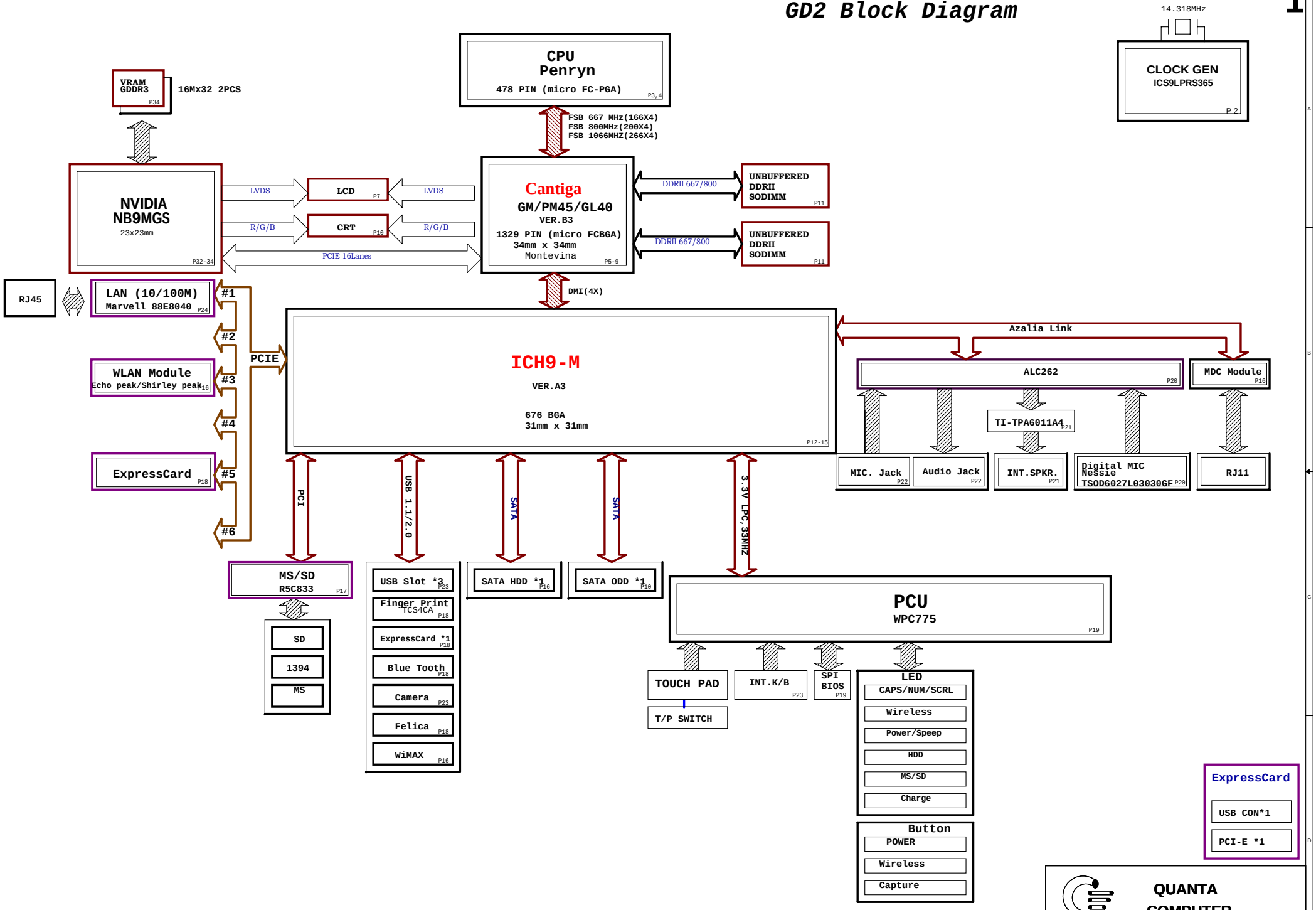
GD2 Block Diagram



1.Level 1 Environment-related Substances Should NEVER be Used.
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QUANTA COMPUTER

Size	Document Number	Rev
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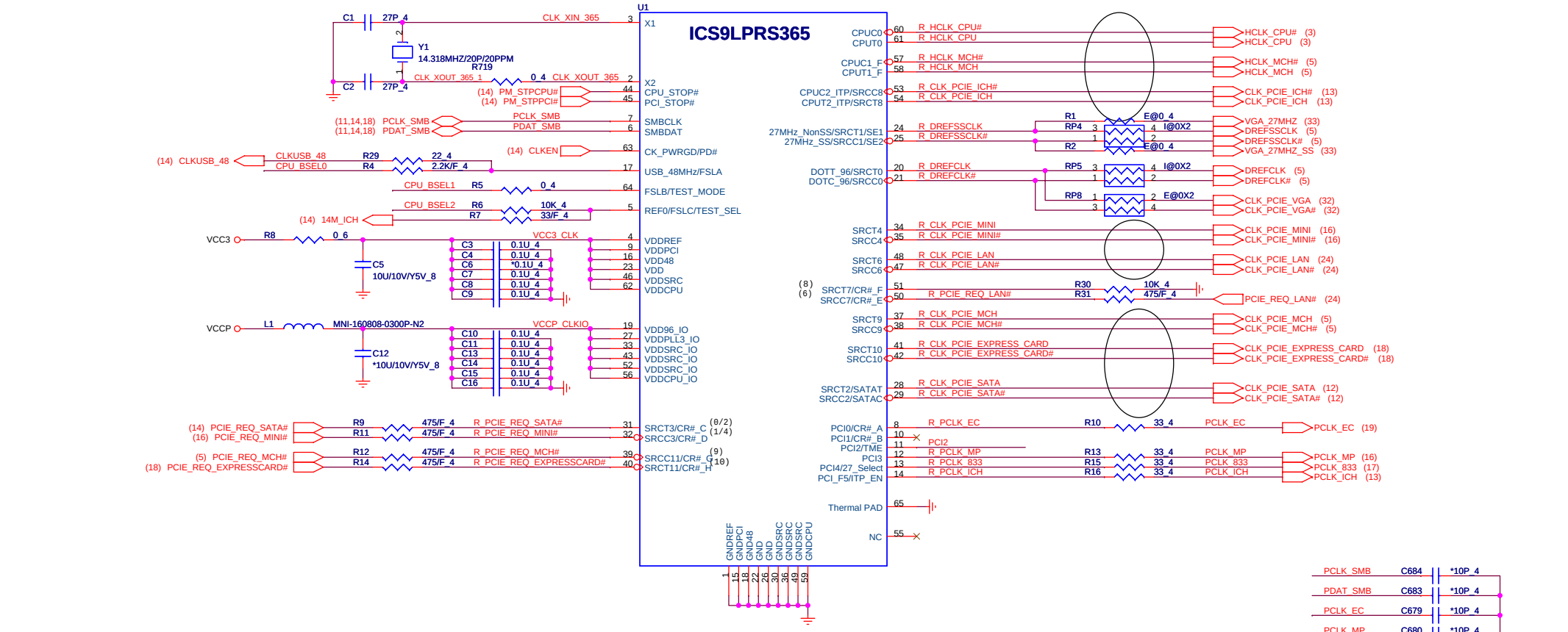

FSC BSEL2	FSB BSEL1	FSA BSEL0	CPU	SRC	PCI	REF	USB	DOT	Spread %
* 0	0	0	266.66	100	33.33	14.318	48	96	0.5 Down
0	0	1	133.33	100	33.33	14.318	48	96	0.5 Down
0	1	0	200.00	100	33.33	14.318	48	96	0.5 Down
0	1	1	**166.66**	100	33.33	14.318	48	96	0.5 Down
1	0	0	333.33	100	33.33	14.318	48	96	0.5 Down
1	0	1	100.00	100	33.33	14.318	48	96	0.5 Down
1	1	0	400.00	100	33.33	14.318	48	96	0.5 Down
1	1	1	RESERVED						

TME(PIN11)
0 : Overclocking of CPU & SRC allowed.
* 1 : Overclocking of CPU & SRC NOT allowed.

27 Select PIN13	PIN 20/21	PIN 24/25	
0	DOT_96 / DOT_96#	LCDCLK / LCDCLK#	(Int. Graphic)
1	SRC_0 / SRC_0#	27M / 27M_SS	(NB9M-GS)

ITP_EN(PIN14)	PIN53/54
* 0	SRC8/SRC8#
1	ITP/ITP#

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QUANTA COMPUTER

Title	CLOCK GENERATOR	
Size	Document Number: GD2 Main Board	Rev 4A
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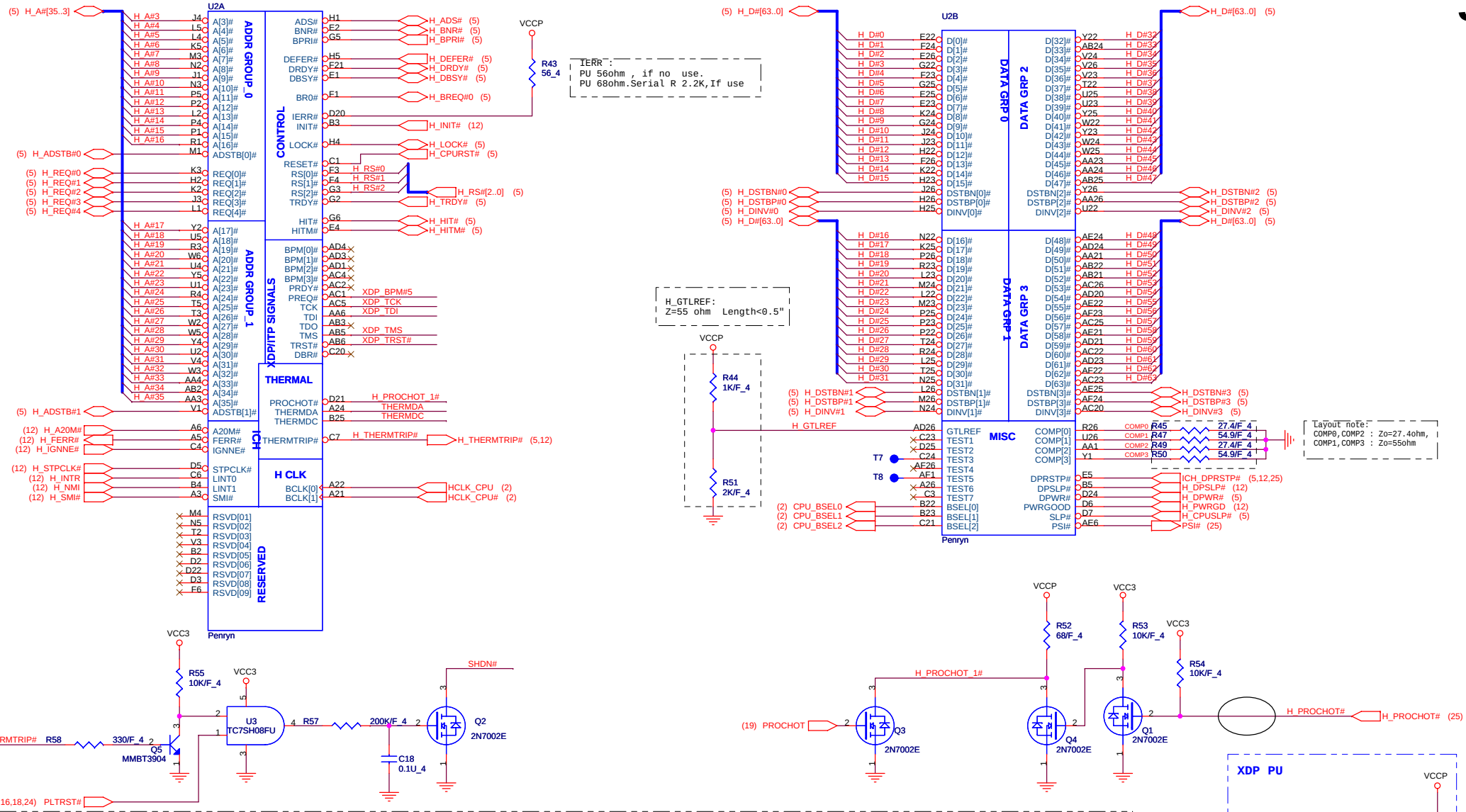
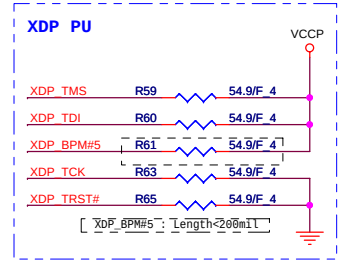
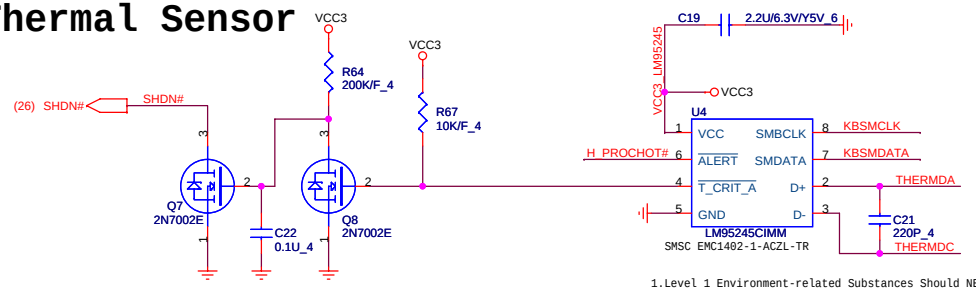
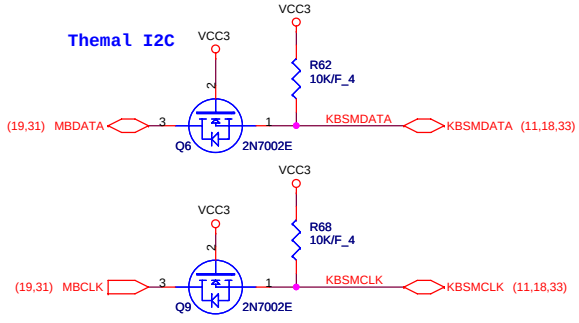




Thermal Sensor





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QUANTA COMPUTER

Title	Pennyn CPU1 of 2	
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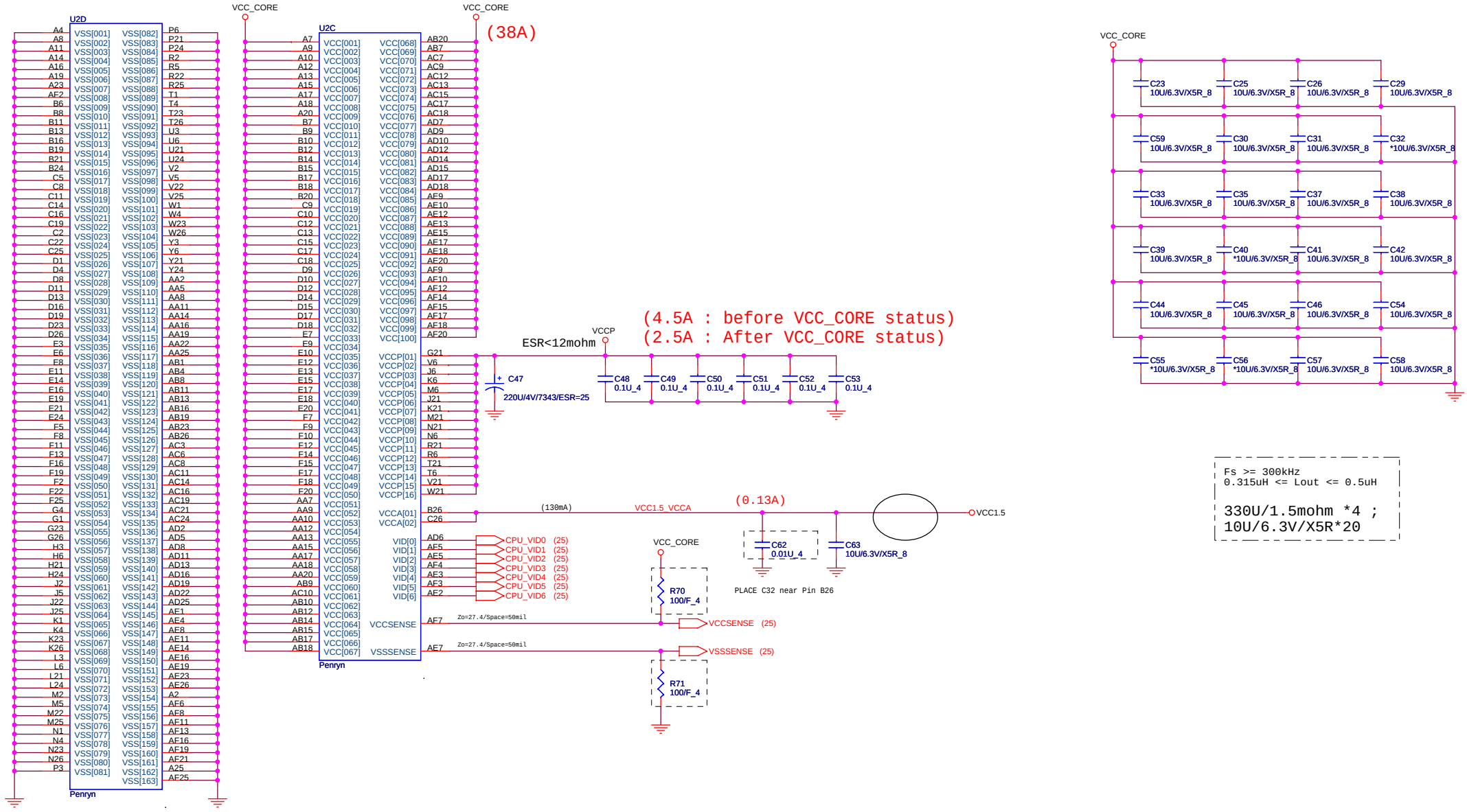

Fs >= 300kHz
0.315uH <= Lout <= 0.5uH

330U/1.5mohm *4 ;
10U/6.3V/X5R*20

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QUANTA COMPUTER

Title: Penryn CPU 2 of 2		
Size	Document Number: GD2 Main Board	Rev: 4A
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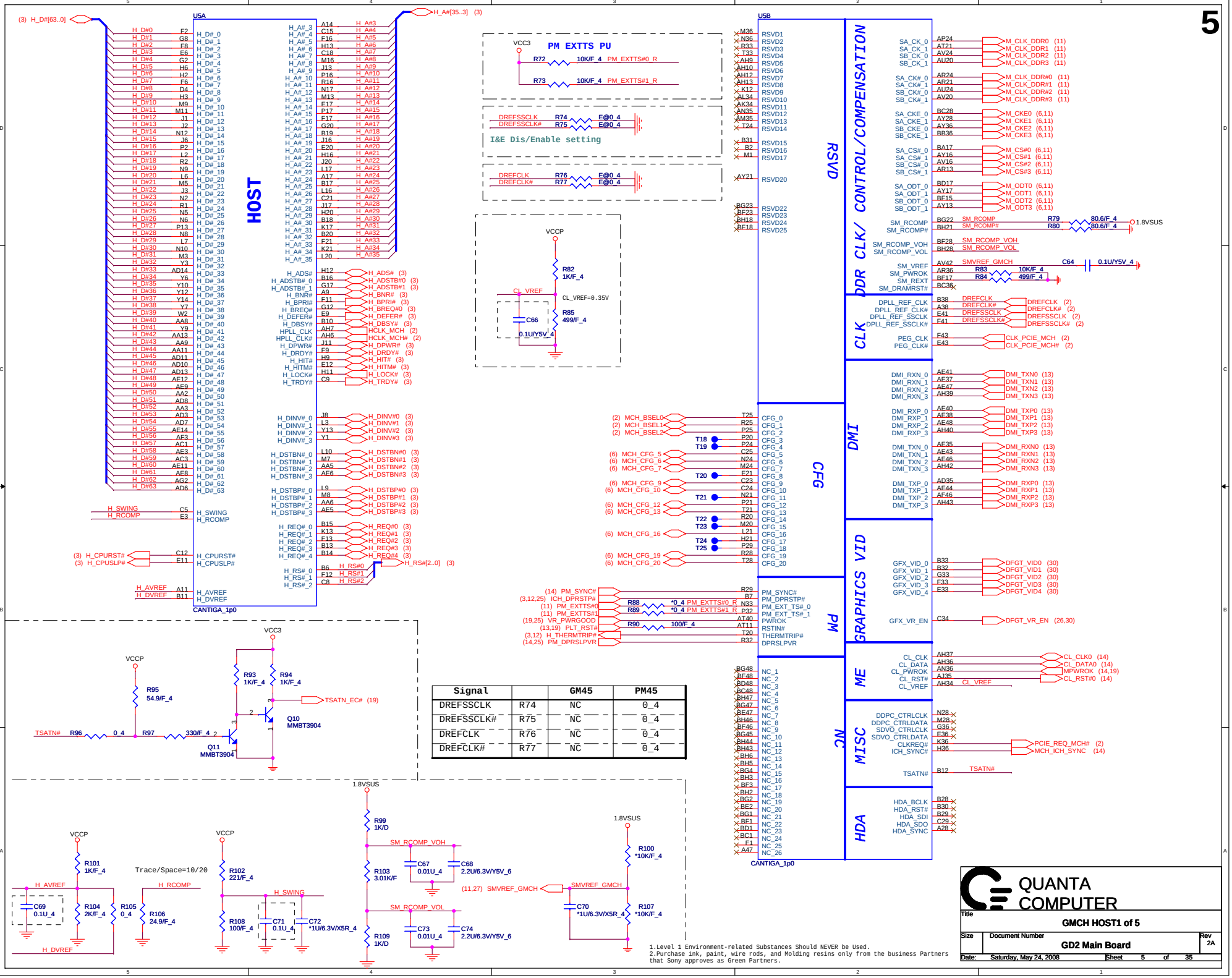

Signal		GM45	PM45
DREFSSCLK	R74	NC	0_4
DREFSSCLK#	R75	NC	0_4
DREFCLK	R76	NC	0_4
DREFCLK#	R77	NC	0_4

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QUANTA COMPUTER

Title	GMCH HOST1 of 5	
Size	Document Number: GD2 Main Board	Rev: 2A
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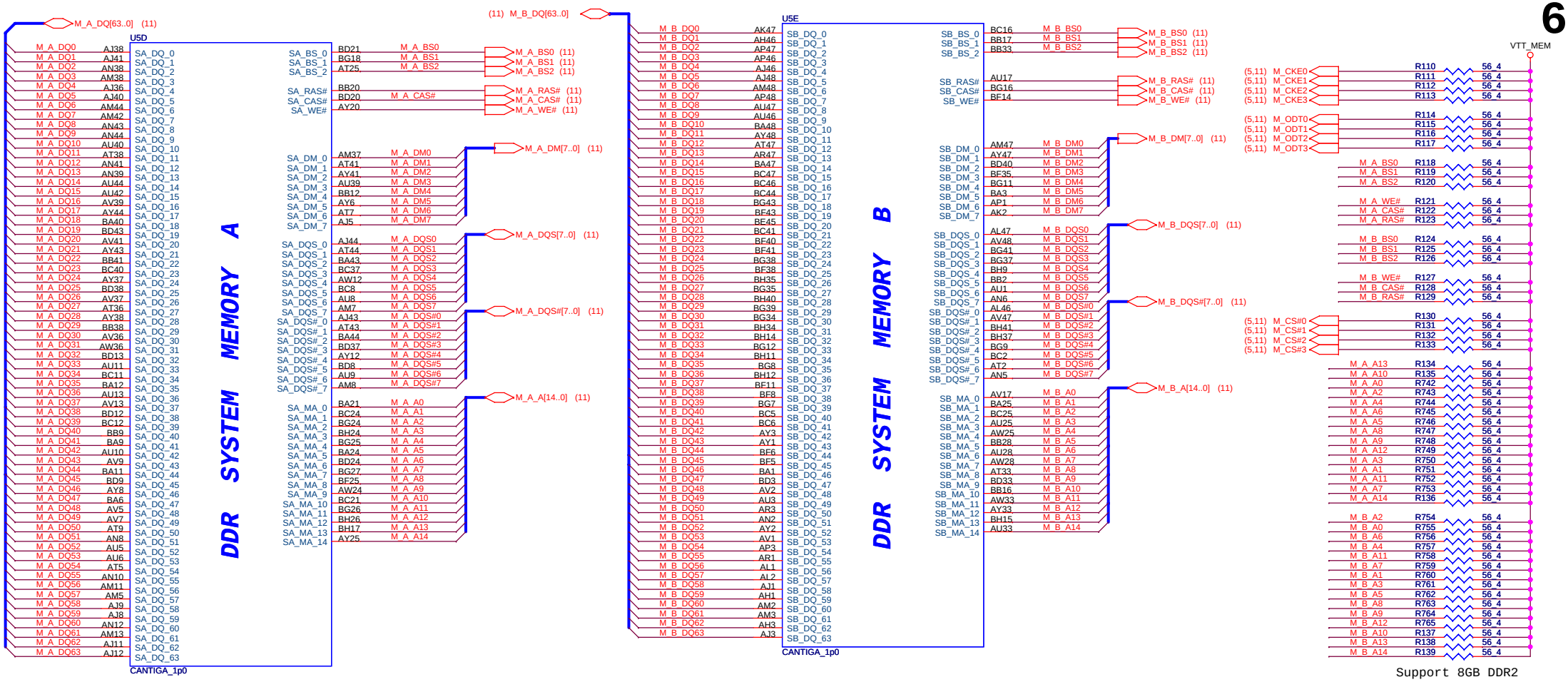

GMCH Strap pin description

	Low	High
CGF5	DMIx2	* DMIx4
CGF6	ITPM HOST interface enable	* ITPM HOST interface disable
CGF7	AMT Fireware will use TLS cipher suite with no confidentiality	* AMT Fireware will use TLS cipher suite with confidentiality
CGF9	PCIE Graphics lan : Reverse Lane	* PCIE Graphics lan : Normal operation
CGF10	PCIE Loopback enable	* PCIE Loopback disable
CGF16	FSB Dynamic ODT Disabled	* FSB Dynamic ODT Enabled
CGF19 *	DMI LANE Normal	DMI LANE Reversed
CGF20 *	only SDVO/DP/iHDMI or PCIE is operational	SDVO/DP/iHDMI and PCIE are operation simultaneously via the PEG port

CGF[12:13]:XOR /ALLZ / Clock Un-gating
00 = Reserve
01 = XOR mode enabled
10 = All-Z mode enabled
* 11 = Normal Operation(Default)

int.Pull-down : CFG 18,19,20
int.Pull-high : CFG CFG 3~17

(5) MCH_CFG_6 — T49
(5) MCH_CFG_5 — T50
(5) MCH_CFG_7 — T51
(5) MCH_CFG_9 — T52
(5) MCH_CFG_10 — T53
(5) MCH_CFG_12 — T54
(5) MCH_CFG_13 — T55
(5) MCH_CFG_16 — T56
(5) MCH_CFG_19 — T57
(5) MCH_CFG_20 — T58

VTT_MEM
C75 *10U/10V/Y5V_8
C76 *10U/10V/Y5V_8
C77–C102 0.1U/Y5V_4

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QUANTA COMPUTER

Title	GMCH DDR II 2 of 5	
Size	Document Number: GD2 Main Board	Rev: 2A
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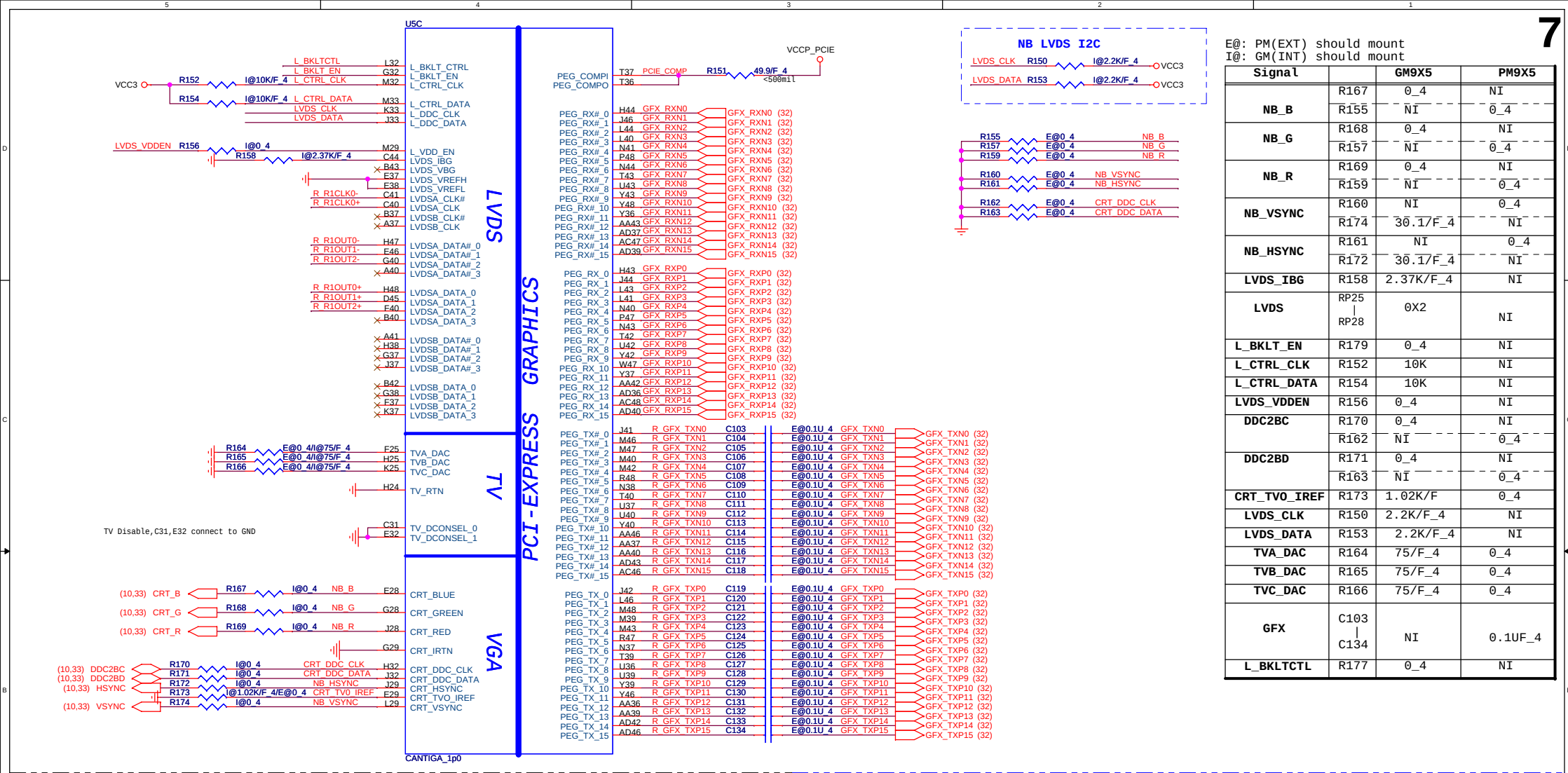
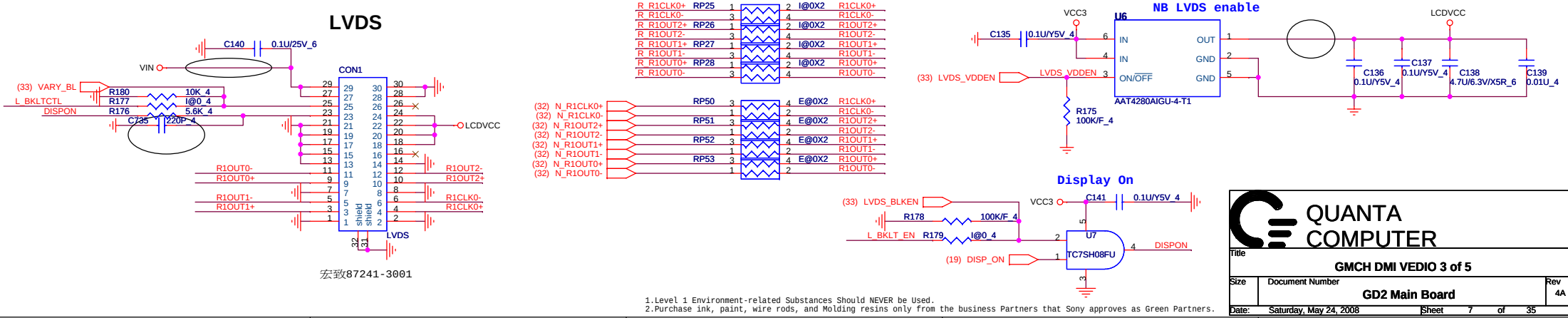


Signal		GM9X5	PM9X5
NB_B	R167	0_4	NI
	R155	NI	0_4
NB_G	R168	0_4	NI
	R157	NI	0_4
NB_R	R169	0_4	NI
	R159	NI	0_4
NB_VSYNC	R160	NI	0_4
	R174	30.1/F_4	NI
NB_HSNYC	R161	NI	0_4
	R172	30.1/F_4	NI
LVDS_IBG	R158	2.37K/F_4	NI
LVDS	RP25 | RP28	0X2	NI
L_BKLT_EN	R179	0_4	NI
L_CTRL_CLK	R152	10K	NI
L_CTRL_DATA	R154	10K	NI
LVDS_VDDEN	R156	0_4	NI
DDC2BC	R170	0_4	NI
	R162	NI	0_4
DDC2BD	R171	0_4	NI
	R163	NI	0_4
CRT_TVO_IREF	R173	1.02K/F	0_4
LVDS_CLK	R150	2.2K/F_4	NI
LVDS_DATA	R153	2.2K/F_4	NI
TVA_DAC	R164	75/F_4	0_4
TVB_DAC	R165	75/F_4	0_4
TVC_DAC	R166	75/F_4	0_4
GFX	C103 | C134	NI	0.1UF_4
L_BKLTCTL	R177	0_4	NI



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QUANTA COMPUTER

Title	GMCH DMI VEDIO 3 of 5	
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U5I — VSS

AU48	VSS_1	VSS_100	AM36	AM36	VSS_297	AH8	
AR48	VSS_2	VSS_101	AE36	AE36	VSS_298	Y8	
AL48	VSS_3	VSS_102	P36	P36	VSS_299	L8	
BB47	VSS_4	VSS_103	L36	L36	VSS_300	E8	
AW47	VSS_5	VSS_104	J36	J36	VSS_301	B8	
AN47	VSS_6	VSS_105	F36	F36	VSS_302	AY7	
AJ47	VSS_7	VSS_106	B36	B36	VSS_303	AU7	
AF47	VSS_8	VSS_107	AH35	AH35	VSS_304	AN7	
AD47	VSS_9	VSS_108	AA35	AA35	VSS_305	AJ7	
AB47	VSS_10	VSS_109	Y35	Y35	VSS_306	AE7	
Y47	VSS_11	VSS_110	U35	U35	VSS_307	AA7	
T47	VSS_12	VSS_111	T35	T35	VSS_308	N7	
N47	VSS_13	VSS_112	BF34	G21	VSS_309	J7	
L47	VSS_14	VSS_113	AM34	BC20	VSS_310	BG6	
G47	VSS_15	VSS_114	AJ34	BA20	VSS_311	BD6	
BD46	VSS_16	VSS_115	AF34	AW20	VSS_312	AV6	
BA46	VSS_17	VSS_116	AE34	AT20	VSS_313	AT6	
AY46	VSS_18	VSS_117	W34	AJ20	VSS_314	AM6	
AV46	VSS_19	VSS_118	B34	AG20	VSS_315	M6	
AR46	VSS_20	VSS_119	A34	Y20	VSS_316	C6	
AM46	VSS_21	VSS_120	BG33	N20	VSS_317	BA5	
V46	VSS_22	VSS_121	BC33	K20	VSS_318	AH5	
R46	VSS_23	VSS_122	BA33	F20	VSS_319	AD5	
P46	VSS_24	VSS_123	AV33	C20	VSS_320	Y5	
H46	VSS_25	VSS_124	AR33	A20	VSS_321	L5	
F46	VSS_26	VSS_125	AL33	BG19	VSS_322	J5	
BF44	VSS_27	VSS_126	AH33	A18	VSS_323	H5	
AH44	VSS_28	VSS_127	AB33	BG17	VSS_324	F5	
AD44	VSS_29	VSS_128	P33	BC17	VSS_325	BF4	
AA44	VSS_30	VSS_129	L33	AW17	VSS_228		
Y44	VSS_31	VSS_130	H33	AT17	VSS_229	VSS_327	BC3
U44	VSS_32	VSS_131	N32	R17	VSS_230	VSS_328	AV3
T44	VSS_33	VSS_132	K32	M17	VSS_231	VSS_329	AL3
M44	VSS_34	VSS_133	F32	H17	VSS_232	VSS_330	R3
F44	VSS_35	VSS_134	C32	C17	VSS_233	VSS_331	P3
BC43	VSS_36	VSS_135	A31			VSS_332	F3
AV43	VSS_37	VSS_136	AN29	BA16	VSS_235	VSS_333	BA2
AU43	VSS_38	VSS_137	T29			VSS_334	AW2
AM43	VSS_39	VSS_138	N29	AU16		VSS_335	AU2
J43	VSS_40	VSS_139	K29	AN16	VSS_237	VSS_336	AP2
C43	VSS_41	VSS_140	H29	N16	VSS_238	VSS_337	AJ2
BG42	VSS_42	VSS_141	F29	K16	VSS_239	VSS_338	AH2
AY42	VSS_43	VSS_142	A29	G16	VSS_240	VSS_339	AF2
AT42	VSS_44	VSS_143	BG28	E16	VSS_241	VSS_340	AE2
AN42	VSS_45	VSS_144	BD28	BG15	VSS_242	VSS_341	AD2
AJ42	VSS_46	VSS_145	BA28	AC15	VSS_243	VSS_342	AC2
AE42	VSS_47	VSS_146	AV28	W15	VSS_244	VSS_343	Y2
N42	VSS_48	VSS_147	AT28	A15	VSS_245	VSS_344	M2
L42	VSS_49	VSS_148	AR28	BG14	VSS_246	VSS_345	K2
BD41	VSS_50	VSS_149	AJ28	AA14	VSS_247	VSS_346	AM1
AU41	VSS_51	VSS_150	AG28	C14	VSS_248	VSS_347	AA1
AM41	VSS_52	VSS_151	AE28	BG13	VSS_249	VSS_348	P1
AH41	VSS_53	VSS_152	AB28	BC13	VSS_250	VSS_349	H1
AD41	VSS_54	VSS_153	Y28	BA13	VSS_251	VSS_350	
AA41	VSS_55	VSS_154	P28		VSS_252		
Y41	VSS_56	VSS_155	K28			VSS_351	U24
U41	VSS_57	VSS_156	H28	AN13		VSS_352	U28
T41	VSS_58	VSS_157	F28	AJ13	VSS_255	VSS_353	U25
M41	VSS_59	VSS_158	C28	AE13	VSS_256	VSS_354	U29
G41	VSS_60	VSS_159	BF26	N13	VSS_257		
B41	VSS_61	VSS_160	AH26	L13	VSS_258		
BG40	VSS_62	VSS_161	AF26	G13	VSS_259		
BB40	VSS_63	VSS_162	AB26	E13	VSS_260	VSS_NCTF_1	AF32
AV40	VSS_64	VSS_163	AA26	BF12	VSS_261	VSS_NCTF_2	AB32
AN40	VSS_65	VSS_164	C26	AV12	VSS_262	VSS_NCTF_3	V32
H40	VSS_66	VSS_165	B26	AT12	VSS_263	VSS_NCTF_4	AJ30
F40	VSS_67	VSS_166	BH25	AM12	VSS_264	VSS_NCTF_5	AM29
AT39	VSS_68	VSS_167	BD25	AA12	VSS_265	VSS_NCTF_6	AF29
AM39	VSS_69	VSS_168	BB25	J12	VSS_266	VSS_NCTF_7	AB29
AJ39	VSS_70	VSS_169	AV25	A12	VSS_267	VSS_NCTF_8	U26
AE39	VSS_71	VSS_170	AR25	BD11	VSS_268	VSS_NCTF_9	U23
N39	VSS_72	VSS_171	AJ25	BB11	VSS_269	VSS_NCTF_10	AL20
L39	VSS_73	VSS_172	AC25	AY11	VSS_270	VSS_NCTF_11	V20
B39	VSS_74	VSS_173	Y25	AN11	VSS_271	VSS_NCTF_12	AC19
BH38	VSS_75	VSS_174	N25	AH11	VSS_272	VSS_NCTF_13	AL17
BC38	VSS_76	VSS_175	L25		VSS_273	VSS_NCTF_14	AJ17
BA38	VSS_77	VSS_176	J25	Y11		VSS_NCTF_15	AA17
AU38	VSS_78	VSS_177	G25	N11	VSS_275	VSS_NCTF_16	U17
AH38	VSS_79	VSS_178	E25	G11	VSS_276		
AD38	VSS_80	VSS_179	BF24	C11	VSS_277		
AA38	VSS_81	VSS_180	AD12	BG10	VSS_278	VSS_SCB_1	BH48
Y38	VSS_82	VSS_181	AY24	AV10	VSS_279	VSS_SCB_2	BH1
U38	VSS_83	VSS_182	AT24	AT10	VSS_280	VSS_SCB_3	A48
T38	VSS_84	VSS_183	AJ24	AJ10	VSS_281	VSS_SCB_4	C1
J38	VSS_85	VSS_184	AH24	AE10	VSS_282	VSS_SCB_5	A3
F38	VSS_86	VSS_185	AF24	AA10	VSS_283		
C38	VSS_87	VSS_186	AB24	M10	VSS_284	NC_26	E1
BF37	VSS_88	VSS_187	R24	BF9	VSS_285	NC_27	D2
BB37	VSS_89	VSS_188	L24	BC9	VSS_286	NC_28	C3
AW37	VSS_90	VSS_189	K24	AN9	VSS_287	NC_29	B4
AT37	VSS_91	VSS_190	J24	AM9	VSS_288	NC_30	A5
AN37	VSS_92	VSS_191	G24	AD9	VSS_289	NC_31	A6
AJ37	VSS_93	VSS_192	F24	G9	VSS_290	NC_32	A43
H37	VSS_94	VSS_193	E24	B9	VSS_291	NC_33	A44
C37	VSS_95	VSS_194	BH23	BH8	VSS_292	NC_34	B45
BG36	VSS_96	VSS_195	AG23	BB8	VSS_293	NC_35	C46
BD36	VSS_97	VSS_196	Y23	AV8	VSS_294	NC_36	D47
AK15	VSS_98	VSS_197	B23	AT8	VSS_295	NC_37	B47
AU36	VSS_99	VSS_198	A23		VSS_296	NC_38	A46
		VSS_199	AJ6			NC_39	E48
						NC_40	E48
						NC_41	C48
						NC_42	B48

CANTIGA_1p0

U5J — VSS NCTF / VSS SCB / NC

CANTIGA_1p0

U5G — POWER

1.8VSUS (3A)

C142	10U/6.3V/X5R_6	AP33	VCC_SM_1
C144	10U/6.3V/X5R_6	AN33	VCC_SM_2
C146	10U/6.3V/X5R_6	BH32	VCC_SM_3
C148	0.1U/Y5V_4	BG32	VCC_SM_4
C150	0.1U/Y5V_4	BF32	VCC_SM_5
C153	0.1U/Y5V_4	BD32	VCC_SM_6
		BC32	VCC_SM_7
		BB32	VCC_SM_8
		BA32	VCC_SM_9
		AY32	VCC_SM_10
		AW32	VCC_SM_11
		AV32	VCC_SM_12
		AU32	VCC_SM_13
		AT32	VCC_SM_14
		AR32	VCC_SM_15
		AP32	VCC_SM_16
		AN32	VCC_SM_17
		BH31	VCC_SM_18
		BG31	VCC_SM_19
		BF31	VCC_SM_20
		BG30	VCC_SM_21
		BH29	VCC_SM_22
		BG29	VCC_SM_23
		BF29	VCC_SM_24
		BD29	VCC_SM_25
		BC29	VCC_SM_26
		BB29	VCC_SM_27
		BA29	VCC_SM_28
		AY29	VCC_SM_29
		AW29	VCC_SM_30
		AV29	VCC_SM_31
		AU29	VCC_SM_32
		AT29	VCC_SM_33
		AR29	VCC_SM_34
		AP29	VCC_SM_35
		BA36	VCC_SM_36/NC
		BB24	VCC_SM_37/NC
		BD16	VCC_SM_38/NC
		BB21	VCC_SM_39/NC
		AW16	VCC_SM_40/NC
		AW13	VCC_SM_41/NC
		AT13	VCC_SM_42/NC

VCC SM

+VCC_CFXCORE

		Y26	VCC_AXG_1
		AE25	VCC_AXG_2
		AB25	VCC_AXG_3
		AA25	VCC_AXG_4
		AE24	VCC_AXG_5
		AC24	VCC_AXG_6
		AA24	VCC_AXG_7
		Y24	VCC_AXG_8
		AE23	VCC_AXG_9
		AC23	VCC_AXG_10
		AB23	VCC_AXG_11
		AA23	VCC_AXG_12
		AJ21	VCC_AXG_13
		AG21	VCC_AXG_14
		AE21	VCC_AXG_15
		AC21	VCC_AXG_16
		AA21	VCC_AXG_17
		Y21	VCC_AXG_18
		AH20	VCC_AXG_19
		AF20	VCC_AXG_20
		AE20	VCC_AXG_21
		AC20	VCC_AXG_22
		AB20	VCC_AXG_23
		AA20	VCC_AXG_24
		T17	VCC_AXG_25
		T16	VCC_AXG_26
		AM15	VCC_AXG_27
		AL15	VCC_AXG_28
		AE15	VCC_AXG_29
		AJ15	VCC_AXG_30
		AH15	VCC_AXG_31
		AG15	VCC_AXG_32
		AF15	VCC_AXG_33
		AB15	VCC_AXG_34
		AA15	VCC_AXG_35
		Y15	VCC_AXG_36
		V15	VCC_AXG_37
		U15	VCC_AXG_38
		AN14	VCC_AXG_39
		AM14	VCC_AXG_40
		U14	VCC_AXG_41
		T14	VCC_AXG_42

VCC GFX

(30) VCC_AXG_SENSE
(30) VSS_AXG_SENSE

AJ14	VCC_AXG_SENSE	
AH14	VSS_AXG_SENSE	

VCC SM LF

AV44	C160	VCC_SM_LF1	1U/6.3V/X5R_4
BA37	C161	VCC_SM_LF2	1U/6.3V/X5R_4
AM40	C162	VCC_SM_LF3	0.47U/6.3V/X5R_4
AV21	C163	VCC_SM_LF4	0.22U/6.3V/X5R_4
AY5	C164	VCC_SM_LF5	0.22U/6.3V/X5R_4
AM10	C165	VCC_SM_LF6	0.1U_4
BB13	C166	VCC_SM_LF7	0.1U_4

VCC GFX NCTF

(8.7A)

+VCC_CFXCORE

		W28	VCC_AXG_NCTF_1
		V28	VCC_AXG_NCTF_2
		W26	VCC_AXG_NCTF_3
		V26	VCC_AXG_NCTF_4
		W25	VCC_AXG_NCTF_5
		V25	VCC_AXG_NCTF_6
		W24	VCC_AXG_NCTF_7
		V24	VCC_AXG_NCTF_8
		W23	VCC_AXG_NCTF_9
		V23	VCC_AXG_NCTF_10
		AM21	VCC_AXG_NCTF_11
		AL21	VCC_AXG_NCTF_12
		AK21	VCC_AXG_NCTF_13
		W21	VCC_AXG_NCTF_14
		V21	VCC_AXG_NCTF_15
		U21	VCC_AXG_NCTF_16
		AM20	VCC_AXG_NCTF_17
		AK20	VCC_AXG_NCTF_18
		W20	VCC_AXG_NCTF_19
		U20	VCC_AXG_NCTF_20
		AM19	VCC_AXG_NCTF_21
		AL19	VCC_AXG_NCTF_22
		AK19	VCC_AXG_NCTF_23
		AJ19	VCC_AXG_NCTF_24
		AH19	VCC_AXG_NCTF_25
		AG19	VCC_AXG_NCTF_26
		AF19	VCC_AXG_NCTF_27
		AE19	VCC_AXG_NCTF_28
		AB19	VCC_AXG_NCTF_29
		AA19	VCC_AXG_NCTF_30
		Y19	VCC_AXG_NCTF_31
		W19	VCC_AXG_NCTF_32
		V19	VCC_AXG_NCTF_33
		U19	VCC_AXG_NCTF_34
		AM17	VCC_AXG_NCTF_35
		AK17	VCC_AXG_NCTF_36
		AH17	VCC_AXG_NCTF_37
		AG17	VCC_AXG_NCTF_38
		AF17	VCC_AXG_NCTF_39
		AE17	VCC_AXG_NCTF_40
		AC17	VCC_AXG_NCTF_41
		AB17	VCC_AXG_NCTF_42
		Y17	VCC_AXG_NCTF_43
		W17	VCC_AXG_NCTF_44
		V17	VCC_AXG_NCTF_45
		AM16	VCC_AXG_NCTF_46
		AL16	VCC_AXG_NCTF_47
		AK16	VCC_AXG_NCTF_48
		AJ16	VCC_AXG_NCTF_49
		AH16	VCC_AXG_NCTF_50
		AG16	VCC_AXG_NCTF_51
		AF16	VCC_AXG_NCTF_52
		AE16	VCC_AXG_NCTF_53
		AC16	VCC_AXG_NCTF_54
		AB16	VCC_AXG_NCTF_55
		AA16	VCC_AXG_NCTF_56
		Y16	VCC_AXG_NCTF_57
		W16	VCC_AXG_NCTF_58
		V16	VCC_AXG_NCTF_59
		U16	VCC_AXG_NCTF_60

+VCC_CFXCORE support int VGA
If ext -VGA, pull down GND

C143	I@10U/6.3V/X5R_6
C145	I@10U/6.3V/X5R_6
C147	I@1U/6.3V/X5R_4
C149	I@0.47U/6.3V/X5R_4
C151	E@0_4/I@0.1U_4
C152	I@0.1U_4
C655	I@0.1U_4
C656	I@0.1U_4
C657	I@0.1U_4
C658	I@0.1U_4
C659	I@0.1U_4
C686	I@10U/6.3V/X5R_6
C687	I@10U/6.3V/X5R_6
C688	I@10U/6.3V/X5R_6
C171	I@220U/2.5V/7343/ESR=15

Signal		GM45	PM45
+VCC_CFXCORE	C143 C145	10U	NI
	C147	1U_4	NI
	C149	0.47U	NI
	C151	0.1U_4	0_4
	C152 C655 C656 C657 C658 C659 C686 C687 C688 C171	0.1U_4	NI

VCCP

U5F — POWER

		AG34	VCC_1
		AC34	VCC_2
		AB34	VCC_3
		AA34	VCC_4
		Y34	VCC_5
		V34	VCC_6
		U34	VCC_7
		AM33	VCC_8
		AK33	VCC_9
		AJ33	VCC_10
		AG33	VCC_11
		AF33	VCC_12
		AE33	VCC_13
		AC33	VCC_14
		AA33	VCC_15
		Y33	VCC_16
		W33	VCC_17
		V33	VCC_18
		U33	VCC_19
		AH28	VCC_20
		AF28	VCC_21
		AC28	VCC_22
		AA28	VCC_23
		AJ26	VCC_24
		AG26	VCC_25
		AE26	VCC_26
		AC26	VCC_27
		AH25	VCC_28
		AG25	VCC_29
		AF25	VCC_30
		AG24	VCC_31
		AJ23	VCC_32
		AH23	VCC_33
		AF23	VCC_34
		T32	VCC_35

VCC CORE

C154	*330U/2.5V/7343/ESR=9/H1.8	
C155	10U/6.3V/X5R_6	
C654	10U/6.3V/X5R_6	
C156	0.22U/6.3V/X5R_4	
C157	0.22U/6.3V/X5R_4	
C158	0.1U/Y5V_4	
C159	0.1U/Y5V_4	
C649	0.1U/Y5V_4	
C650	0.1U/Y5V_4	
C651	0.1U/Y5V_4	
C652	0.1U/Y5V_4	
C653	0.1U/Y5V_4	

VCCP

VCC NCTF

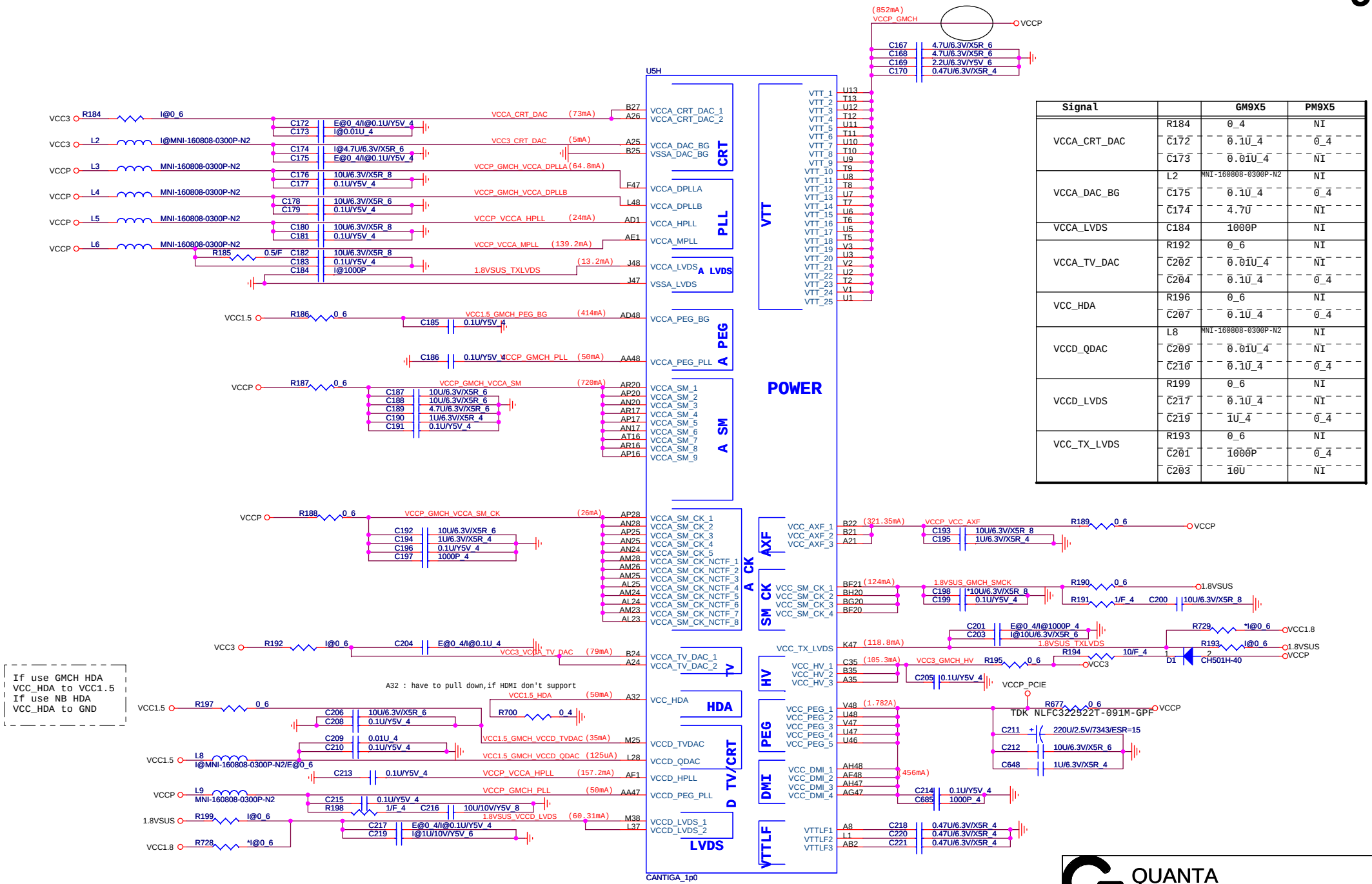
		AM32	VCC_NCTF_1
		AL32	VCC_NCTF_2
		AK32	VCC_NCTF_3
		AJ32	VCC_NCTF_4
		AH32	VCC_NCTF_5
		AG32	VCC_NCTF_6
		AE32	VCC_NCTF_7
		AC32	VCC_NCTF_8
		AA32	VCC_NCTF_9
		Y32	VCC_NCTF_10
		W32	VCC_NCTF_11
		U32	VCC_NCTF_12
		AM30	VCC_NCTF_13
		AL30	VCC_NCTF_14
		AK30	VCC_NCTF_15
		AH30	VCC_NCTF_16
		AG30	VCC_NCTF_17
		AF30	VCC_NCTF_18
		AE30	VCC_NCTF_19
		AC30	VCC_NCTF_20
		AB30	VCC_NCTF_21
		AA30	VCC_NCTF_22
		Y30	VCC_NCTF_23
		W30	VCC_NCTF_24
		V30	VCC_NCTF_25
		U30	VCC_NCTF_26
		AL29	VCC_NCTF_27
		AK29	VCC_NCTF_28
		AJ29	VCC_NCTF_29
		AH29	VCC_NCTF_30
		AG29	VCC_NCTF_31
		AE29	VCC_NCTF_32
		AC29	VCC_NCTF_33
		AA29	VCC_NCTF_34
		Y29	VCC_NCTF_35
		W29	VCC_NCTF_36
		V29	VCC_NCTF_37
		AL28	VCC_NCTF_38
		AK28	VCC_NCTF_39
		AL26	VCC_NCTF_40
		AK26	VCC_NCTF_41
		AK25	VCC_NCTF_42
		AK24	VCC_NCTF_43
		AK23	VCC_NCTF_44

CANTIGA_1p0

1. Level 1 Environment-related Substances Should NEVER be Used.
2. Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

QUANTA COMPUTER

Title	GMCH Power 4 of 5	
Size	Document Number: GD2 Main Board	Rev: 3A
Date: Saturday, May 24, 2008	Sheet 8 of 35	



Signal		GM9X5	PM9X5
VCCA_CRT_DAC	R184	0_4	NI
	C172	0.1U_4	0_4
	C173	0.01U_4	NI
VCCA_DAC_BG	L2	MNI-160808-0300P-N2	NI
	C175	0.1U_4	0_4
	C174	4.7U	NI
VCCA_LVDS	C184	1000P	NI
VCCA_TV_DAC	R192	0_6	NI
	C202	0.01U_4	NI
	C204	0.1U_4	0_4
VCC_HDA	R196	0_6	NI
	C207	0.1U_4	0_4
VCCD_QDAC	L8	MNI-160808-0300P-N2	NI
	C209	0.01U_4	NI
	C210	0.1U_4	0_4
VCCD_LVDS	R199	0_6	NI
	C217	0.1U_4	NI
	C219	1U_4	0_4
VCC_TX_LVDS	R193	0_6	NI
	C201	1000P	0_4
	C203	10U	NI

If use GMCH HDA
VCC_HDA to VCC1.5
If use NB HDA
VCC_HDA to GND

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QUANTA COMPUTER

Title	GMCH Power 5 of 5	
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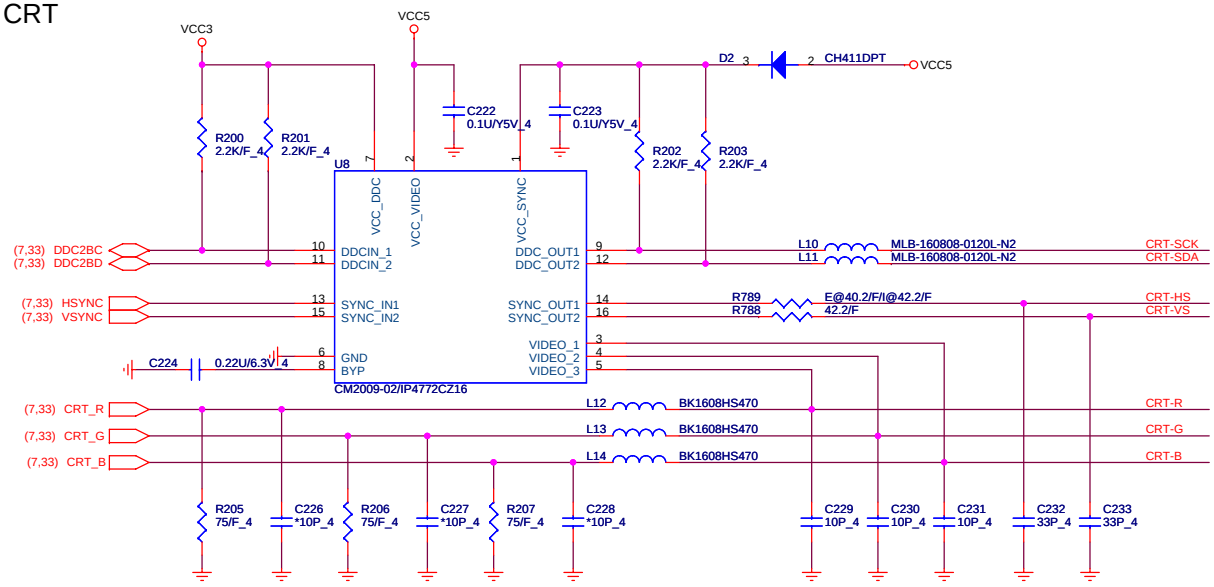
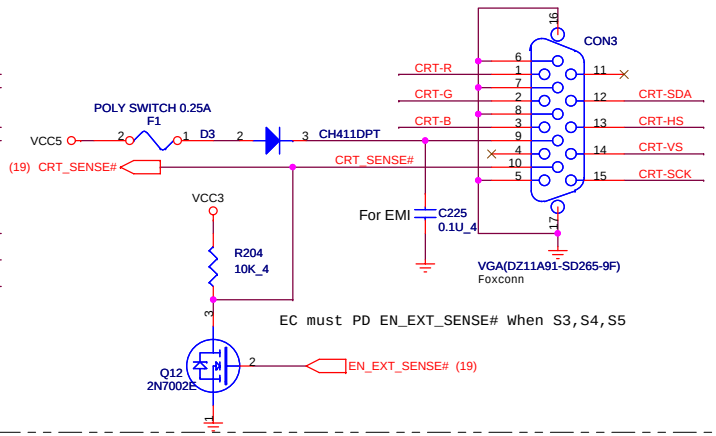
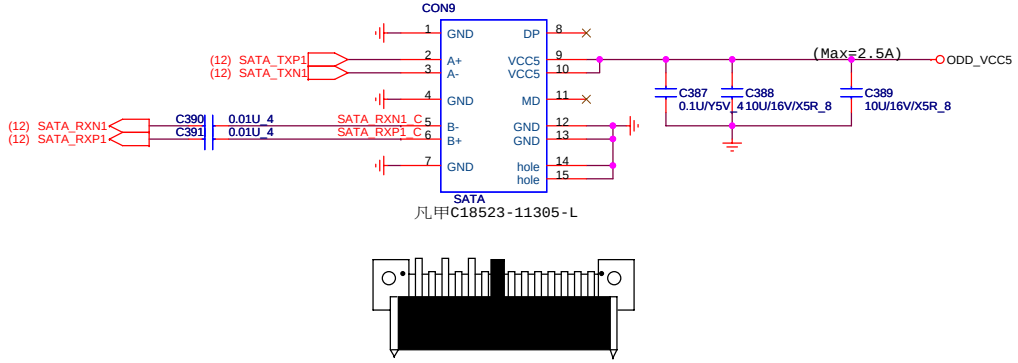
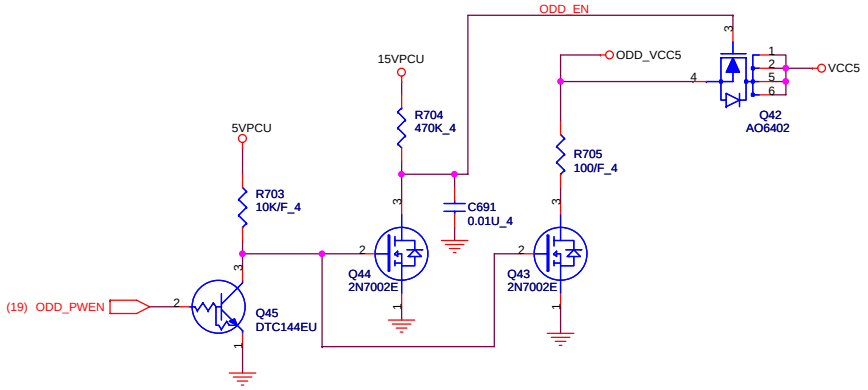
CRT

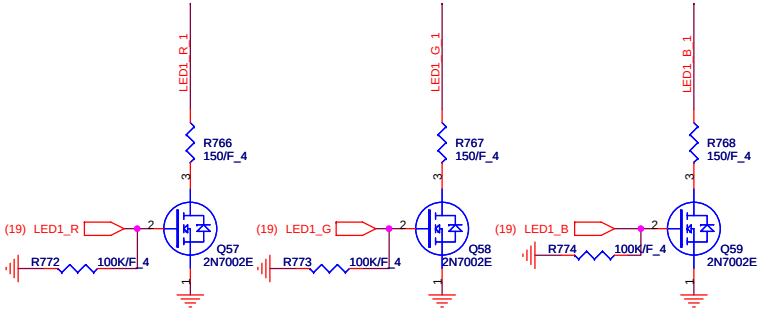


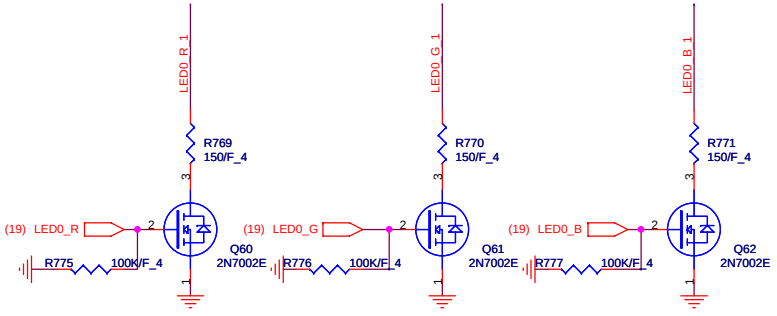


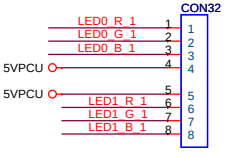
ODD CONNECTOR











1.Level 1 Environment-related Substances Should NEVER be Used.
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

QUANTA COMPUTER

Title	CRT	
Size: Custom	Document Number: GD2 Main Board	Rev: 4A
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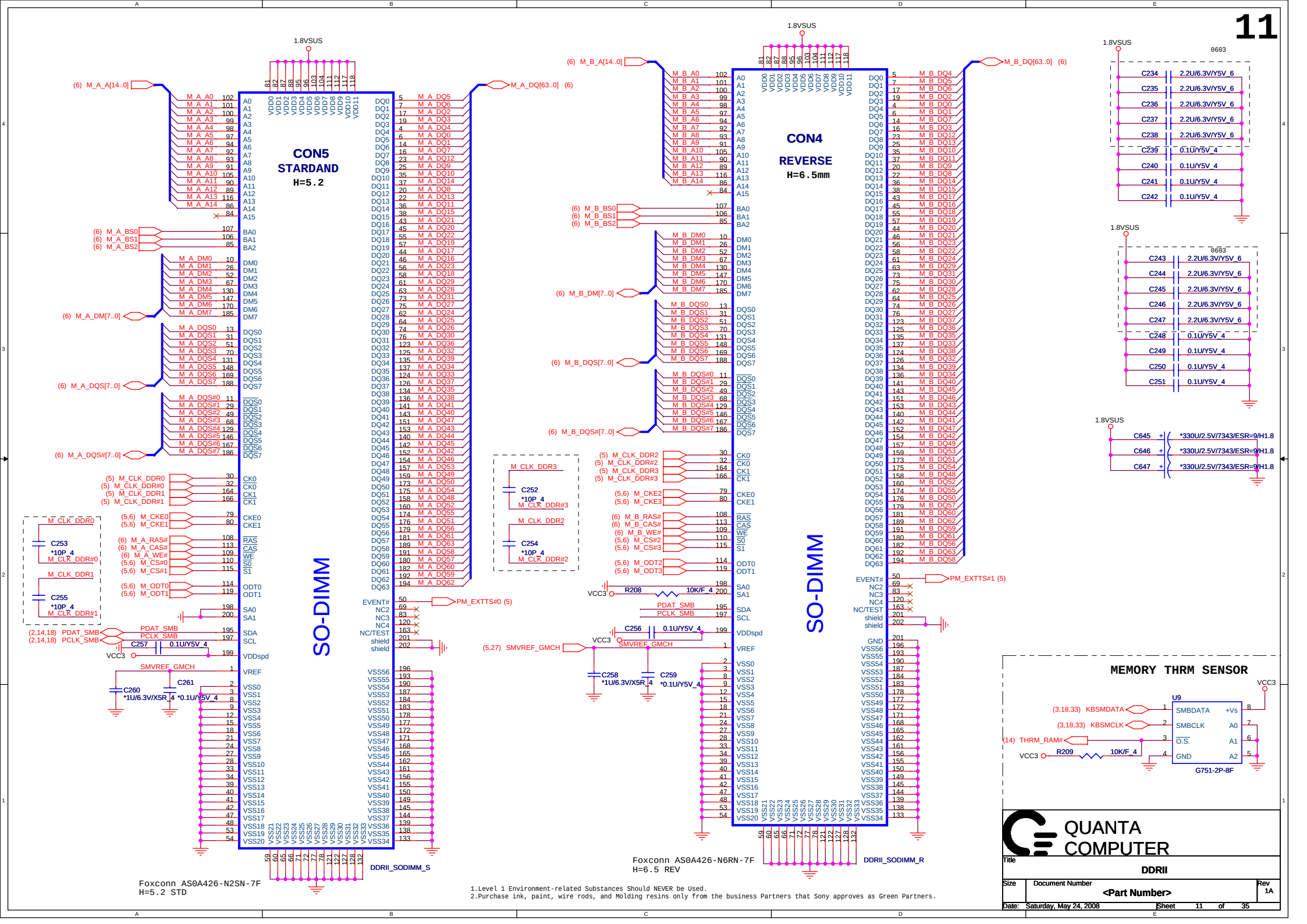
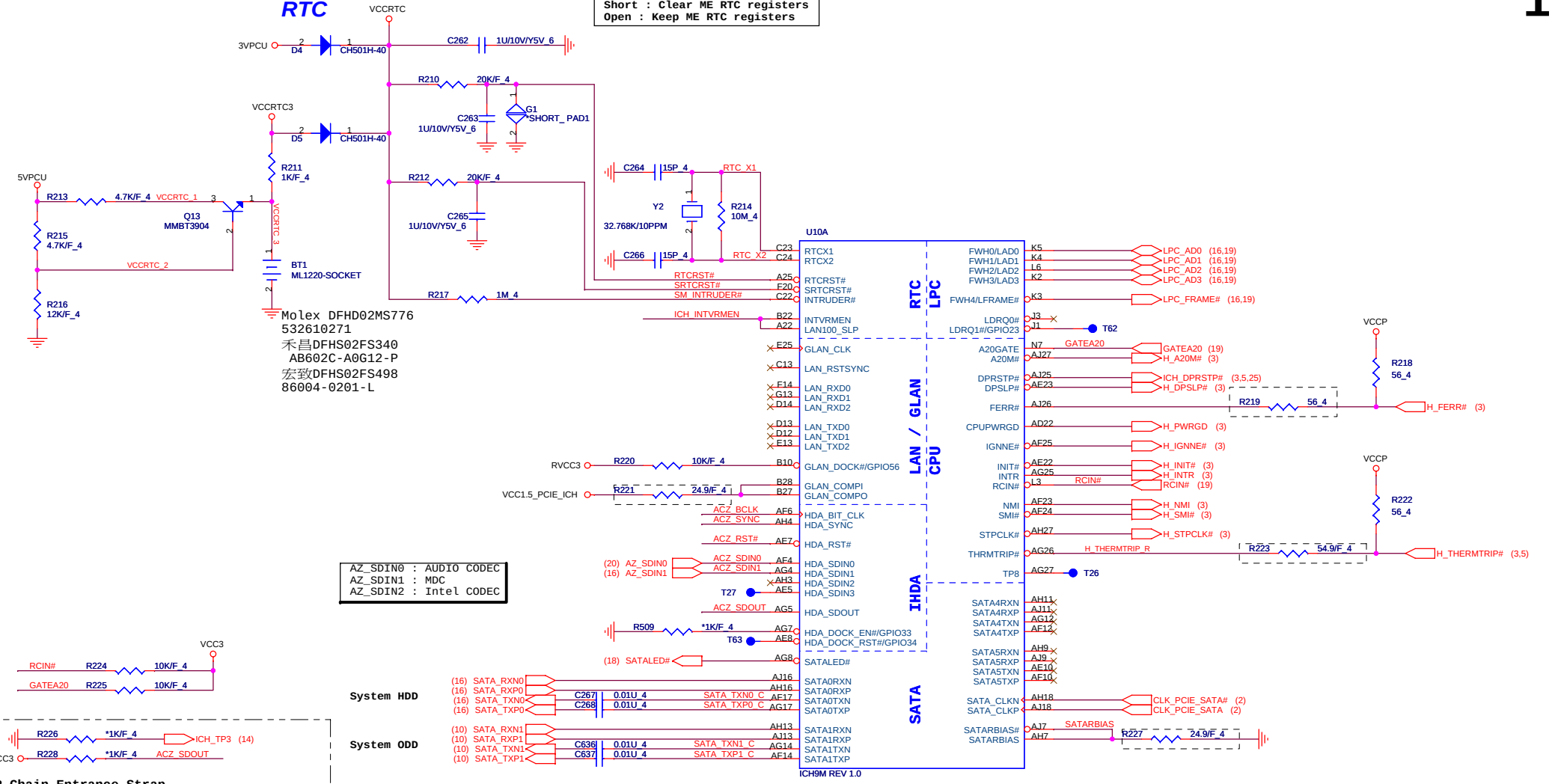


1.Level 1 Environment-related Substances Should NEVER be Used.
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

G2 Short-PAD:
Short : Clear ME RTC registers
Open : Keep ME RTC registers

RTC



Molex DFHD02MS776
532610271
禾昌DFHS02FS340
AB602C-A0G12-P
宏致DFHS02FS498
86004-0201-L

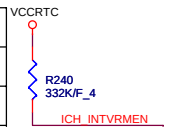
AZ_SDIN0 : AUDIO CODEC
AZ_SDIN1 : MDC
AZ_SDIN2 : Intel CODEC

XOR Chain Entrance Strap

ICH_TP3	ACZ_SDOUT	Description
0	0	RSVD
0	1	Enter XOR Chain
1	0	* Normal opration
1	1	Set PCIE port config bit 1

Internal VRM Enable for Vccsus1_05, VcSus1_5 , VccCL1_5, vccLAN1_05,vccCL1_05)

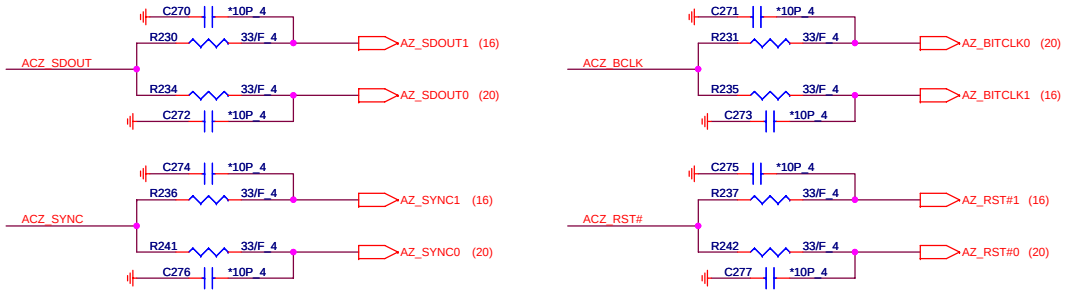
	INTVRMEN
Enable (default)	1
Disable	0



System HDD

System ODD

HD to Audio Codec / Modem / N.B



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QUANTA COMPUTER

Title	ICH9-M HOST1 of 4	
Size	Document Number: GD2 Main Board	Rev: 2A
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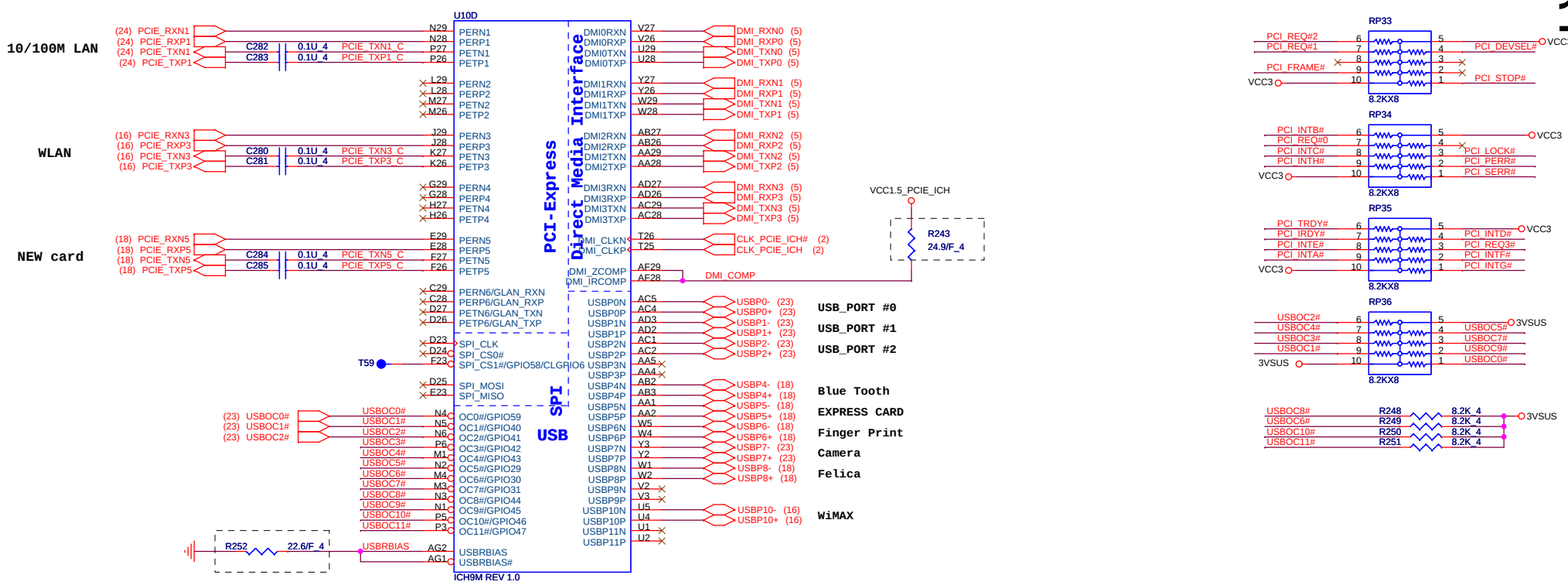
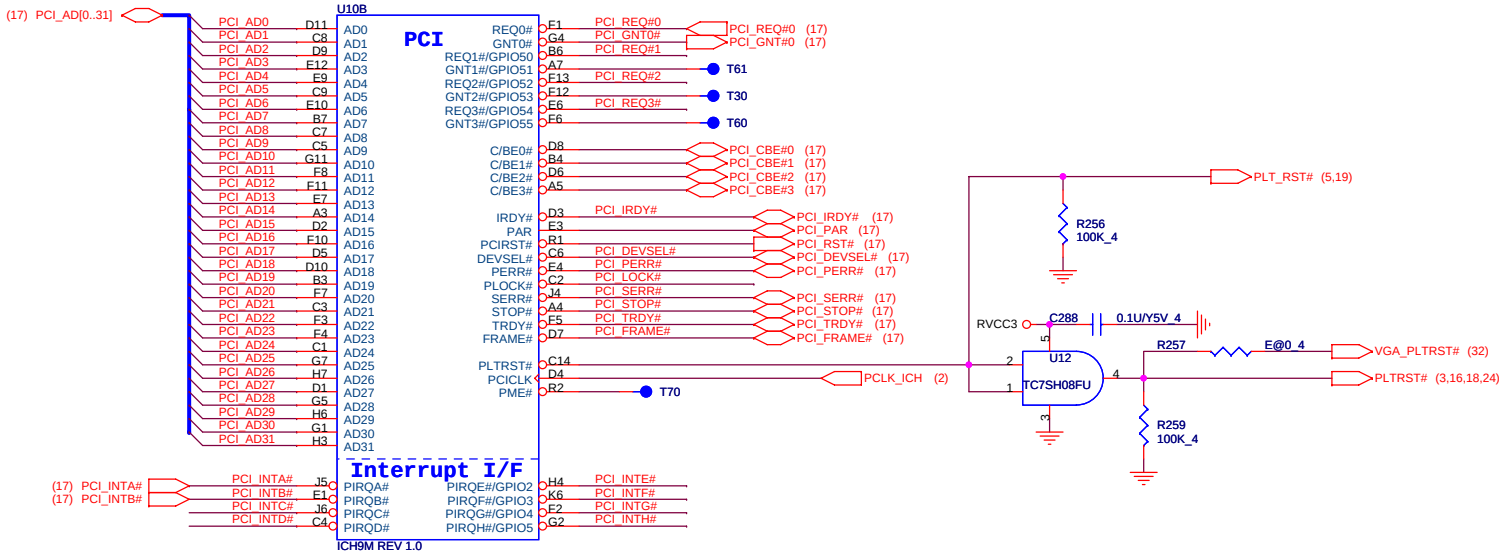




GPIO49 : NC
GPIO20 : Can't pull high.

A16 SWAP Override strap

PCI_GNT#3	Low = A16 swap override enabled High = Default

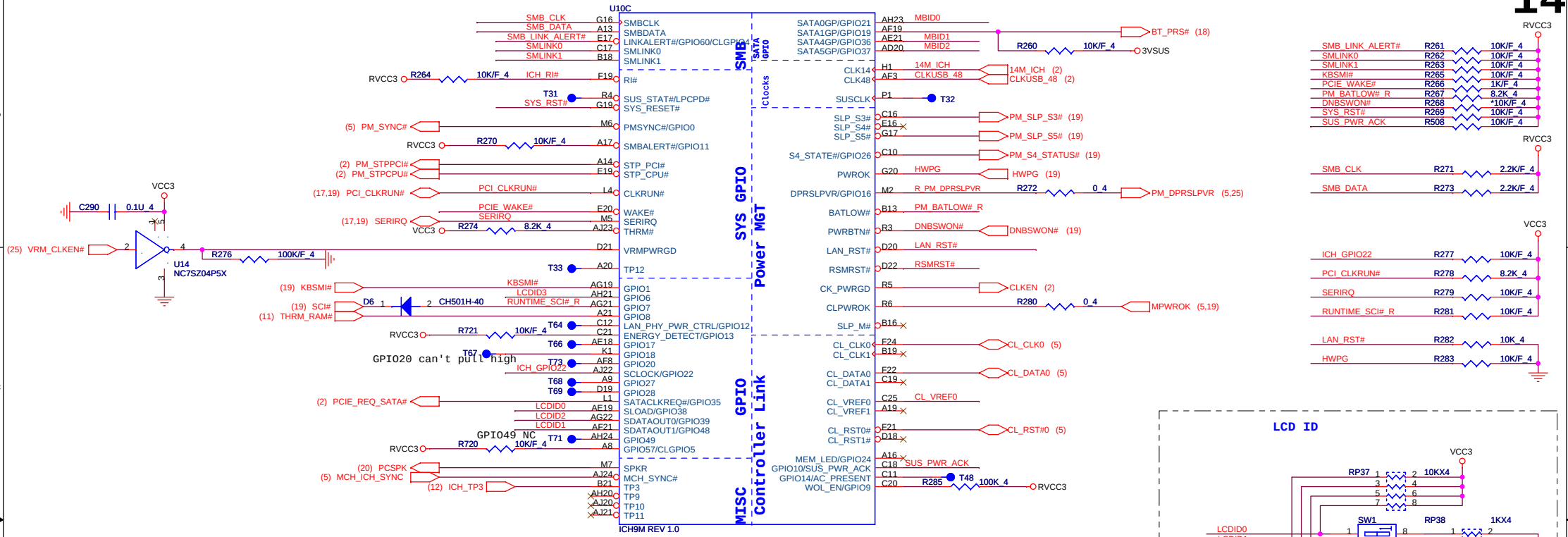
ICH9 Boot BIOS select

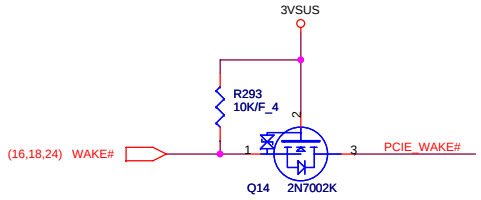
PCI_GNT#0	SPI_CS#1	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	LPC (Default)

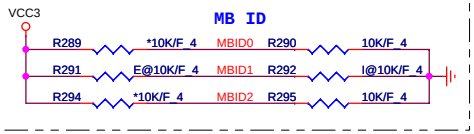
1.This part should not contain any substances which are specified in SS-00259-1
2.Purchase ink, paint, wire rods and molding resins only from the business partners that Sony approves as Green Partners.

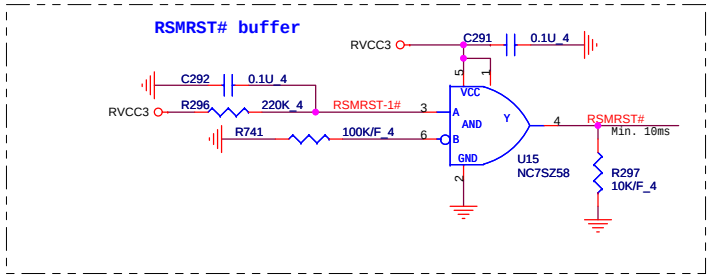
QUANTA COMPUTER

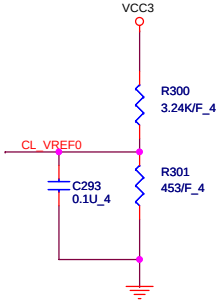
Title	ICH9-M PCIE 2 of 4	
Size	Document Number: GD2 Main Board	Rev: 2A
Date: Saturday, May 24, 2008	Sheet 13 of 35	

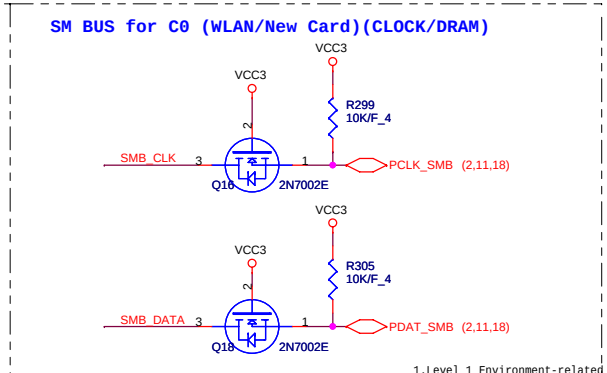










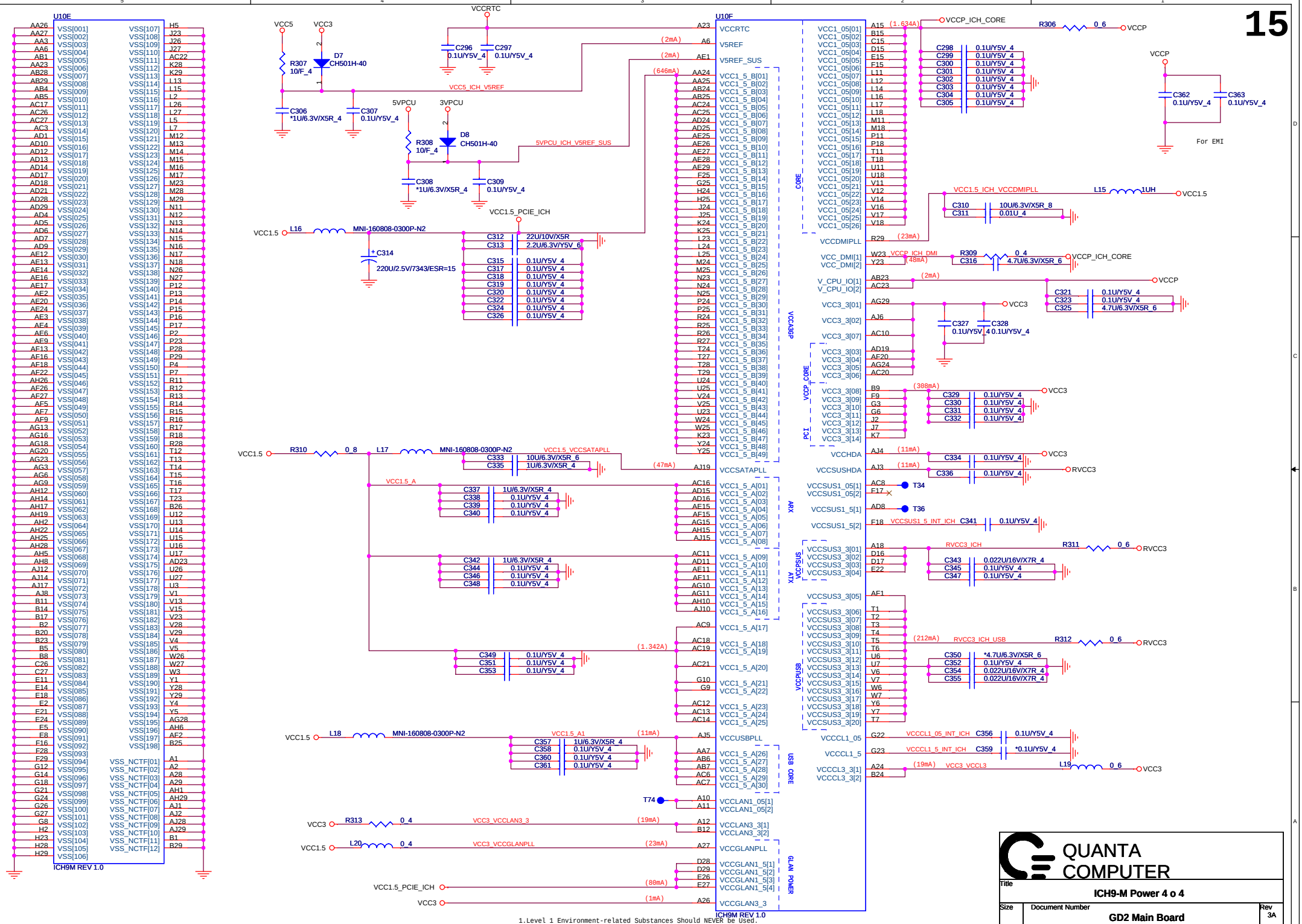


	GM45	PM45+Nvidia	GL40
MBID0	0	0	0
MBID1	0	1	1
MBID2	0	0	1

1.Level 1 Environment-related Substances Should NEVER be Used.
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

QUANTA COMPUTER

Title	ICH9-M GPIO 3 of 4	
Size	Document Number: GD2 Main Board	Rev: 2A
Date: Saturday, May 24, 2008	Sheet 14 of 35	



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QUANTA COMPUTER

Title	ICH9-M Power 4 o 4	
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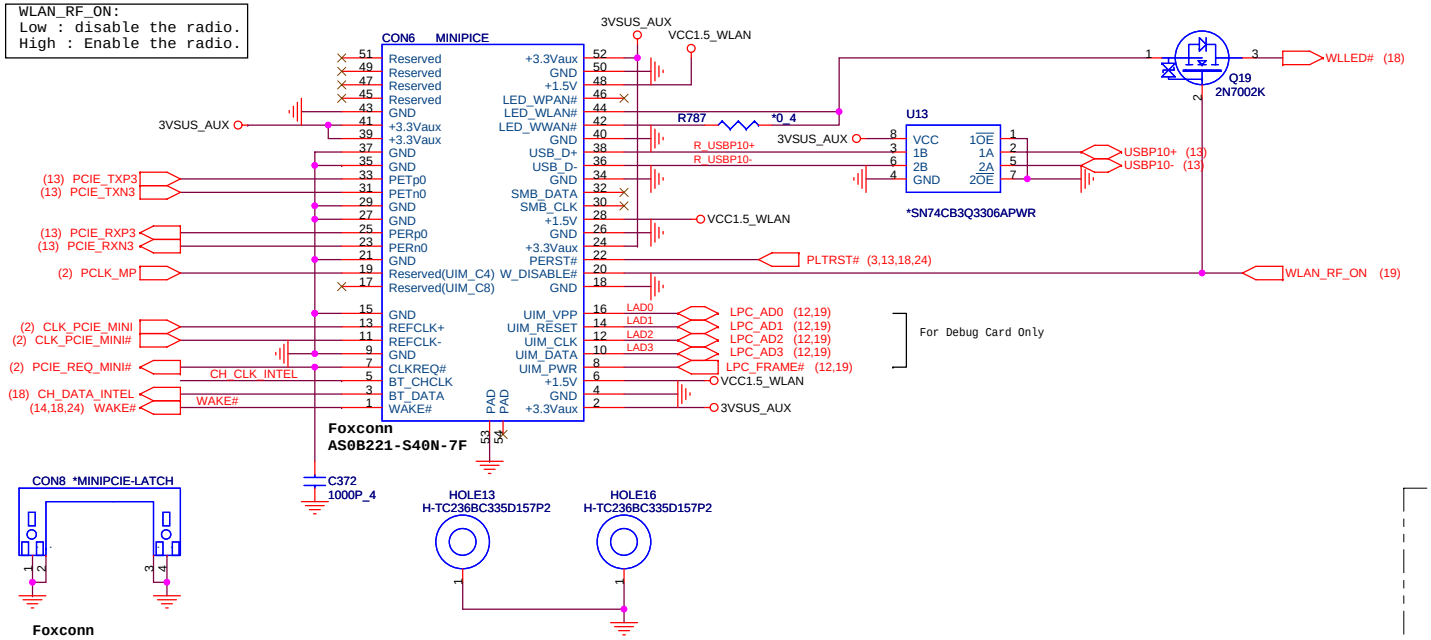
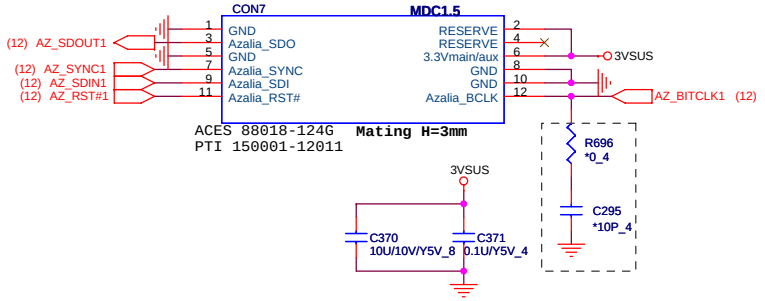
Mini PCI-E Card FOR WL

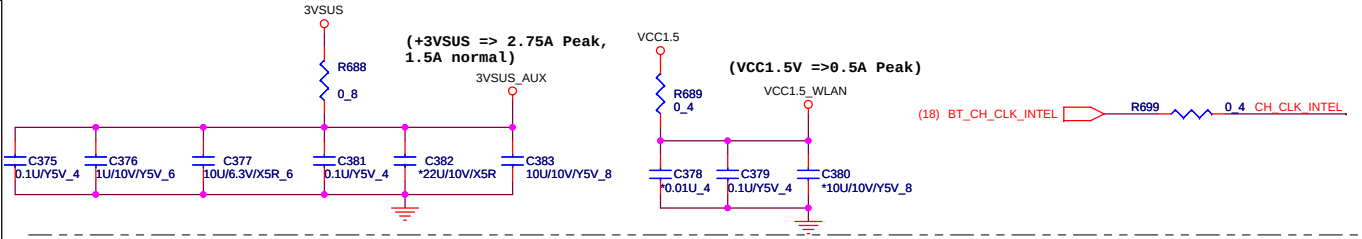
WLAN_RF_ON:
Low : disable the radio.
High : Enable the radio.



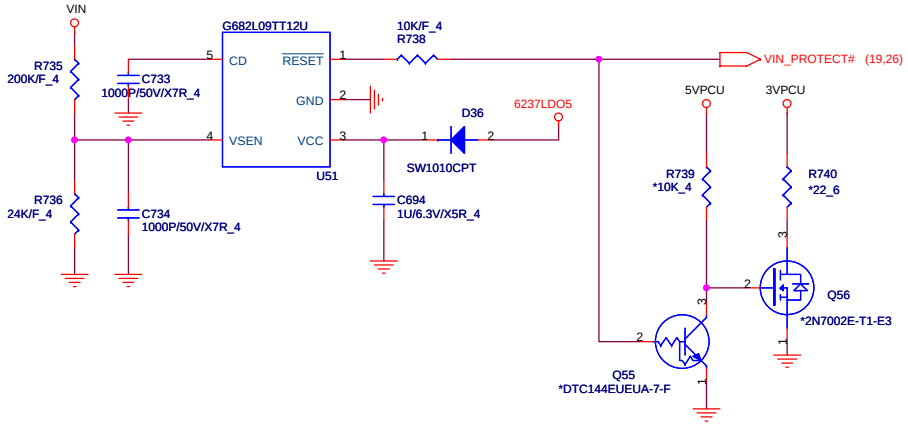
SM BUS ADDRESS	A6	A5	A4	A3	A2	A1	A0
CPU LM95245CIMM EMC1402-1	1	0	0	1	1	0	0
NB9MGS LM89-1/G781-1	1	0	0	1	1	0	1
DRAM G751-2P	1	0	0	1	0	0	0
Thermal G751-2P	1	0	0	1	0	0	1

MDC V1.5

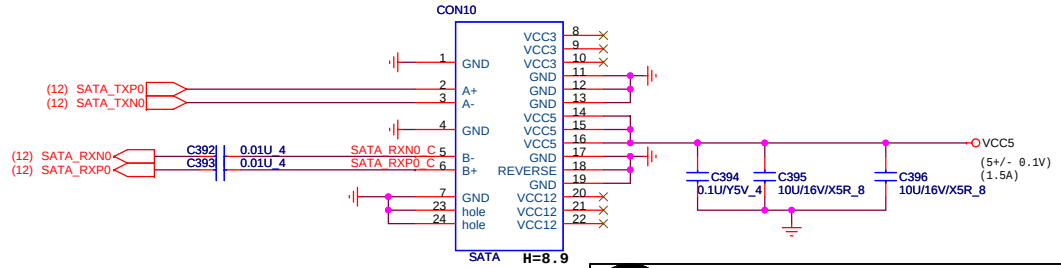




Reset Cricuit



HDD CONNECTOR



凡甲C166Q5-12205-L

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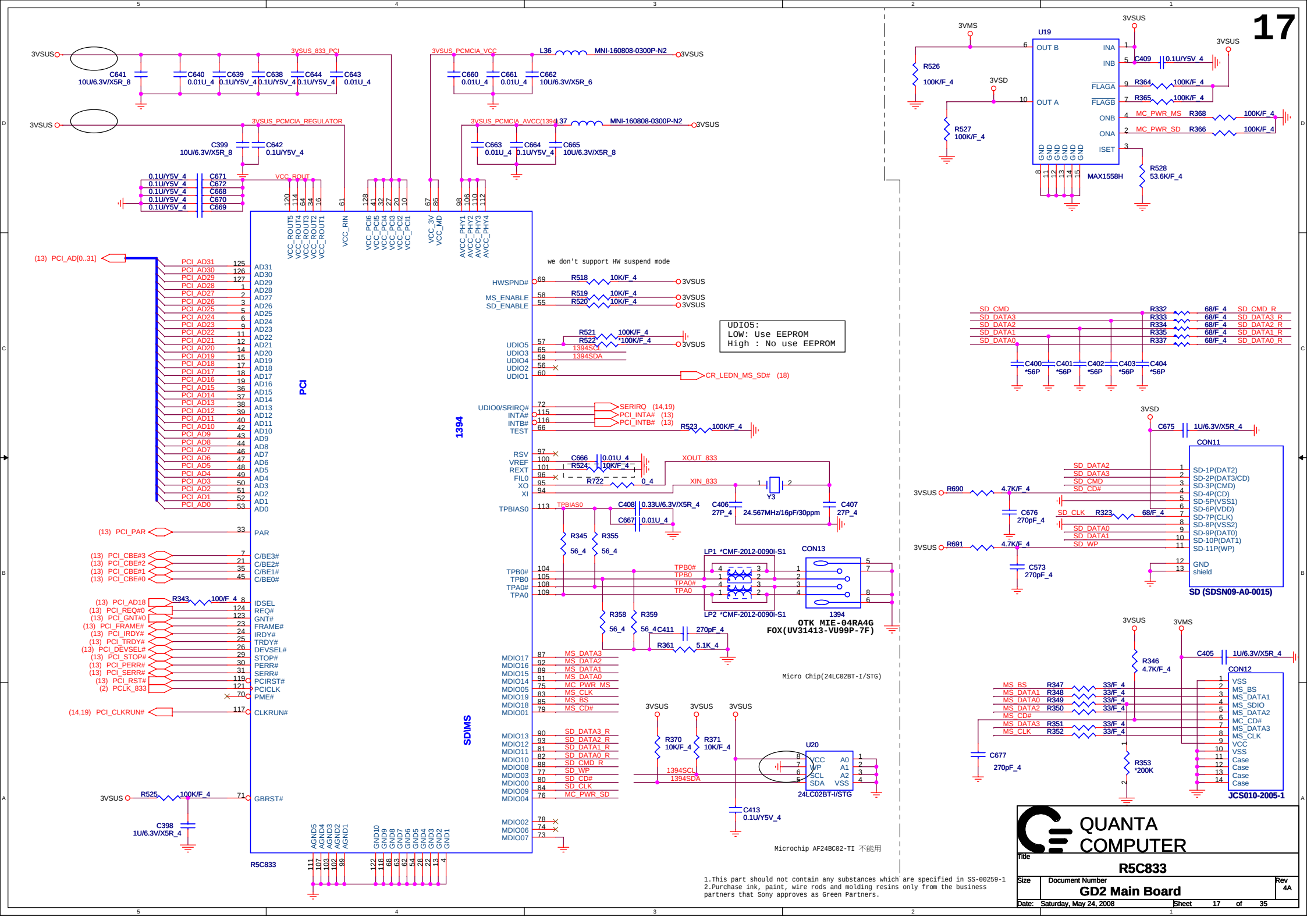
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

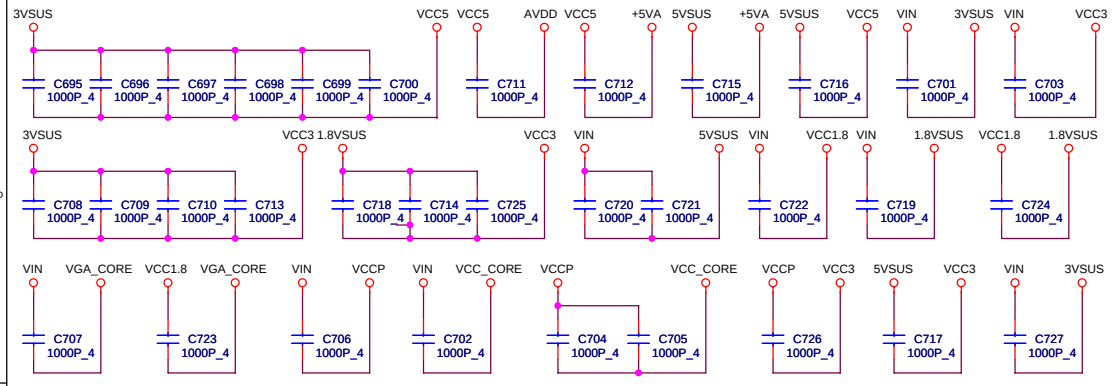
QUANTA COMPUTER

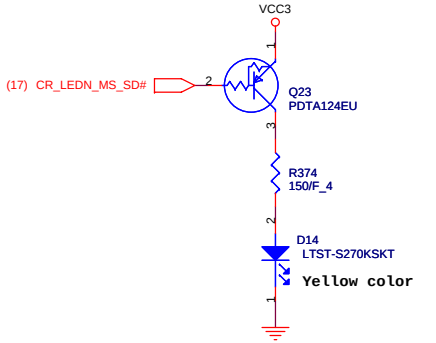
Title	MINIPCIE / MDC	
Size	Document Number GD2 Main Board	Rev 3A
Date: Saturday, May 24, 2008	Sheet 16 of 35	

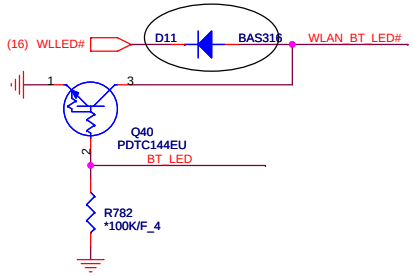


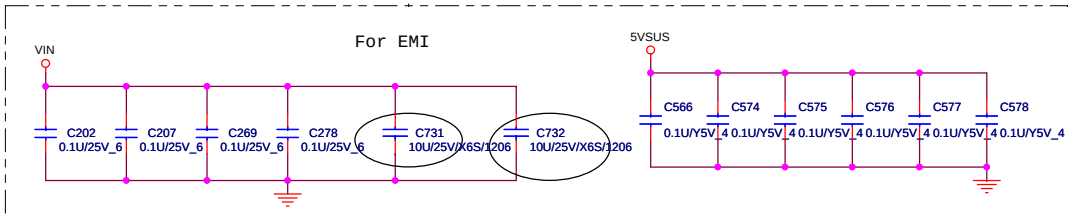
1.This part should not contain any substances which are specified in SS-00259-1
2.Purchase ink, paint, wire rods and molding resins only from the business partners that Sony approves as Green Partners.

QUANTA COMPUTER		
Title: R5C833		
Size	Document Number: GD2 Main Board	Rev: 4A
Date: Saturday, May 24, 2008	Sheet 17 of 35	



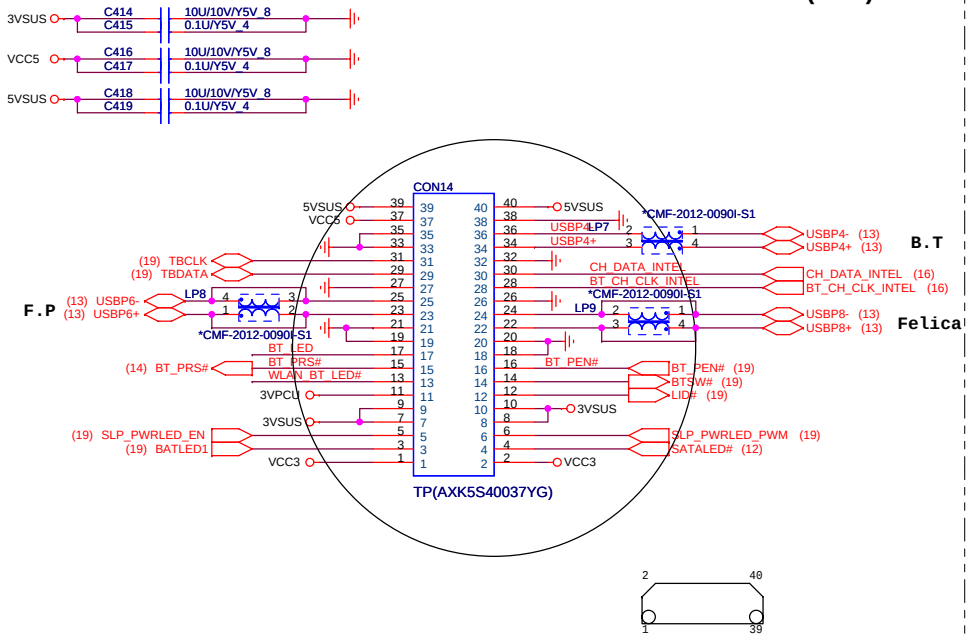




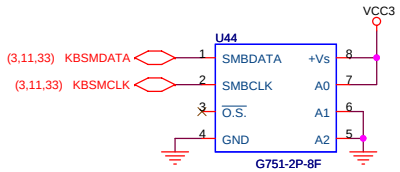


Two Color :
everylight : 19-22UYOSYGC(BEAG0028ZA0_
liteon : LTST-C195KGKFKT(BEAG0032ZA0)
Amber:
everylight : 19-21UYOC/S530-A6/TR8 (BEAB0015Z06)
liteon : LTST-C190KFKT (BEAB0006Z07)
Green :
everylight : 19-21SYGC/S530-E2/TR8(BEYG0053ZA2)
liteon : LTST-C190KGKT(BEGR0080Z07)
Yellow:
everylight : 19-21UYC/S530-A2/TR8(BEYL0016Z08)
liteon : LTST-C190KSKT(BEYL0024Z01)

T/P to M/B (FPC)

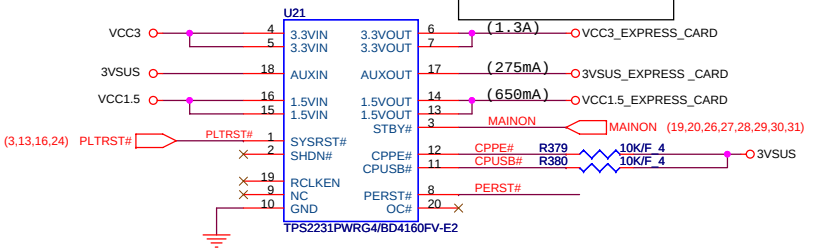


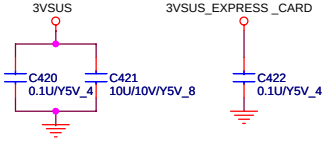
MEMORY THRM SENSOR

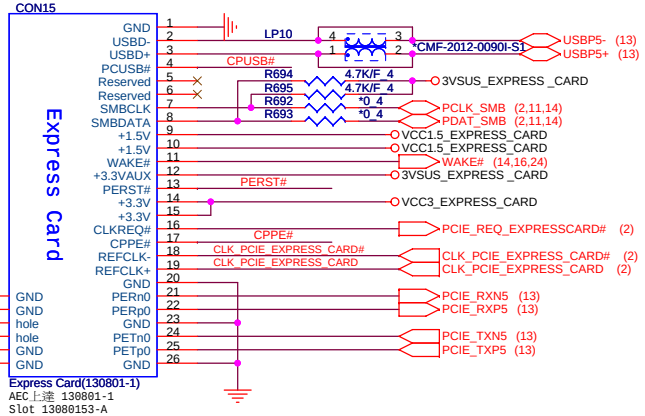


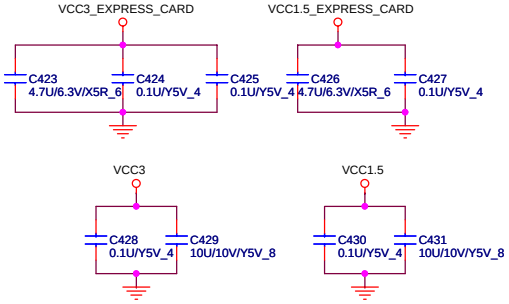
EXPRESS CARD

Short current:
3.3VOUT : 1.35 ~ 2.5A
AUXOUT : 0.275 ~ 0.6A
1.5VOUT : 0.67 ~ 1.3A









1.This part should not contain any substances which are specified in SS-00259-1
2.Purchase ink, paint, wire rods and molding resins only from the business partners that Sony approves as Green Partners.

QUANTA COMPUTER

Title	Express Card/LED	
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I/O Address

BADDR1-0	Index	Data
* 1 0	2E	2F
1 1	4E	4F
0 0	(HCFGBAH, HCFGBAL)	(HCFGBAH, HCFGBAL)+1
0 1	XOR-TREE TEST	

SHMB: SHBM(If = 0 Enable share host BIOS memory)

CHGEN# : BADDR0

T?: BADDR1

WPC775L

Input Voltage Range : 0 ~ 2.97 V

BIOS can programing 20mA

BIOS can programing 20mA

Power Limit:
ACAD: 90W -> 85W
BATT: 70W -> 66W

* WPC775 Pin83:Should be pull low.

Winbond W25X80VSSIG

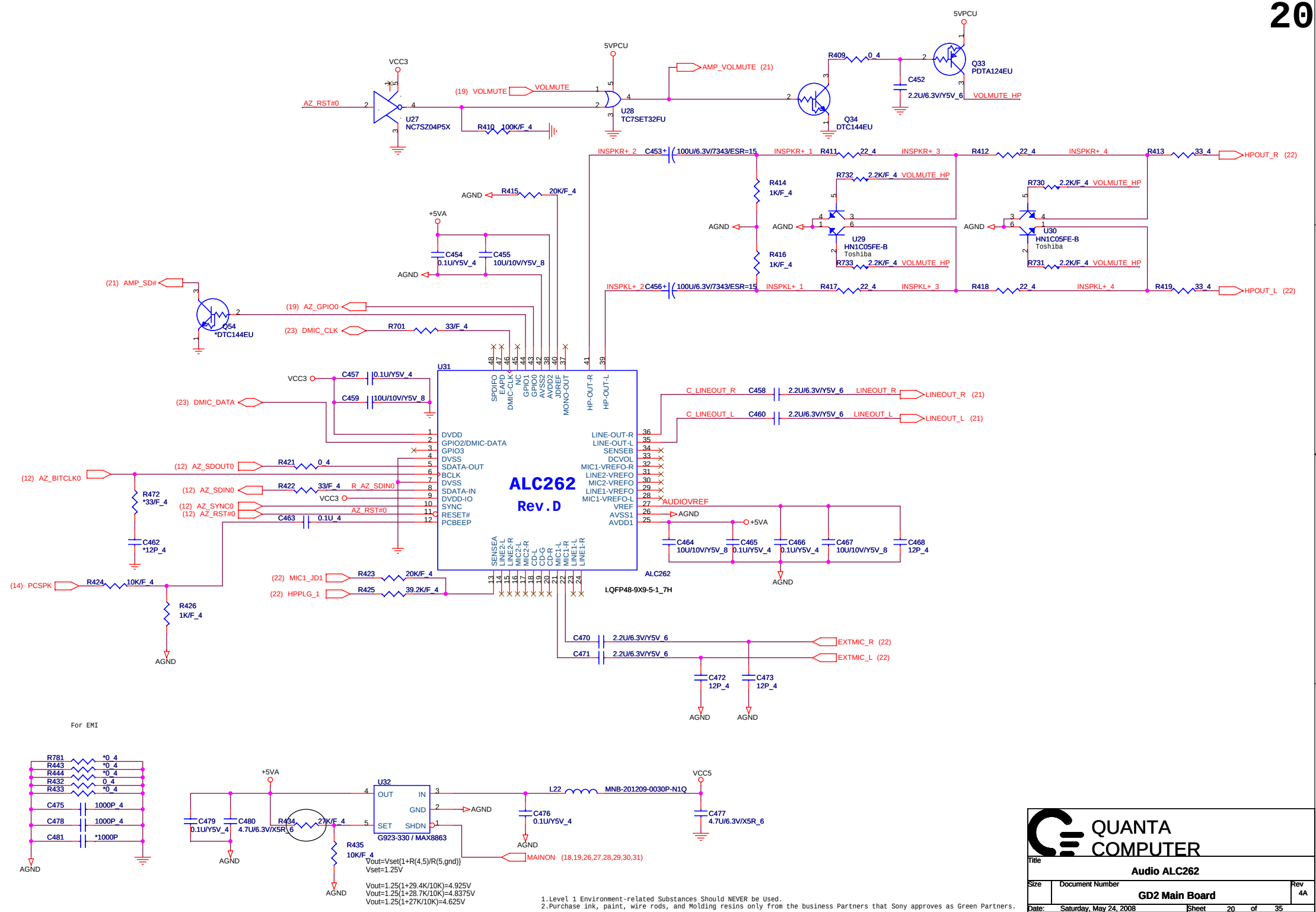
1.Level 1 Environment-related Substances Should NEVER be Used.
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

QUANTA COMPUTER

Title: WPC8763L & FLASH

Size | Document Number: GD2 Main Board | Rev: 3A

Date: Saturday, May 24, 2008 | Sheet 19 of 35



1.Level 1 Environment-related Substances Should NEVER be Used.
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

QUANTA COMPUTER

Title	Audio ALC262	
Size	Document Number: GD2 Main Board	Rev: 4A
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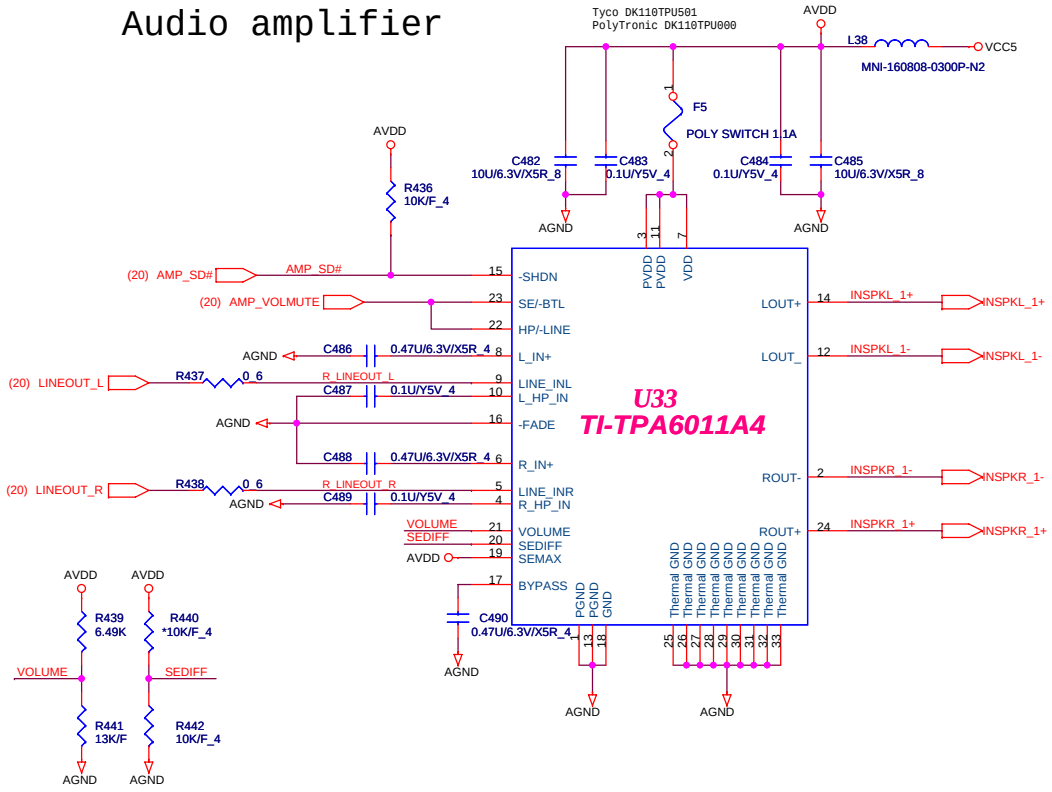
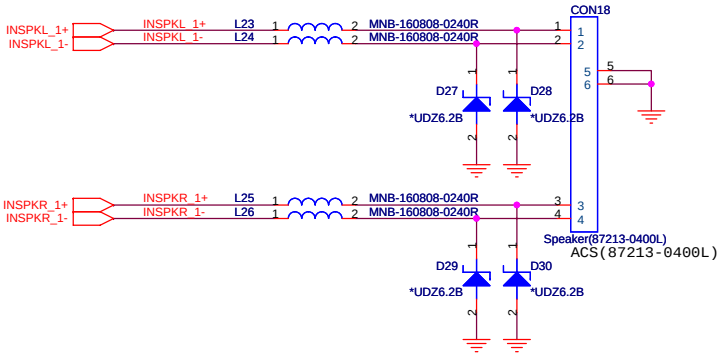
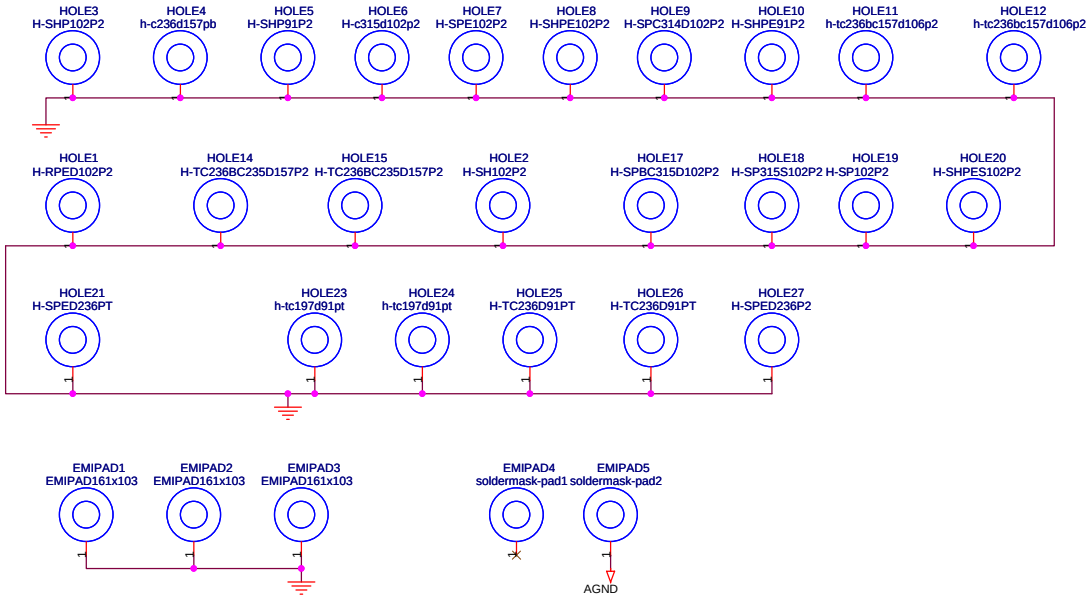
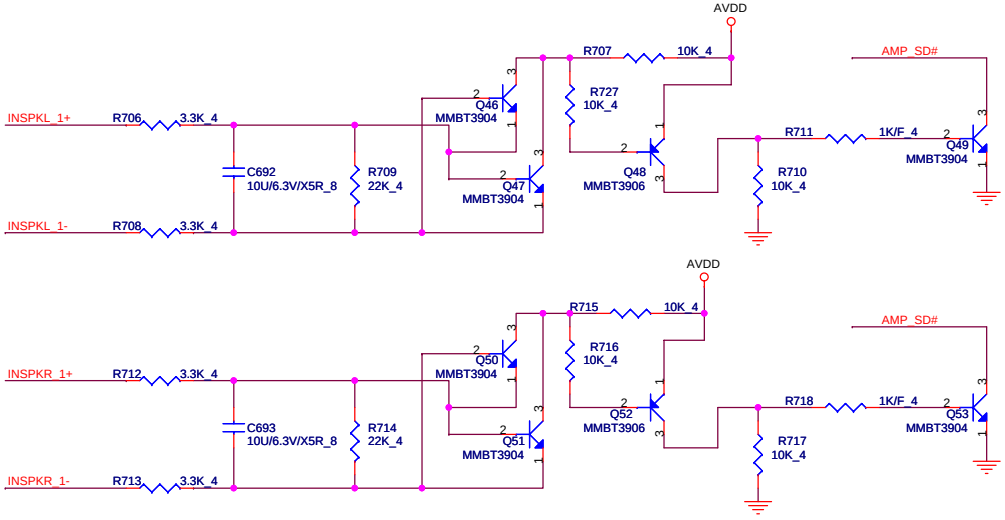
Audio amplifier





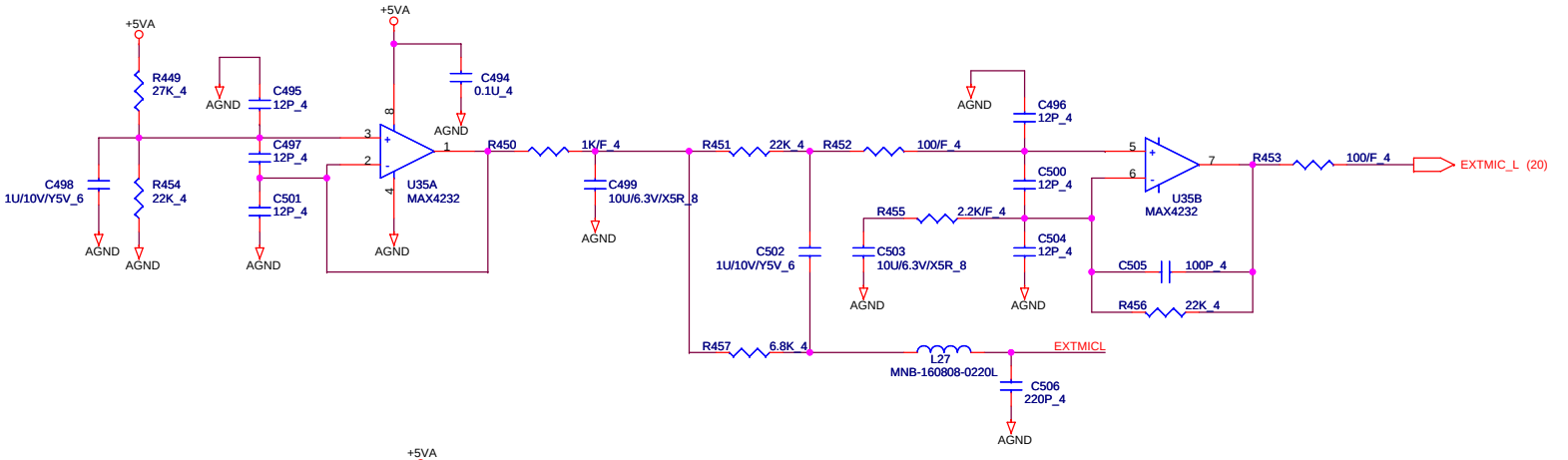


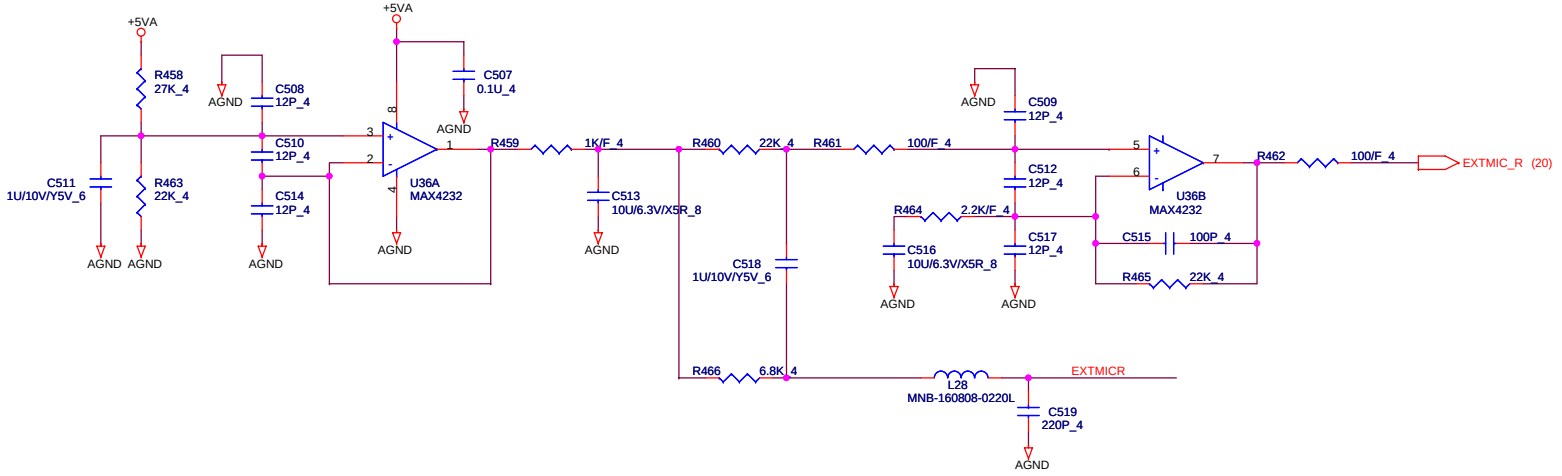


1.Level 1 Environment-related Substances Should NEVER be Used.
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

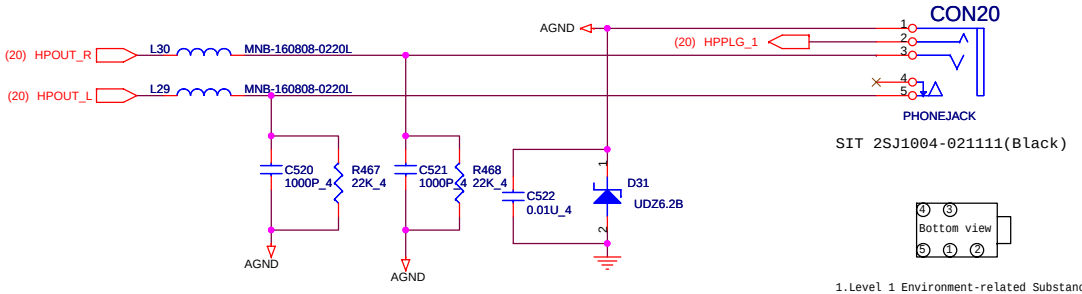
QUANTA COMPUTER

Title	Audio AMP & Int. Speaker	
Size	Document Number: GD2 Main Board	Rev: 3A
Date: Saturday, May 24, 2008	Sheet 21 of 35	



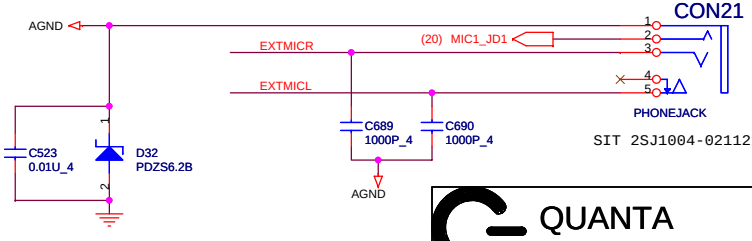


EXTERNAL PHONE



SIT 2SJ1004-021111(Black)

EXTERNAL MIC



SIT 2SJ1004-021121(RED)

1.Level 1 Environment-related Substances Should NEVER be Used.
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

QUANTA COMPUTER

Title	Phone /MIC Jack	
Size	Document Number GD2 Main Board	Rev 2A
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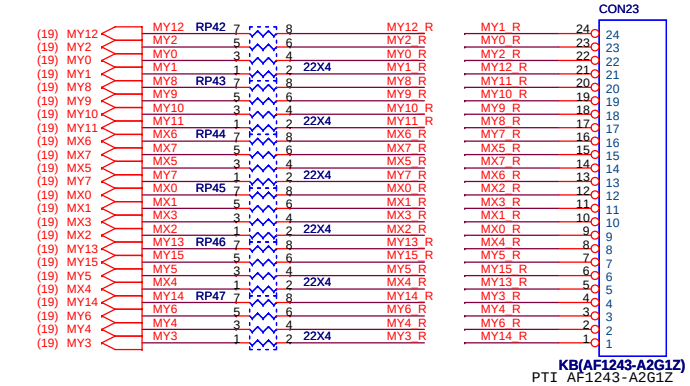
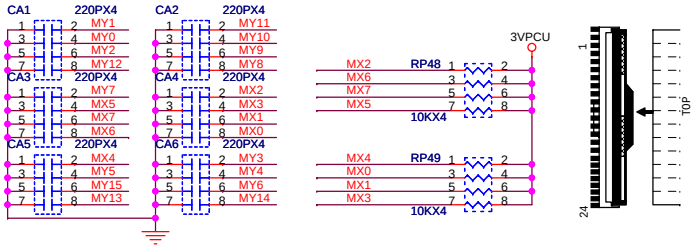
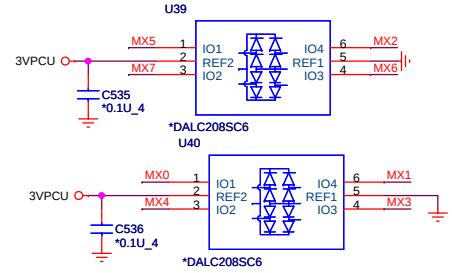
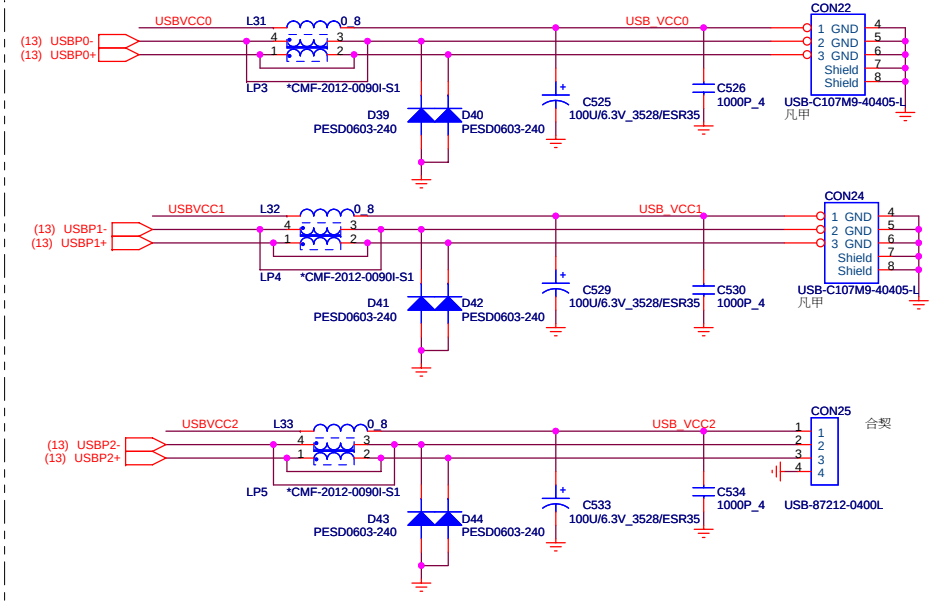
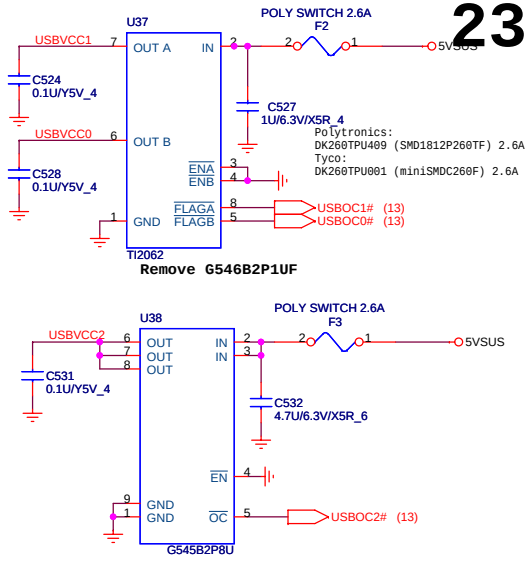
KEYBOARD

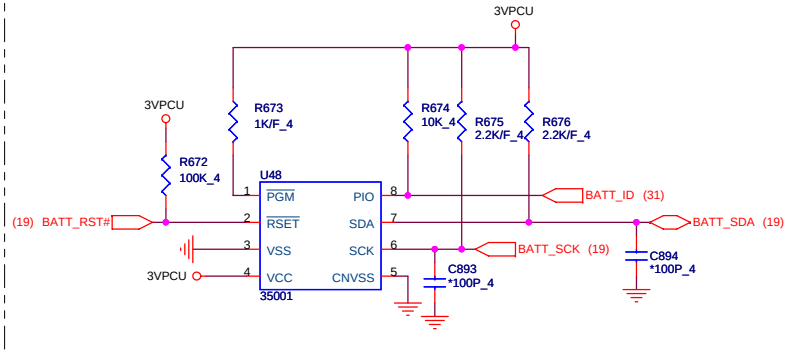




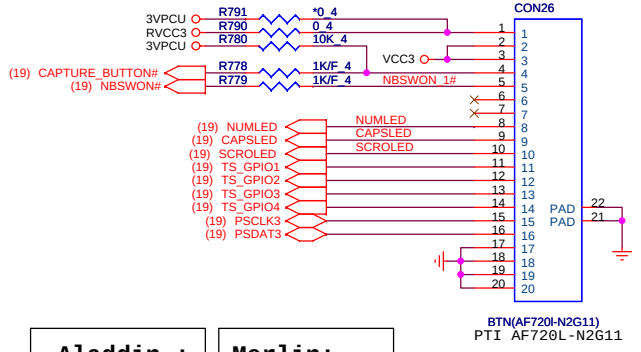






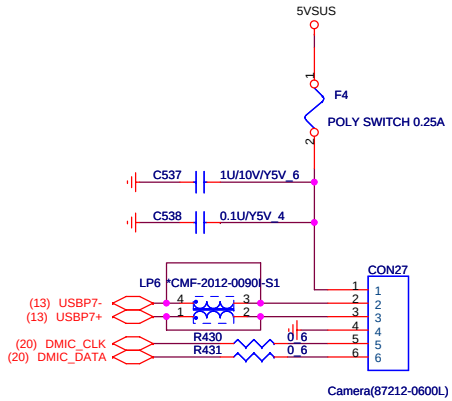


Power SW BOARD

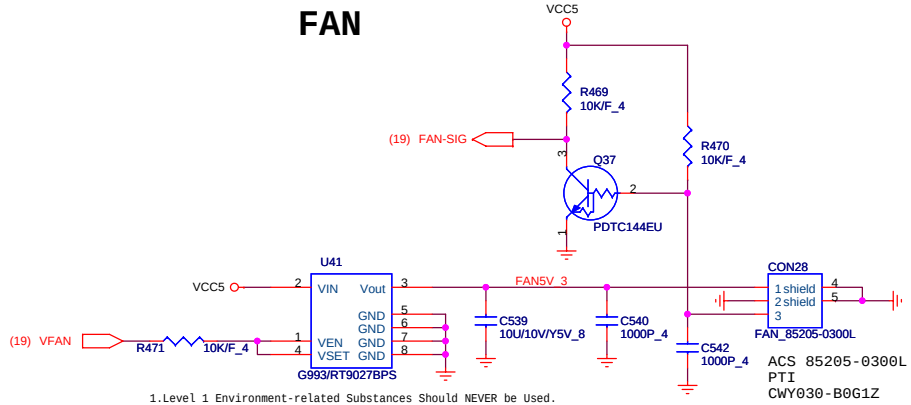


Aladdin :	Merlin:
VCC3	RVCC3
PSCLK3	TS_GPIO1
PSDAT3	TS_GPIO2
TS_GPIO3	GND
TS_GPIO4	
GND	

USB Camera



FAN



ACS 85205-0300L
PTI
CWY030-B0G1Z

1.Level 1 Environment-related Substances Should NEVER be Used.
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

QUANTA COMPUTER

Title	K/B ,USB	
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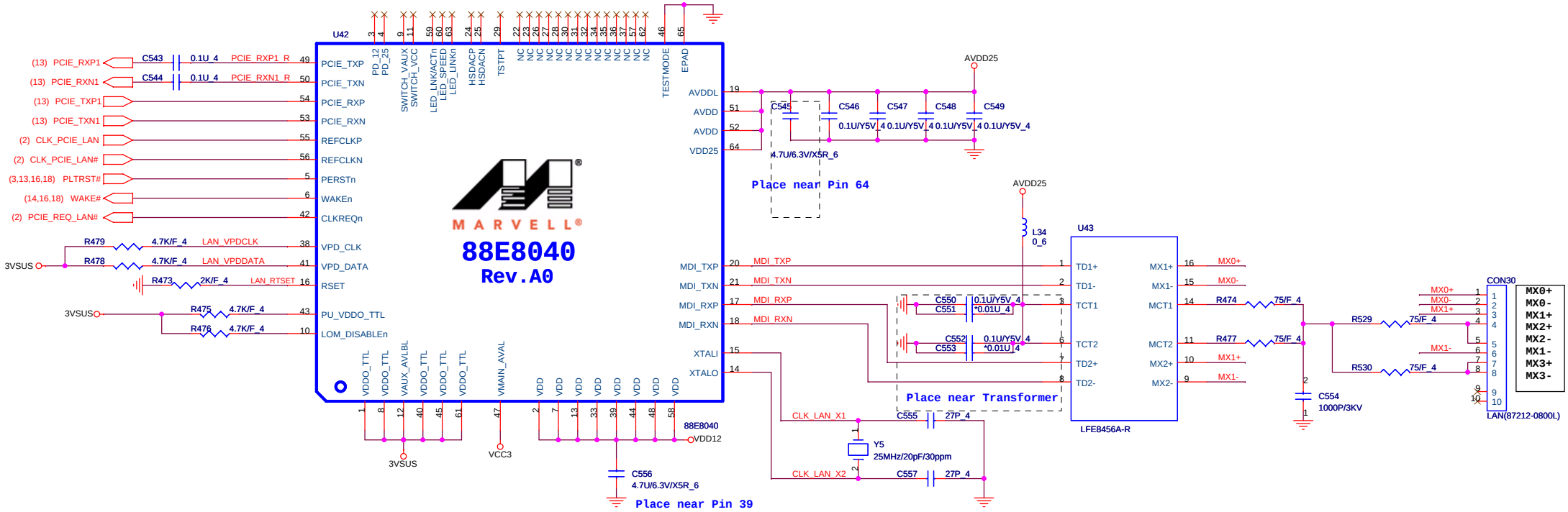

QUANTA COMPUTER		
Title: 10/100 LAN 88E8040		
Size	Document Number: GD2 Main Board	Rev: 2A
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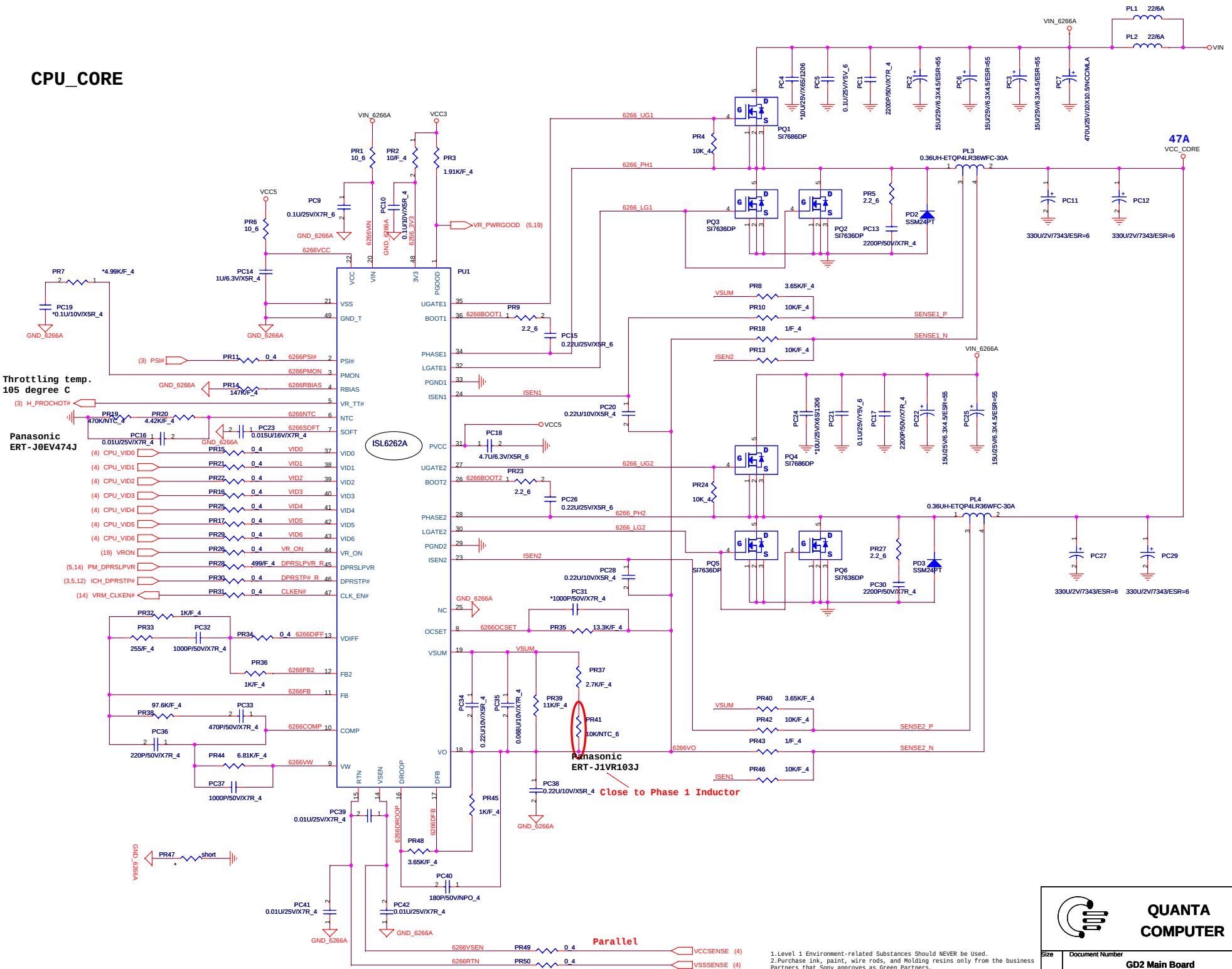
CPU_CORE



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QUANTA COMPUTER

Size	Document Number	Rev
	GD2 Main Board	2A

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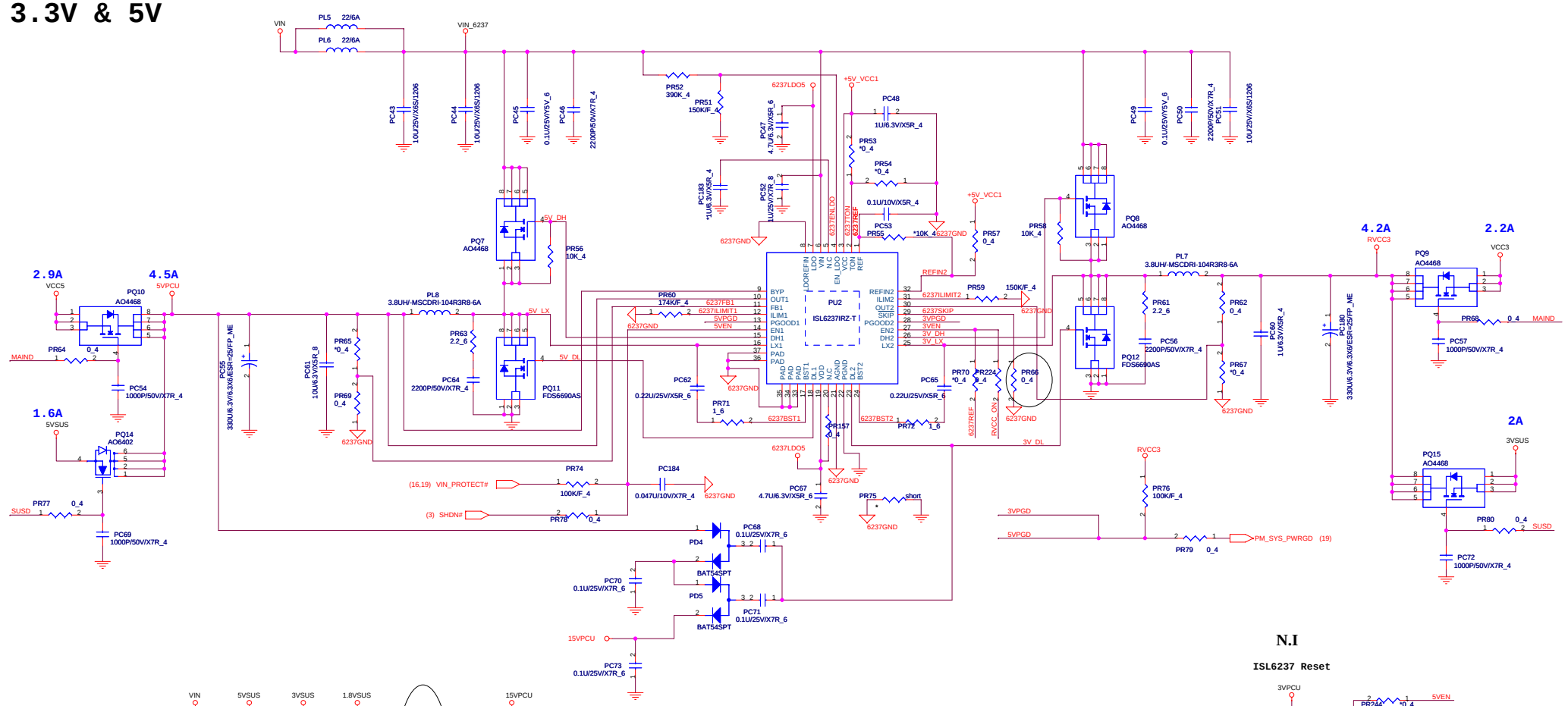
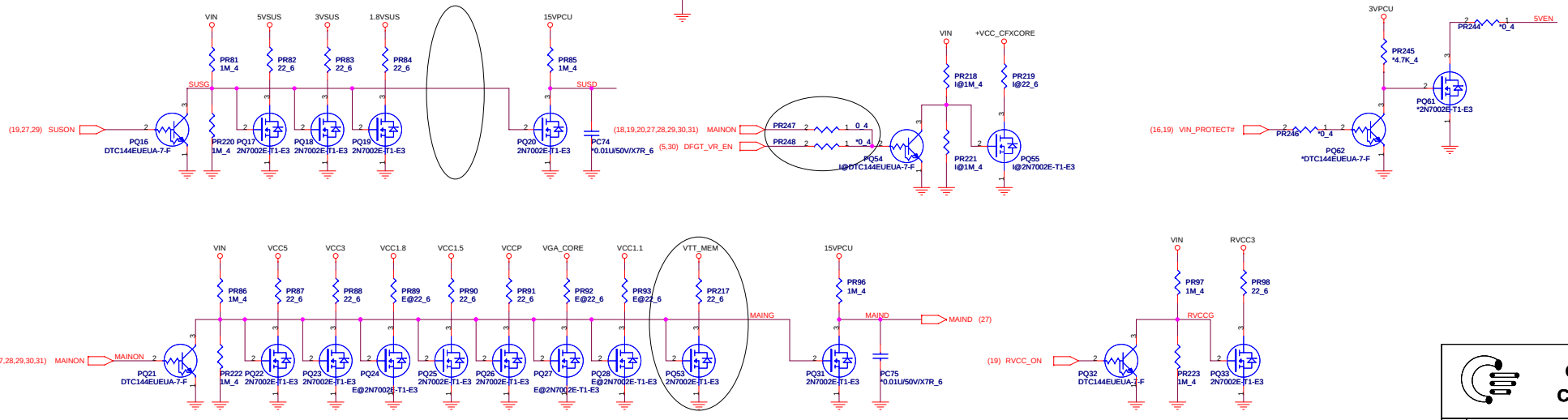
3.3V & 5V



N.I

ISL6237 Reset



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QUANTA COMPUTER

Size	Document Number	Rev
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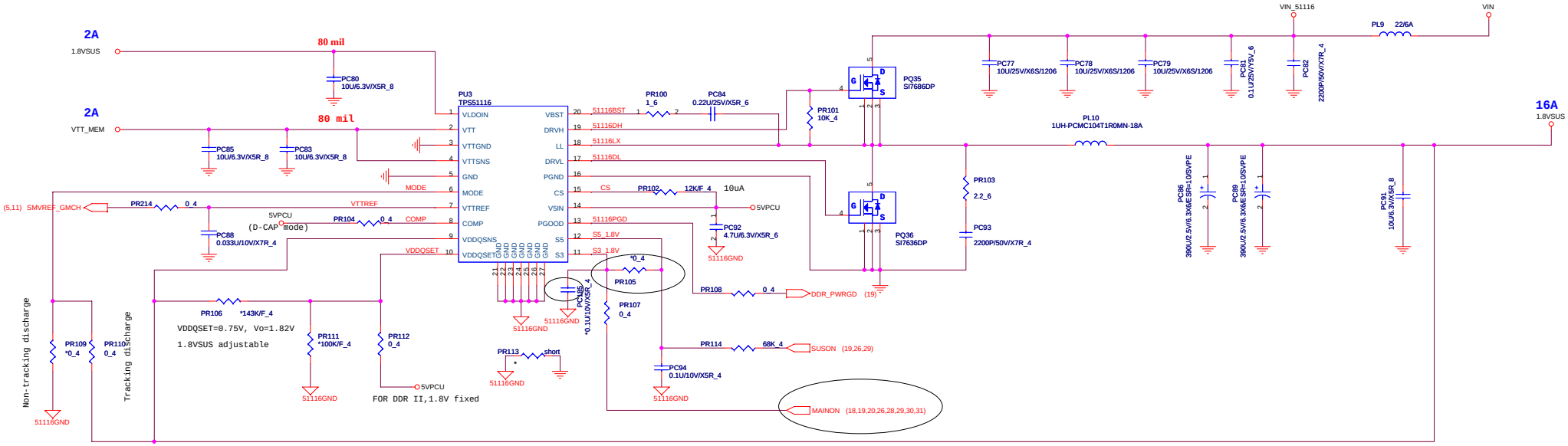
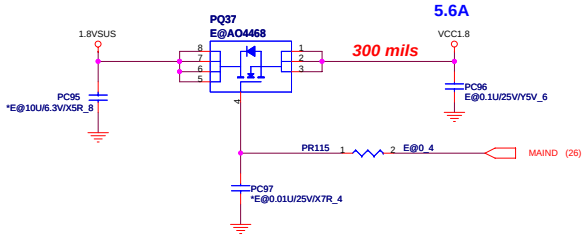
1.8VSUS & VTT_MEM





MODE	DISCHARGE MODE
+5V	No discharge
+1.8V	Tracking discharge
GND	Non-tracking discharge

VDDQSET	VDDQ(V)	VTTREF & VTT	NOTE
GND	2.5 fixed	VDDQSNS/2	DDR
5V	1.8 fixed	VDDQSNS/2	DDR2
FB-Resistor	Adjustable	VDDQSNS/2	1.5V<VDDQ<3V

VTT = VTTREF = VDDQSNS/2 = 0.9V

STATE	S3	S5	1.8VSUS	VTTREF	VTT
S0	1	1	on	on	on
S3	0	1	on	on	off
S4/S5	0	0	off	off	off

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QUANTA COMPUTER

Size	Document Number	Rev
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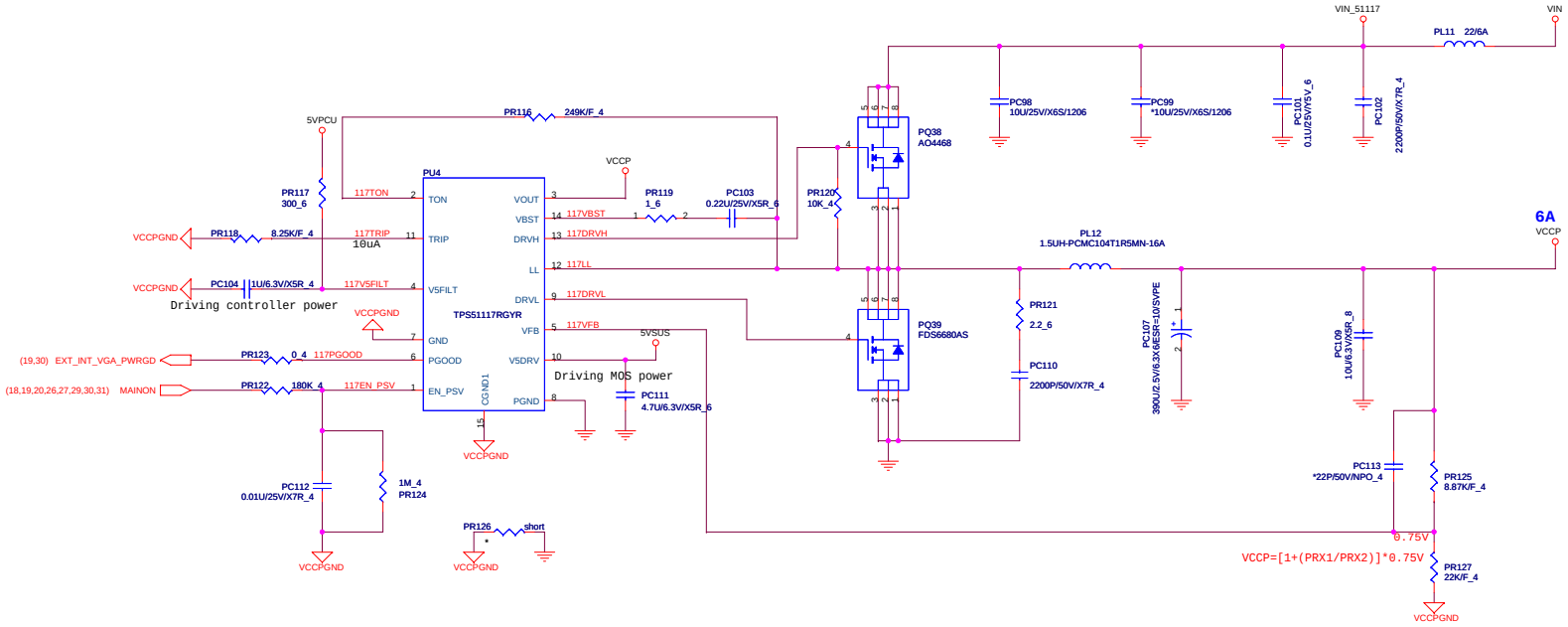
VCCP



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QUANTA COMPUTER

Size	Document Number	Rev
	GD2 Main Board	3A
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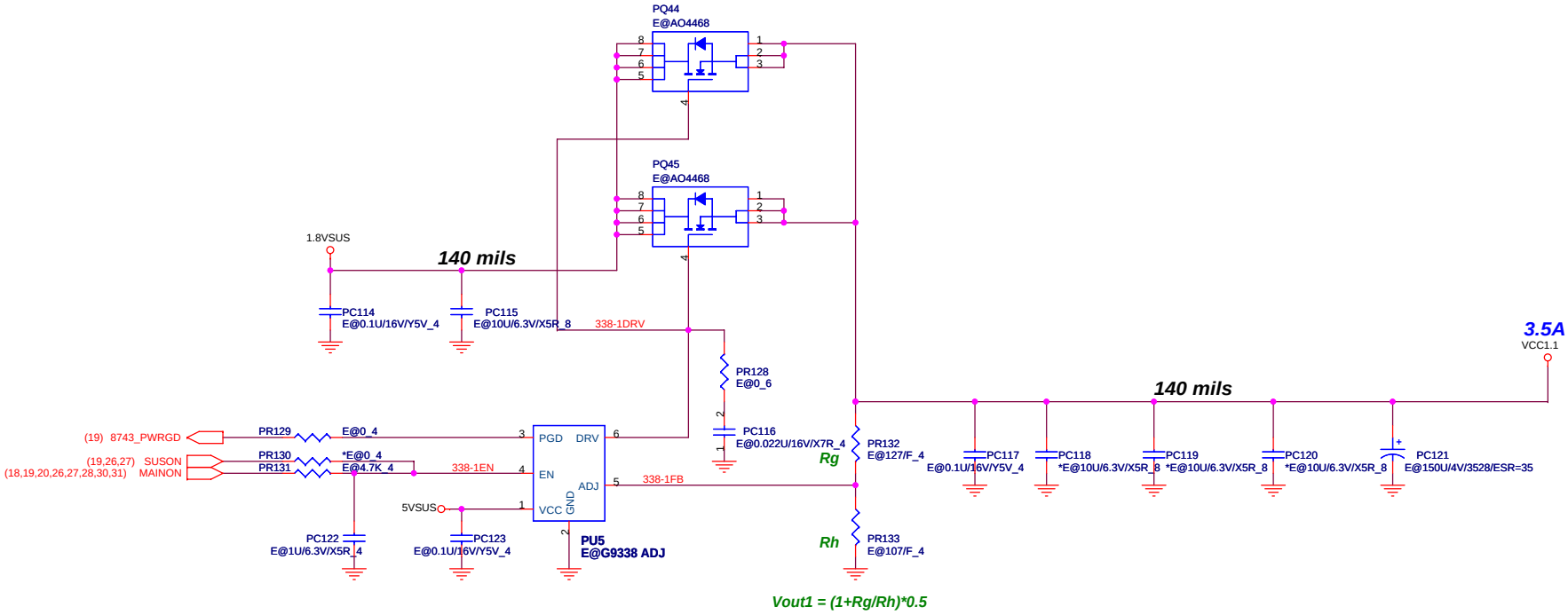
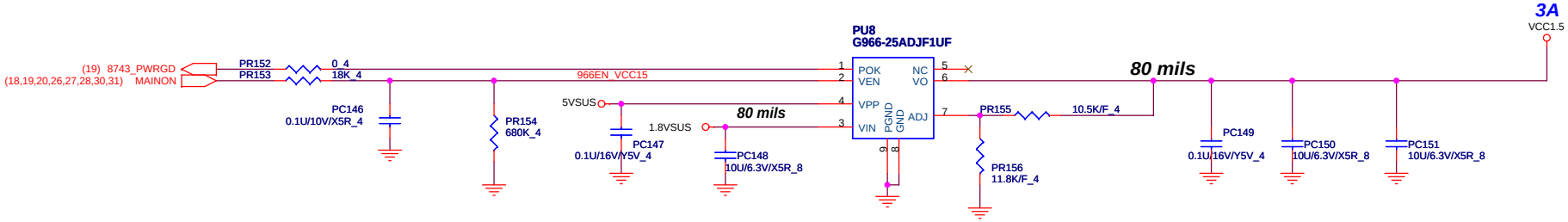
VCC1.1



*Vout1 = (1+Rg/Rh)*0.5*

VCC1.5



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QUANTA COMPUTER

Size	Document Number	Rev
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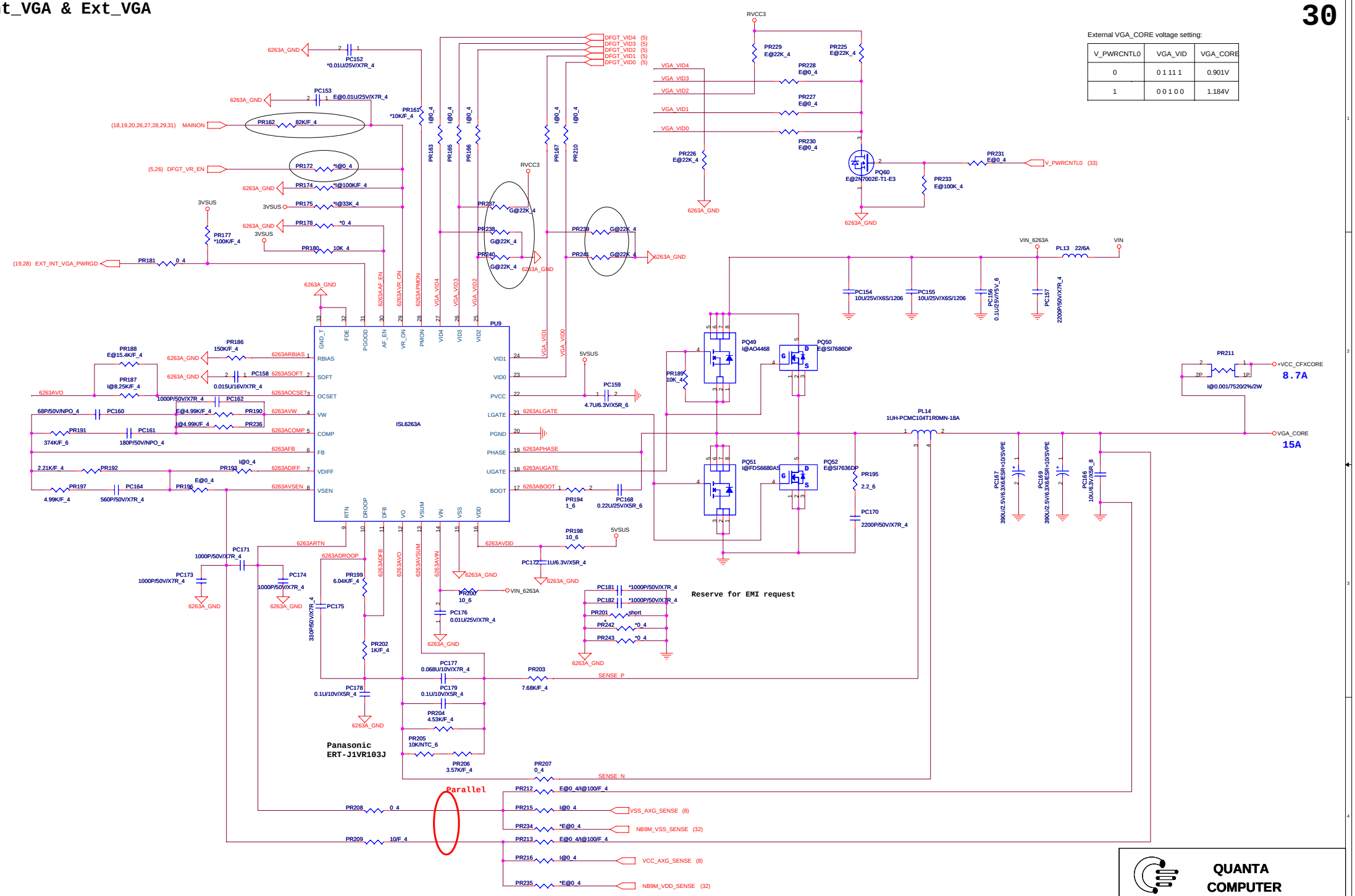
External VGA_CORE voltage setting:

V_PWRCNTL0	VGA_VID	VGA_CORE
0	0 1 1 1 1	0.901V
1	0 0 1 0 0	1.184V



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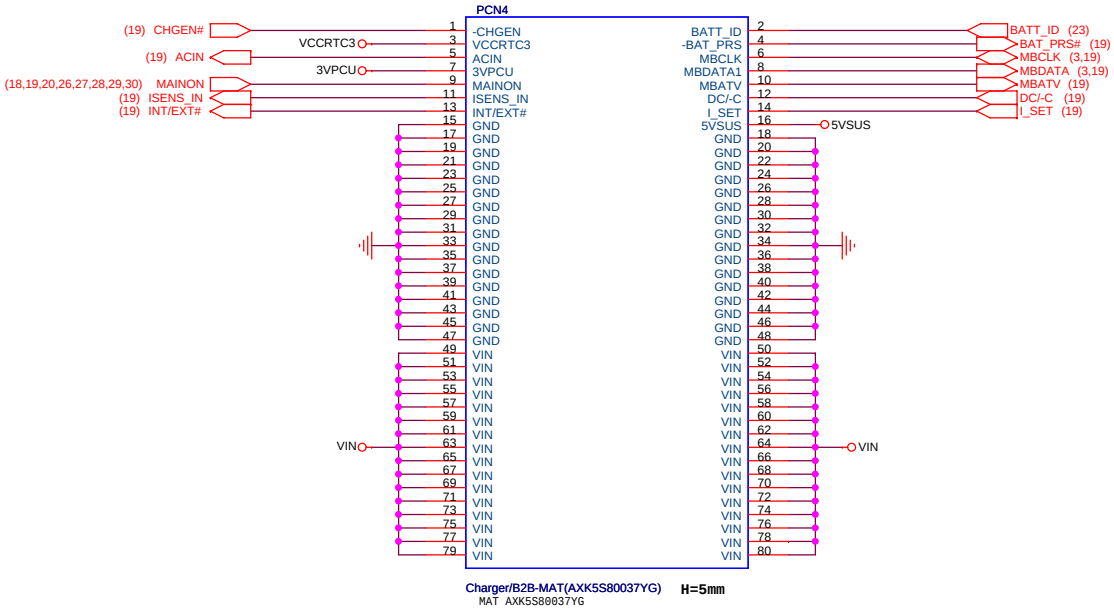
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.



1.Level 1 Environment-related Substances Should NEVER be Used.
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

QUANTA COMPUTER

Size	Document Number	Rev
	GD2 Main Board	3A
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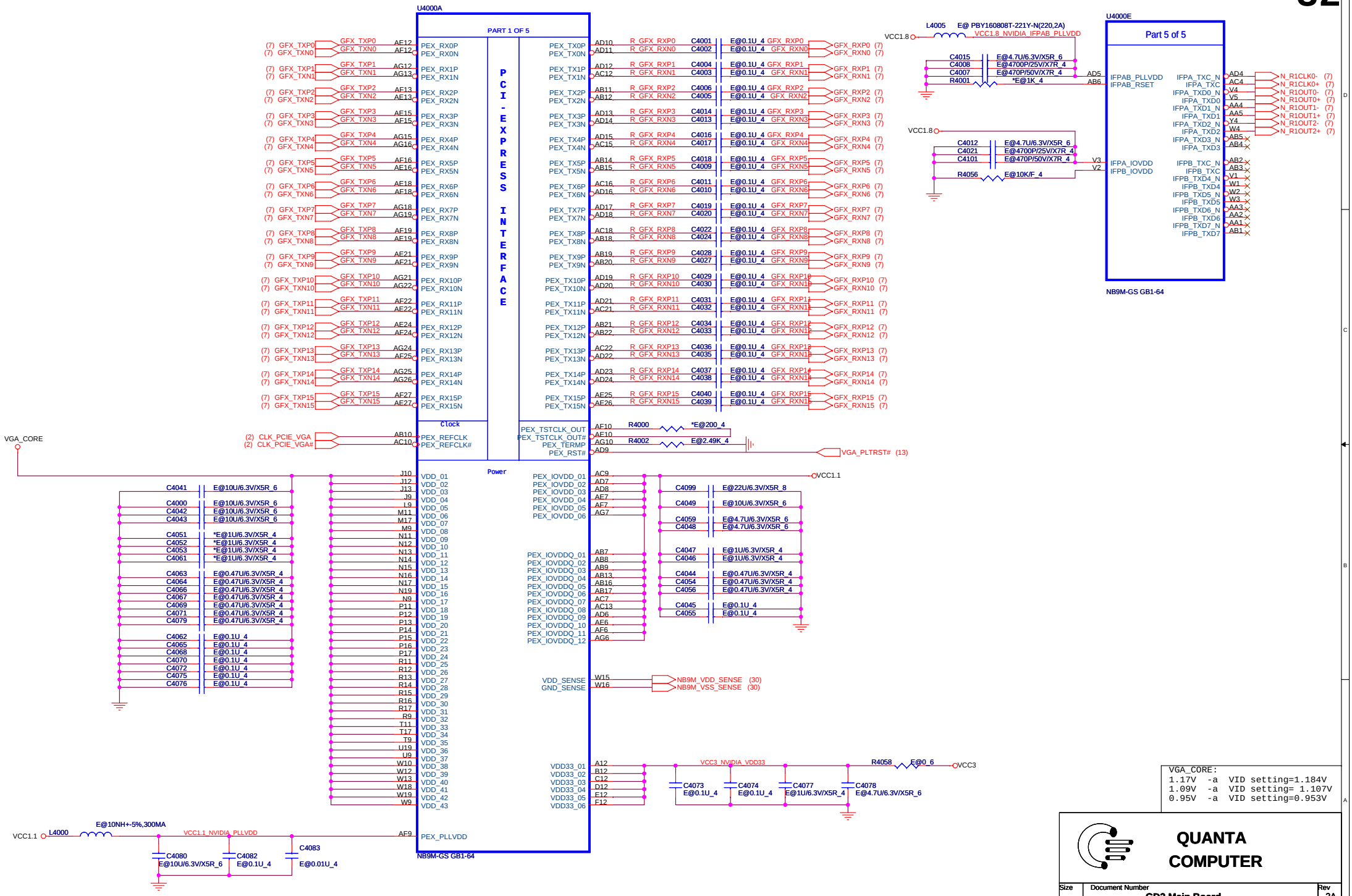

VGA_CORE:
1.17V -a VID setting=1.184V
1.09V -a VID setting= 1.107V
0.95V -a VID setting=0.953V

1.Level 1 Environment-related Substances Should NEVER be Used.
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QUANTA COMPUTER

Size	Document Number	Rev
	GD2 Main Board	3A
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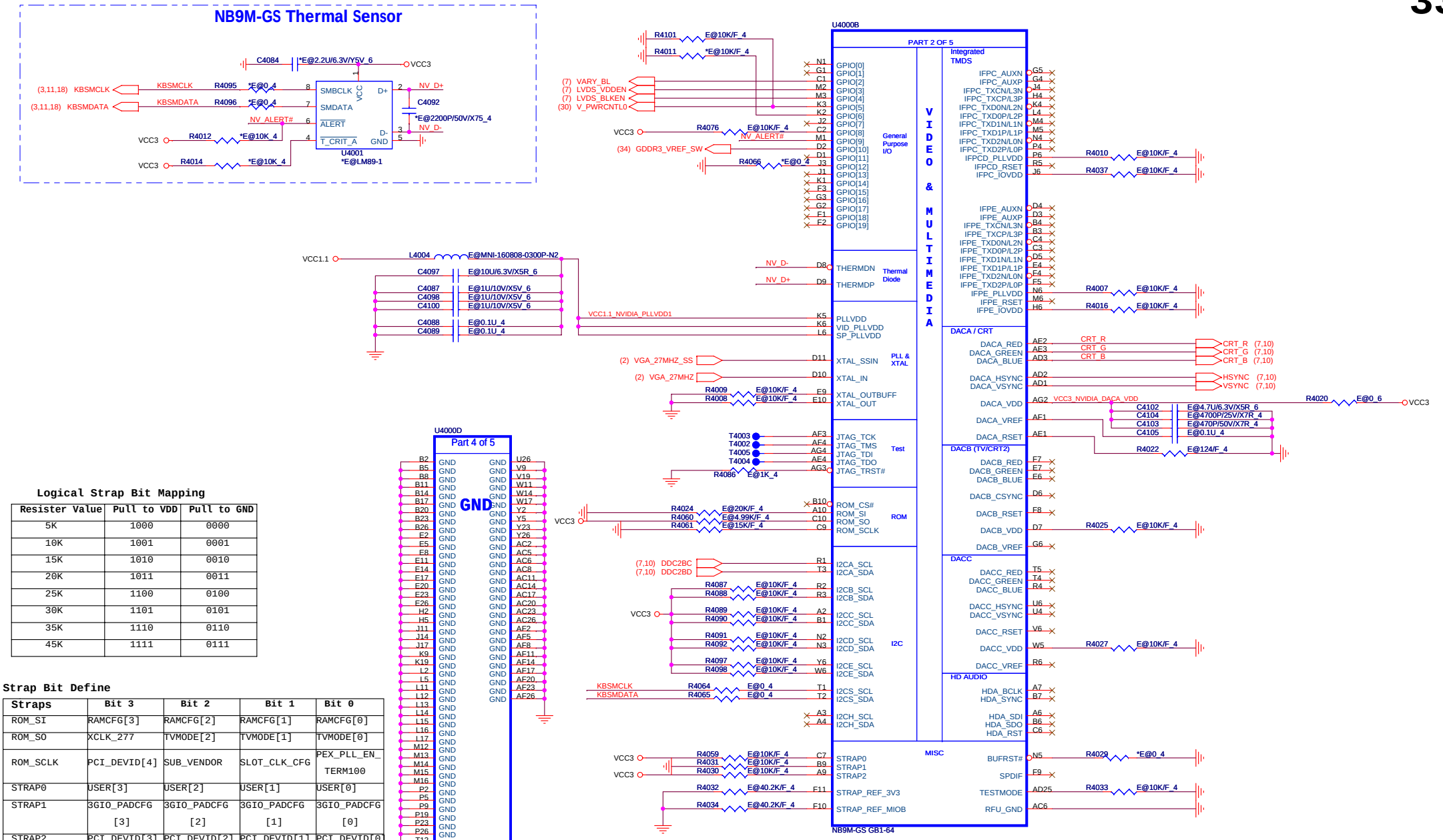

Logical Strap Bit Mapping

Resister Value	Pull to VDD	Pull to GND
5K	1000	0000
10K	1001	0001
15K	1010	0010
20K	1011	0011
25K	1100	0100
30K	1101	0101
35K	1110	0110
45K	1111	0111

Strap Bit Define

Straps	Bit 3	Bit 2	Bit 1	Bit 0
ROM_SI	RAMCFG[3]	RAMCFG[2]	RAMCFG[1]	RAMCFG[0]
ROM_SO	XCLK_277	TVMODE[2]	TVMODE[1]	TVMODE[0]
ROM_SCLK	PCI_DEVID[4]	SUB_VENDOR	SLOT_CLK_CFG	PEX_PLL_EN_TERM100
STRAP0	USER[3]	USER[2]	USER[1]	USER[0]
STRAP1	3GIO_PADCFG [3]	3GIO_PADCFG [2]	3GIO_PADCFG [1]	3GIO_PADCFG [0]
STRAP2	PCI_DEVID[3]	PCI_DEVID[2]	PCI_DEVID[1]	PCI_DEVID[0]

VRAM Strap:ROM_SI ; RAMCFG[x]

VRAM Vender	ID	R4024
Infineon	0001	PD 10K
Hynix	0010	PD 15K
Samsung	0011	PD 20K

1.Level 1 Environment-related Substances Should NEVER be Used.
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

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U4000C
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MEMORY INTERFACE
NB9M-GS GB1-64

U4003
E@VRAM

U4004
E@VRAM

(33) GDDR3_VREF_SW

Place near U4003 VDDQ

Place near U4004 VDDQ

Place near VRAM side

ODT on : 1.26V (70% of 1.8V)
ODT off : 0.9V (50% of 1.8V)

1.Level 1 Environment-related Substances Should NEVER be Used.
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

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* Delete RP1,RP2,RP3,RP6,RP7,RP9,RP10,RP11.(P2)
* Delete R56(P3)
* Delete R69(P4)
* Delete R726,R725(P7)

* R789 change value to E@40.2F/I@42.2F.(P10)
* R788 change value to 42.2F.(P10)
* Delete R516,R517(P17)
* U20 pin 7 pull low.(P17)
* C731,C732 change from 0805 to 1206(P18)
* CON14 change to BtB connector.(easy for ASSY)(P18)
* Add D11(P18)
* Change net BTSW to BTSW# (P18)
* Change net BTSW to BTSW# (P19)
* R434 change value from 28.7K/F to 27K/F.(P20)
* Add PR66 to enable "Skip" mode for 3V/5V. (P26)
* Change PQ53 pin2 from SUSG to MAING. (P26)
* Change PR107 connection to MAINON / reserve PR105,PC185. (P27)

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