

<Core Design>

REFERENCE DESIGN

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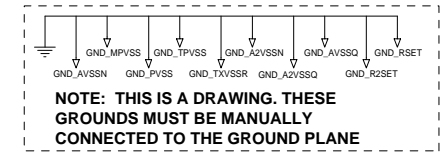
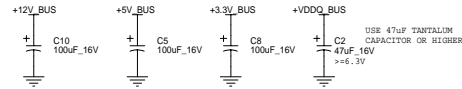
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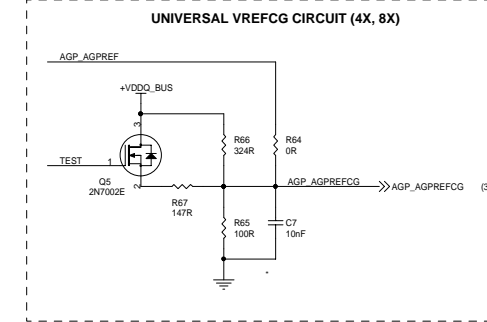
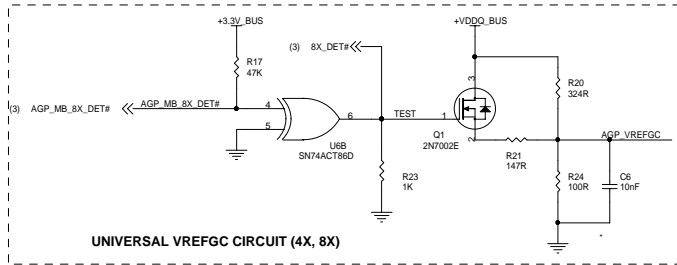
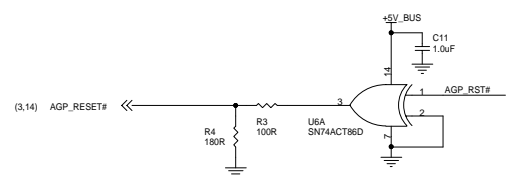
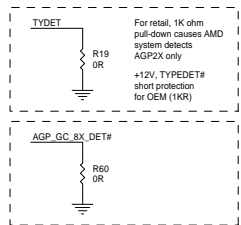
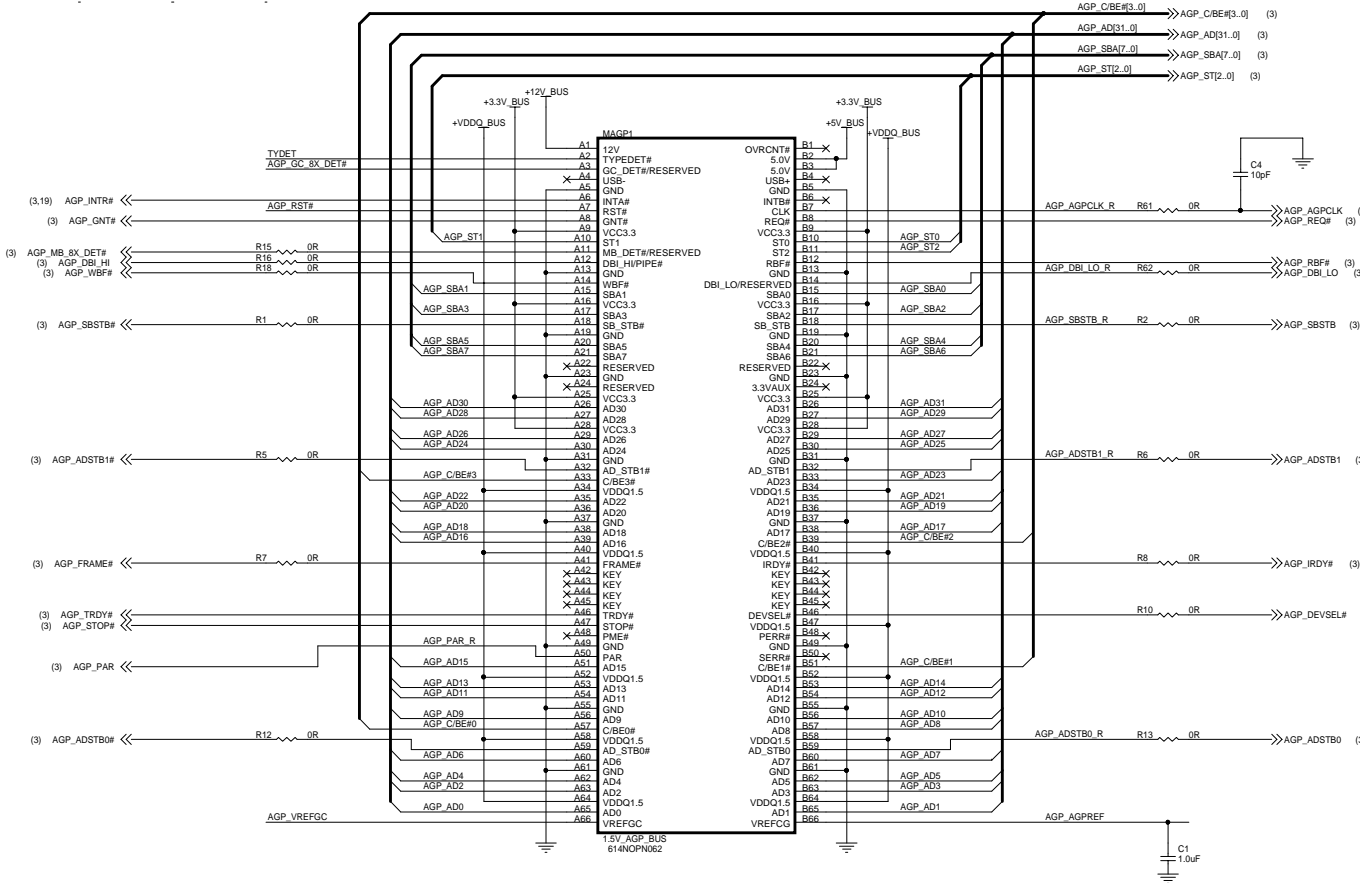
Title		AGP RV350 128M BGA VGA DVI VO	
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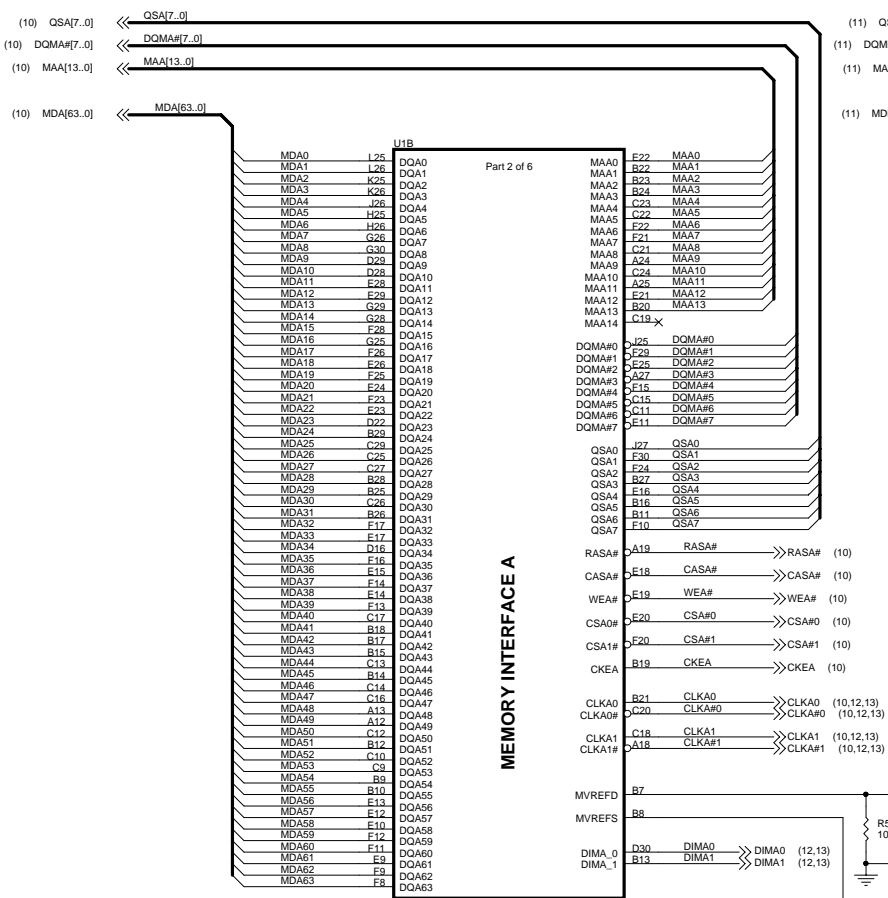
4X/8X AGP BUS



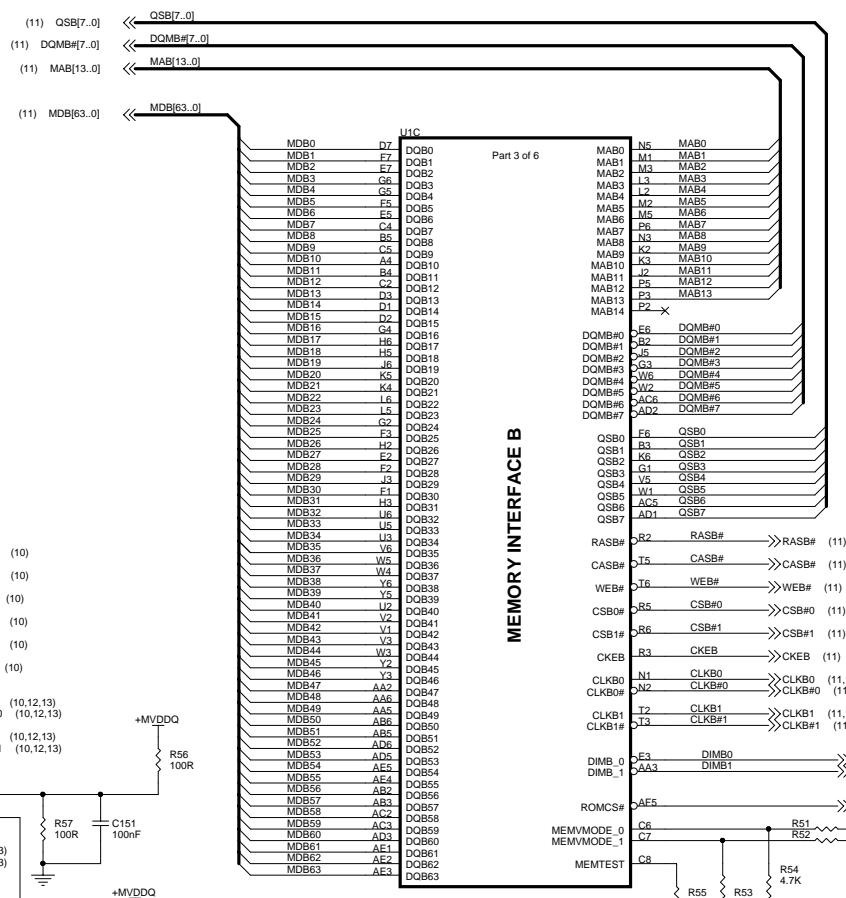
NOTE: THIS IS A DRAWING. THESE GROUNDS MUST BE MANUALLY CONNECTED TO THE GROUND PLANE

SYMBOL LEGEND	
DNI	DO NOT INSTALL
#	ACTIVE LOW
	DIGITAL GROUND
	ANALOG GROUND



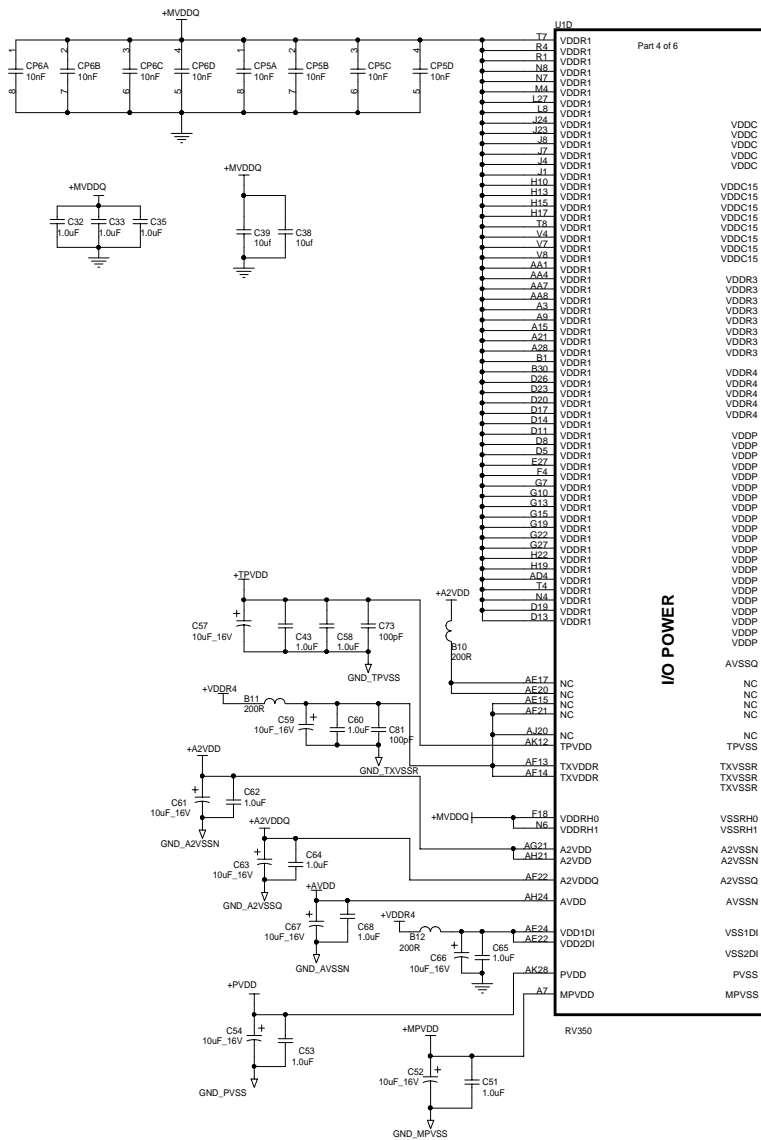


MEMORY CHANNEL A

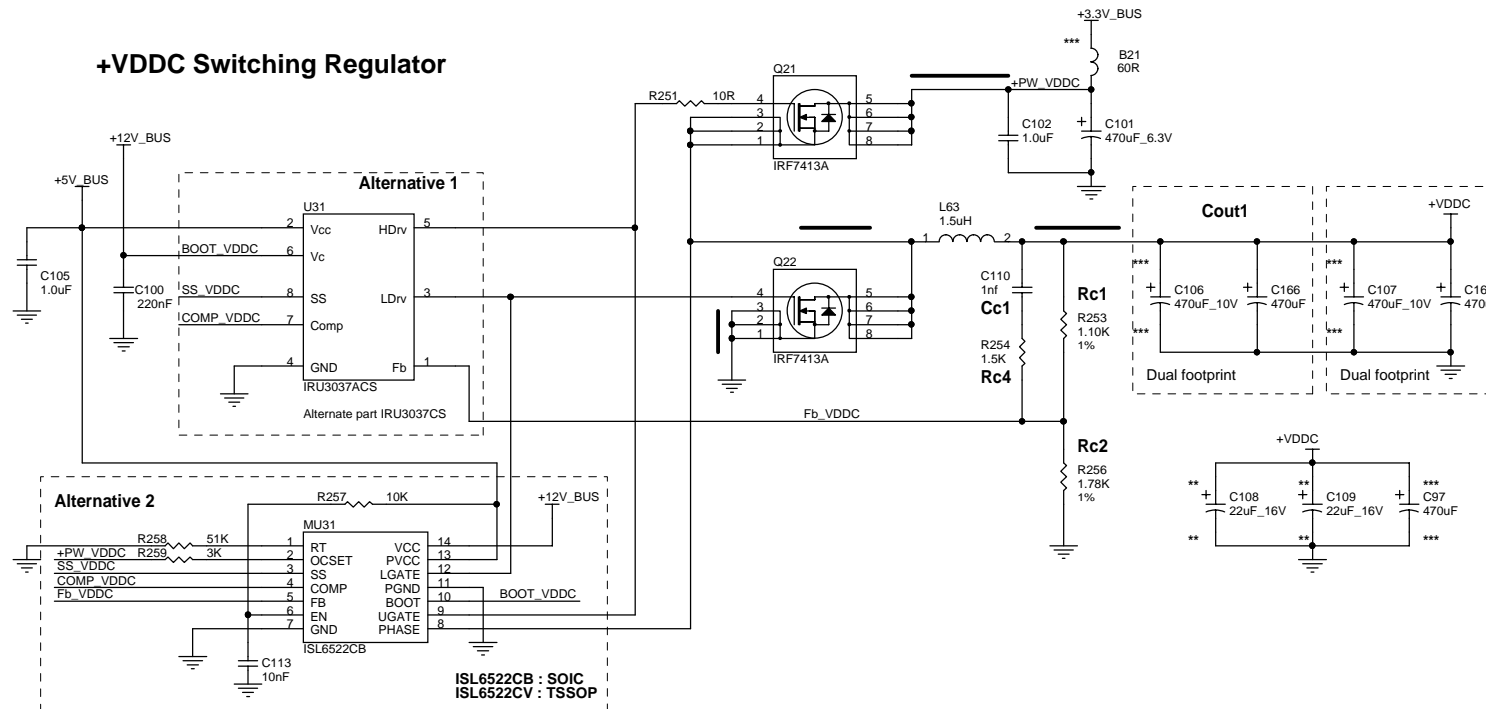


MEMORY CHANNEL B

VDDR1	MEMVMODE_0	MEMVMODE_1
1.8V	GND	+VDDC_CT
2.5V	+VDDC_CT	GND
2.8V	+VDDC_CT	+VDDC_CT



+VDDC Switching Regulator



Regulator for VDDC (RV350 Core)

Vin = 3.3V_BUS

Vout = 1.2V

Iout = 7A MAX (load consumption)

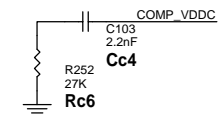
Iout = 3A MAX (Power rail consumption)

REG.	VOLTAGE	RESISTORS	
		Rc1	Rc2
ISL6522C	1.2V	1.00K (p/n 3240100100)	2K (p/n 3240200100)
	1.25V	1.00K (p/n 3240100100)	1K78 (p/n 3240178100)
	1.3V	1.10K (p/n 3240110100)	1K78 (p/n 3240178100)

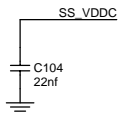
Compensation options for +VDDC regulator

Alt. Compensation 1

This compensation circuit is simplified and will only work with the IRU3037(A) Regulator

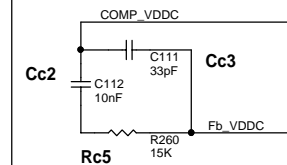


Common



Alt. Compensation 2

This is required for the ISL6522CB regulator, and provides maximum regulation speed for IRU3037 Regulator



Note: Alternative Compensation Circuit 2 will only work if Rc1 is a 1k Ohm Resistor. Alternative Compensation Circuit 1 has no requirements for the divider circuit.

Cout1

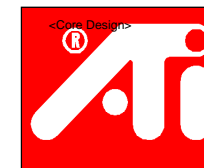
470uF thru hole capacitor has 30mR ESR where as 470uF SMT capacitor has 22mR ESR. For current below 4.5A, 1 thru 470uF is enough.

Part	INSTALL	Compensation Circuit	DO NOT INSTALL
IRU3037 IRU3037A	Alternative1	Common, and Either Alt. Compensation 1, or Alt. Compensation 2	Cc4, Rc6 Alternative 2
ISL6522CB	Alternative2	Common and Alt. Compensation 2	Alternative1

*** Indicates number of vias required for the connection

C166, C167 alternate parts for C106, C107

Place C102 capacitor very close to the Q21 pins



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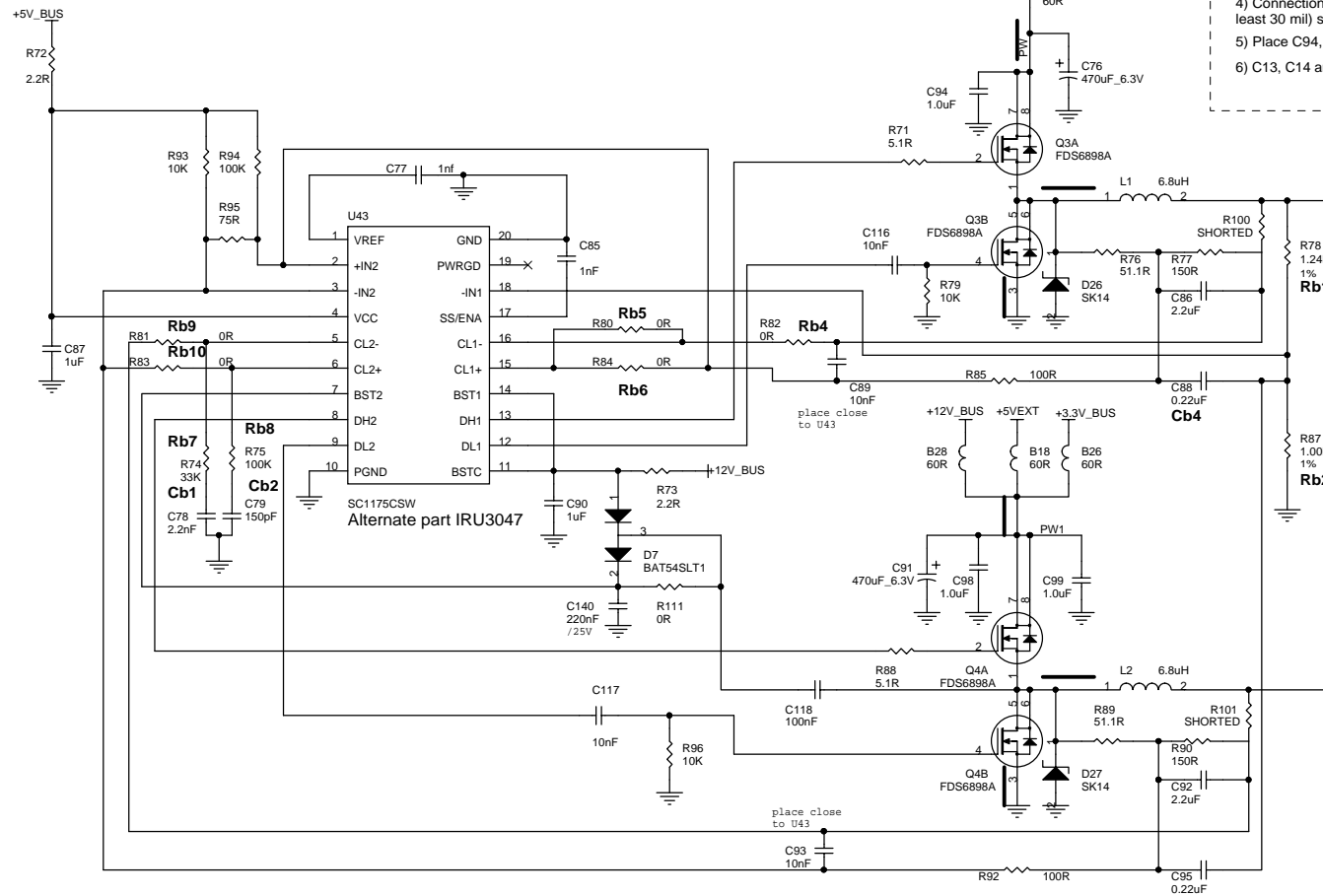
Title AGP RV350 128M BGA VGA DVI VO

Size B Document Number 105-A034XX-00C Rev 2

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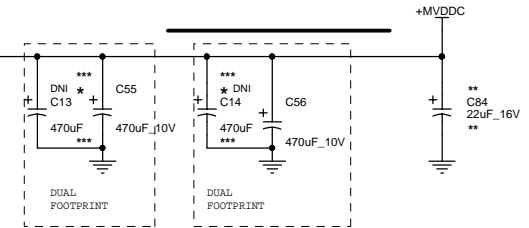
MEMORY CORE REGULATOR MVDDC

OPTION 1: Dual Phase Switching Regulator



Layout Guide Lines for switching regulators

- 1) Feedback trace from the voltage divider resistors to the controller as short as possible.
- 2) Components with " *** " should have two vias on each pad
- 3) Components with " **** " should have three vias on each pad.
- 4) Connections indicated by bold thick line are high current path. Short, thick traces (at least 30 mil) should be used.
- 5) Place C94, C98, C99 close to Q3, Q4
- 6) C13, C14 are the alternate surface mount components for C55, C56

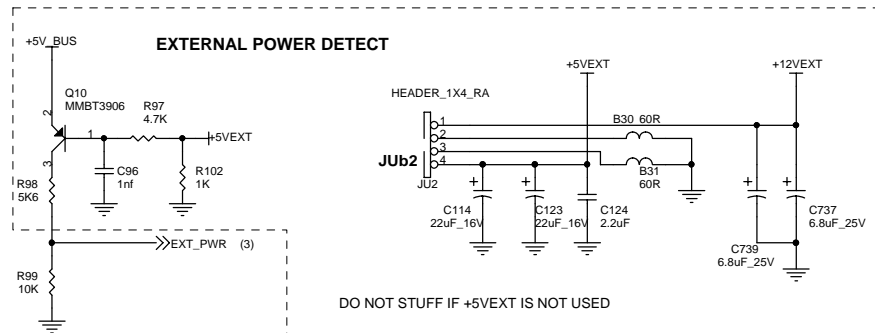


Part	INSTALL	DO NOT INSTALL
SC1175	Rb4, Rb6, Rb9, Rb10, Cb4	Rb7, Rb8, Rb5, Cb1, Cb2, Db2, Db1
IRU3047	Rb7, Rb8, Rb5, Cb1, Cb2, Db1, Db2	Rb4, Rb6, Rb9, Rb10, Cb4

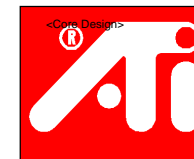
STUFFING OPTIONS FOR EXTERNAL/INTERNAL POWER

	+5VEXT	+12V_BUS	+3.3V_BUS
B26	DO NOT STUFF	DO NOT STUFF	P/N 5050003200
B18	P/N 5050003200	DO NOT STUFF	DO NOT STUFF
B28	DO NOT STUFF	P/N 5050003200	DO NOT STUFF
C98, C99	P/N 4240010500	P/N 4250022400	P/N 4240010500
C91	P/N 4264047700	P/N 4260018700	P/N 4264047700
C118	DO NOT STUFF	P/N 4250010400	DO NOT STUFF
R111	P/N 3230000000	DO NOT STUFF	P/N 3230000000
C140	P/N 4250022400	P/N 4251022400	P/N 4250022400
C114, C123	P/N 4273010600	DO NOT STUFF	DO NOT STUFF
C124	P/N 4210022500	DO NOT STUFF	DO NOT STUFF
B30, B31	P/N 5050003200	DO NOT STUFF	DO NOT STUFF
JU2	P/N 6140011300	DO NOT STUFF	DO NOT STUFF
Q10	P/N 2021390600	DO NOT STUFF	DO NOT STUFF
C96	P/N 4250010200	DO NOT STUFF	DO NOT STUFF
R97	P/N 3230047200	DO NOT STUFF	DO NOT STUFF
R98	P/N 3230056200	DO NOT STUFF	DO NOT STUFF

Part	MVDDC	Rb1	Rb2
SC1175	2.8V	1K24 (p/n 3240124100)	1.00K (p/n 3240100100)
	2.9V	1K33 (p/n 3240133100)	1.00K (p/n 3240100100)



DO NOT STUFF IF +5VEXT IS NOT USED



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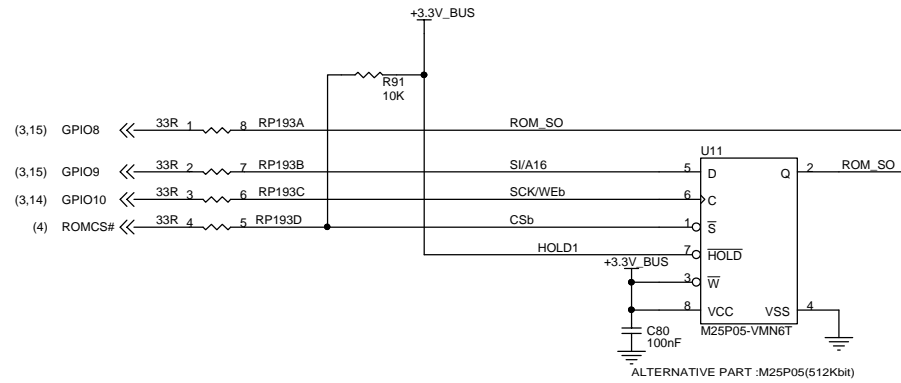
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SERIAL EEPROM 512K/1M



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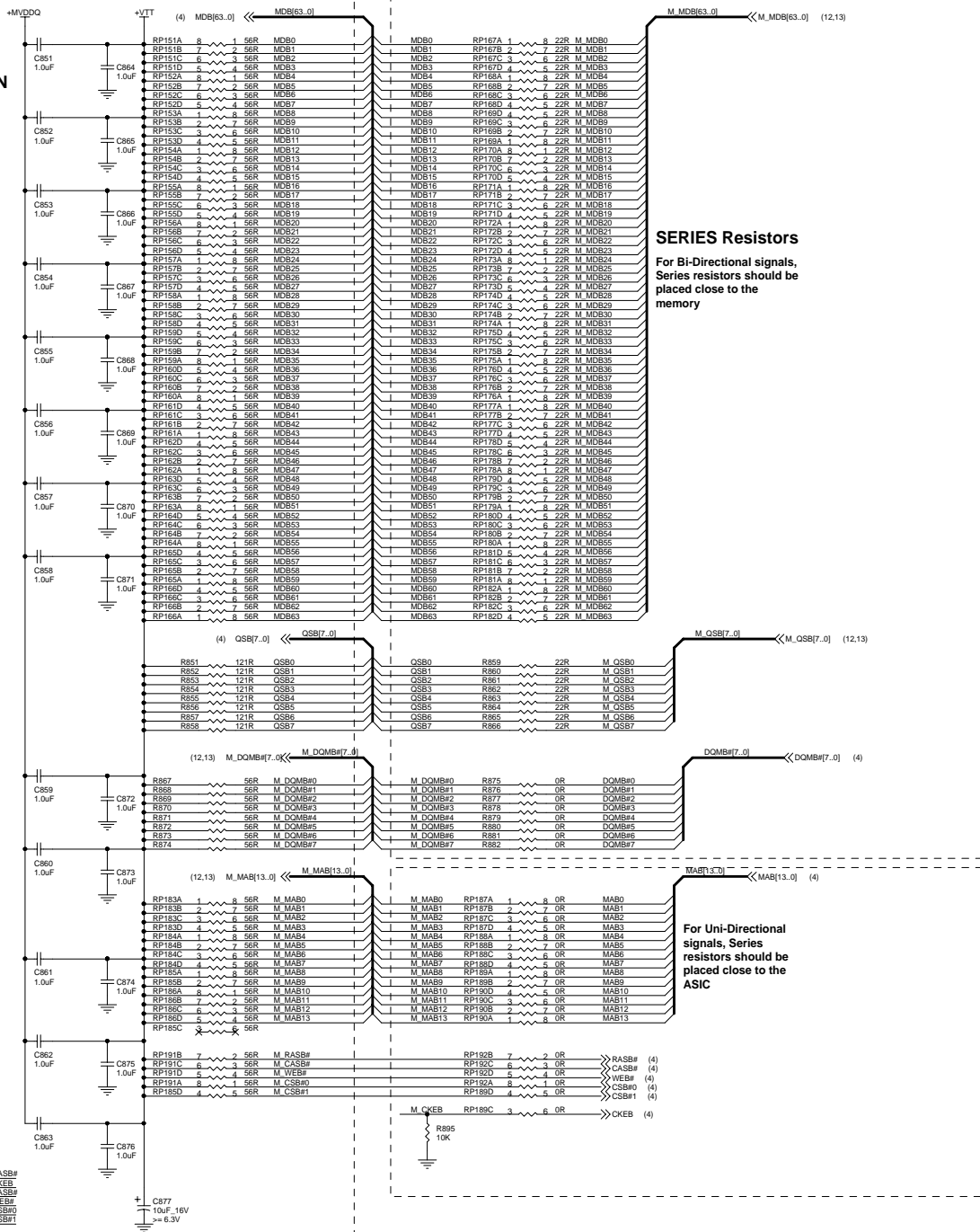
TERMINATION FOR
MEMORY
CHANNEL B

PARALLEL TERMINATION
RESISTORS AND
DECOUPLING

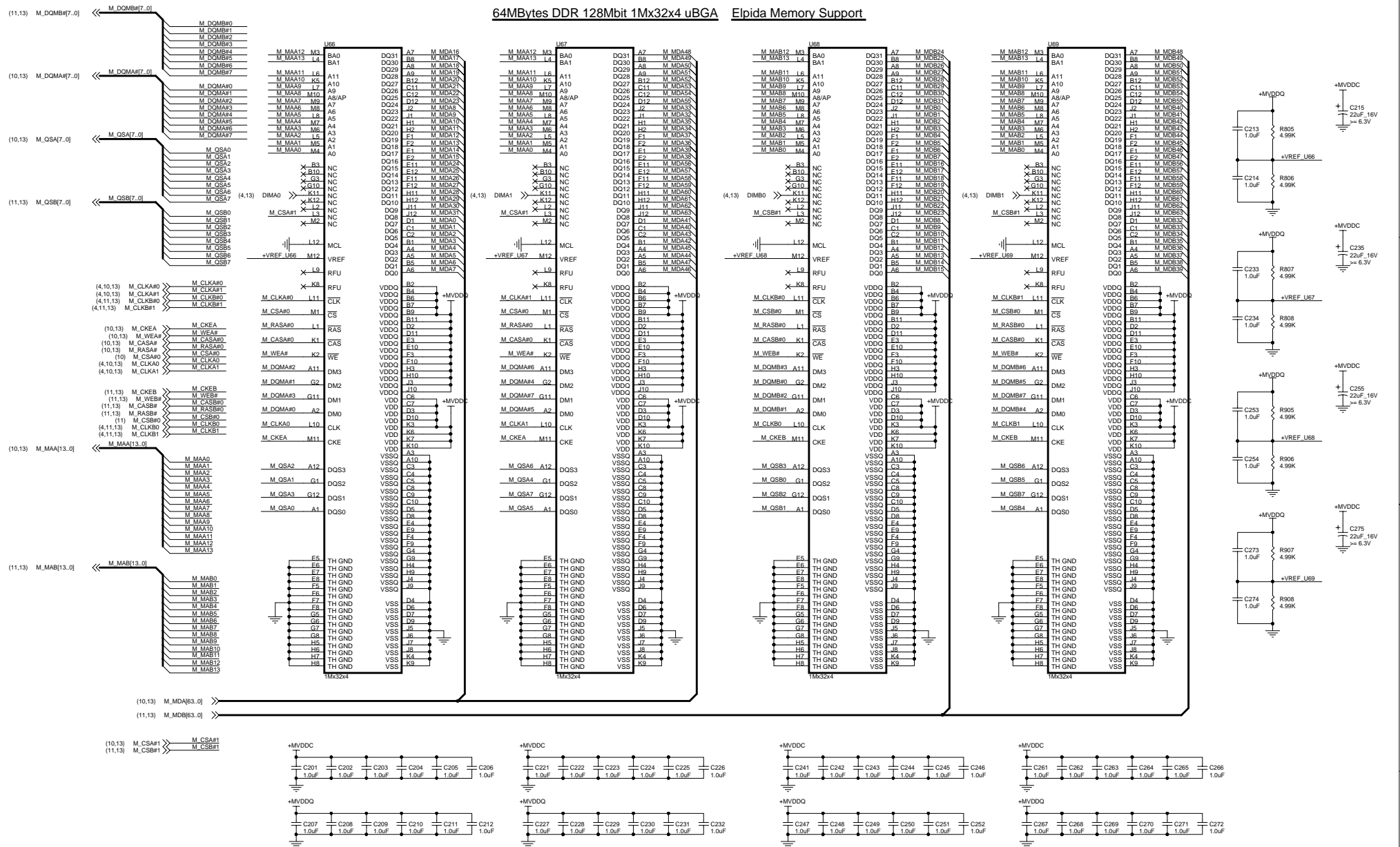
SSTL_2 CLASS I

PLACE AT NETS MID
POINT

PARALLEL TERMINATION COULD BE
OMITTED UNDER SOME CIRCUMSTANCE.
PLEASE CONSULT WITH ATI FOR DETAIL.



64MBytes DDR 128Mbit 1Mx32x4 uBGA Elpida Memory Support



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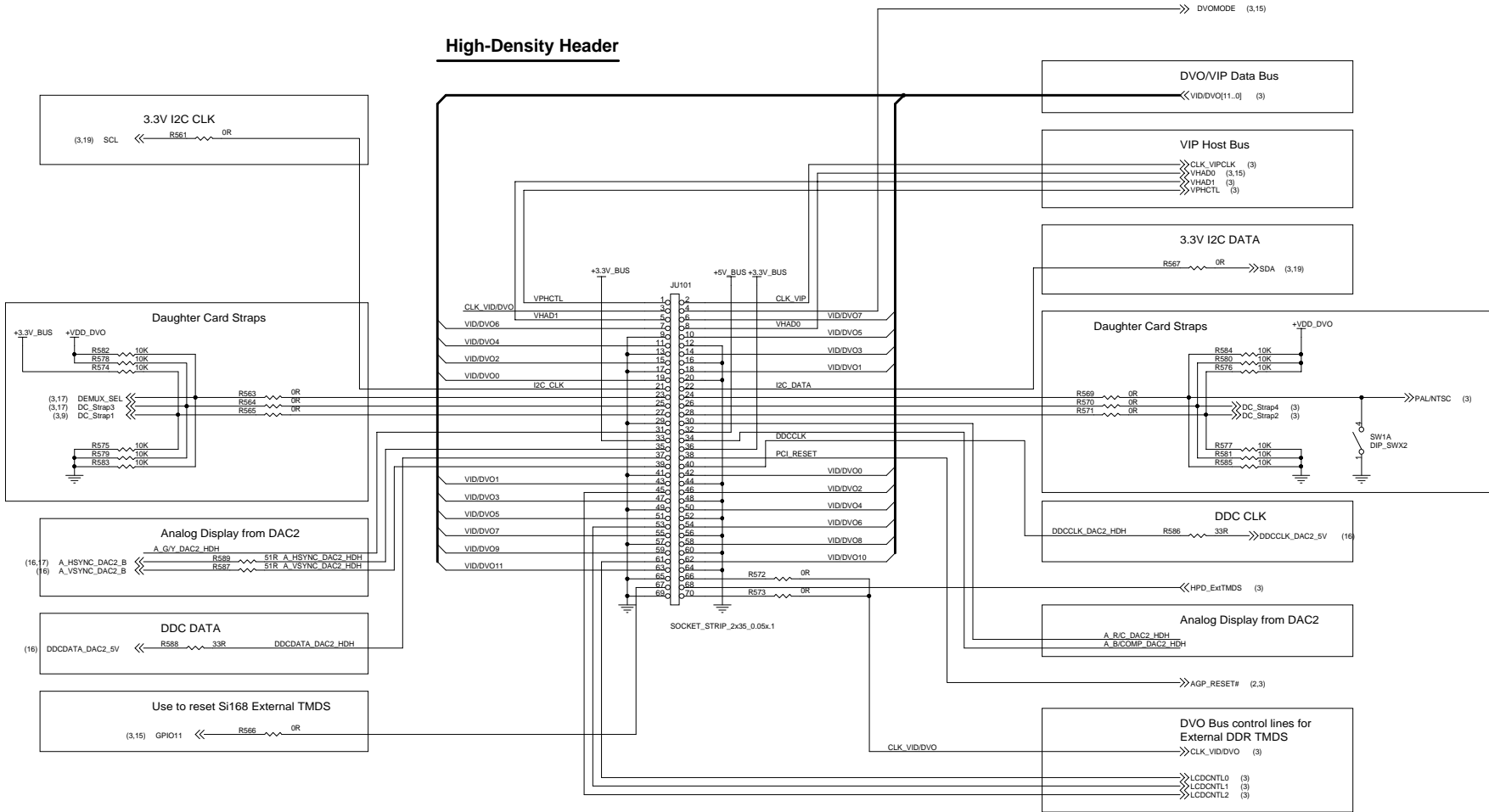
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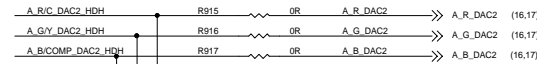
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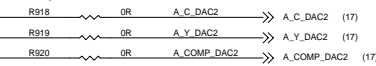
High-Density Header



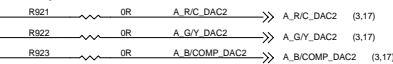
Map DAC2 CRT to HDH



Map DAC2 VO to HDH



Map DAC2 to HDH



STRAPS	PIN	DESCRIPTION
DC_STRAP1	LCDDATA12	Internal TMDs Enabled 0 - Disabled 1 - Enabled
DC_STRAP2	LCDDATA13	Video Capture Enabled 0 - Disabled 1 - Enabled
DC_STRAP4 DC_STRAP5	LCDDATA15 LCDDATA19	DAC2 Configuration DAC2 Off DAC2 On as CRT DAC2 On as TVOUT DAC2 On as TVOUT and CRT
DC_STRAP6	LCDDATA18	TVO Standard Default (Resistor pull-up and switch short to GND) 0 - PAL (on board resistor pull-down and switch closed) 1 - NTSC (on board resistor pull-up)

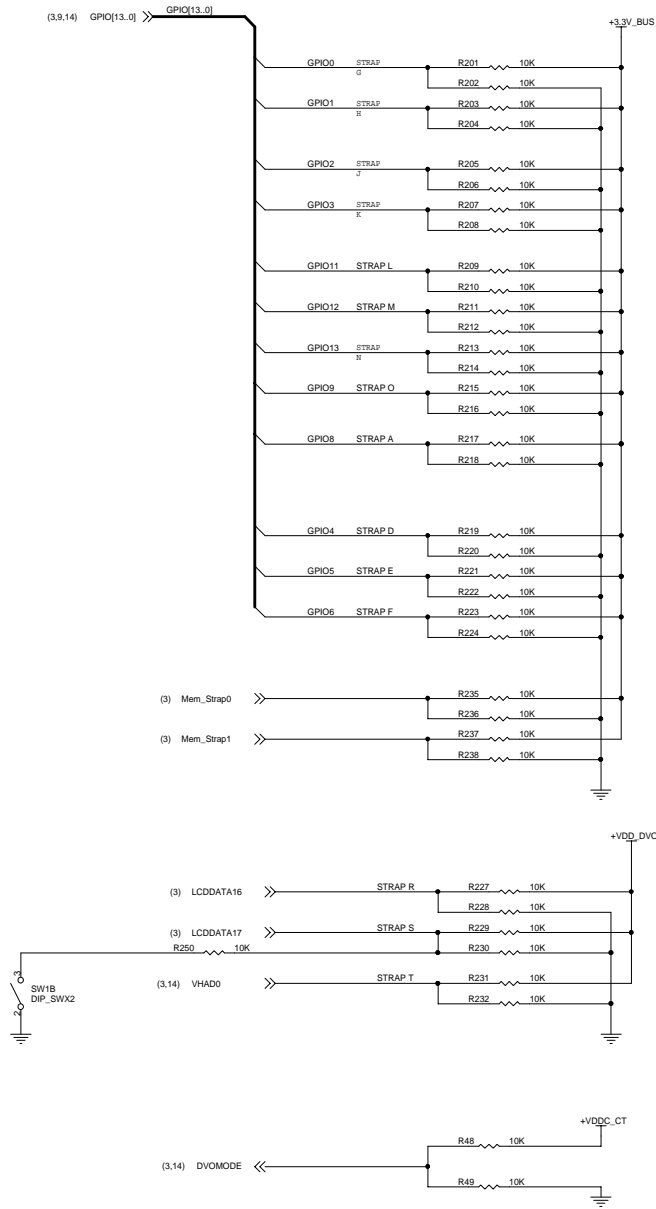
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OPTION STRAPS



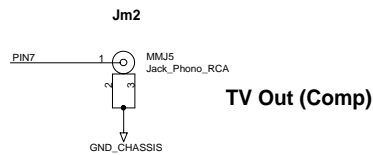
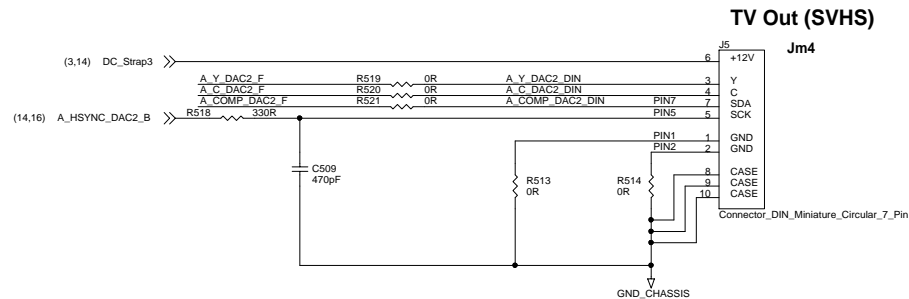
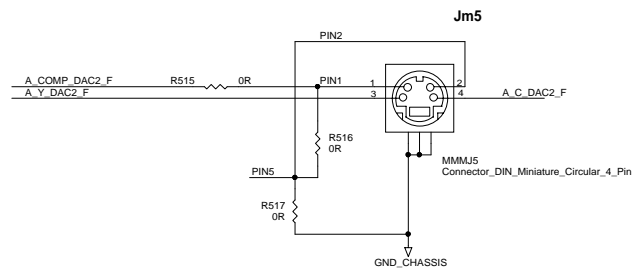
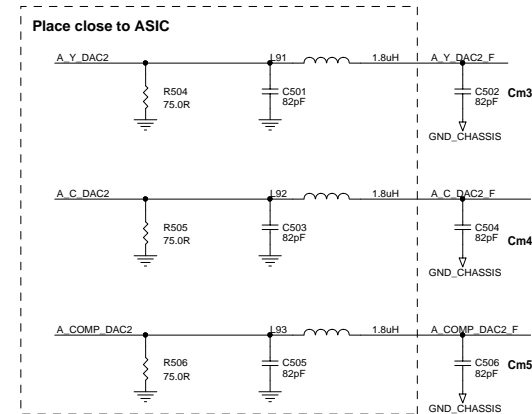
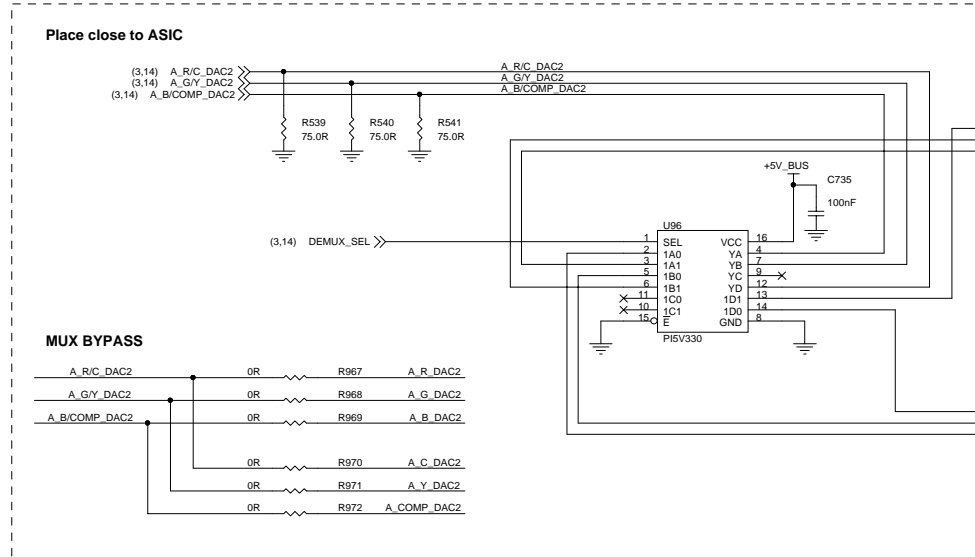
STRAPS	PIN	DESCRIPTION	DEFAULT
AGPFBSEKEW(1:0)	GPIO(1:0)	AGP 1x clock feedback phase adjustment wrt refclk(cpuck) 00 - refclk slightly earlier then feedback 01 - refclk 1 tap earlier then feedback 10 - refclk 1 tap later then feedback 11 - refclk 2 taps earlier then feedback clock	11
X1CLK_SKWE(1:0)	GPIO(3:2)	Clock phase adjustment between x1 clk and x2clk 00 - 0 tap delay 01 - 1 tap delay 10 - 2 taps delay 11 - 3 taps delay	00
ROMIDCFG(3:0)	GPIO(9,13:11)	If no ROM attached, controls chip IDIs. If rom attached identifies ROM type 0000 - No ROM, CHG_ID=0 0001 - No ROM, CHG_ID=1 0100 - reserved 0110 - reserved 1000 - Parallel ROM, chip IDIs from ROM 1001 - Serial AT25F1024 ROM (Atmel), chip IDIs from ROM 1010 - Serial AT45DB011 ROM (Atmel), chip IDIs from ROM 1011 - Serial M25P10 ROM (ST), chip IDIs from ROM 1100 - Serial M25P05 ROM (ST), chip IDIs from ROM 1101 - Serial N25F011B ROM (ISSI), chip IDIs from ROM	1100
ID_DISABLE	GPIO(8)	0 - Normal operation 1 - Shuts the chip down by not responding to any config cycles In a system with two graphics chips, one on the motherboard, the other on add-in card, the strap can be used to disable one of the two through a jumper.	0
BUSCFG(2:0)	GPIO(6:4)	Controls bus type, CLK PLL select, and IDSEL 000 - 1.5V BUS -> AGP 4x, PLL clk, IDSEL=AD16 001 - 3.3V BUS -> AGP 1x2x, PLL clk, IDSEL=AD16 010 - 1.5V BUS -> AGP 4x, PLL clk, IDSEL=AD17 011 - 3.3V BUS -> AGP 1x2x, PLL clk, IDSEL=AD17 100 - PCI 66MHz, PLL clk 101 - PCI 33MHz, 3.3v, REF clk 110 - 1.5V BUS -> AGP 1x, REF clk, IDSEL=AD16 111 - 3.3V BUS -> AGP 1x, REF clk, IDSEL=AD16 112 - 1.5V BUS -> AGP 1x, REF clk, IDSEL=AD17 113 - 3.3V BUS -> AGP 1x, REF clk, IDSEL=AD17 Note that for AGP configurations GPIO(4) acts as the IDSEL strap. For PCI it acts as the PLL bypass (33 or 66MHz) strap.	000
MULTIFUNC(1:0)	LCDDATA(17:16)	Multi-function device select 00 - single function device 01 - two function device. No AGP in either function 10 - two function device. AGP only in function 0 11 - two function device. AGP in both functions If BUSCFG pin based straps are set to PCI, then AGP will not be enabled in any function. See AGP function table below for detail on AGP ability claims.	11
VIP_DEVICE	LCDDATA(20) STRAP T	Indicates if any slave VIP host devices drove this in low during reset. 0 - Slave VIP host port devices present 1 - No slave VIP host port devices reporting presence during reset	0

STRAP P	INTERRUPT
LOW	ENABLED (DEFAULT)
HIGH	DISABLED

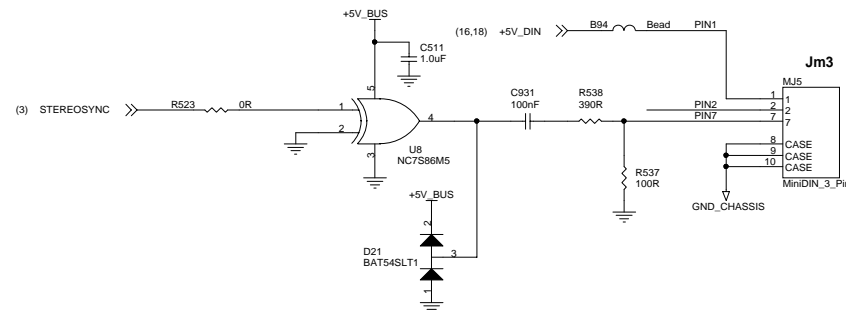
MEMORY TYPE STRAPS		
	Mem_Strap0	Mem_Strap1
SAM	0	0
INF	1	0
HYN	0	1
ELPIDA	1	1

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Jm2, Jm3, Jm4 and Jm5 use the same footprint



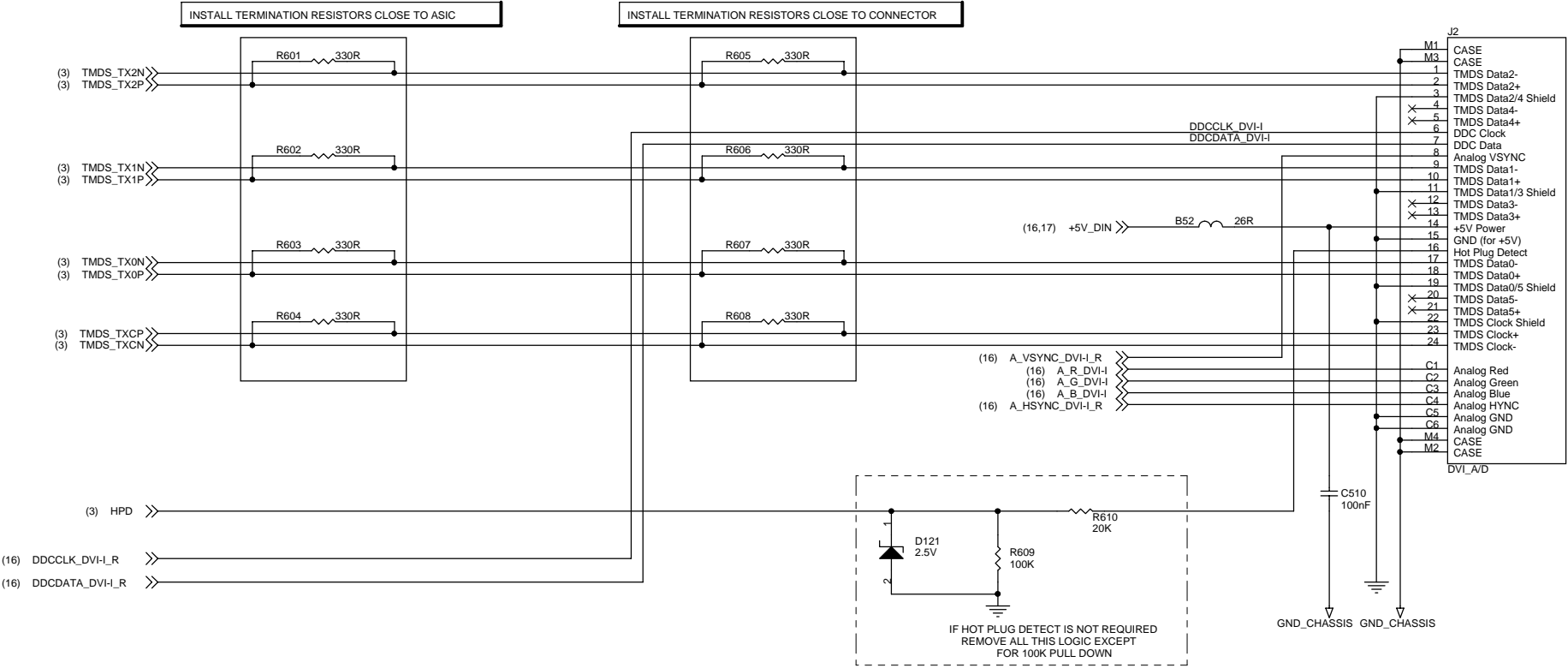
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PRIMARY DVI-I CONNECTOR

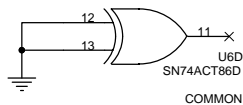
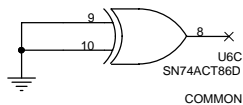
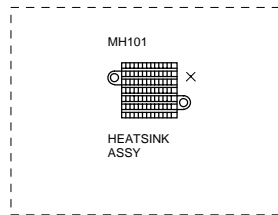
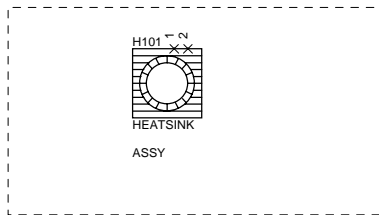
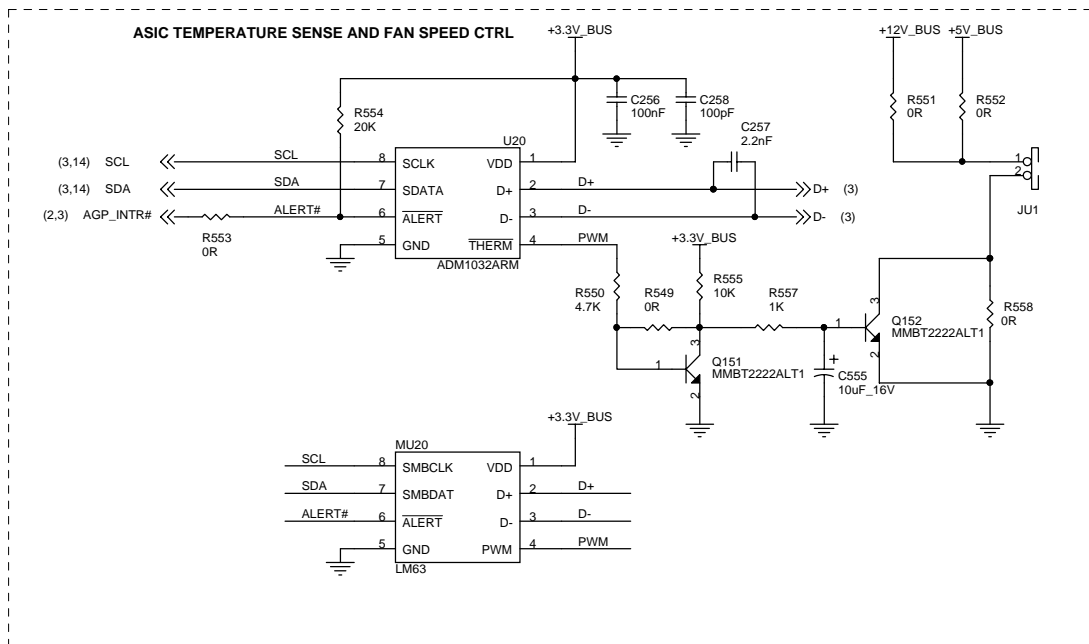


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CRT SCREWS

ASSY1
SCREW
JACKSCREW
ASSY

ASSY4
SCREW
JACKSCREW
ASSY

ASSY6
SCREW
PAN_HEAD

ASSY8
BRACKET
NO_TABS_VGA_DIN_DVI

DVI SCREWS

ASSY2
SCREW
JACKSCREW
ASSY

ASSY5
SCREW
JACKSCREW
ASSY

MISC. BOARD PARTS

ASSY3
BLANK
LABEL
1.50W_X_0.50H
ASSY

ASSY7
ANTISTATIC
BAG
6_X_11
ASSY

REF1
SCHEMATIC
105-A034XX-00
ASSY

REF2
PCB
109-A034XX-00
ASSY

REF3
ATI LOGO
LABEL
ATI_LOGO_LABEL

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Bill Of Materials February 7,2003 16:38:09 Page1

Item	Quantity	Reference	Part
1	4	ASSY1,ASSY2,ASSY4,ASSY5	7020000800 1 Jackscrew for DB15 Connector, 4-40, Steel w/ Zinc plate &
2	1	ASSY3	9050005100 1 Label, blank 1.50 X 0.50
3	1	ASSY6	7020001700 1 Screw, Phillips Pan Hd., 4-40 X 3/16"
4	1	ASSY7	9040000900 1 Antistatic bag, W/O Ziplock, 6in x 11in
5	1	ASSY8	8020032100 1 BRACKET, NO TABS, VGA, DIN, DVI
6	7	B10,B11,B12,B27,B29,B53,B71	5260001900 1 Ferrite Bead, 200mA 200R@100MHz
7	6	B16,B18,B26,B28,B30,B31	5050003200 1 Ferrite bead, 60R @100MHz, 6000mA
8	2	B21,B24	5050003200 1 Ferrite bead, 60R @100MHz, 6000mA
9	2	B51,B52	5260000200 1 Ferrite Bead, 500mA 26R@100MHz
10	1	B94	5050001900 1 Bead ferrite 26 ohm 600mA SM
11	7	CP2,CP3,CP4,CP5,CP6,CP8,CP9	4290000200 1 Capacitor Array, 4x10nF, 20%, 50V, X7R
12	4	C1,C94,C98,C99	4240010500 1 1uF +80/-20% 10V Y5V CERAMIC SM
13	1	C2	4230047600 1 47uF 20% 16V Tantalum SM
14	8	C3,C74,C80,C83,C151,C152,C256,C931	4250010400 1 100nF 10% 16V X7R CERAMIC SM
15	1	C4	4250010000 1 10pF +/- .5pF 50V NPO CERAMIC SM
16	3	C5,C8,C10	4260110700 1 100uF 20% 16V ALUMINUM SM 5.4mm High
17	6	C6,C7,C89,C93,C116,C117	4250010300 1 10nF 10% 25V X7R CERAMIC SM
18	197	C11,C26,C27,C28,C29,C32,C33,C35,C36,C37,C43,C44,C45,C46,C47,C48,C49,C51,C53,C58,C60,C62,C64,C65,C68,C69,C102,C105,C137,C156,C161,C201,C202,C203,C204,C205,C206,C207,C208,C209,C210,C211,C212,C213,C214,C221,C222,C223,C224,C225,C226,C227,C228,C229,C230,C231,C232,C233,C234,C241,C242,C243,C244,C245,C246,C247,C248,C249,C250,C251,C252,C253,C254,C261,C262,C263,C264,C265,C266,C267,C268,C269,C270,C271,C272,C273,C274,C301,C302,C303,C304,C305,C306,C307,C308,C309,C310,C311,C312,C313,C314,C321,C322,C323,	4240010500 1 1uF +80/-20% 10V Y5V CERAMIC SM

C324,C325,C326,C327,C328,
C329,C330,C331,C332,C333,
C334,C341,C342,C343,C344,
C345,C346,C347,C348,C349,
C350,C351,C352,C353,C354,
C361,C362,C363,C364,C365,
C366,C367,C368,C369,C370,
C371,C372,C373,C374,C450,
C511,C751,C752,C753,C754,
C755,C756,C757,C758,C759,
C760,C761,C762,C763,C764,
C765,C766,C767,C768,C769,
C770,C771,C772,C773,C774,
C775,C776,C851,C852,C853,
C854,C855,C856,C857,C858,
C859,C860,C861,C862,C863,
C864,C865,C866,C867,C868,
C869,C870,C871,C872,C873,
C874,C875,C876

19	2	C13,C14	4265047700	4	470uF	20%	6.3V	Polymer / Aluminum	Low ESR	15mOhm	12mm	Hig
20	3	C24,C38,C39	4220010600	1	10uF		+80/-20%	6.3V	Y5V	CERAMIC	SM	
21	2	C52,C59	4233010600	1	10uF		20%	16V		Tantalum	SM	
22	6	C54,C57,C61,C63,C66,C67	4233010600	1	10uF		20%	16V		Tantalum	SM	
23	2	C56,C55	4051047700	1	470uF,	10V,	20%	10X12.5mm	0.030R@100kHz,	Radial		
24	5	C70,C158,C555,C777,C877	4233010600	1	10uF		20%	16V		Tantalum	SM	
25	2	C71,C72	4250022000	1	22pF		10%	50V	NPO	CERAMIC	SM	
26	3	C73,C81,C258	4250010100	1	100pF		10%	50V	NPO	CERAMIC	SM	
27	3	C76,C91,C101	4262047700	1	470uF	20%	6.3V	Aluminum	Low ESR	160mOhm	10.5mm	High
28	3	C77,C96,C747	4250010200	1	1nF		10%	50V	X7R	CERAMIC	SM	
29	1	C78	4250022200	1	2.2nF		10%	50V	X7R	CERAMIC	SM	
30	1	C79	4250015100	1	150pF		10%	50V	X7R	CERAMIC	SM	
31	1	C84	4235022600	1	22uF		20%	16V		Tantalum	SM	
32	1	C85	4210010200	1	1nF		10%	100V	NPO	CERAMIC	SM	
33	3	C86,C92,C124	4210022500	1	2.2uF		10%	6.3V	X5R	Ceramic	SM	
34	3	C87,C90,C734	4210010500	1	1uF		+80/-20%	16V	Y5V	CERAMIC	SM (0805)	
35	2	C88,C95	4210022400	1	220nF		10%	16V	X7R	CERAMIC	SM	
36	4	C97,C166,C167,C736	4264047700	1	470uF	20%	6.3V	Polymer / Aluminum	Low ESR	22mOhm	8mm	High
37	3	C100,C131,C780	4250022400	1	220nF		+80/-20%	16V	Y5V	CERAMIC	SM	
38	1	C103	4250022200	1	2.2nF		10%	50V	X7R	CERAMIC	SM	
39	2	C104,C127	4250022300	1	22nF		10%	25V	X7R	CERAMIC	SM	
40	3	C106,C107,C134	4051047700	1	470uF,	10V,	20%	10X12.5mm	0.030R@100kHz,	Radial		
41	3	C108,C109,C154	4235022600	1	22uF		20%	16V		Tantalum	SM	
42	1	C110	4250010200	1	1nF		10%	50V	X7R	CERAMIC	SM	
43	1	C111	4250033000	1	33pF		10%	50V	NPO	CERAMIC	SM	
44	3	C112,C113,C163	4250010300	1	10nF		10%	25V	X7R	CERAMIC	SM	
45	6	C114,C123,C215,C235,C255,C275	4235022600	1	22uF		20%	16V		Tantalum	SM	
46	1	C115	4250010300	1	10nF		10%	25V	X7R	CERAMIC	SM	
47	2	C118,C121	4250010400	1	100nF		10%	16V	X7R	CERAMIC	SM	
48	3	C119,C744,C745	4250022400	1	220nF		+80/-20%	16V	Y5V	CERAMIC	SM	
49	1	C120	4260018700	1	180uF	20%	16V	Polymer / Aluminum	Low ESR	33mOhm	8mm	High
50	2	C125,C129	4250010300	1	10nF		10%	25V	X7R	CERAMIC	SM	
51	1	C126	4250022200	1	2.2nF		10%	50V	X7R	CERAMIC	SM	
52	1	C128	4250033000	1	33pF		10%	50V	NPO	CERAMIC	SM	

53	1	C130	4260047600	1	47uF	20%	6.3V	ALUMINUM SM	5.4mm High
54	1	C133	4262047700	1	470uF	20%	6.3V	Aluminum Low ESR	160mOhm 10.5mm High
55	2	C138,C509	4250047100	1	470pF	10%	50V	X7R CERAMIC	SM
56	1	C139	4240010500	1	1uF	+80/-20%	10V	Y5V CERAMIC	SM
57	1	C140	4251022400	1	220nF	+80/-20%	25V	Y5V CERAMIC	SM
58	2	C157,C155	4261010700	1	100uF	20%	6.3V	Aluminum Low ESR	440mOhm 5.8mm High
59	1	C257	4250022200	1	2.2nF	10%	50V	X7R CERAMIC	SM
60	12	C401,C402,C403,C404,C405, C406,C451,C452,C453,C454, C455,C456	425003R300	1	3.3pF	+/- .25%	50V	NPO CERAMIC	SM
61	6	C407,C408,C409,C457,C458, C459	4240005000	1	5pF	+/- .5pF	50V	NPO CERAMIC	SM
62	2	C441,C510	4250010400	1	100nF	10%	16V	X7R CERAMIC	SM
63	6	C501,C502,C503,C504,C505, C506	4240082000	1	82pF	5%	50V	NPO CERAMIC	SM
64	1	C735	4250010400	1	100nF	10%	16V	X7R CERAMIC	SM
65	2	C737,C739	4231068500	1	6.8uF	20%	25V	Tantalum	SM
66	1	C746	4270010600	1	10uF	20%	10V	X5R Ceramic	SM
67	4	C778,C779,C878,C879	4210010300	1	10nF	10%	50V	X7R CERAMIC	SM
68	16	D6,D7,D51,D52,D53,D54, D55,D56,D57,D71,D72,D73, D74,D75,D76,D77	5170005400	1	Diode, Schottky,		30V 200mA,	SM	SOT-23
69	1	D21	5170005400	1	Diode, Schottky,		30V 200mA,	SM	SOT-23
70	2	D26,D27	5171581900	1	Diode Schottky		1A 40V,	SM	
71	2	D31,D30	5160468100	1	Diode, Zener		2.4V +/-5%, 500mW,	SM	
72	1	D121	5161038500	1	Diode, Voltage reference		2.5V +/- 75mV,	SM	
73	1	F1	5120000800	1	Fuse resettable		750mA, 13.2V		
74	1	H101	7120000800	1	Heatsink Active		45X45X10mm, 5V, w/o adhesive backing		
75	1	JU1	6010007800	1	Header, 2x1, 2mm ctrs.,		Shrouded, Vertical		
76	1	JU2	6140011300	1	Header, 1X4, 2.5mm,		Right angle (Floppy Power)		
77	1	JU101	6020005500	1	Socket strip		2x35 0.05x.1 .18 High	TH	
78	1	J1	6050001400	1	Connector DB15 Female		VGA Blue PIN 9 Recessed		
79	1	J2	6140005300	1	Connector, DVI, A/D, R/angle		Receptacle, Low Profile,		
80	1	J5	6070001500	1	DIN Connector Y/C S video		w/Full Shielding		
81	2	L2,L1	5260005500	1	Inductor Fixed SM		3316 6.8uH 20% 4.4A		
82	1	L5	5260005700	1	Inductor Fixed SM		3316 3.3uH 20% 5.4A		
83	12	L51,L52,L53,L60,L61,L62, L71,L72,L73,L80,L81,L82	5260004900	1	Inductor, Fixed		82nH 20% 300mA,	Chip	
84	6	L54,L55,L56,L74,L75,L76	5260004800	1	Inductor, Fixed		68nH 20% 300mA,	Chip	
85	3	L57,L58,L59	5260004800	1	Inductor, Fixed		68nH 20% 300mA,	Chip	
86	1	L63	5260013200	1	Inductor, Fixed,		1.5uH 20% 9.0A		
87	3	L91,L92,L93	5260002100	1	Inductor, Fixed		1.8uH 10% 50mA,	Chip	
88	1	MAGP1	614NOPN062		CONNECTOR CARD EDGE		1.5V AGP BUS		
89	1	MH101	7120002700	1	Heatsink, 45x41x11mm,		Finned, w/brass pushpins		
90	1	MJ2	6050003000	1	DB15 Female slim right angle		connector with pin 9 recess		
91	1	MJ5	6070001900	1	Connector, MiniDIN, 3 Pin,		Shielded, Right Angle		
92	1	MMJ5	6030001400	1	Jack Phono RCA Rt. Angle		Thru-Hole Yellow		
93	1	MMMJ5	6070001000	1	Connector DIN Miniature Circular		4 Pin A Type with Ground		
94	3	MRG25,MRG26,MRG27	2480010500	5	Precision Adj. Shunt Regulator,		1.24V, 1% 100mA (SOT-23-5		
95	2	U48,MU20	2480018900	1	Synchronous PWM Controller,		400KHz Reference Voltage 0.8V		
96	1	MU31	2480020900	1	Buck & Synchronous-Rectifier		PWM Controller		
97	3	Q1,Q2,Q5	2020002300	1	Transistor, MOSFET, N. Ch.,		60V 250mA		
98	2	Q3,Q4	2020007600	1	Transistor, MOSFET, Dual N Ch.,		20V 9.4A, .018R, Logic 1e		
99	3	Q6,Q27,Q28	2021390400	1	Transistor, NPN,		60V 200mA		

100	1	Q7	2020004300	1	Transistor, MOSFET, N Ch., 20V 1.7A, Low RDS On		
101	1	Q8	2020008100	1	Transistor, MOSFET, Dual N Ch., 30V 8A, .020R, Logic leve		
102	1	Q10	2021390600	1	Transistor, PNP, 40V 200mA		
103	2	Q22,Q21	2020005600	1	Transistor, MOSFET, N-Ch., 30V 12A, .0135R		
104	4	Q51,Q52,Q71,Q72	2020000600	1	Transistor, MOSFET, N Ch., 50V 100mA		
105	2	Q151,Q152	2021222200	1	Transistor, NPN, 40V 600mA		
106	1	REF1	105-942XX-12	SCHEMATIC AGP R300 128MB BGA DVII VGA VO VIP			
107	1	REF2	109-942XX-12	PCB AGP R300 128MB BGA DVII VGA VO VIP			
108	1	REF3	9110054500	1	ATI Logo Lable for PCBs		
109	1	REG20	2480021200	1	DDR Bus Termination Regulator, 3A		
110	2	REG22,REG21	2480012200	1	Voltage Regulator Adjustable LDO 800mA		
111	1	REG24	2480004000	1	Voltage Regulator, 150mA, 2.5V, LDO		
112	1	REG25	2480009800	1	Precision Adj. Shunt Regulator, 1.24V, 1% 100mA (SOT-23)		
113	1	REG26	2480009800	1	Precision Adj. Shunt Regulator, 1.24V, 1% 100mA (SOT-23)		
114	1	REG27	2480009800	1	Precision Adj. Shunt Regulator, 1.24V, 1% 100mA (SOT-23)		
115	42	RP101,RP102,RP103,RP104,RP105,RP106,RP107,RP108,RP109,RP110,RP111,RP112,RP113,RP114,RP115,RP116,RP133,RP134,RP135,RP136,RP141,RP151,RP152,RP153,RP154,RP155,RP156,RP157,RP158,RP159,RP160,RP161,RP162,RP163,RP164,RP165,RP166,RP183,RP184,RP185,RP186,RP191	3270003700	1	56R 4-Element Resistor Network Individual SM T&R		
116	32	RP117,RP118,RP119,RP120,RP121,RP122,RP123,RP124,RP125,RP126,RP127,RP128,RP129,RP130,RP131,RP132,RP167,RP168,RP169,RP170,RP171,RP172,RP173,RP174,RP175,RP176,RP177,RP178,RP179,RP180,RP181,RP182	3270003000	1	22R 4-Element Resistor Network Individual SM T&R		
117	10	RP137,RP138,RP139,RP140,RP142,RP187,RP188,RP189,RP190,RP192	3270000300	1	0R 4-Element Resistor Network Individual SM T&R 1206		
118	1	RP193	3270004000	1	33R 4-Element Resistor Network Individual SM T&R 0805		
119	24	R1,R2,R5,R6,R7,R8,R10,R12,R13,R14,R15,R16,R18,R19,R31,R60,R61,R62,R64,R513,R514,R553,R566,R573	3230000000	1	0R	1/16W	5% SM T&R
120	2	R3,R537	3230010100	1	100R	1/16W	5% SM T&R
121	1	R4	3230018100	1	180R	1/16W	5% SM T&R
122	1	R17	3230047300	1	47K	1/16W	5% SM T&R
123	2	R66,R20	3240324000	1	324R	1/16W	1% SM T&R
124	2	R21,R67	3240147000	1	147R	1/16W	1% SM T&R
125	6	R23,R30,R41,R42,R102,R557	3230010200	1	1K	1/16W	5% SM T&R
126	5	R24,R28,R56,R57,R65	3240100000	1	100R	1/16W	1% SM T&R
127	1	R27	3230015100	1	150R	1/16W	5% SM T&R
128	1	R29	3210000000	1	0R	1/10W	5% SM T&R (JUMPER)
129	1	R32	3230010500	1	1M	1/16W	5% SM T&R
130	1	R33	3240100100	1	1.00K	1/16W	1% SM T&R

131	6	R34,R35,R87,R273,R275, R294	3240100100	1	1.00K	1/16W	1% SM T&R
132	1	R37	324040R200	1	40.2R	1/16W	1% SM T&R
133	1	R38	324071R500	1	71.5R	1/16W	1% SM T&R
134	1	R39	3240499000	1	499R	1/16W	1% SM T&R
135	1	R40	3240715000	1	715R	1/16W	1% SM T&R
136	5	R45,R46,R63,R97,R550	3230047200	1	4.7K	1/16W	5% SM T&R
137	1	R48	3230010300	1	10K	1/16W	5% SM T&R
138	28	R49,R118,R119,R201,R203, R205,R207,R210,R212,R213, R216,R217,R219,R221,R223, R228,R230,R232,R235,R237, R250,R574,R576,R578,R579, R581,R583,R585	3230010300	1	10K	1/16W	5% SM T&R
139	8	R51,R52,R53,R54,R404, R406,R454,R456	3230047200	1	4.7K	1/16W	5% SM T&R
140	1	R55	3230047000	1	47R	1/16W	5% SM T&R
141	1	R58	3230047000	1	47R	1/16W	5% SM T&R
142	1	R59	3230051000	1	51R	1/16W	5% SM T&R
143	45	R68,R69,R80,R81,R82,R83, R84,R111,R112,R128,R297, R298,R299,R300,R775,R776, R777,R778,R779,R780,R781, R782,R875,R876,R877,R878, R879,R880,R881,R882,R915, R916,R917,R918,R919,R920, R921,R922,R923,R967,R968, R969,R970,R971,R972	3230000000	1	0R	1/16W	5% SM T&R
144	2	R71,R88	323005R100	1	5.1R	1/16W	5% SM T&R
145	3	R72,R73,R127	3210022A00	1	2.2R	1/10W	5% SM T&R
146	1	R74	3230033300	1	33K	1/16W	5% SM T&R
147	2	R75,R94	3230010400	1	100K	1/16W	5% SM T&R
148	2	R89,R76	324051R100	1	51.1R	1/16W	1% SM T&R
149	2	R77,R90	3240150000	1	150R	1/16W	1% SM T&R
150	1	R78	3240124100	1	1.24K	1/16W	1% SM T&R
151	6	R79,R93,R96,R99,R893, R895	3230010300	1	10K	1/16W	5% SM T&R
152	2	R85,R92	3230010100	1	100R	1/16W	5% SM T&R
153	24	R91,R202,R204,R206,R208, R209,R211,R214,R215,R218, R220,R222,R224,R227,R229, R231,R236,R238,R575,R577, R580,R582,R584,R554	3230010300	1	10K	1/16W	5% SM T&R
154	1	R95	3230075000	1	75R	1/16W	5% SM T&R
155	1	R98	3230056200	1	5.6K	1/16W	5% SM T&R
156	2	R100,R101	323S1R0603		RES 1/16W	5% SM EIA(1206)	T&R (SHORTED) DO NOT INSTALL
157	2	R251,R113	3230010000	1	10R	1/16W	5% SM T&R
158	1	R114	3240133100	1	1.33K	1/16W	1% SM T&R
159	1	R115	3230015200	1	1.5K	1/16W	5% SM T&R
160	1	R116	3230027300	1	27K	1/16W	5% SM T&R
161	1	R117	3240536000	1	536R	1/16W	1% SM T&R
162	1	R120	3230051300	1	51K	1/16W	5% SM T&R
163	1	R121	3230030200	1	3K	1/16W	5% SM T&R
164	1	R122	3230015300	1	15K	1/16W	5% SM T&R

165	1	R123	3230027200	1	2.7K	1/16W	5%	SM	T&R
166	1	R124	3230022100	1	220R	1/16W	5%	SM	T&R
167	4	R125,R126,R254,R296	3230015200	1	1.5K	1/16W	5%	SM	T&R
168	2	R285,R129	3220047000	1	47R	1/4W	5%	SM	T&R
169	1	R252	3230027300	1	27K	1/16W	5%	SM	T&R
170	1	R253	3240110100	1	1.10K	1/16W	1%	SM	T&R
171	1	R256	3240178100	1	1.78K	1/16W	1%	SM	T&R
172	1	R257	3230010300	1	10K	1/16W	5%	SM	T&R
173	1	R258	3230051300	1	51K	1/16W	5%	SM	T&R
174	1	R259	3230030200	1	3K	1/16W	5%	SM	T&R
175	1	R260	3230015300	1	15K	1/16W	5%	SM	T&R
176	1	R274	3230010200	1	1K	1/16W	5%	SM	T&R
177	1	R280	3230082200	1	8.2K	1/16W	5%	SM	T&R
178	1	R281	3230024200	1	2.4K	1/16W	5%	SM	T&R
179	1	R282	3230020300	1	20K	1/16W	5%	SM	T&R
180	2	R284,R286	3220018000	1	18R	1/4W	5%	SM	T&R
181	1	R287	3240681000	1	681R	1/16W	1%	SM	T&R
182	1	R288	3240681000	1	681R	1/16W	1%	SM	T&R
183	1	R289	3240681000	1	681R	1/16W	1%	SM	T&R
184	1	R290	3230015200	1	1.5K	1/16W	5%	SM	T&R
185	1	R291	3230015200	1	1.5K	1/16W	5%	SM	T&R
186	1	R292	3230015200	1	1.5K	1/16W	5%	SM	T&R
187	1	R293	3240200000	1	200R	1/16W	1%	SM	T&R
188	1	R295	3240681000	1	681R	1/16W	1%	SM	T&R
189	9	R401,R402,R403,R451,R452, R453,R504,R505,R506	3240075000	1	75.0R	1/16W	1%	SM	T&R
190	4	R405,R407,R455,R457	3230068200	1	6.8K	1/16W	5%	SM	T&R
191	2	R411,R412	3230051000	1	51R	1/16W	5%	SM	T&R
192	4	R413,R414,R587,R589	3230051000	1	51R	1/16W	5%	SM	T&R
193	4	R415,R416,R586,R588	3230033000	1	33R	1/16W	5%	SM	T&R
194	2	R461,R462	3230051000	1	51R	1/16W	5%	SM	T&R
195	2	R467,R465	3230033000	1	33R	1/16W	5%	SM	T&R
196	2	R466,R468	3230033000	1	33R	1/16W	5%	SM	T&R
197	2	R515,R516	3230000000	1	0R	1/16W	5%	SM	T&R
198	10	R517,R561,R563,R564,R565, R567,R569,R570,R571,R572	3230000000	1	0R	1/16W	5%	SM	T&R
199	5	R518,R601,R602,R603,R604	3230033100	1	330R	1/16W	5%	SM	T&R
200	4	R519,R520,R521,R523	3230000000	1	0R	1/16W	5%	SM	T&R
201	1	R538	3230039100	1	390R	1/16W	5%	SM	T&R
202	3	R539,R540,R541	3240075000	1	75.0R	1/16W	1%	SM	T&R
203	2	R549,R551	3230000000	1	0R	1/16W	5%	SM	T&R
204	1	R552	3230000000	1	0R	1/16W	5%	SM	T&R
205	1	R554	3230020300	1	20K	1/16W	5%	SM	T&R
206	1	R555	3230010300	1	10K	1/16W	5%	SM	T&R
207	1	R558	3210000000	1	0R	1/10W	5%	SM	T&R (JUMPER)
208	4	R605,R606,R607,R608	3230033100	1	330R	1/16W	5%	SM	T&R
209	1	R609	3230010400	1	100K	1/16W	5%	SM	T&R
210	1	R610	3230020300	1	20K	1/16W	5%	SM	T&R
211	16	R751,R752,R753,R754,R755, R756,R757,R758,R851,R852, R853,R854,R855,R856,R857, R858	3240121000	1	121R	1/16W	1%	SM	T&R
212	16	R759,R760,R761,R762,R763, R764,R765,R766,R859,R860,	3230022000	1	22R	1/16W	5%	SM	T&R

		R861,R862,R863,R864,R865, R866						
213	16	R767,R768,R769,R770,R771, R772,R773,R774,R867,R868, R869,R870,R871,R872,R873, R874	3230056000	1	56R	1/16W	5%	SM T&R
214	8	R797,R798,R799,R800,R897, R898,R899,R900	3230056000	1	56R	1/16W	5%	SM T&R
215	16	R801,R802,R803,R804,R805, R806,R807,R808,R901,R902, R903,R904,R905,R906,R907, R908	3240499100	1	4.99K	1/16W	1%	SM T&R
216	6	R1001,R1002,R1003,R1004, R1005,R1006	3210000000	1	0R	1/10W	5%	SM T&R (JUMPER)
217	1	SW1	5030003000	1	Slide Switch, SPST, 2 position			
218	13	TP1,TP2,TP3,TP4,TP5,TP6, TP7,TP8,TP9,TP10,TP11, TP12,TP13		1	TEST POINT PCB HOLE 0.035 in.			
219	1	U1	215R8JAGA11F		IC RV350 All 31x31 BGA			
220	2	U6,U7	2430001100	1	Quad Exclusive -Or Gate			
221	1	U8	2430002000	4	Single Gate 2 Input XOR, High Speed (Tiny Logic)			
222	1	U11	2280001900	1	Serial Flash 512Kbit 64Kx8, SPI interface, 20MHz, 2.7V-3.			
223	1	U20	2480022100	4	System Temperature Monitor, Local/Remote, 1 Deg.C			
224	1	U31	2480018900	1	Synchronous PWM Controller, 400KHz Reference Voltage 0.8V			
225	1	U43	2480019600	1	Dual Synchronous PWM Controller, Programmable			
226	1	U49	2480020900	1	Buck & Synchronous-Rectifier PWM Controller			
227	8	U66,U67,U68,U69,U76,U77, U78,U79	235C284433	1	SGRAM DDR 128Mbit 1MX32X4 Bank 300MHz w/DLL 2.5V VDD/VDDQ			
228	1	U96	2710000800	1	Wideband Quad 2-Channel Video Mux/Demux			
229	1	Y1	5023270000	1	Crystal 27.000 MHz, Fundamental, 18pF, 30ppm			
230	1	Y2	5016270000	1	Crystal Oscillator 27.00MHz, 50ppm, 3.3V, HCMOS/TTL			