P75. NV17-Pro. 4MX32 DDR BGA. 64MB. RGB. dual DVI-I. VGA TV-out, video capture, stereo. AGP4X

 NVIDIA

HISTORY:

A01-X00: started with P75-A00

added the TV-out filter to the TV OUT CY assembly fixed strapping bugs for xtal and rom

remove the Connexant TV encoder add serial termination for the DVO port

changed switcher input to 3.3V

added 2.8V supply for IFPPLLVDD

added possible OCSet circuit to Semtech switcher (R640,R641,C640)

A01-X04: fixed 0603 caps on 0402 footprints

PCI DEVICE ID 0X0 see strapping options.

PAGE OVERVIEW

1 TOP (this) page

2 1. AGP interface, core decoupling

3 2.a NV17 Frame Buffer

4 2.b Frame Buffer 0..63

5 2.b Frame Buffer 64...127

6 3.a DAC_A, DAC_B, XTAL 7 3.c DAC A VGA

8 3.d DAC_B VGA

9 3.e Int. Transmitter

10 5.b PH-Video Decoder

11 5.c TV out, Video Capture

12 6.a NVVDD Power Supply, VDD33

13 6.b Analog Power Supply, FBVDDQ

14 7 BIOS, Strapping

Stuffing Options Meaning

VDD33

COMMON the common components 1117 stuff fixed 1117 linear regulator for analog 3.3V

1117 ADJ stuff adjustable 1117 linear regulator for analog 3.3V

NO 1117 bypass the linear regulator for analog 3.3V

BP_FBVDDQ bypass the linear regulator for FBVDDQ (=> FBVDDQ=FBVDD)

SET FBVDDQ set the FBVDDQ voltage (memory IO) SET_FBVDD set the FBVDD voltage (memory core) SET NVVDD set the NVVDD voltage (GPU core) BP VDD33 bypass the VDD33 voltage for the GPU

stuff the VDD33 regulator components SET_VDD33 set the VDD33 voltage SC stuff the Semtech switcher

SC1565 stuff FBVDDQ voltage regulator SC1565

IRU stuff the IR switcher

IRU VID stuff the VID setting resistors of the IR switcher IRU POWSEQ stuff the power sequencing circuit for the IR switcher

VIDCAP stuff the video capture circuit with SAA7114 TV OUT PH stuff TV-out with the Philips encoder SAA7102

stuff video in/out with SAA7108

VIVO VGA-B PROT stuff the protection diodes around DAC B DVI-I-A PROT stuff the protection diodes around DVI-I A VGA-B stuff the VGA connector at DAC B

VGA-B-SYNCBUFF stuff the sync buffer for DAC B/DVI-I-B DVI-I-A-SYNCBUFF stuff the sync buffer for DVI-I-A NO_DVI-I-A-SYNCBUFF bypass the sync buffer for DVI-I-A

NO VGA-B-SYNCBUFF bypass the sync buffer for DAC B/DVI-I-B DVI-I-A stuff the DVI-I at DAC A (and the SII164) stuff the DVI-I at DAC B (and internal transmitter) DVI-I-B

STEREOSYNC1 stuff the stereo synchronisation for DAC A STEREOSYNC2 stuff the stereo synchronisation for DAC B **STEREOSYNCS** stuff the switchable stereo synchronisation

STEREO stuff the stereo circuit

A HPLUG stuff the hot plug detection for DVI-I-A B HPLUG stuff the hot plug detection for DVI-I-B XOR HPLUG stuff the hot plug detection for DVI-I-A and B

VGA-TV-DVI use the VGA-TV-DVI bracket VGA-TV use the VGA-TV bracket VGA use the VGA bracket DVI-TV-DVI use the DVI-TV-DVI bracket PASSIVE HS use the passive heatsink

FAN use the fan heatsink and stuff all associated components

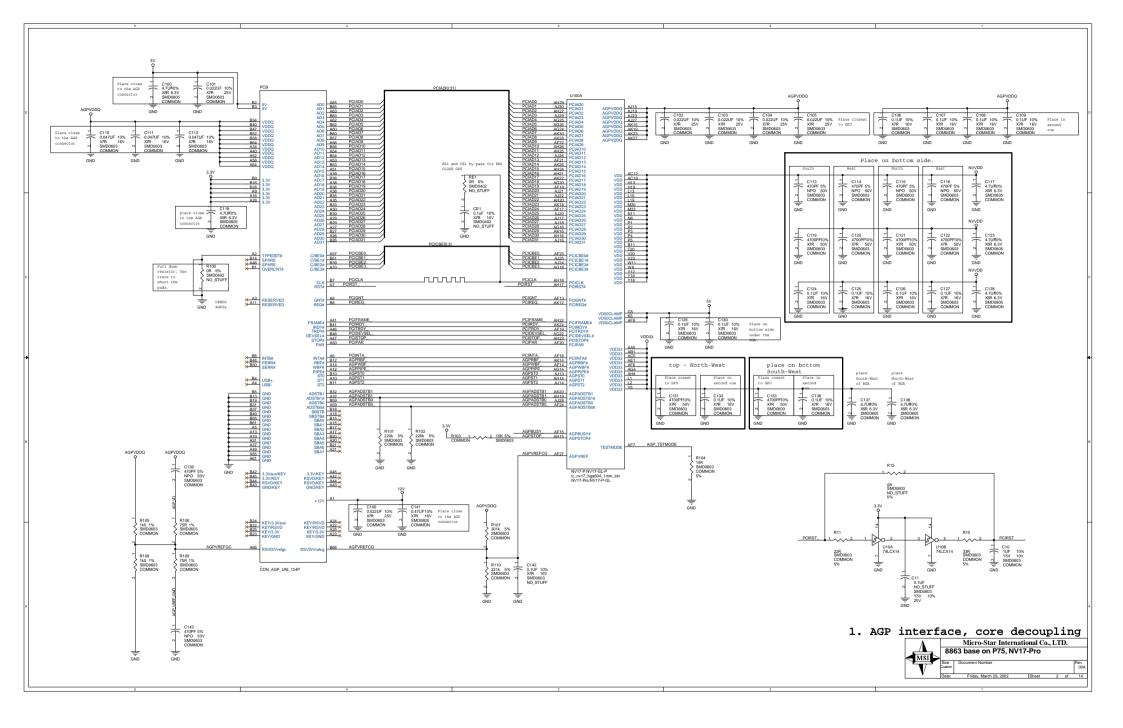
TH Control stuff the thermal control circuit

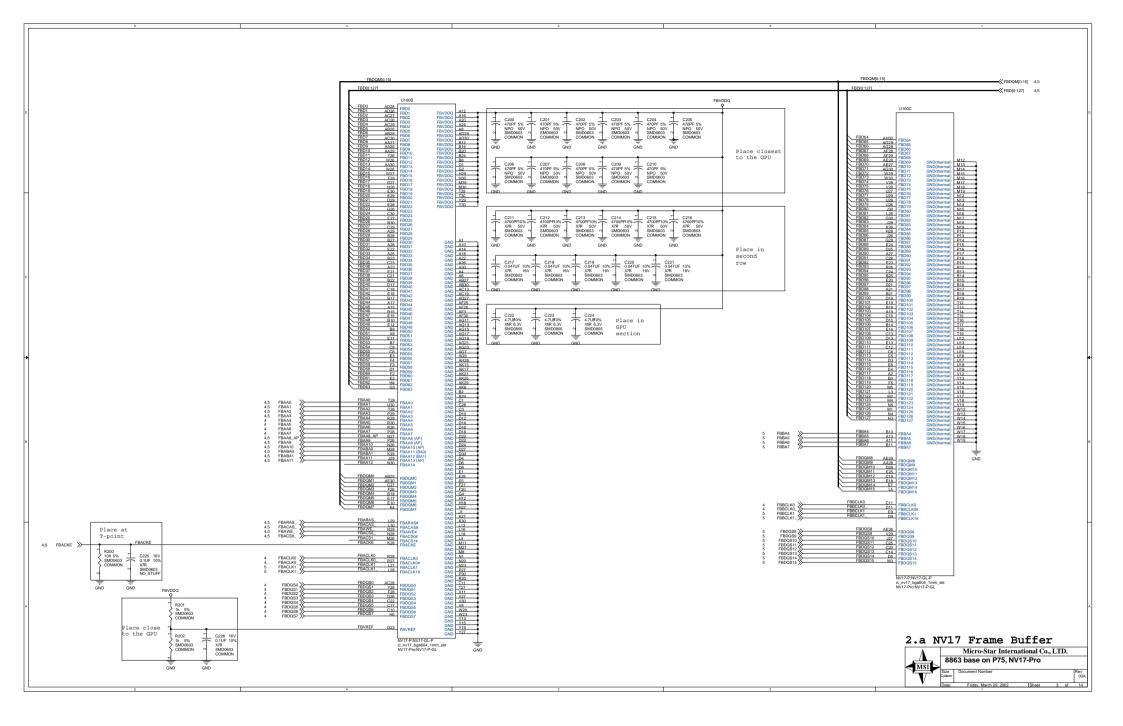
MEMORY the memory stuffing

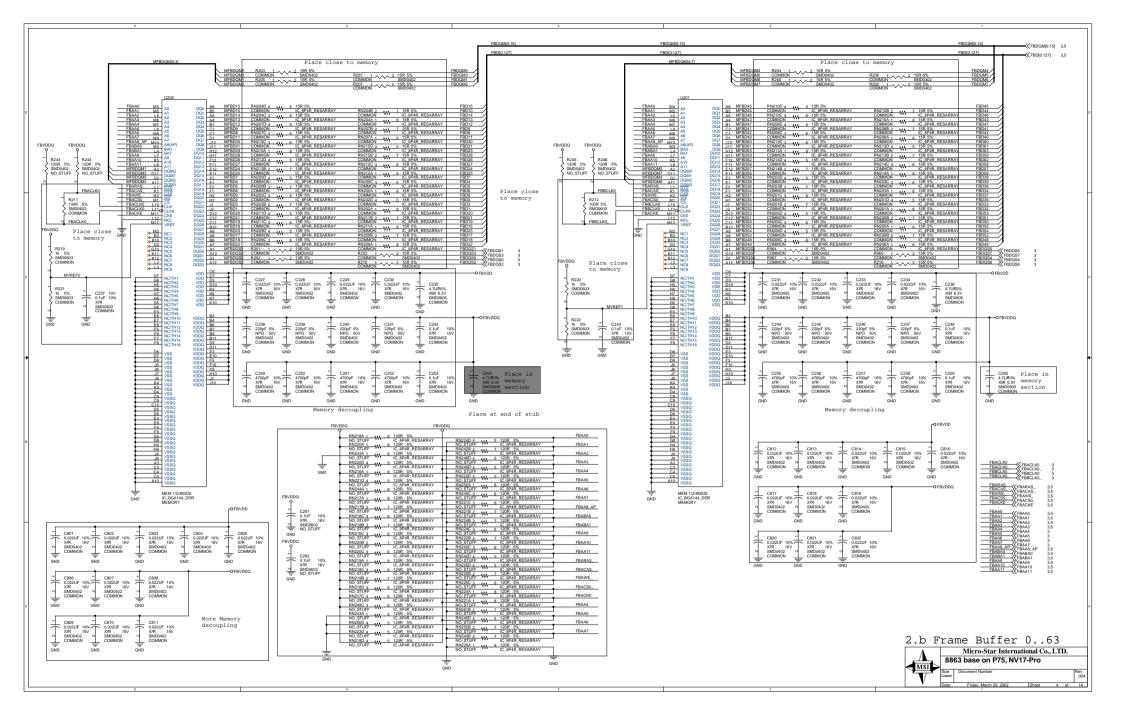
MEM_STRAP_1111 strap the memory to 1111 (= 4Mx32, 1DQS per 32bit) MEM STRAP 1101 strap the memory to 1101 (= 4Mx32, 1DQS per 8bit)

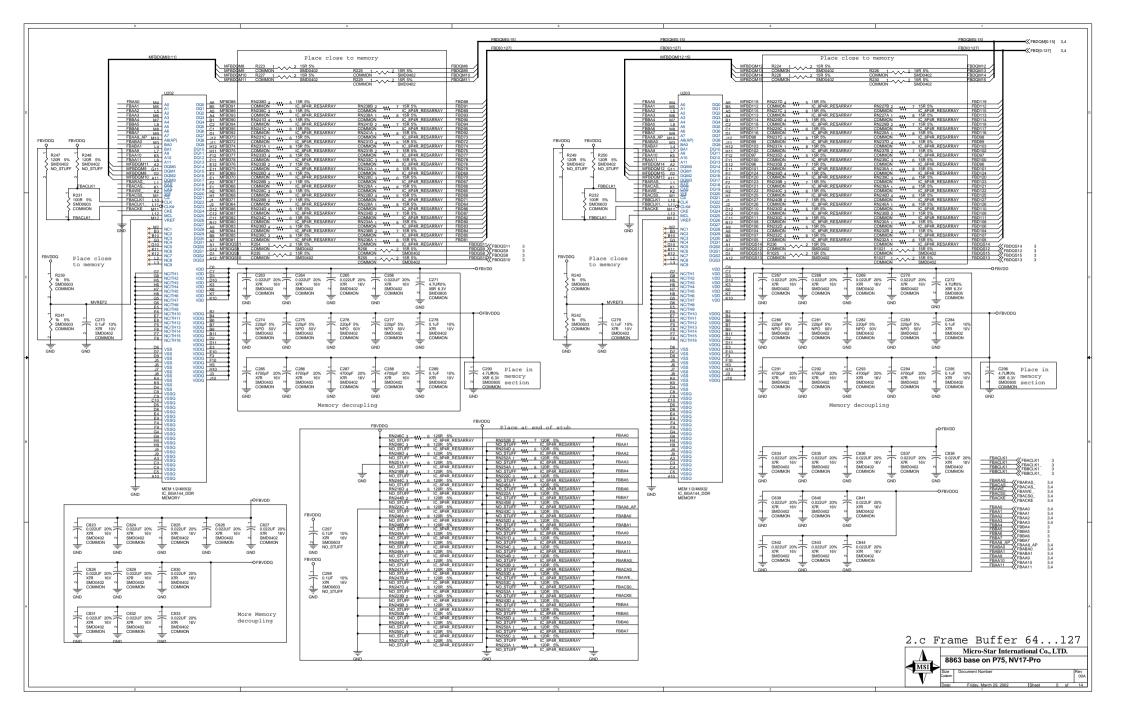
NV17-Pro stuff the NV17 Pro NV17-P-GL stuff the NV17 GL Pro

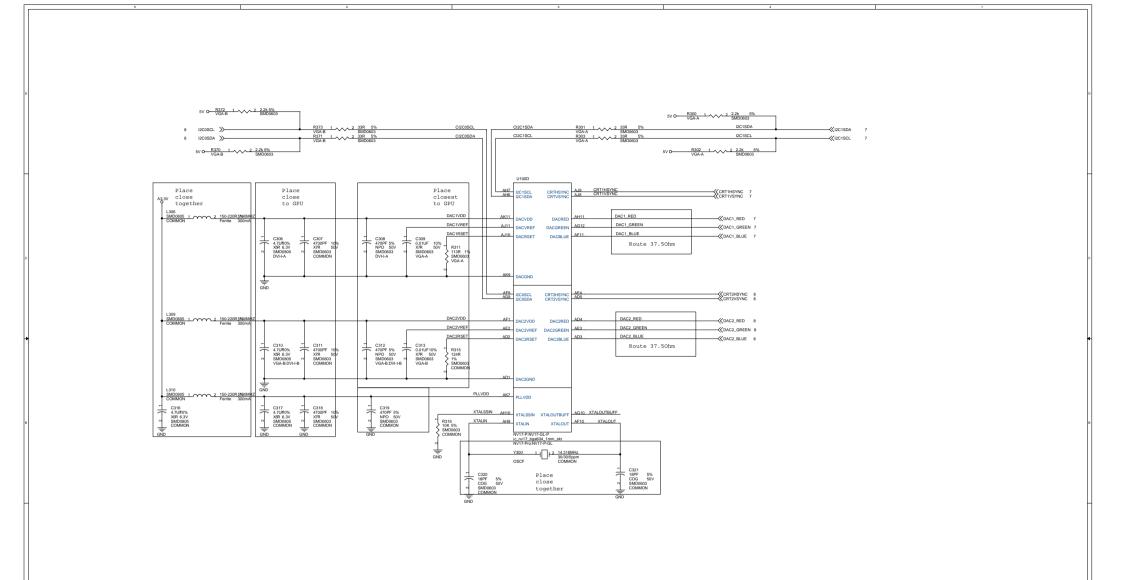
A		Micro-Star Intern	ational Co., LTD.		
MSI	8863 base on P75, NV17-Pro				
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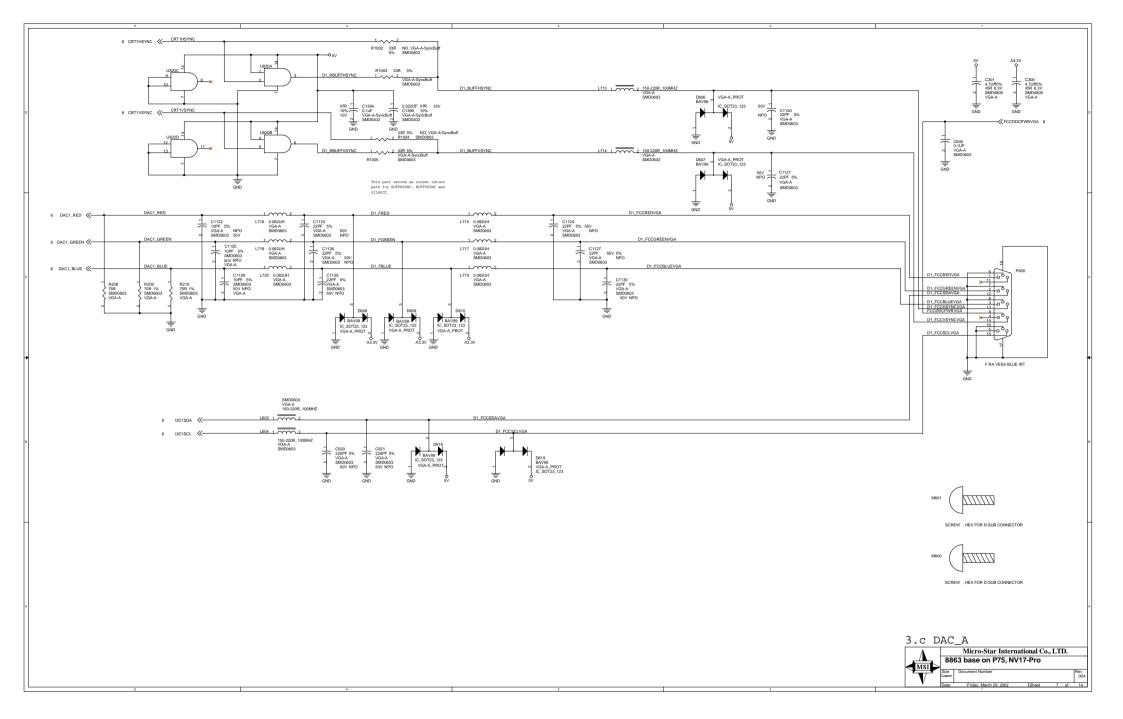


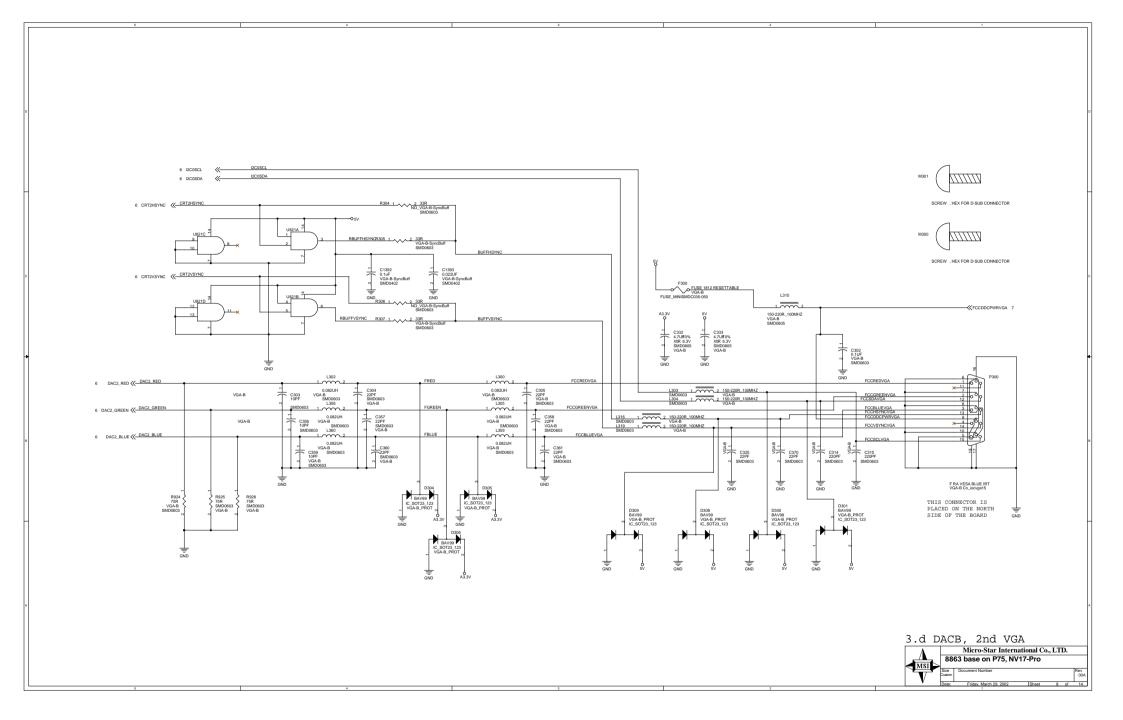


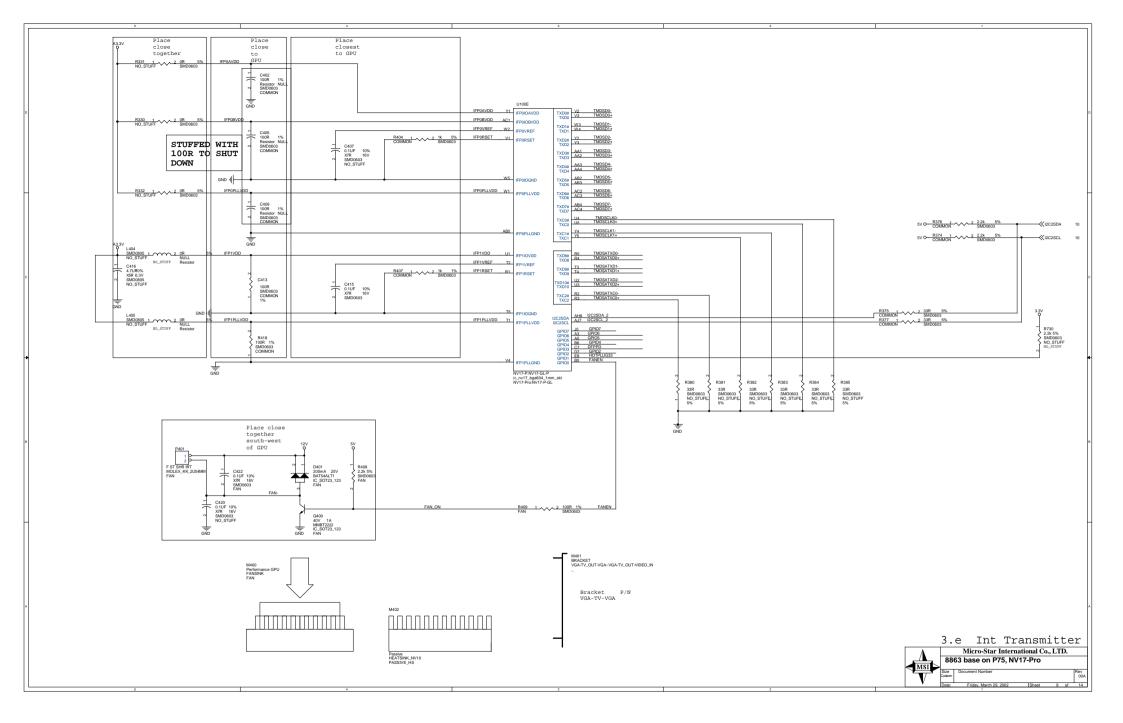


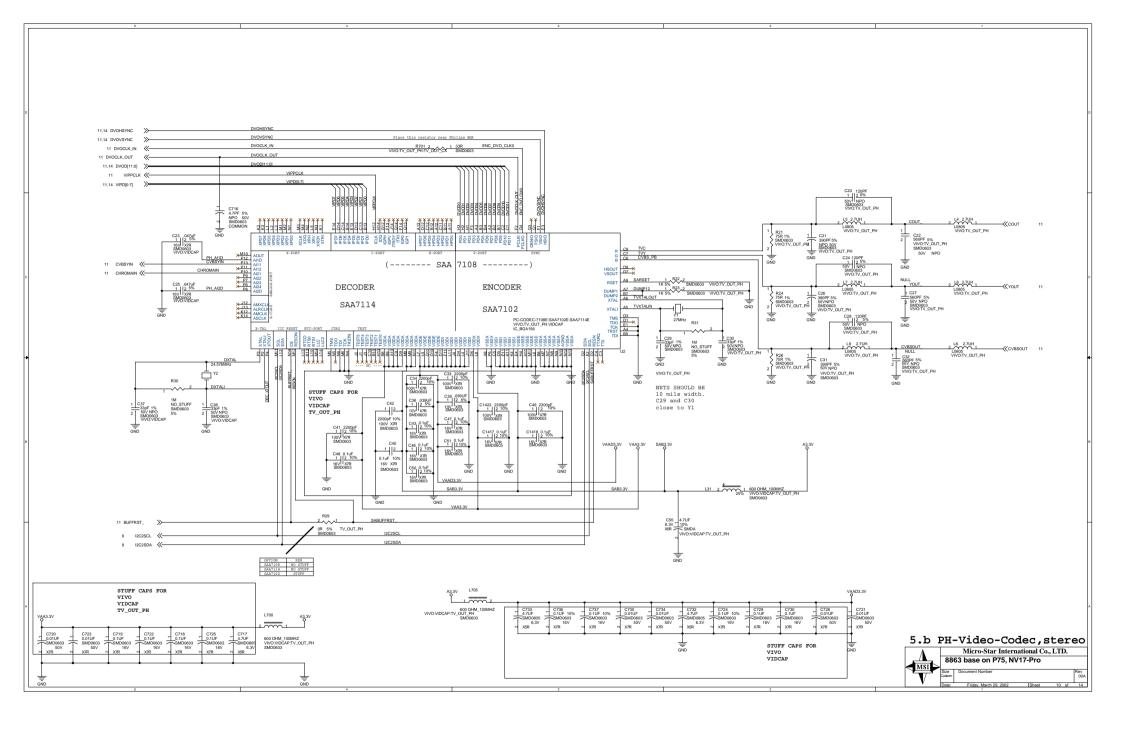
3.a DACA, DACB, PLL, XTAL

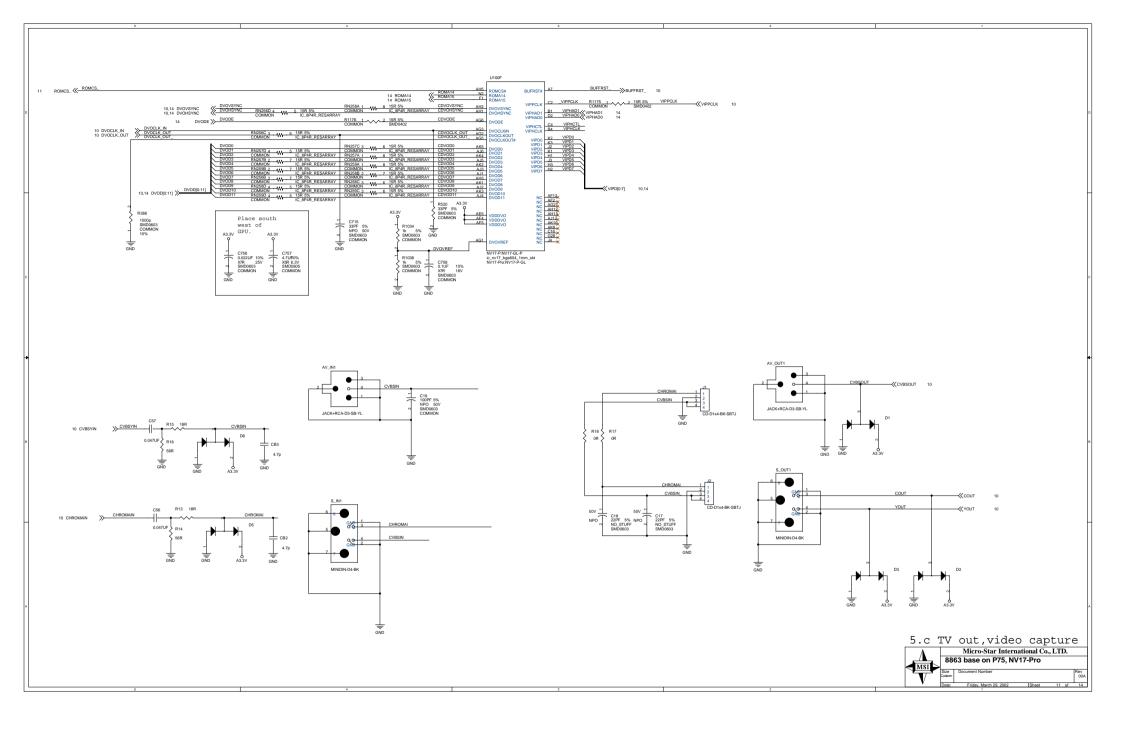


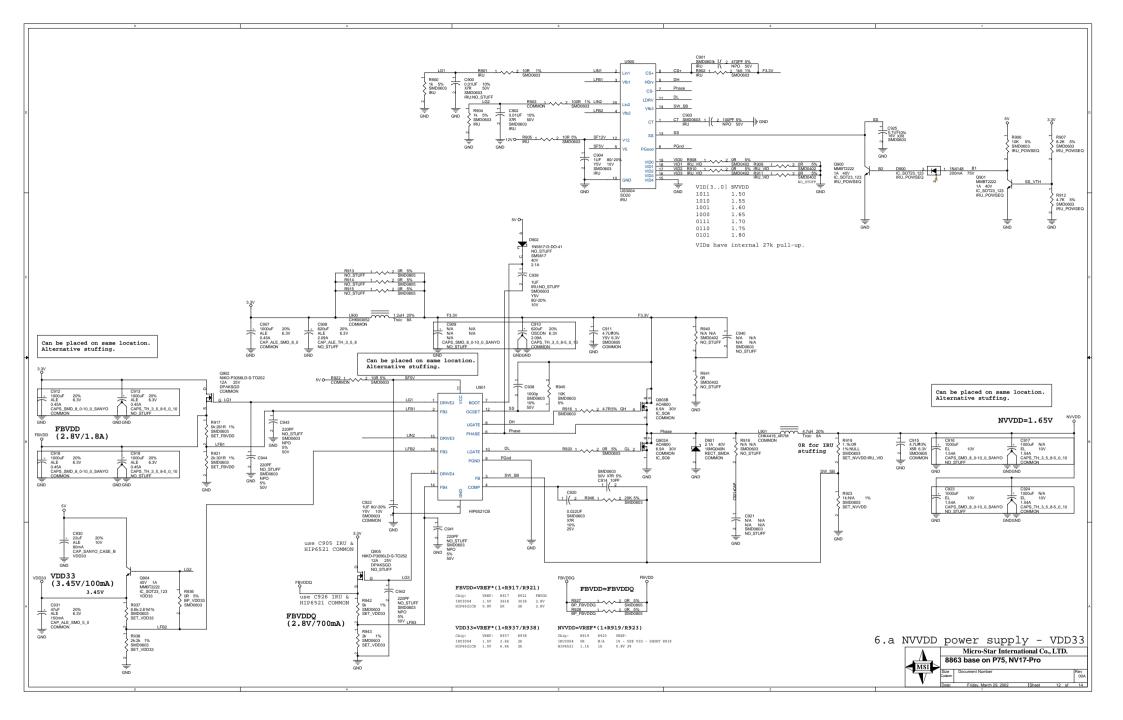


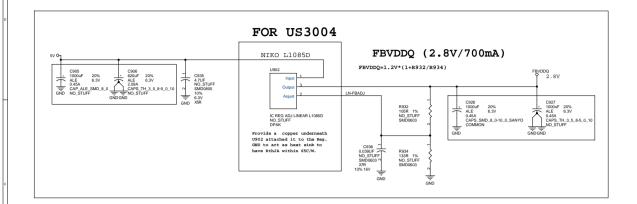


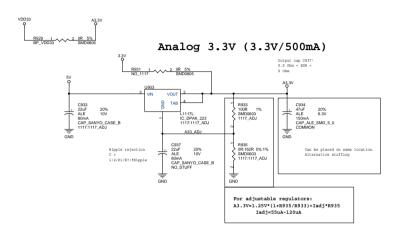


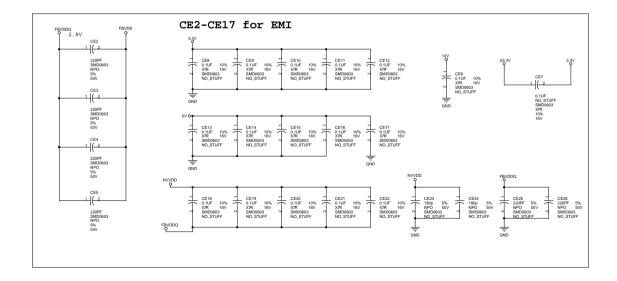


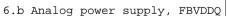




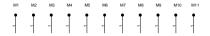












Strapping

10,11 DVOHSYNC >>

		VIPD[0:7]		
	DVOD0	R801 1 2 10k 5% SMD0402	PCI_AD_SWAP	0: REVERSED not supported 1: NORMAL
R804 1 2 10k 5% NO_STUFF SMD0402	DVOD1	R805 1 2 10k 5% COMMON SMD0402	SUB_VENDOR	0: system BIOS 1: adapter BIOS default
R808 1 2 10k 5% NO_STUFF SMD0402	DVOD2 DVOD3 DVOD4 DVOD5	R809 1 2 10k 5% MEM_STRAP_1101MEM_STRAP_1111 R811 1 2 10k 5% MEM_STRAP_111 R813 1 2 10k 5% MEM_STRAP_1101MEM_STRAP_1111 R815 1 2 10k 5% MEM_STRAP_1101MEM_STRAP_1111 R815 1 2 10k 5%	RAM_CFG_0 RAM_CFG_1 RAM_CFG_2 RAM_CFG_3	[3:0] 13111 48423 DGB SDBAM, DQS per 32 bits, dll-on, low drive strength 1101: 48432 DGB SDBAM, DQS per 8 bits, dll-on, low drive strength
R818 1 2 10k 5% NO_STUFF SMD0402 R820 1 2 10k 5% COMMON SMD0402	DVOD6 VIPD6	R819 1 2 10k 5% COMMON SM00402 R821 1 2 10k 5% NO_STUFF SM00402	CRYSTAL_0 CRYSTAL_1	[1:0] 00: 13.5Min 01: 14.31MMn 10: 27Min 11: unknown
R824 1 2 10k 5% NO_STUFF SMD0402 R826 1 2 10k 5% NO_STUFF SMD0402	DVOD7 DVOD8	R825 1 2 10k 5% COMMON SMD0402 R827 1 2 10k 5% COMMON SMD0402	TVMODE_0 TVMODE_1	(1:0) 00: SECUM
R830 1 2 10k 5% COMMON SMD0402	DVOD9	R831 1 2 10k 5% SMD0402	AGP4x	0: enabled default 1: disabled
R834 1 2 10k 5% SMD0402	VIPD7	R835 1 2 10k 5% SMD0402	AGP_FW	0: enabled default 1: disabled
R838 1	VIPD4 VIPD5 VIPD3 DVOHSYNC	R839 1 2 10k 5% NV17-P-GL SMD0402 R841 1 2 10k 5% NV17-P-GL SMD0402 R843 1 2 10k 5% NO STUFF 2 SMD0402 R845 1 2 10k 5% NV17-P-GL SMD0402 R845 1 2 SMD0402	PCI_DEVID_0 PCI_DEVID_1 PCI_DEVID_2 PCI_DEVID_3	[310] 00001 WN17-970 10111 WN17-970-GL
	DVOD11	R849 1 2 10k 5% COMMON SMD0402	BUS_TYPE	0: PCI not supported 1: AGP default
R852 2 10k 5% COMMON SMID0402 R854 1 2 10k 5% COMMON SMID0402 R856 1 2 10k 5% COMMON SMID0402 R856 2 10k 5% COMMON SMID0402 R856 COMMON SMID0402 COMMON SMID0402 COMMON SMID0402 COMMON SMID0402 COMMON C	VIPD0 VIPD1 VIPHAD0 VIPHAD1	R853 1 2 10k 5% NO STUFF SMD0402 R855 1 2 10k 5% NO STUFF SMD0402 R857 1 2 10k 5% NO STUFF SMD0402 R857 1 2 10k 5% NO_STUFF SMD0402 R859 1 2 10k 5% NO_STUFF SMD0402	USER_0 USER_1 USER_2 USER_3	USER[0]-1: PAC default USER[0]-1: HAC mot supported
R862 1 2 10k 5% COMMON SMD0402 R864 1 2 10k 5% COMMON SMD0402	DVOD10 VIPD2	R863 1 2 10k 5% NO STUFF SM00402	ROMTYPE_0 ROMTYPE_1	(1:0) 00: parallel default 01: serial Arcor not supported 11: serial future not supported 11: serial future not supported
11 VIPHADO >>				

