NV11, 2MX32 SDR SDRAM, DUAL RGB, EXTERNAL DVI-I, AGP4X, TV I/F.
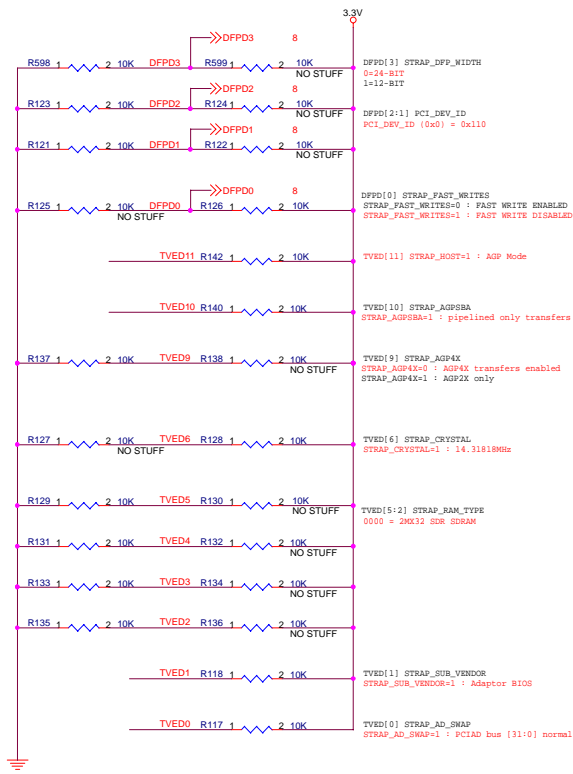
PCI DEVICE ID 0X0=0X110 FOR NV11.

STRAPS: AGP4X, FAST WRITE ENA, ADP BIOS, NORMAL PCIAD, 14.318MHZ
STRAP_RAM_TYPE [5:2]=0000-2MX32 SDR SDRAM

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nVIDIA

U100A

Signal	Pin	Label
PCIAD0	AJ28	PCIAD0
PCIAD1	AH27	PCIAD1
PCIAD2	AK26	PCIAD2
PCIAD3	AJ27	PCIAD3
PCIAD4	AG24	PCIAD4
PCIAD5	AH26	PCIAD5
PCIAD6	AK24	PCIAD6
PCIAD7	AK27	PCIAD7
PCIAD8	AH24	PCIAD8
PCIAD9	AK23	PCIAD9
PCIAD10	AK25	PCIAD10
PCIAD11	AJ23	PCIAD11
PCIAD12	AG23	PCIAD12
PCIAD13	AK22	PCIAD13
PCIAD14	AH22	PCIAD14
PCIAD15	AJ22	PCIAD15
PCIAD16	AG19	PCIAD16
PCIAD17	AH19	PCIAD17
PCIAD18	AJ19	PCIAD18
PCIAD19	AJ18	PCIAD19
PCIAD20	AJ18	PCIAD20
PCIAD21	AK19	PCIAD21
PCIAD22	AH18	PCIAD22
PCIAD23	AJ16	PCIAD23
PCIAD24	AK17	PCIAD24
PCIAD25	AK16	PCIAD25
PCIAD26	AH15	PCIAD26
PCIAD27	AJ15	PCIAD27
PCIAD28	AH14	PCIAD28
PCIAD29	AG15	PCIAD29
PCIAD30	AG14	PCIAD30
PCIAD31	AK14	PCIAD31

VDDQ pins: AE24, AF11, AF13, AF18, AF20, AF24, AG25 — VDDQ

NVVDD / VDD pins: AA26, AF10, AF12, AF19, AF21, AF23, E10, E11, E12, E13, E18, E19, E20, E21, K5, K26, L5, L26, M5, M26, N26, V5, V26, W5, W26, Y5, Y26 — VDD

Signal	Pin	Label
PCICBE0	AJ24	PCICBE#0
PCICBE1	AG22	PCICBE#1
PCICBE2	AK21	PCICBE#2
PCICBE3	AK18	PCICBE#3
PCICLK	AG16	PCICLK
PCIRST_	AK15	PCIRST#
PCIGNT_	AH11	PCIGNT#
PCIREQ_	AK11	PCIREQ#
PCIFRAME_	AH20	PCIFRAME#
PCIIRDY_	AG20	PCIIRDY#
PCITRDY_	AK20	PCITRDY#
PCIDEVSEL_	AG21	PCIDEVSEL#
PCISTOP_	AH21	PCISTOP#
PCIPAR	AJ21	PCIPAR
PCIINTA_	AH16	PCIINTA#
AGPRBF_	AH12	AGPRBF#
AGPWBF_	AH13	AGPWBF#
AGPPIPE_	AG13	AGPPIPE#
AGPST0	AG12	AGPST0
AGPST1	AJ12	AGPST1
AGPST2	AK12	AGPST2
AGPADSTB1	AG17	AGPADSTB1
AGPADSTB1_	AH17	AGPADSTB1#
AGPADSTB0	AK25	AGPADSTB0
AGPADSTB0_	AJ25	AGPADSTB0#
AGPBUSY_	AK13	AGPBUSY#
AGPSTOP_	AJ13	AGPSTOP#
AGPVREFCG	AK28	AGPVREF

VD50CLAMP pins: AA5, AB5, AF8, F6 — VD50CLAMP

VDD33 pins: AD5, AD6, AE4, AE5, AE7, AF4, AF6, AF7, AG5, AG6, G5, H5 — VDD33

GND pins: N5, P4, P29, U2, U29, Y2, Y29 — GND

TESTMODE0 AK2 TEST0
TESTMODE1 AK29 TEST1

A01

Capacitors (VDDQ rail): C840 0.1UF, C841 0.1UF, C842 0.1UF, C843 0.1UF

5V
C214 0.1UF
3.3V
3.3V

VDDQ
R572 10K
TP9

R566 10K
R100 10K

Heat Sink
GeForce2 MX-400

In all cases each capacitor should be low
ESR/ESL and placed as close as possible to
the respective rail connector pin(s).

PCIAD[31:0]   2
PCICBE0_   2
PCICBE1_   2
PCICBE2_   2
PCICBE3_   2
PCICLK   2
PCIRST_   2
PCIGNT   2
PCIREQ   2
PCIFRAME_   2
PCIIRDY_   2
PCITRDY_   2
PCIDEVSEL_   2
PCISTOP_   2
PCIPAR   2
PCIINTA   2
AGPRBF_   2
AGPWBF_   2
AGPPIPE_   2
AGPST0   2
AGPST1   2
AGPST2   2
AGPADSTB1   2
AGPADSTB1_   2
AGPADSTB0   2
AGPADSTB0_   2

C104 10UF   C105 10UF   C108 0.1UF
C110 0.01UF   C111 0.01UF   C112 0.022UF   C114 0.01UF
C115 10UF   C116 0.022UF   C117 0.022UF   C118 0.022UF

VDDQ   5V   3.3V

R103 0R

R104 0R NO STUFF
R105 0R NO STUFF
R106 0R NO STUFF

C119 5.6PF NO STUFF   C120 5.6PF NO STUFF   C121 5.6PF NO STUFF
R109 220K   R110 220K

R111 1.5K   C122 470PF   AGPVREF1
R113 75R
R114 75R
R116 1.5K   C126 470PF   AGPVREF2

R112 301K
C125 0.1UF NO STUFF   R115 221K

AGPVREFGC
AGPVREFCG   2

(GOLD FINGERS AND PCB PER FAB DWG)

J100 D1x2-WH   12V

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AGP I/O
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3.3V

C139 10UF
C136 10UF
C851 10UF
C852 10UF NO STUFF
C853 10UF NO STUFF

3.3V   3.3V
C129
1 8
2 7
3 6
4 5
0.1uF
NO STUFF

NVVDD   NVVDD
C134
1 8
2 7
3 6
4 5
0.1uF

NVVDD   NVVDD
C135
1 8
2 7
3 6
4 5
0.1uF

NVVDD   NVVDD
C132
1 8
2 7
3 6
4 5
0.1uF

3.3V   3.3V
C839
1 8
2 7
3 6
4 5
0.1uF
NO STUFF

3.3V   3.3V
C131
1 8
2 7
3 6
4 5
0.1uF

3.3V   3.3V
C130
1 8
2 7
3 6
4 5
0.1uF

NVVDD   NVVDD
C133
1 8
2 7
3 6
4 5
0.1uF

NVVDD
C137 10UF
C127 10UF
C128 10UF

3.3V

TO-263 5-pin package
Semtech EZ1581,
Unisem US1150

NVVDD

D800 DO-214AB 3A
D801 DO201 3A NO STUFF

U511
REG-PWR-IN 5 POWER   SENSE   OUTPUT 3
5V   4 CONTROL ADJ   6
FBADJ

2.0V@3A +/- 100mV

R68 113
R69 68.1

C145 0.039UF

C810 10UF ALE-B
C844 330UF ALE-C
C808 330UF ALE-D NO STUFF

C827 330UF R055
C828 330UF R055
C809 1UF

3.3V

8 DFPD[11:0]
7,11,12 VIPD[7:0]
7,11,12 TVED[11:0]

DFPD3 8
R598 1 2 10K DFPD3 R599 1 2 10K
NO STUFF

DFPD2 8
R123 1 2 10K DFPD2 R124 1 2 10K
NO STUFF

DFPD1 8
R121 1 2 10K DFPD1 R122 1 2 10K
NO STUFF

DFPD0 8
R125 1 2 10K DFPD0 R126 1 2 10K
NO STUFF

TVED11 R142 1 2 10K

TVED10 R140 1 2 10K

R137 1 2 10K TVED9 R138 1 2 10K
NO STUFF

R127 1 2 10K TVED6 R128 1 2 10K
NO STUFF

R129 1 2 10K TVED5 R130 1 2 10K
NO STUFF

R131 1 2 10K TVED4 R132 1 2 10K
NO STUFF

R133 1 2 10K TVED3 R134 1 2 10K
NO STUFF

R135 1 2 10K TVED2 R136 1 2 10K
NO STUFF

TVED1 R118 1 2 10K

TVED0 R117 1 2 10K

DFPD[3] STRAP_DFP_WIDTH
0=24-BIT
1=12-BIT

DFPD[2:1] PCI_DEV_ID
PCI_DEV_ID (0x0) = 0x110

DFPD[0] STRAP_FAST_WRITES
STRAP_FAST_WRITES=0 : FAST WRITE ENABLED
STRAP_FAST_WRITES=1 : FAST WRITE DISABLED

TVED[11] STRAP_HOST=1 : AGP Mode

TVED[10] STRAP_AGPSBA
STRAP_AGPSBA=1 : pipelined only transfers

TVED[9] STRAP_AGP4X
STRAP_AGP4X=0 : AGP4X transfers enabled
STRAP_AGP4X=1 : AGP2X only

TVED[6] STRAP_CRYSTAL
STRAP_CRYSTAL=1 : 14.31818MHz

TVED[5:2] STRAP_RAM_TYPE
0000 = 2MX32 SDR SDRAM

TVED[1] STRAP_SUB_VENDOR
STRAP_SUB_VENDOR=1 : Adaptor BIOS

TVED[0] STRAP_AD_SWAP
STRAP_AD_SWAP=1 : PCIAD bus [31:0] normal

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Document Number
NV11 HOST STRAPS
Rev 0A
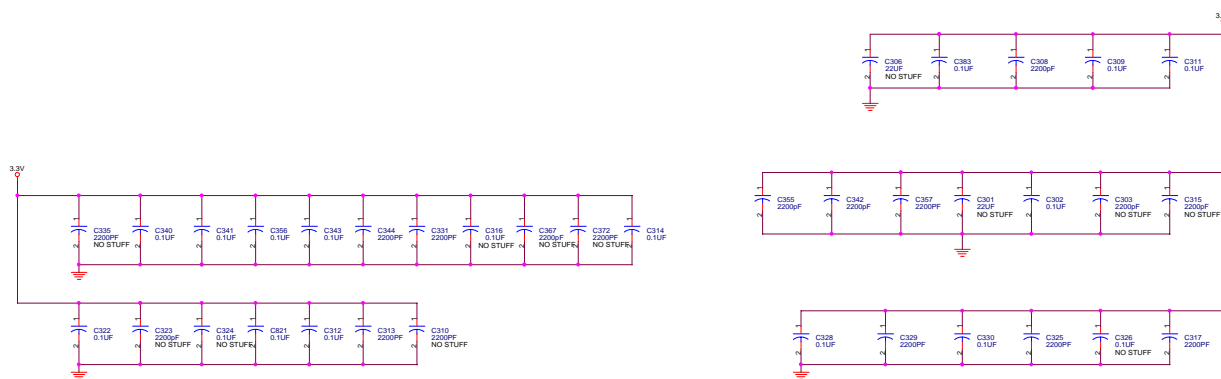Date: Tuesday, May 22, 2001 Sheet 5 of 12

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	DAC I/O	

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U100D

Signal	Pin
CDDCSCL	AG7 / DDCSCL
CDDCSDA	AH5 / DDCSDA
CSCL	AH6 / I2CSCL
CSDA	AK5 / I2CSDA
VIPHCLK	A8 / VIPHCLK
VIPHCTL	B7 / VIPHCTL
VIPHAD0	A4 / VIPHAD0
VIPHAD1	C4 / VIPHAD1
VIPHAD2	AC3 / VIPHAD2
VIPHAD3	AC4 / VIPHAD3
VIPHAD4	C8 / VIPHAD4
VIPHAD5	AK3 / VIPHAD5
VIPHAD6	AH1 / VIPHAD6
VIPHAD7	AD4 / VIPHAD7

TVED[11:0]   5,11,12
VIPD[7:0]   11,12

VIPPCLK B4 VIPPCLK   VIPPCLK 12
VIPD0   H3 VIPD0   VIPD[7:0] 11,12
VIPD1   F1 VIPD1
VIPD2   H4 VIPD2
VIPD3   G2 VIPD3
VIPD4   E1 VIPD4
VIPD5   G3 VIPD5
VIPD6   D1 VIPD6
VIPD7   F2 VIPD7
VIPD8   F3 VIPD8   VIPD8
VIPD9   G4 VIPD9   VIPD9

3.3V
L211
150-220R_100MHZ
1 2

DACVDD AK9 DACVDD
        AK8 PLLVDD

C215 0.1UF
C216 0.001UF
C217 0.01UF

DACCOMP AG11 DACCOMP
DACVREF AK10 DACVREF
DACRSET AJ10 DACRSET

C218 0.01UF
R212 110

AJ9 DACGND

DACRED   AG10 DACRED   DACRED 6
R211 75

DACGREEN AH10 DACGREEN DACGREEN 6
R213 75

DACBLUE   AH9   DACBLUE   DACBLUE 6
R214 75

BUFFRST_   12   B10 BUF_RST#
TVEVSYNC   12   AE1 TVVSYNC
TVEHSYNC   12   AD3 TVHSYNC

Signal	Pin
TVED0	AJ4 / TVD0
TVED1	AK4 / TVD1
TVED2	AH4 / TVD2
TVED3	AJ3 / TVD3
TVED4	AG1 / TVD4
TVED5	AG2 / TVD5
TVED6	AE2 / TVD6
TVED7	AE3 / TVD7
TVED8	AF3 / TVD8
TVED9	AF1 / TVD9
TVED10	AG3 / TVD10
TVED11	AH2 / TVD11

5,11,12 TVED[11:0]

VIDHSYNC AG8 DACHSYNC DACHSYNC 6,11
VIDVSYNC AH7 DACVSYNC DACVSYNC 6

TVECLKOUT 12 TVECLKOUT R597 CTVECLKOUT AD1 TVCLKOUT
TVECLKIN   12 TVECLKIN   22R   AD2 TVCLKIN

XTALSOUT AH8
XTALSIN   AG9

R216 220K

AK7 XTALIN   XTALOUT AJ7

A01

100_100_20 14.31818MHZ Y200
DACXTALIN   1   2   DACXTALOUT

C223 10PF
C224 10PF

Use thick (non-impedance controlled) traces on XTALIN/OUT

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3.3V

C306 22UF NO STUFF	C383 0.1UF	C308 2200pF	C309 0.1UF	C311 0.1UF

3.3V

| C335 2200PF NO STUFF | C340 0.1UF | C341 0.1UF | C356 0.1UF | C343 0.1UF | C344 2200PF | C331 2200PF | C316 0.1UF NO STUFF | C367 2200pF NO STUFF | C372 2200PF NO STUFF | C314 0.1UF |

| C355 2200pF | C342 2200pF | C357 2200PF | C301 22UF NO STUFF | C302 0.1UF | C303 2200pF NO STUFF | C315 2200pF NO STUFF |

| C322 0.1UF | C323 2200pF NO STUFF | C324 0.1UF NO STUFF | C821 0.1UF | C312 0.1UF | C313 2200PF | C310 2200PF NO STUFF |

| C328 0.1UF | C329 2200PF | C330 0.1UF | C325 2200PF | C326 0.1UF NO STUFF | C317 2200PF |

5V 5V 3.3V 3.3V

R402 2.2K
R403 2.2K
R400 10K
R401 10K

7 CSCL R404 1 2 33R SCL SCL 12
7 CSDA R405 1 2 33R SDA SDA 12
7 VIPHAD0
7 VIPHCTL

VIPD0 VIPD0 7,12
VIPD1 VIPD1 7,12
VIPD2 VIPD2 7,12
VIPD3 VIPD3 7,12
VIPD4 VIPD4 7,12
VIPD5 VIPD5 7,12
VIPD6 VIPD6 7,12
VIPD7 VIPD7 7,12

VIPHAD5 7
VIPHAD6 7
VIPHAD7 7

5,7,12 TVED[11:0] TVED[11:0]

U400

TVED0	12	A0	O0	13 VIPD0
TVED1	11	A1	O1	14 VIPD1
TVED2	10	A2	O2	15 VIPD2
TVED3	9	A3	O3	17 VIPD3
TVED4	8	A4	O4	18 VIPD4
TVED5	7	A5	O5	19 VIPD5
TVED6	6	A6	O6	20 VIPD6
TVED7	5	A7	O7	21 VIPD7
TVED8	27	A8		
TVED9	26	A9		
TVED10	23	A10		
TVED11	25	A11		

7 VIPHAD2 4 A12
7 VIPHAD3 28 A13
7 VIPHAD4 29 A14
6,7 DACHSYNC 3 A15 NC 1
UPPER 2 NC/A16
30 NC/A17

8 ROMCS_ 22 CE VDD 32 3.3V
7 VIPHAD0 24 OE C480 0.1UF
7 VIPHAD1 31 WE GND 16
150NS

3.3V

UPPER J1
1 1
2 2
3 3
D1x3-BK

Default CAP ON Pin 2-3

1.EXTAL,EXTALI,DXTAL AND DXTALI
NETS SHOULD BE 10 mils width.

[8:7] STRAP_TVMODE
STRAP_TVMODE=0 : PAL
STRAP_TVMODE=1 : NTSC
STRAP_TVMODE=2 : Reserved
STRAP_TVMODE=3 : Disabled

(STUFF FOR SAA7102)

DECODER   ENCODER