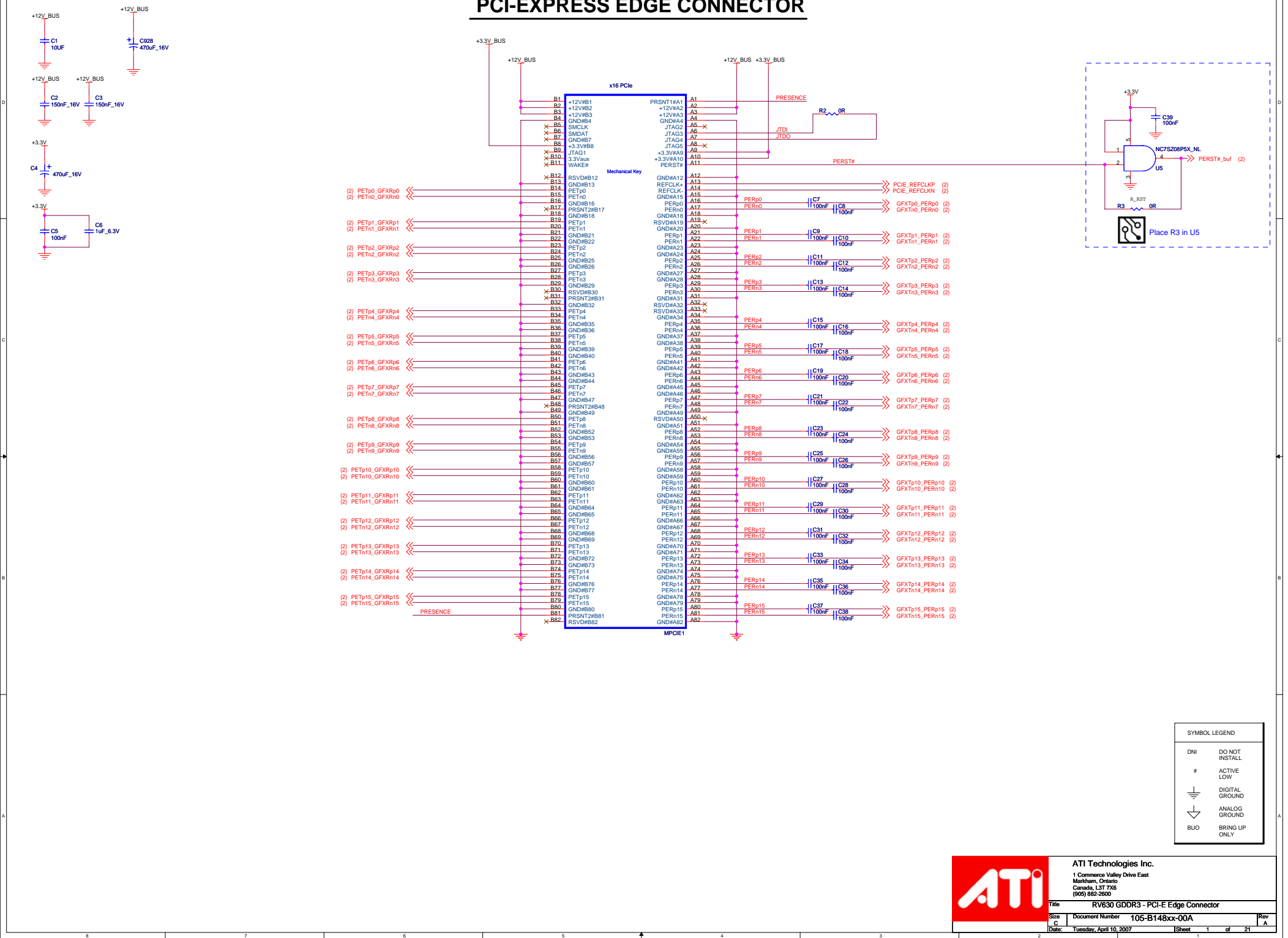
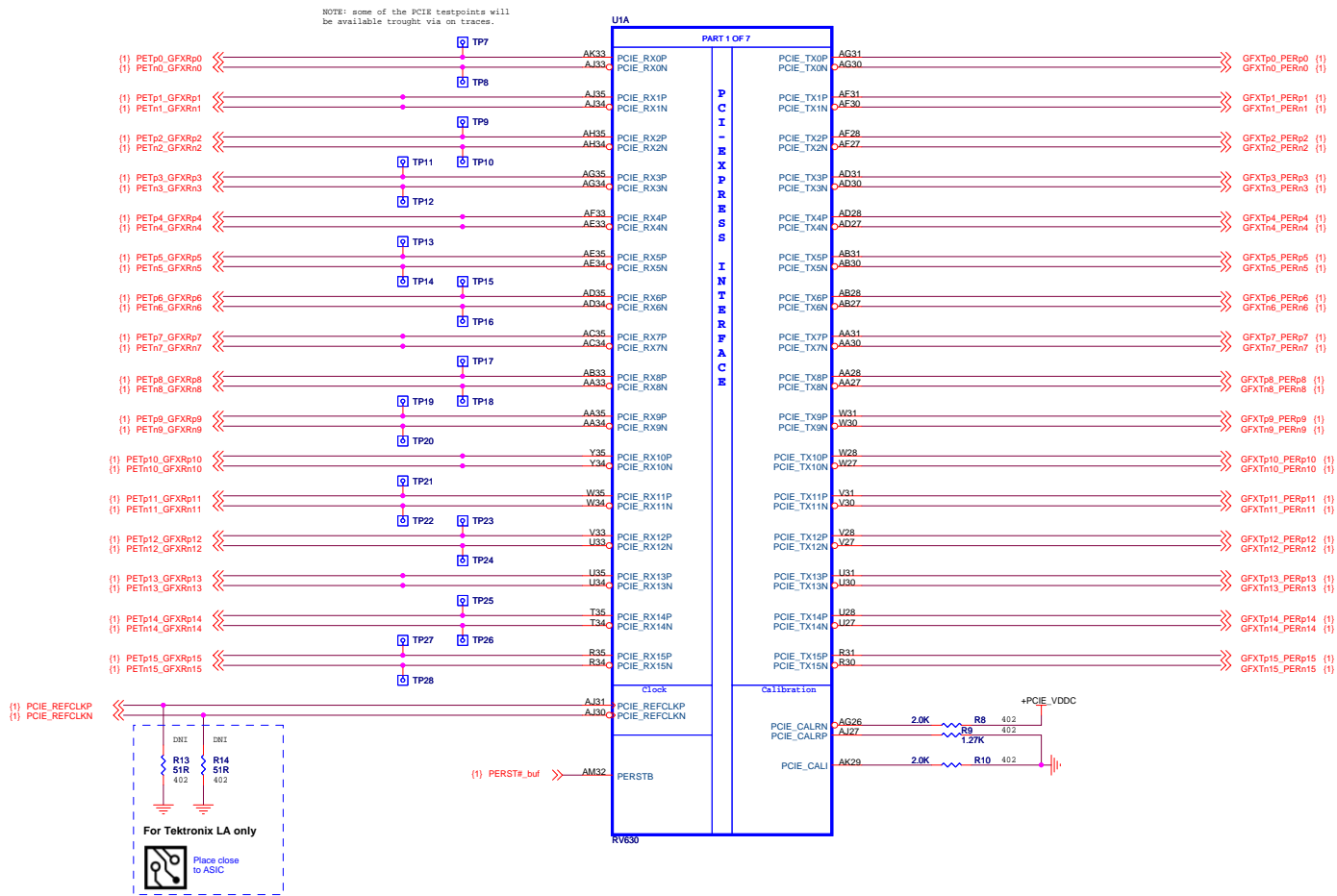


PCI-EXPRESS EDGE CONNECTOR



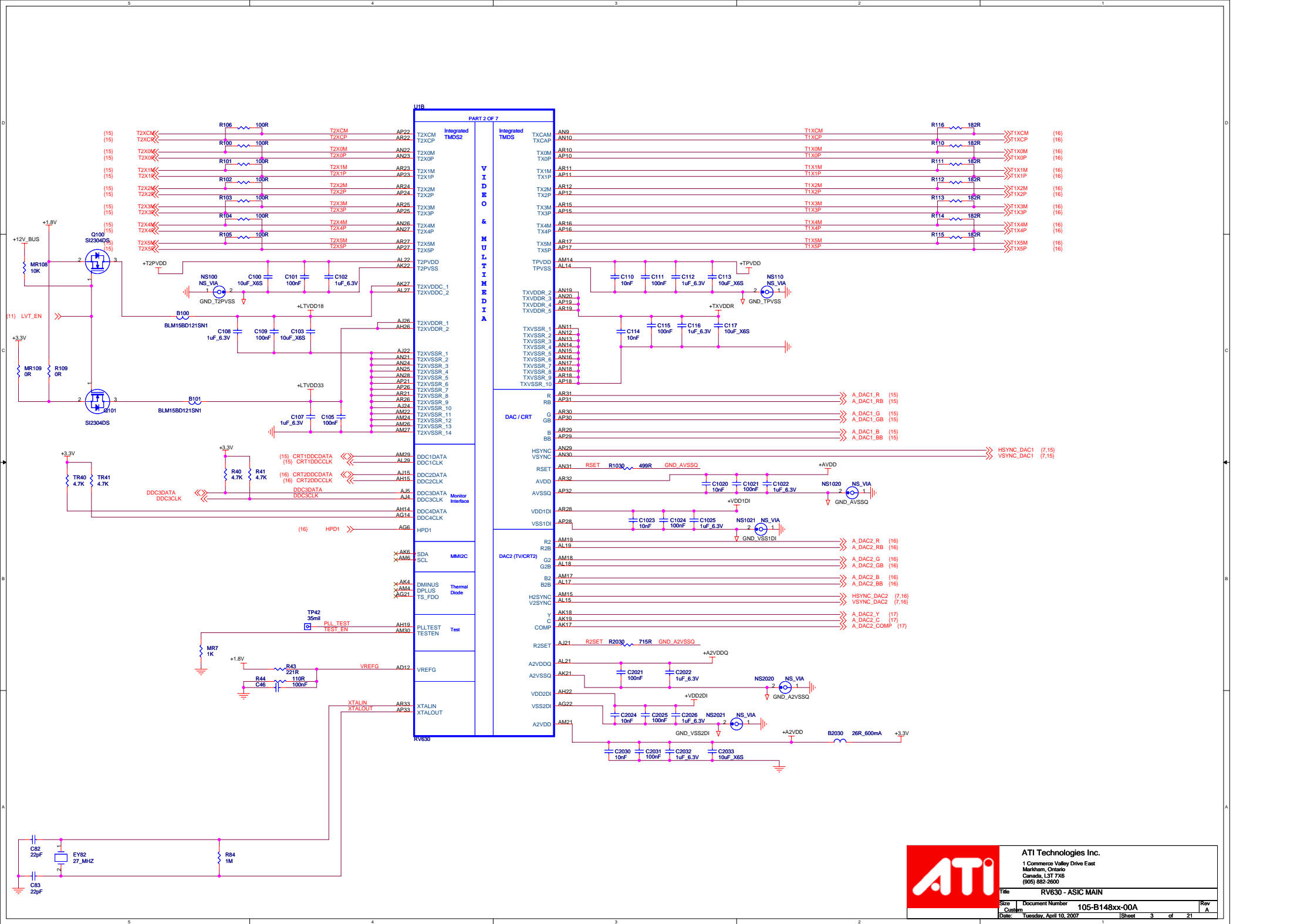
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Title		RV630 GDDR3 - PCI-E Edge Connector	
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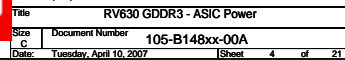
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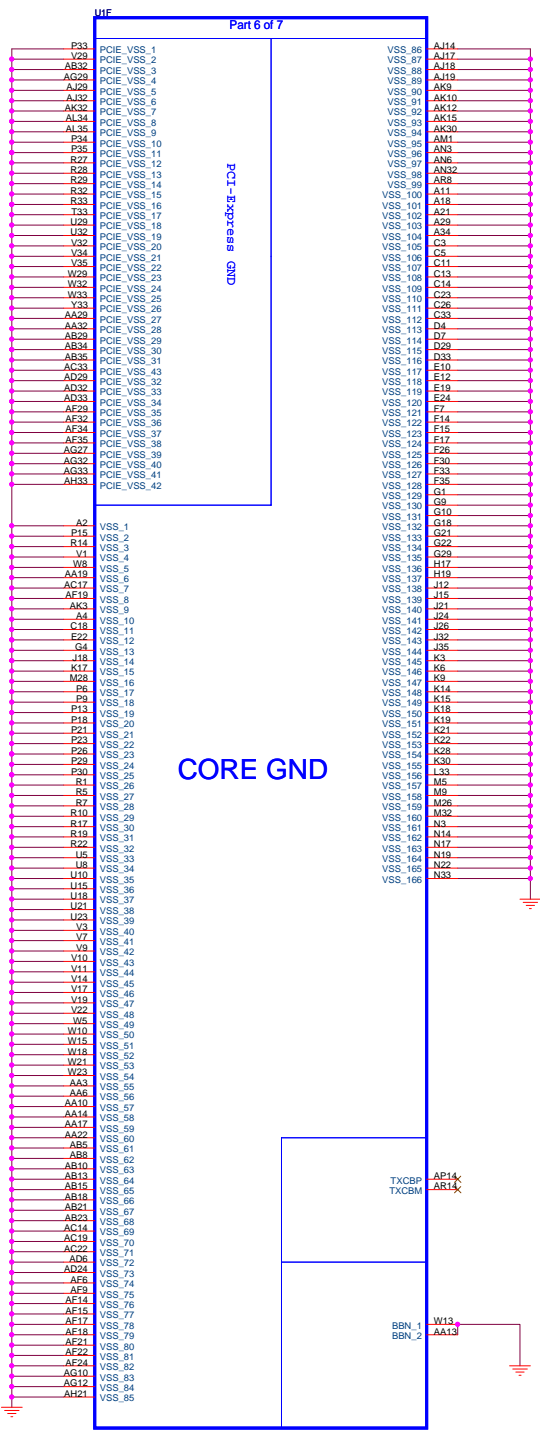
Title		RV630 GDDR3 - ASIC PCIe Interface	
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The schematic diagram illustrates the power distribution for the RV630 GDDR3 - ASIC. It is divided into several functional blocks:

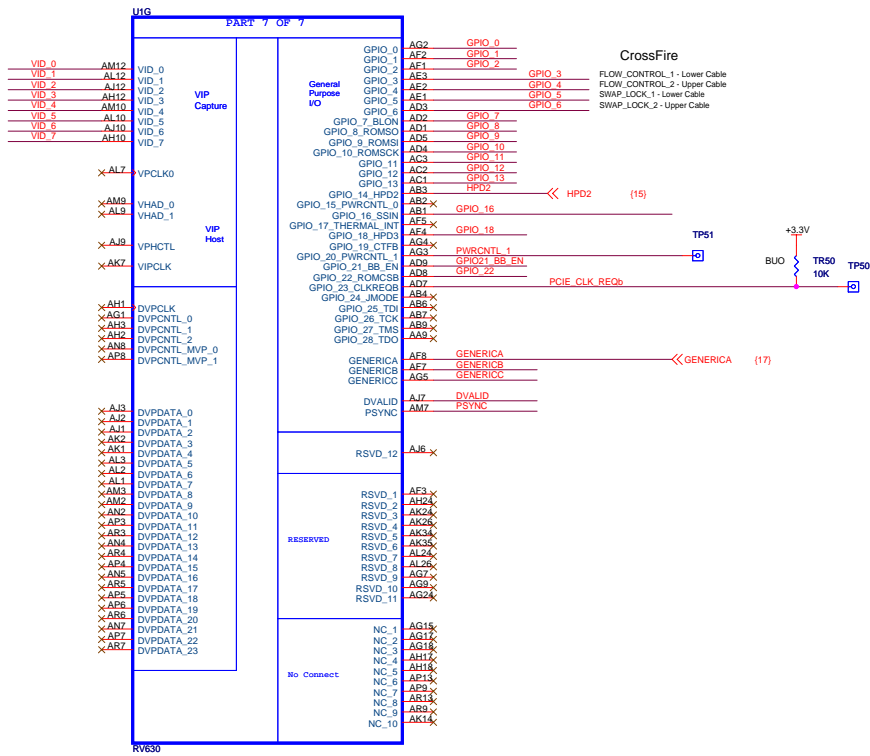
- Memory I/O:** This section shows the power planes for memory I/O, including VDD, VDDQ, and VDDQ2. It features a dense array of capacitors (C150-C159, C130-C139, C110-C119, C100-C109, C90-C99, C80-C89, C70-C79, C60-C69, C50-C59, C40-C49, C30-C39, C20-C29, C10-C19, C0-C9) and inductors (L1-L9, L10-L19, L20-L29, L30-L39, L40-L49, L50-L59, L60-L69, L70-L79, L80-L89, L90-L99, L100-L109, L110-L119, L120-L129, L130-L139, L140-L149, L150-L159, L160-L169, L170-L179, L180-L189, L190-L199, L200-L209, L210-L219, L220-L229, L230-L239, L240-L249, L250-L259, L260-L269, L270-L279, L280-L289, L290-L299, L300-L309, L310-L319, L320-L329, L330-L339, L340-L349, L350-L359, L360-L369, L370-L379, L380-L389, L390-L399, L400-L409, L410-L419, L420-L429, L430-L439, L440-L449, L450-L459, L460-L469, L470-L479, L480-L489, L490-L499, L500-L509, L510-L519, L520-L529, L530-L539, L540-L549, L550-L559, L560-L569, L570-L579, L580-L589, L590-L599, L600-L609, L610-L619, L620-L629, L630-L639, L640-L649, L650-L659, L660-L669, L670-L679, L680-L689, L690-L699, L700-L709, L710-L719, L720-L729, L730-L739, L740-L749, L750-L759, L760-L769, L770-L779, L780-L789, L790-L799, L800-L809, L810-L819, L820-L829, L830-L839, L840-L849, L850-L859, L860-L869, L870-L879, L880-L889, L890-L899, L900-L909, L910-L919, L920-L929, L930-L939, L940-L949, L950-L959, L960-L969, L970-L979, L980-L989, L990-L999, L1000-L1009, L1010-L1019, L1020-L1029, L1030-L1039, L1040-L1049, L1050-L1059, L1060-L1069, L1070-L1079, L1080-L1089, L1090-L1099, L1100-L1109, L1110-L1119, L1120-L1129, L1130-L1139, L1140-L1149, L1150-L1159, L1160-L1169, L1170-L1179, L1180-L1189, L1190-L1199, L1200-L1209, L1210-L1219, L1220-L1229, L1230-L1239, L1240-L1249, L1250-L1259, L1260-L1269, L1270-L1279, L1280-L1289, L1290-L1299, L1300-L1309, L1310-L1319, L1320-L1329, L1330-L1339, L1340-L1349, L1350-L1359, L1360-L1369, L1370-L1379, L1380-L1389, L1390-L1399, L1400-L1409, L1410-L1419, L1420-L1429, L1430-L1439, L1440-L1449, L1450-L1459, L1460-L1469, L1470-L1479, L1480-L1489, L1490-L1499, L1500-L1509, L1510-L1519, L1520-L1529, L1530-L1539, L1540-L1549, L1550-L1559, L1560-L1569, L1570-L1579, L1580-L1589, L1590-L1599, L1600-L1609, L1610-L1619, L1620-L1629, L1630-L1639, L1640-L1649, L1650-L1659, L1660-L1669, L1670-L1679, L1680-L1689, L1690-L1699, L1700-L1709, L1710-L1719, L1720-L1729, L1730-L1739, L1740-L1749, L1750-L1759, L1760-L1769, L1770-L1779, L1780-L1789, L1790-L1799, L1800-L1809, L1810-L1819, L1820-L1829, L1830-L1839, L1840-L1849, L1850-L1859, L1860-L1869, L1870-L1879, L1880-L1889, L1890-L1899, L1900-L1909, L1910-L1919, L1920-L1929, L1930-L1939, L1940-L1949, L1950-L1959, L1960-L1969, L1970-L1979, L1980-L1989, L1990-L1999, L2000-L2009, L2010-L2019, L2020-L2029, L2030-L2039, L2040-L2049, L2050-L2059, L2060-L2069, L2070-L2079, L2080-L2089, L2090-L2099, L2100-L2109, L2110-L2119, L2120-L2129, L2130-L2139, L2140-L2149, L2150-L2159, L2160-L2169, L2170-L2179, L2180-L2189, L2190-L2199, L2200-L2209, L2210-L2219, L2220-L2229, L2230-L2239, L2240-L2249, L2250-L2259, L2260-L2269, L2270-L2279, L2280-L2289, L2290-L2299, L2300-L2309, L2310-L2319, L2320-L2329, L2330-L2339, L2340-L2349, L2350-L2359, L2360-L2369, L2370-L2379, L2380-L2389, L2390-L2399, L2400-L2409, L2410-L2419, L2420-L2429, L2430-L2439, L2440-L2449, L2450-L2459, L2460-L2469, L2470-L2479, L2480-L2489, L2490-L2499, L2500-L2509, L2510-L2519, L2520-L2529, L2530-L2539, L2540-L2549, L2550-L2559, L2560-L2569, L2570-L2579, L2580-L2589, L2590-L2599, L2600-L2609, L2610-L2619, L2620-L2629, L2630-L2639, L2640-L2649, L2650-L2659, L2660-L2669, L2670-L2679, L2680-L2689, L2690-L2699, L2700-L2709, L2710-L2719, L2720-L2729, L2730-L2739, L2740-L2749, L2750-L2759, L2760-L2769, L2770-L2779, L2780-L2789, L2790-L2799, L2800-L2809, L2810-L2819, L2820-L2829, L2830-L2839, L2840-L2849, L2850-L2859, L2860-L2869, L2870-L2879, L2880-L2889, L2890-L2899, L2900-L2909, L2910-L2919, L2920-L2929, L2930-L2939, L2940-L2949, L2950-L2959, L2960-L2969, L2970-L2979, L2980-L2989, L2990-L2999, L3000-L3009, L3010-L3019, L3020-L3029, L3030-L3039, L3040-L3049, L3050-L3059, L3060-L3069, L3070-L3079, L3080-L3089, L3090-L3099, L3100-L3109, L3110-L3119, L3120-L3129, L3130-L3139, L3140-L3149, L3150-L3159, L3160-L3169, L3170-L3179, L3180-L3189, L3190-L3199, L3200-L3209, L3210-L3219, L3220-L3229, L3230-L3239, L3240-L3249, L3250-L3259, L3260-L3269, L3270-L3279, L3280-L3289, L3290-L3299, L3300-L3309, L3310-L3319, L3320-L3329, L3330-L3339, L3340-L3349, L3350-L3359, L3360-L3369, L3370-L3379, L3380-L3389, L3390-L3399, L3400-L3409, L3410-L3419, L3420-L3429, L3430-L3439, L3440-L3449, L3450-L3459, L3460-L3469, L3470-L3479, L3480-L3489, L3490-L3499, L3500-L3509, L3510-L3519, L3520-L3529, L3530-L3539, L3540-L3549, L3550-L3559, L3560-L3569, L3570-L3579, L3580-L3589, L3590-L3599, L3600-L3609, L3610-L3619, L3620-L3629, L3630-L3639, L3640-L3649, L3650-L3659, L3660-L3669, L3670-L3679, L3680-L3689, L3690-L3699, L3700-L3709, L3710-L3719, L3720-L3729

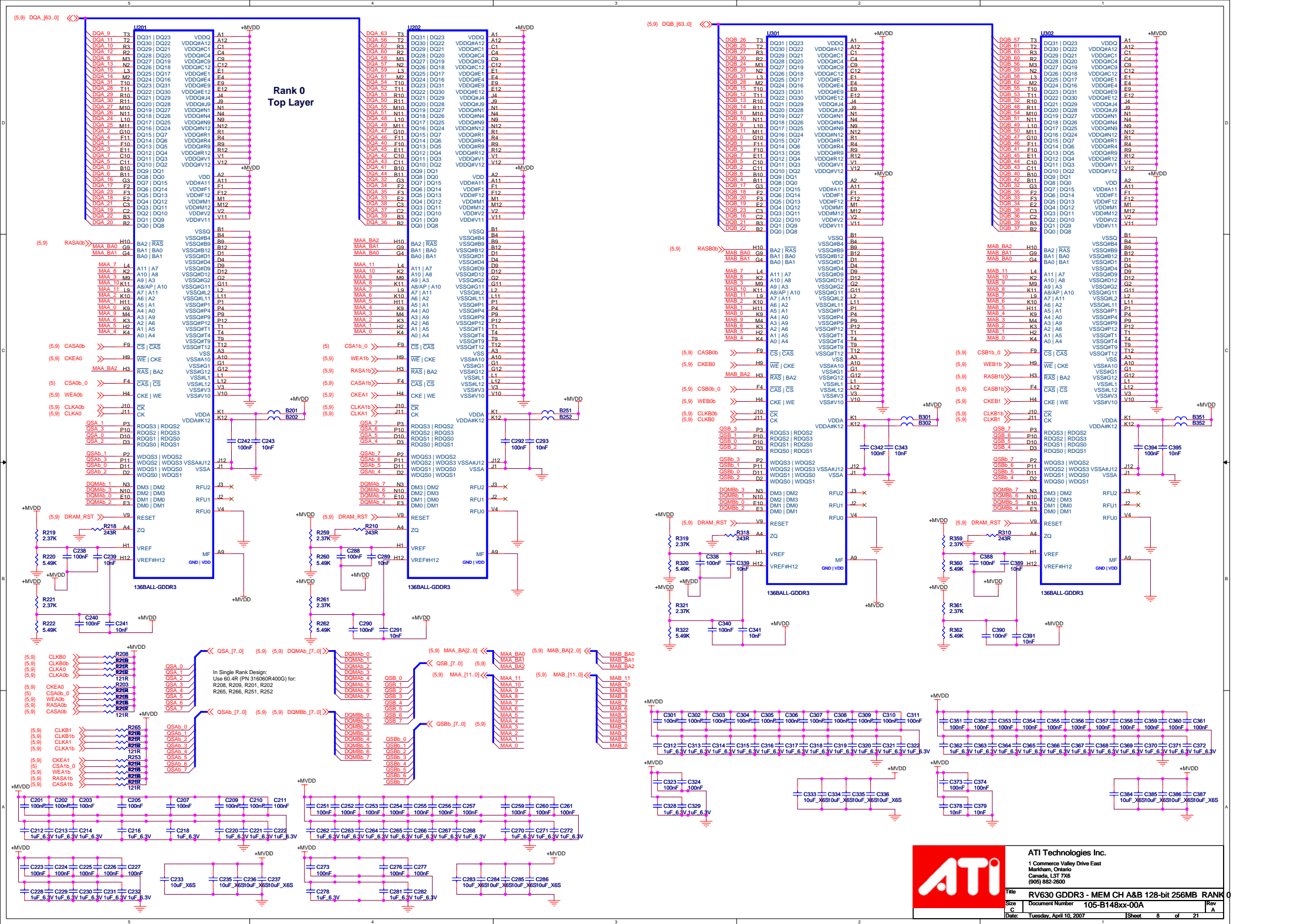


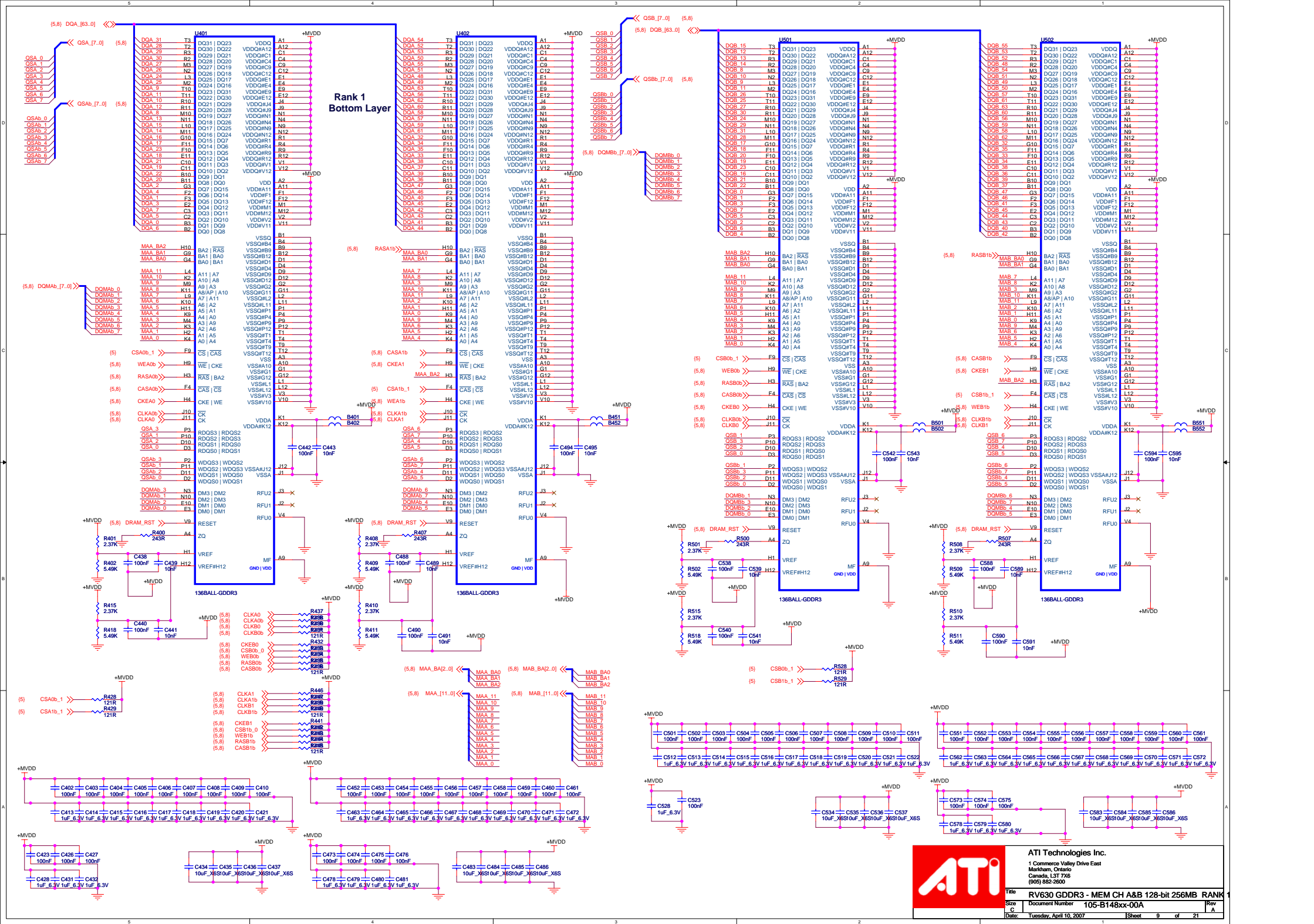


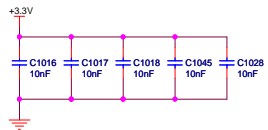
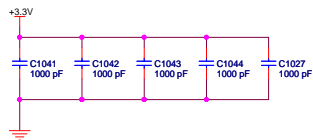
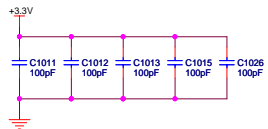
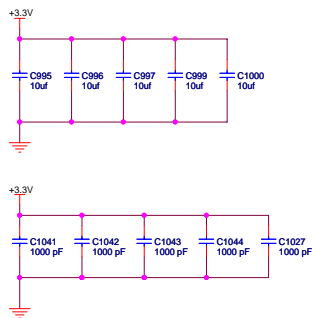
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Title		RV630 GDDR3 - ASIC Grounds	
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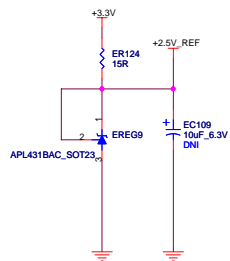




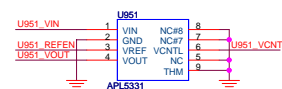
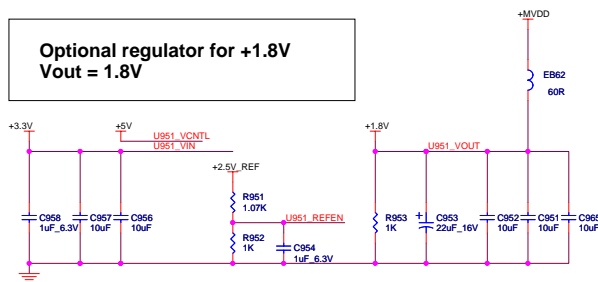


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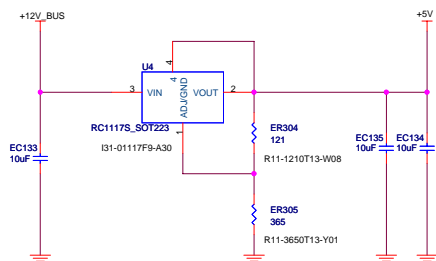
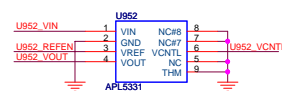
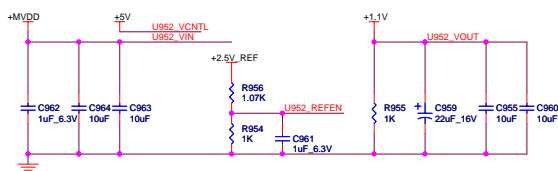
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Optional regulator for +1.8V
Vout = 1.8V



Optional regulator for +1.1V
Vout = 1.1V



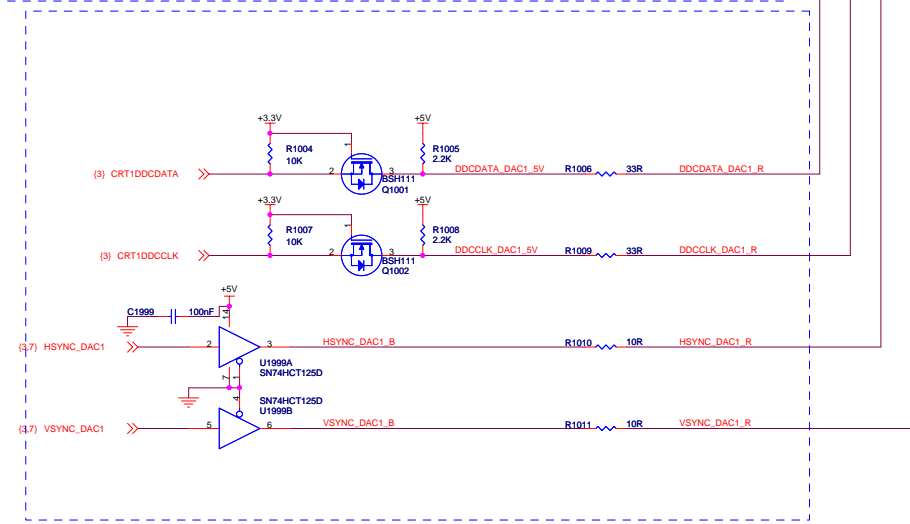
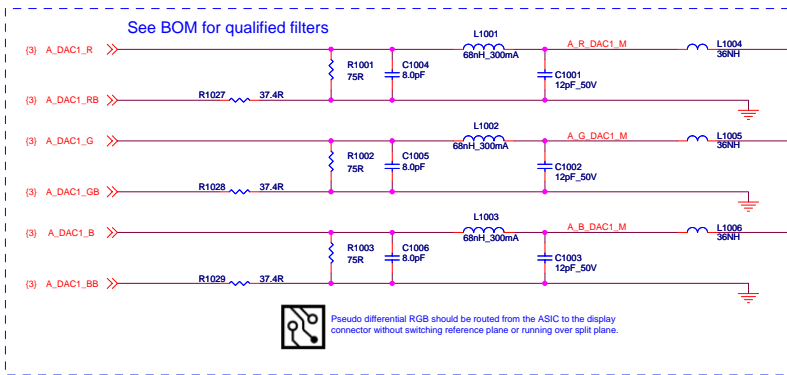
$$V_{out} = 1.25V \times \left[1 + \left(\frac{ER305}{ER304} \right) \right]$$

Shared Power Rails

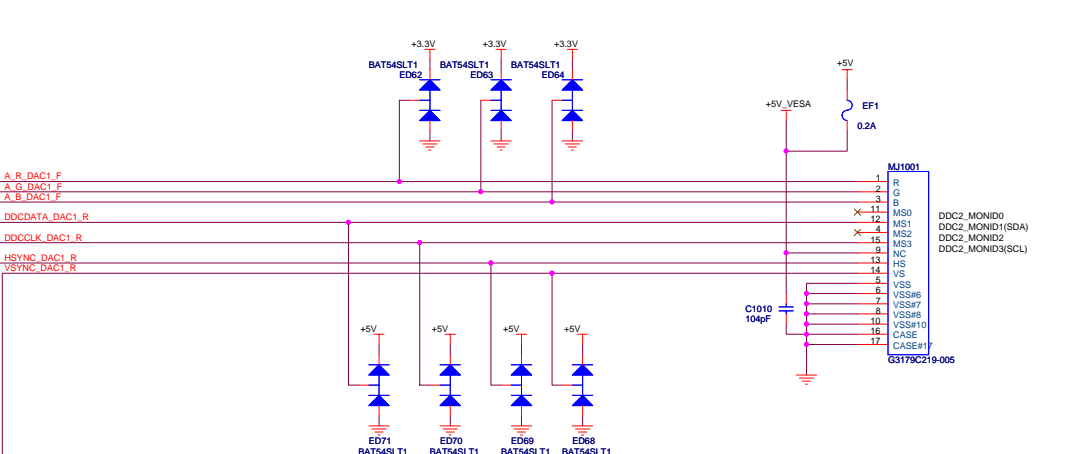


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Title	RV630 GDDR3 - Linear Regulators	Rev	A
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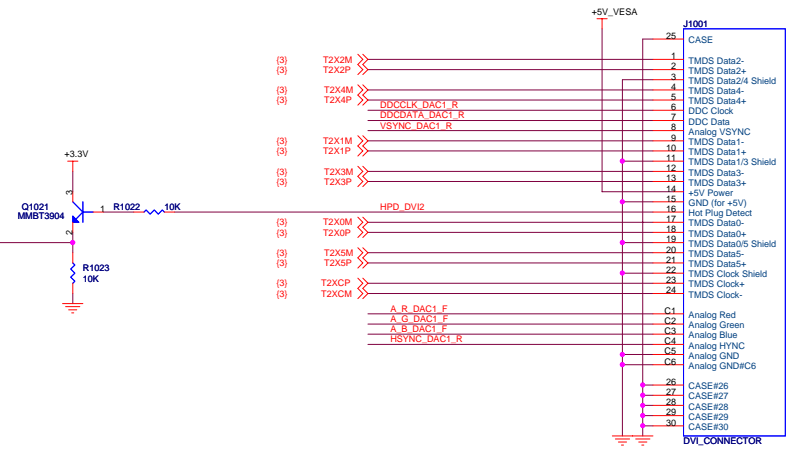


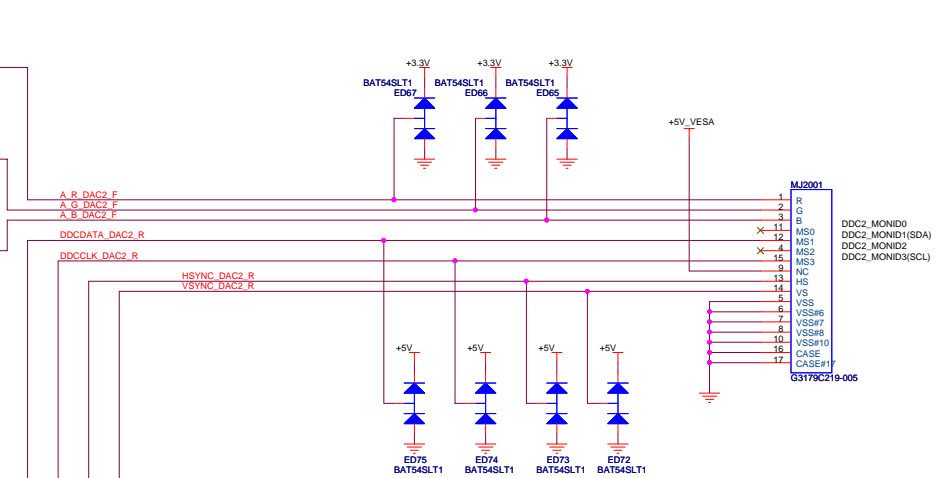
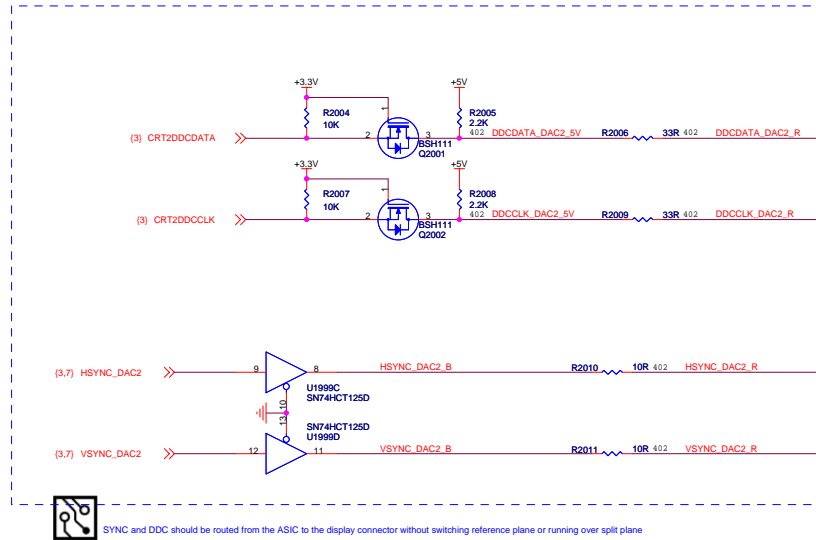
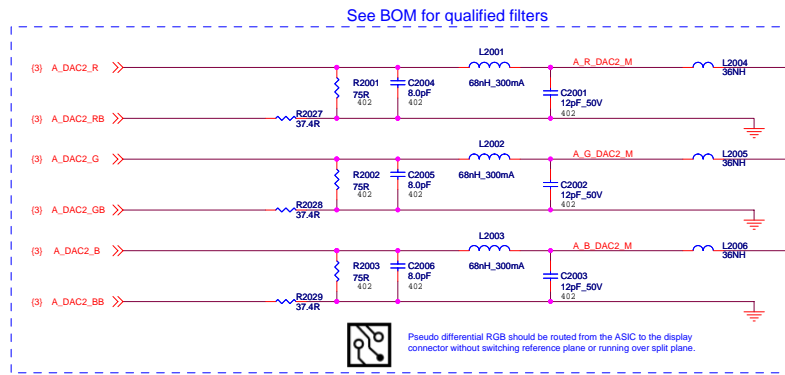
SYNC and DDC should be routed from the ASIC to the display connector without switching reference plane or running over split plane



DB15 pin	Standard VGA	DDC1 Host	DDC2B or DDC2B Host	DDC2AB Host	DDC1/2 Display
11	Monitor ID bit 0	Monitor ID bit 0	Monitor ID bit 0	Monitor ID bit 0	Optional
12	Monitor ID bit 1	Data from display SDA	Monitor ID bit 1	Monitor ID bit 1	Optional
4	Monitor ID bit 2	Open	Monitor ID bit 2	Monitor ID bit 2	Optional
15	Monitor ID bit 3	Open	Monitor ID bit 3	Monitor ID bit 3	Optional
9	N/C	+5V	+5V	+5V	Optional
Support	No	Yes	Yes	No	Yes

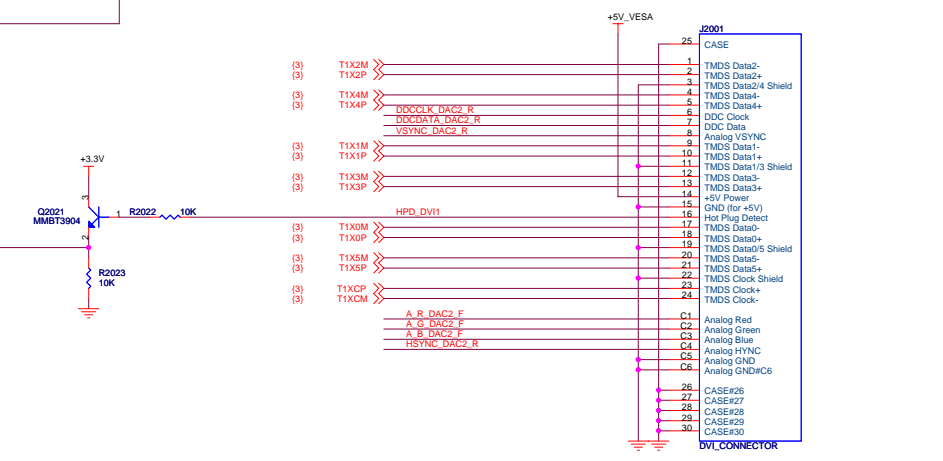
Based on VESA Display Data Channel (DDC) Standard Ver. 3 Dec. 15, 1997

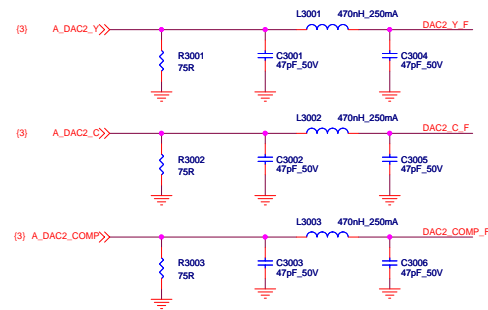




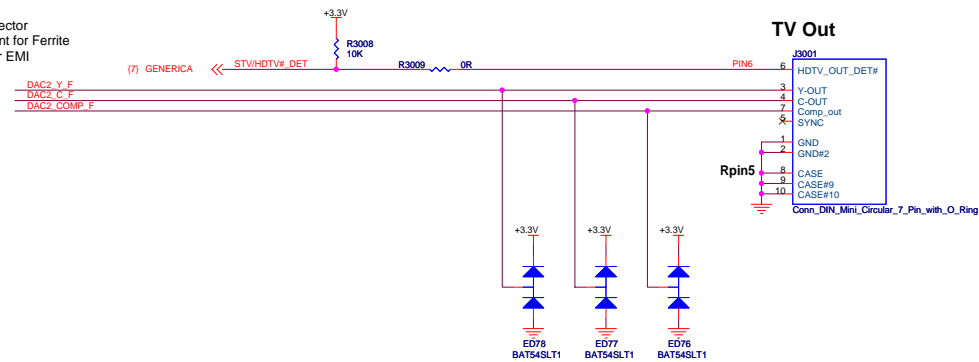
DB15 pin	Standard VGA	DDC1 Host	DDC2B or DDC2B+ Host	DDC2AB Host	DDC1/2 Display
11	Monitor ID bit 0	Monitor ID bit 0	Monitor ID bit 0	Monitor ID bit 0	Optional
12	Monitor ID bit 1	Monitor ID bit 1	Monitor ID bit 1	Monitor ID bit 1	Optional
4	Monitor ID bit 2	Monitor ID bit 2	Monitor ID bit 2	Monitor ID bit 2	Optional
15	Monitor ID bit 3	Open	Monitor ID bit 3	Monitor ID bit 3	Optional
9	N/C	+5V	+5V	+5V	Optional
Hardware Support	Mechanical Key	Yes	Yes	No	Yes

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





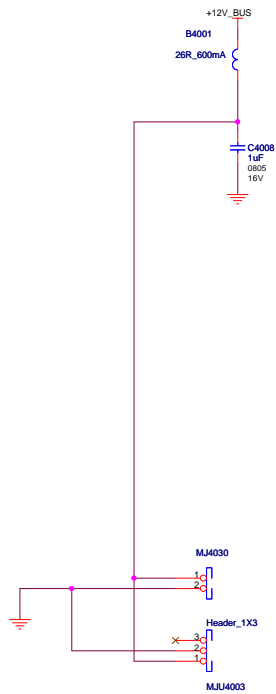
Place near connector
OR leaves footprint for Ferrite
Beads if req'd for EMI



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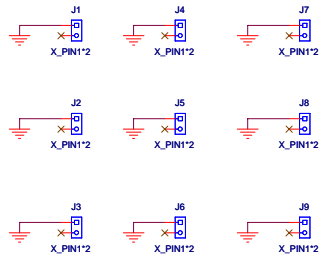
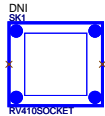
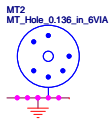
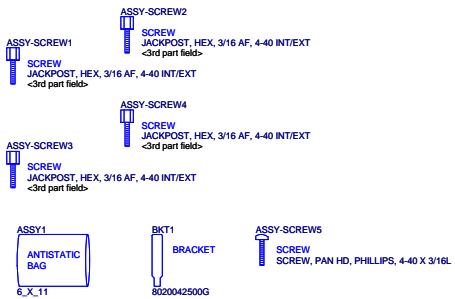
Title	RV630 GDDR3 - TVO	Rev	A
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DVI/DVI SCREWS with top tab



<Variant Name>

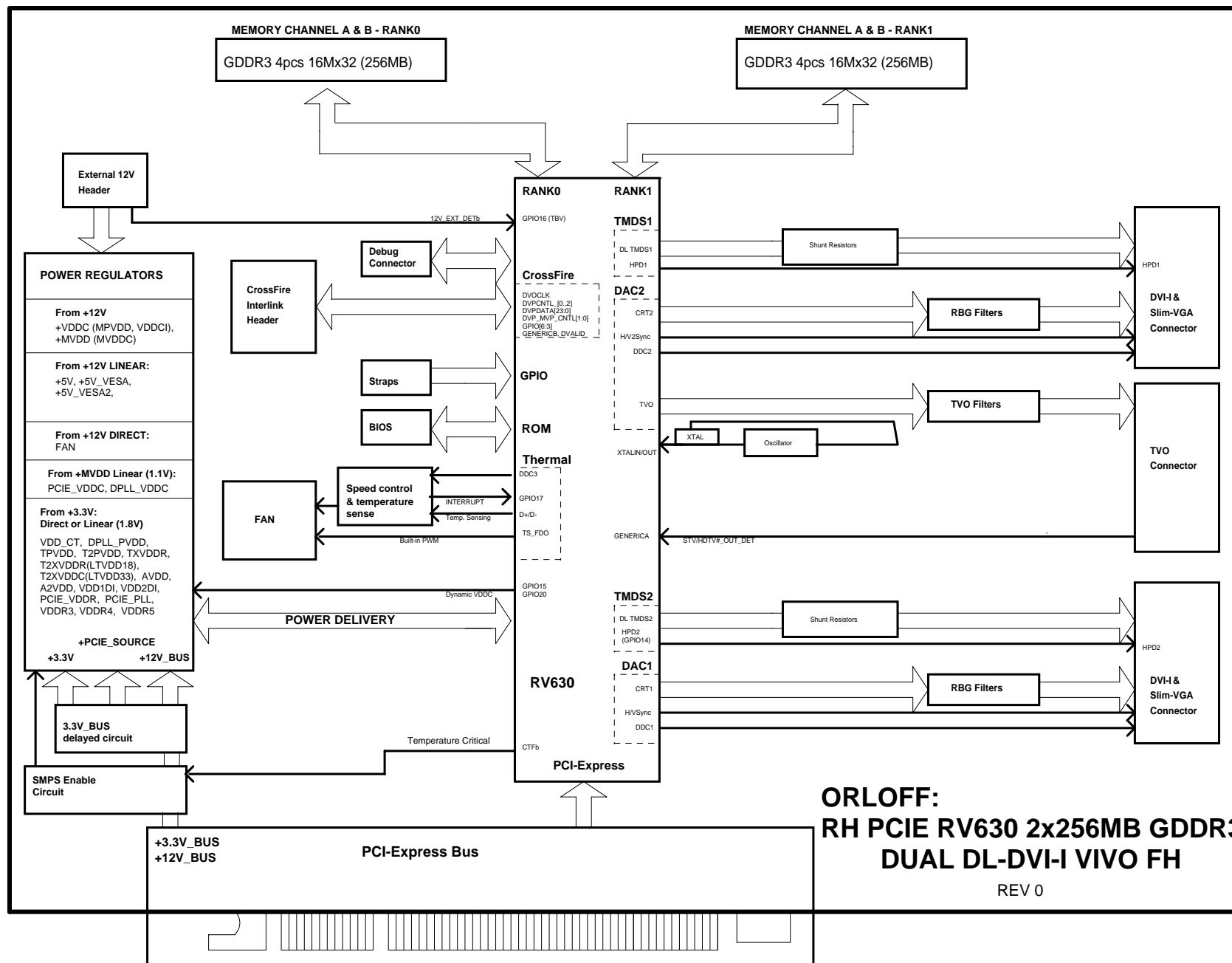
		ATI Technologies Inc. 1 Commerce Valley Drive East Markham, Ontario Canada, L3T 7X6 (905) 882-2600	
Title RV630 GDDR3- Mechanical			
Size C	Document Number	105-B148xx-00A	Rev A
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Title	Schematic No.	Date:
RH PCIE RV630 2x256MB GDDR3 DUAL DL-DVI-I VIVO FH	105-B148xx-00A	Tuesday, April 10, 2007

REVISION HISTORY	NOTE: This schematic represents the PCB, it does not represent any specific SKU. For Stuffing options (component values, DNI , ? please consult the product specific BOM. Please contact ATI representative to obtain latest BOM closest to the application desired.	Rev A
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Sch Rev	PCB Rev	Date	REVISION DESCRIPTION
0	00A	07/02/06	Initial design for RV630 GDDR3



ORLOFF:
RH PCIE RV630 2x256MB GDDR3
DUAL DL-DVI-I VIVO FH

REV 0



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Title RV630 GDDR3 - BLOCK DIAGRAM

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