MS8877-0A

HISTORY:

first version for layout start. No video capture, no stereo. NO DRC CHECK.

fixed PCB footprints for IC SO14 150MIL and CON DVI-I RA added end-termination r-packs for address-status-bus changed RGB filter to integrated 5-pole only

added video capture, BIOS, Strapping changed RefDes

added missing end termination for FBBAx changed stereo 3pin header added clamp diodes for TV-out and video capture changed topology for 2nd DDC (VGA / DVI)

splitted analog/digital suply for SAA7113 (no component change)

Fixed some RefDes

Changed the strapping resistors cases to 0402

changed C617 to SMD0603 changed U502 and U503 to TSSOP14 added CKF connection to the memories added D505 to the stereo section changed L501, L502, L503 to 0603 NO DRC CHECK

changed U601 to SOT223-DPAK-D2PAK

changed L600 to IND_CDR73

added VIP connector NO DRC CHECK

XUE.

deleted VIP

changed TPs to HOLE_48C28P

changed switcher gate circuit (no component change) added C641 and C642 to the linear voltage regulator

pinswap of memory termination

deleted page 10: 5.b ViVo changed filter topology for RGB

added return traces for RGB NO DRC CHECK

added TV filter caps with reference to GND (C511.C517.C522) separated RGB returns (NOTE: there will be a change for DAC2) NO DRC CHECK

added net names to unused panel signals (test points)

NO DRC CHECK

added decoupling for DVO rail (C529 and C530)

added GND connection to pin 1 of LIZ00

added R520 pull down for DVOCLKIN DRC CHECK DONE

changed caps in power section to the combined footprints

data bus swappings

swapped CLKs for U201 and U202 X14:

connected the RGB returns of VGA2 together

update materials

update stuffings X17-A01: release A01

changed DVOVDD from VID3.3V to A3.3V add linear regulator for NV17's VDD33

connected the IEP-RSETs to GND

deleted C134 and C135

P70, NV17, 2M/4MX32 DDR, 32MB/64MB, RGB, TV-out, video capture, T-BIOS, Hardware Monitor, AGP4X

PCI DEVICE ID 0X0=0X171 FOR NV17-128D.

change to target release A02

added I2C filter components for ViVo (I 506 I 507 R521-R524 D506 D507 C531 C532)

added R243-R250 for clock pull-up.

material changes. X21-A03:

fixed values and descriptions for R609, R613 and C640

- changed the RGB filter topology: - delete R325-R330
- connect all DACRTN to GND
- move the 75R termination resistors to the connector changed RGB clamping to A3.3V

add testpoint net XTALOUTBUFF

changed XTAL-load caps C320 and C321 to 18pF removed obsolete 0603 00hm resistors

NO_STUFFed the stereo 3-pin header.

changed bulk decoupling in VGA section from 3.3V to A3.3V

changed VDD33 to A3.3V X24-A03:

added C643 for memory core decoupling

X25-A03:

changed the long body VGA connector to a three pin type

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.c Frame Buffer 64...127
- 6 3. Dual DAC, 1st VGA
- 7 4. Panel
- 8 5. TV-out, video capture
- 9 6. Power supply
- 10 7. BIOS, Strapping
- 11 8. Hareware Monitor

Stuffing Options	Meaning

COMMON common components for all skus

NO STUFF no assembly at all

XTAL 27 stuff the 27MHz xtal for the GPU XTAL 14 stuff the 14.318MHz xtal for the GPU VIVO stuff video I/O

VIDCAP stuff video capture TV OUT stuff TV-out DVI-I stuff the DVI-I option DVI stuff the DVI-D option 2NDVGA stuff a second VGA NO DVI don't stuff any DVI

SYNC_DRIVER2 stuff the termination resistors for the DACB syncs

SYNC DRIVER stuff the sync driver chip

bypass the sync driver for the DAC B syncs NO_SYNC_DRIVER2 NO SYNC DRIVER bypass the sync driver for the DAC A syncs STEREOSYNCS stuff the switchable stereo sync circuit

STEREOSYNC2 svnc stereo to DAC B STEREOSYNC1 sync stereo to DAC A **STEREO** stuff the generic stereo circuit

SI2C PROT stuff the protection diodes for syncs and I2C at DAC A RGB PROT stuff the protection diodes for RGB at DAC A

stuff 128 bit memory - 4pcs

2NDVGA RGB PROT stuff the protection diodes for RGB at DAC B 2NDSI2C PROT stuff the protection diodes for syncs and I2C at DAC B

SET NVVDD ISL set NVVDD voltage at Intersil switcher set NVVDD voltage at IR/UnisemI switcher SET NVVDD IRU set FBVDDQ voltage at Intersil switcher SET FBVDDQ ISL SET_FBVDDQ IRU set FBVDDQ voltage at IR/UnisemI switcher NO_1117 bypass the A3.3V regulator to AGP3.3V

ISL stuff the Intersil switcher IRU stuff the IR/Unisem switcher FBVDD 3.3 connect FBVVDD with AGP3.3V FBVDD_2.5 connect FBVVDD with FBVDDQ 1117_ADJ stuff the adjustable regulator for A3.3V stuff the fixed regulator for A3,3V 1117

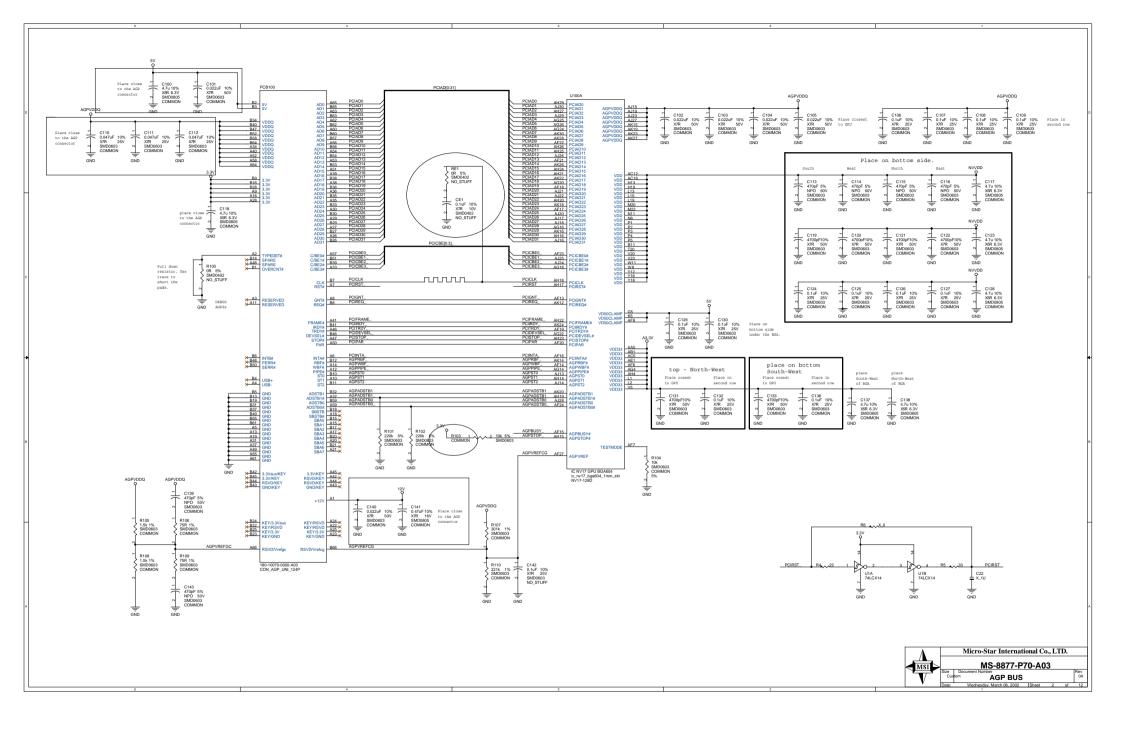
PASSIVE HS have passive heatsink FAN fan sink and components BRCKT VGA TV VGA Bracket VGA-TV-VGA BRCKT VGA TV DVI Bracket VGA-TV-DVI BRCKT_VGA_TV Bracket VGA-TV BRCKT VGA Bracket VGA MEMSTRAP1111 strap memory to 1111 MEM-64B stuff 64 bit memory - 2pcs

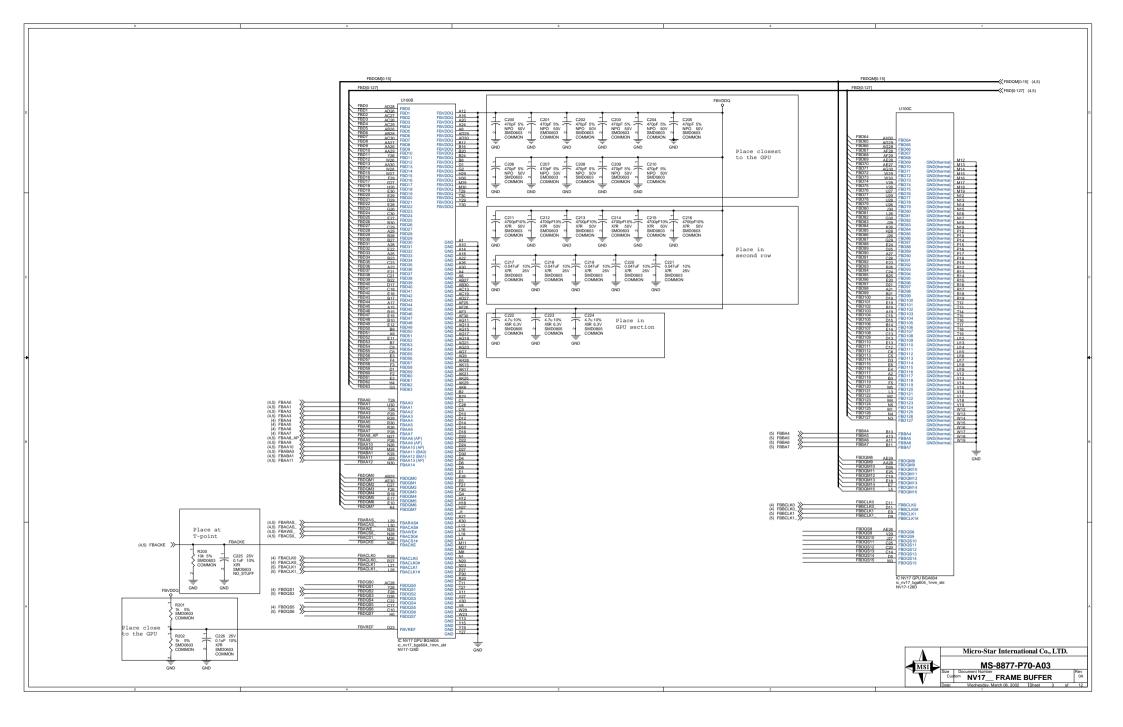
NV17-128D stuff NV17-128D

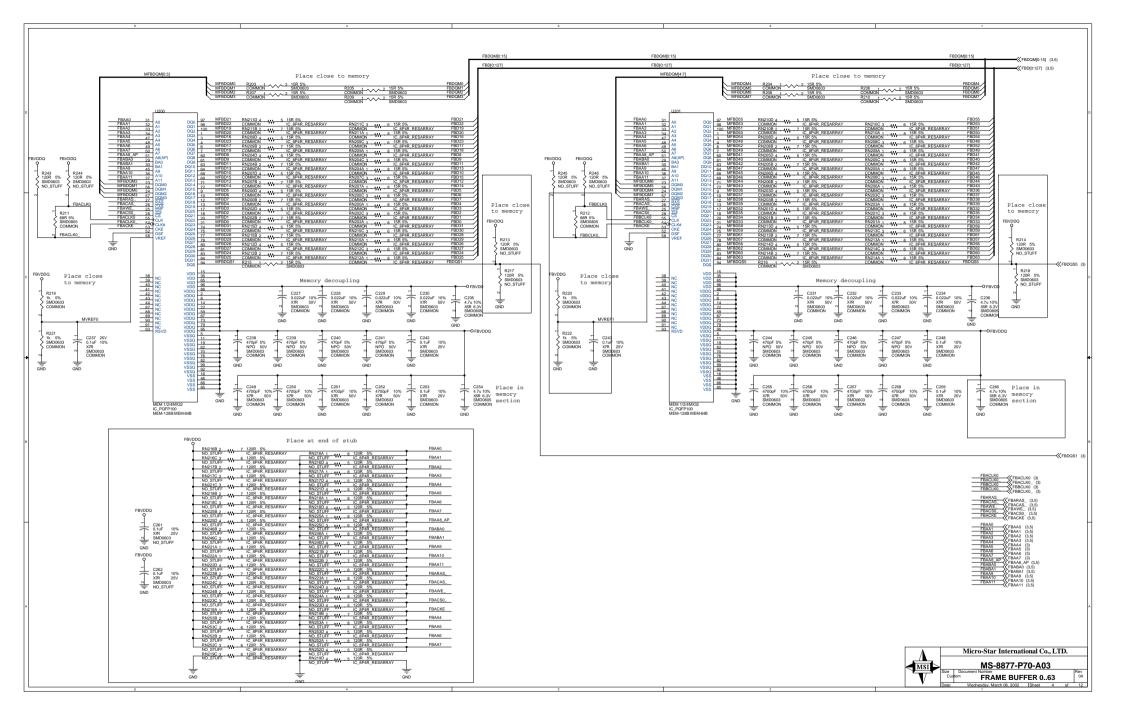
MEM-128B

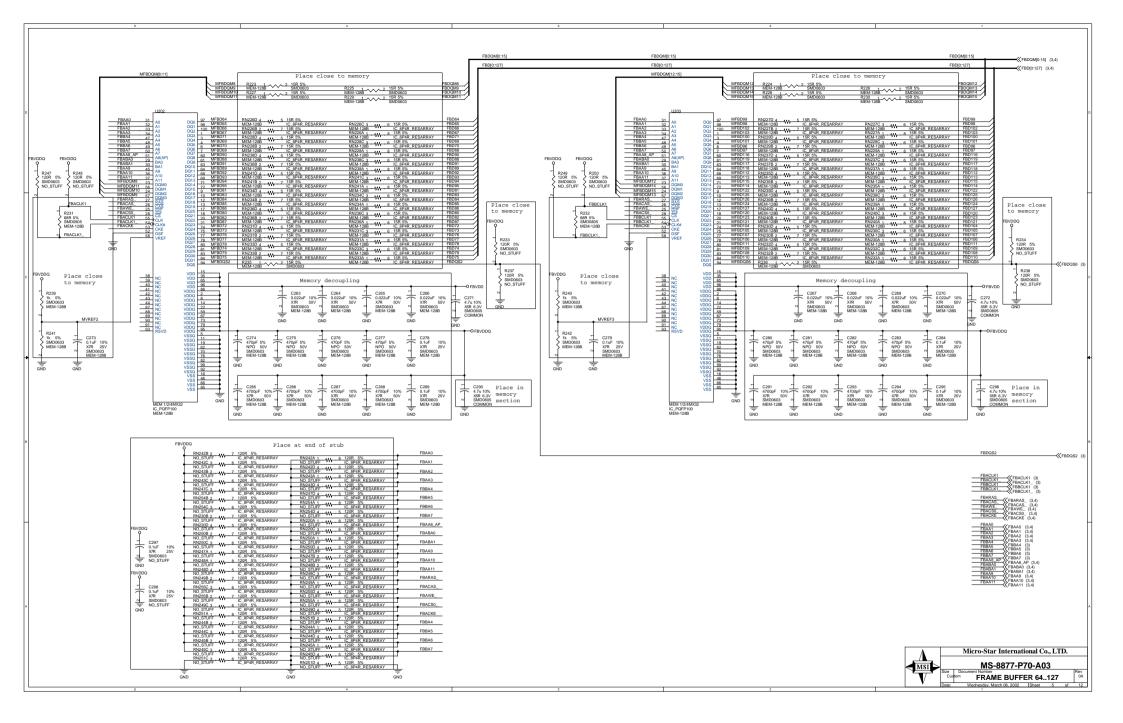
140-10070-0000-A03 602-10070-0000-A03

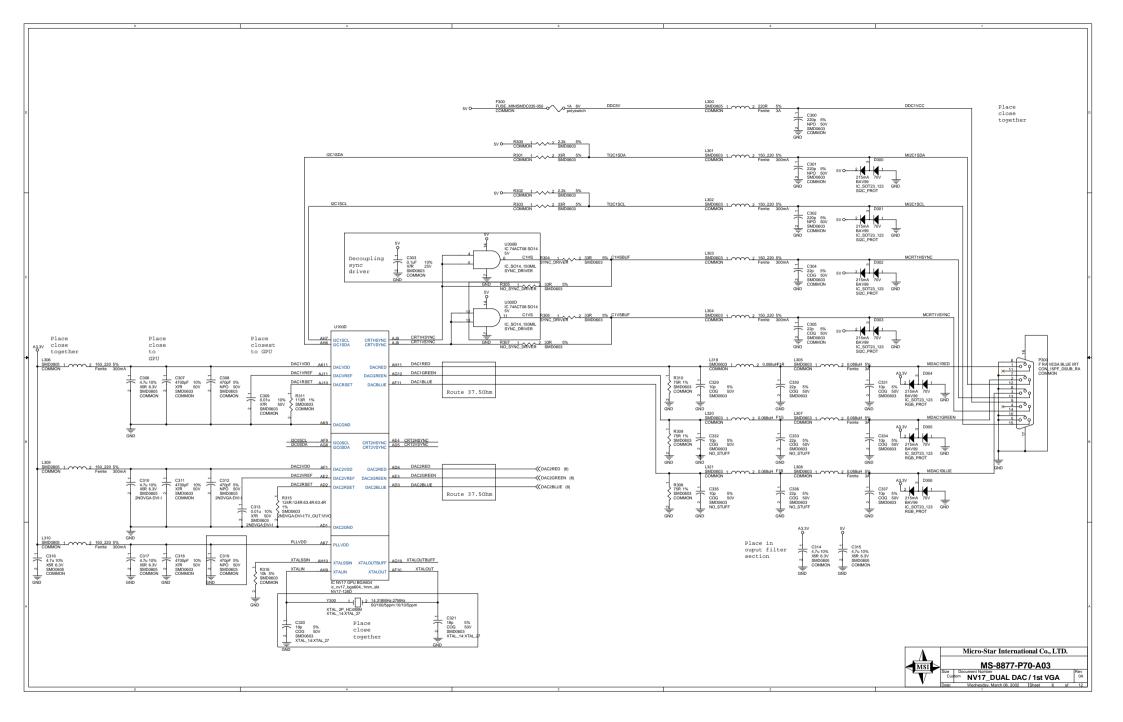


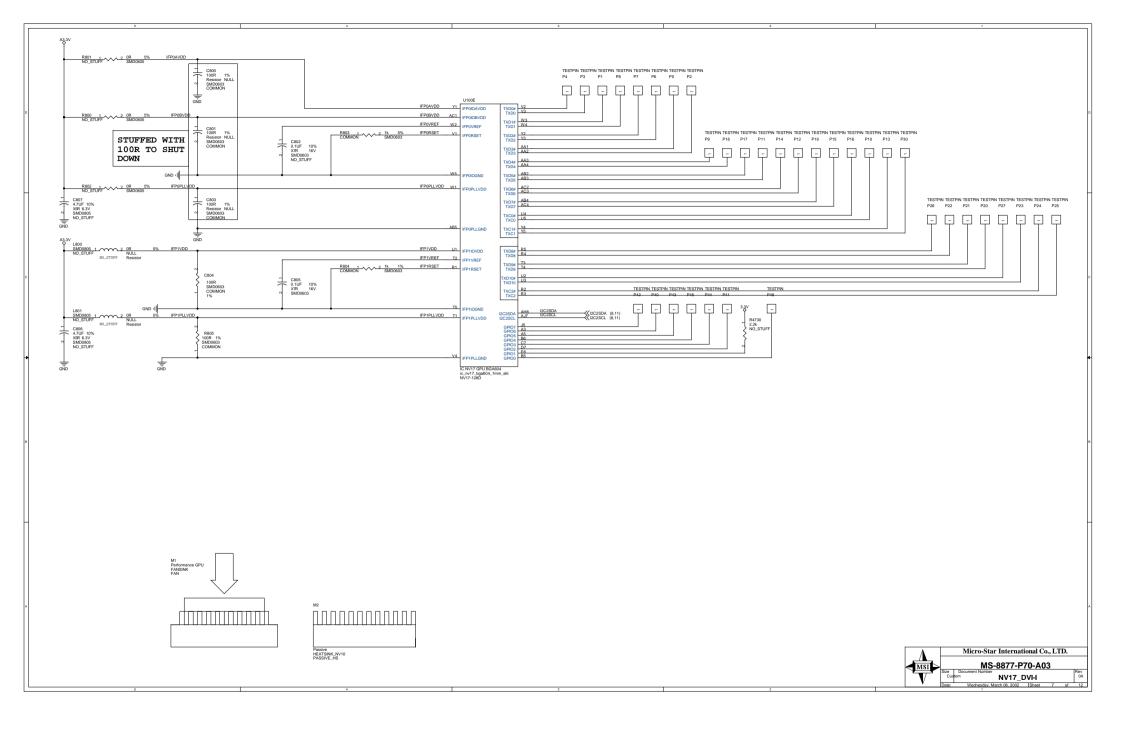


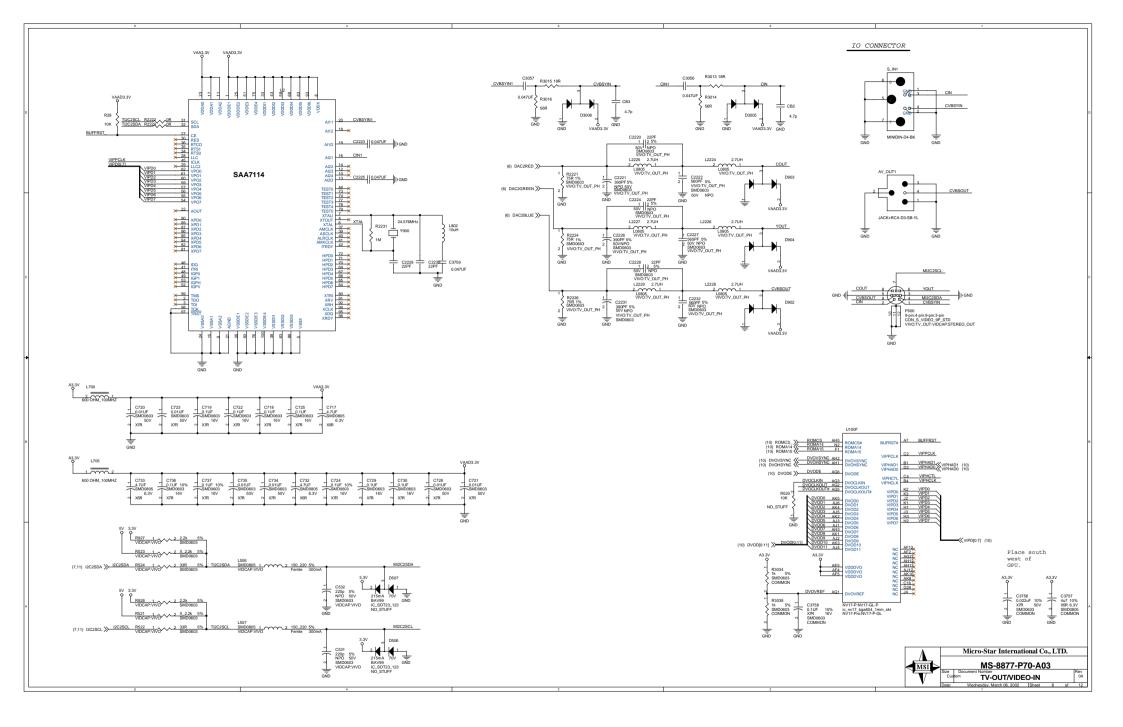


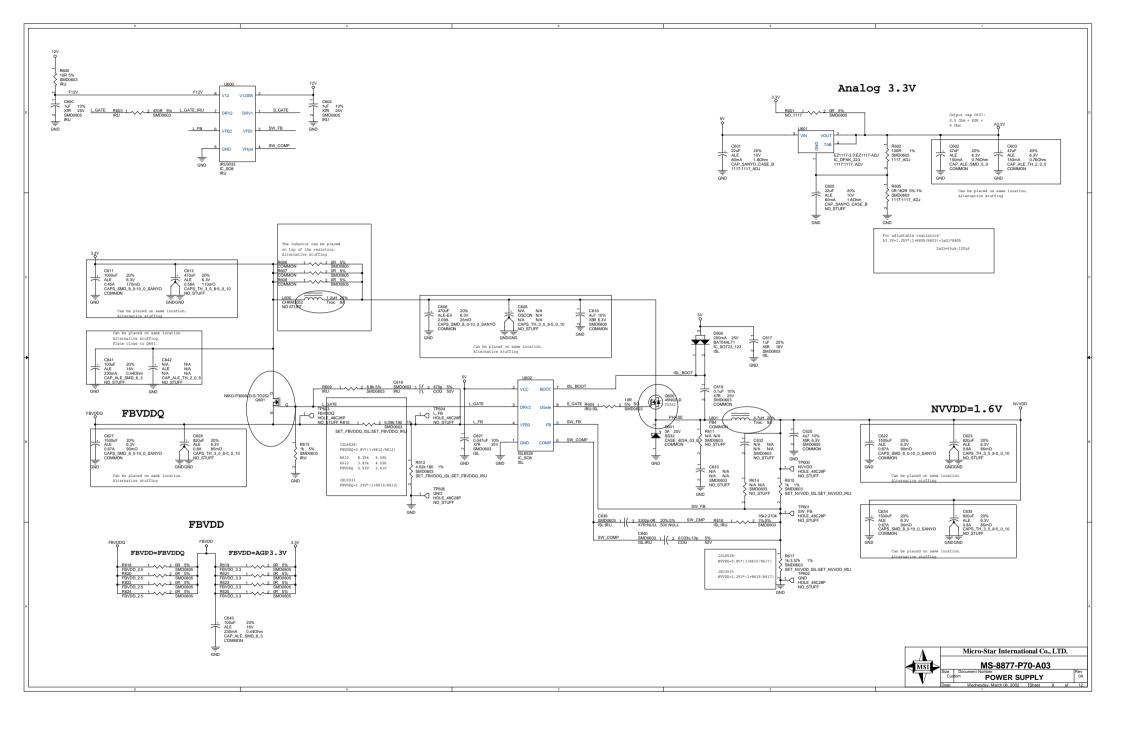








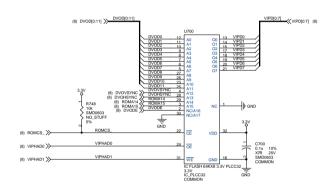




0 R700 1 2 10k 5% SMD0402 DVOD0 R701 1 2 10k 5% SMD0402 PCI_AD_SWAP 0: REVERSED 1: NORMAL default R702 1 2 10k 5% NO_STUFF SMD0402 DVOD1 1 l: system BIOS L: adapter BIOS **default** DVOD2 RAM_CFG_0 2 R704 1 2 10k 5% SMD0603 R705 1 ~ 2 10k 5% SMD0603 [3:0] llll: $496x32\ \mbox{DDR}$ SDRAM, DQS per 32 bits, dll-on, low drive strength R706 1 2 10k 5% SMD0803 DVOD3 RAM_CFG_1 R707 1 2 10k 5%
COMMON SMD0603 R708 1 2 10k 5% NO_STUFF SMD0803 DVOD4 R709 1 2 10k 5% SMD0603 RAM_CFG_3 DVOD5 5 R710 1 2 10k 5% NO_STUFF SMD0603 R711 1 2 10k 5% COMMON SMD0603 [1:0] 00: 13.5MHz 01: 14.318MHz 10: 27MHz 11: unknown R712 1 2 10k 5% COMMON SMD0603 DVOD6 R713 1 2 10k 5% SMD0603 VIPD6 CRYSTAL_1 22 R714 1 2 10k 5% NO_STUFF SMD0603 R715 1 2 10k 5%
COMMON SMD0603 R716 1 2 10k 5% COMMON SMD0603 DVOD7 TVMODE_0 [1:0] 00: SECAM 01: NTSC 10: PAL 11: VGA R717 1 2 10k 5% SMD0603 R719 1 2 10k 5%
COMMON SMD0603 8 R718 1 2 10k 5% COMMON SMD0603 DVOD9 default R722 1 2 10k 5% COMMON SMD0402 R723 1 2 10k 5% SMD0402 0: enabled 1: disabled 9 11 VIPD7 R724 1 2 10k 5% COMMON SMD0402 R725 1 2 10k 5% SMD0402 : enabled default : disabled R726 1 2 10k 5% NO_STUFF SMD0603 VIPD4 R727 1 2 10k 5% SMD0603 PCI_DEVID_0 12 R728 1 2 10k 5% COMMON SMD0603 13 R729 1 2 10k 5% SMD0603 VIPD3 PCI_DEVID_2 20 R730 1 2 10k 5% COMMON SMD0603 R731 1 2 10k 5% SMD0603 DVOHSYNC PCI_DEVID_3 21 R732 1 2 10k 5% COMMON SMD0603 R733 1 2 10k 5% NO_STUFF SMD0603 DVOD11 BUS TYPE 14 R735 1 2 10k 5% COMMON SMD0402 16 R736 1 2 10k 5% COMMON SMD0402 VIPD0 R737 1 2 10k 5% SMD0402 R739 1 2 10k 5% SMD0402 NO_STUFF SMD0402 R738 1 2 10k 5%

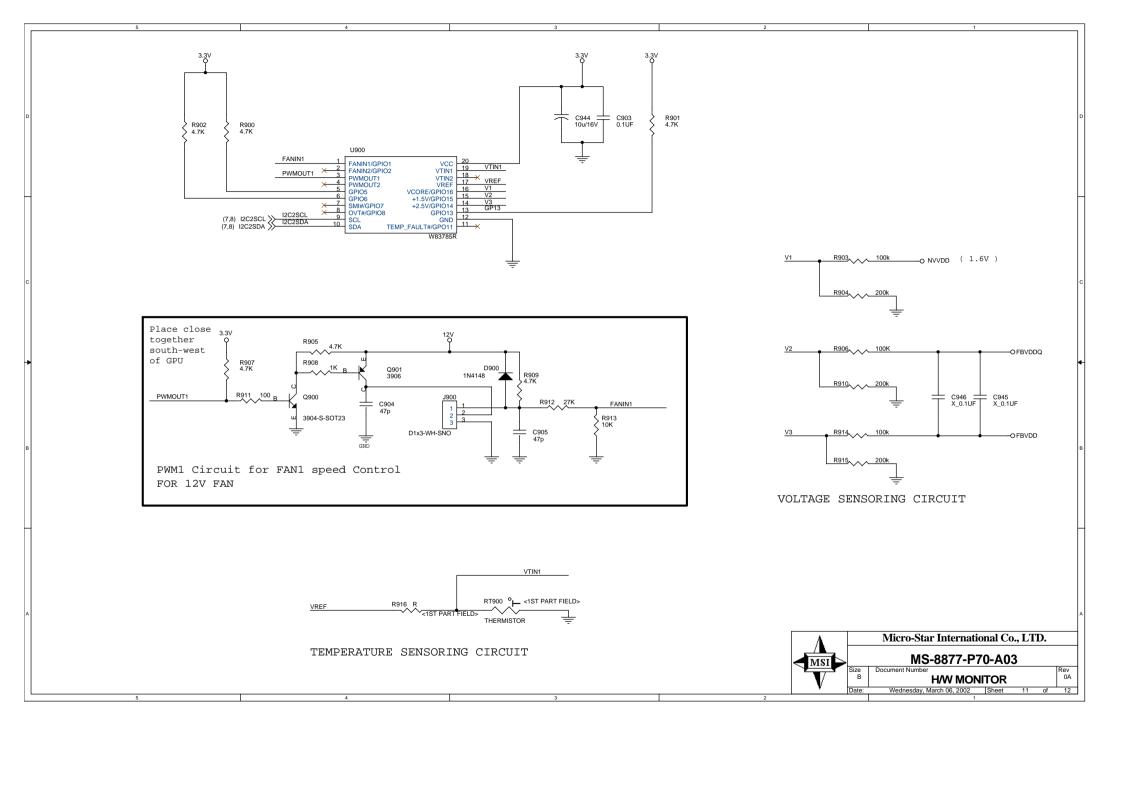
COMMON SMD0402 VIPD1 USER_1 17 R740 1 2 10k 5% COMMON SMD0402 VIPHAD0 USER_2 R741 1 2 10k 5% NO_STUFF SMD0402 18 VIPHAD1 USER_3 19 R742 1 2 10k 5% SMD0402 R743 1 2 10k 5% NO_STUFF SMD0402 29 R744 1 2 10k 5% COMMON SMD0402 R745 1 2 10k 5% SMD0402 default 30 R746 1 2 10k 5% COMMON SMD0402 ROMTYPE_1

CHANGE 0402 TO 0603

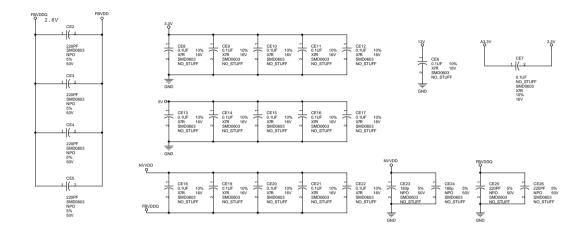


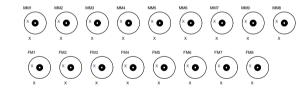


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CE2-CE17 for EMI





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