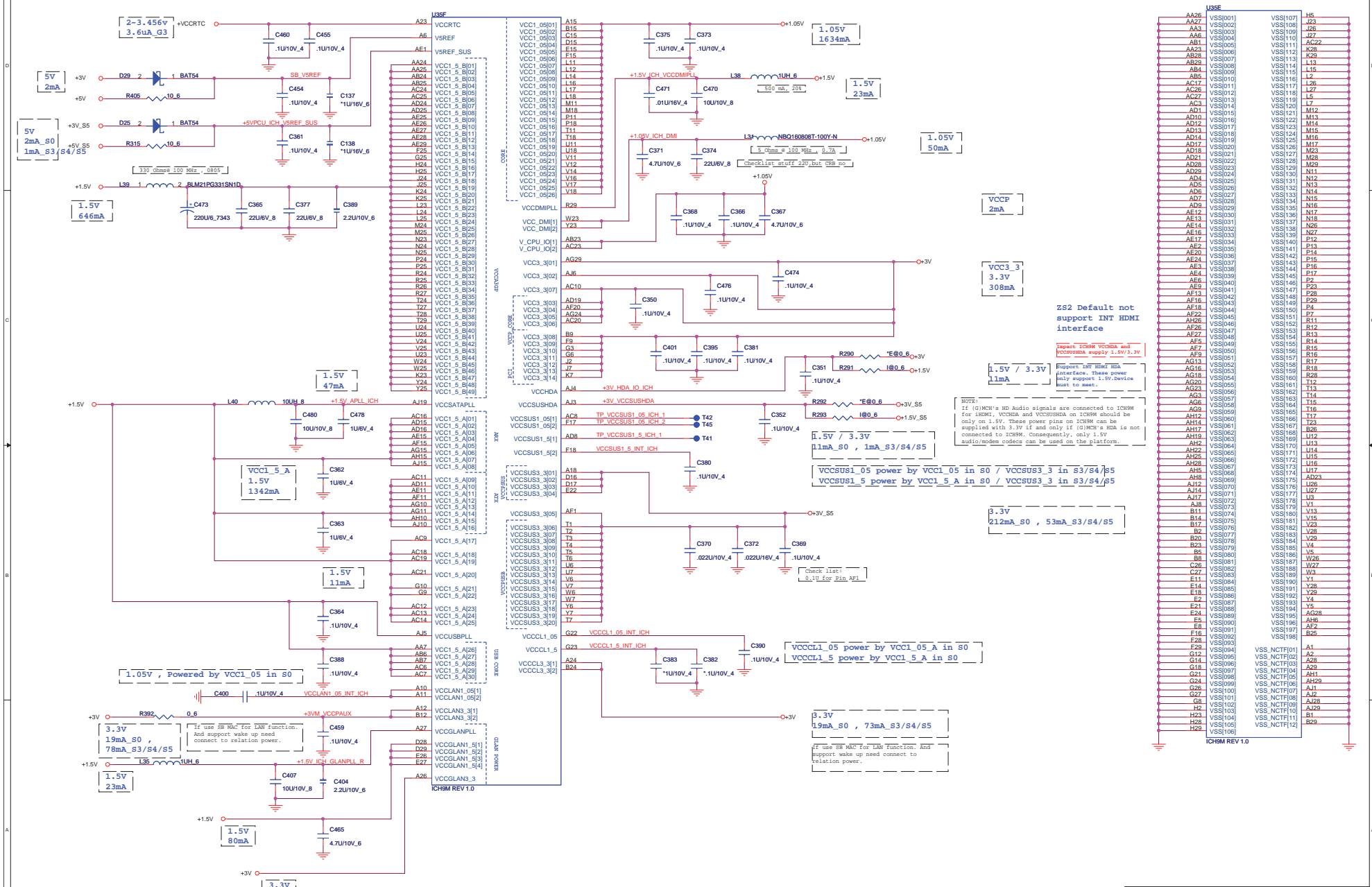
South Bridge Strap Pin (3/3)

| Pin Name | Strap description | Sampled | Configuration | PU/PD |
|----------|-------------------------|---------|--|-------------------------|
| GPIO20 | Reserved | PWROK | | |
| SPKR | No Reboot | PWROK | 0 = Default 1 = No Reboot mode | PCSPK R346 *1K_4 +3V |
| GPIO49 | DMI Termination Voltage | PWROK | 0 = for desktop applications 1 = for mobile applications Internal PU | DMI_TERM_SEL R400 *1K_4 |

| Board ID | ID3 | ID2 | ID1 | ID0 |
|--------------|-----|-----|-----|-----|
| ZY2 | 0 | 0 | 0 | 0 |
| ZY6 | 0 | 0 | 1 | 0 |
| ZY2 LOW COST | 0 | 0 | 0 | 1 |
| ZY6 LOW COST | 0 | 0 | 1 | 1 |
| ZY2 eMachine | 0 | 1 | 0 | 0 |
| ZY6 eMachine | 0 | 1 | 1 | 0 |

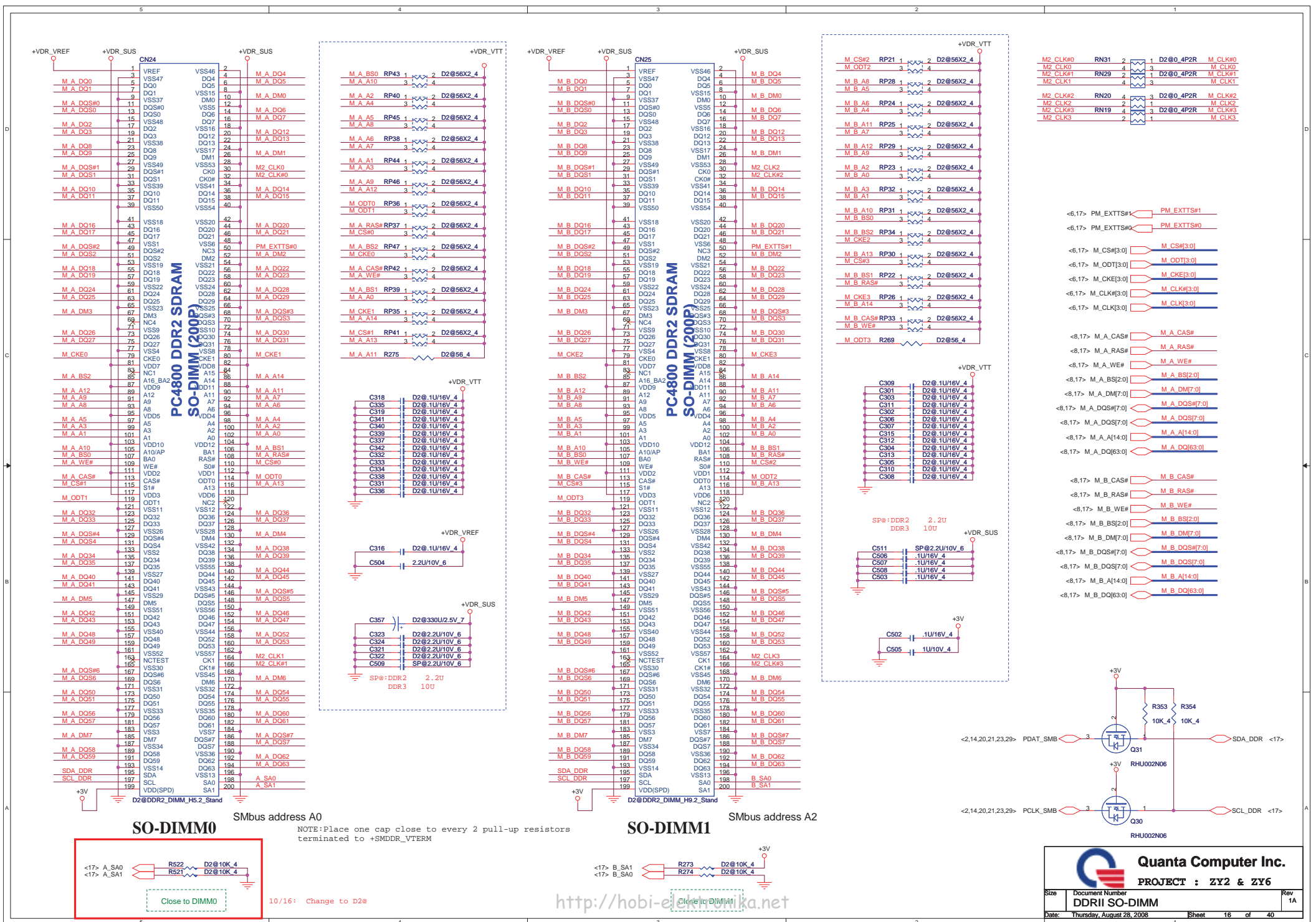
Quanta Computer Inc.
PROJECT : ZY2 & ZY6

Size Document Number ICH9M GPIO Rev 1A
Date: Thursday, August 28, 2008 Sheet 14 of 40



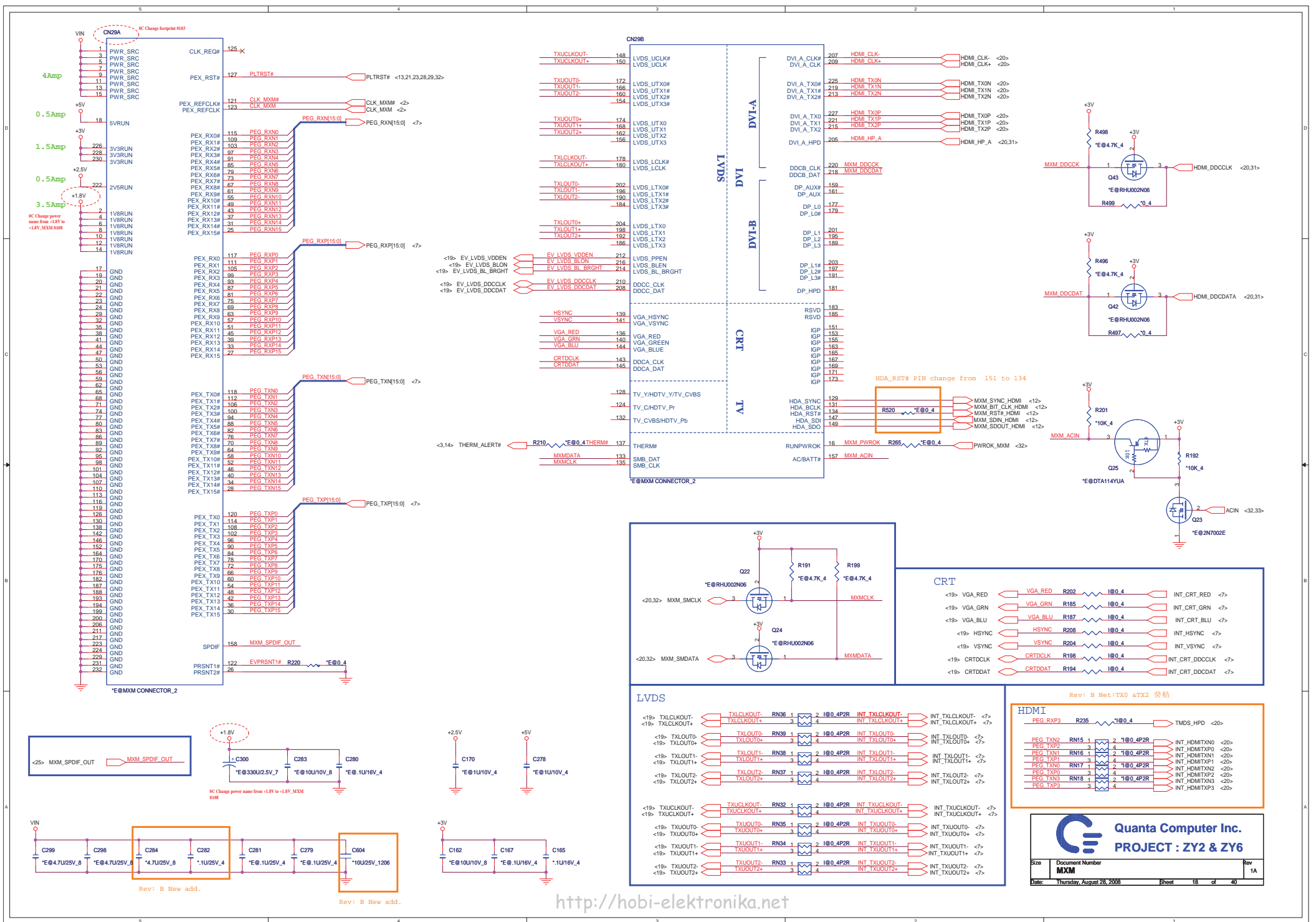
Quanta Computer Inc.
PROJECT : ZY2 & ZY6

Size: _____ Document Number: **ICH9 POWER** Rev: 1A
Date: Thursday, August 28, 2008 Sheet: 16 of 40



Quanta Computer Inc.
PROJECT : ZY2 & ZY6

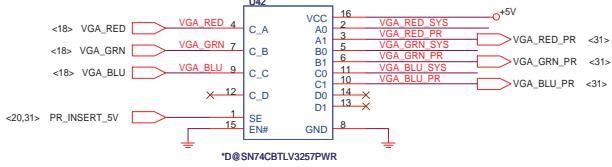
| | | |
|-------|---------------------------|----------------|
| Size | Document Number | Rev |
| | DDR2 SO-DIMM | 1A |
| Date: | Thursday, August 28, 2008 | Sheet 16 of 40 |



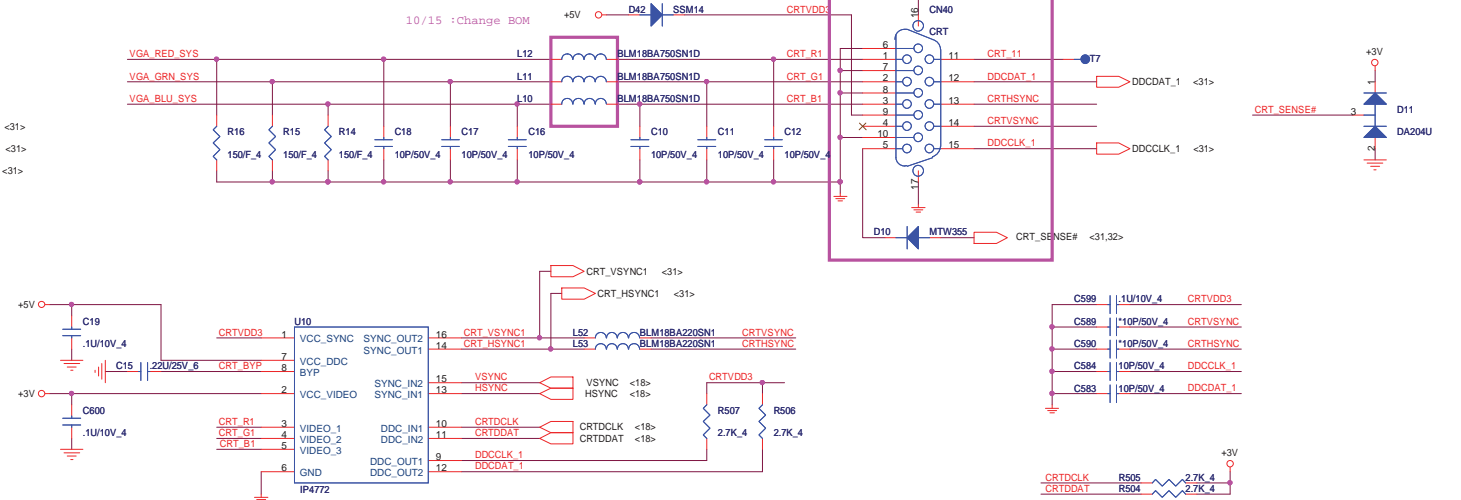
<http://hobi-elektronika.net>

CRT Select

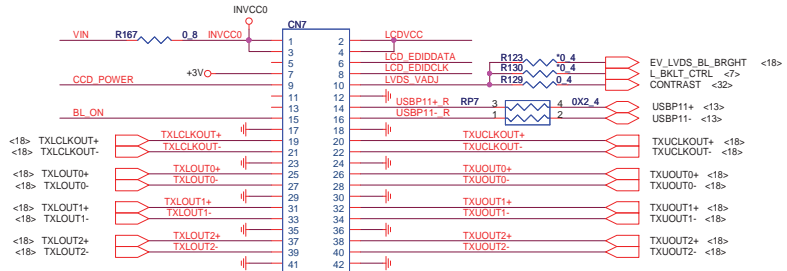
CRT SWITCH



CRT CONNECTOR AND ESD

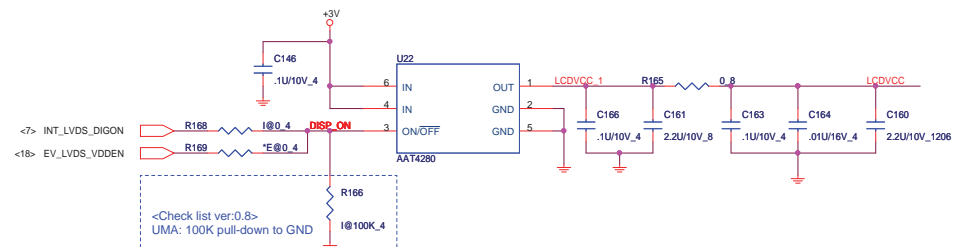
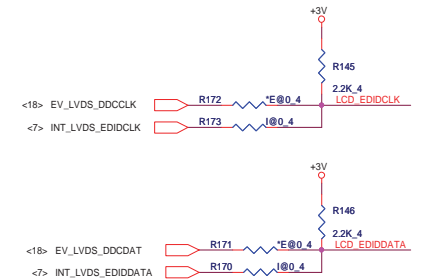


LVDS

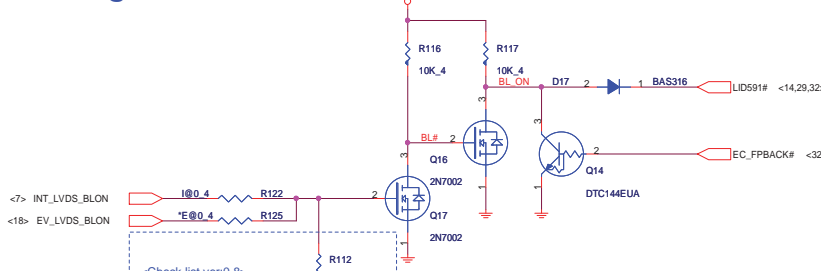


Rev:B, Modify QCI P/N.

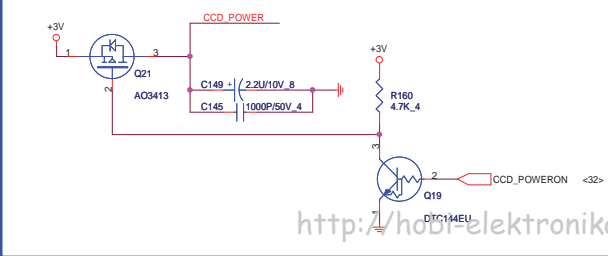
Rev:C, Change to 4.7U 0805



Backlight Control



CAMERA MODULE CONNECTOR

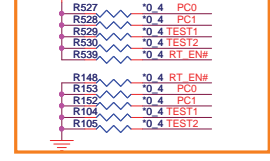
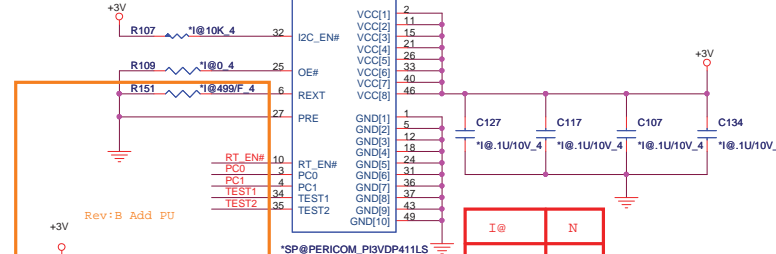
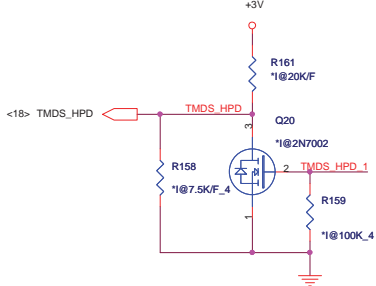
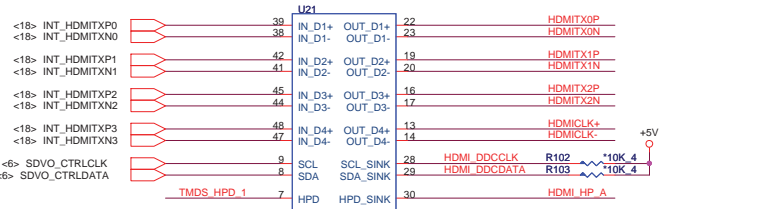


Quanta Computer Inc.
PROJECT : ZY2 & ZY6

| | | |
|------|---------------------------|----------------|
| Size | Document Number | Rev |
| | CRT | 1A |
| Date | Thursday, August 28, 2008 | Sheet 19 of 40 |

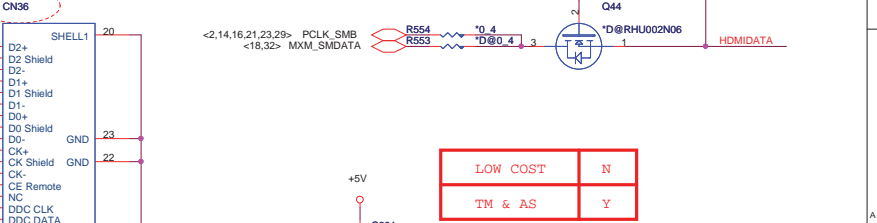
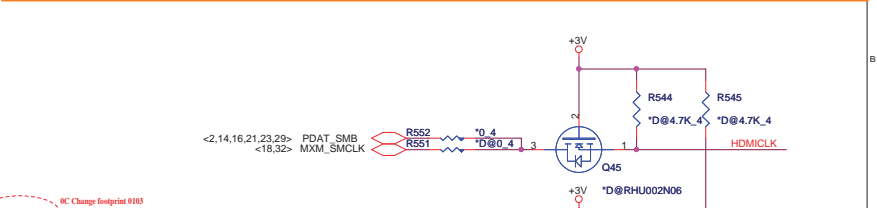
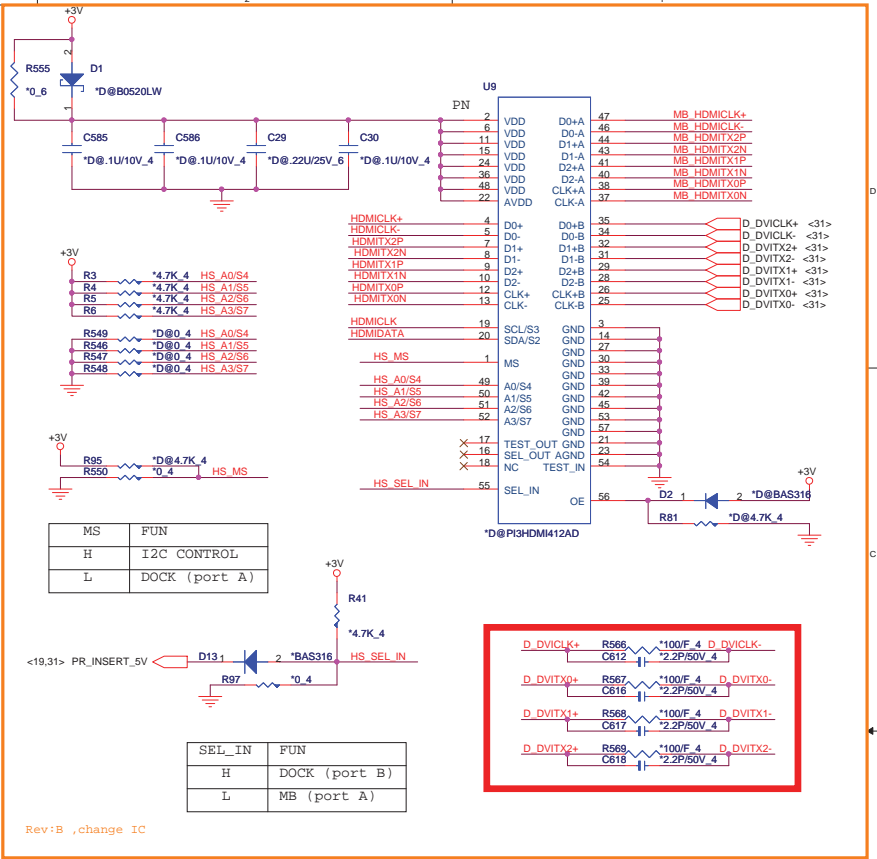
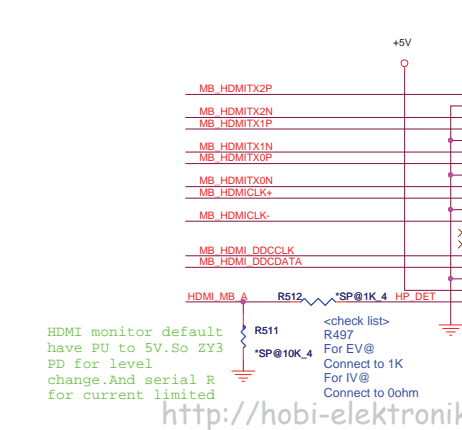
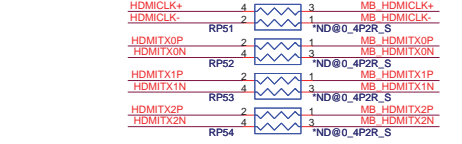
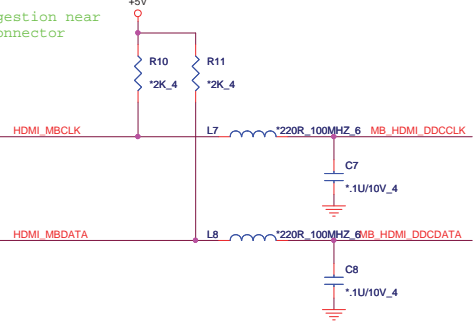
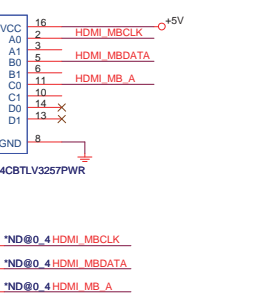
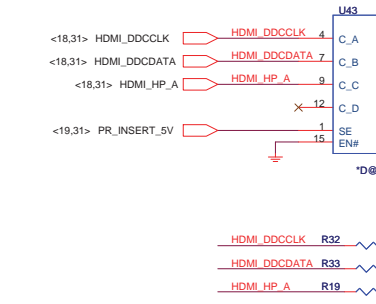
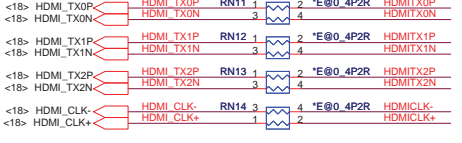
DVI-I CONNECTOR (DVI-D)

| QCI P/N | |
|-------------|-------------|
| PI3VDP411LS | ALP411LS000 |
| Ch7318A | AL007318000 |
| PS8101 | |



| | |
|----|---|
| I@ | N |
| E@ | Y |

| | |
|----------|---|
| LOW COST | N |
| TM & AS | Y |

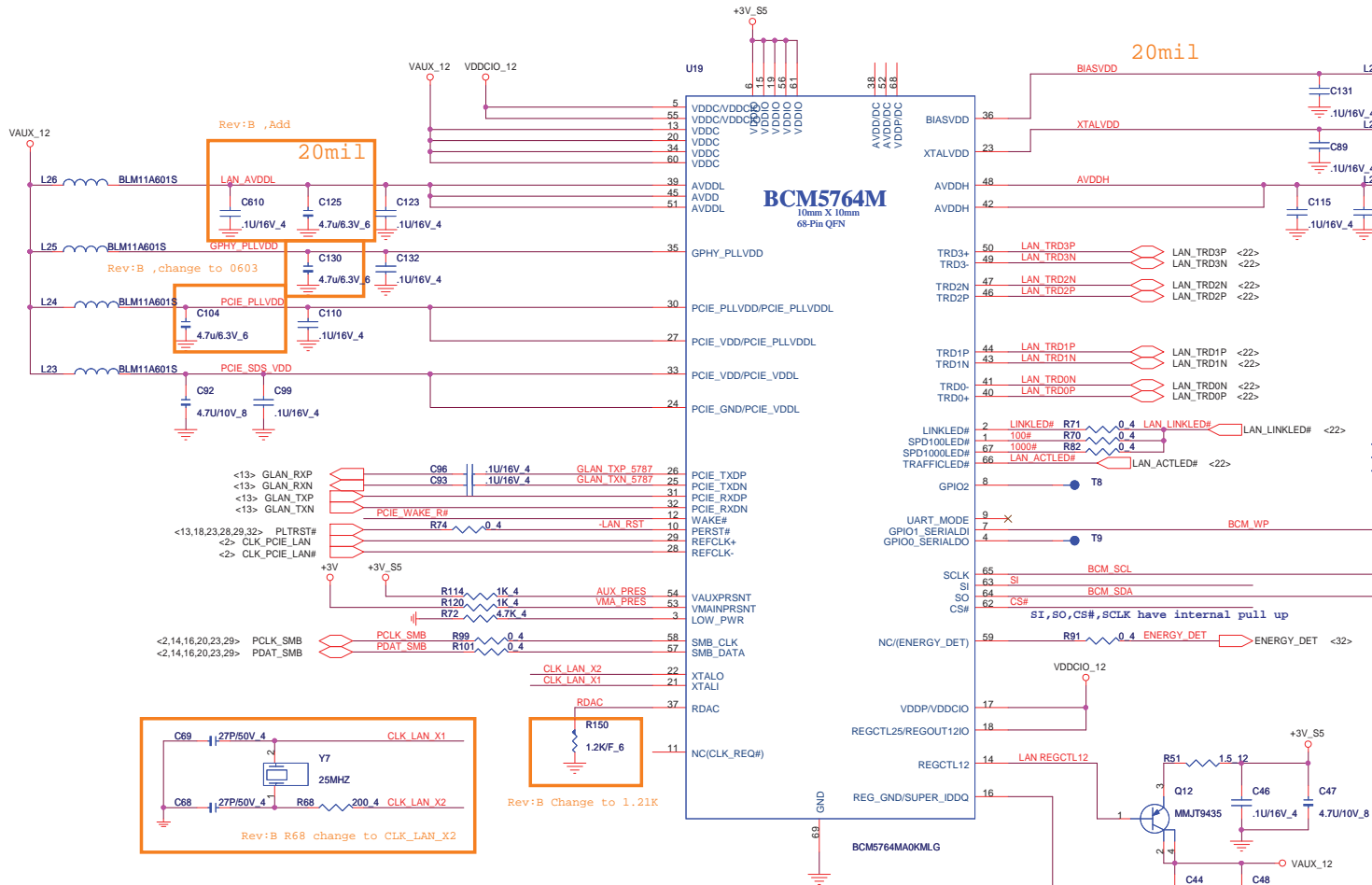
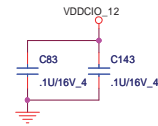
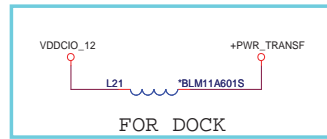
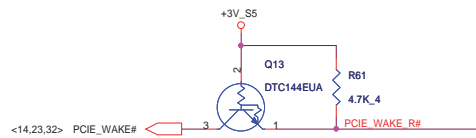


| | |
|----------|---|
| LOW COST | N |
| TM & AS | Y |

Quanta Computer Inc.
PROJECT : ZY2 & ZY6

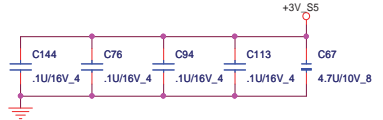
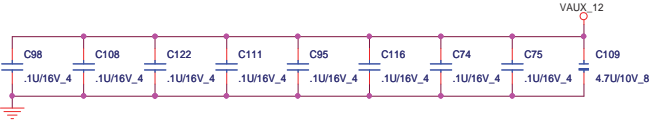
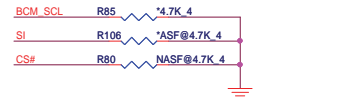
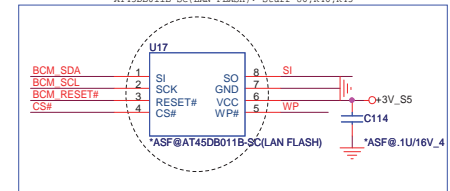
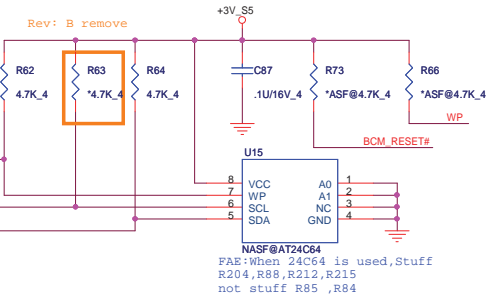
Size: Document Number
LVDS/HDMI/CAMERA/LID
Date: Tuesday, August 12, 2008
Sheet: 20 of 40

LAN



EEPROM Strapping

| | SO | SI | CS# | SCLK |
|------------|----|----|-----|------|
| 24c64 | 1 | 1 | 0 | 1 |
| AT45DB011B | 1 | 0 | 1 | 1 |



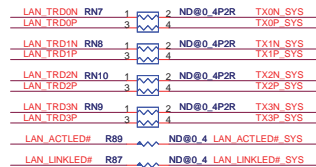
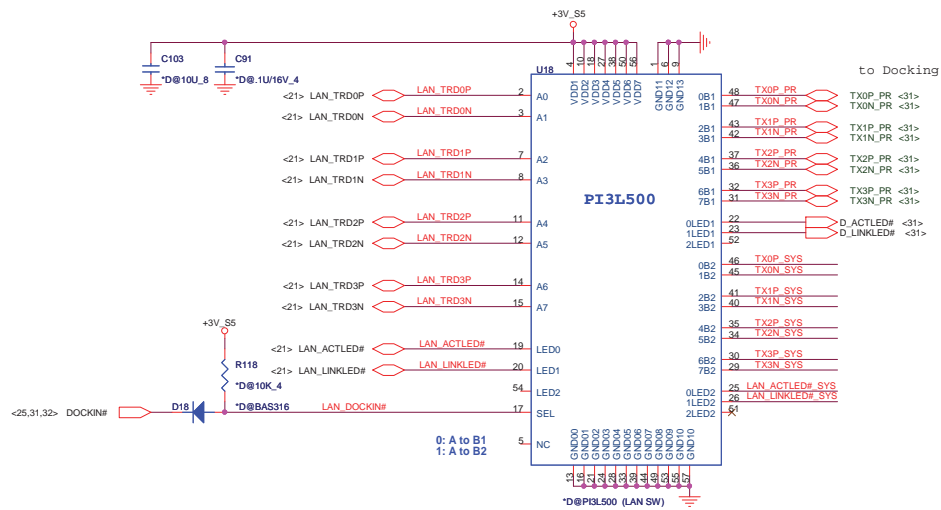
Low is normal, H->Turn Off 1.2V, H(>0.7V <2.5V)->L will internal reset

<http://hobi-elektronika.net>

Quanta Computer Inc.
PROJECT : ZY2 & ZY6

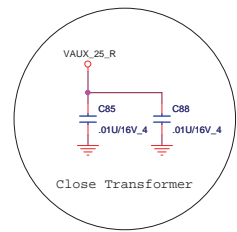
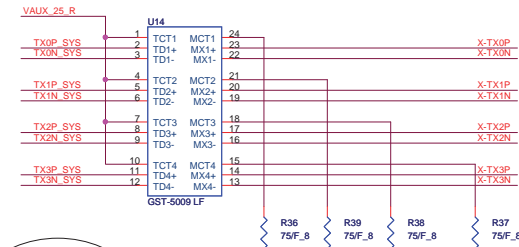
| | | |
|---------------------------|-------------------------------|-----|
| Size | Document Number | Rev |
| Date: | BCM5787 & 5764 LAN | 1A |
| Thursday, August 28, 2008 | Sheet 21 of 40 | |

LAN SWITCH

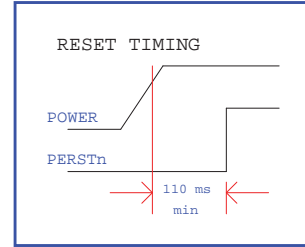


Transformer

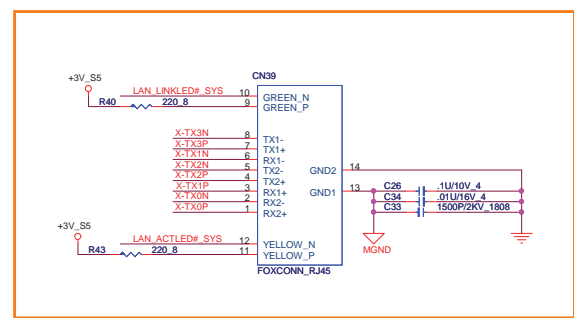
Source 1: DELTA LFE9249 DB0ZR1LAN11
 Source 2: Bothand GST5009 DBKN1NLAN03



change r36,r37,r38,r39 to c0805 for burn out issue July 12th

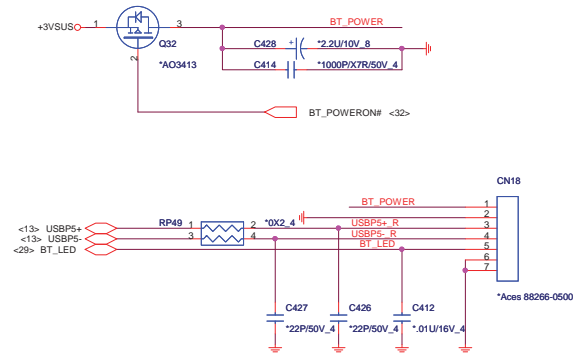


RJ45-11



9/29: change footprint
 11/27: change footprint
 11/28: R43 & R40 Change to 0805
 1/31: Rev: C change PIN define about 9,10,11 & 12

BLUETOOTH MODULE CONNECTOR

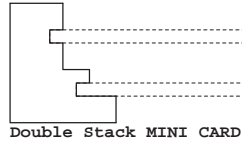


Quanta Computer Inc.
 PROJECT : ZY2 & ZY6

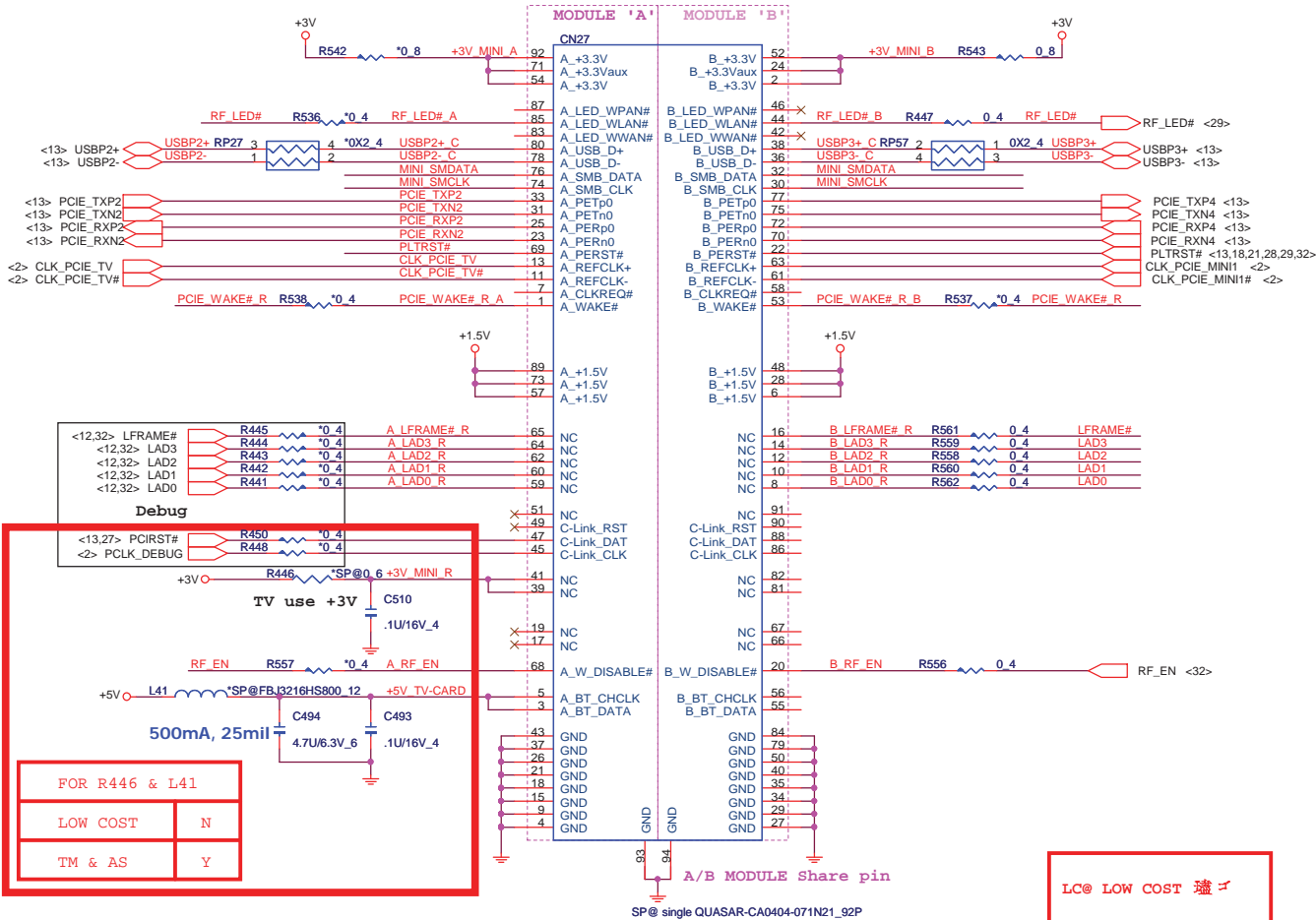
| | | |
|-------|---------------------------|----------------|
| Size | Document Number | Rev |
| | BT/CCDRJ45-11/CIR/2nd FAN | 1A |
| Date: | Thursday, August 28, 2008 | Sheet 22 of 40 |

<http://hobi-elektronika.net>

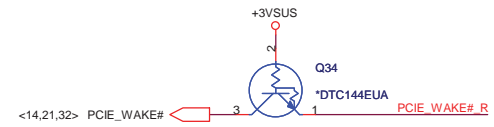
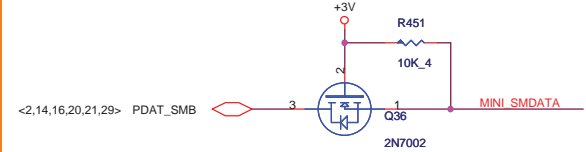
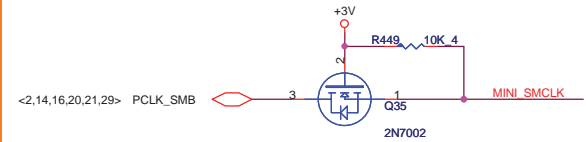
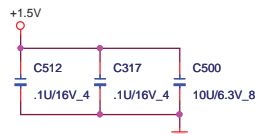
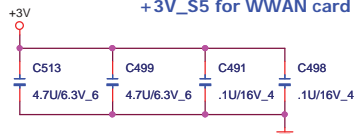
MINI-CARD



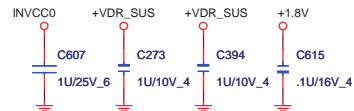
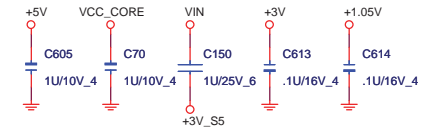
Rev: B PIN36,38 Add USB3
 PIN69 Add R536
 PIN1, 53 Add R537 & R538



+3V_S5 for WWAN card is 2.75A



FOR EMI

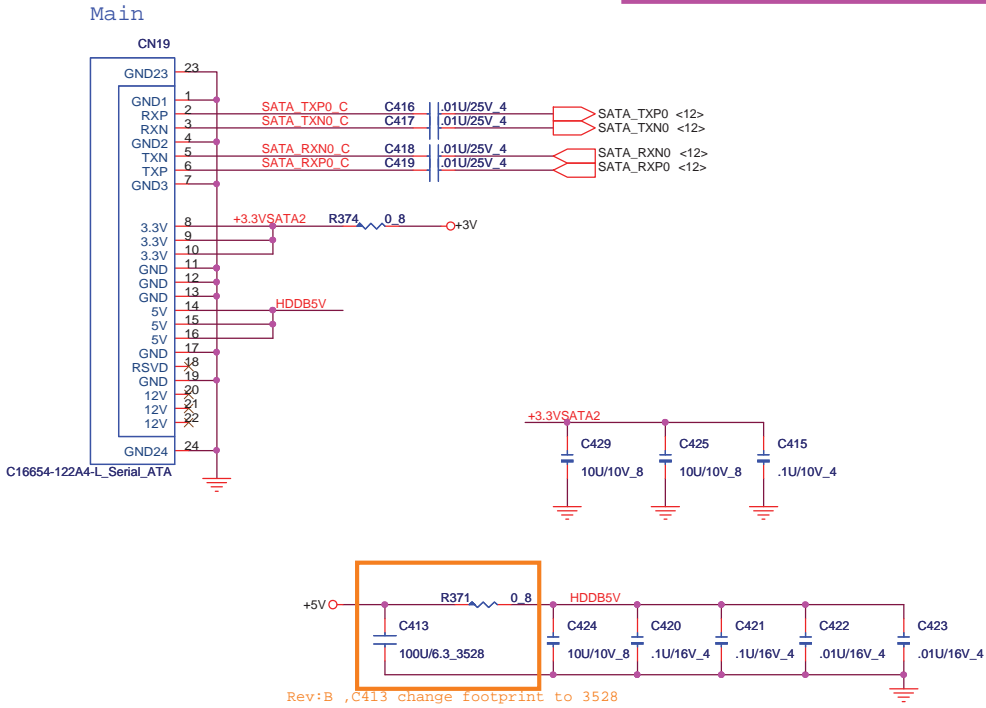


Quanta Computer Inc.
PROJECT : ZY2 & ZY6

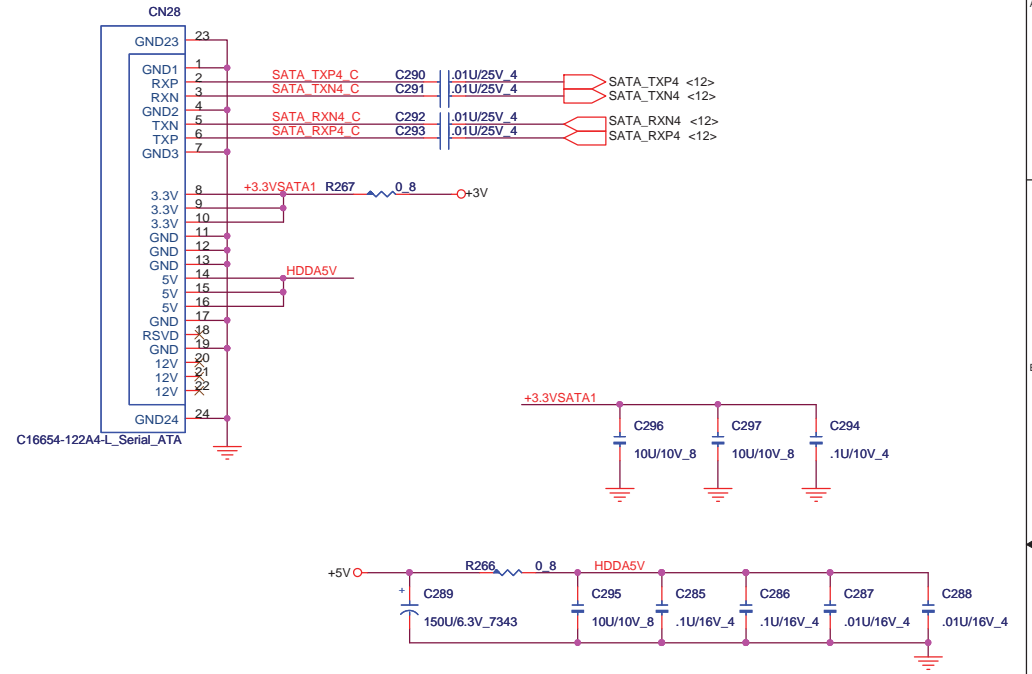
| | | |
|-------|-------------------------------|----------------|
| Size | Document Number | Rev |
| | MINI PCI-E card/TV/TPM | 1A |
| Date: | Tuesday, August 12, 2008 | Sheet 23 of 40 |

SATA HDD

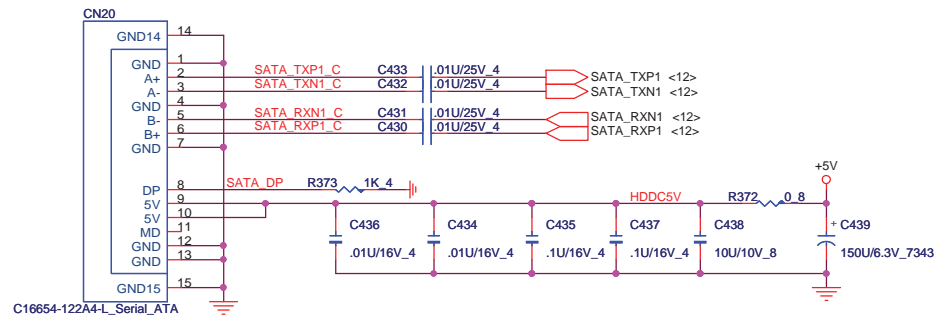
11/8 REV:B Conn. 奔奕粘 CN28 & CN19



2ND SATA HDD



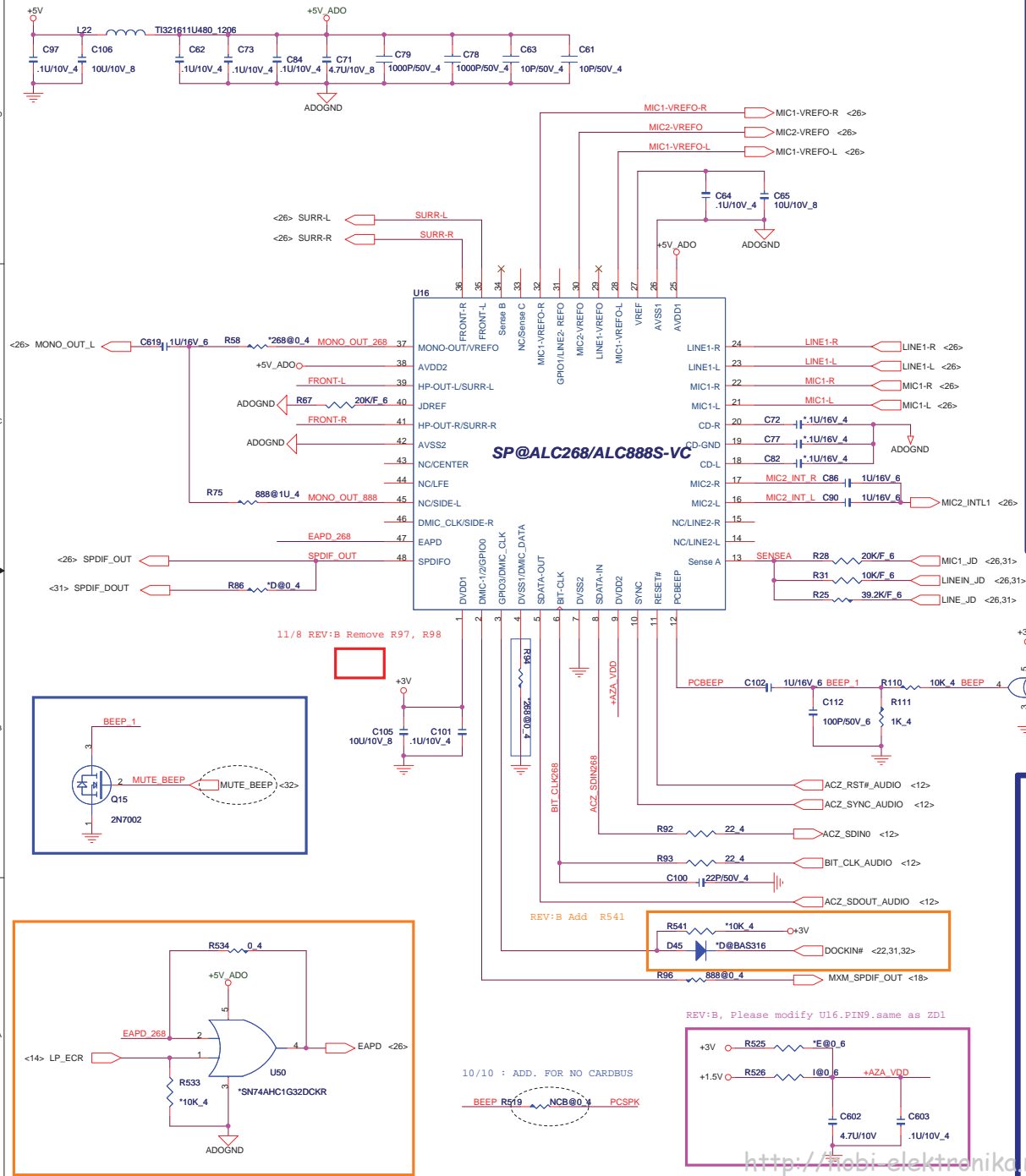
ODD (SATA)



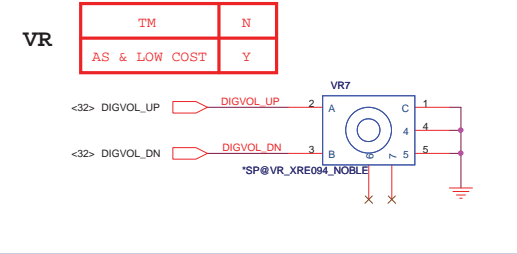
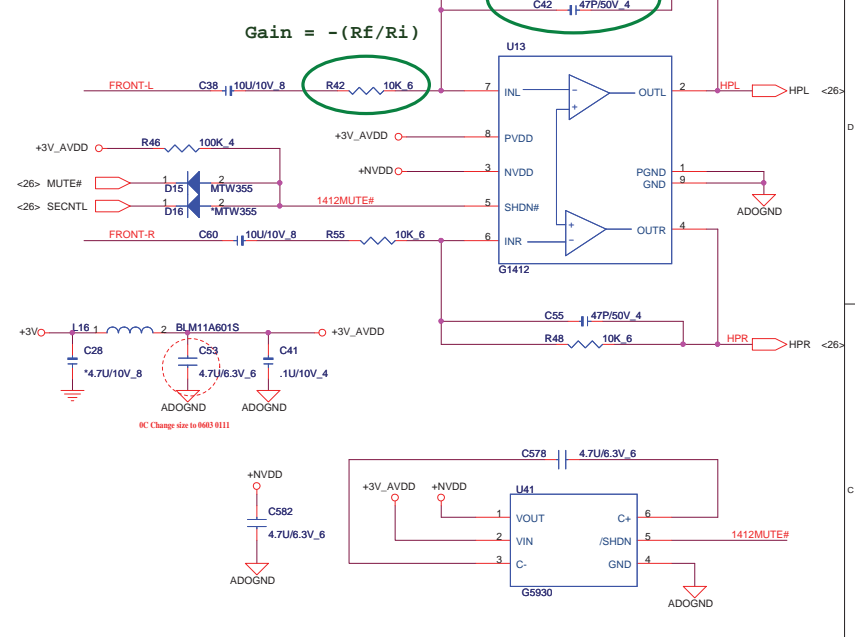
| | | |
|-------|----------------------------|----------------|
| Size | Document Number | Rev |
| | SATA-HDD & ODD | 1A |
| Date: | Wednesday, August 13, 2008 | Sheet 24 of 40 |

<http://hobi-elektronika.net>

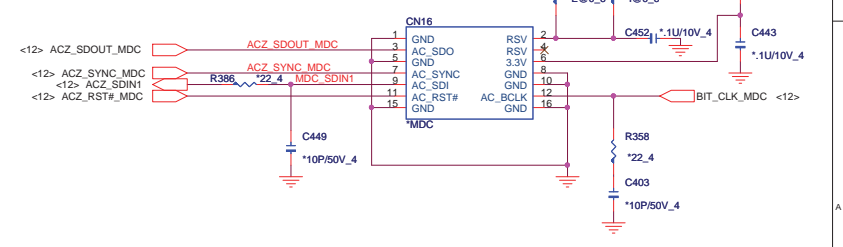
CODEC (ALC268)



LINE OUT Amplifier



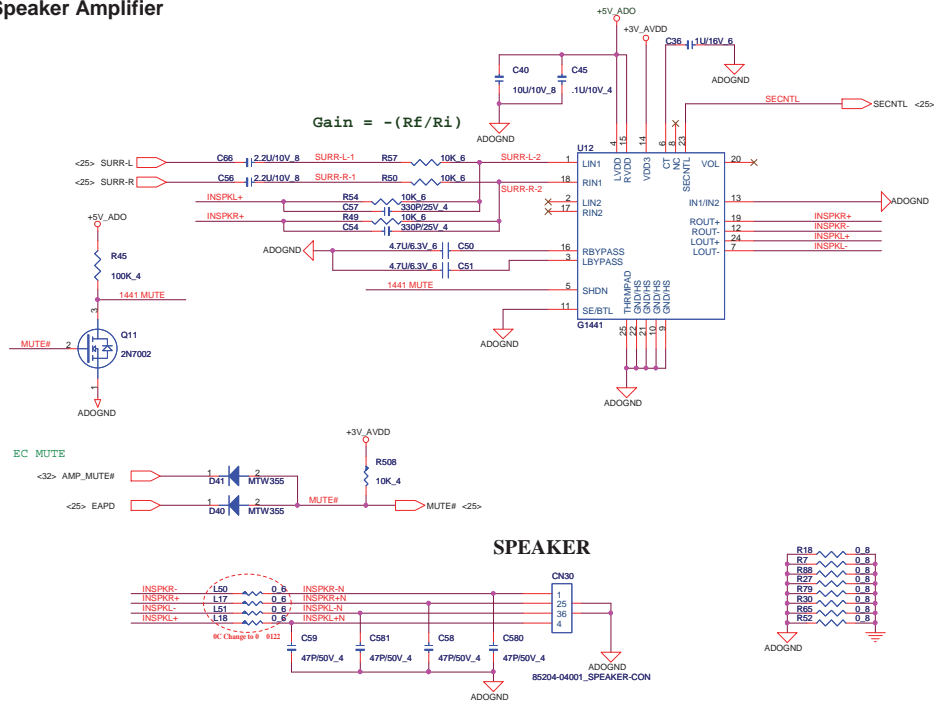
MDC



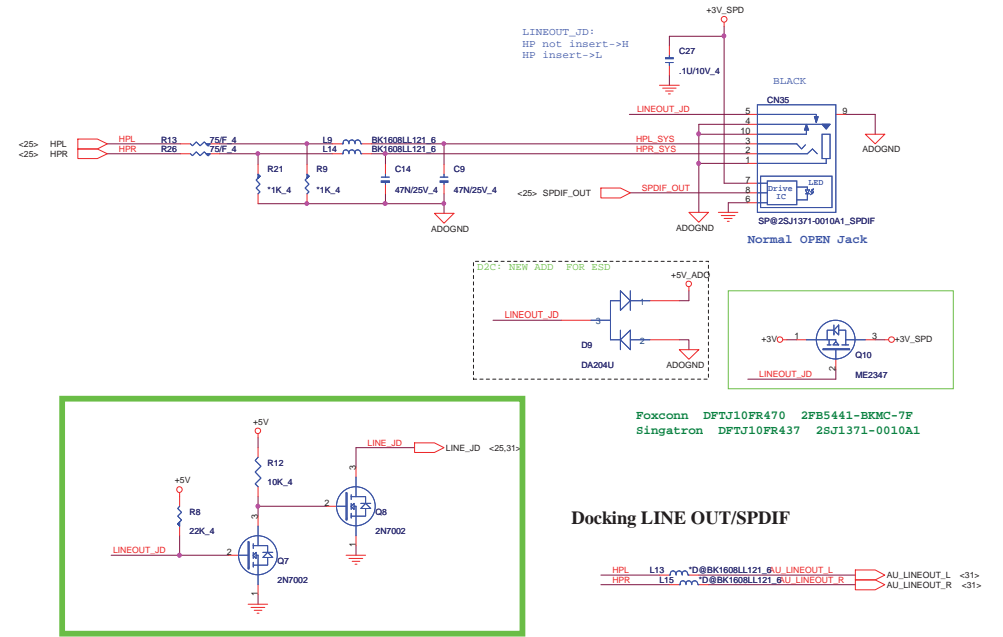
Quanta Computer Inc.
PROJECT : ZY2 & ZY6

| | | |
|-------|--------------------------------------|----------------|
| Size | Document Number | Rev |
| | REALTEK ALC268&888/MDC/VR | 1A |
| Date: | Tuesday, August 12, 2008 | Sheet 25 of 40 |

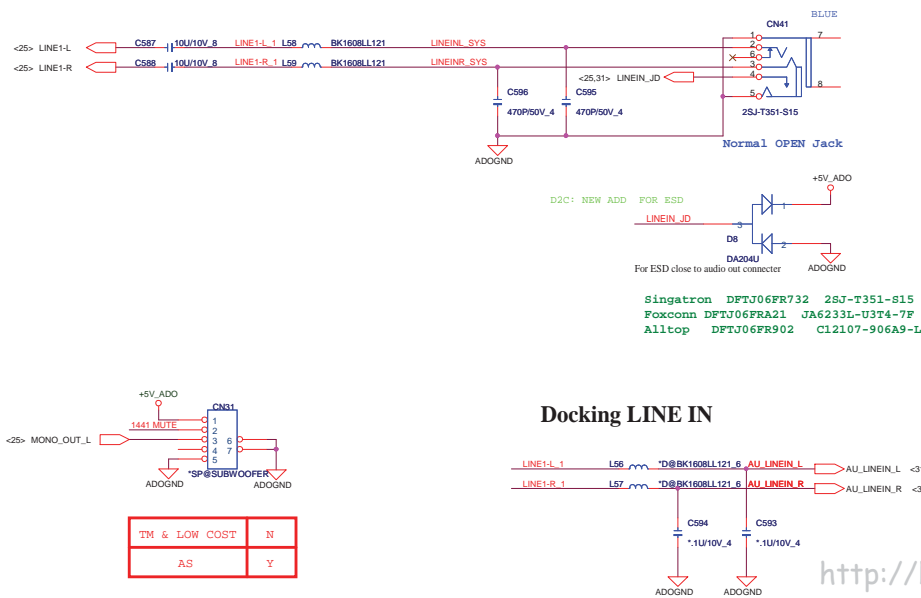
Speaker Amplifier



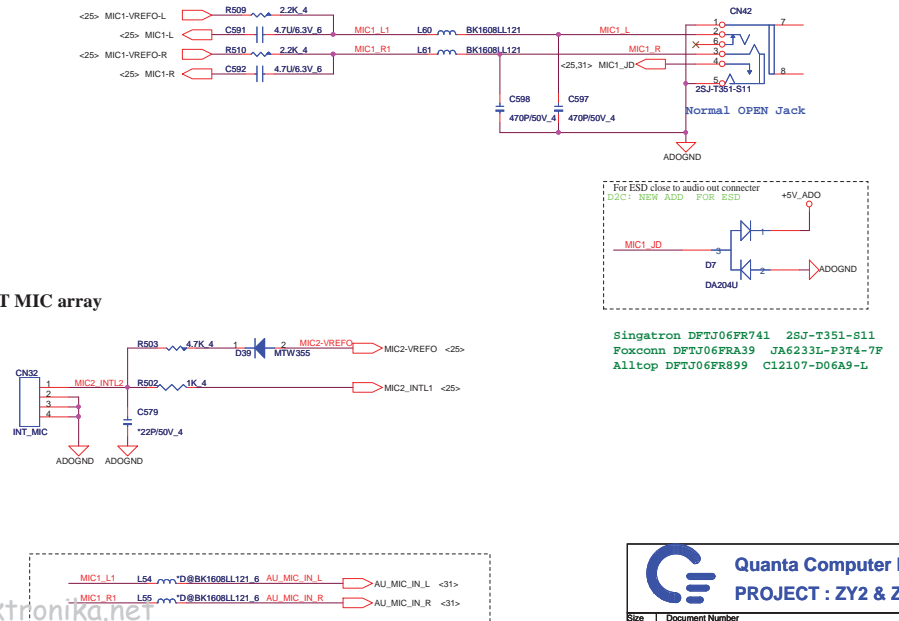
SYSTEM LINE OUT/SPDIF



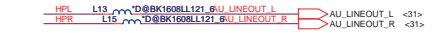
SYSTEM LINE IN/SUBWOOFER



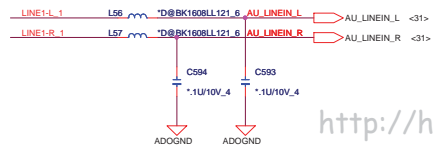
MIC



Docking LINE OUT/SPDIF



Docking LINE IN



| | |
|---------------|---|
| IM & LOW COST | N |
| AS | Y |

Quanta Computer Inc.
PROJECT : ZY2 & ZY6

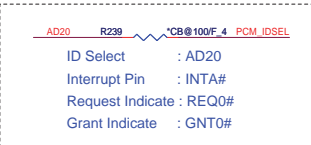
NOTE: IDSEL SELECTION!

THIS DEVICE UTILIZES A "SELECTABLE IDSEL" SCHEME. IDSEL CAN BE CONNECTED INTERNALLY TO ONE OF THREE PCI AD LINES OR EXTERNAL IDSEL SIGNAL.

22K TO 47K PULL-UP & PULL-DOWN RESISTORS ARE REQUIRED TO BE CONNECTED TO PINS 123 & 124 TO SELECT ONE OF THE 4 POSSIBLE IDSEL CONNECTIONS. THE TABLE BELOW SHOWS THE 4 POSSIBLE COMBINATIONS.

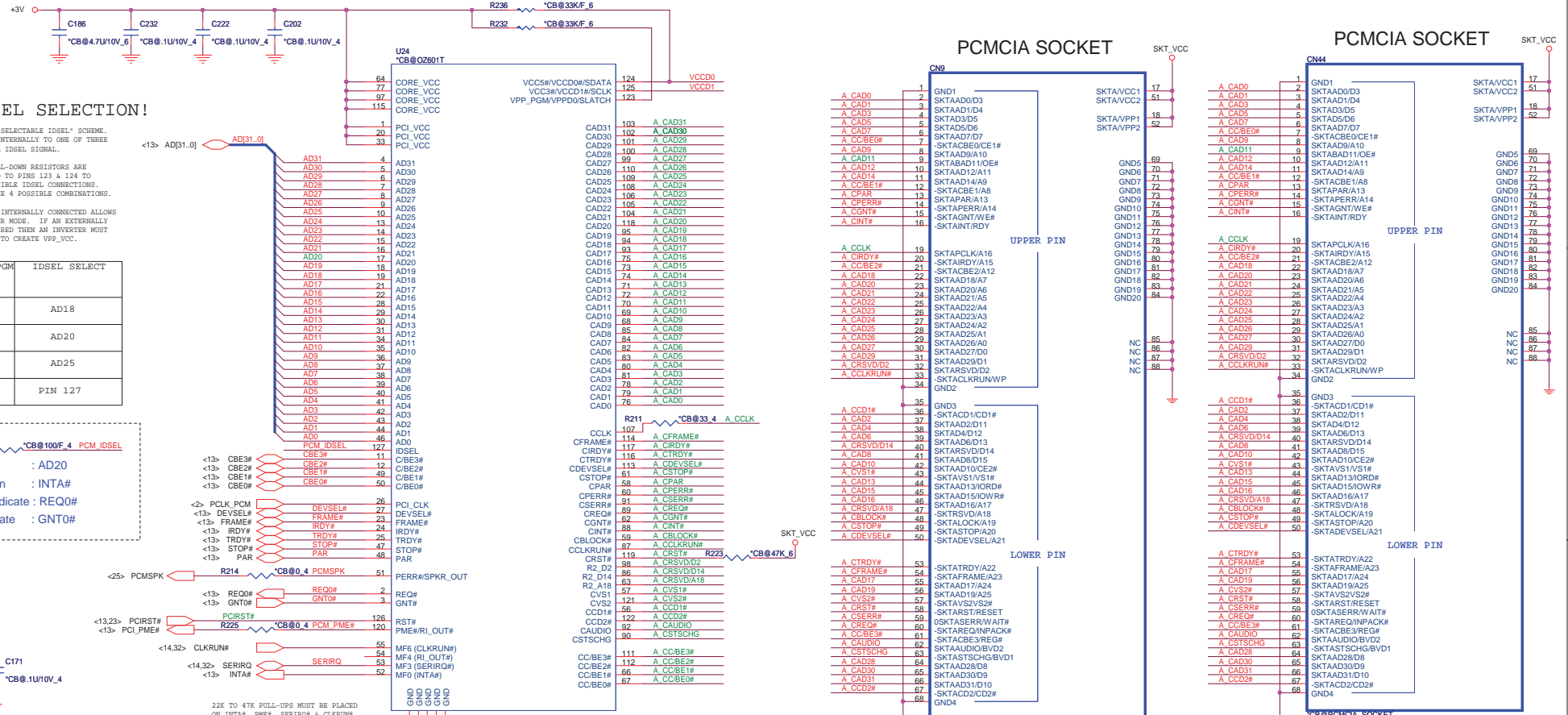
CONFIGURING IDSEL TO BE INTERNALLY CONNECTED ALLOWS FOR A FULL PARALLEL POWER MODE. IF AN EXTERNALLY CONNECTED IDSEL IS REQUIRED THEN AN INVERTER MUST BE CONNECTED TO VPP_PGM TO CREATE VPP_VCC.

| VCC5# (124) | VPP_PGM (123) | IDSEL SELECT |
|-------------|---------------|--------------|
| DOWN | DOWN | AD18 |
| DOWN | UP | AD20 |
| UP | DOWN | AD25 |
| UP | UP | PIN 127 |



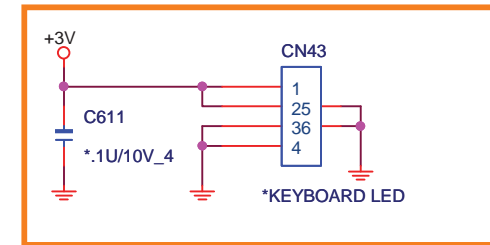
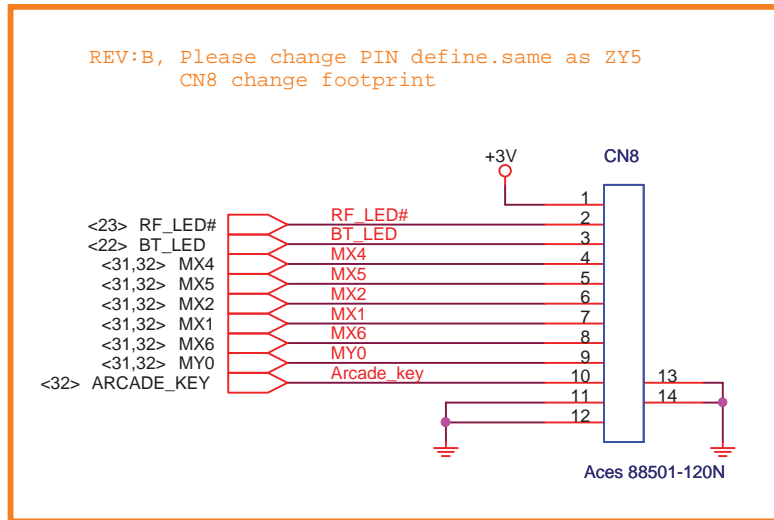
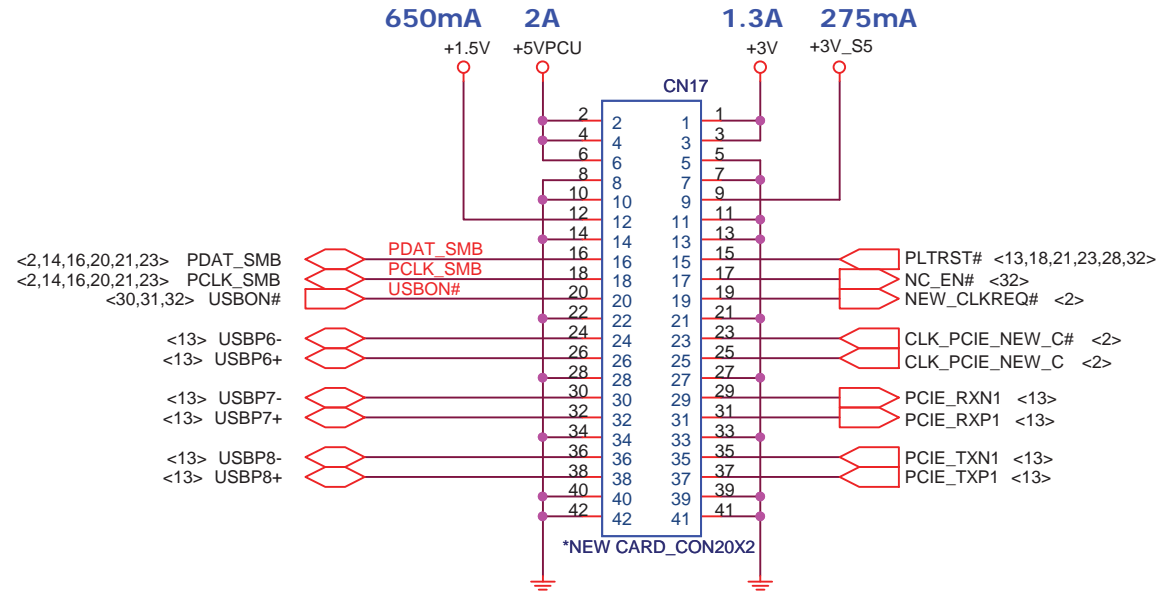
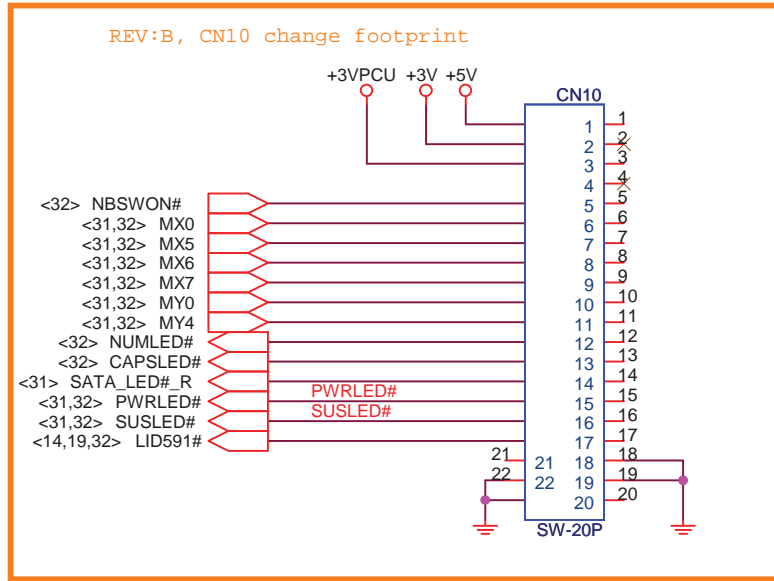
- ID Select : AD20
- Interrupt Pin : INTA#
- Request Indicate : REQ0#
- Grant Indicate : GNT0#

IDSEL SELECT POWER-ON-STRAPPING
(SEE NOTE & TABLE FOR OPTIONS)



O2MICRO OZ2210 8PIN SINGLE SLOT PARALLEL POWER SWITCH

To NEW-CARD & EXT. USB



Rev:B Add CN43 For backlight KB

Rev:B Change to 蛾 to ↓PAD
C255,C234,C221,C199,R217,C198,R183,
R182,R174,R257,R324,R335,R334,R349,C395

| Fncion | Keyboard Matrix |
|--------------|-----------------|
| E-KEY | MX0/ MY0 |
| E-Mail | MX1/ MY0 |
| E-WWW | MX2/ MY0 |
| 3G/TV | MX3/ MY0 |
| Wireless | MX4/ MY0 |
| BlueTooth | MX5/ MY0 |
| P-KEY | MX6/ MY0 |
| Presentation | MX5/ MY4 |
| Lock | MX6/ MY4 |
| Sync | MX7/ MY4 |

<http://hobi-elektronika.net>



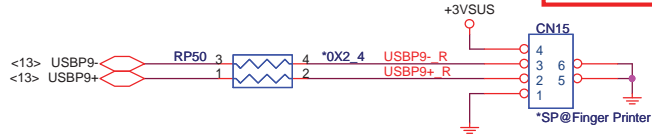
Quanta Computer Inc.

PROJECT : ZY2 & ZY6

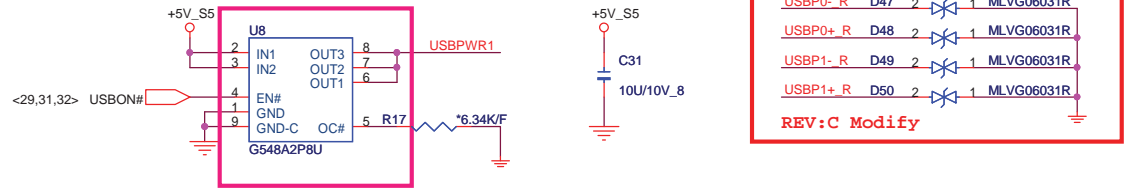
| | | |
|-------|--------------------------|----------------|
| Size | Document Number | Rev |
| | BTB CONN. | 1A |
| Date: | Tuesday, August 12, 2008 | Sheet 29 of 40 |
| | 2 | 1 |

Finger Printer

| | |
|----------|---|
| TM & AS | Y |
| LOW COST | N |



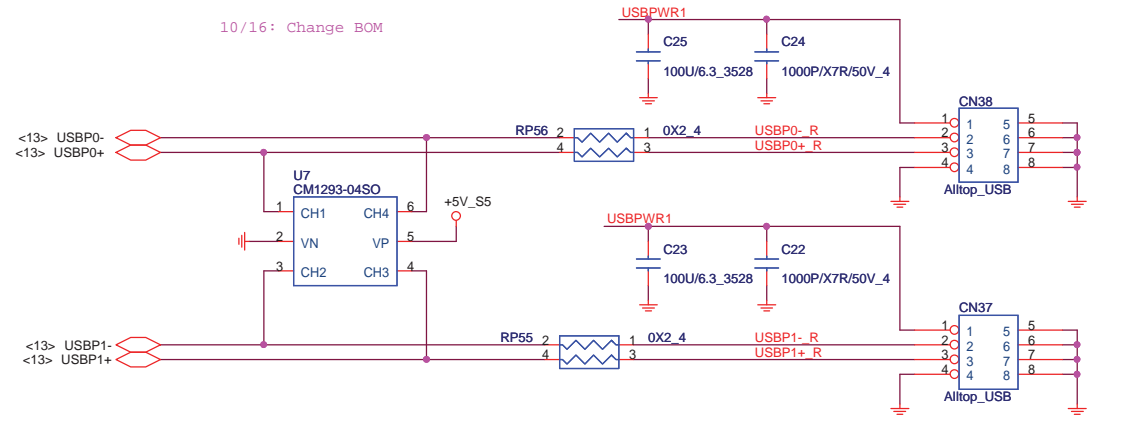
USB



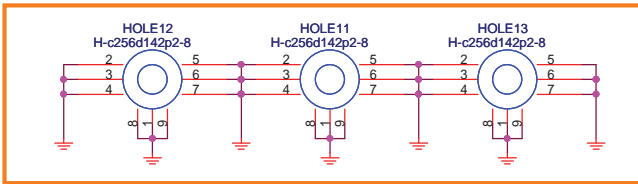
| | | | | |
|----------|-----|---|---|------------|
| USBP0- R | D47 | 2 | 1 | MLVG06031R |
| USBP0+ R | D48 | 2 | 1 | MLVG06031R |
| USBP1- R | D49 | 2 | 1 | MLVG06031R |
| USBP1+ R | D50 | 2 | 1 | MLVG06031R |

REV:C Modify

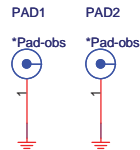
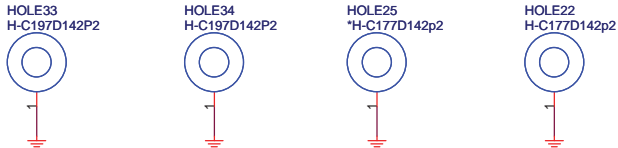
10/16: Change BOM



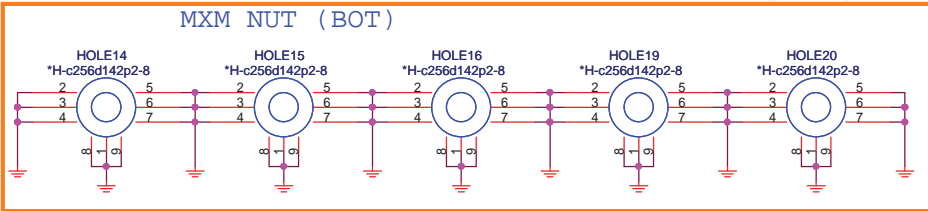
HOLES CPU NUT (BOT)



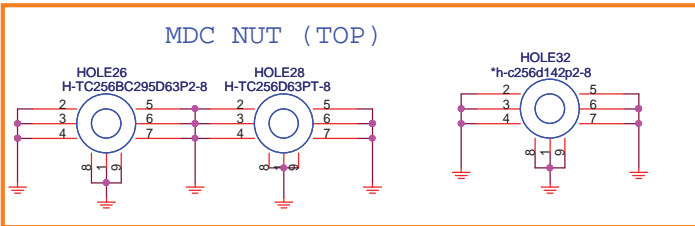
Rev : B Add MINI NUT



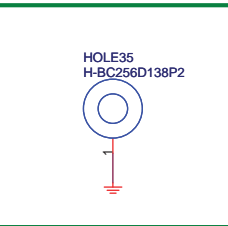
MXM NUT (BOT)



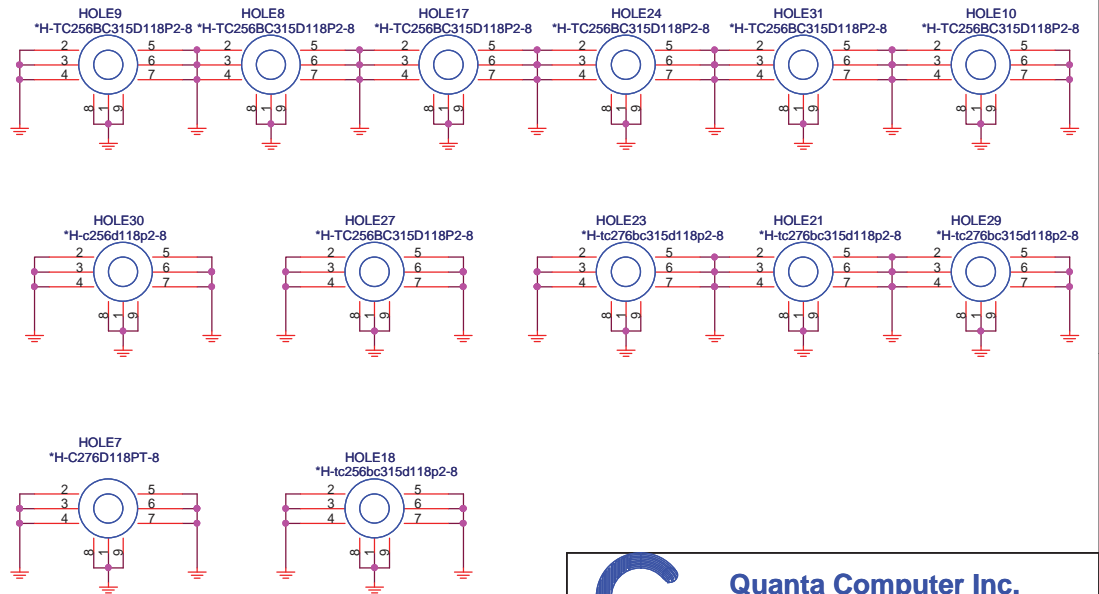
MDC NUT (TOP)



Rev:B New add HOLE32
HOLE26 & 28 Change footprint



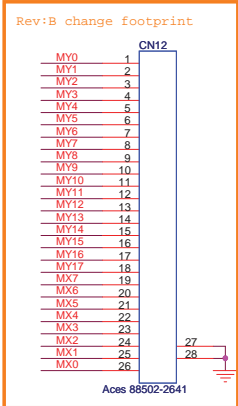
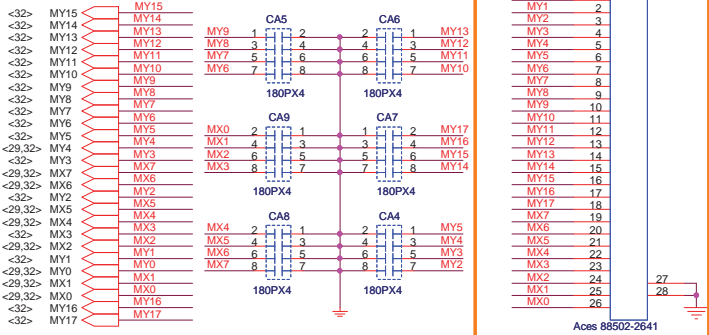
HOLE35 璫穉 BOT



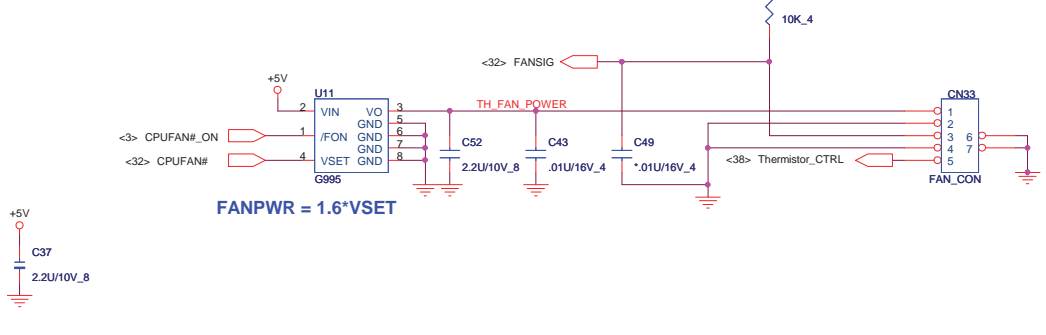
Quanta Computer Inc.
PROJECT : ZY2 & ZY6

| | | |
|-------|---------------------------|----------------|
| Size | Document Number | Rev |
| | USB/FINGER PRINTER | 1A |
| Date: | Tuesday, August 12, 2008 | Sheet 30 of 40 |

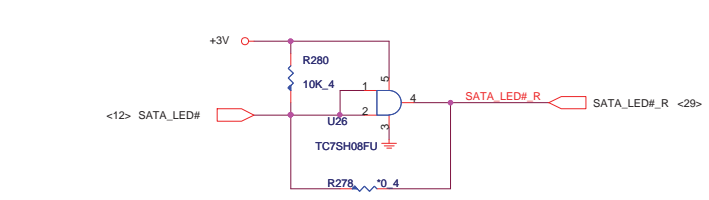
INT K/B



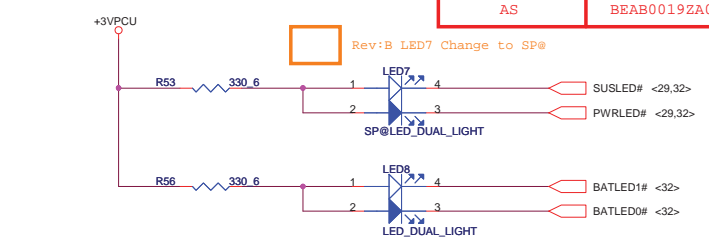
CPU FAN



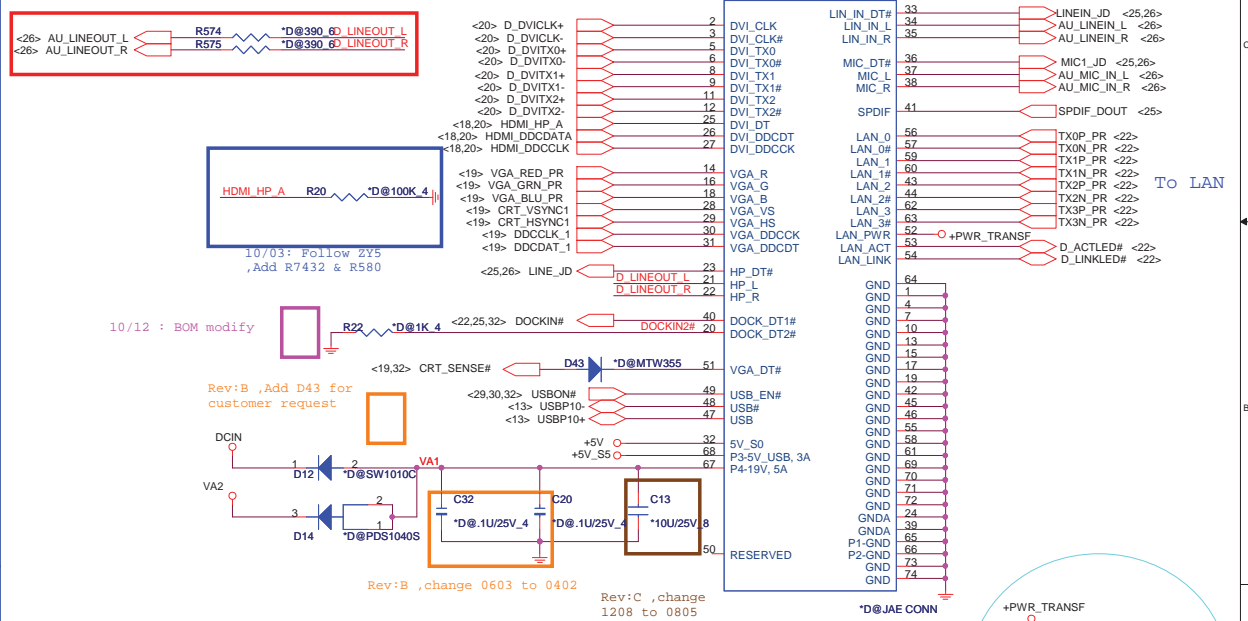
LED



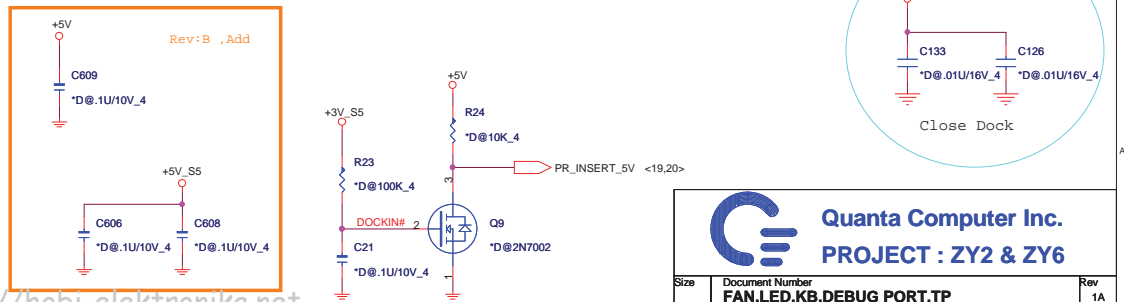
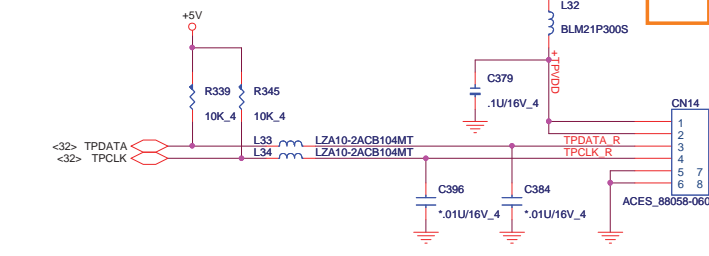
| | |
|---------------|-------------|
| TM & LOW COST | BEGA0017ZA0 |
| AS | BEAB0019ZA0 |



CABLE DOCK

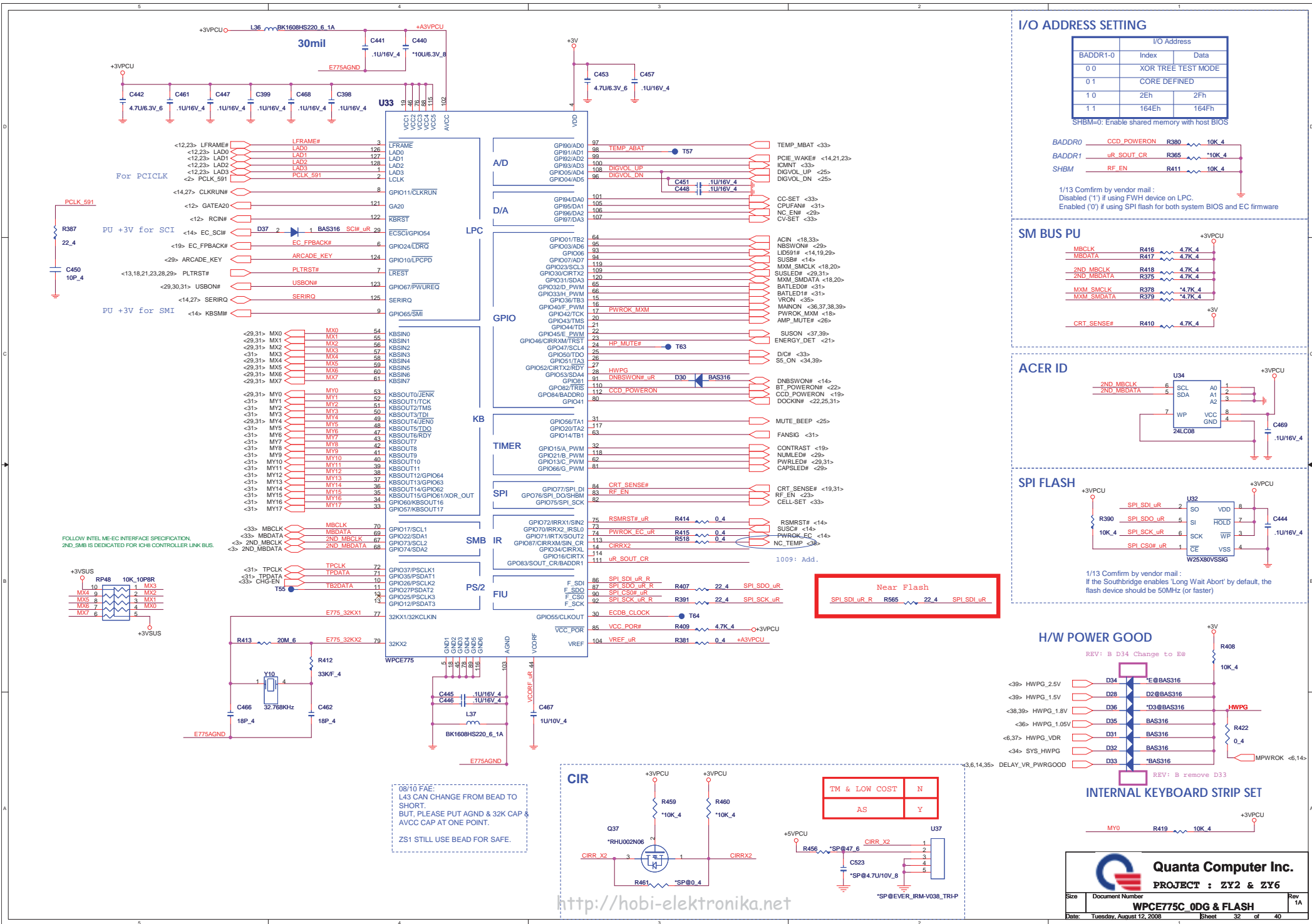


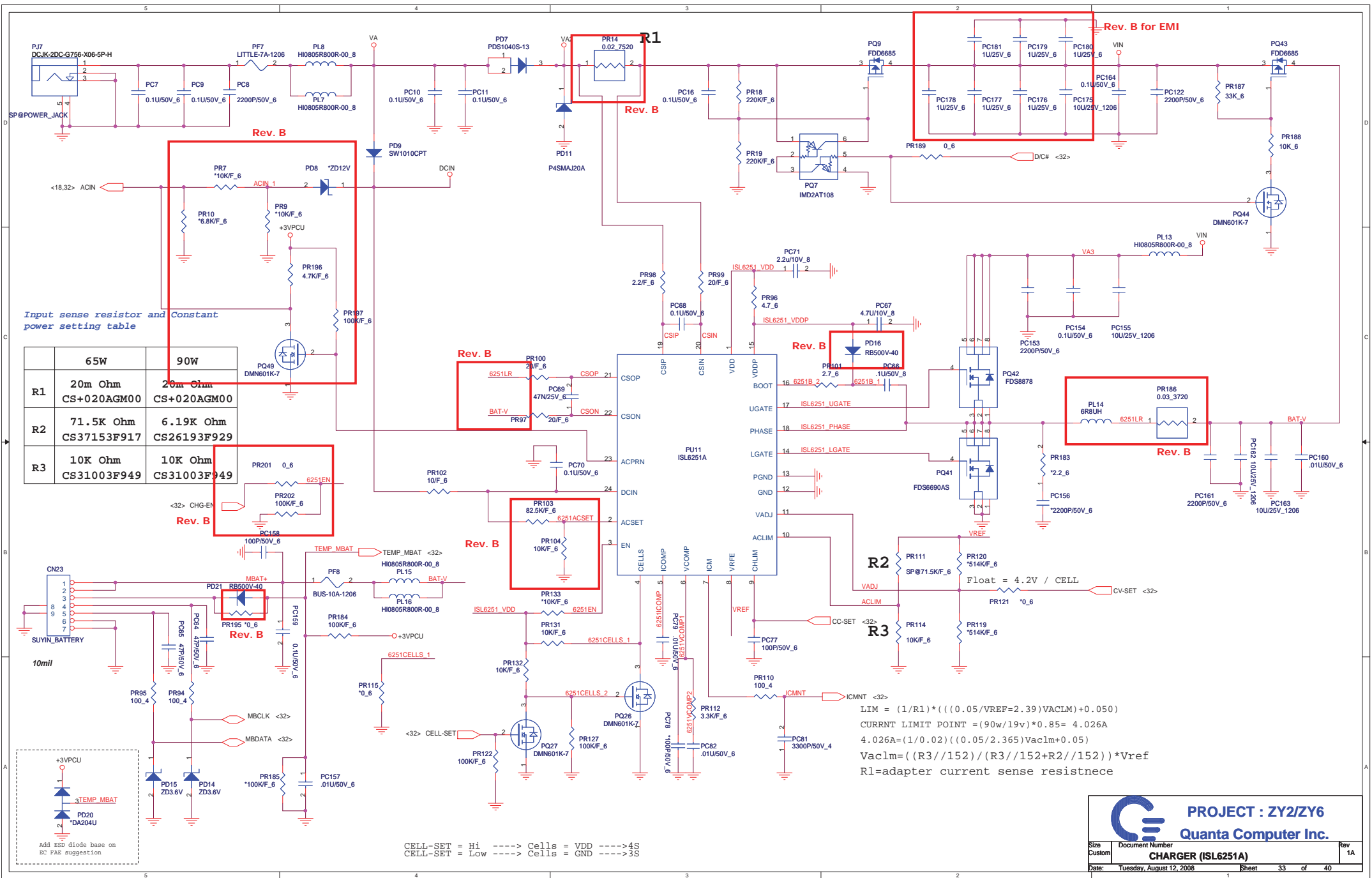
T/P



Quanta Computer Inc.
PROJECT : ZY2 & ZY6

Size: Document Number: **FAN,LED,KB,DEBUG PORT,TP** Rev: 1A
Date: Tuesday, August 12, 2008 Sheet: 31 of 40

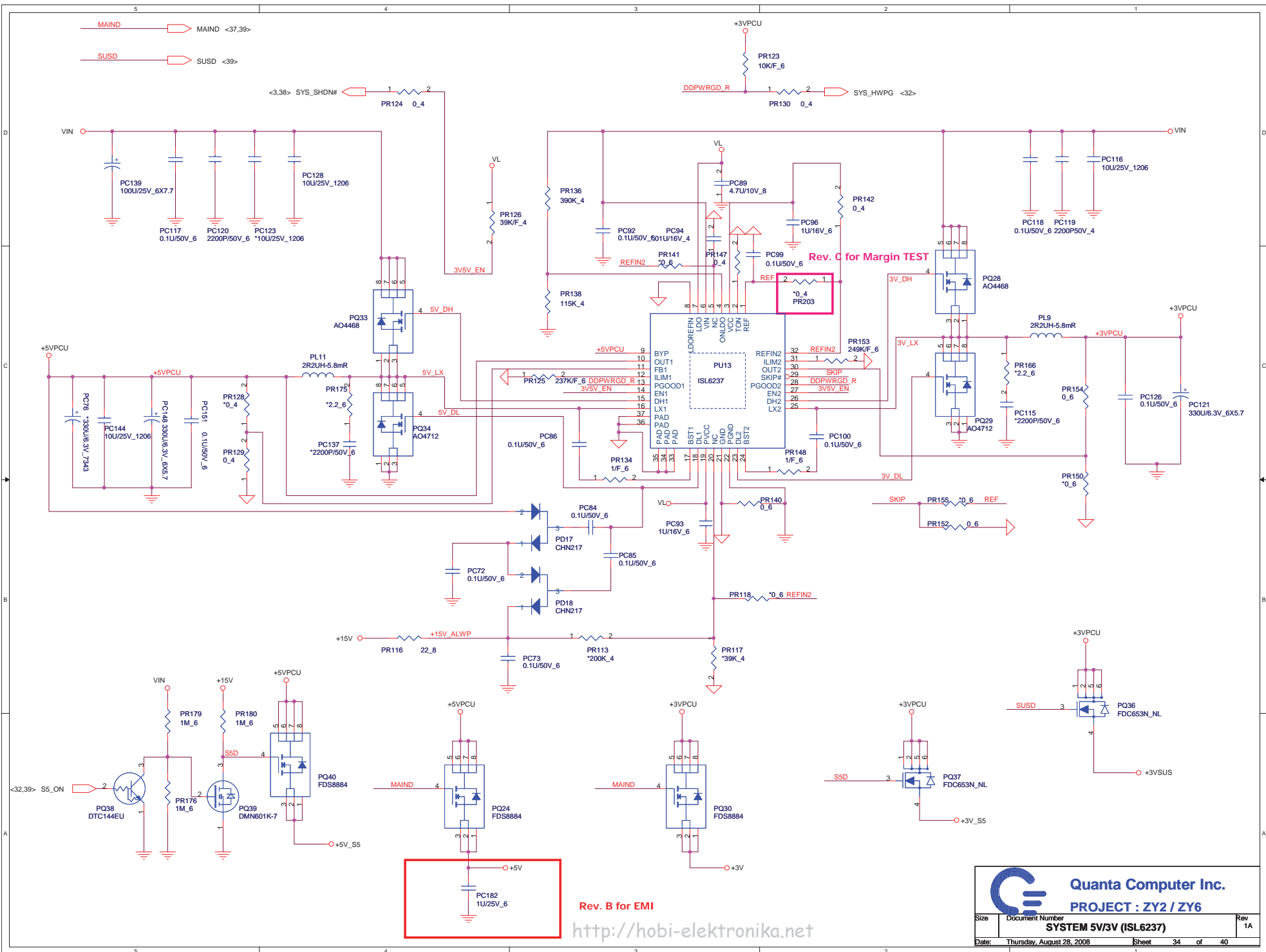





PROJECT : ZY2/Y6
Quanta Computer Inc.

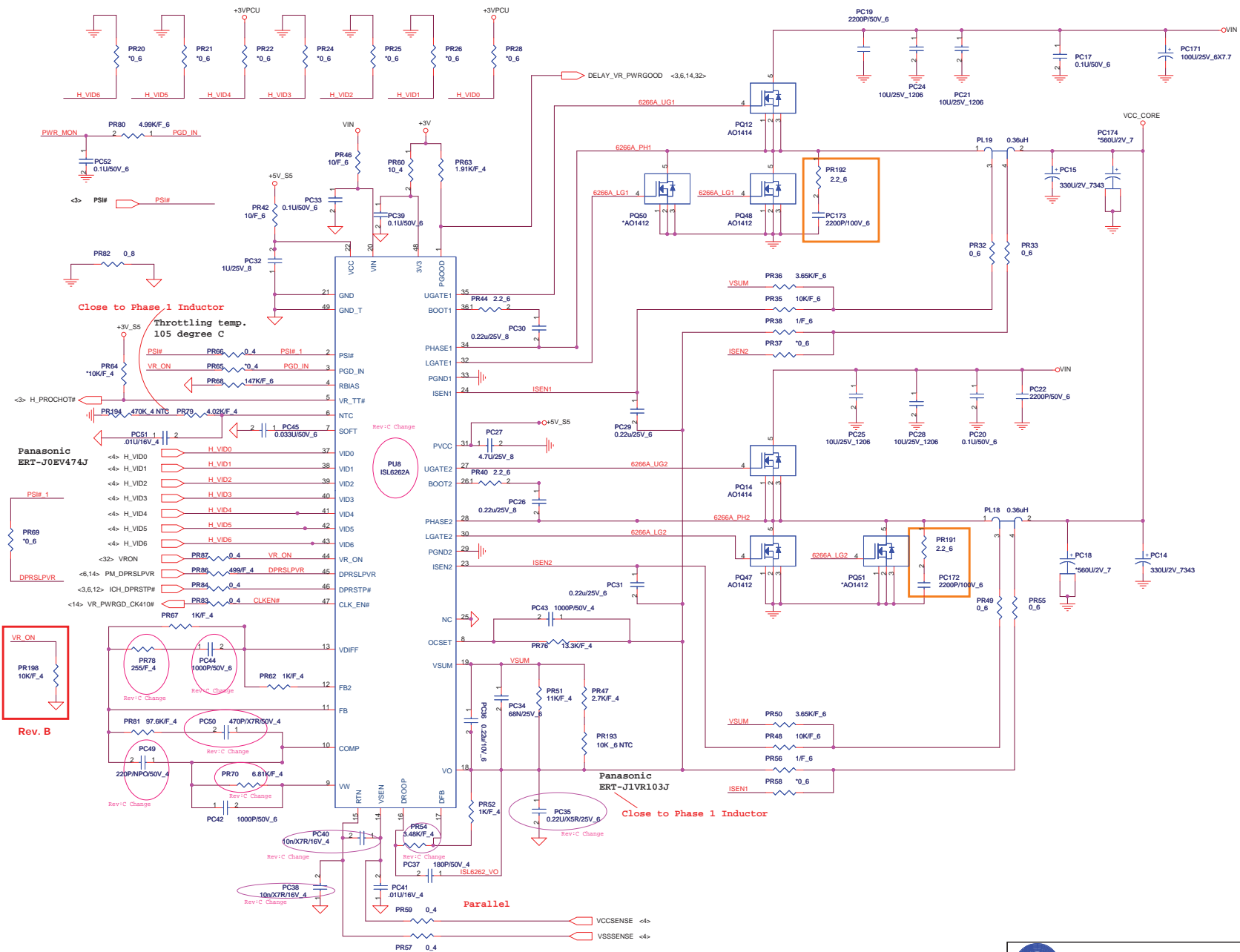
| | | |
|--------------------------------|-----------------|--------|
| Size Custom | Document Number | Rev 1A |
| CHARGER (ISL6251A) | | |
| Date: Tuesday, August 12, 2008 | Sheet 33 | of 40 |

<http://hobi-elektronika.net>




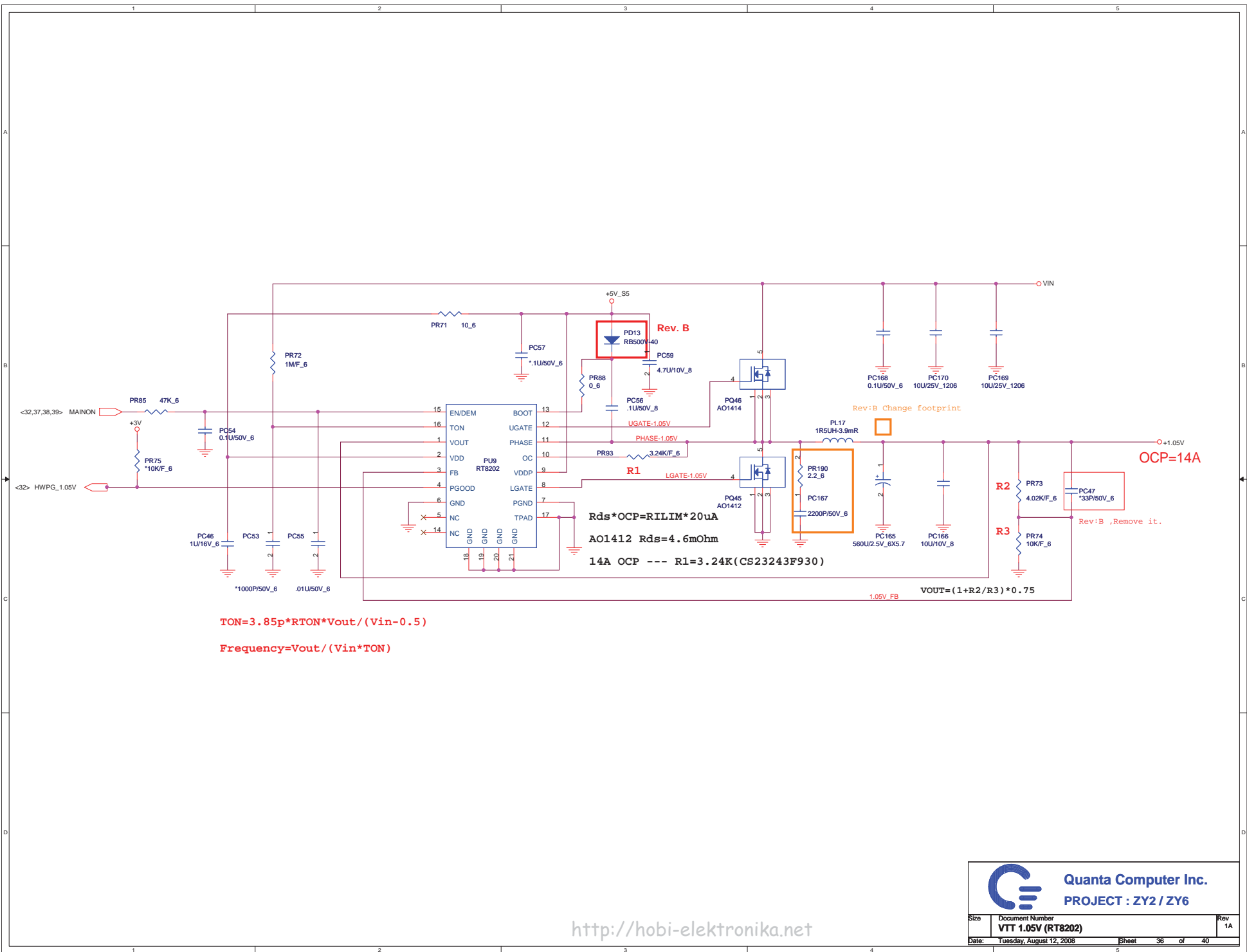

Quanta Computer Inc.
PROJECT : ZY2 / ZY6
SYSTEM 5V/3V (ISL6237)

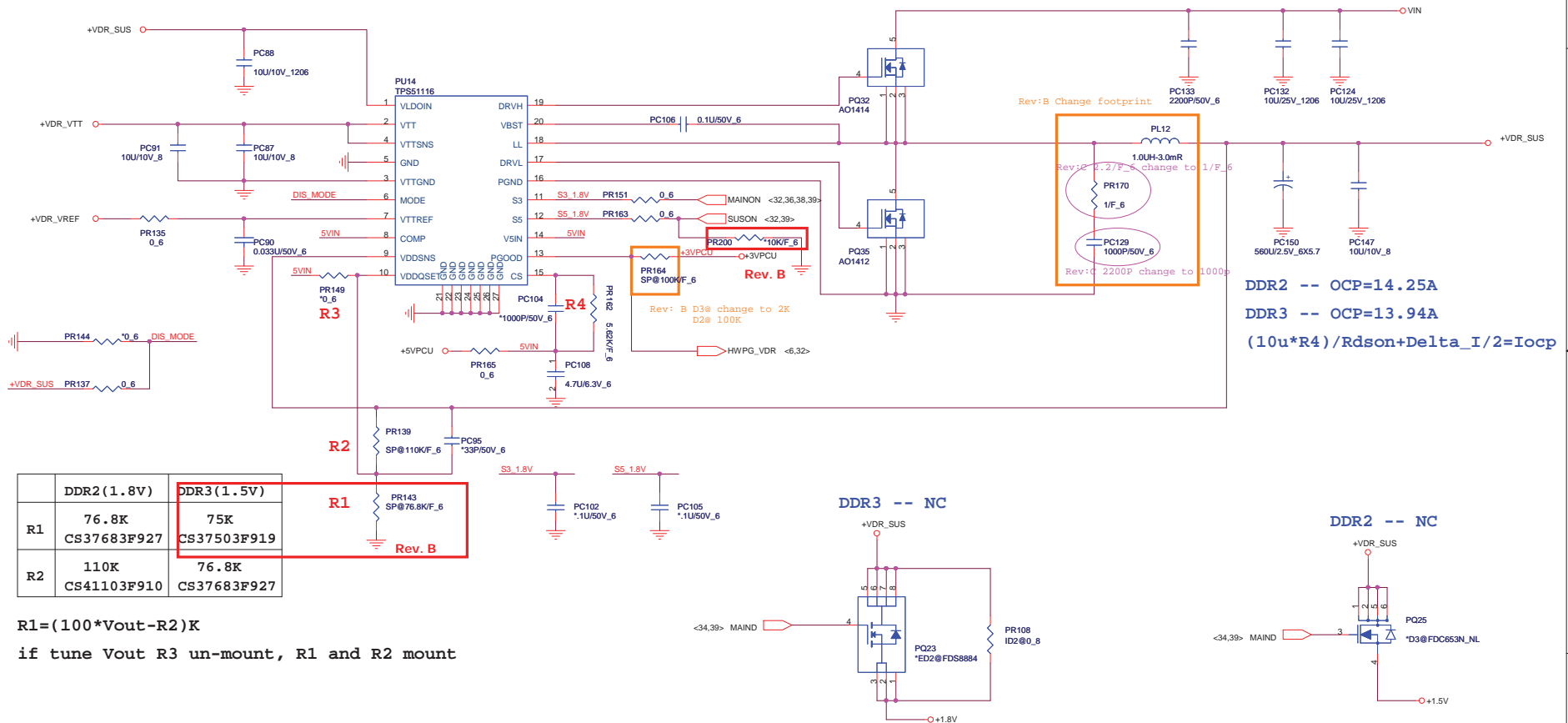
| | | |
|---------------------------------|-----------------|-----|
| Size | Document Number | Rev |
| | | 1A |
| Date: Thursday, August 28, 2008 | Sheet 34 of 40 | |




<http://hobi-elektronika.net>

| | | |
|---|--------------------------|---------------------------|
|  Quanta Computer Inc. PROJECT : ZY2 / ZY6 | | Rev |
| | | 1A |
| Size | Document Number | CPU CORE (ISL6266) |
| Custom | | |
| Date: | Tuesday, August 12, 2008 | Sheet 35 of 40 |

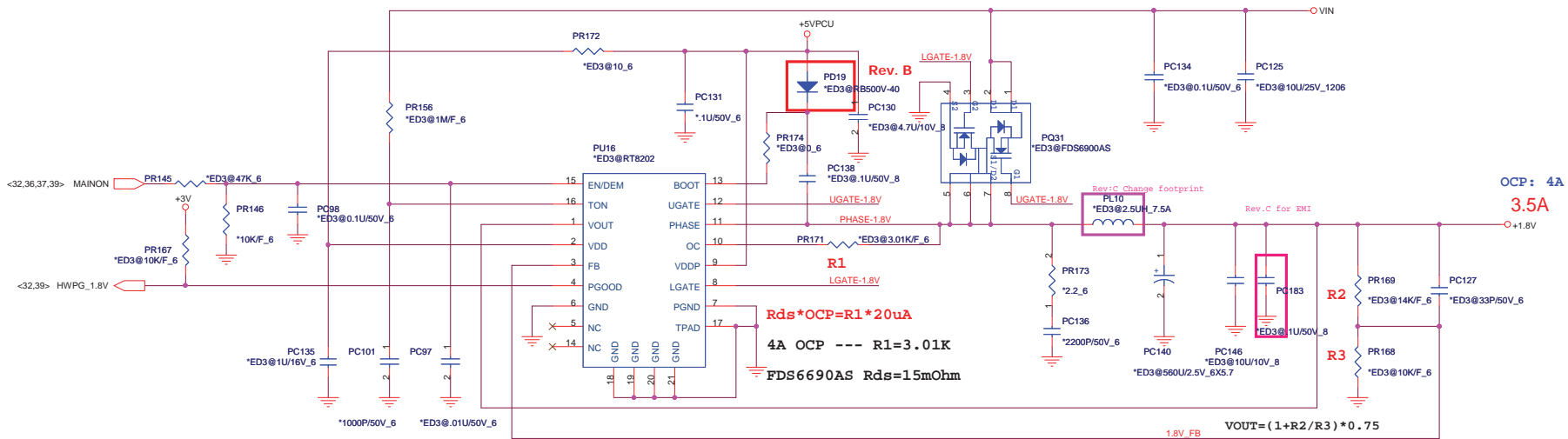




<http://hobi-elektronika.net>

 **Quanta Computer Inc.**
PROJECT : ZY2 / ZY6

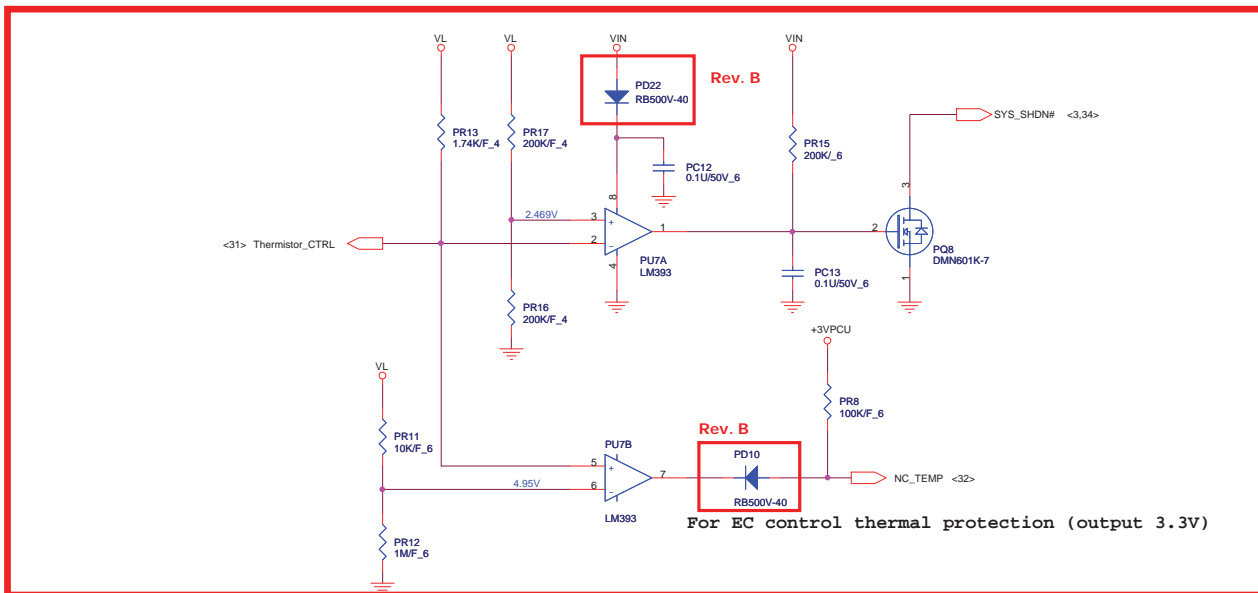
| | | |
|-------|--------------------------|----------------|
| Size | Document Number | Rev |
| | VDR (TPSS1116) | 1A |
| Date: | Tuesday, August 12, 2008 | Sheet 37 of 40 |



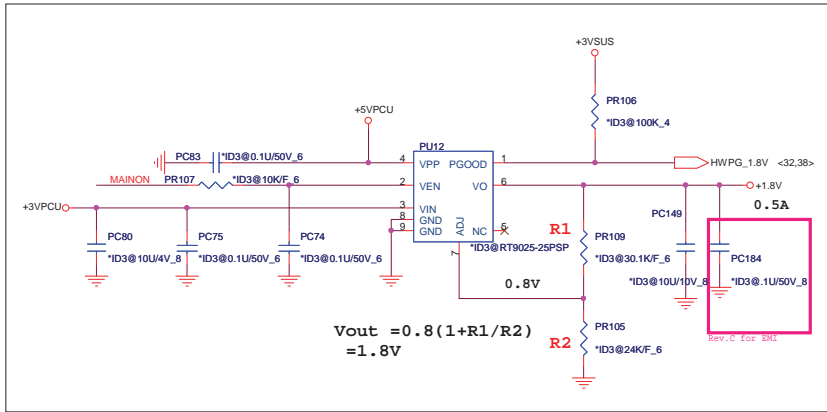
$$T_{ON} = 3.85p * R_{TON} * V_{out} / (V_{in} - 0.5)$$

$$Frequency = V_{out} / (V_{in} * T_{ON})$$

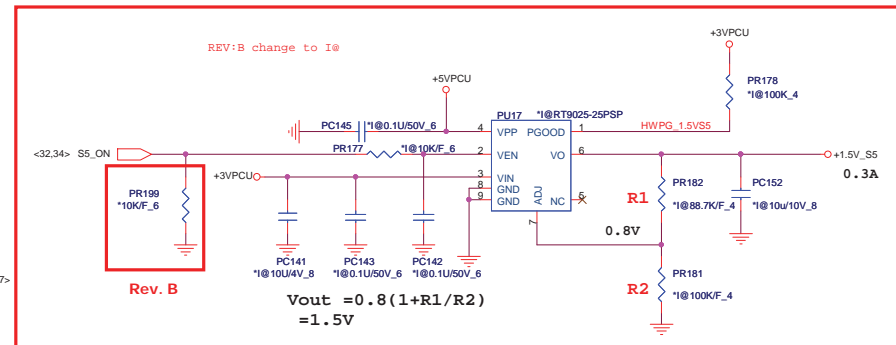
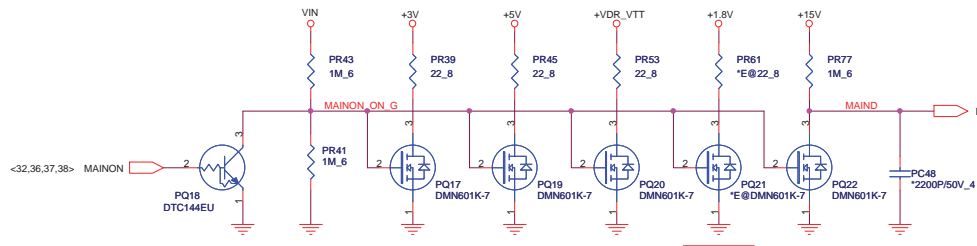
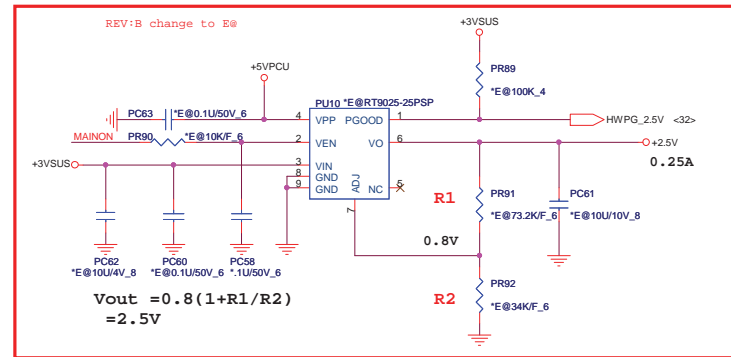
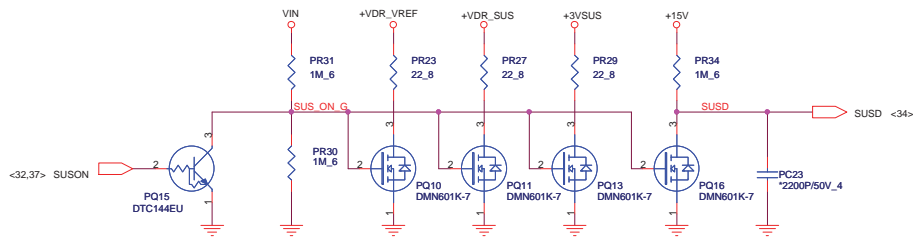
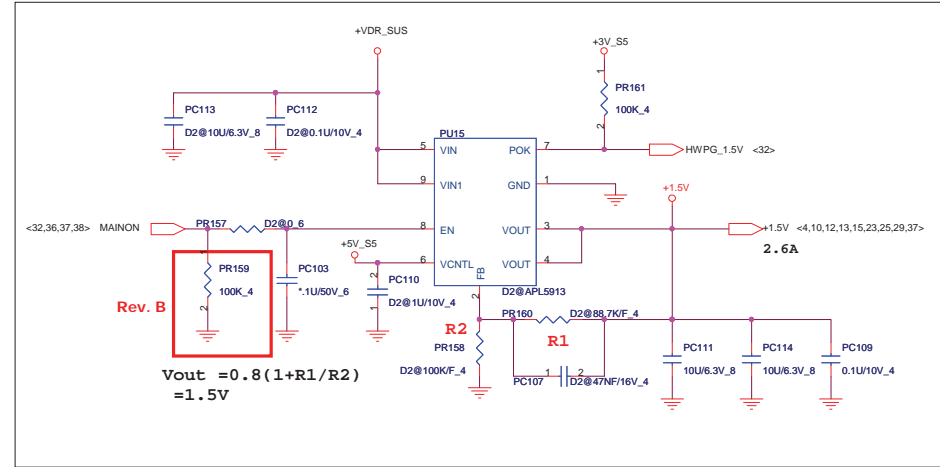
thermal protection --0928



for DDR3 and UMA



DDR3 -- NC



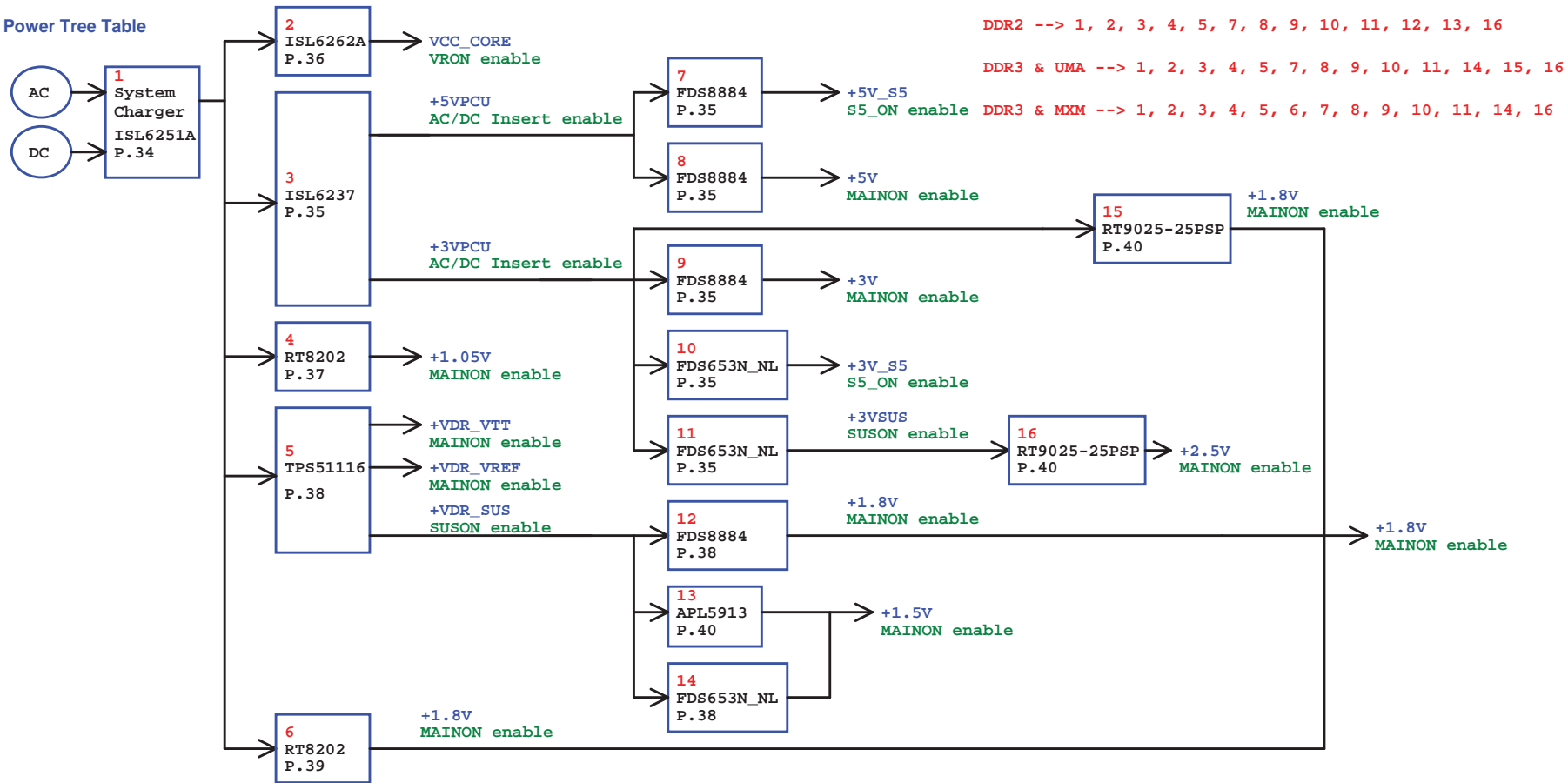
REV:B change to B@



Quanta Computer Inc.
PROJECT : ZY2 / ZY6

| | | |
|-------|------------------------------|----------------|
| Size | Document Number | Rev |
| | Discharge (2.5V/1.5V) | 1A |
| Date: | Tuesday, August 12, 2008 | Sheet 39 of 40 |

Power Tree Table



Power Distribution List

| Power | Distribution |
|-----------|---|
| VCC_CORE | CPU |
| +5VPCU | ICH8M, RJ45/USB /B, USB/eSATA, Satellite LED, CIR |
| +3VPCU | RTC, HALL SENSOR, KB, TP/FP/LED /B, Power /B, Kill SW, EC, ID, SPI Flash, CIR |
| +1.5V | CPU, GMCH, ICH9M, Mini Card, New Card |
| +VDR_SUS | GMCH, DDR |
| +VDR_VREF | GMCH, DDR |
| +VDR_VTT | DDR |
| +1.05V | CPU, CLK, Thermal Trip, GMCH, ICH8M |
| +5V_S5 | ICH8M, G-SENSOR, Felica, USB/eSATA |
| +5V | CPU, ICH8M, VGA, Camera, CRT, HDMI, SATA HDD, PATA ODD, PCMCIA, TP/FP/LED /B, EC, Speaker, Headphone |
| +3V | CLK, CPU Thermal Monitor, FAN, GMCH, DDR, ICH8M, VGA, LCD/LED Panel, HALL SENSOR, CRT, HDMI, SATA HDD, PATA ODD, PCMCIA, Cardreader (OZ129T) Mini Card, KB, TP/FP/LED /B, RJ45/USB /B, Bluetooth, MMB, New Card, PC BEEP, EC, Codec (CX20561), VR, Headphone, MDC |
| +3V_S5 | ICH8M, Mini Card, RJ45/USB /B, New Card |
| +3VSUS | ICH8M, FP |
| +1.8V | Cardreader |
| +2.5V | MXM |

<http://hobi-elektronika.net>

Quanta Computer Inc.
 PROJECT : ZY6D

Size: Document Number: Power Tree Table Rev 1A
 Date: Thursday, August 28, 2008 Sheet 40 of 40

