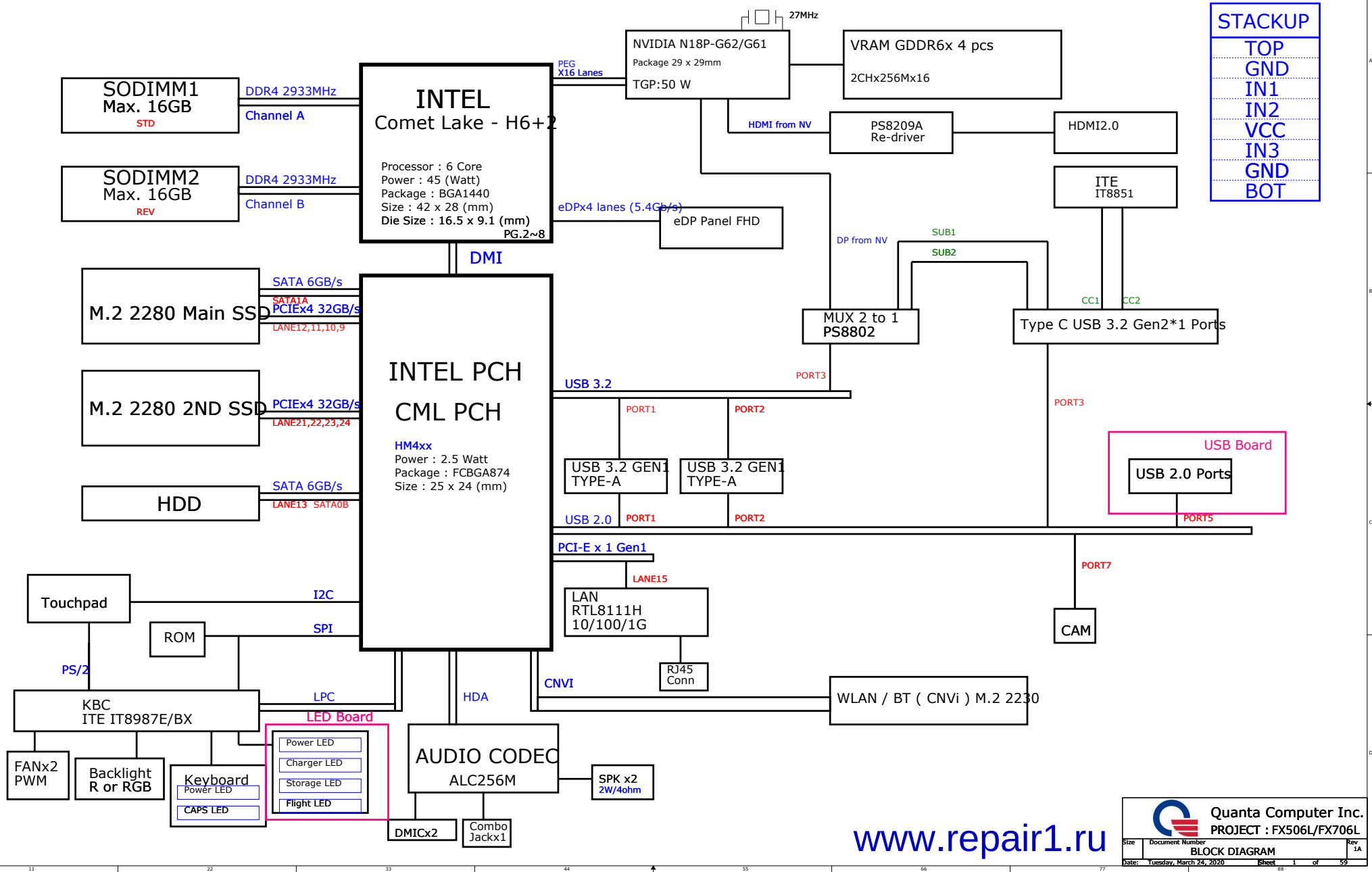
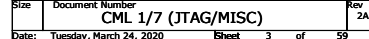


ASUS FX506LI/FX506LH/FX706LI N18P-G62/G61 Block Diagram

01



Trace spacing = 15 / 20 mils, Impedance 85 ohms



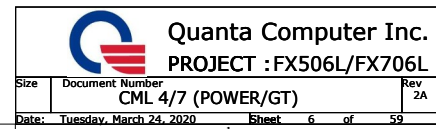


Interleaved

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06

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Follow CML H EDS page 135 to 45W(GT2): VCCSA=11.1A
ER-022:Change C289,C73,C72 From 47uF to 22uF for PASS VRTT....1119

Follow CML H EDS page 135 45W: VDDQ=3.3A

Follow CML H EDS P136 to 45W: VCCIO
+VCCIO = 0.95V

Under CPU

Close to U1.BH13/BJ13/G11

Close to U1.H29,G30

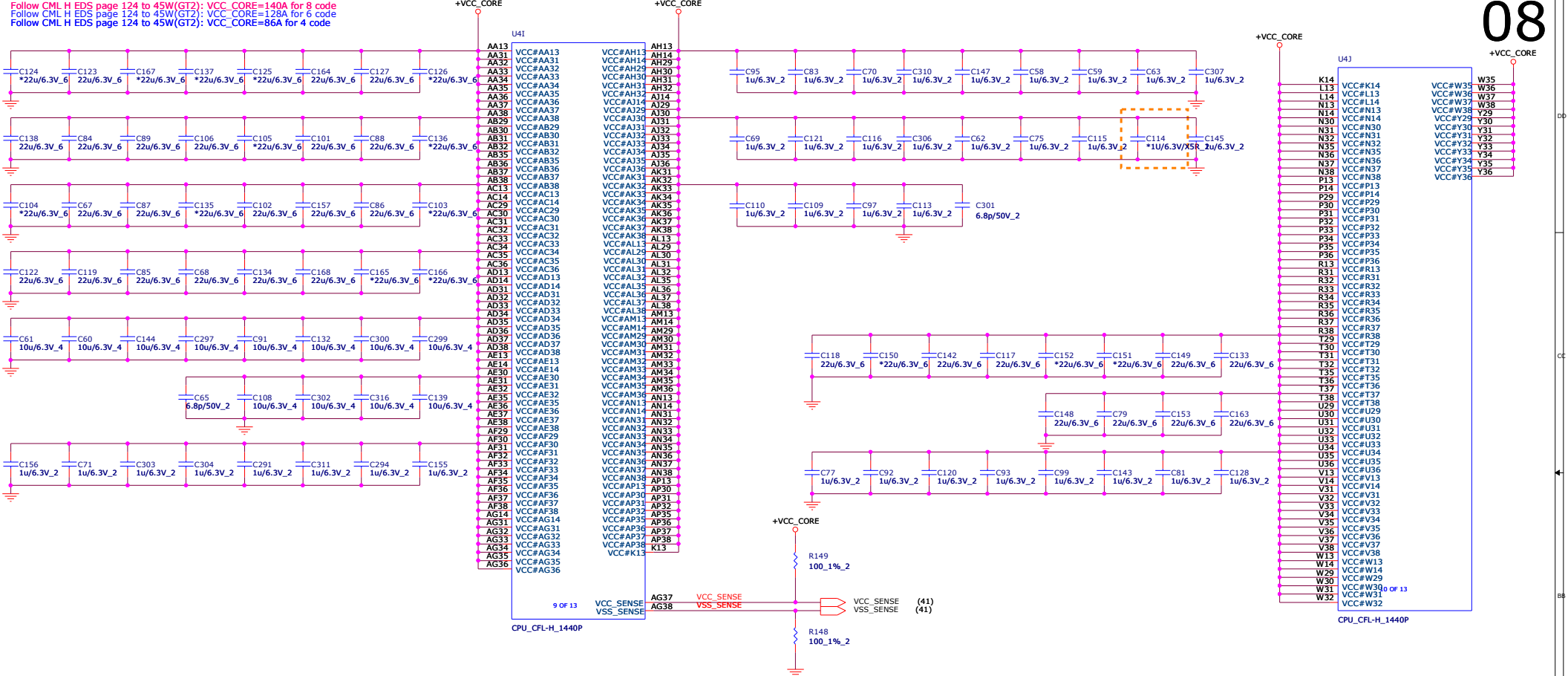
Close CPU

Short-Pad

ER-015:Change C269 1000P to 10U_4 for power ripple....1113.


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Follow CML H EDS page 124 to 45W(GT2): VCC_CORE=140A for 8 code
Follow CML H EDS page 124 to 45W(GT2): VCC_CORE=128A for 6 code
Follow CML H EDS page 124 to 45W(GT2): VCC_CORE=86A for 4 code



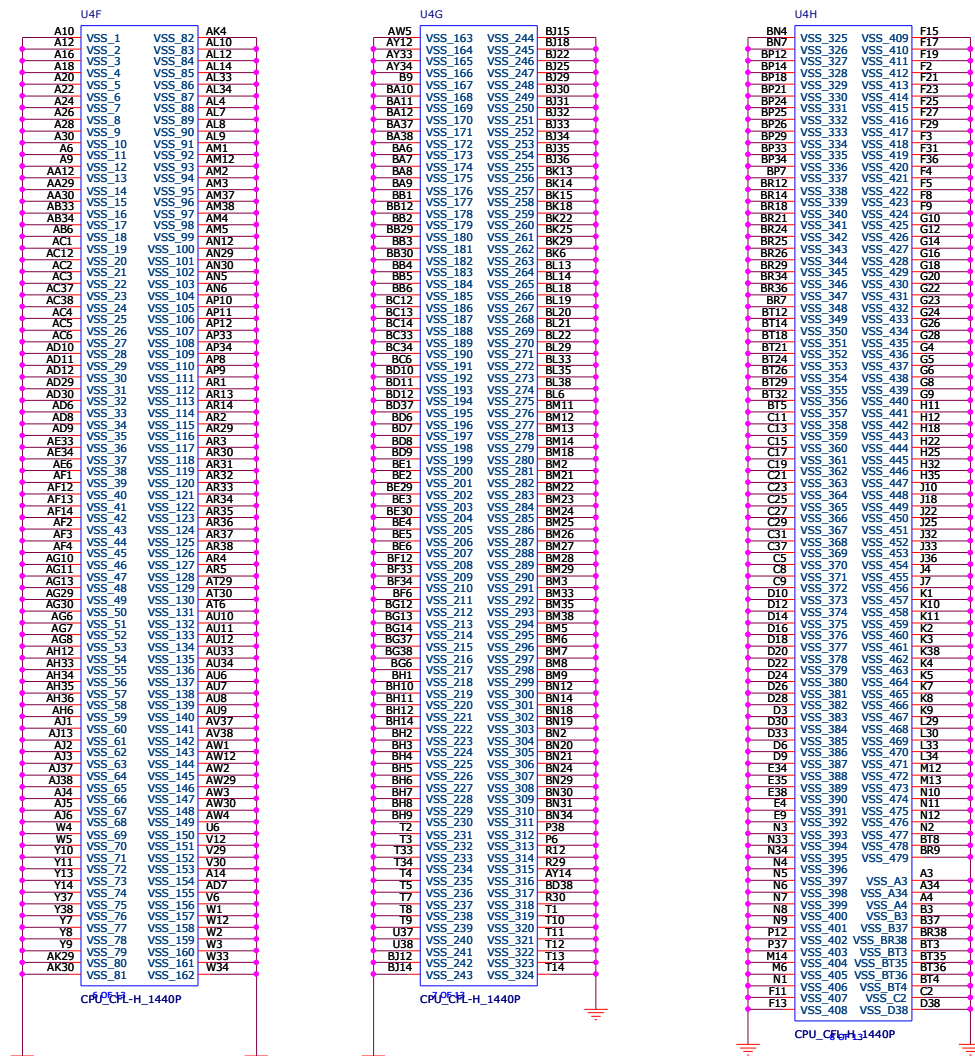
Sense resistor should be placed within 2 inches (50.8 mm) of the processor socket
Trace Impedance 50 ohm

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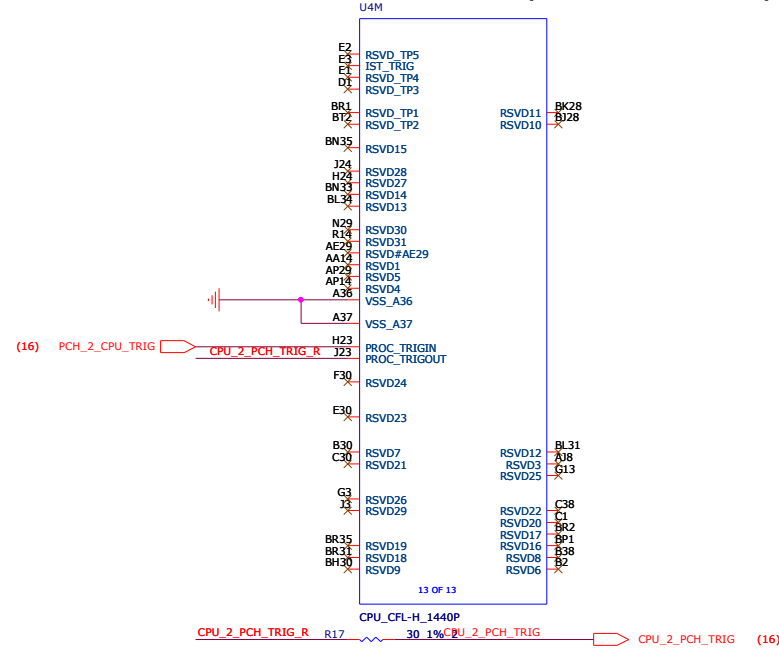


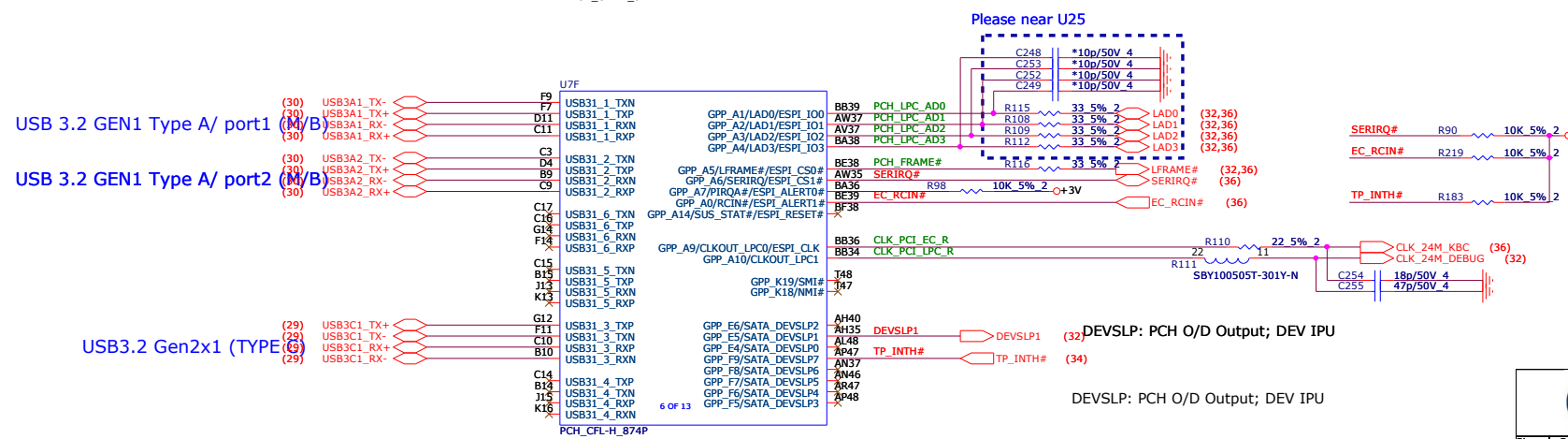
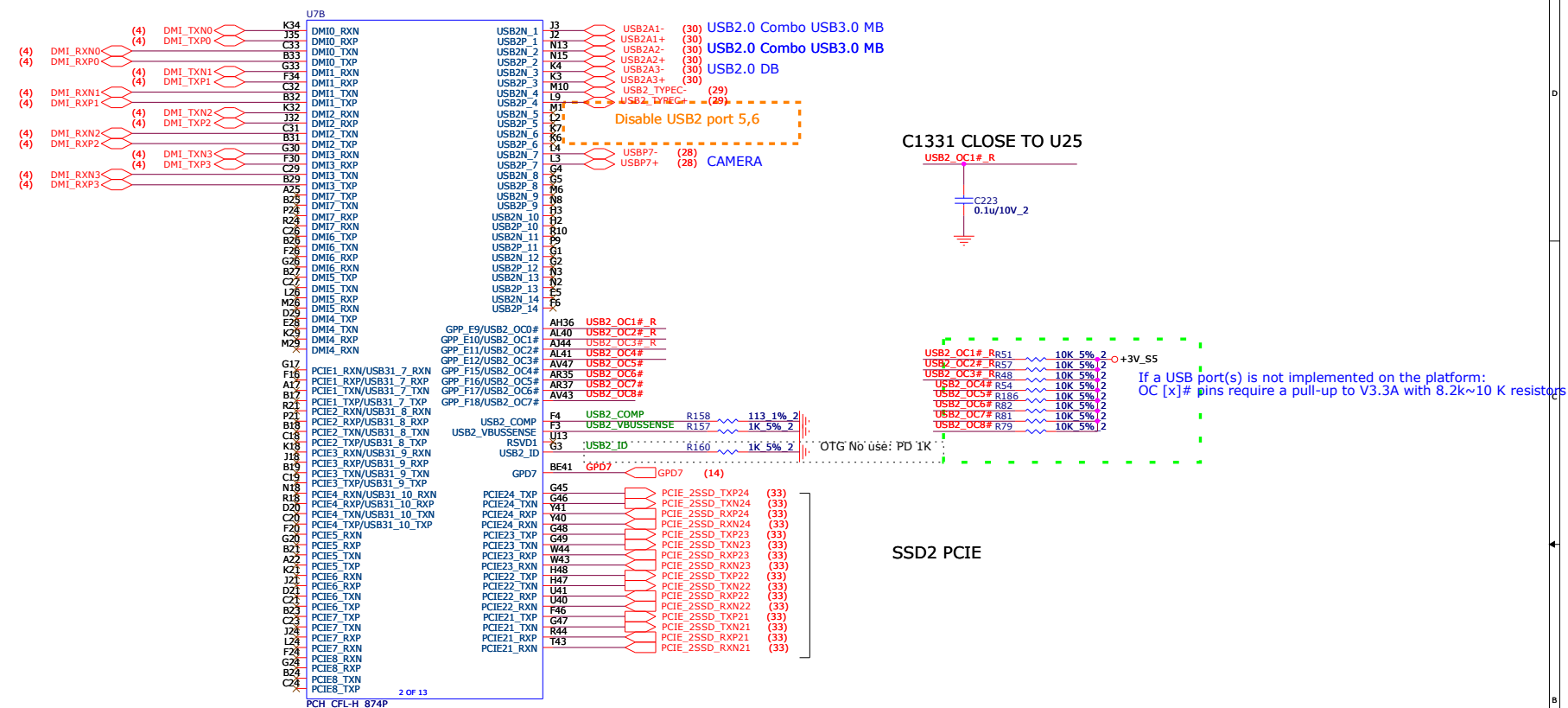
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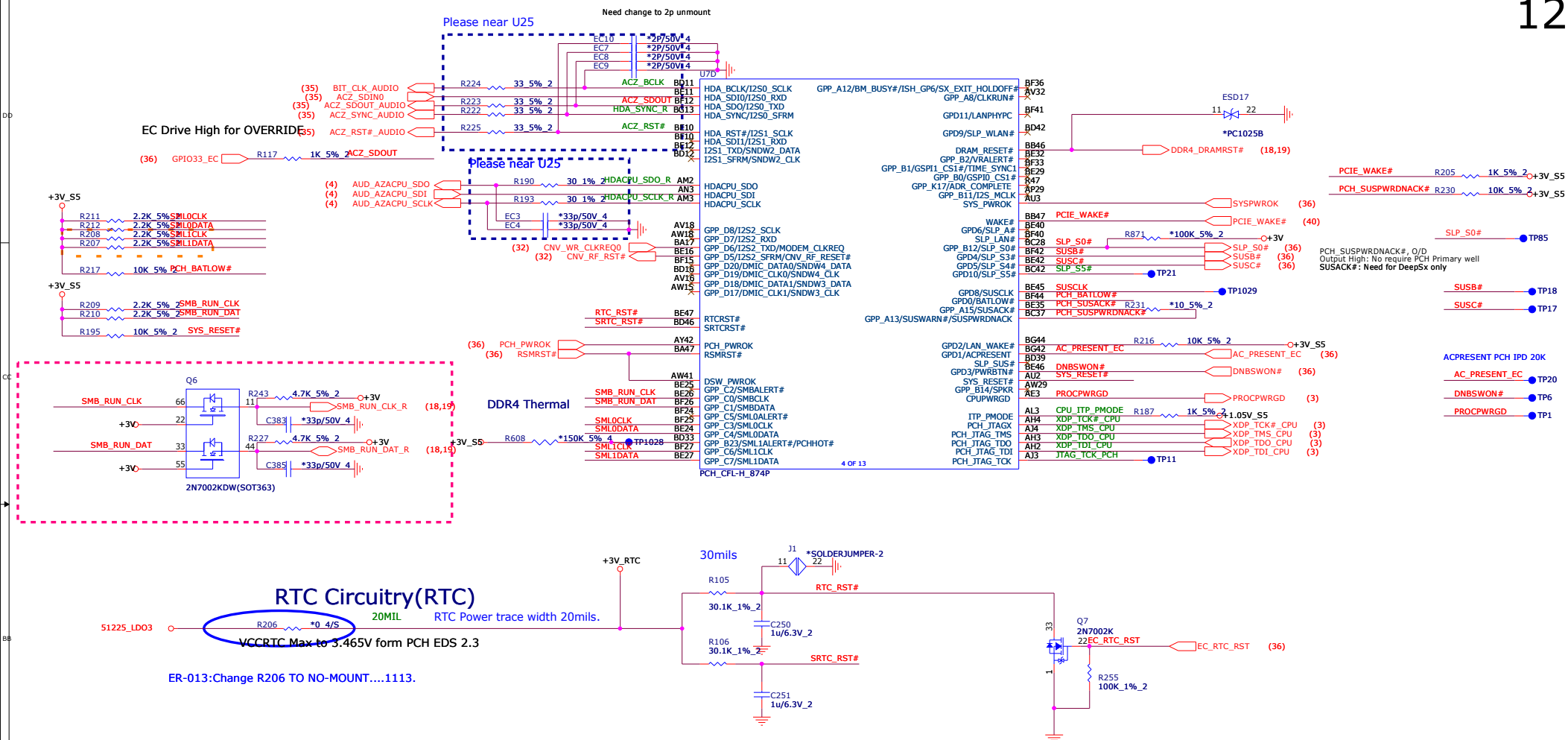
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|-------------------------------|----------------------|-----|
| Size | Document Number | Rev |
| | CML 6/7 (POWER&GND) | 2A |
| Date: Tuesday, March 24, 2020 | Sheet 8 of 59 | |

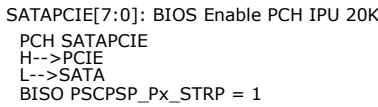


CML-H Processor (RESERVED, CFG)



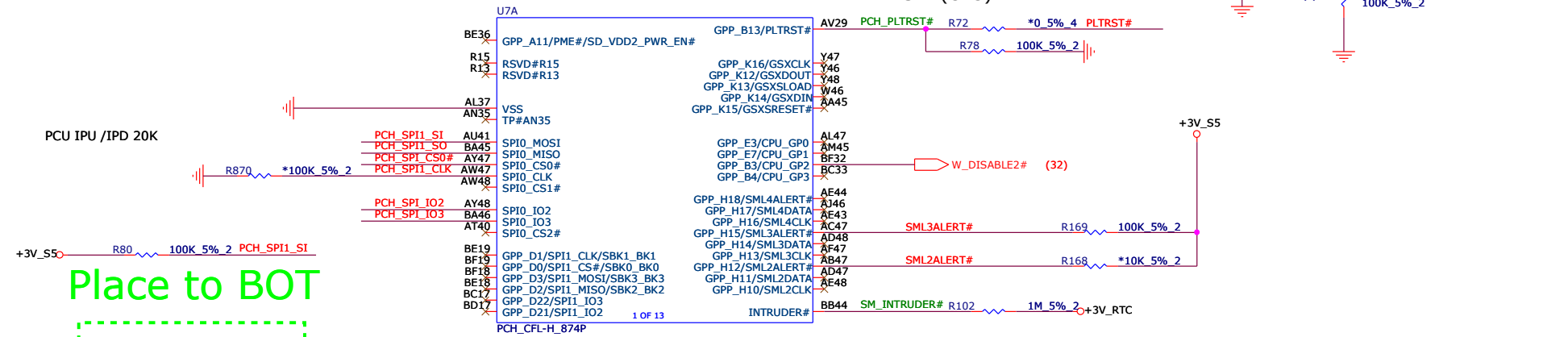








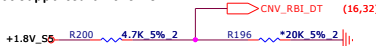
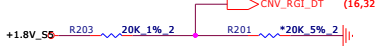
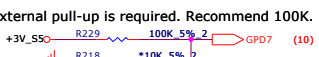
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PLTRST#(CLG)


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Cannon Lake PCH-H Strapping Table

| Pin Name | Strap description | Sampled | Configuration | xxx PCH STRAPS SETTING STATUS |
|-------------------------------|--|-----------|--|---|
| GPP_B14 (SPKR) | Top Swap Override | PCH_PWROK | 0 = *Disable Top Swap (IPD 20K) Default 1 = Enable Top Swap Mode | |
| GPP_B18 (GSP10_MOSI) | No reboot | PCH_PWROK | 0 = *Disable No Reboot (IPD 20K) Default 1 = Enable No Reboot Mode | |
| GPP_C2 (SMBALERT#) | TLS Confidentiality | RSRMRST# | 0 = *Disable Intel ME Cryp to TLS(IPD 20K) Default 1 = Enable Intel ME Cryp to TLS to support AMT TLS | |
| GPP_B22 (GSP11_MOSI) | Boot BIOS Strap Bit BBS | PCH_PWROK | 0 = *SPI (IPD 20K) Default 1 = LPC | |
| GPP_C5 (SML0ALERT#) | eSPI or LPC | RSRMRST# | 0 = *LPC is selected for EC (IPD 20K) Default 1 = eSPI selected for EC | |
| SPI0_MOSI | Reserved | RSRMRST# | (IPU 15 ~ 40K) This signal has an internal pull-up. This strap should sample HIGH. There should NOT be any on-board device driving it to opposite direction during strap sampling. | |
| GPP_H15 (SML3ALERT#) | Reserved | RSRMRST# | (IPU 15 ~ 40K) This signal has an internal pull-up. This strap should sample HIGH. There should NOT be any on-board device driving it to opposite direction during strap sampling. | |
| GPP_B23 (SML1ALERT# /PCHHOT#) | Reserved | RSRMRST# | (IPD 20K) This signal has an internal pull-down. This strap should sample LOW. There should NOT be any on-board device driving it to opposite direction during strap sampling. | |
| SPI0_IO2 | Reserved | RSRMRST# | (IPU 15 ~ 40K) This signal has an internal pull-up. This strap should sample HIGH. There should NOT be any on-board device driving it to opposite direction during strap sampling. | |
| SPI0_IO3 | Reserved | RSRMRST# | (IPU 15 ~ 40K) This signal has an internal pull-up. This strap should sample HIGH. There should NOT be any on-board device driving it to opposite direction during strap sampling. | |
| HDA_SDO (I2S0_TXD) | Flash Descriptor Security Override / Intel ME Debug Mode | PCH_PWROK | 0 = *Enable security in the Flash Description (IPD 20K) Default 1 = Disable Flash Descriptor Security (Override) | EC Drive High for OVERRIDE |
| GPP_H12 (SML2ALERT#) | eSPI Flash Sharing Mode | RSRMRST# | 0 = *Master Attached Flash Sharing (MAFS) enabled (IPD 20K)Default 1 = Slave Attached Flash Sharing (SAFS) enabled. | |
| GPP_I6 (DDPB_CTRLDATA) | Display Port B Detected | PCH_PWROK | 0 = *Port B is not detected (IPD 20K) (Default) 1 =Port B is detected |  Change |
| GPP_I8 (DDPC_CTRLDATA) | Display Port C Detected | PCH_PWROK | 0 = *Port C is not detected (IPD 20K) (Default) 1 =Port C is detected |  |
| GPP_I10 (DDPD_CTRLDATA) | Display Port D Detected | PCH_PWROK | 0 = *Port D is not detected (IPD 20K) (Default) 1 =Port D is detected | |
| GPP_F23 | Display Port F Detected | PCH_PWROK | 0 = *Port F is not detected (IPD 20K) (Default) 1 =Port F is detected | CFL - H CPU Not Support DDI Port F |
| GPP_J4 CNV_BRL_DT/UART0_RTS# | XTAL Frequency Select | RSRMRST# | An external pull-up is required on this strap since 38.4MHz XTAL is not supported on the PCH. 0 = *38.4MHz XTAL frequency selected. (IPD 20K) (Default) 1 = 24MHz XTAL frequency selected. |  |
| GPP_J6 CNV_RGI_DT/UART0_TXD | M.2 CNV Mode Select | RSRMRST# | An external pull-up or pull-down is required. 0 = Integrated CNVi enable. (Default) 1 = Integrated CNVi disable. |  |
| GPP_J9 | 1.8V VCCSPI | RSRMRST# | 0 = *VCCSPI is connected to 3.3V rail. (IPD 20K) (Default) 1 = VCCSPI is connected to 1.8V rail | |
| GPD7 | Reserved | DSW_PWROK | This strap should sample HIGH. There should NOT be any on-board device driving it to opposite direction during strap sampling. | External pull-up is required. Recommend 100K.  |

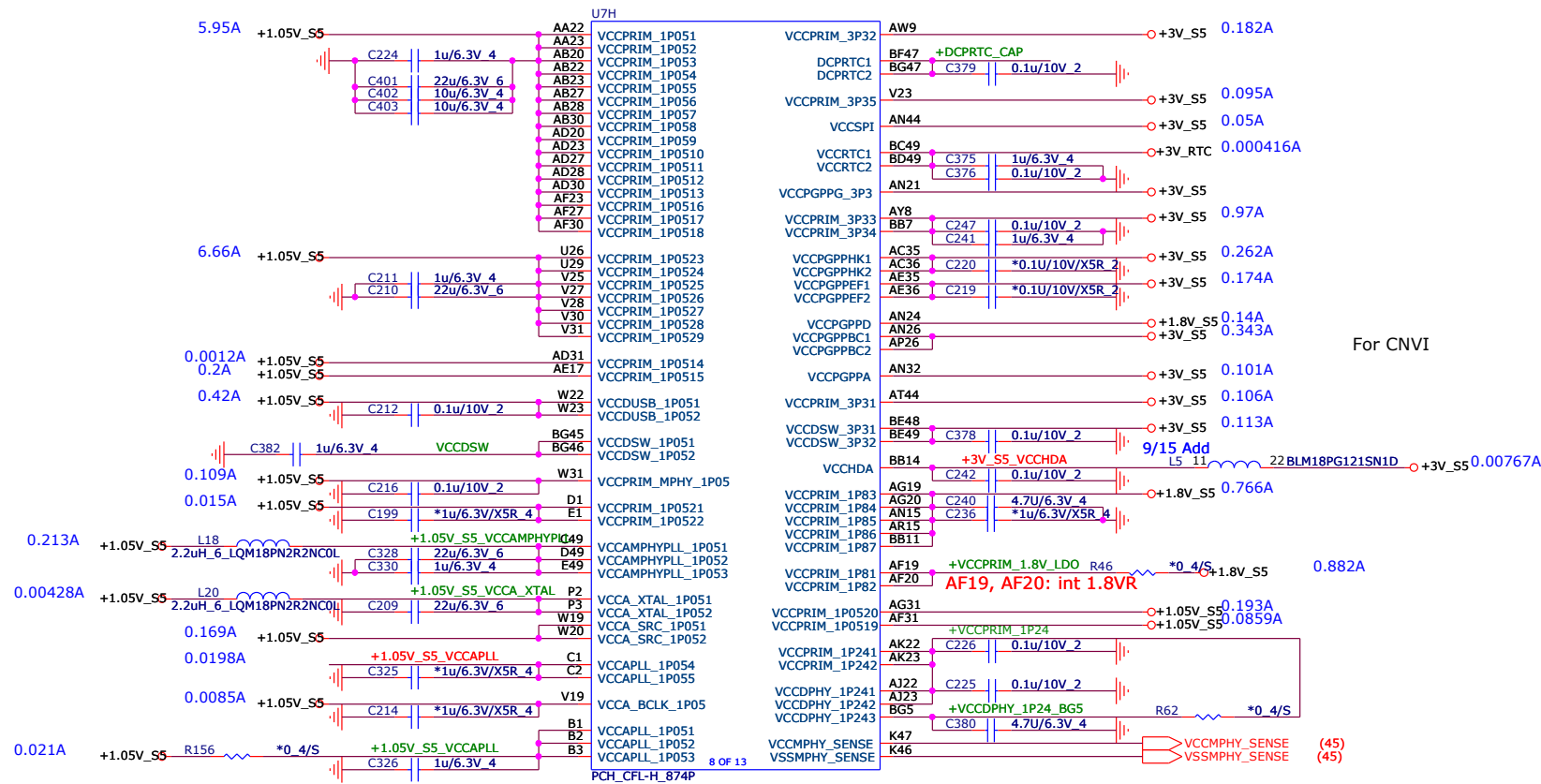
[illegible]

Warning: This strap must be configured to '0' (SAFS is disabled)
if the eSPI or LPC strap is configured to '0' (eSPI is disabled)

PCH Strap: GPP_J6 = M.2 CNVI STRAP
HIGH -> DISABLE / LOW -> ENABLE

Note: If VCCSPI is connected to 1.8V rail, this pin strap must be a '1' for the proper functionality of the SPI (Flash) I/Os

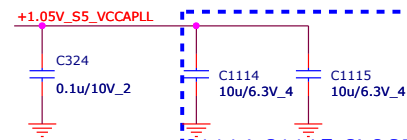
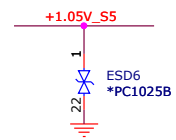
need to add +1.05V power rail



For CNVI


ESD6 CLOSE TO U7

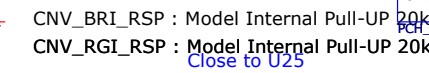
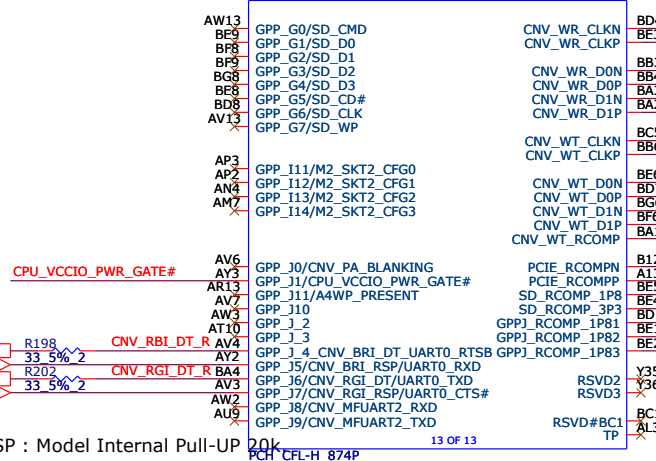
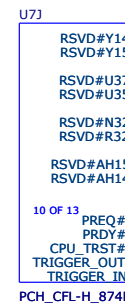
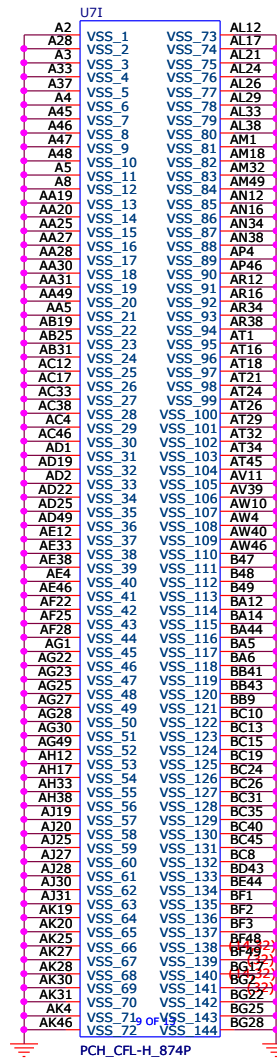
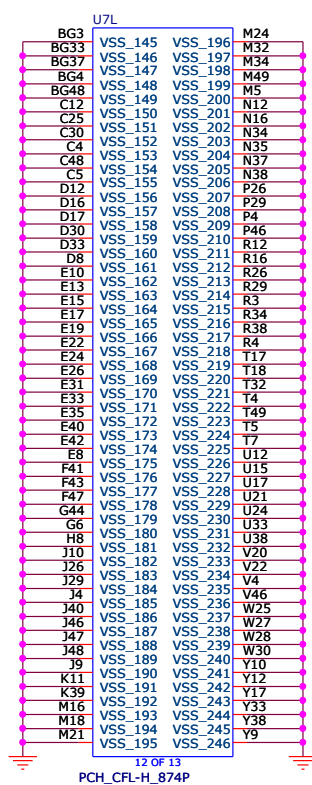
C324 CLOSE TO U7.B2



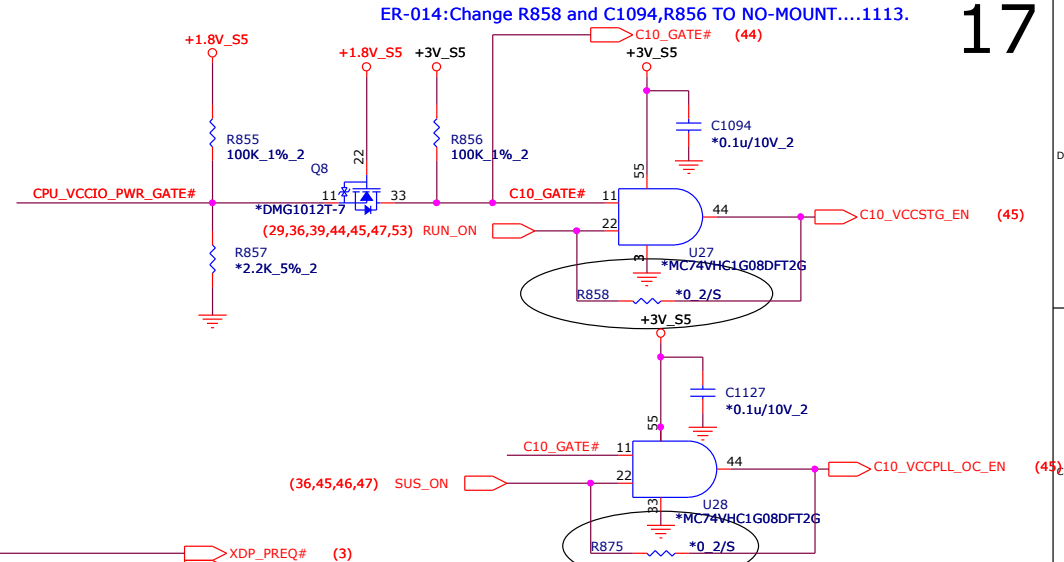
C1114, C1115 CLOSE TO U7.C1 pin

1.24V for CNVI logic = VCCDPHY_1P24 & +VCCPRIM_1P24
 This rail is generated internally with a LDO and needs to be routed to the motherboard
 so that the rail can be supplied back to the SoC.
 Refer to the Platform Design Guide for implementation details.

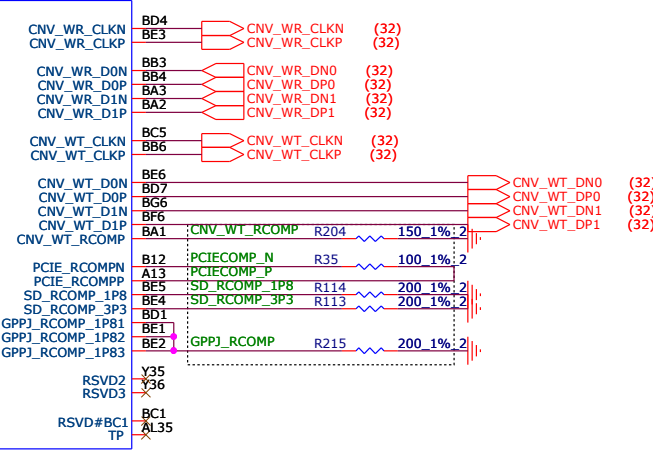
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| | PCH 6/7 (POWER) | 2A |
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Follow #571483 CFL-H CRB0.9 Reserve Pull-H Resistor.



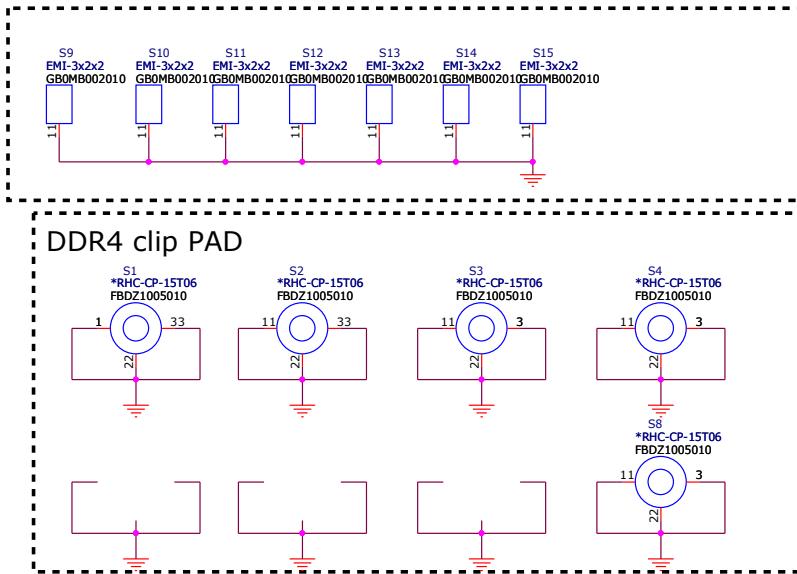
ER-E35:Reserve U28 for C10 GATE# support



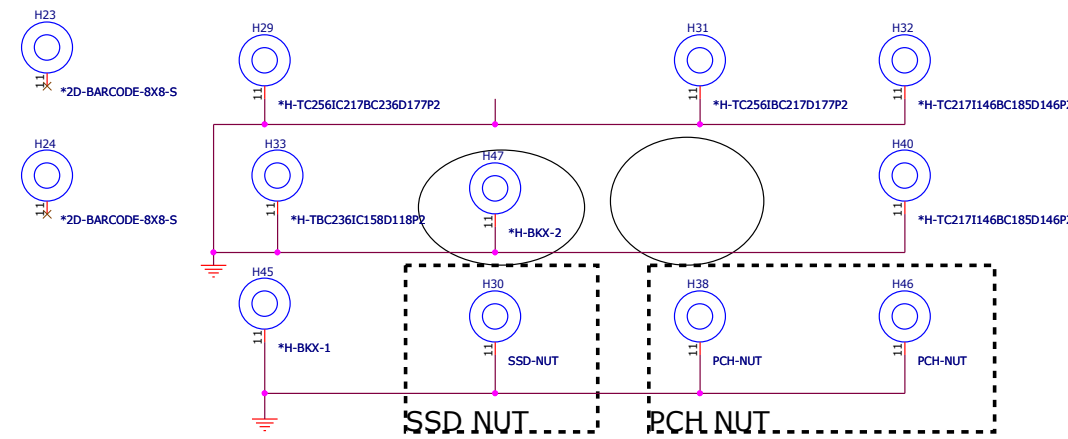
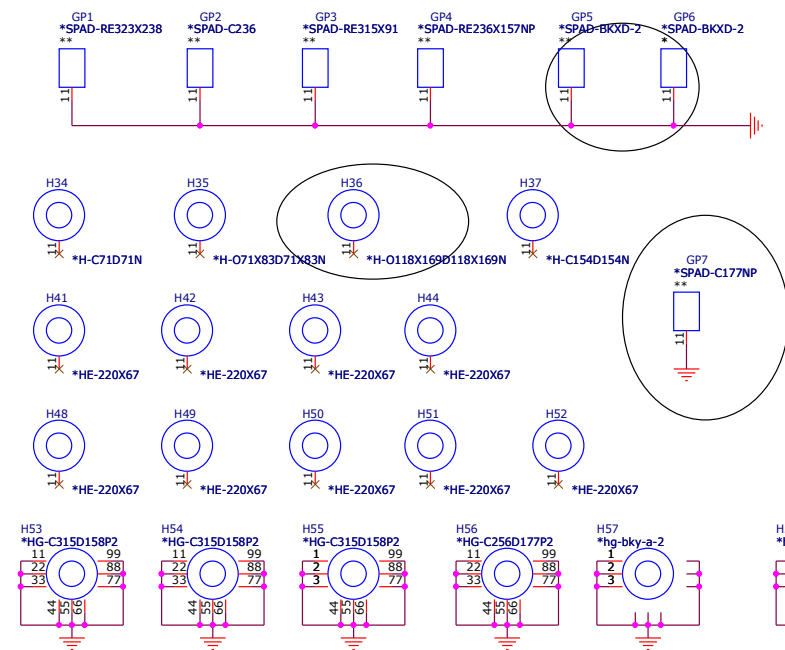
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| Size | Document Number | Rev |
| | PCH 7/7 (GND/CNV) | 2 |
| Date: | Tuesday, March 24, 2020 | Sheet 16 of 59 |

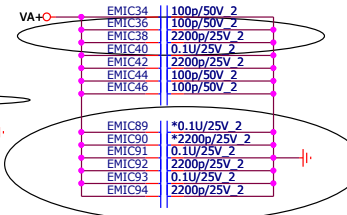
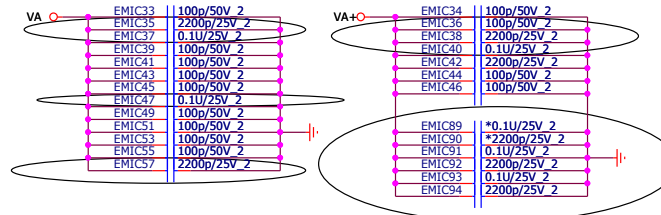
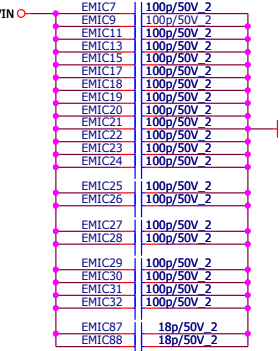
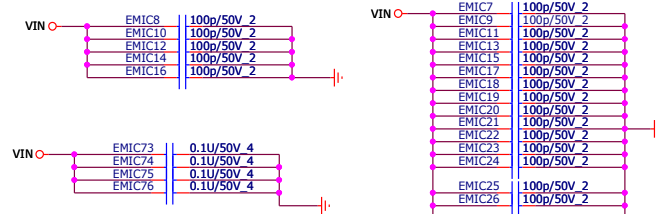
SMT GASKET-BOT



PR-E05:Add EMC89/EMC91/EMC93 0.1uF and EMC90/EMC92/EMC94 for EMI, EMC89 and EMC90 un-mount for Height limitation
PR-E07:EMIC35/EMIC57/EMIC38/EMIC42 change from 100p to 2200p, EMIC37/EMIC47/EMIC40 change from 100p to 0.1u for EMI



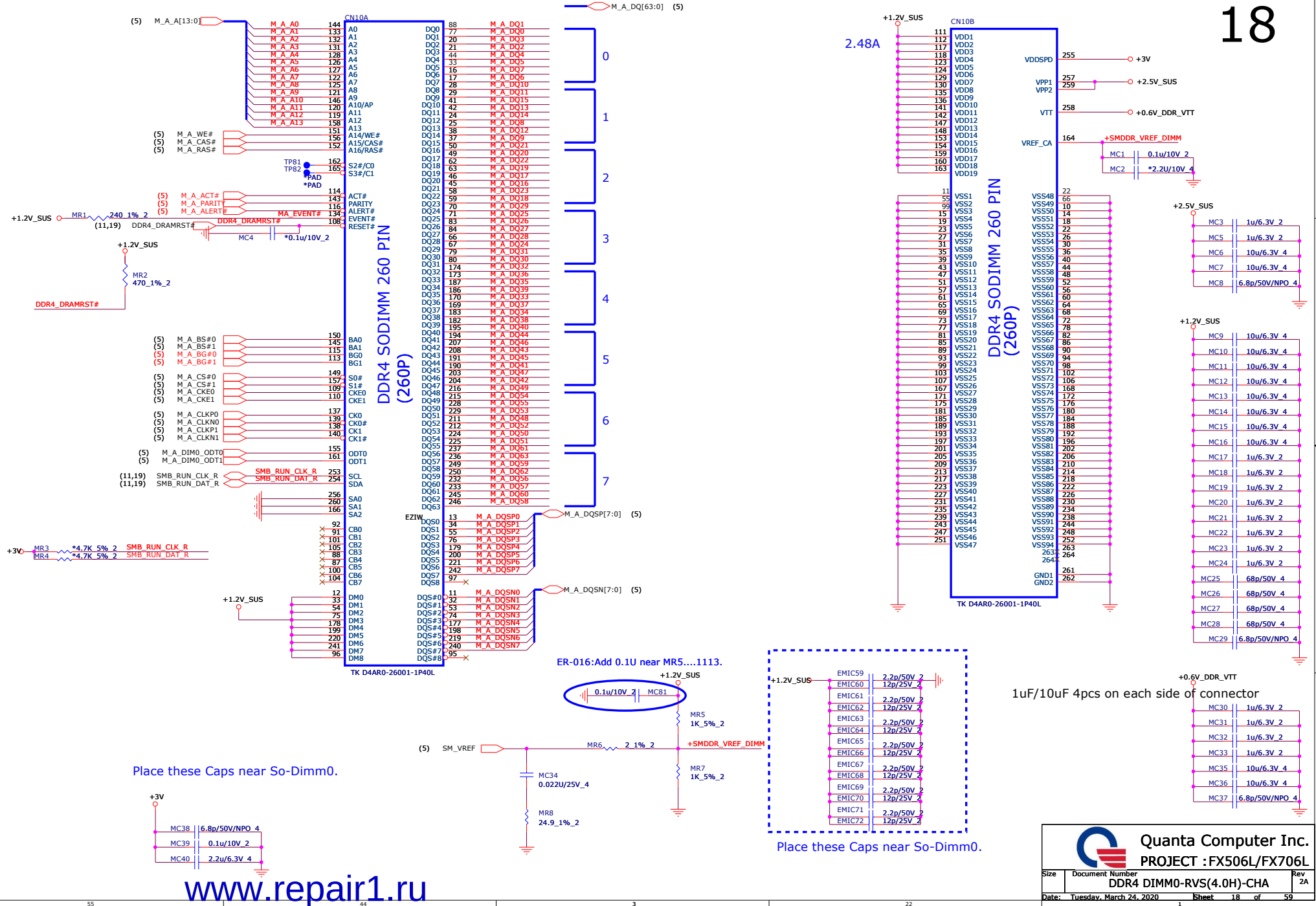
placement on TOP SIDE VIN Plane

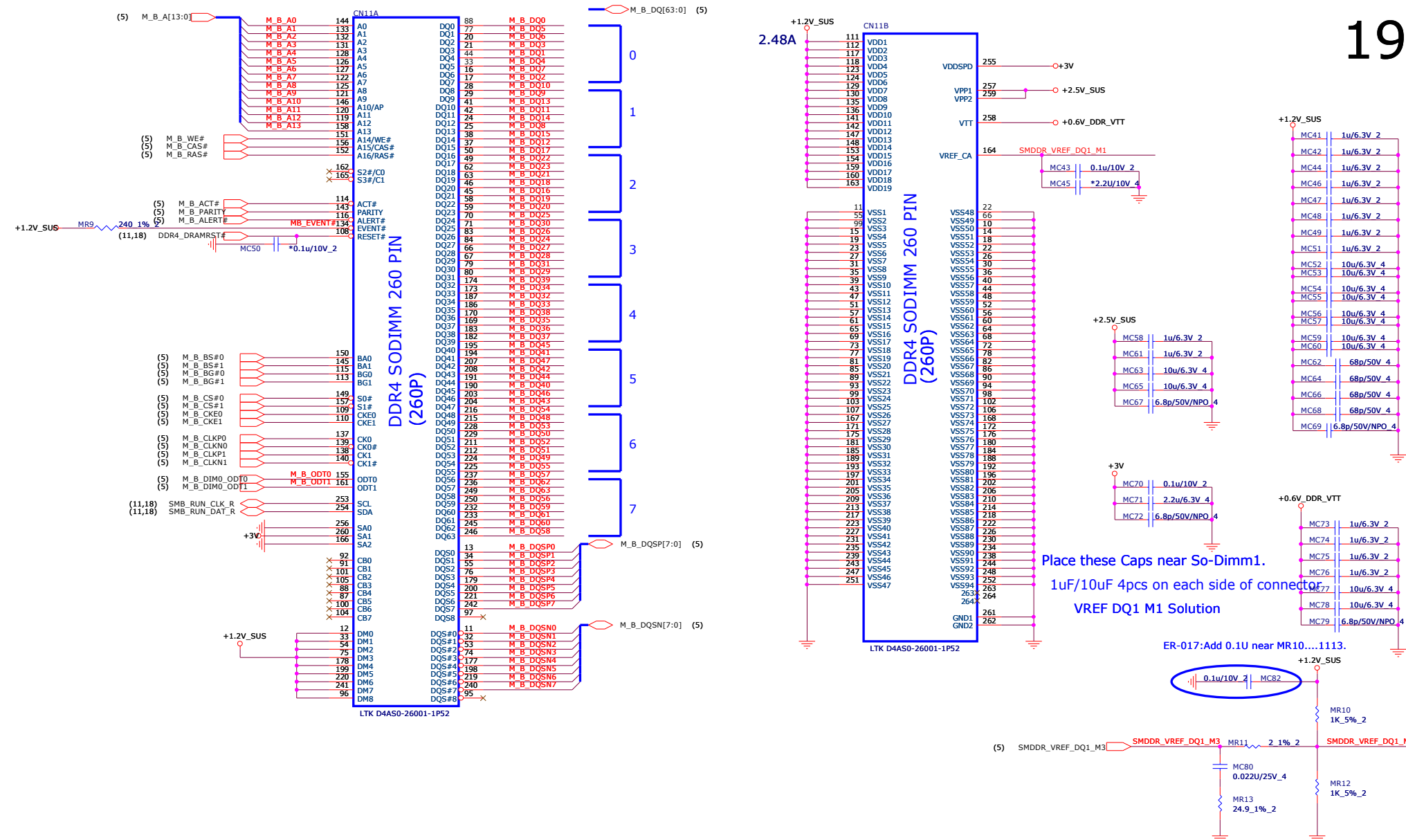


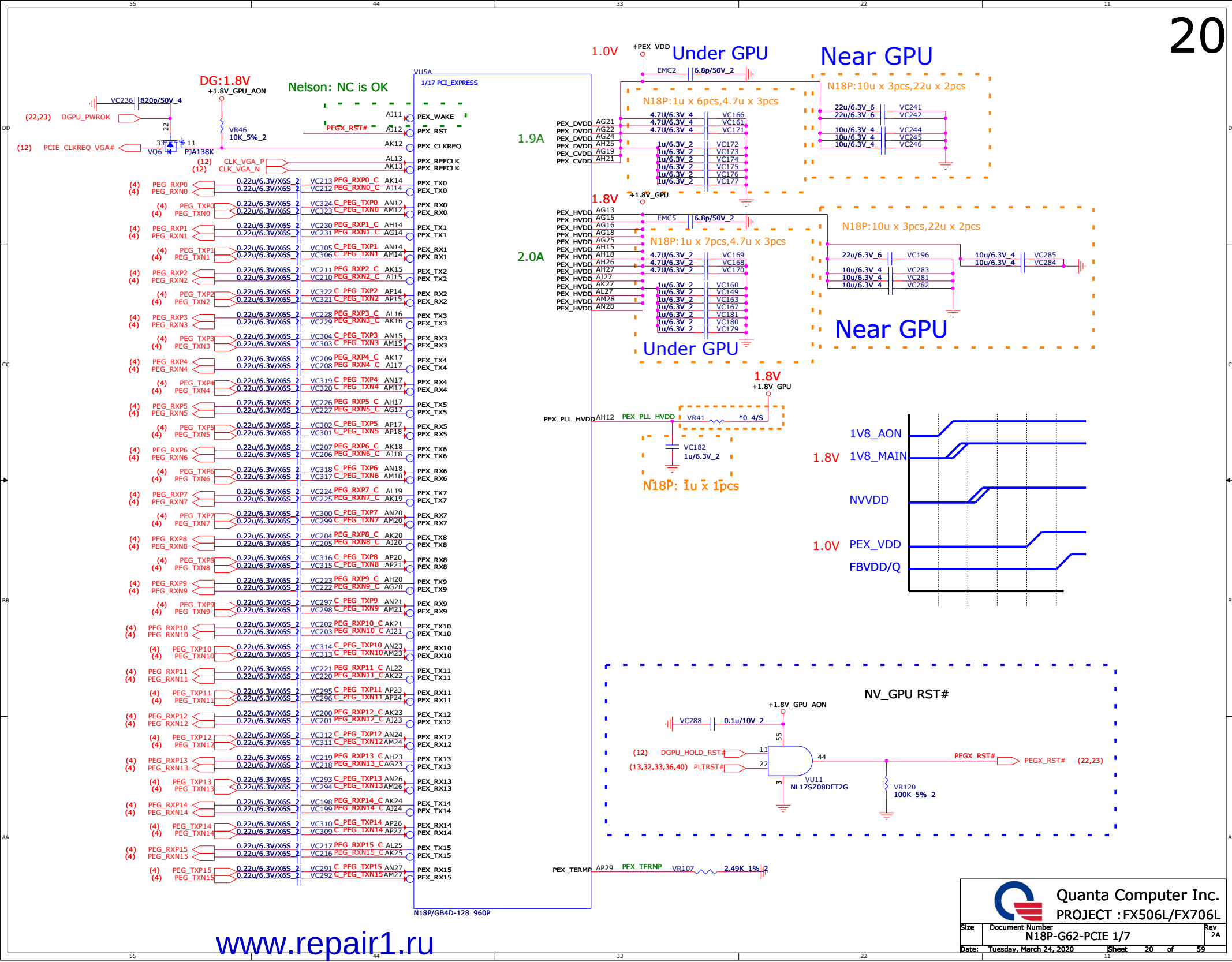
placement on TOP SIDE VA+ Plane

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| | HOLE | 2A |
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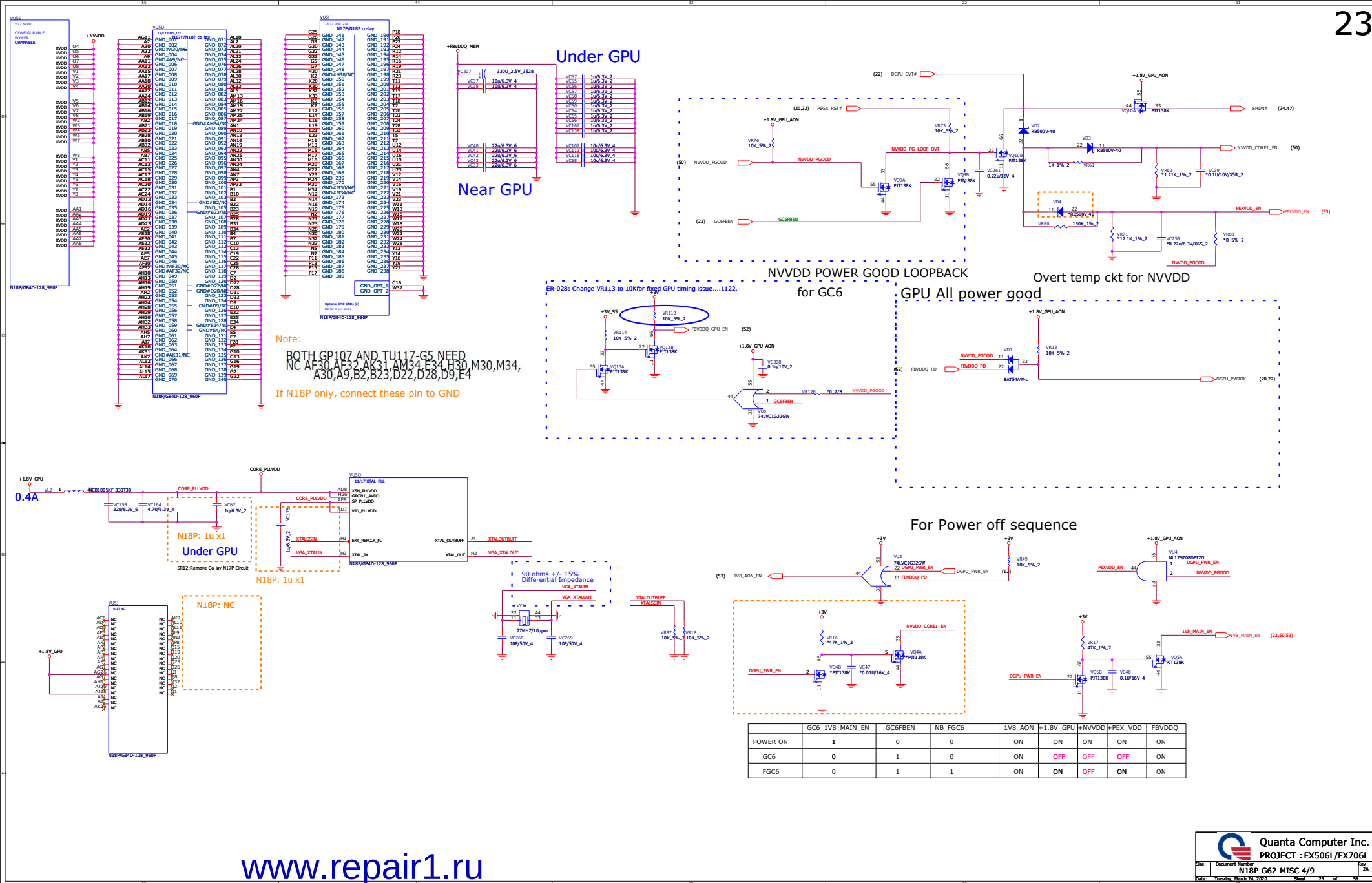


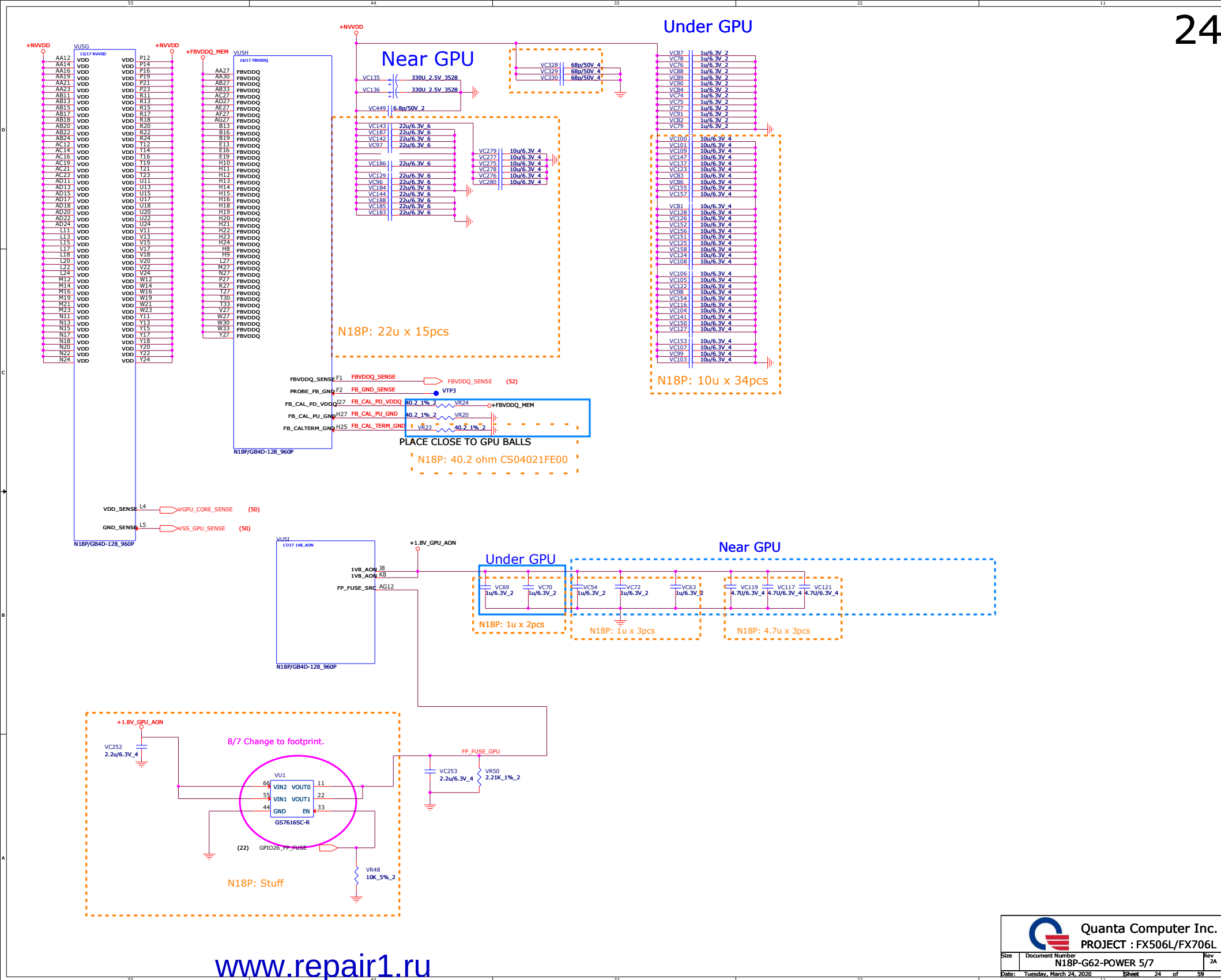


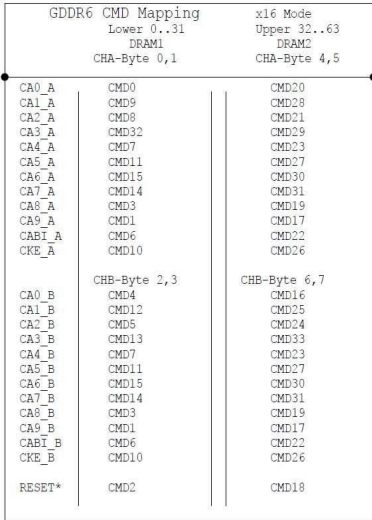
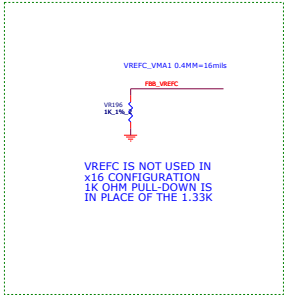
| Table 14.2: GPIO Descriptors for iGB4-12 CPUs (Continued) | | | |
|---|----------------------|------------------------------------|---|
| GPIO Header | GPIO Name | I/O Functional Description | I/O Terminal |
| GPIO6 | WAKEUP_PIN | Power Shedding Lock Section 14-3.3 | 10 kΩ pull-up to +V _{DD} or pull-down to GND |
| GPIO7 | LED_GPIO_0 | Panel Backlight enable | 100 kΩ pull-up to +V _{DD} |
| GPIO8 | ACER_LED_CTL1 | Memory controller status | Not supported for power supply |
| GPIO9 | THEIR_GPIO_ALERT | Active Low Thermal Alert | Open Drain, 100 kΩ pull-up to +V _{DD} |
| GPIO10 | ACER_RESET_CTL1 | Memory Reset Control | Open Drain, 100 kΩ pull-up to +V _{DD} |
| GPIO11 | LED_VDD | LED Power supply | 100 kΩ pull-up to +V _{DD} |
| GPIO12 | Power Button_Stubout | Power Button stubout | 100 kΩ pull-up to +V _{DD} |
| GPIO13 | LED_BACK | LED Power Backlight Enable | Panel Backlight |
| GPIO14 | HPF_GPIO_1 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO15 | HPF_GPIO_2 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO16 | HPF_GPIO_3 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO17 | HPF_GPIO_4 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO18 | HPF_GPIO_5 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO19 | HPF_GPIO_6 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO20 | HPF_GPIO_7 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO21 | HPF_GPIO_8 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO22 | HPF_GPIO_9 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO23 | HPF_GPIO_10 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO24 | HPF_GPIO_11 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO25 | HPF_GPIO_12 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO26 | HPF_GPIO_13 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO27 | HPF_GPIO_14 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO28 | HPF_GPIO_15 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO29 | HPF_GPIO_16 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO30 | HPF_GPIO_17 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO31 | HPF_GPIO_18 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO32 | HPF_GPIO_19 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO33 | HPF_GPIO_20 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO34 | HPF_GPIO_21 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO35 | HPF_GPIO_22 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO36 | HPF_GPIO_23 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO37 | HPF_GPIO_24 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO38 | HPF_GPIO_25 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO39 | HPF_GPIO_26 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO40 | HPF_GPIO_27 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO41 | HPF_GPIO_28 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO42 | HPF_GPIO_29 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO43 | HPF_GPIO_30 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO44 | HPF_GPIO_31 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO45 | HPF_GPIO_32 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO46 | HPF_GPIO_33 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO47 | HPF_GPIO_34 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO48 | HPF_GPIO_35 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO49 | HPF_GPIO_36 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO50 | HPF_GPIO_37 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO51 | HPF_GPIO_38 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO52 | HPF_GPIO_39 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO53 | HPF_GPIO_40 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO54 | HPF_GPIO_41 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO55 | HPF_GPIO_42 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO56 | HPF_GPIO_43 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO57 | HPF_GPIO_44 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO58 | HPF_GPIO_45 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO59 | HPF_GPIO_46 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO60 | HPF_GPIO_47 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO61 | HPF_GPIO_48 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO62 | HPF_GPIO_49 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO63 | HPF_GPIO_50 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO64 | HPF_GPIO_51 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO65 | HPF_GPIO_52 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO66 | HPF_GPIO_53 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO67 | HPF_GPIO_54 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO68 | HPF_GPIO_55 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO69 | HPF_GPIO_56 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO70 | HPF_GPIO_57 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO71 | HPF_GPIO_58 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO72 | HPF_GPIO_59 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO73 | HPF_GPIO_60 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO74 | HPF_GPIO_61 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO75 | HPF_GPIO_62 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO76 | HPF_GPIO_63 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO77 | HPF_GPIO_64 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO78 | HPF_GPIO_65 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO79 | HPF_GPIO_66 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO80 | HPF_GPIO_67 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO81 | HPF_GPIO_68 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO82 | HPF_GPIO_69 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO83 | HPF_GPIO_70 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO84 | HPF_GPIO_71 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO85 | HPF_GPIO_72 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO86 | HPF_GPIO_73 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO87 | HPF_GPIO_74 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO88 | HPF_GPIO_75 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO89 | HPF_GPIO_76 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO90 | HPF_GPIO_77 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO91 | HPF_GPIO_78 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO92 | HPF_GPIO_79 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO93 | HPF_GPIO_80 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO94 | HPF_GPIO_81 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO95 | HPF_GPIO_82 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO96 | HPF_GPIO_83 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO97 | HPF_GPIO_84 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO98 | HPF_GPIO_85 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO99 | HPF_GPIO_86 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO100 | HPF_GPIO_87 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO101 | HPF_GPIO_88 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO102 | HPF_GPIO_89 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO103 | HPF_GPIO_90 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO104 | HPF_GPIO_91 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO105 | HPF_GPIO_92 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO106 | HPF_GPIO_93 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO107 | HPF_GPIO_94 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO108 | HPF_GPIO_95 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO109 | HPF_GPIO_96 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO110 | HPF_GPIO_97 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO111 | HPF_GPIO_98 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO112 | HPF_GPIO_99 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO113 | HPF_GPIO_100 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO114 | HPF_GPIO_101 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO115 | HPF_GPIO_102 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO116 | HPF_GPIO_103 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO117 | HPF_GPIO_104 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO118 | HPF_GPIO_105 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO119 | HPF_GPIO_106 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO120 | HPF_GPIO_107 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO121 | HPF_GPIO_108 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO122 | HPF_GPIO_109 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO123 | HPF_GPIO_110 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO124 | HPF_GPIO_111 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO125 | HPF_GPIO_112 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO126 | HPF_GPIO_113 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO127 | HPF_GPIO_114 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO128 | HPF_GPIO_115 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO129 | HPF_GPIO_116 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO130 | HPF_GPIO_117 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO131 | HPF_GPIO_118 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO132 | HPF_GPIO_119 | Hot Plug Detect for HPFs | Interrupted by Fan |
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| GPIO134 | HPF_GPIO_121 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO135 | HPF_GPIO_122 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO136 | HPF_GPIO_123 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO137 | HPF_GPIO_124 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO138 | HPF_GPIO_125 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO139 | HPF_GPIO_126 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO140 | HPF_GPIO_127 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO141 | HPF_GPIO_128 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO142 | HPF_GPIO_129 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO143 | HPF_GPIO_130 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO144 | HPF_GPIO_131 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO145 | HPF_GPIO_132 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO146 | HPF_GPIO_133 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO147 | HPF_GPIO_134 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO148 | HPF_GPIO_135 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO149 | HPF_GPIO_136 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO150 | HPF_GPIO_137 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO151 | HPF_GPIO_138 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO152 | HPF_GPIO_139 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO153 | HPF_GPIO_140 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO154 | HPF_GPIO_141 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO155 | HPF_GPIO_142 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO156 | HPF_GPIO_143 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO157 | HPF_GPIO_144 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO158 | HPF_GPIO_145 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO159 | HPF_GPIO_146 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO160 | HPF_GPIO_147 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO161 | HPF_GPIO_148 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO162 | HPF_GPIO_149 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO163 | HPF_GPIO_150 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO164 | HPF_GPIO_151 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO165 | HPF_GPIO_152 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO166 | HPF_GPIO_153 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO167 | HPF_GPIO_154 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO168 | HPF_GPIO_155 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO169 | HPF_GPIO_156 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO170 | HPF_GPIO_157 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO171 | HPF_GPIO_158 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO172 | HPF_GPIO_159 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO173 | HPF_GPIO_160 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO174 | HPF_GPIO_161 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO175 | HPF_GPIO_162 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO176 | HPF_GPIO_163 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO177 | HPF_GPIO_164 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO178 | HPF_GPIO_165 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO179 | HPF_GPIO_166 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO180 | HPF_GPIO_167 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO181 | HPF_GPIO_168 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO182 | HPF_GPIO_169 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO183 | HPF_GPIO_170 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO184 | HPF_GPIO_171 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO185 | HPF_GPIO_172 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO186 | HPF_GPIO_173 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO187 | HPF_GPIO_174 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO188 | HPF_GPIO_175 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO189 | HPF_GPIO_176 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO190 | HPF_GPIO_177 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO191 | HPF_GPIO_178 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO192 | HPF_GPIO_179 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO193 | HPF_GPIO_180 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO194 | HPF_GPIO_181 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO195 | HPF_GPIO_182 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO196 | HPF_GPIO_183 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO197 | HPF_GPIO_184 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO198 | HPF_GPIO_185 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO199 | HPF_GPIO_186 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO200 | HPF_GPIO_187 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO201 | HPF_GPIO_188 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO202 | HPF_GPIO_189 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO203 | HPF_GPIO_190 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO204 | HPF_GPIO_191 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO205 | HPF_GPIO_192 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO206 | HPF_GPIO_193 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO207 | HPF_GPIO_194 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO208 | HPF_GPIO_195 | Hot Plug Detect for HPFs | Interrupted by Fan |
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| GPIO211 | HPF_GPIO_198 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO212 | HPF_GPIO_199 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO213 | HPF_GPIO_200 | Hot Plug Detect for HPFs | Interrupted by Fan |
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| GPIO215 | HPF_GPIO_202 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO216 | HPF_GPIO_203 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO217 | HPF_GPIO_204 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO218 | HPF_GPIO_205 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO219 | HPF_GPIO_206 | Hot Plug Detect for HPFs | Interrupted by Fan |
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| GPIO225 | HPF_GPIO_212 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO226 | HPF_GPIO_213 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO227 | HPF_GPIO_214 | Hot Plug Detect for HPFs | Interrupted by Fan |
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| GPIO236 | HPF_GPIO_223 | Hot Plug Detect for HPFs | Interrupted by Fan |
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| GPIO239 | HPF_GPIO_226 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO240 | HPF_GPIO_227 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO241 | HPF_GPIO_228 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO242 | HPF_GPIO_229 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO243 | HPF_GPIO_230 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO244 | HPF_GPIO_231 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO245 | HPF_GPIO_232 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO246 | HPF_GPIO_233 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO247 | HPF_GPIO_234 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO248 | HPF_GPIO_235 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO249 | HPF_GPIO_236 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO250 | HPF_GPIO_237 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO251 | HPF_GPIO_238 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO252 | HPF_GPIO_239 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO253 | HPF_GPIO_240 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO254 | HPF_GPIO_241 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO255 | HPF_GPIO_242 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO256 | HPF_GPIO_243 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO257 | HPF_GPIO_244 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO258 | HPF_GPIO_245 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO259 | HPF_GPIO_246 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO260 | HPF_GPIO_247 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO261 | HPF_GPIO_248 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO262 | HPF_GPIO_249 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO263 | HPF_GPIO_250 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO264 | HPF_GPIO_251 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO265 | HPF_GPIO_252 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO266 | HPF_GPIO_253 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO267 | HPF_GPIO_254 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO268 | HPF_GPIO_255 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO269 | HPF_GPIO_256 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO270 | HPF_GPIO_257 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO271 | HPF_GPIO_258 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO272 | HPF_GPIO_259 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO273 | HPF_GPIO_260 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO274 | HPF_GPIO_261 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO275 | HPF_GPIO_262 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO276 | HPF_GPIO_263 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO277 | HPF_GPIO_264 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO278 | HPF_GPIO_265 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO279 | HPF_GPIO_266 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO280 | HPF_GPIO_267 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO281 | HPF_GPIO_268 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO282 | HPF_GPIO_269 | Hot Plug Detect for HPFs | Interrupted by Fan |
| GPIO | | | |

| GPIO Number | GPIO Name | I/O | Functional Description | I/O Term |
|-------------|----------------------------|-----|-----------------------------|--------------------------------------|
| GPIO23 | GCMI: GPU_PEX_RST_HOLDY | O | GPU PCIe self-reset control | Open Drain 10 kΩ pull-up (30) |
| GPIO24 | HFD_IFTF | I | Hot plug detect for I/TF | Hot plug detect for I/TF (Figure 14) |
| GPIO25 | UNUSED | | | |
| GPIO26 | UNUSED | | | |
| GPIO27 | HFD_IFFC | I | Hot plug detect for I/FC | Hot plug detect for I/FC (Figure 14) |


| GPIO Number | GPIO Name | I/O | Functional Description | I/O Termination |
|-------------|-----------|-----|-------------------------------|------------------------------------|
| OVERT | OVERT | I/O | Catastrophic Over Temperature | 100 kΩ pull up to 2V _{CC} |







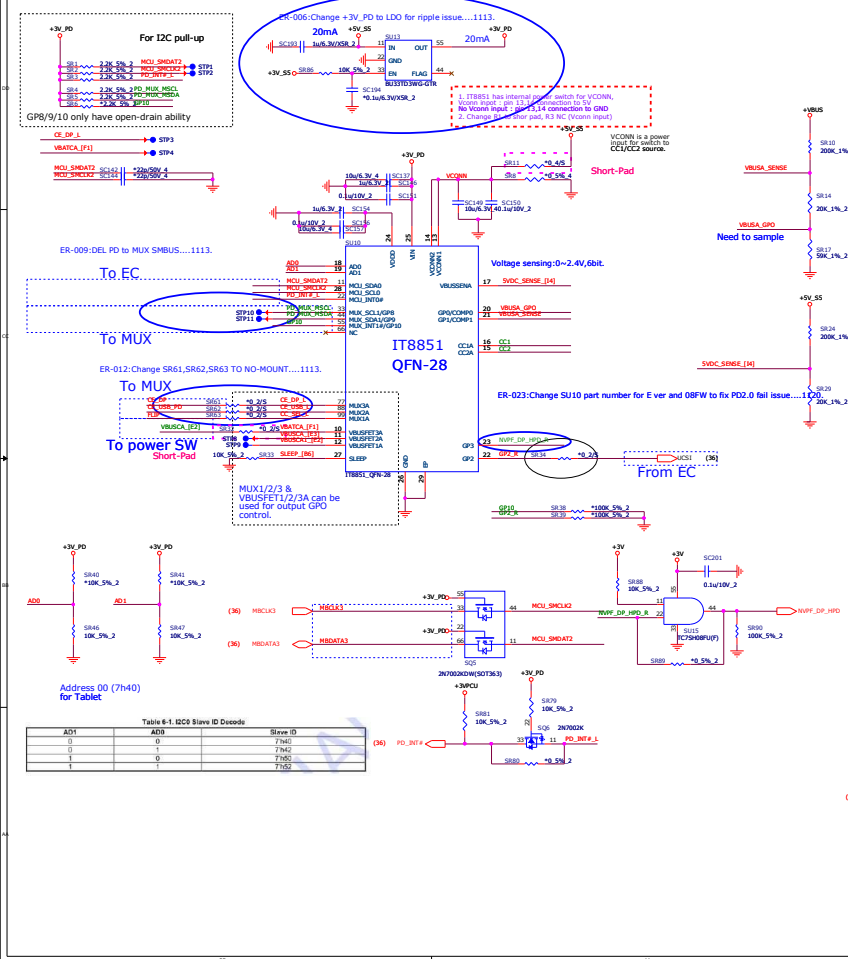
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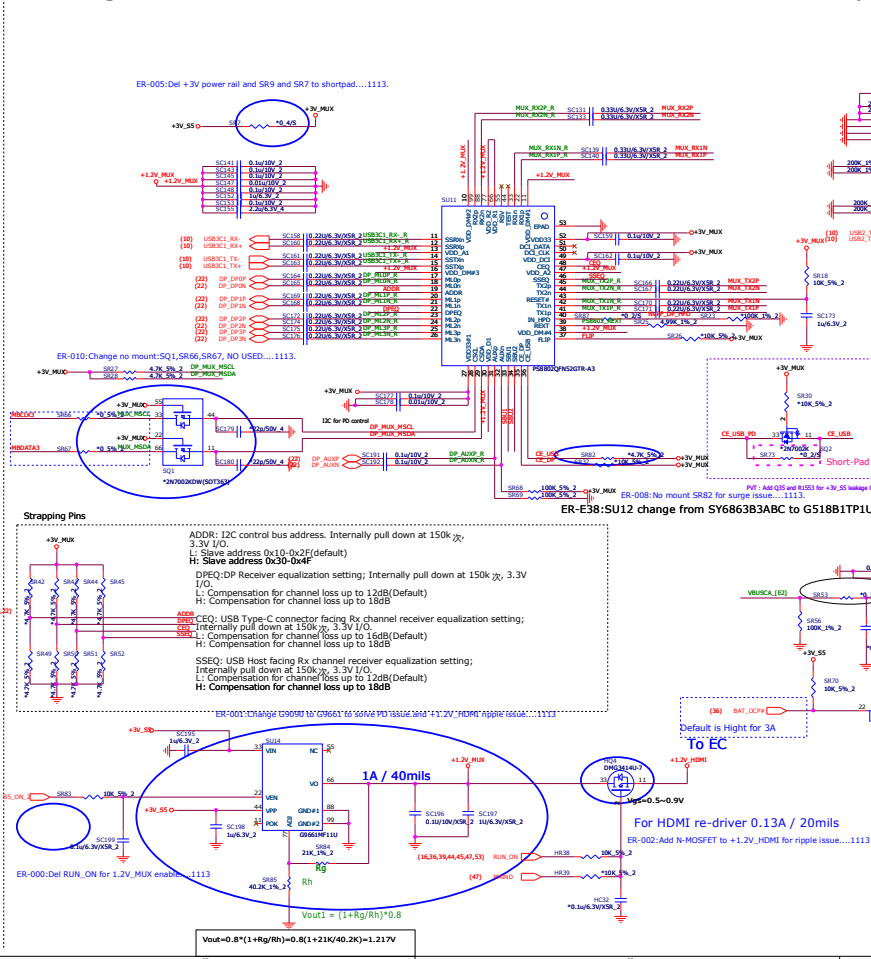
Quanta Computer Inc.
PROJECT : FX506L/FX706L

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| | N17P-G1 (Reserved) | 2A |
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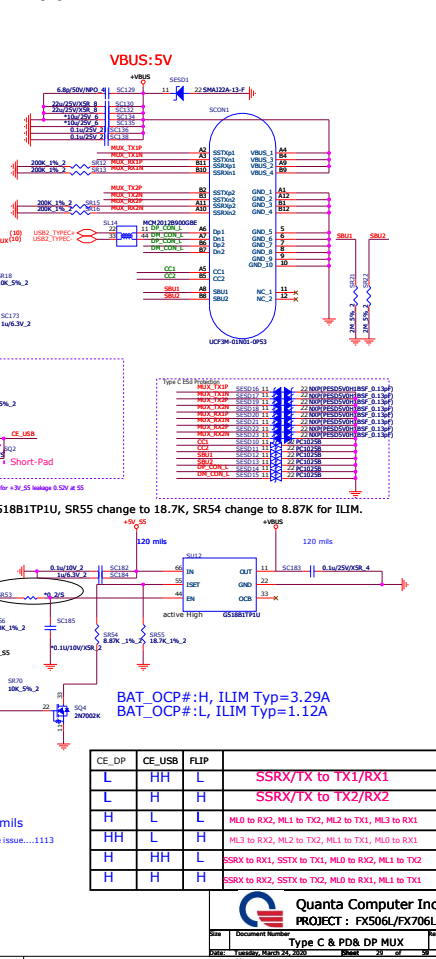
PD Controller



DP MUX



Type C

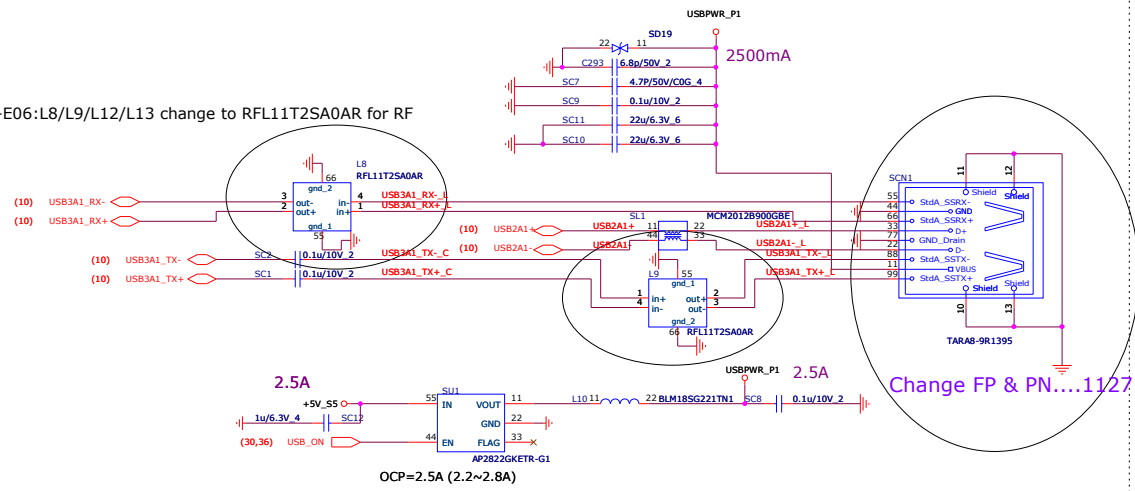


USB 3.2 GEN1 Type A/ PORT1

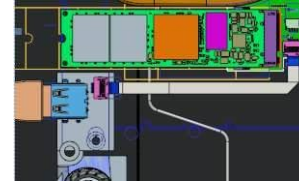
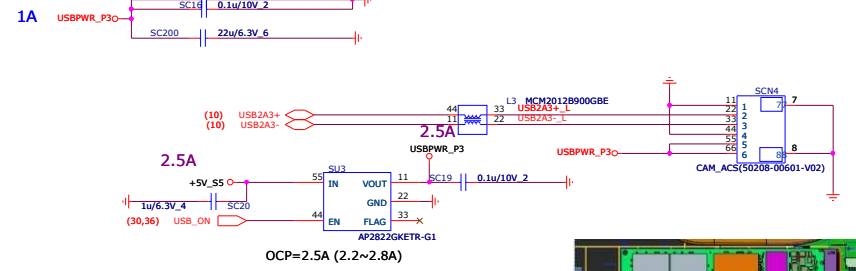
USB 2.0 PORT1

PR-E02:Remove CON6 for USB board FFC CONN.....0217

PR-E06:L8/L9/L12/L13 change to RFL11T2SA0AR for RF



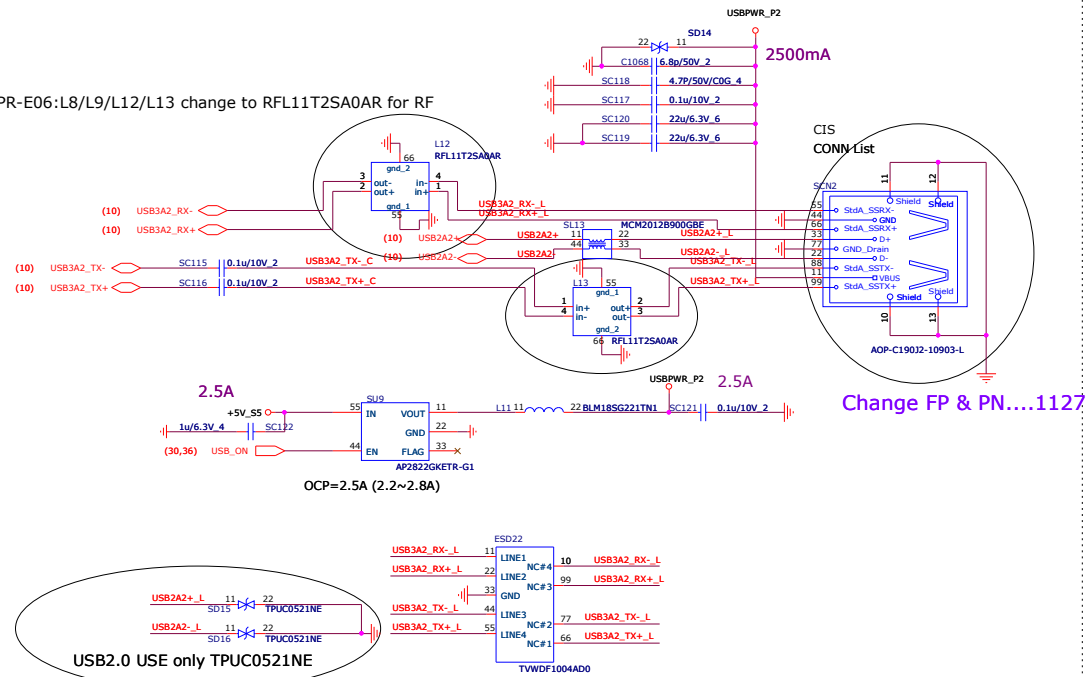
USB2.0 port



USB2.0 USE only TPUC0521NE

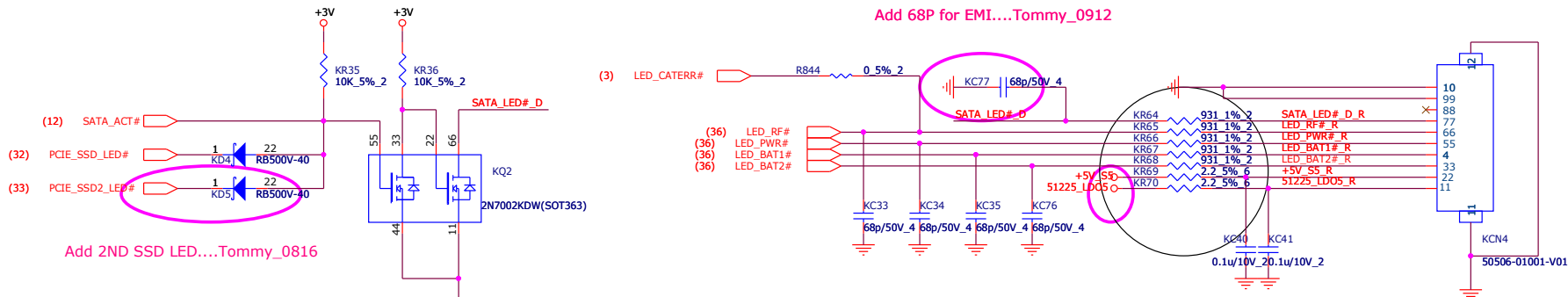
USB 3.2 GEN1 Type A/PORT2

PR-E06:L8/L9/L12/L13 change to RFL11T2SA0AR for RF

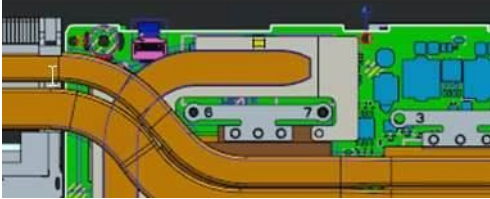


USB2.0 USE only TPUC0521NE

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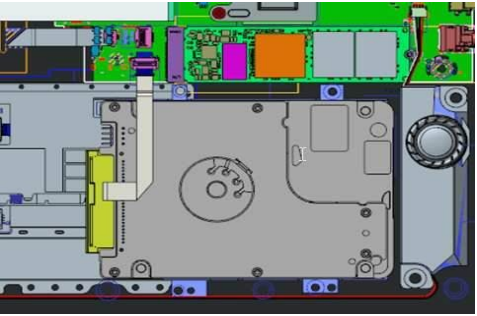
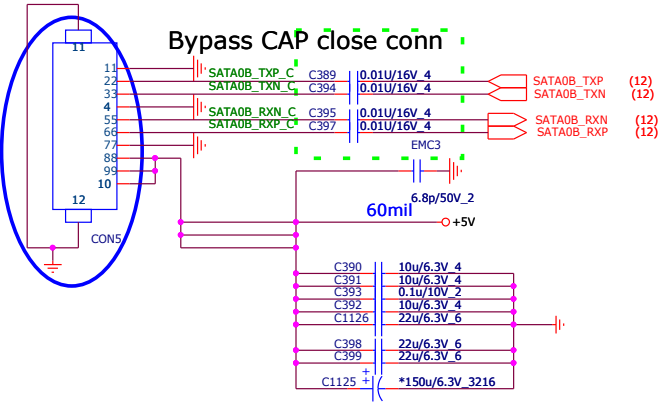
ER-E34:KR64, KR65, KR66, KR67, KR68 change from 390 to 931 ohm for brigtness

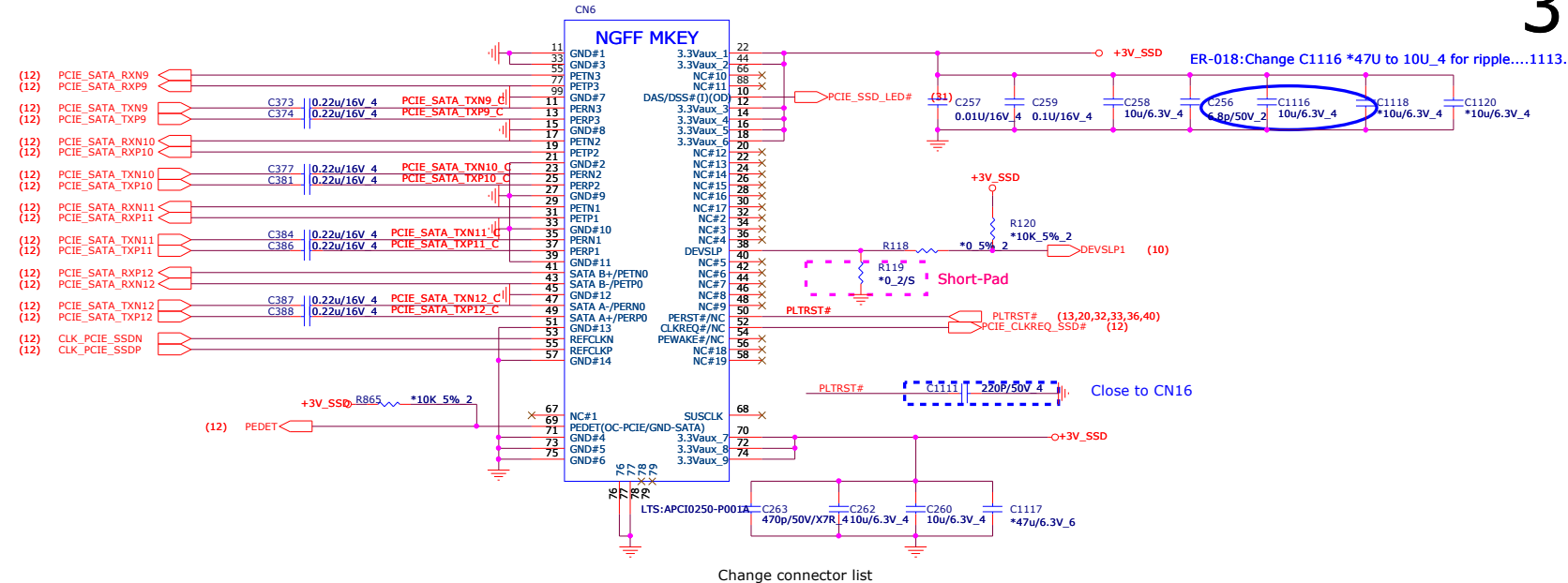


SATA HDD FFC

ER-032:Change HDD FFC pin define for ME cable routing....1126

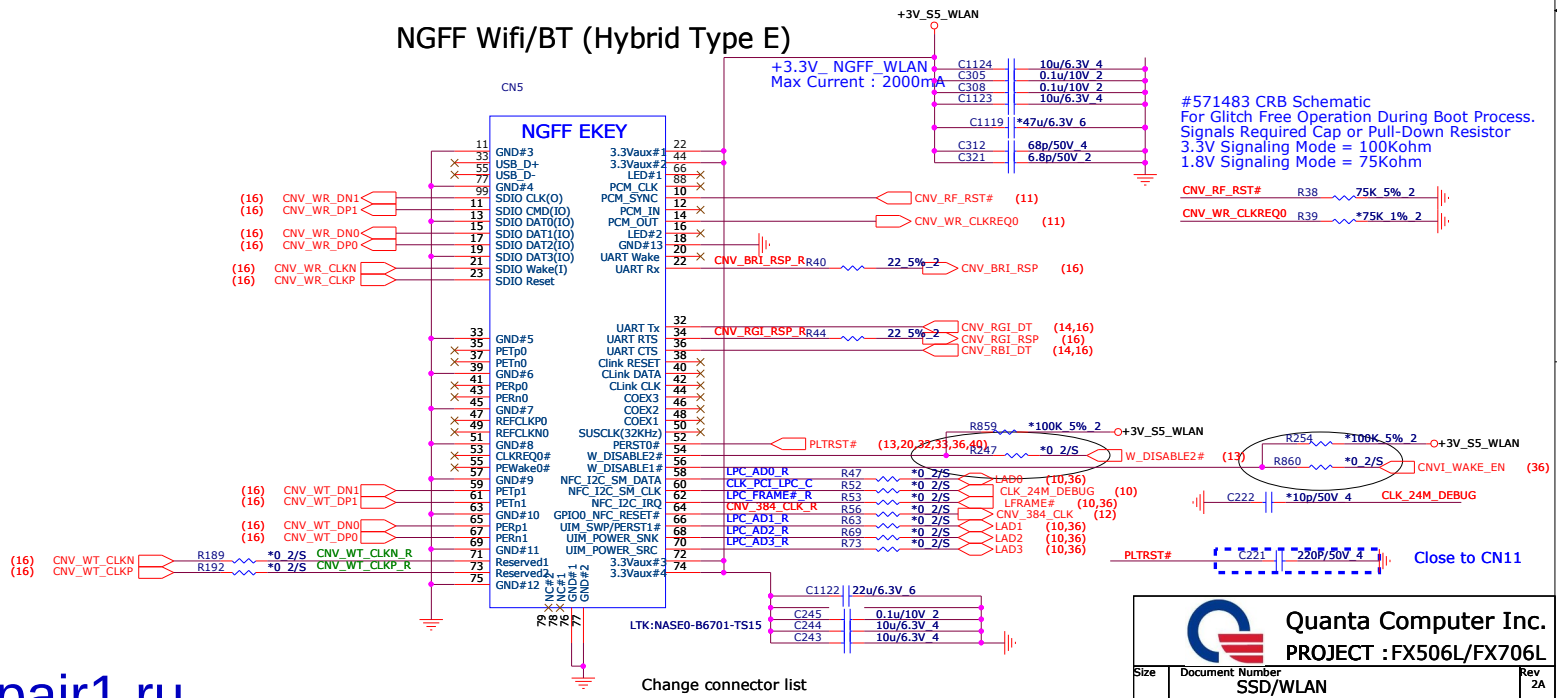
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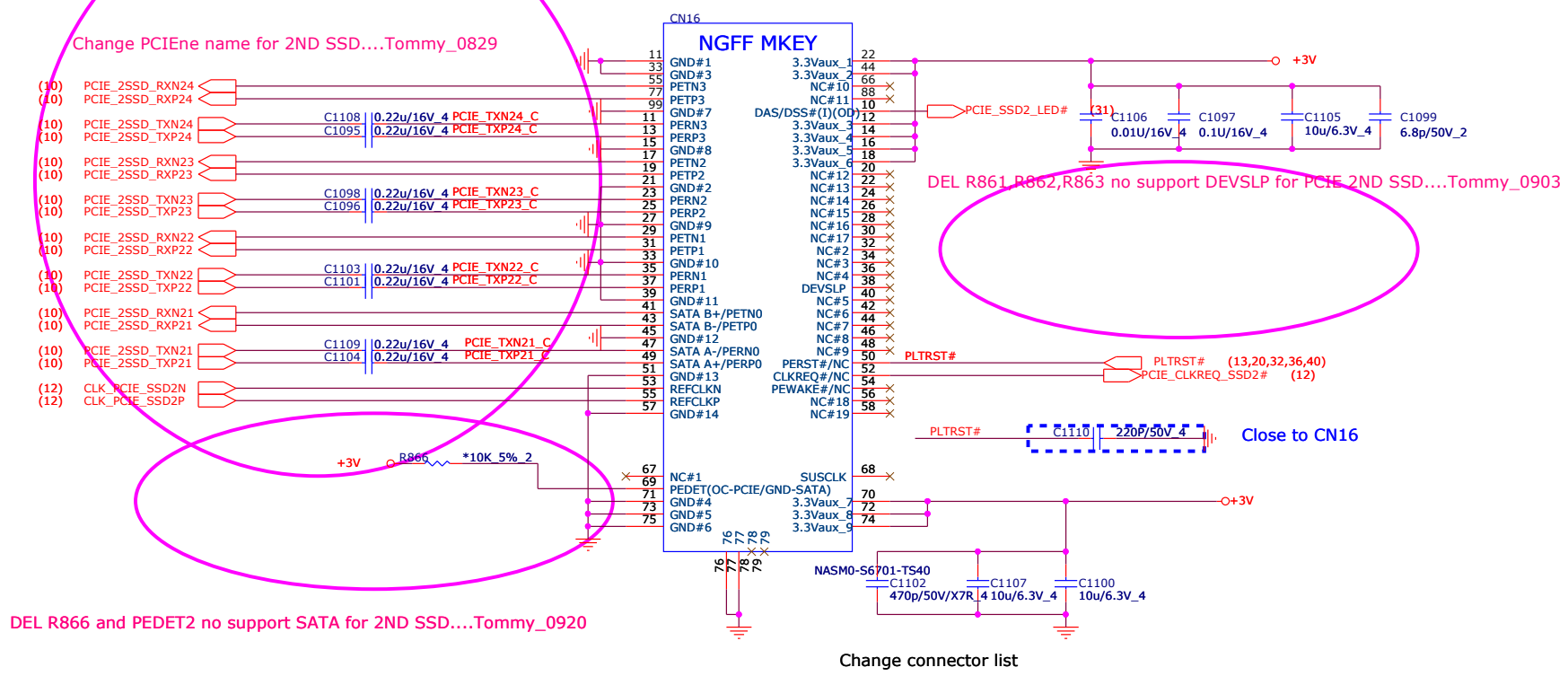


WLAN/BT


NGFF Wifi/BT (Hybrid Type E)



2ND SSD



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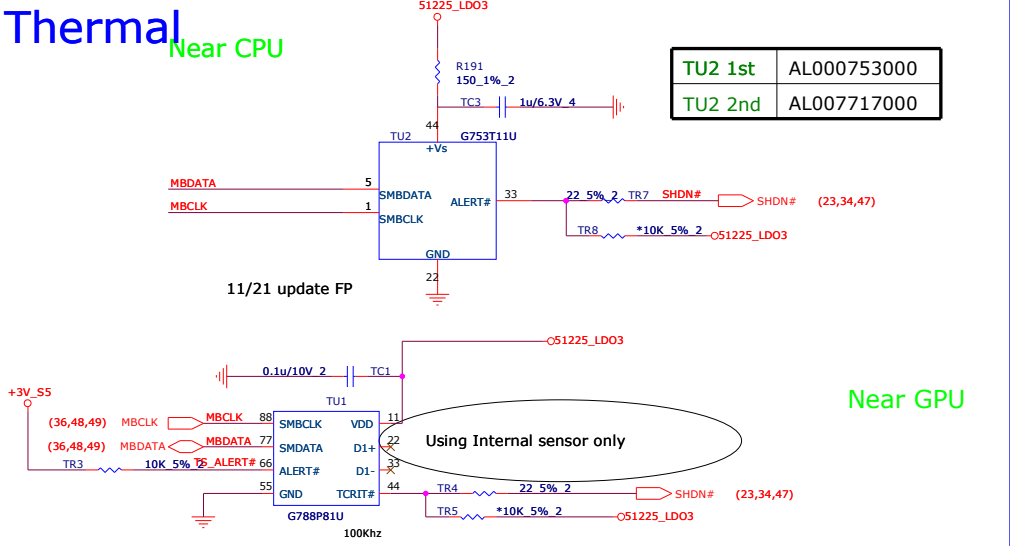
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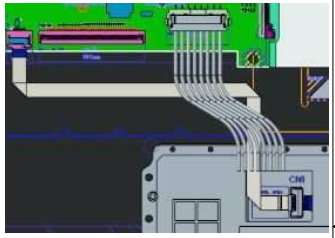
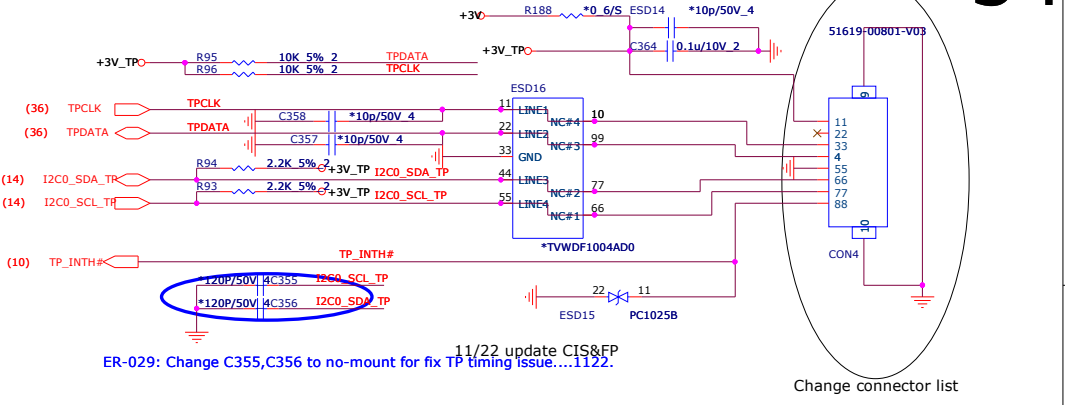
Thermal

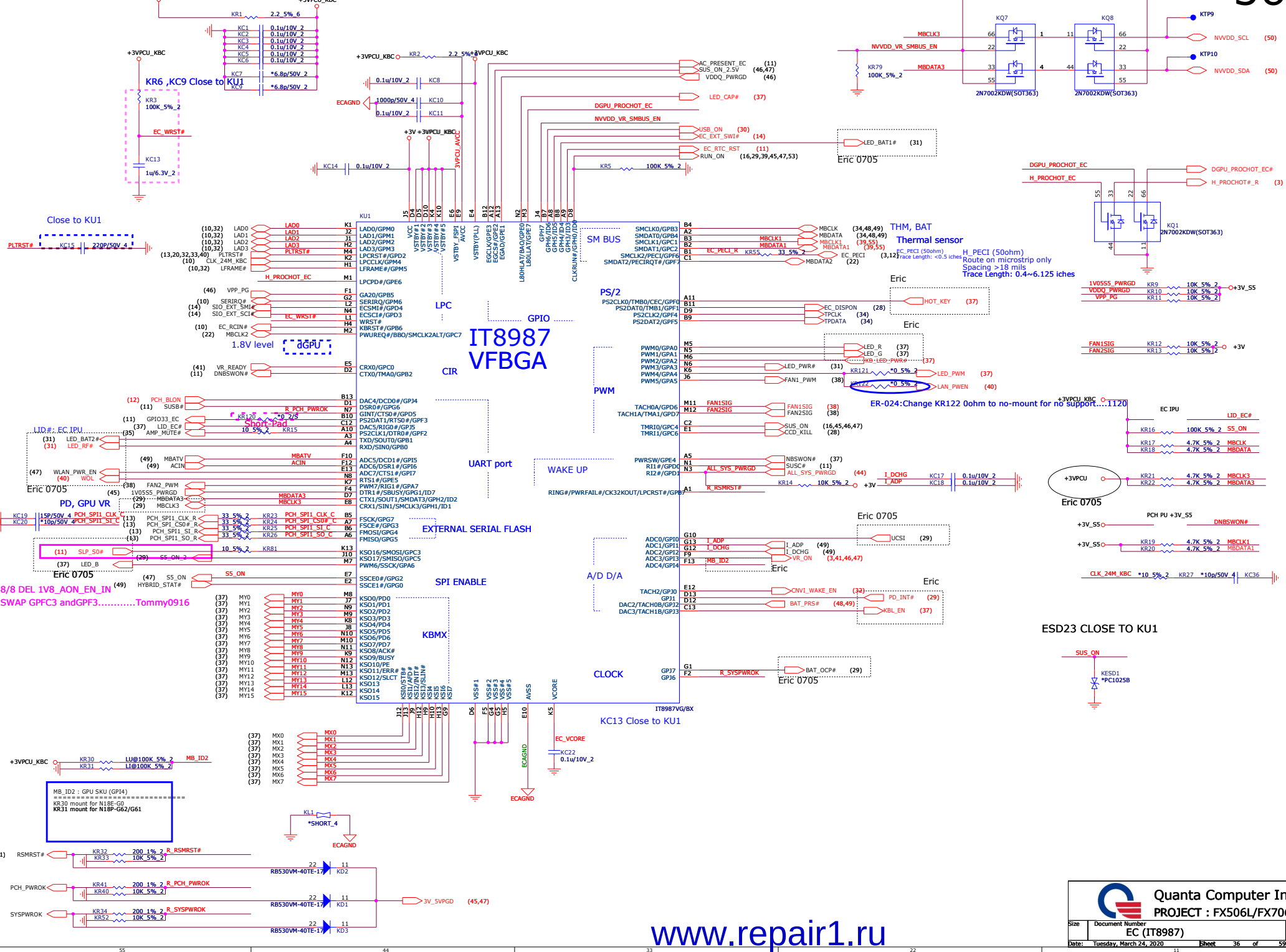
Near CPU

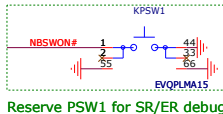
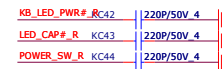


Touch Pad Connector AA type

34

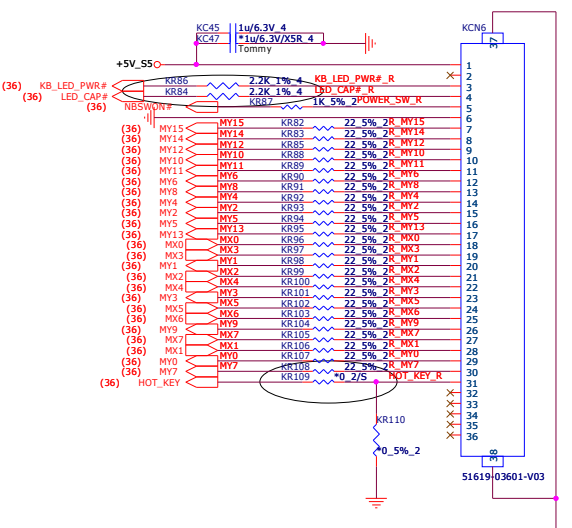
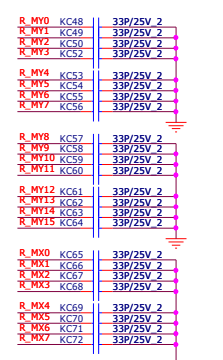






KEYBOARD Con.

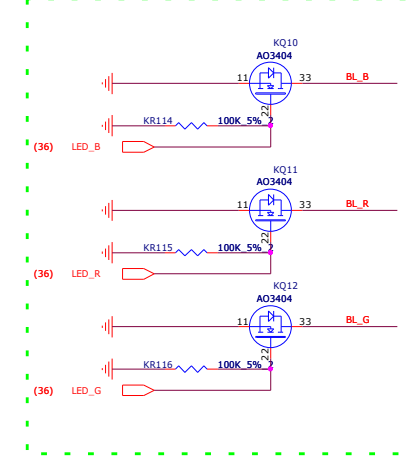
PR-E10:KR84, KR86 change from 220 ohm to 2.2K ohm for ID KB LED brightness request.



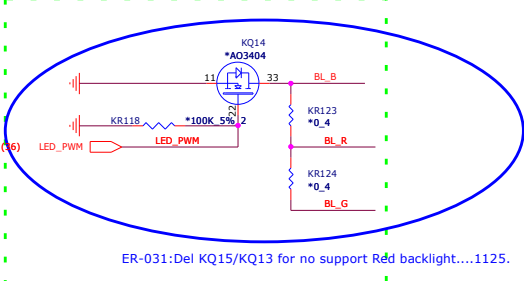
KEYBOARD BACKLIGHT Con.

8/7 Change to footprint.

1 Zone RGB

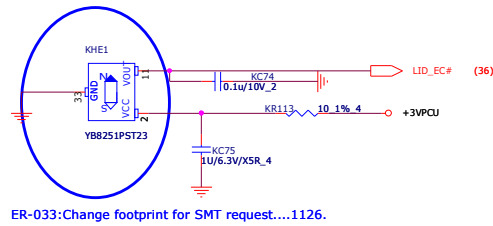
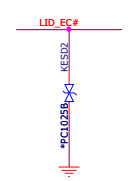


1 Zone R



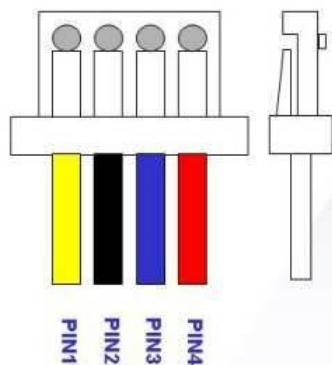
ER-031:Del KQ15/KQ13 for no support Red backlight....1125.

ESD23 CLOSE TO KHE1



ER-033:Change footprint for SMT request....1126.

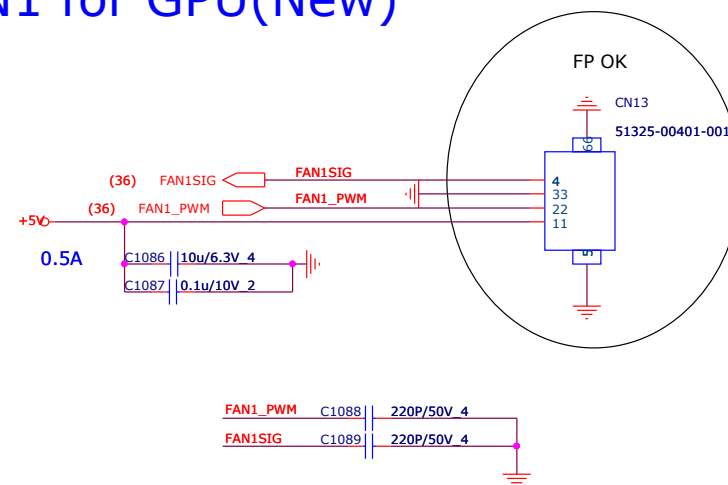
4Pins Fan Connector Pins Definition



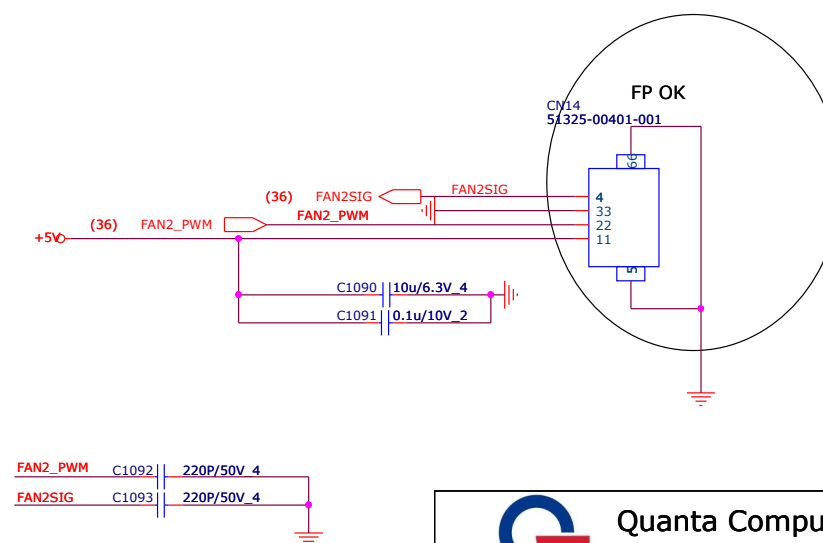
| Pin No. | Function |
|---------|----------|
| Pin 1 | TACHO |
| Pin 2 | GNA |
| Pin 3 | PWM |
| Pin 4 | +5V |

FAN1 for GPU(New)


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FAN2 for CPU



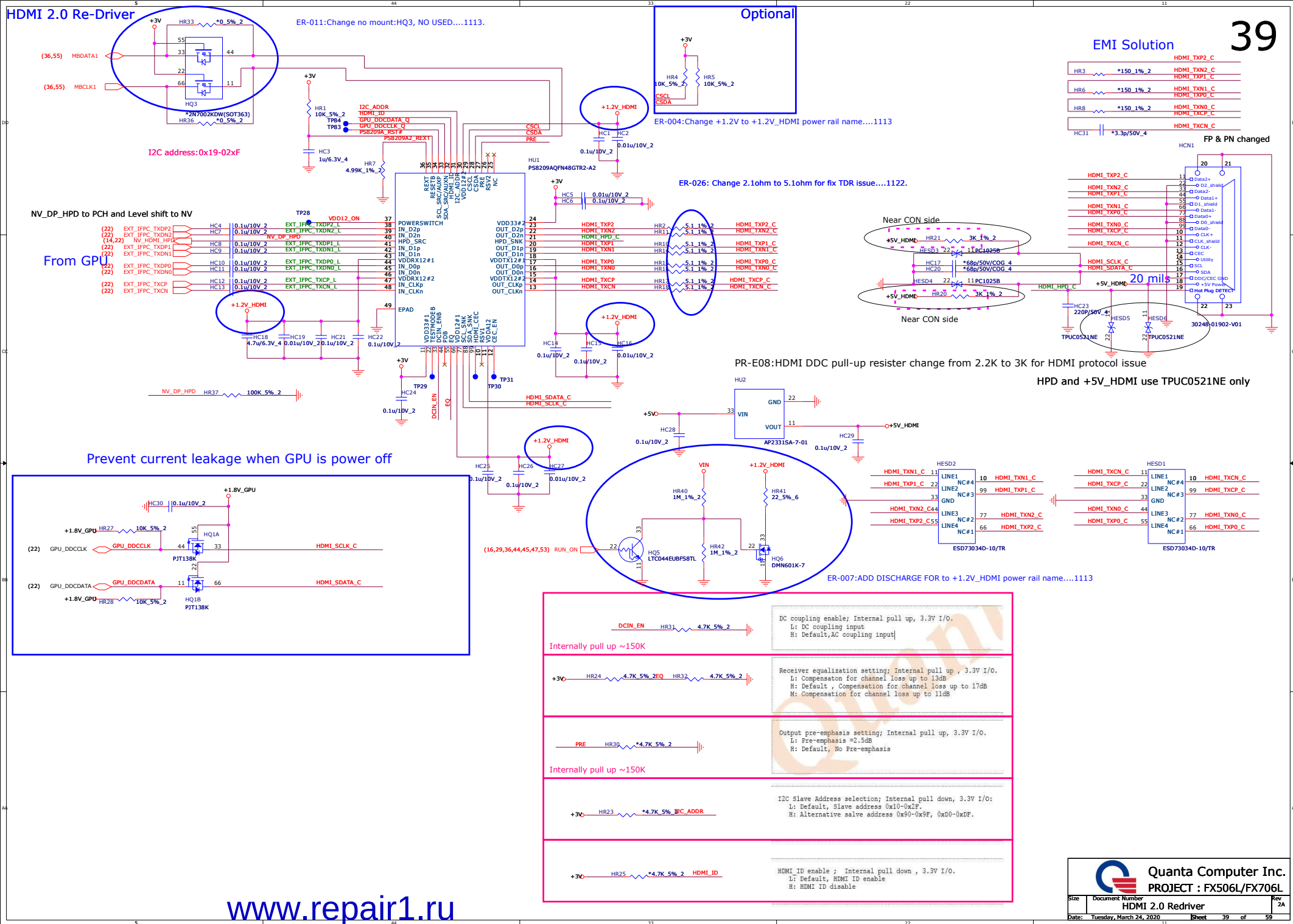
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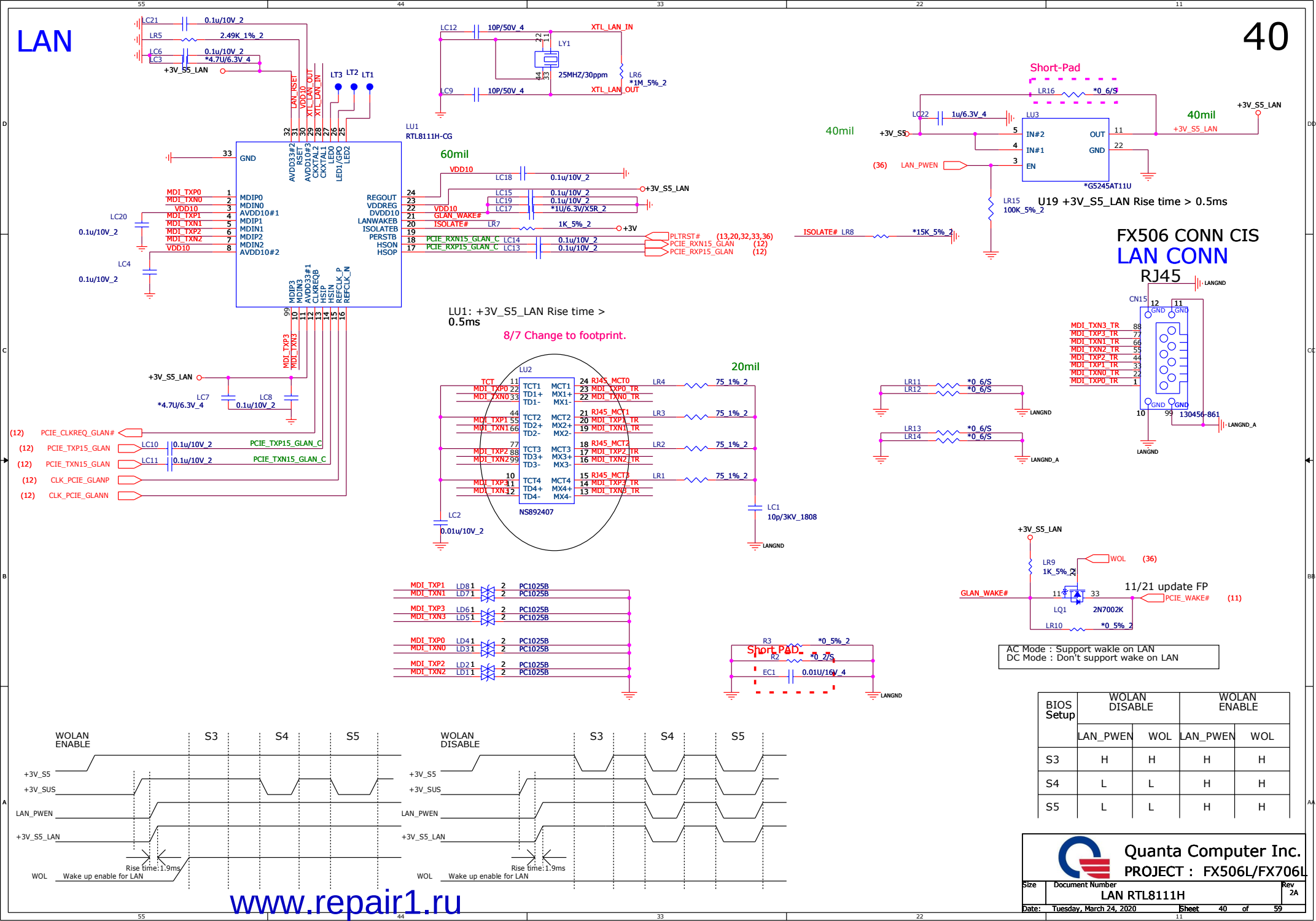


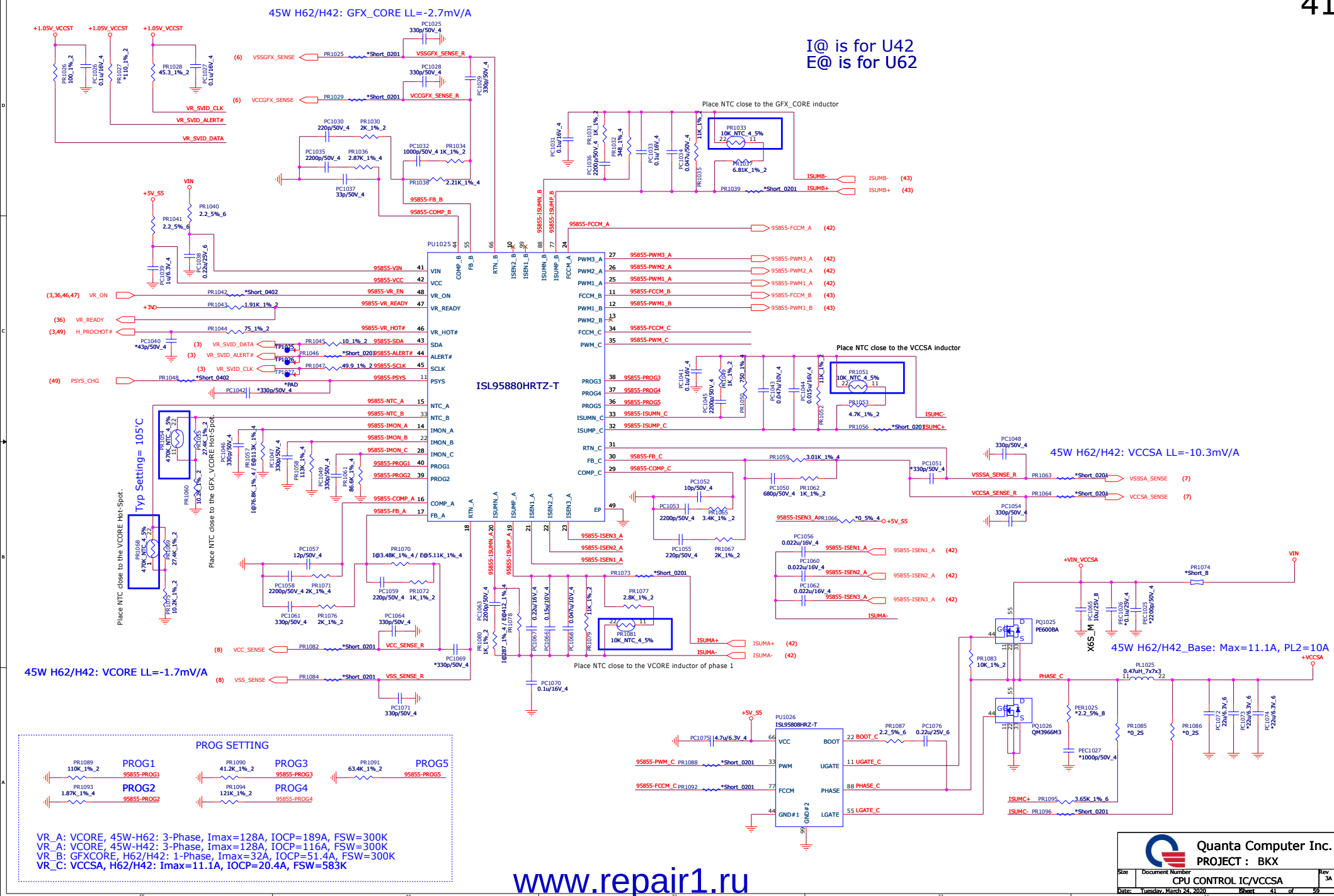
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| | FAN | 2A |
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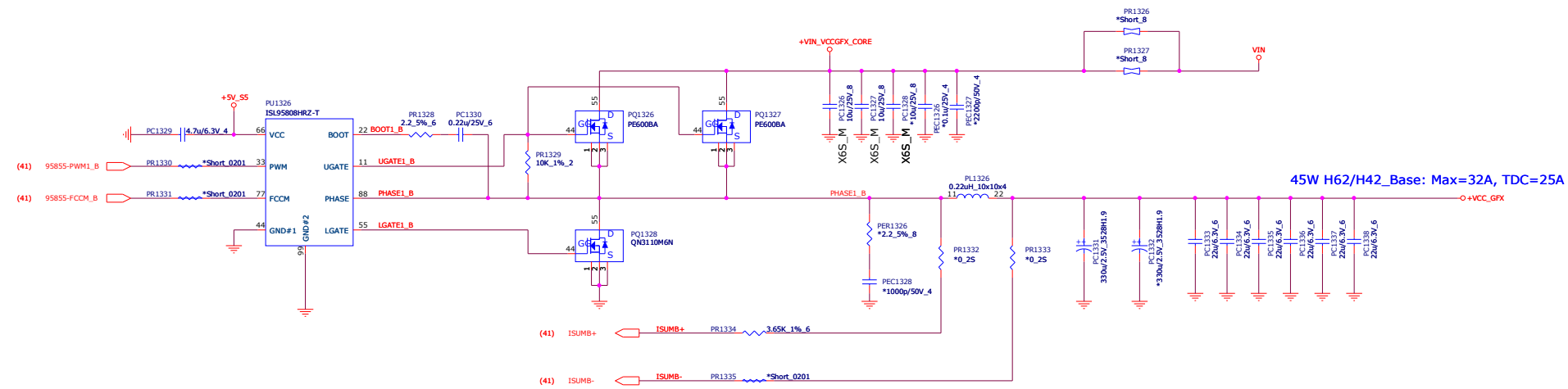


H42_Base TDP=45W:
Max=86A, PL2=60A, LL=1.7m

H62_Base TDP=45W:
Max=128A, PL2=80A, LL=1.7m

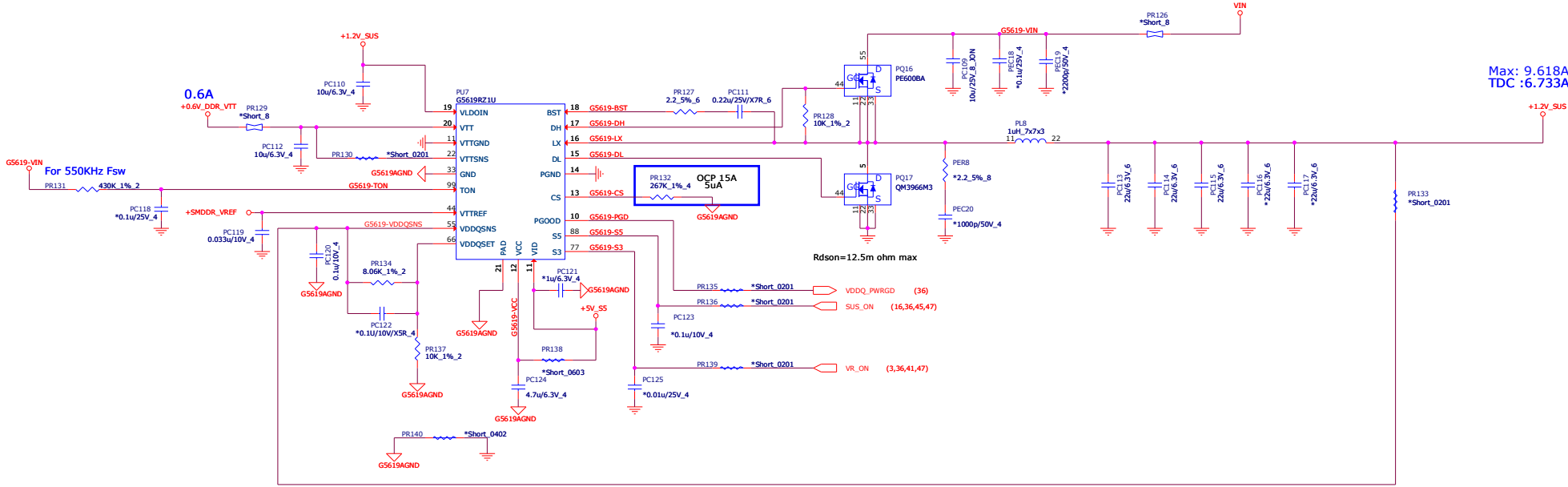


GFX_CORE

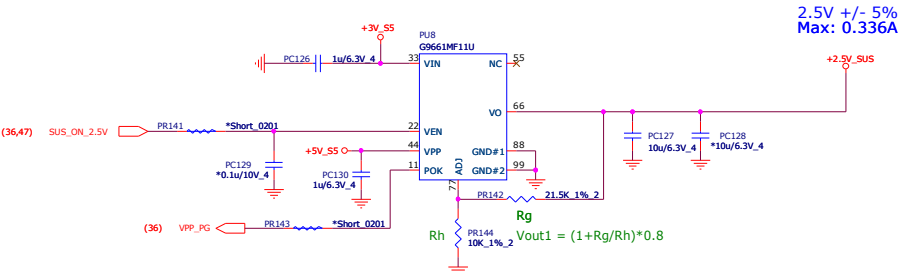


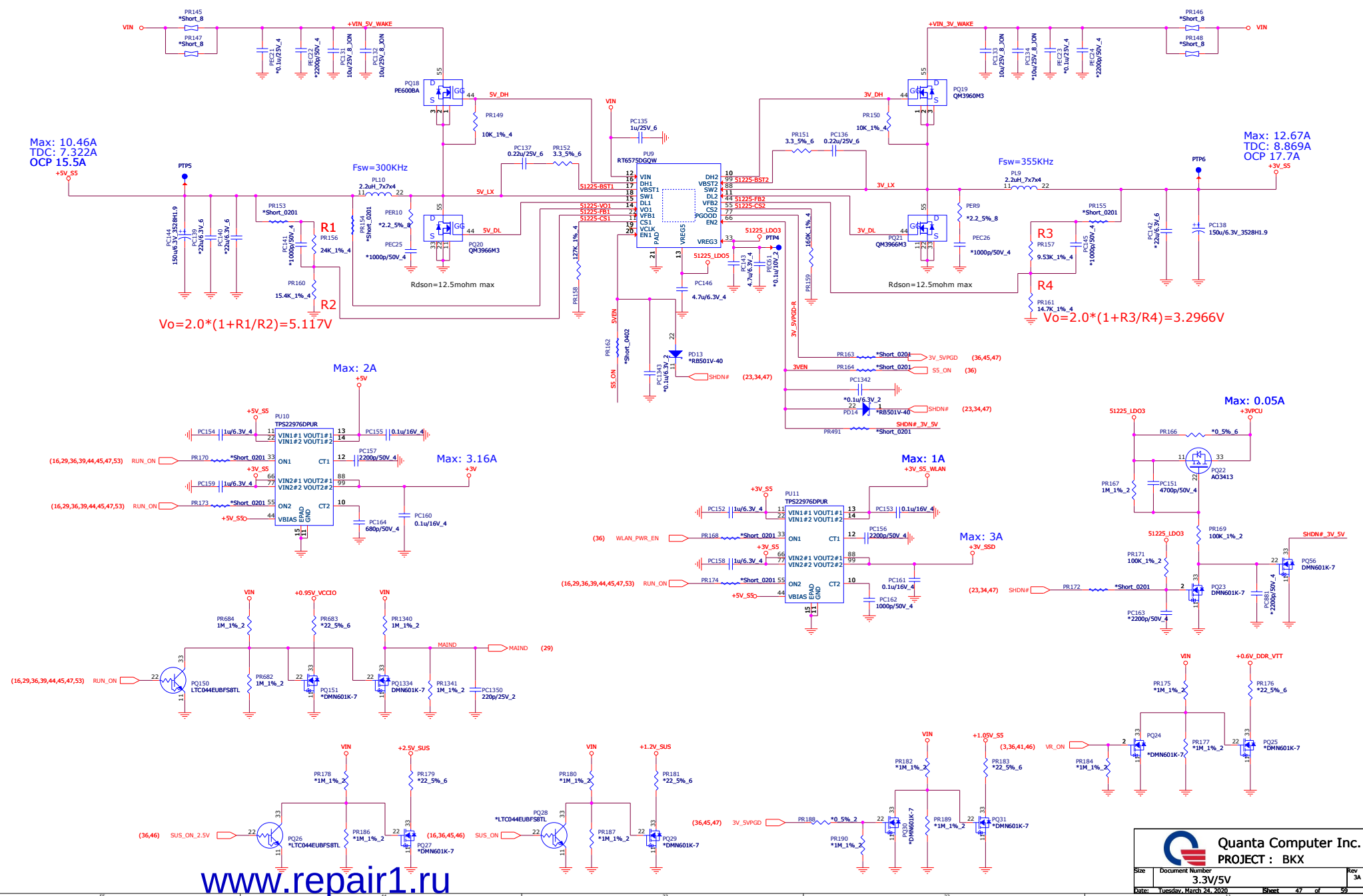


1.2VSUS & VTT_MEM

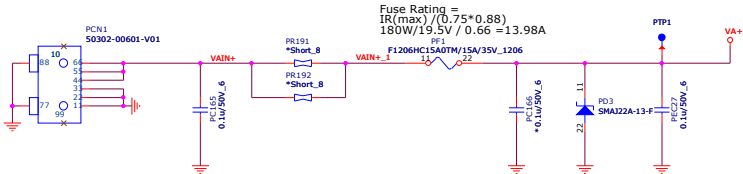


+2.5V_SUS

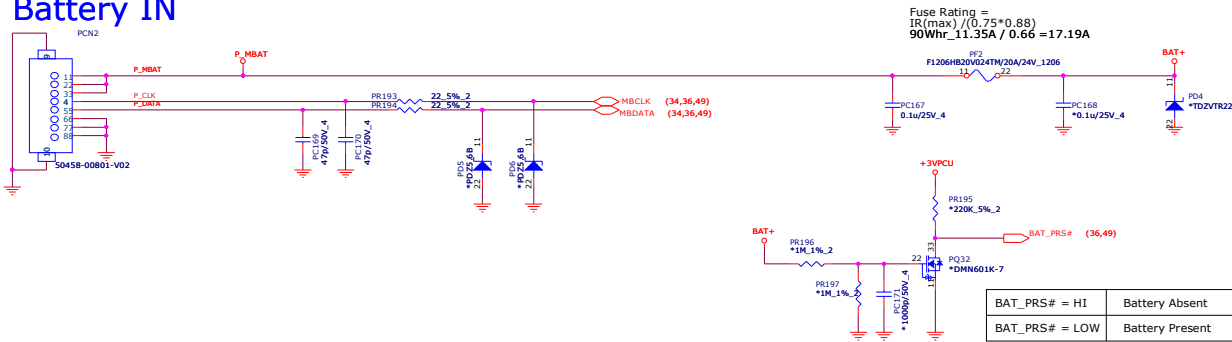




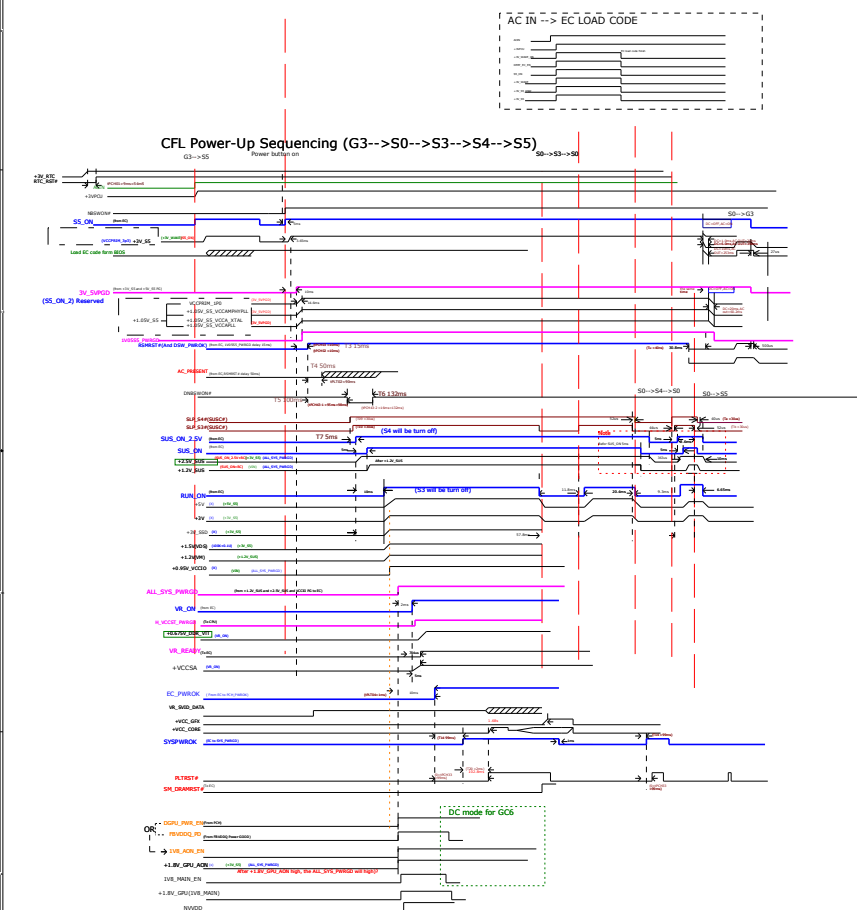
AC IN (On-Board DC-Jack)

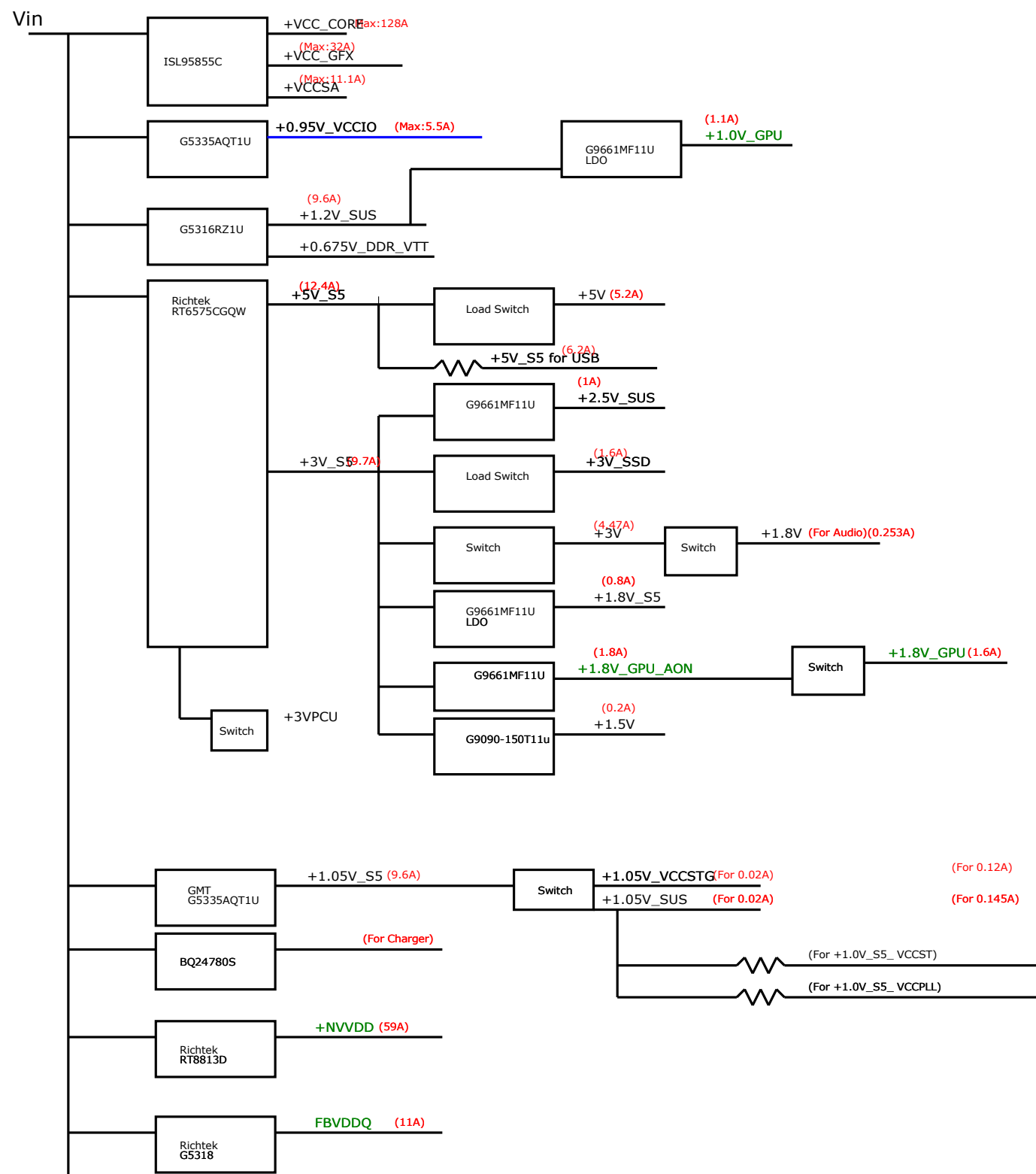


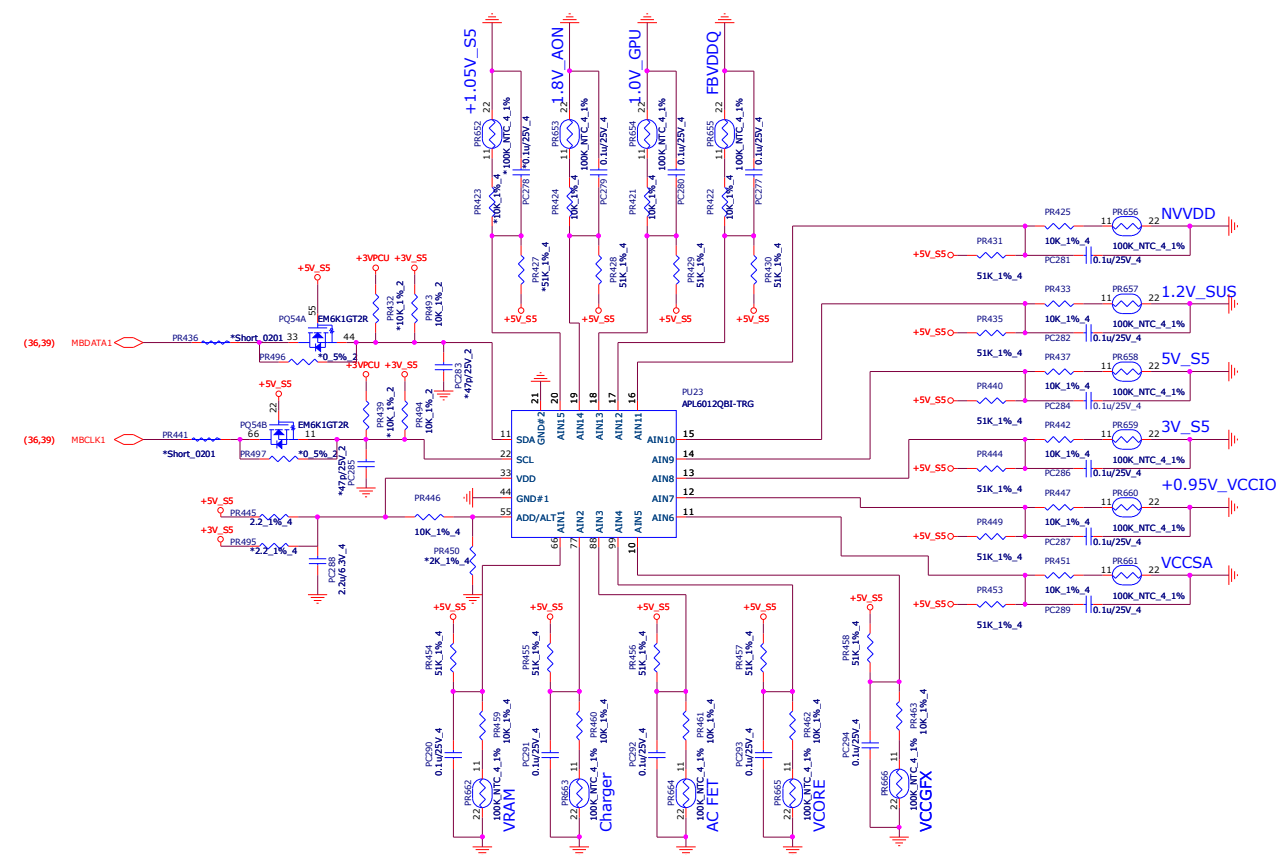
Battery IN



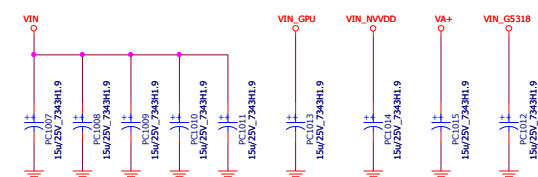
| OS status | S0 | S0ix | S3 | (Soft OFF) | (Soft OFF) | (Soft OFF) | (Soft OFF) | |
|----------------------------|----|------|----|---|---|-----------------------------|-----------------------------|--|
| H/W status | S0 | C10 | S3 | S4 (Win10 off) RTC wake Enable WOLAN Enable | S4 (Win10 off) RTC wake Disable WOLAN Disable | S5 (Fast Startup "v") | S5 (Fast Startup "x") | |
| RUN_ON | H | H | L | L | L | L | L | |
| +3V | H | H | L | L | L | L | L | |
| +5V | H | H | L | L | L | L | L | |
| +0.675V_DDR_VTT | H | H | L | L | L | L | L | |
| +VCCSA | H | H | L | L | L | L | L | |
| +VCC_GFX | H | H | L | L | L | L | L | |
| +VCC_CORE | H | H | L | L | L | L | L | |
| C10_GATE | H | L | L | L | L | L | L | |
| +1.05V_VCCSTG | H | L | L | L | L | L | L | |
| +0.95V_VCCIO | H | L | L | L | L | L | L | |
| +1.2V_SUS_C10(VCCPLL_OC) | H | L | L | L | L | L | L | |
| SUS_ON | H | H | HH | L | L | L | L | |
| +1.05V_VCCPLL/+1.05V_VCCST | H | H | H | L | L | L | L | |
| +1.05V_SUS | H | H | H | L | L | L | L | |
| +1.2V_SUS | H | H | HH | L | L | L | L | |
| SUS_ON_2.5V | H | H | HH | L | L | L | L | |
| +2.5V_SUS | H | H | H | L | L | L | L | |
| S5_ON_2 | H | H | | HH | L | L | L | |
| +1.05V_S5 | HH | H | | H | L | L | L | |
| S5_ON | HH | HH | | HH | L | HH | L | |
| +3V_S5 | H | HH | | HH | L | L | L | |
| +1.8V_S5(From PCH) | H | H | | H | L | H | L | |
| +5V_S5 | H | H | | HH | L | H | L | |
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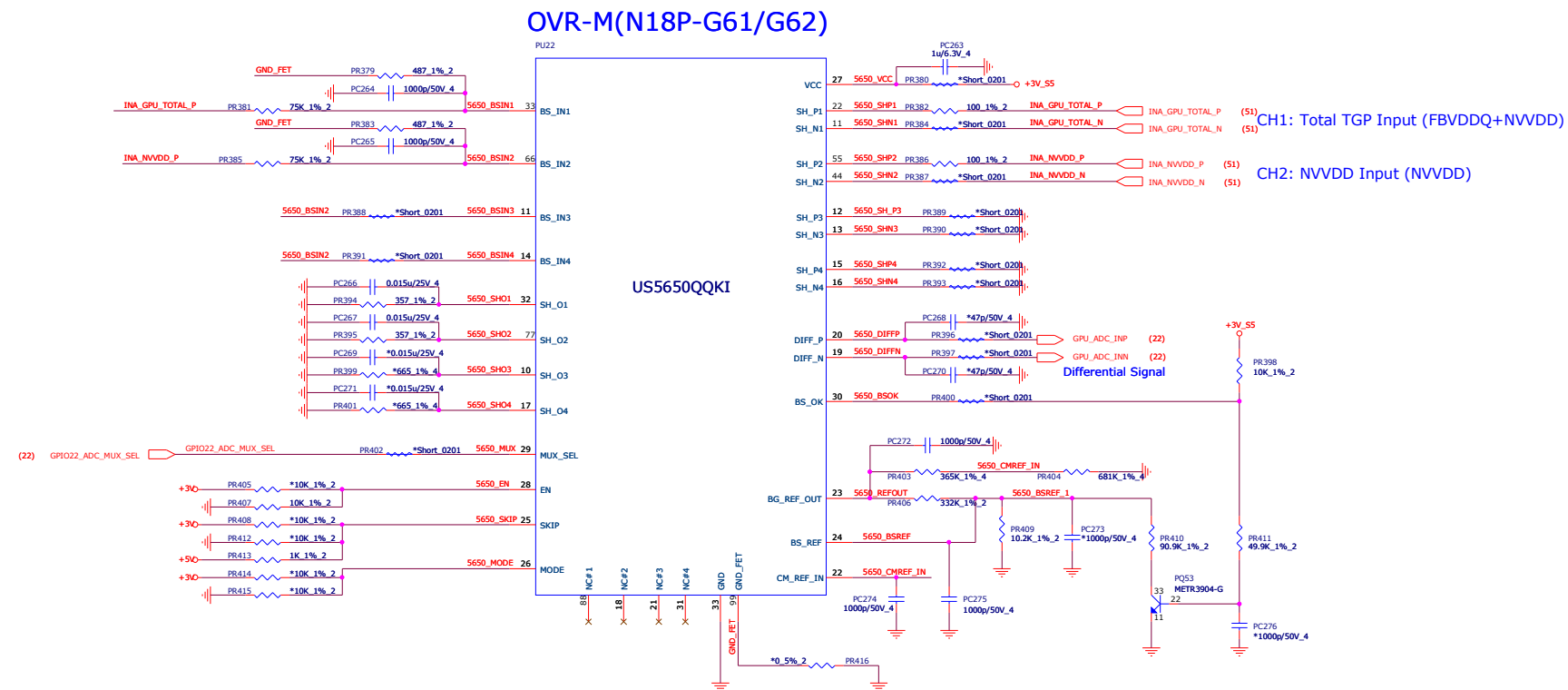




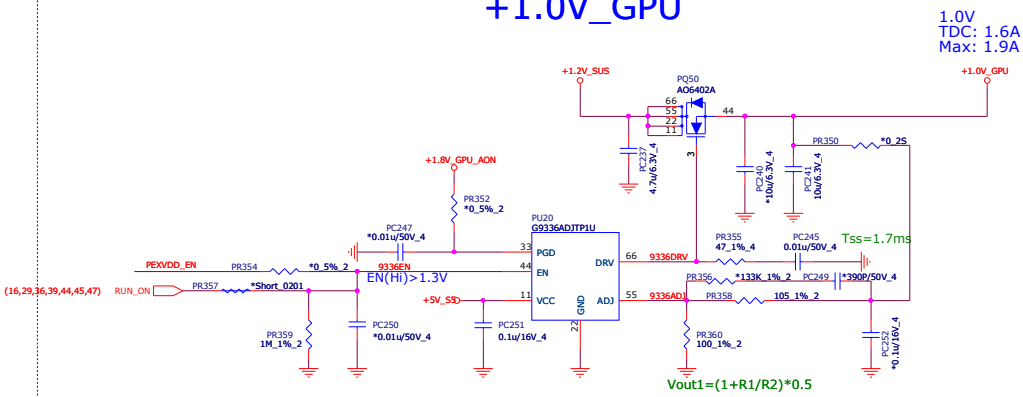


For ADP 180W

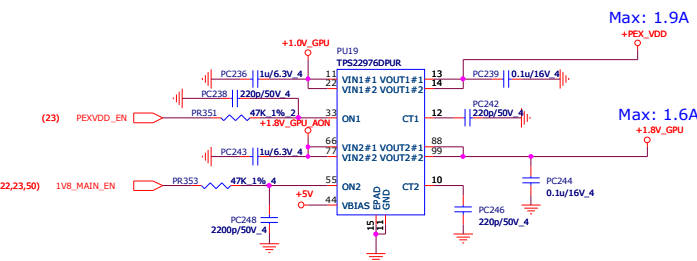




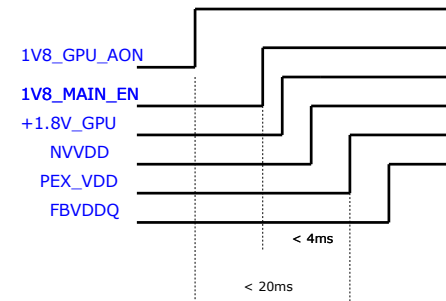
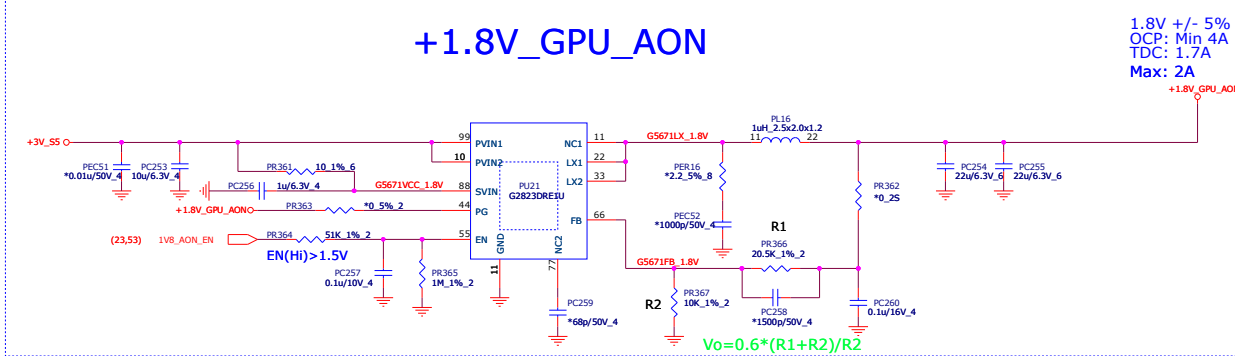
+1.0V_GPU



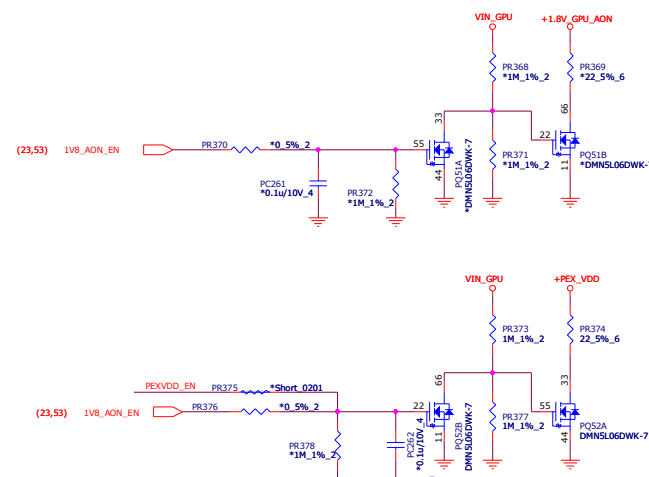
Load Switch for GPU



+1.8V_GPU_AON

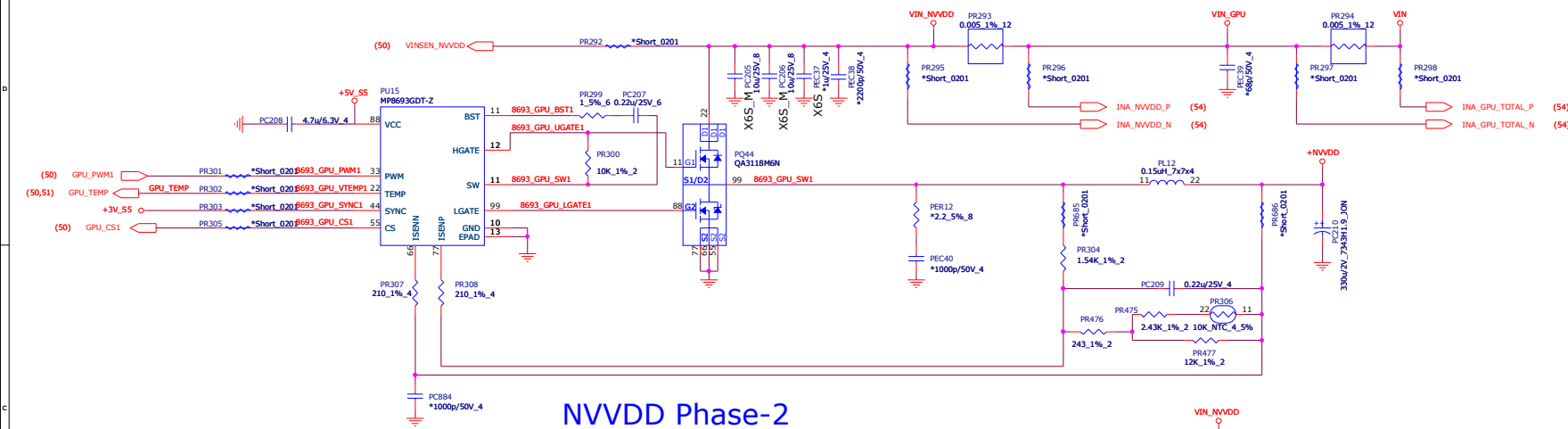


Discharge



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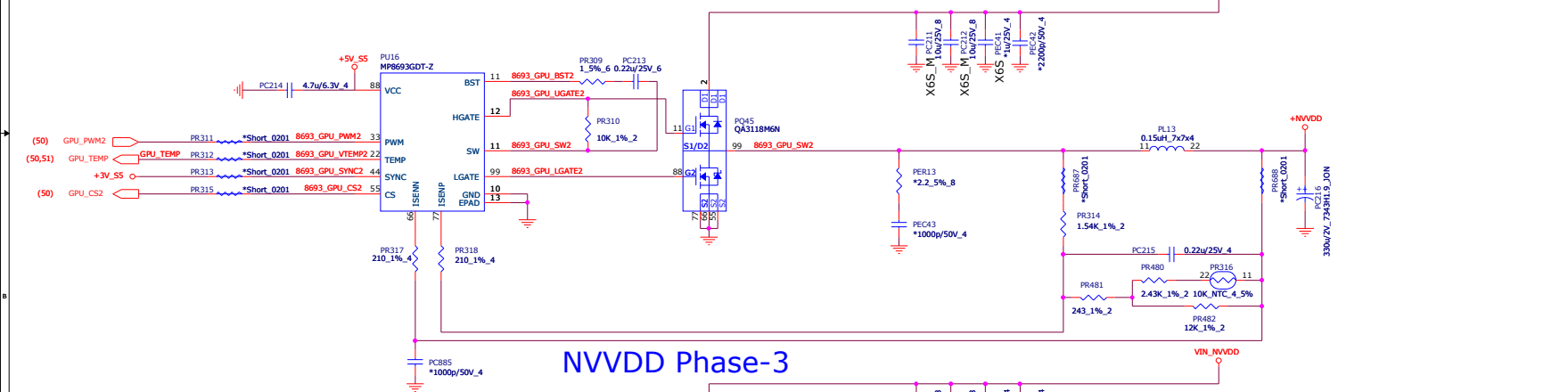
NVVDD Phase-1



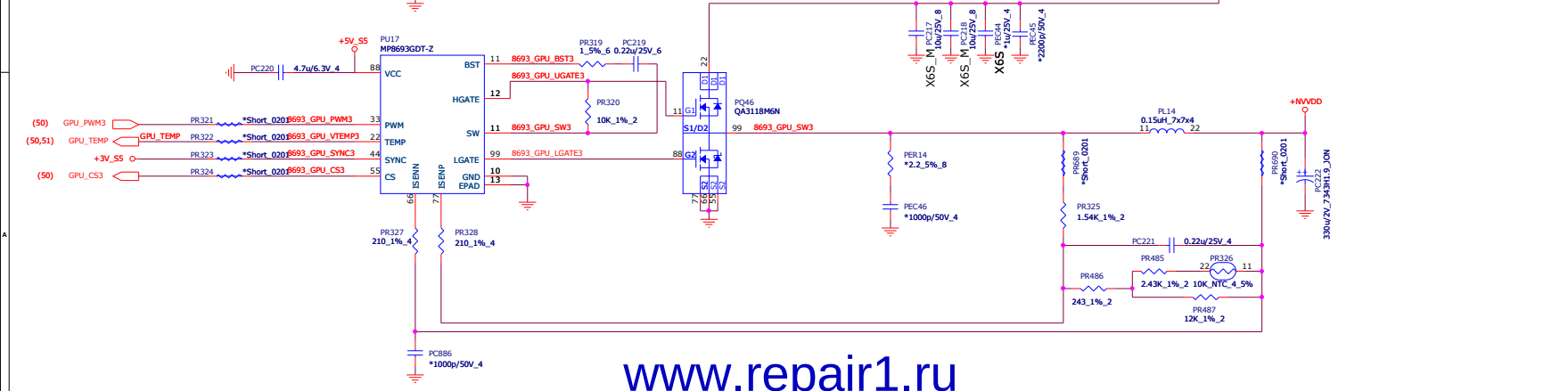
N18P-G61
TGP=50W, TDP=36W
TDC=45.4A, MAX=100.2A

N18P-G62
TGP=50W, TDP=36.1W
(54) TDC=45.8A, MAX=120.5A

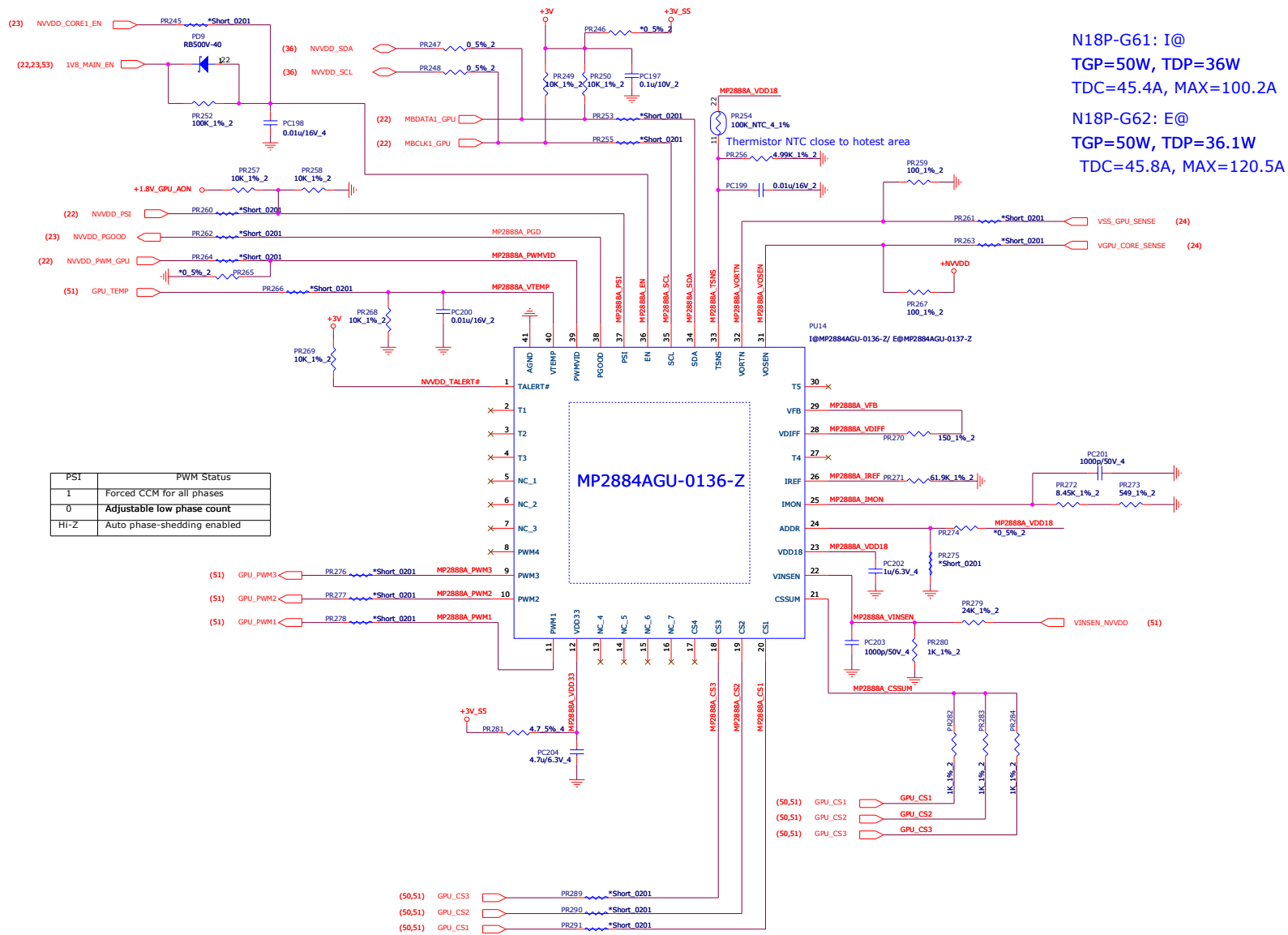
NVVDD Phase-2



NVVDD Phase-3



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N18P-G61: I@
TGP=50W, TDP=36W
TDC=45.4A, MAX=100.2A
N18P-G62: E@
TGP=50W, TDP=36.1W
TDC=45.8A, MAX=120.5A

