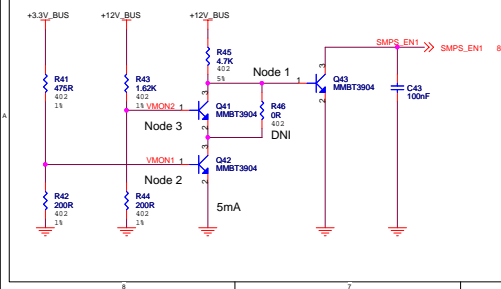
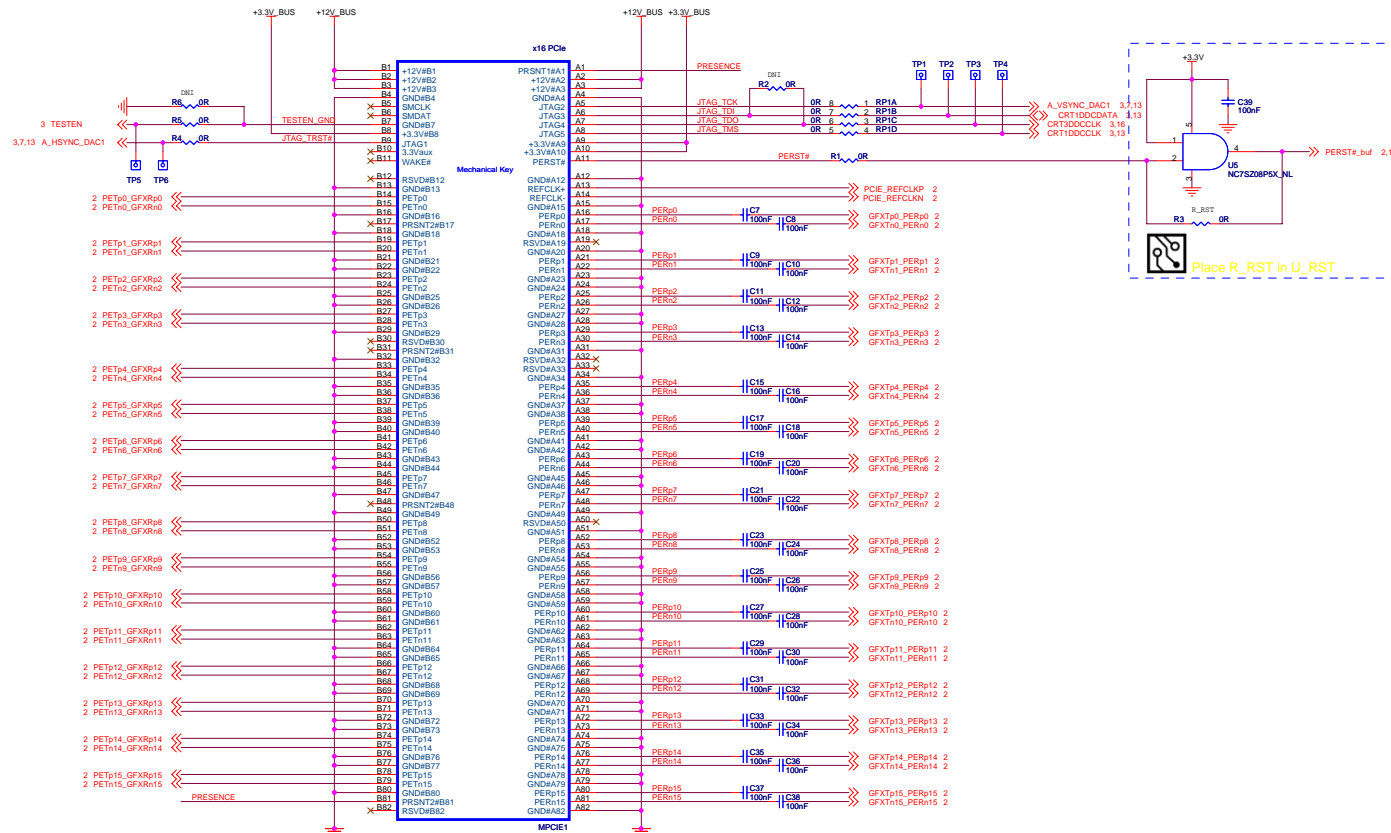
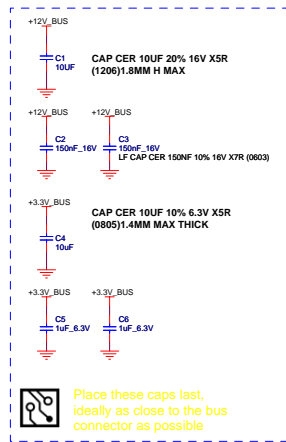


This schematic represents the PCB, it does not represent any specific SKU.

Very important to meet HDMI compliance requirements
Capacitance of SDADDC_HDMI & SCLDDC_HDMI nets to Power/GND planes must be less than 50pF (try to make it lower)





PCI-EXPRESS EDGE CONNECTOR



Power Sequence Circuit to ensure SMPS_EN is released after +12V_BUS and +3.3V_BUS are both in regulation. Pull-up may or may not be required on SMPS_EN signal depending on SMPS design.

- Node 1 When +12V ramps above min Vbe, SMPS_EN will be held low
- Node 2 When +3.3V gets close to regulation, one of the two conditions of releasing SMPS_EN is active
- Target ~ 900mV when +3.3 at min regulation (worse case)
- Typical trigger when +3.3V ramps above 2.2V (650mV)
- Node 3 When +12V gets close to regulation, one of the two conditions of releasing SMPS_EN is active
- Target ~ 1.25V when +12 at min regulation (worse case)
- Typical trigger when +12V ramps above 10V (1.1V)

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

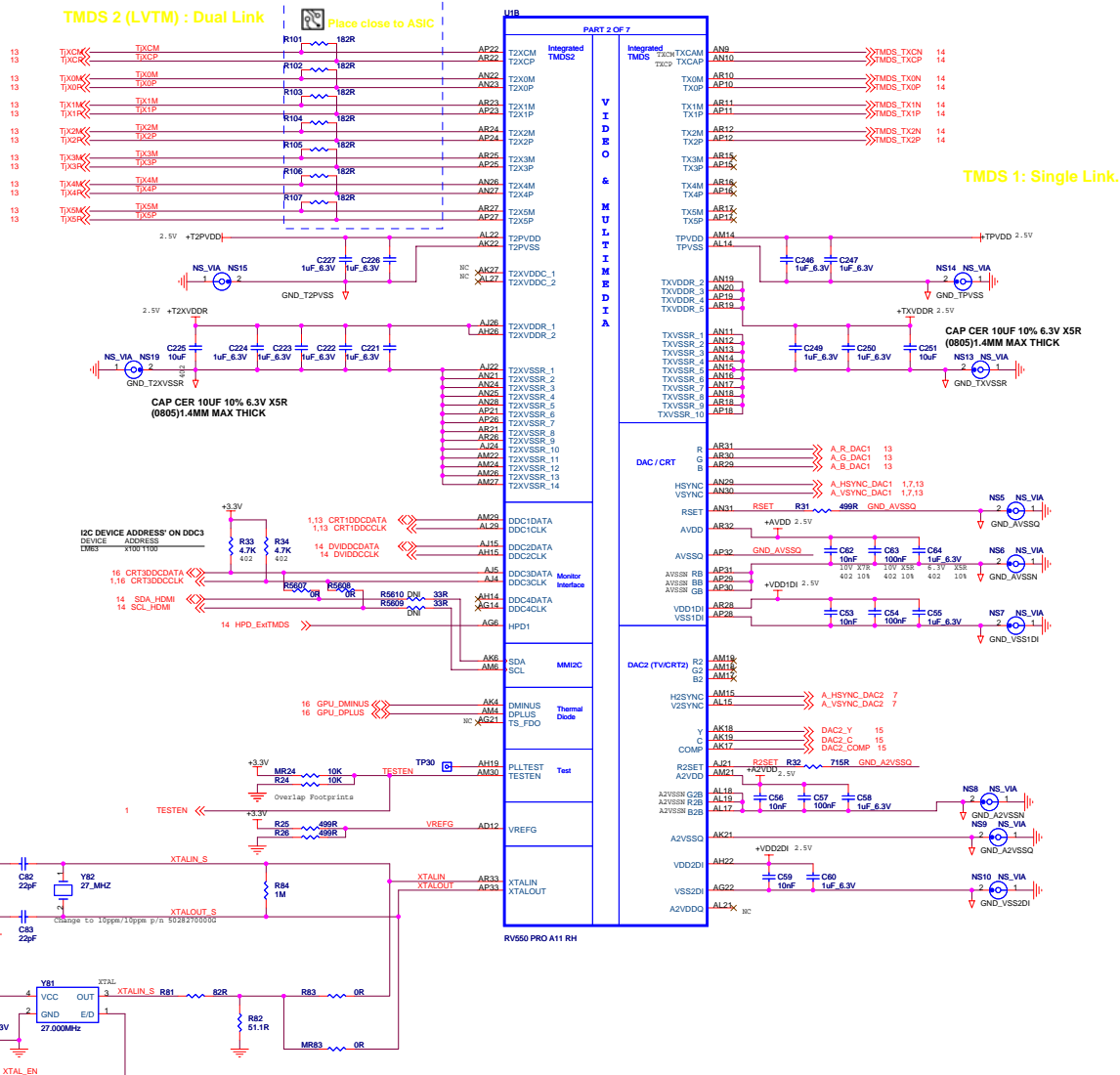


ATI Technologies Inc
1 Commerce Valley Drive East
Markham, Ontario
Canada, L3T 7X6
(905) 882-2600

Title		RV550 LP HDMI VGA 256/512MB DDR2	
Size	Document Number	105-B173xx-00	Rev
C			
Date:	Thursday, January 11, 2007	Sheet	1 of 19



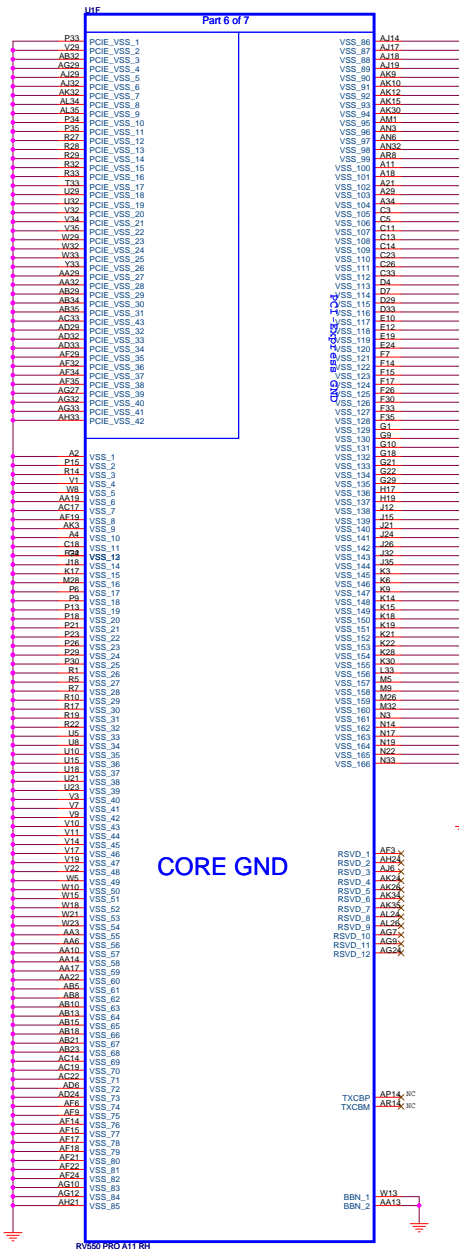
RV550: LVTM (TMDS2) is dual link, the other TMDS (TMDS1) interface is single-link only.



AT&T Technologies Inc.

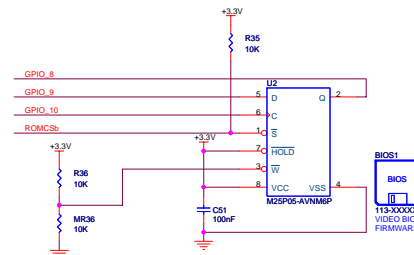
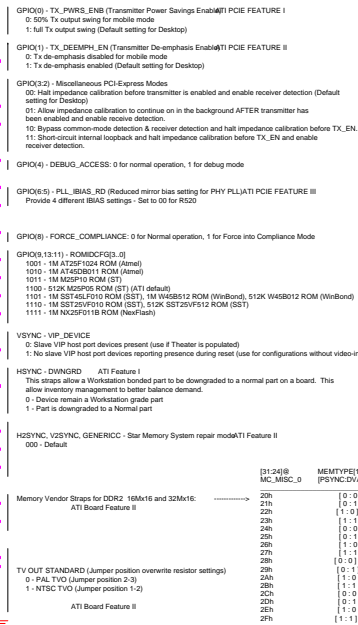
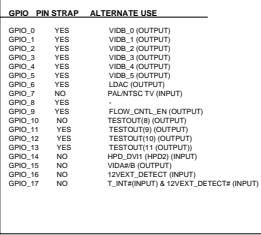
1 Commerce Valley Drive East
Markham, Ontario
Canada, L3T 7X6
(905) 882-2600

Title				RV550 LP HDMI VGA 256/512MB DDR2			
Size		Document Number				Rev	
Custom		105-B173xx-00				0	
Date: Thursday, January 11, 2007				Sheet 3 of 19			



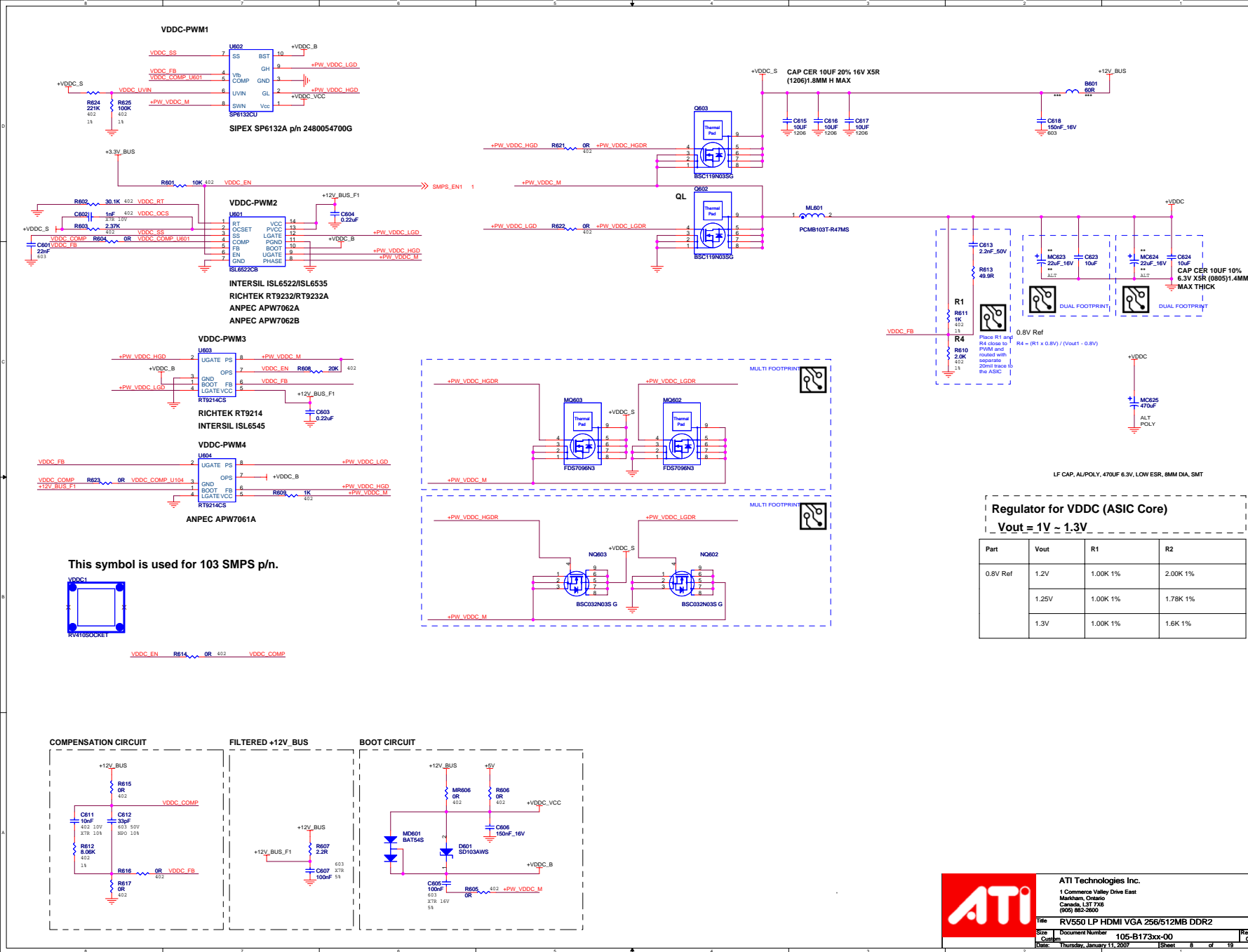
ATI Technologies Inc.
1 Commerce Valley Drive East
Markham, Ontario
Canada L3T 7X6
(905) 882-2600

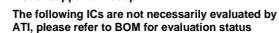
Title			RV550 LP HDMI VGA 256/512MB DDR2
Size	Document Number	105-B173xx-00	Rev 1.0
Date	Thursday, January 11, 2007	Sheet 6 of 19	



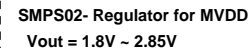
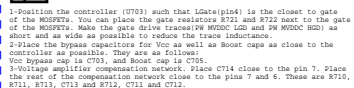
1 Commerce Valley Drive East
Markham, Ontario
Canada, L3T 7X6
(905) 882-2600

Size 6	Document Number 105-B173xx-00
-----------	----------------------------------





Layout guideline for Nexsem NX2114/2307



Part	Vout	RFB1	RFB2
0.5V Ref	2.03V (1.98V–2.08V)	4.99K p/n 3160499100G	3.24K p/n 3160324100G

SMPS02 Specifications

	Nominal Value	Tolerance	Adjustable range / Note
Vin (power stage)	12V	+/- 0.8 VDC	ATEL2V ver. 2.2 +/- 0.5V
Vout	2V	+/- 0.25 / -2%	1.8V - 2.85V
Vout ripple (DC)	50mVp		
Iout	6Arms, 8Arms max		
Step load	3Arms		
Vout ripple (AC)	+/- 0.8 or 200mVp at 1h step load		
Switching Freq.	> 30kHz		75W
Protection			



ATI Technologies Inc.
1 Commerce Valley Drive East
Markham, Ontario
Canada, L3T 7X6
(416) 491-0000

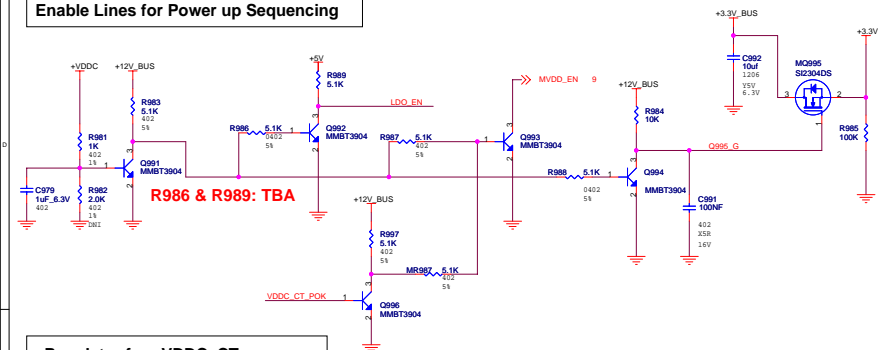
Title RV550 LP HDMI VGA 256/512MB DDR2

Size	Document Number	1.05 B.130	30
------	-----------------	------------	----

Custom	105-B173xx-00
Date: Thursday, January 11, 2007	Sheet

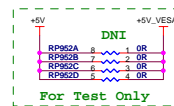
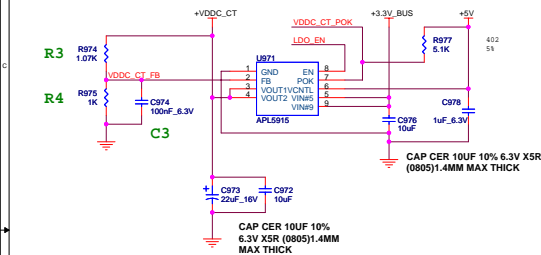
[illegible]

Enable Lines for Power up Sequencing

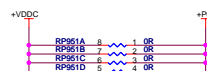
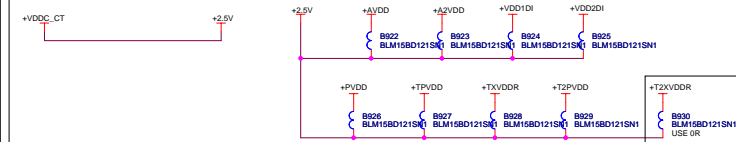


Regulator for +VDDC_CT

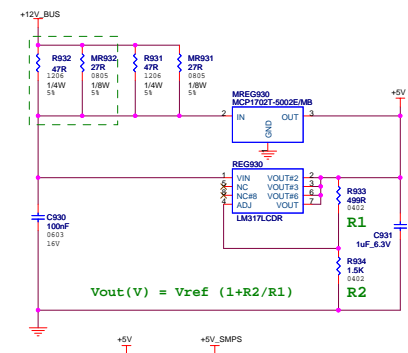
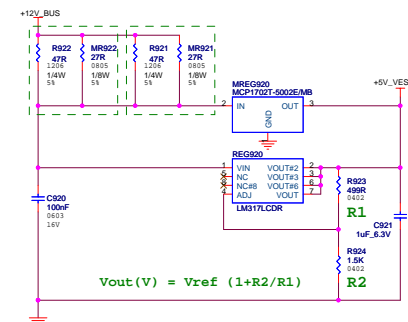
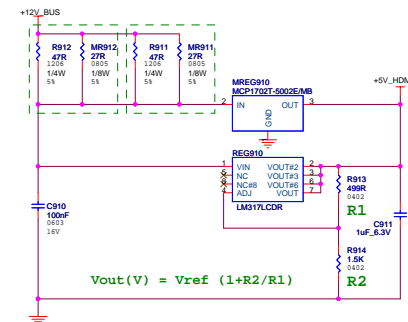
Vout = 2.8V +/- 1.5%



Shared Power Rails



Regulators for +5V, +5V_VESA and +5V_VESA2



ATI Technologies Inc.
1 Commerce Valley Drive East
Markham, Ontario
Canada, L3T 7X6
(905) 882-2600

Part: RV550 LP HDMI VGA 256/512MB DDR2

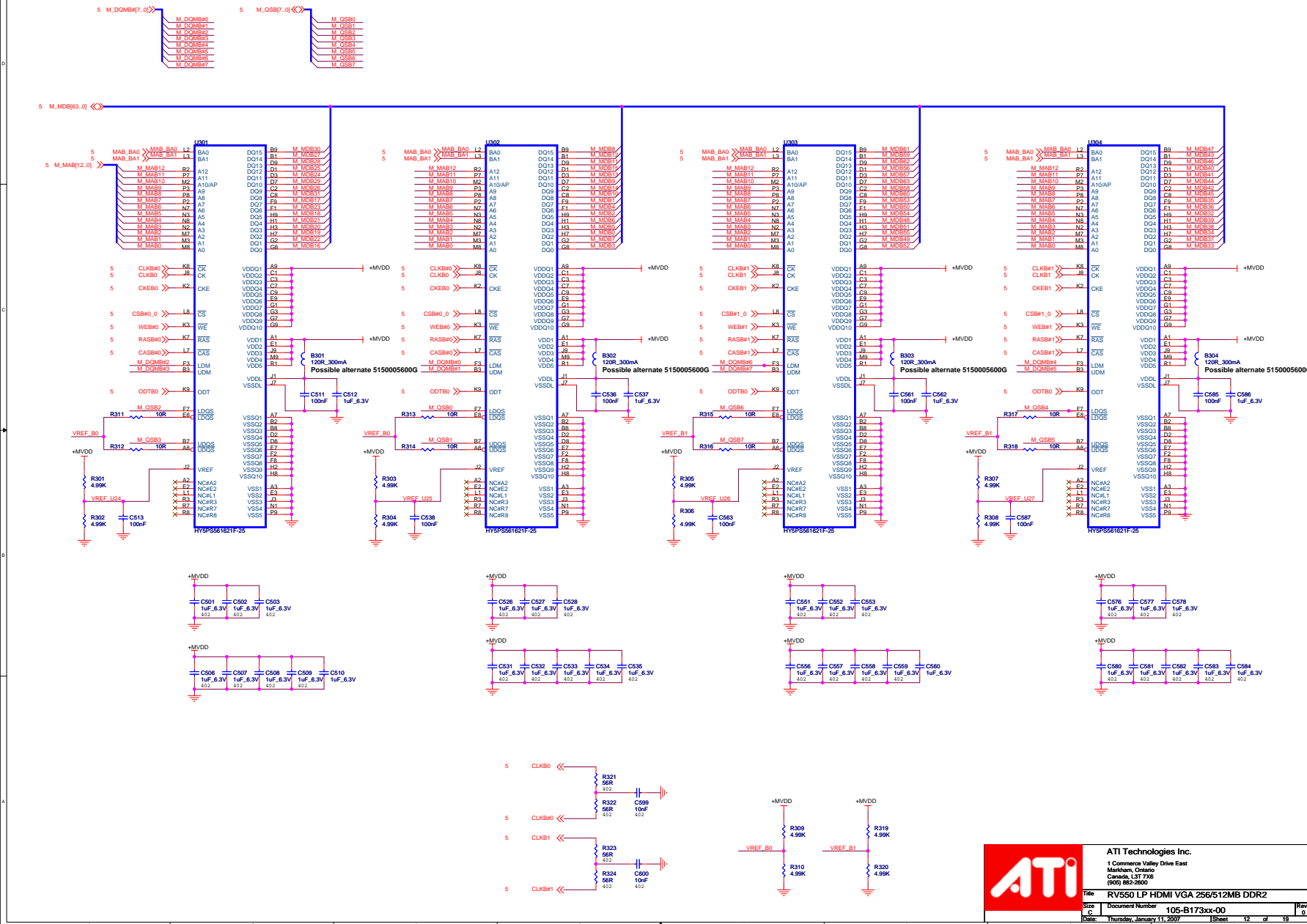
Size: Document Number 105-B173xx-00

Date: Thursday, January 11, 2007 Sheet 19 of 19

Rev 0



CHANNEL B: RANK 0 128MB DDR2



ATI Technologies Inc.
1 Commerce Valley Drive East
Markham, Ontario
Canada, L3T 7X6
416-754-0700

Title		RV550 LP HDMI VGA 256/512MB DDR	
Size	Document Number		
C	105-B173xx-00		
Date:	Thursday, January 11, 2007	Sheet	12



RGB should be routed from the ASIC to the display connector without switching reference plane or running over split plane



SYNC and DDC should be routed from the ASIC to the display connector without switching reference plane or running over split plane

NO Corse Fire Support.

These resistors can be placed close to the ASIC so single net is needed

DB15 pin	Standard VGA	DDC1 Host	DDC2B or DDC2B+ Host	DDC2AB Host	DDC1/2 Display
14	Monitor ID bit0	Monitor ID bit0	Monitor ID bit0	Monitor ID bit0	Optional
12	Monitor ID bit1	Monitor ID bit1	Monitor ID bit1	Monitor ID bit1	Optional
15	Monitor ID bit2	Monitor ID bit2	Monitor ID bit2	Monitor ID bit2	Optional
9	N/C	+5V	+5V	+5V	Optional
Hardware Support	No	Yes	Yes	No	Yes

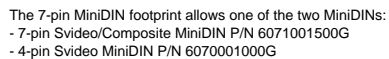
Based on VESA Display Data Channel (DDC) Standard Ver. 3 Dec. 15, 1997



ATI Technologies Inc.

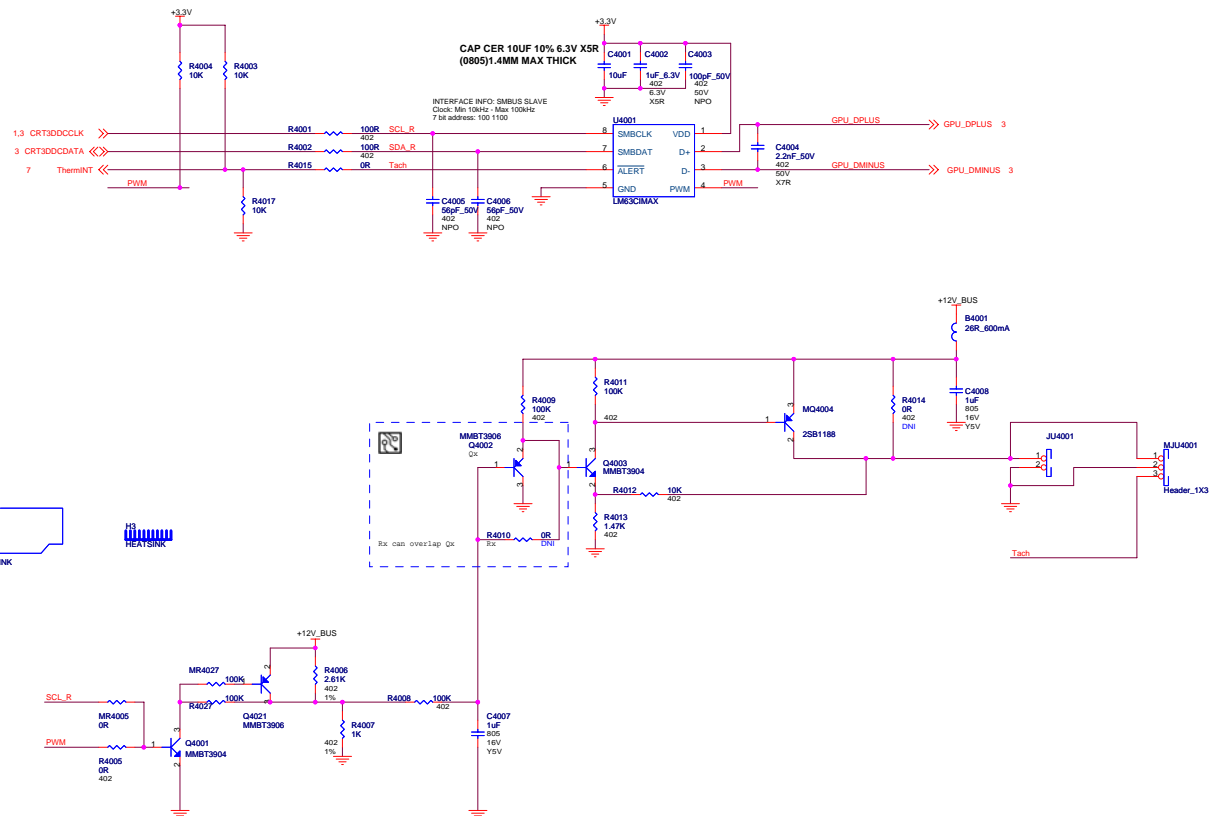
1 Commerce Valley Drive East
Markham, Ontario
Canada L3T 7X6
(905) 882-2600

Title	RV550 LP HDMI VGA 256/512MB DDR2	Rev	0
Size	Document Number	105-B173xx-00	
Date	Friday, January 12, 2007	15:55	13 of 19



1 Commerce Valley Drive East
Markham, Ontario
Canada, L3T 7X6
(905) 882-2600

Title		RV550 LP HDMI VGA 256/512MB DDR2	
Size	Document Number		Rev
C	105-B173xx-00		0
Date:	Thursday, January 11, 2007	Sheet	15 of 19



ATI Technologies Inc.
1 Commerce Valley Drive East
Markham, Ontario
Canada L3T 7X5
(905) 882-2600

Title: RV550 LP HDMI VGA 256/512MB DDR2

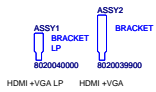
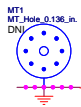
Size: Document Number 105-B173xx-00

Date: Thursday, January 11, 2007

Sheet 18 of 19

Rev 1.0

DVIVGA SCREWS



M71 M package.
Make sure Rv550 can
use it. 6090023700



ATI Technologies Inc.
1 Commerce Valley Drive East
Markham, Ontario
Canada L3T 7Y5
(905) 882-2600

Title	RV550 LP HDMI VGA 256/512MB DDR2		
Size	Document Number	105-B173xx-00	Rev 1.0
C			
Date	Friday, January 15, 2009	Sheet 17	of 19

