MS-V080 -- G72 7300LE, 128/256 MB 64bit DDR2-84pin, DVI-I,HDMI

P381: G72, DDR2 MEMORY 16Mx16

Page 1: P381 Overview
Page 2: PCI Express Interface
Page 3: Frame Buffer Interface
Page 4: Memory 1st bank 0..31
Page 5: Memory 1st bank 32..63
Page 6: DAC-A, DB15 Connector
Page 7: DACB
Page 8: TMDS Interface
Page 9: MIOA, MIOB Interface, LPC-ROM
Page 10: STRAPS, Mechanical Parts
Page 11: XTAL, GPIO, BIOS, FAN, SPIDF IN
Page 12: PowerSupplyI: NVVDD, A3V3
Page 13: PowerSupplyII: 5V, DDC5V, F3V3, TMDS_PLLVDD
Page 14: EXTERNAL HDMI LINK SII1930
Page 15: Micro Controller & AudioDAC

Base on P381_ A04 (V056-V3.0)modify

Page8, removed mini-din 4pin. add mini-din 7pin support HDTV

Page 13: PowerSupplyI: NVVDD, A3V3 add mlcc 10U/16V 1206 5pcs
remove L5 L6 R7 R8 R9 ,D9

Page 9: ADD 預留 R593,R594,R595,R596 FOR EMI

Page 14: ADD 預留 R655,R656,R657,R658 FOR EMI

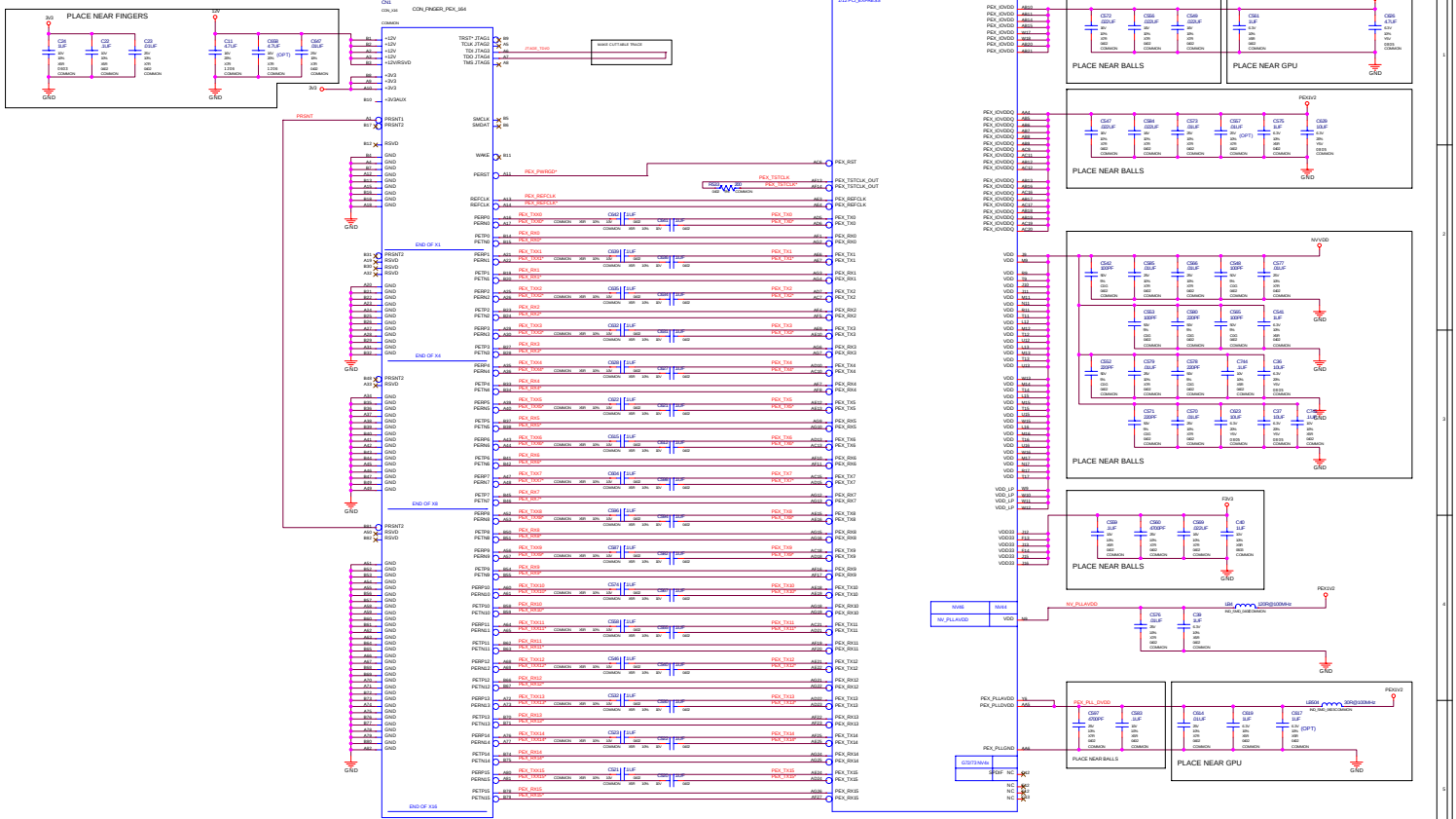
Page 12: Remove C8 EL Cap and change Q1 MOSFET package to T0252

100

Page 13: Delete C25 100u DIP CAP
Page 13: Add 3A DIODE for reduce FBVDDQ linear REG temperature

	Micro-Star International Co., LTD.	
	Title: Over view	
Size: Custom	Document Number: MS-V080	Rev: 100
Date: Wednesday, October 11, 2006	Sheet 1 of 15	

PEX-Interface



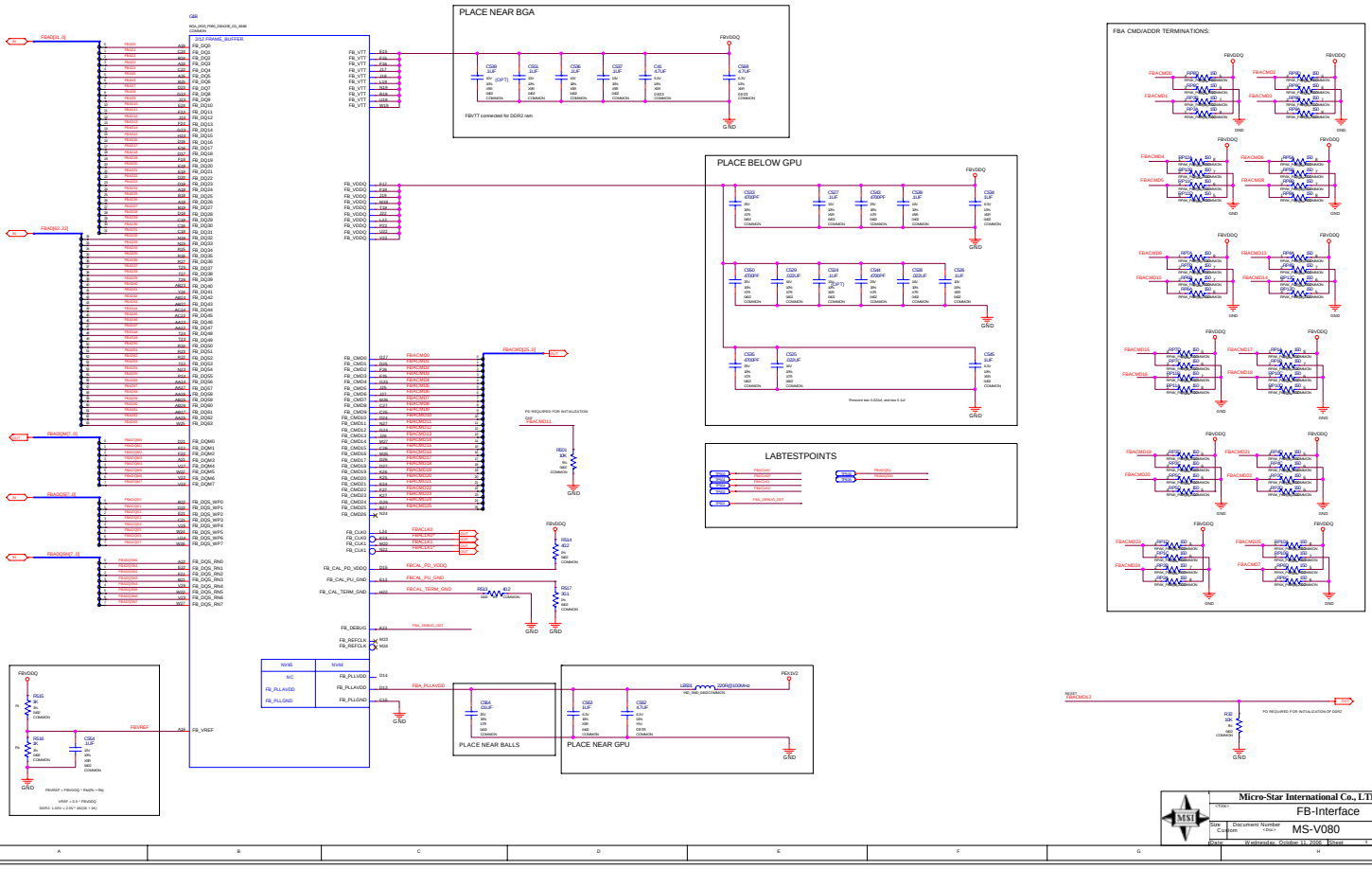
Micro-Star International Co., LTD.

PEX-Interface

Size: Custom | Document Number: MS-V080 | Rev: 100

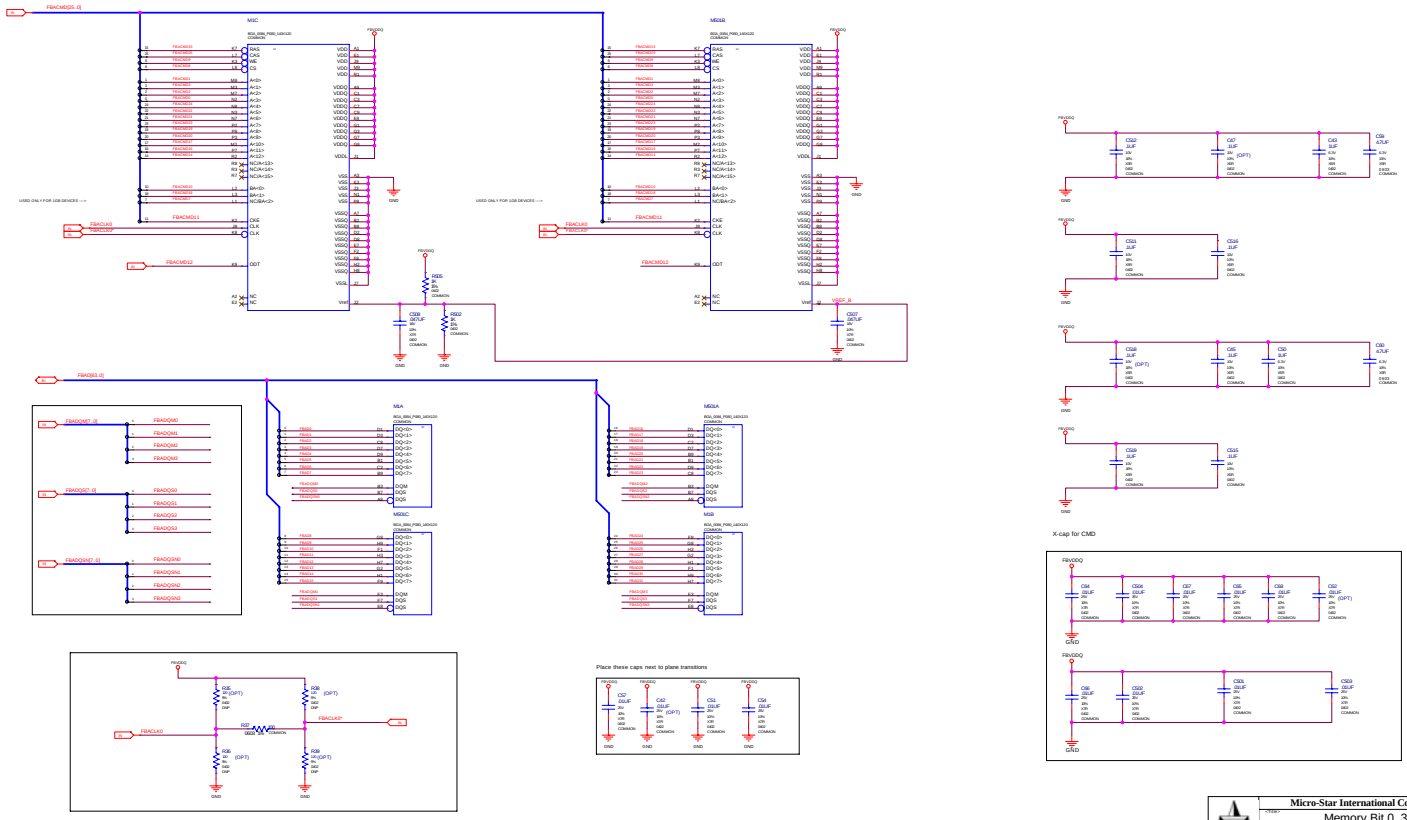
Date: Wednesday, October 11, 2006 | Sheet: 2 of 55

GPU: FB-Interface



Memory Bit 0..31

PLACE ALL DISCRETE COMPONENTS AS NEAR AS POSSIBLE TO MEMORY

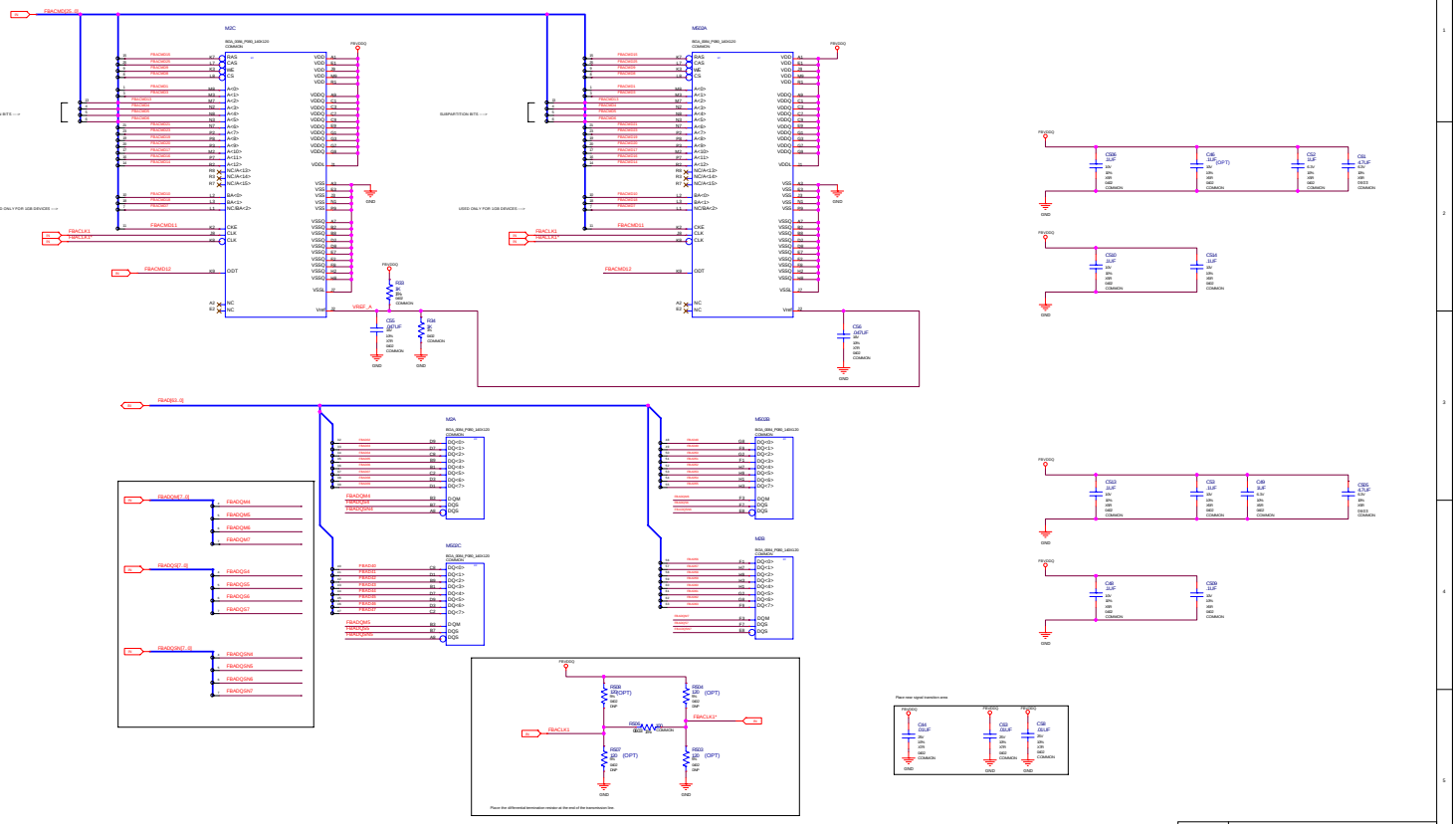


X-cap for CMD

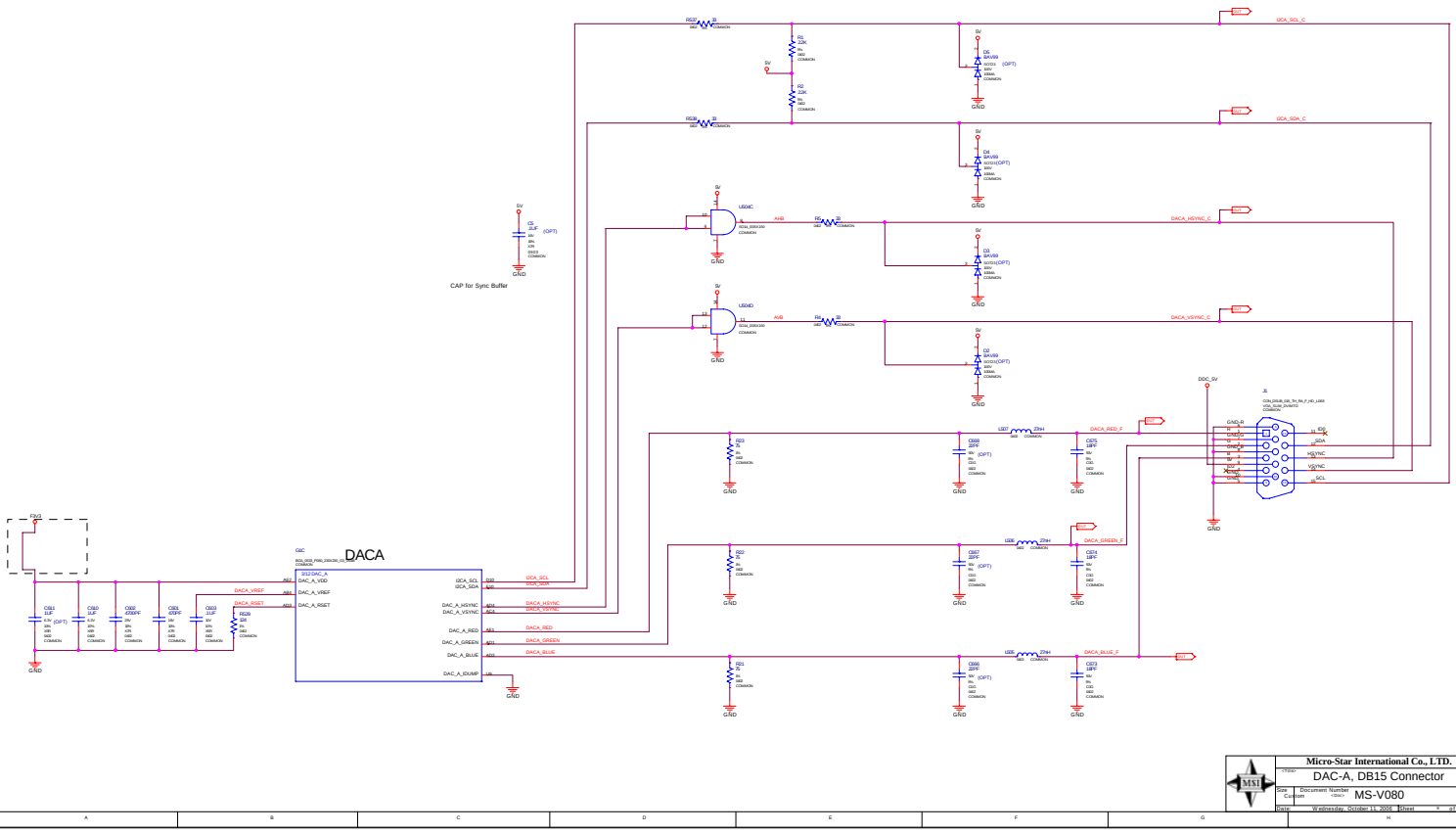
Micro-Star International Co., LTD.		
Memory Bit 0..31		
Size: Custom	Document Number: MS-V080	Rev: 1.0
Date: Wednesday, October 11, 2006	Sheet: 4 of 31	

Memory Bit 32..63

PLACE ALL DISCRETE COMPONENTS AS NEAR AS POSSIBLE TO MEMORY

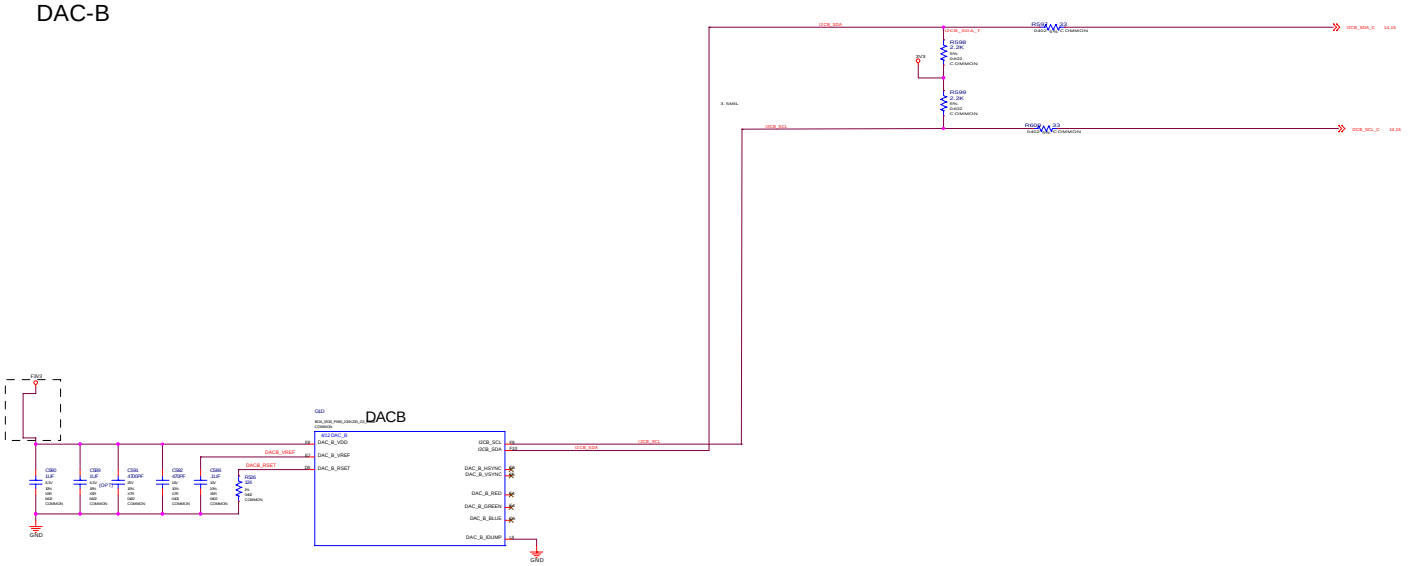


DAC-A, DB15 Connector



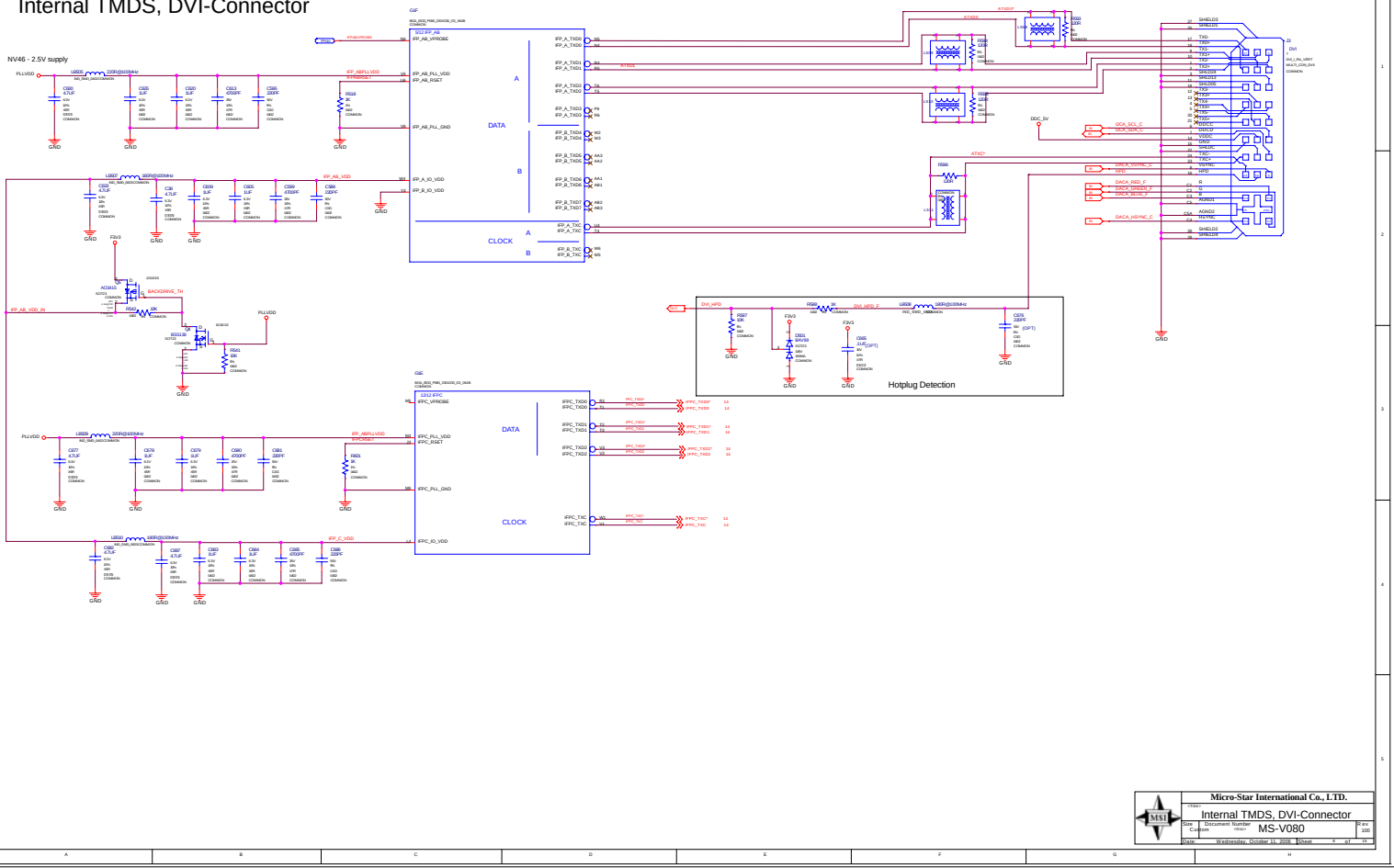
Micro-Star International Co., LTD.	
DAC-A, DB15 Connector	
Size: Custom	Document Number: MS-V080
Date: Wednesday, October 11, 2006	Sheet 9 of 35

DAC-B



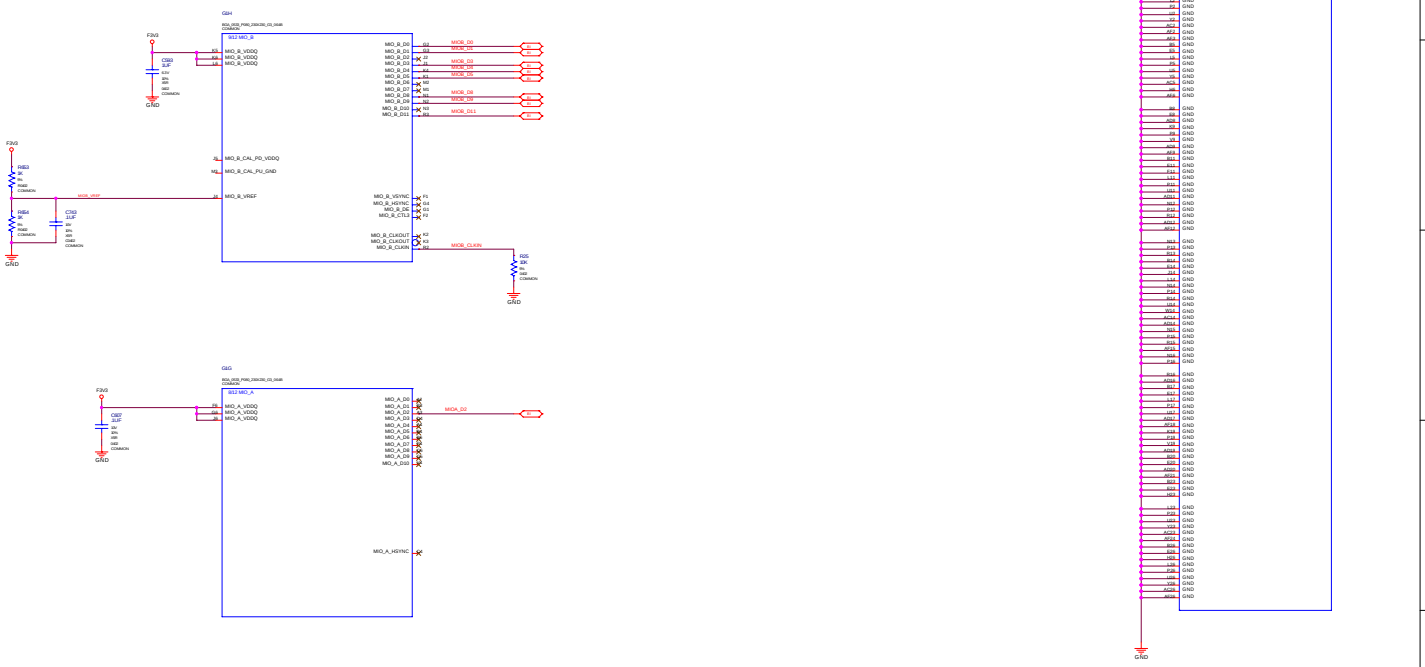
Micro-Star International Co., LTD.			
DAC-B			
Size: Custom	Document Number: MS-V080		Rev: 100
Date: Wednesday, October 11, 2006	Sheet: 7 of 35		

Internal TMDS, DVI-Connector



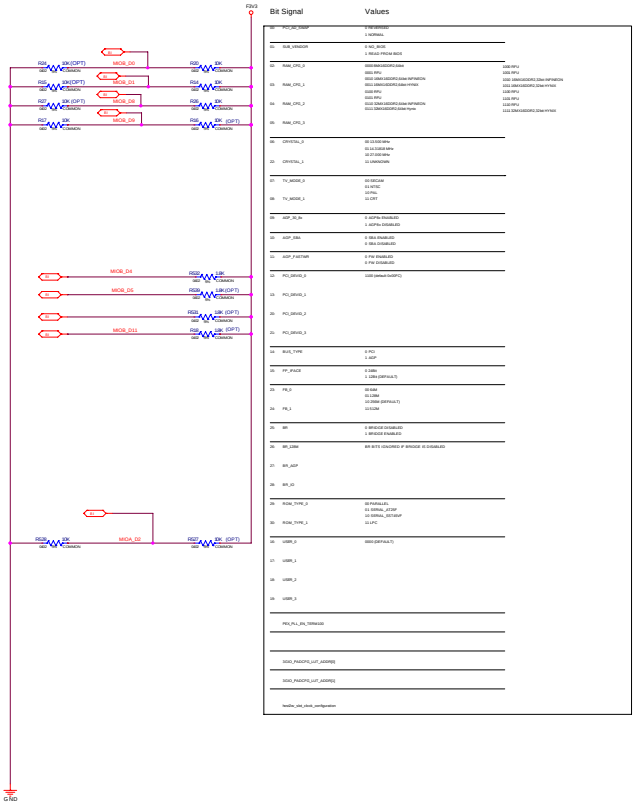
Micro-Star International Co., LTD.	
Internal TMDS, DVI-Connector	
Size: Custom	Document Number: MS-V080
Rev: 1.00	
Date: Wednesday, October 11, 2006	Sheet: 9 of 15

MIOA, MIOB Interface



Micro-Star International Co., LTD.			
MIOA, MIOB Interface			
Size: Custom	Document Number: MS-V080	Rev: 1.00	
Date: Wednesday, October 11, 2006	Sheet: 9 of 35		

STRAPS, Mechanical Parts



	Bit	Signal	Values
	00	PCI_SC_ENAB	0 PM DEFAULT 1 NORMAL
	01	SUB_VENDOR	0 NO_BIOS 1 RSLV2 FROM BIOS
	02	RAM_CPC_0	0000 SMA1/ADDR12 Inhib 0001 RPU 0010 SDA1/ADDR12 Inhib INFINEON 0011 SMA1/ADDR12 Inhib HYNIX 0100 RPU 0101 RPU 0110 SDA1/ADDR12 Inhib INFINEON 0111 SDA1/ADDR12 Inhib Hynix 1000 RPU 1001 RPU 1010 SDA1/ADDR13 Inhib INFINEON 1011 SDA1/ADDR12 Inhib HYNIX 1100 RPU 1101 RPU 1110 RPU 1111 SDA1/ADDR12 Inhib HYNIX
	03	RAM_CPC_1	
	04	RAM_CPC_2	
	05	RAM_CPC_3	
	06	CRYSTAL_0	00 13.500 MHz 01 14.31818 MHz 10 27.000 MHz 11 UNKNOWN
	07	CRYSTAL_1	
	08	TV_MODE_0	00 NTSC/J 01 NTSC 10 PAL 11 CRT
	09	TV_MODE_1	
	10	AGP_SC_En	0 AGPIrtv Disable,EO 1 AGPIrtv Enable,EO
	11	AGP_SBA	0 SBA Disable,EO 1 SBA Enable,EO
	12	AGP_FASTWR	0 FW Disable,EO 1 FW Enable,EO
	13	PCI_DEVID_0	1100 (default 0x00FC)
	14	PCI_DEVID_1	
	15	PCI_DEVID_2	
	16	PCI_DEVID_3	
	17	BUS_TYPE	0 PCI 1 AGP
	18	FP_IFACE	0 24Bit 1 18Bit (DEFAULT)
	19	FB_0	00 64M 01 128M 10 256M (DEFAULT) 11 512M
	20	FB_1	
	21	BR	0 BR#DIS# ENABLED 1 BR#DIS# ENABLED
	22	BR_128M	BR WITE ENABLED IF BR#DIS# IS ENABLED
	23	BR_AGP	
	24	BR_IO	
	25	ROM_TYPE_0	00 PARALLEL 01 SERIAL_AT25F 10 SERIAL_INT16AF 11 LPC
	26	ROM_TYPE_1	
	27	USBR_0	0000 (DEFAULT)
	28	USBR_1	
	29	USBR_2	
	30	USBR_3	
		PEX_PLL_EN_TERM[100	
		SIO0_PADCFG_LUT_ASSR[8]	
		SIO0_PADCFG_LUT_ASSR[9]	
		hendler_vick_clock_configuration	

MEC1
HDA_GPIO_THRS Gr P_T_Ar_ L_V1
COMMON

MEC2 FAN
HDF_GPIO_HEGE_T_Ak_ J
COMMON

BAT1
0703
COMMON

PCB
0703
COMMON

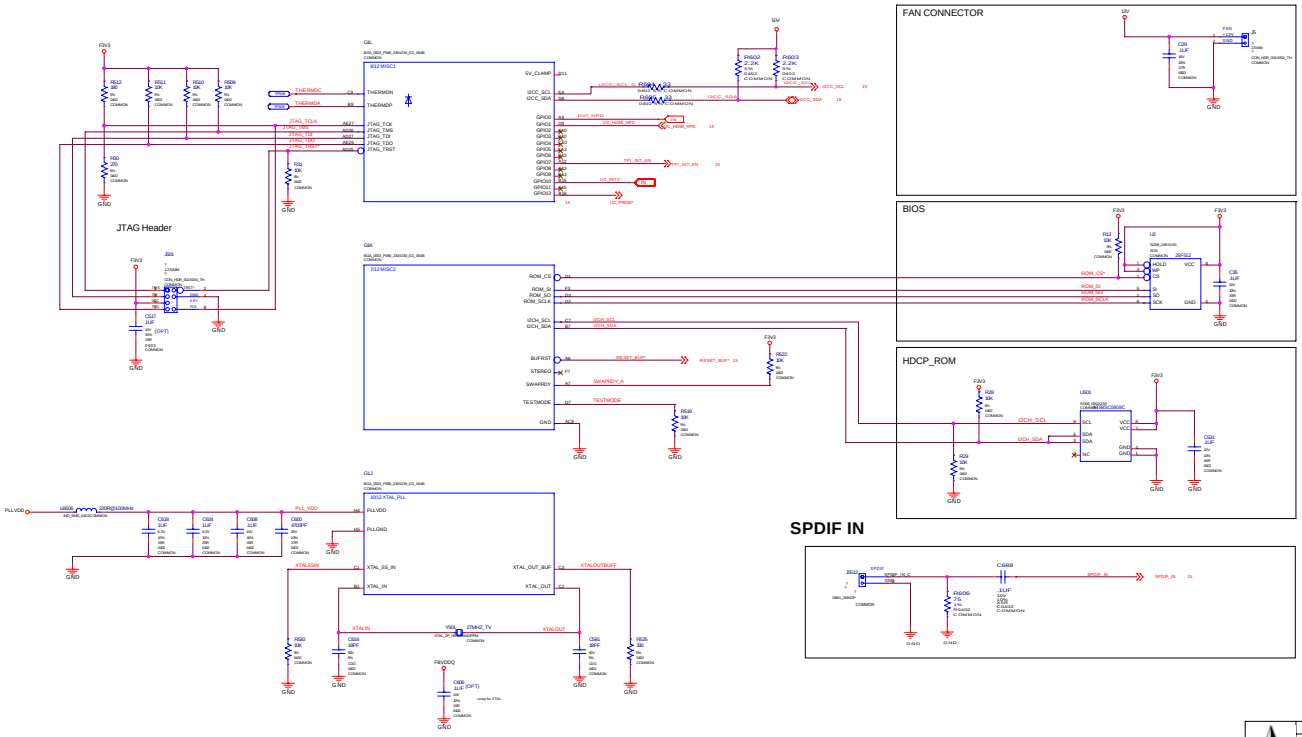
MEC3
0703
COMMON

MEC4
0703
COMMON

GND

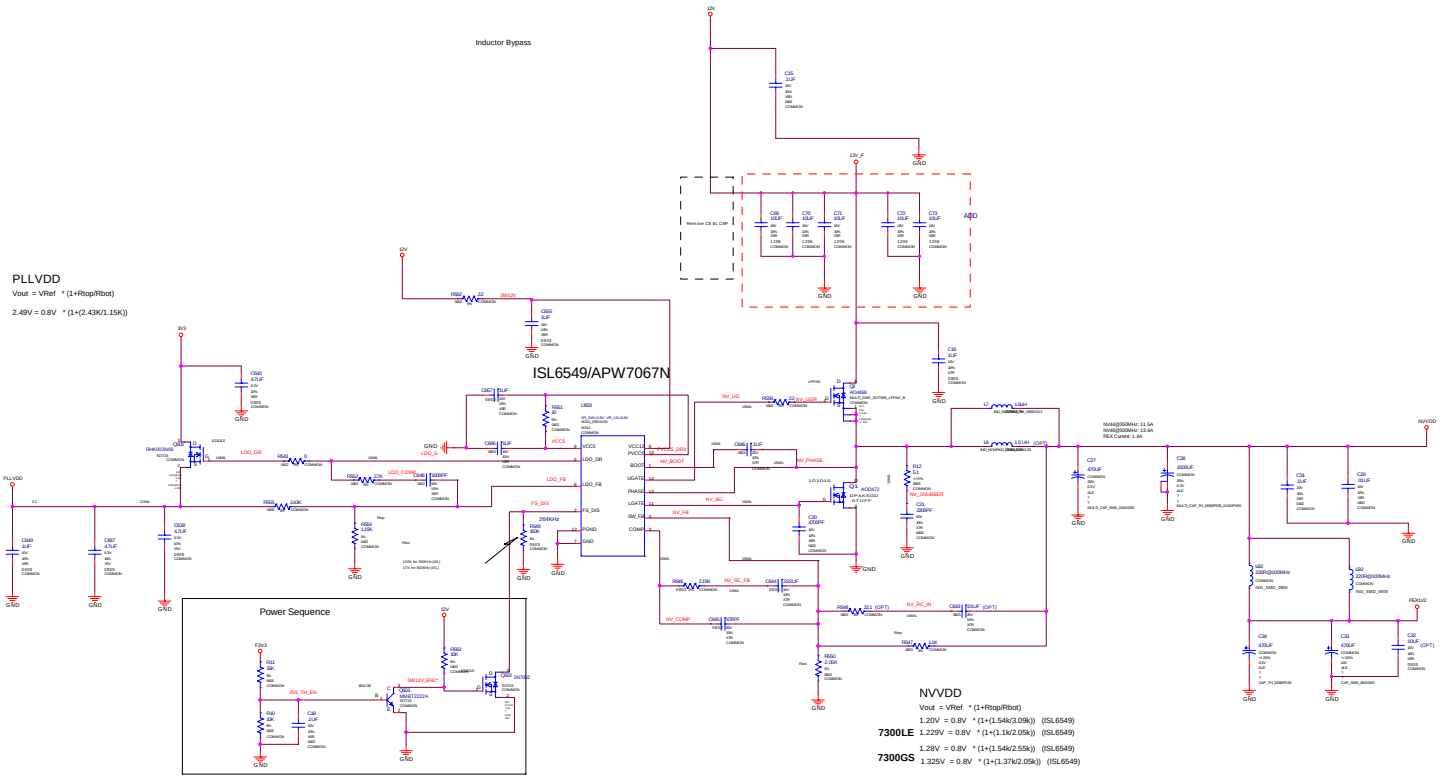
Micro-Star International Co., LTD.			
<Title> STRAPS			
Size: Custom	Document Number: MS-V080		Rev: 3.00
Date: Wednesday, October 11, 2006	Sheet: 19 of 43		

XTAL, GPIO, BIOS, FAN, JTAG, THERMAL,SPIDF



Micro-Star International Co., LTD.			
XTAL, GPIO, BIOS, FAN			
Size: Custom	Document Number: MS-V080	Rev: 1.00	
Date: Wednesday, October 11, 2006	Sheet 13 of 38		

PowerSupplyI: NVVDD, PLLVDD

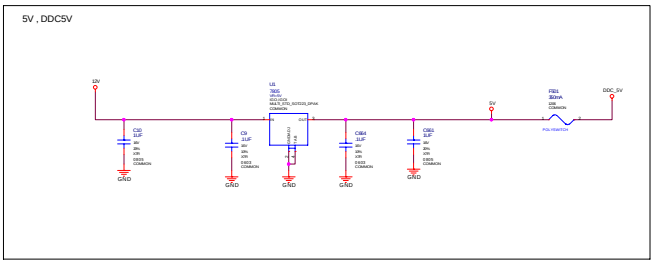


Replace SO-8 FETs with AO4422

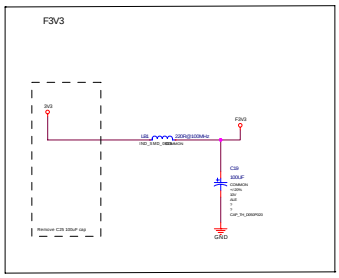
Micro-Star International Co., LTD.	
NVVDD, PLLVDD	
Size: Custom	Document Number: MS-V080
Rev: 1.00	
Date: Wednesday, October 11, 2006	Sheet: of

PowerSupplyII: 5V, DDC5V, F3V3, FBVDDQ,1V8

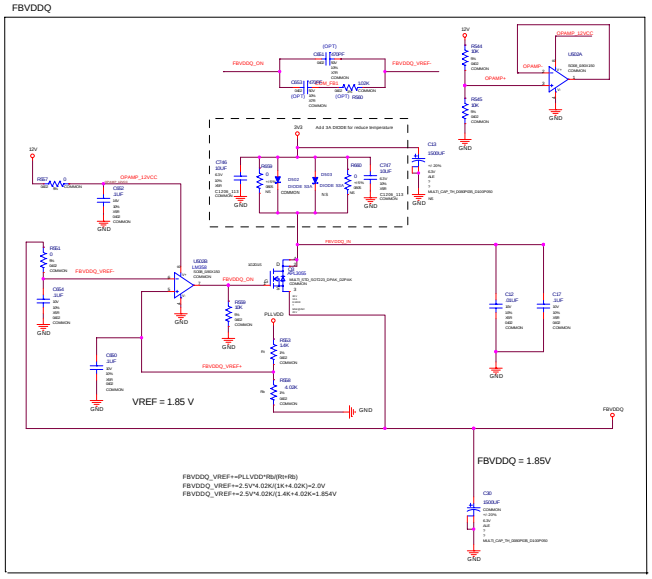
5V , DDC5V



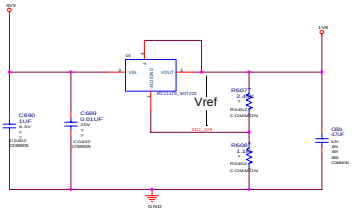
F3V3



FBVDDQ



1.8V 320mA



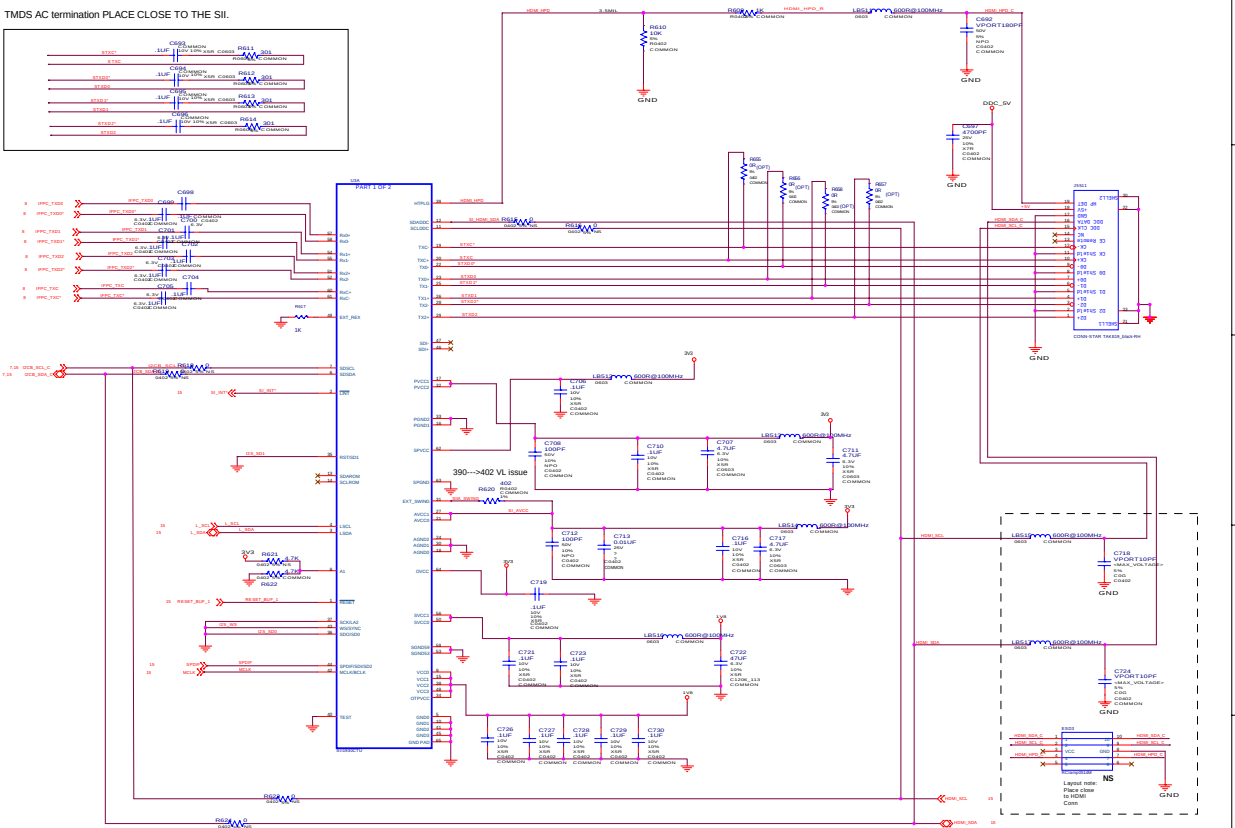
Vout=Vref(1+Rbot/Rtop)
Vout=1.25(1+1.1K/2.49K)=1.8V

Micro-Star International Co., LTD.			
5V, DDC5V, F3V3, FBVDDQ			
Size: Custom	Document Number: MS-V080		Rev: 100
Date: Wednesday, October 14, 2009	Sheet: 47	of: 51	

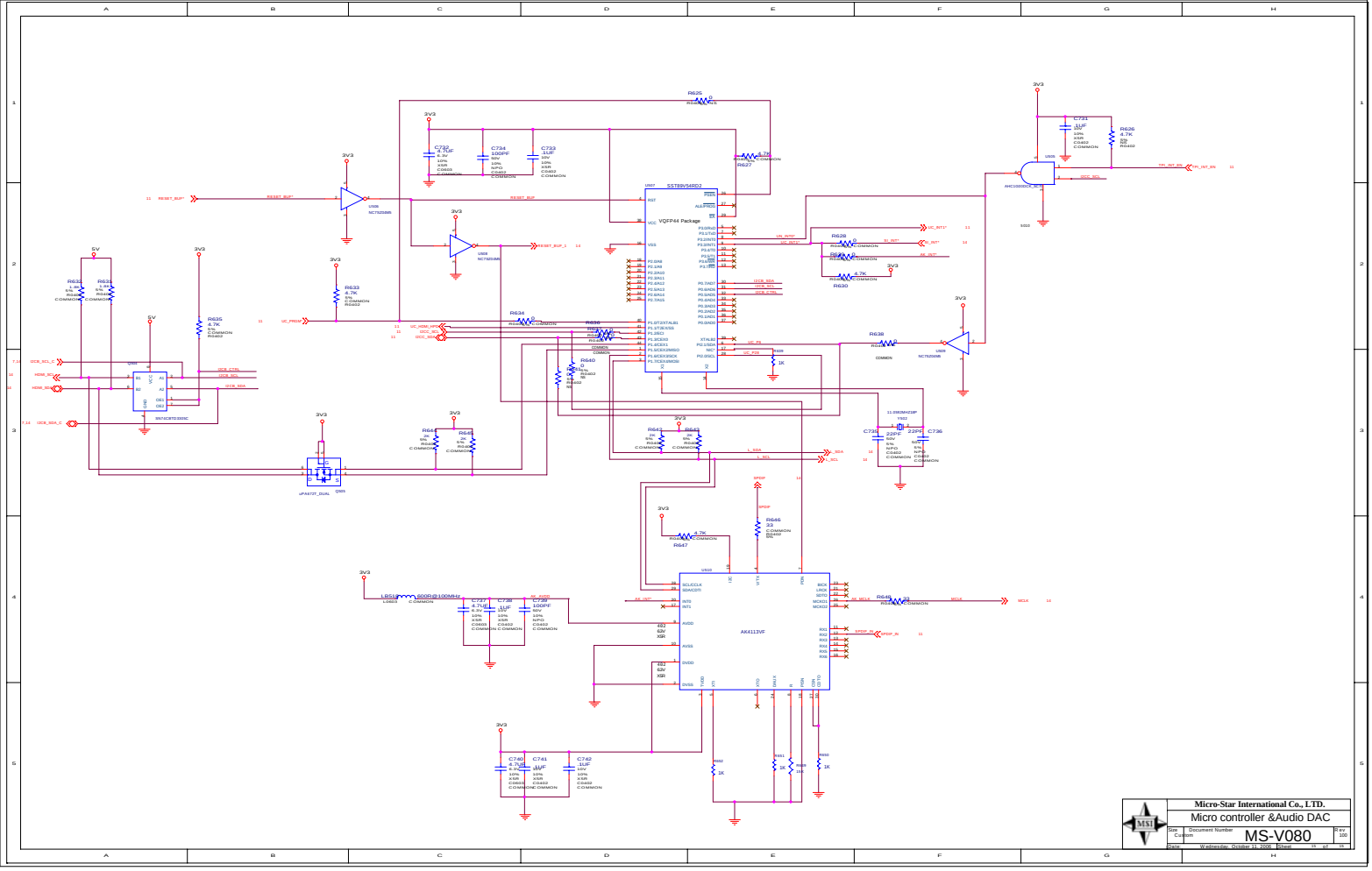
Hotplug Detection

Capacitance of HDMI_SDA_C & HDMI_SCL_C nets to Power/GND planes must be less than 50pF (try to make it lower)

TMDS AC termination PLACE CLOSE TO THE SII.



Micro-Star International Co., LTD.	
HDMI LINK Sil 1930	
Size: Custom	Document Number: MS-V080
Rev: 1.00	
Date: Wednesday, October 11, 2006	Sheet: of


SST89V58RD2
VQFP44 Package
AK4113VF
Micro-Star International Co., LTD.
Micro controller &Audio DAC
MS-V080
Wednesday, October 11, 2006