MS-7399

Version 0A

Persian Project

CPU:

- **Intel Prescott (L2=2MB)**
- **Intel Cendar Mill (65nm)**
- **Intel Smithfield (90nm Dual core)**
- **Intel Presler (65nm Dual core)**
- **Intel Conroe (65nm Dual core)**
- **Intel Kentsfield**
- **Intel Yorkfield**
- **Intel Wolfdale**

System Chipset:

- **nVidia - MCP73PV/S**

On Board Chipset:

- **BIOS -- SPI FLASH 4Mb**
- **Azalia CODEC(ALC 888S)**
- **LPC Super I/O -- ITE8718F**
- **LAN-Realtek RTL8211BL**
- **IEEE1394 -- VIA VT6308P**

Main Memory:

- **DDR II * 2 (Max 2GB)**

Expansion Slots:

- **PCI Express X16 SLOT * 1**
- **PCI Express X1 SLOT * 1**
- **PCI 2.3 SLOT * 2**

Intersil PWM:

- **Controller: Intersil 6312 3 Phase**

MSI *Link to the Future* **MICRO-START INT'L CO.,LTD.**

Title: COVER SHEET		
Size: Custom	Document Number: acer Persian / MS-7399	Rev: 0A
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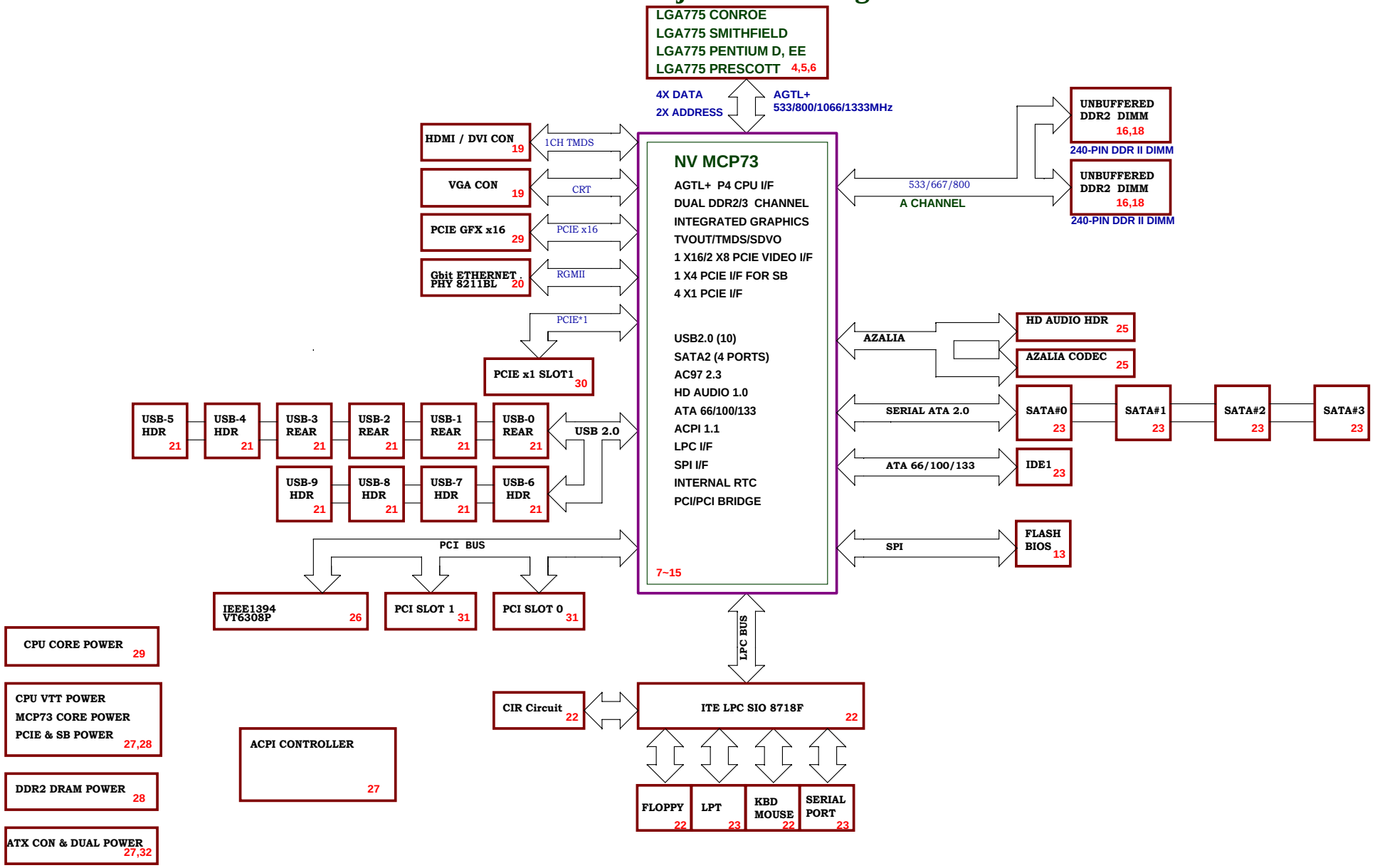
acer Persian Project Block Diagram



MSI MICRO-START INTL CO.,LTD.

Title: Block Diagram

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MCP73 GPIO Config.

GPIO Pin	Type	Primary State
GPIO_2/NMI/PS2_CLK0	I/O(S5_3.3V)	TMDS_DET1
GPIO_3/SMI#/PS2_DATA0	I/O(S5_3.3V)	TMDS_DET2
GPIO_4/SCI/INTR/PS2_CLK1	I/O(S5_3.3V)	Unused
GPIO_5/INIT#/PS2_DATA1	I/O(S5_3.3V)	OBR1
GPIO_6/FERR#/SYS_SERR#/IGPU_GPIO6	I/O(S5_3.3V)	Unused
GPIO_7/NFERR#/SYS_PERR#/IGPU_GPIO7	I/O(S5_3.3V)	Unused
GPIO_8/SPI_DI	I/O(S5_3.3V)	Unused
GPIO_9/SPI_DO	I/O(S5_3.3V)	Unused
GPIO_10/SPI_CS0	I/O(S5_3.3V)	Unused
GPIO_11/SPI_CLK	I/O(S5_3.3V)	Unused
LPC_DRQ1#/GPIO_19/FANRPM1	I/O(3.3V)	Unused
PROCHOT#/GPIO_20	I/O(CPU_VTT)	H_PROCHOT#
PE_WAKE#/GPIO_21	I/O(S5_3.3V)	WAKE#
HDA_SDATA_IN0/GPIO_22	I/O(S5_3.3V)	HDA_SDATA_IN
HDA_SDATA_IN1/GPIO_23/MGPIO_0	I/O(S5_3.3V)	Unused
HDA_SDATA_IN2/GPIO_24/MGPIO_2	I/O(3.3V)	Unused
USB_OC0#/GPIO_25	I/O(S5_3.3V)	OC#1
USB_OC1#/GPIO_26	I/O(S5_3.3V)	OC#2
USB_OC2#/GPIO_27	I/O(S5_3.3V)	OC#3
USB_OC3#/GPIO_28	I/O(S5_3.3V)	Pull Hi
USB_OC4#/GPIO_29	I/O(S5_3.3V)	Pull Hi
PCI_PME#/GPIO_30	I/O(S5_3.3V)	PCI_PME#
SIO_PME#/GPIO_31	I/O(S5_3.3V)	SIO_PME#
EXT_SMI#/GPIO_32	I/O(S5_3.3V)	LPC_SMI#
SUS_CLK/GPIO_34	I/O(S5_3.3V)	Unused
MII0_INTR/GPIO_35	I/O(S5_3.3V)	RGMII_INTR#
MII0_PXER/GPIO_36/PWR_LED#	I/O(S5_3.3V)	RGMII_RX_ER
MII0_PWRDWN/GPIO_37	I/O(S5_3.3V)	RGMII_PREDN
PCI_REQ3#/GPIO_38/RS232_CTS#	I/O(3.3V)	PREQ#3
PCI_GNT3#/GPIO_39/RS232_RTS#	I/O(3.3V)	Unused
PCI_REQ2#/GPIO_40/RS232_DSR#	I/O(3.3V)	PREQ#2
PCI_GNT2#/GPIO_41/RS232_DTR#	I/O(3.3V)	PGNT#2
LPC_RESET#/GPIO_42	I/O(3.3V)	Unused
PCI_PERR#/GPIO_43/RS232_DCD#	I/O(3.3V)	PERR#
HDA_SYNC/GPIO_44	I/O(3.3V)	AZ_SYNC_R
HDA_SDATA_OUT/GPIO_45	I/O(3.3V)	HDA_SDATA_OUT
LPC_DRQ0#/GPIO_50	I/O(3.3V)	LPC_DRQ#0
PCI_REQ4#/GPIO52/RS232_SIN#	I/O(3.3V)	PREQ#4
PCI_GNT4#/GPIO_53/RS232_SOUT#	I/O(3.3V)	Unused
A20GATE/GPIO_55	I/O(3.3V)	A20GATE
KBRDRSTIN#/GPIO_56	I/O(3.3V)	KBRST#
SATA_LED#/GPIO_57	A(3.3V)	SATALED#
THERMTRIP#/GPIO_58	I/O(CPU_VTT)	H_THERMTRIP#
THERM#/GPIO_59	I/O(3.3V)	Unused
FANRPM0/GPIO_60	I/O(3.3V)	OBR2
FANCTL0/GPIO_61	I/O(3.3V)	AUDIO_FRONT_IO
FANCTL1/GPIO_62	I/O(3.3V)	DEPOP_GPIO
CABLE_DET_P/GPIO_63	I/O(3.3V)	ATADET0

PCI Config.

DEVICE	MCP1 INT Pin	REQ#/GNT#	IDSEL	CLOCK
PCI Slot 1	PCI_INTX# PCI_INTY# PCI_INTZ# PCI_INTW#	PREQ#0 PGNT#0	AD21	PCICLK0
PCI Slot 2	PCI_INTY# PCI_INTZ# PCI_INTW# PCI_INTX#	PREQ#1 PGNT#1	AD22	PCICLK1
1394	PCI_INTW#	PREQ#2 PGNT#2	AD23	1394_PCLK

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Title: GPIO Configuration

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CPU SIGNAL BLOCK

BSEL			TABLE
2	1	0	FSB FREQUENCY
0	0	0	267 MHZ (1067)
0	1	0	200 MHZ (800)
0	0	1	133 MHZ (533)

Prescott / Cedar Mill
LL_ID[1:0] = 00
GTLREF_SEL = 0
VTT_SEL = 1

PLACE BPM TERMINATION NEAR CPU

FSBSEL RESISTOR CAN BE REMOVED IF ONLY TEJAS AND CEDAR MILL ARE SUPPORTED

ZIF-SOCK775-15u-in,ZIF-SOCK775-15u-in_TH

MSI Link to the Future	MICRO-START INT'L CO.,LTD.		
Title	Intel LGA775 - Signals		
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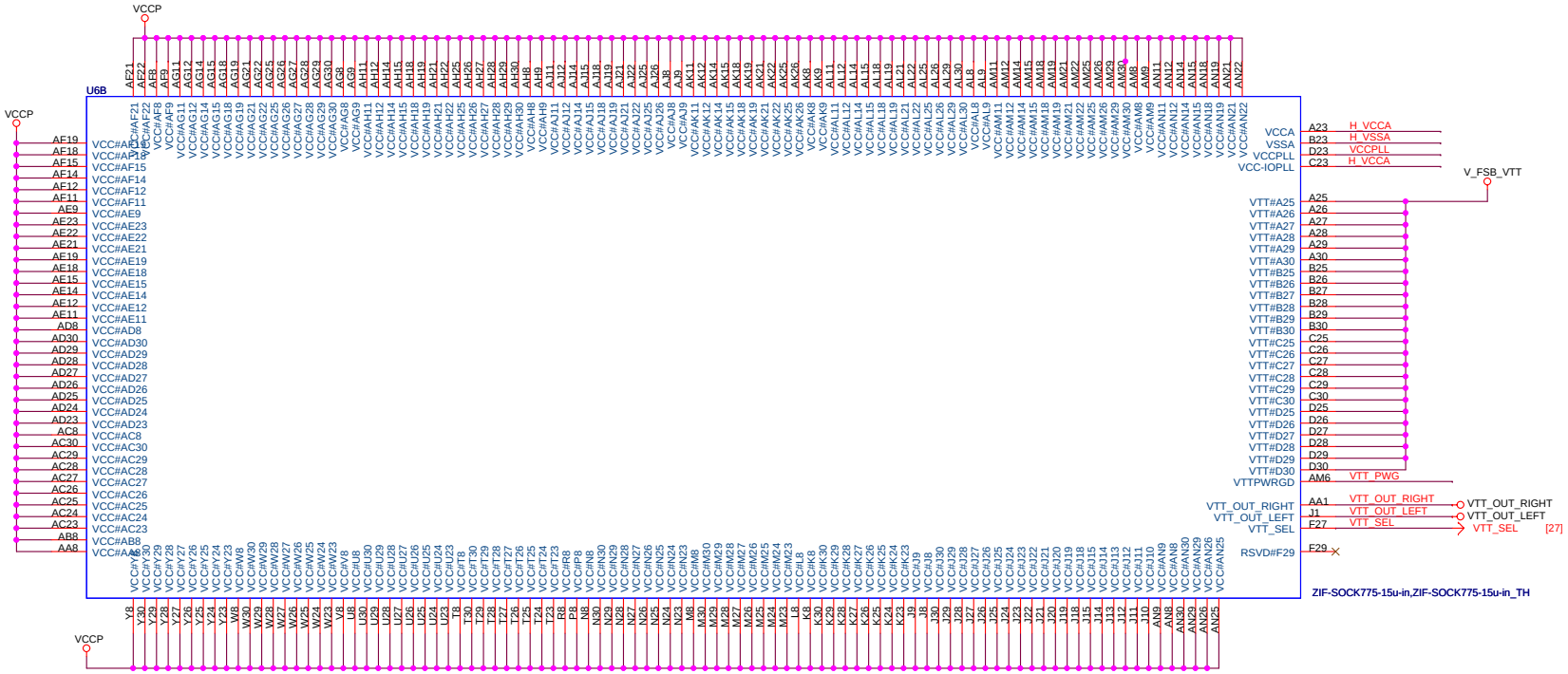
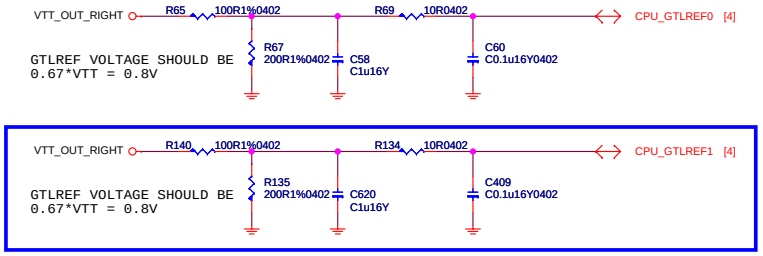
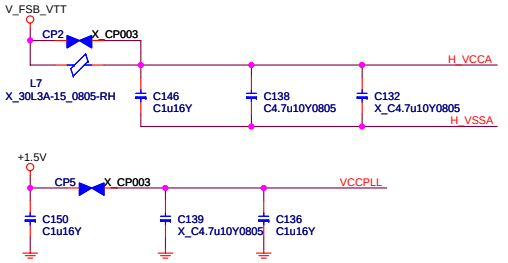
Date: Thursday, July 12, 2007	Sheet 4 of 36		



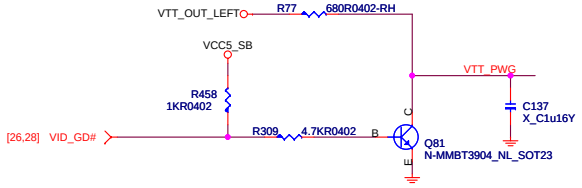


PLACE COMPONENTS AS CLOSE AS POSSIBLE TO PROCESSOR SOCKET
TRACE WIDTH TO CAPS MUST BE SMALLER THAN 12MILS



VTT_PWG SPEC :
High > 0.9V
Low < 0.3V
Trise < 150ns

VTT_PWRGOOD



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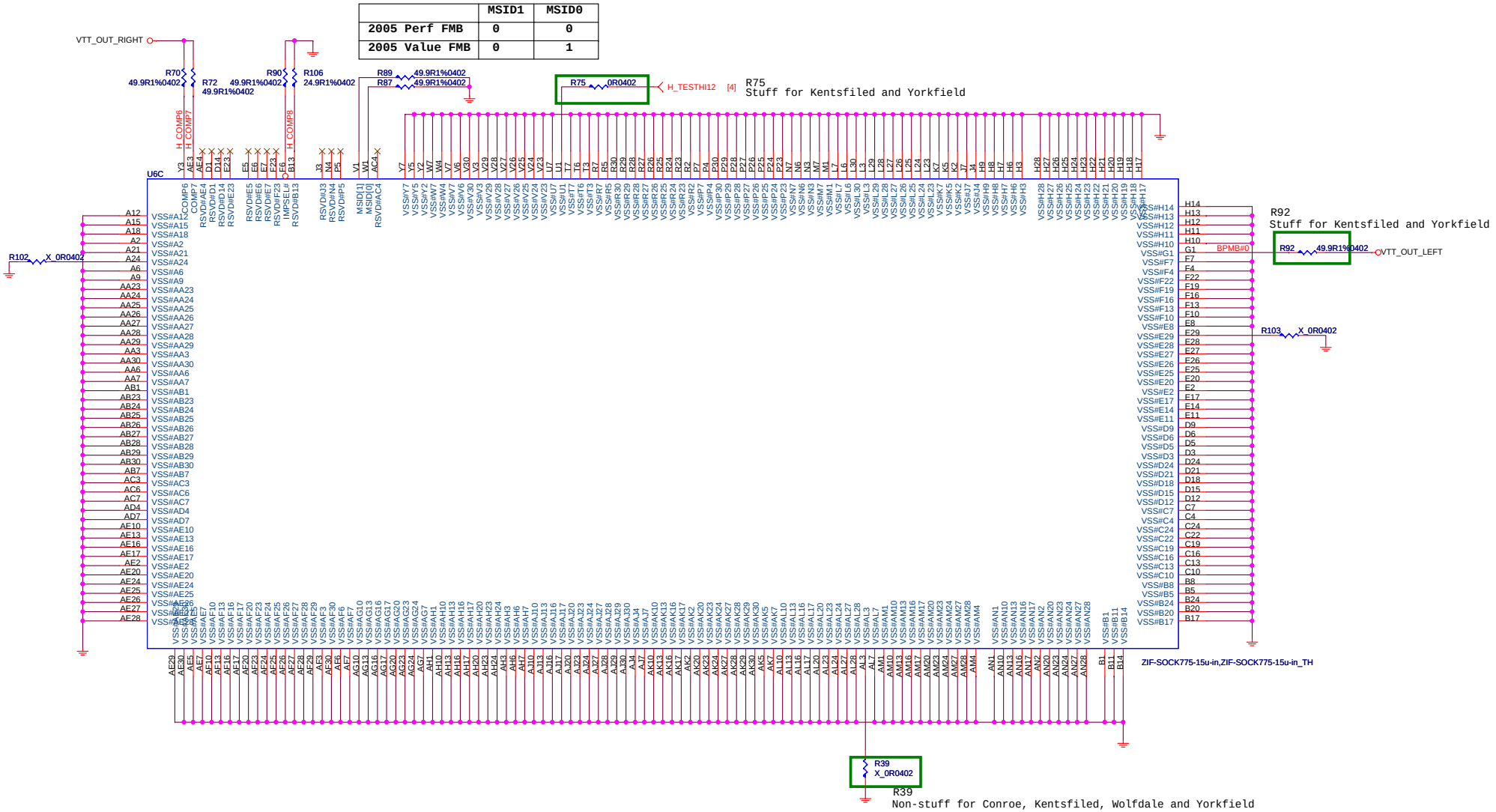
Title	Intel LGA775 - Power	
Size: Custom	Document Number: acer Persian / MS-7399	Rev: 0A
Date: Monday, July 16, 2007	Sheet 5 of 36	


MSID1 MSID0
2005 Perf FMB 0 0
2005 Value FMB 0 1
VTT_OUT_RIGHT
R70 49.9R1%0402
R72 49.9R1%0402
R90 49.9R1%0402
R106 24.9R1%0402
R89 49.9R1%0402
R87 49.9R1%0402
R75 0R0402
H_TESTHI12 [4]
R75
Stuff for Kentsfiled and Yorkfield
H_COMP6
H_COMP7
H_COMP8
U6C
R102 X_0R0402
R92
Stuff for Kentsfiled and Yorkfield
R92 49.9R1%0402
BPMB#0
VTT_OUT_LEFT
R103 X_0R0402
ZIF-SOCK775-15u-in,ZIF-SOCK775-15u-in_TH
R39 X_0R0402
R39
Non-stuff for Conroe, Kentsfiled, Wolfdale and Yorkfield
MICRO-START INT'L CO.,LTD.
Title
Intel LGA775 - GND
Size Custom
Document Number
acer Persian / MS-7399
Rev
0A
Date: Wednesday, July 11, 2007
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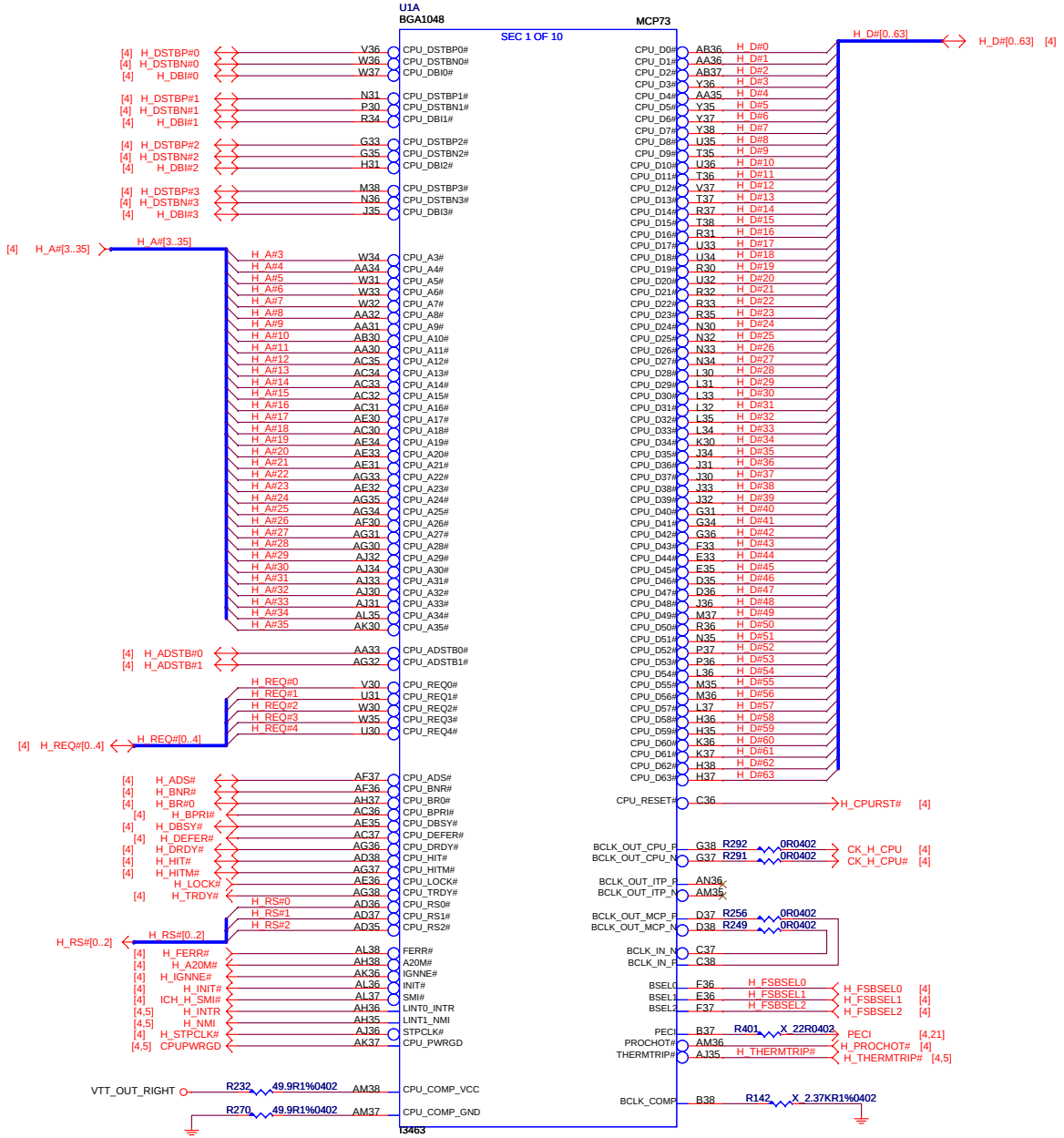

MSI Link to the Future	MICRO-START INTL CO.,LTD.	
Title: MCP73 CPU		
Size: Custom	Document Number: acer Persian / MS-7399	Rev: 0A
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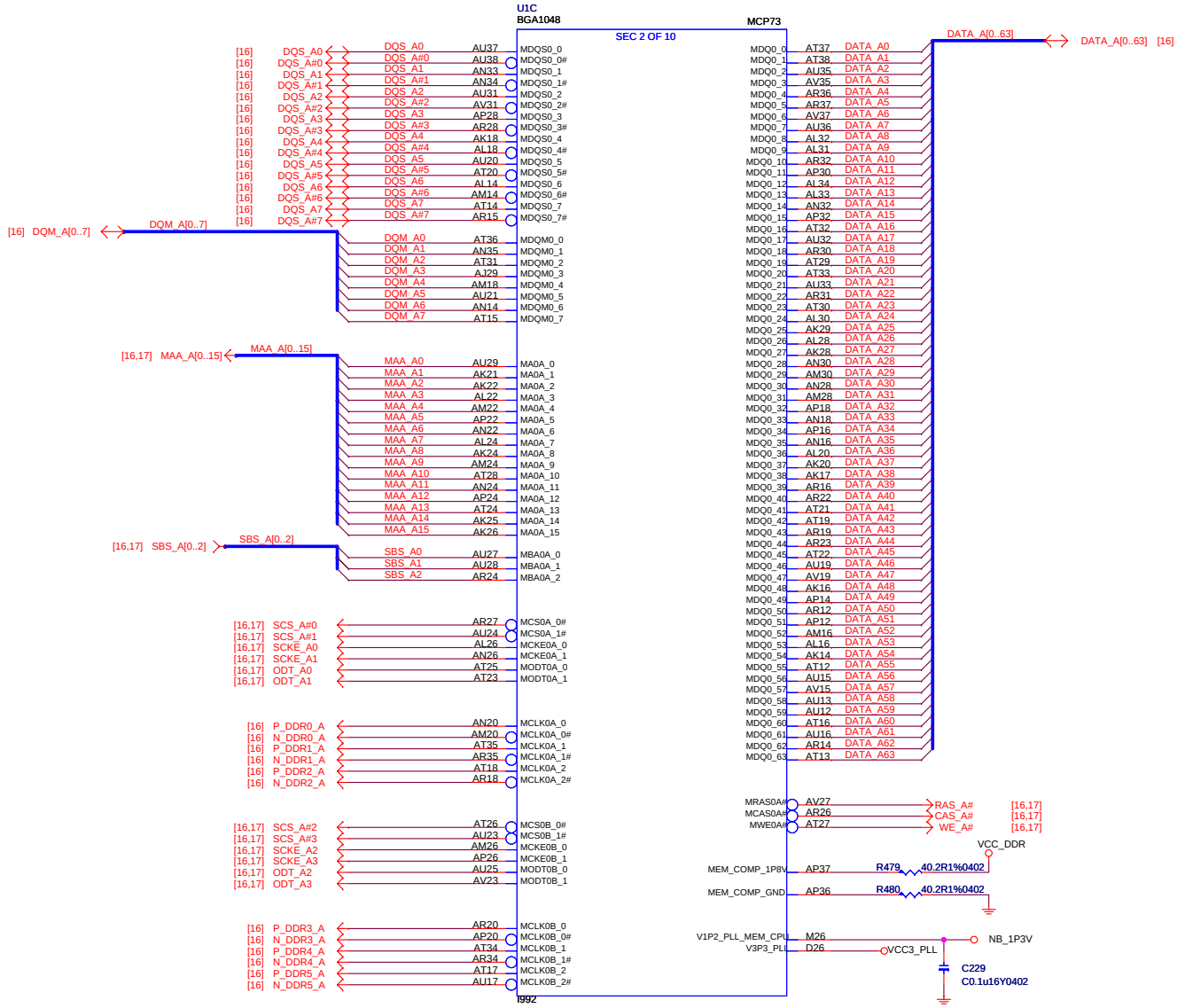

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Link to the Future

Title	MCP73 MEM	
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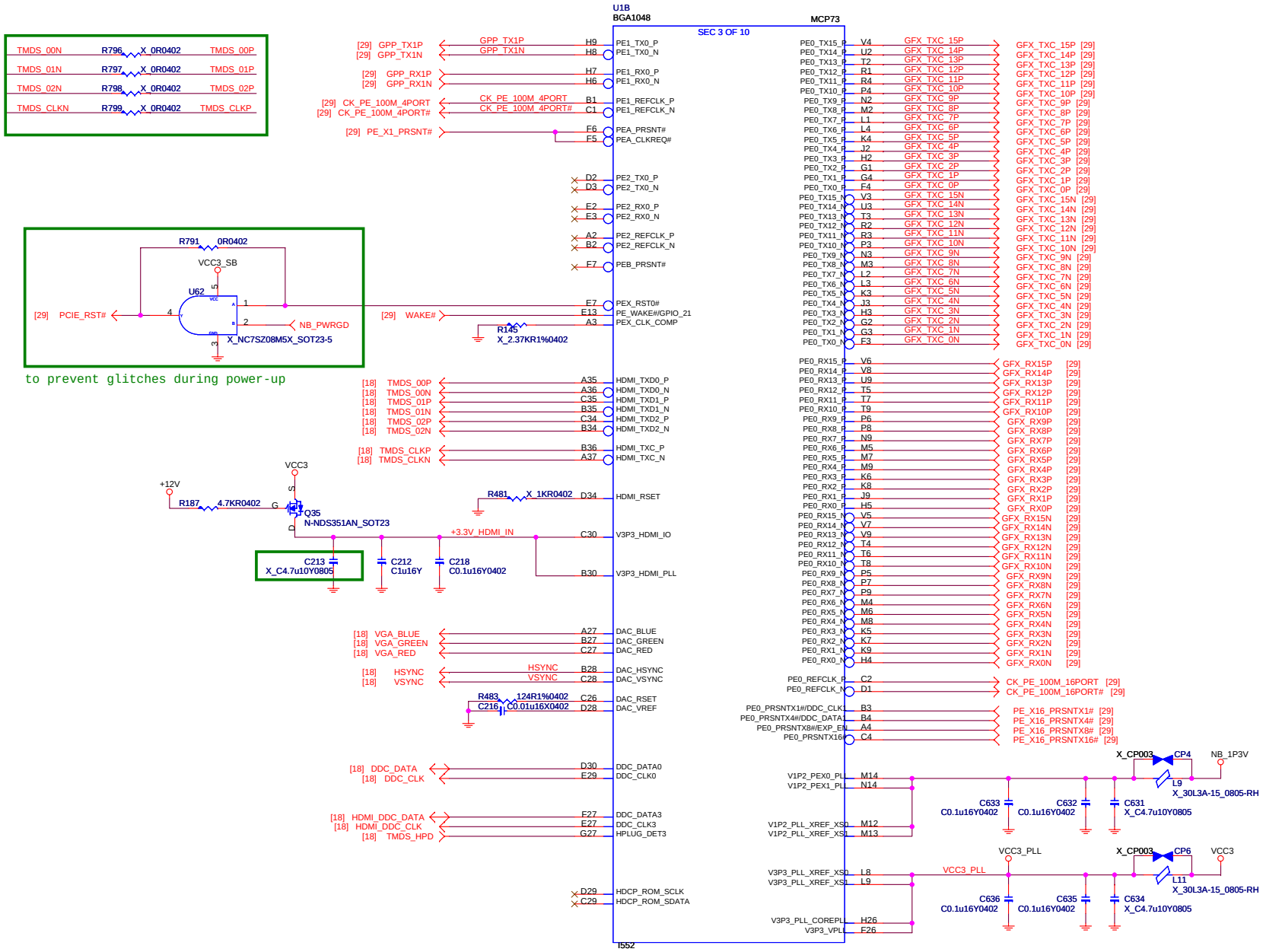

MSI MICRO-STAR INTL CO.,LTD.

Title: MCP73 PCIE/DAC/HDMI

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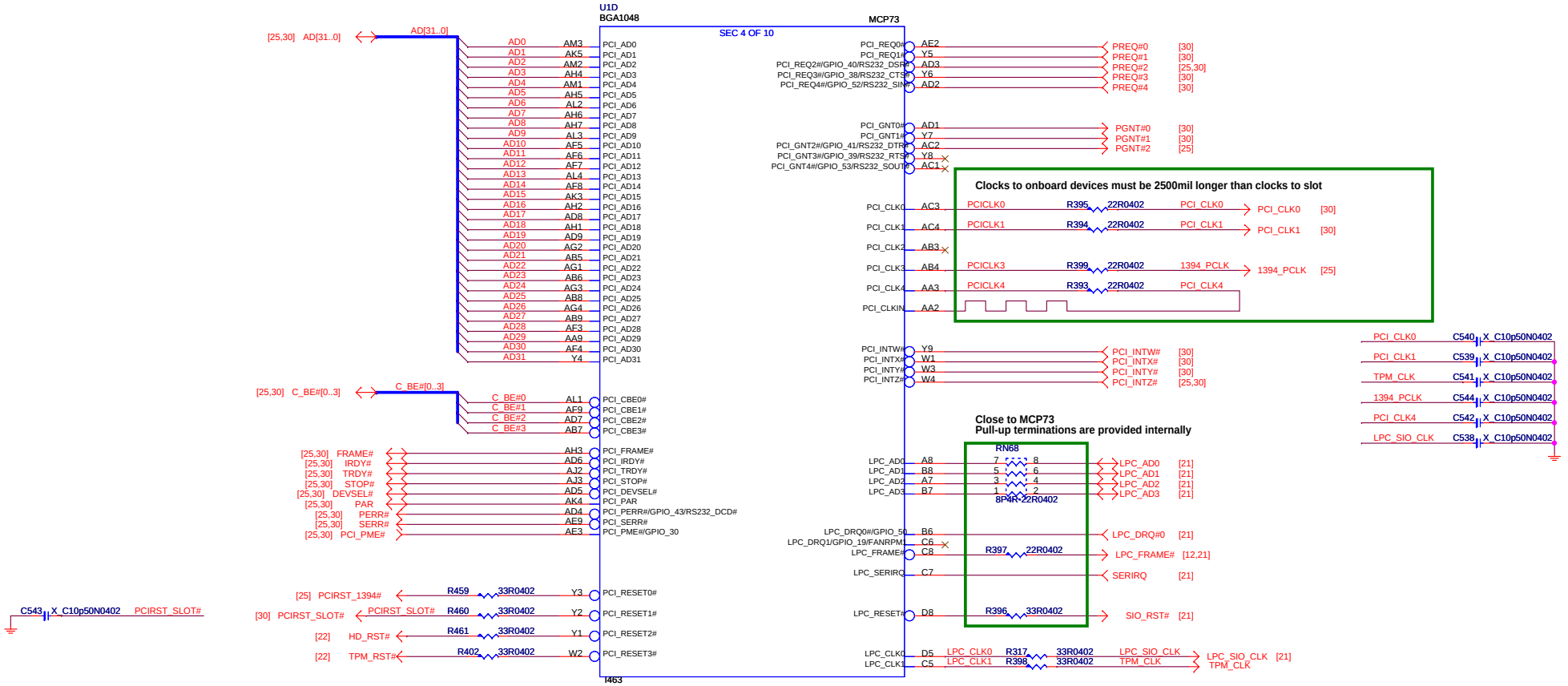
Date: Wednesday, July 11, 2007 | Sheet 9 of 36



Title	MCP73 PCI/LPC
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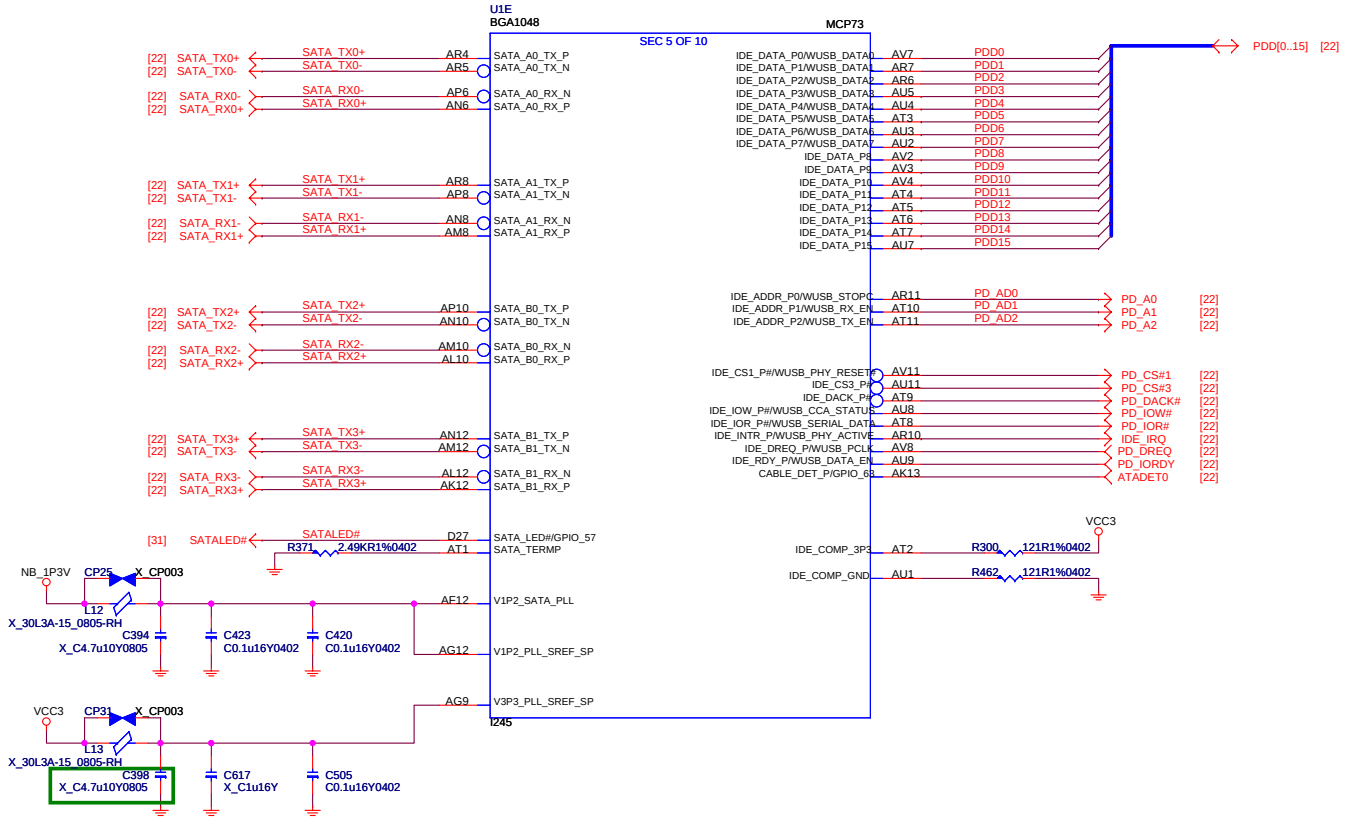
Link to the Future



MICRO-START INTL CO.,LTD.

Title: MCP73 SATA/IDE

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Strapping 10K ohm to VCC3_SB: RGMII

VCC3_SB — R467 10KR0402 — AZ_RST#

RN55 (8P4R-22R0402)
- [24,32] AZ_RESET# → AZ_RST#
- [24] AZ_BITCLK → AZ_BITCLK_R
- [24] AZ_SYNC → AZ_SYNC_R
- [24] AZ_SDATA_OUT → AZ_SDATA_OUT_R

C549 C10p50N0402 AZ_RST#
C583 C10p50N0402 AZ_BITCLK_R
C585 C10p50N0402 AZ_SYNC_R
C586 C10p50N0402 AZ_SDATA_OUT_R

HDA_SYNC (SIO CLK)
0 = 14.318MHZ
1 = 24MHZ *
VCC3 — R466 10KR0402 AZ_SYNC_R
R464 10KR0402 SPKR

SPKR
0 = USER MODE
1 = SAFE MODE

VCC3
R513 8.2KR0402 AZ_SDATA_OUT_R
R514 8.2KR0402 LPC_FRAME# — LPC_FRAME# [10,21]

STRAP	HDA_SDOUT	LPC_FRAME
LPC BIOS	0	0
PCI BIOS	0	1
SPI BIOS	1	0
RESERVED	1	1

VCC3_SB
R526 1.47KR1%0402
RGMII_VREF
R527 1.47KR1%0402
C479 C0.1u16Y0402

U1F BGA1048 — SEC 6 OF 10

[24] SDATA_IN	E11	HDA_SDATA_OUT/GPIO_45
AZ_SDATA_OUT_R	H11	HDA_SDATA_IN0/GPIO_22
SDATA_IN	G11	HDA_SDATA_IN1/GPIO_23/MGPIO_0
AZ_SYNC_R	D11	HDA_SYNC/GPIO_44
AZ_BITCLK_R	F11	HDA_BITCLK
AZ_RST#	J11	HDA_RESET#
[31] SPKR	F9	SPKR
RGMII_TXD_0	C21	MII0_TXD0
RGMII_TXD_1	D21	MII0_TXD1
RGMII_TXD_2	B22	MII0_TXD2
RGMII_TXD_3	C23	MII0_TXD3
RGMII_TX_CLK	C22	MII0_TXCLK
RGMII_TX_CTRL	B23	MII0_TXEN
[19] RGMII_RXD0	A19	MII0_RXD0
[19] RGMII_RXD1	B20	MII0_RXD1
[19] RGMII_RXD2	C20	MII0_RXD2
[19] RGMII_RXD3	D20	MII0_RXD3
[19] RGMII_RXCLK_N	A20	MII0_RXCLK
[19] RGMII_RXCTRL	D19	MII0_RXDV
[19] RGMII_RX_ER	E19	MII0_RXER/GPIO_36
[19] RGMII_COL	G19	MII0_COL/MI2C_DATA
[19] RGMII_CRS	F19	MII0_CRS/MI2C_CLK
[19] RGMII_MDC	B19	MII0_MDC
RGMII_MDIO	C19	MII0_MDIO
[19] RGMII_INTR#	E21	MII0_INTR/GPIO_35
	H19	MII0_PWRDWN/GPIO_37
[19] RGMII_RST#	F21	MII0_RESET#
RGMII_VREF	A23	MII_VREF
R131 49.9R1%0402	A24	MII_COMP_VDD
R129 49.9R1%0402	B24	MII_COMP_GND
X_CP003 CP7	J19	V3P3_DUAL_PLL_MAC

VCC3_SB — C488 X_C4.7u10Y0805 — C475 C0.1u16Y0402 — L14 X_30L3A-15_0805-RH

MCP73

USB0_P	C25	USB0+	USB0+ [20]
USB0_N	D25	USB0-	USB0- [20]
USB1_P	C24	USB1+	USB1+ [20]
USB1_N	D24	USB1-	USB1- [20]
USB2_P	J25	USB2+	USB2+ [20]
USB2_N	J26	USB2-	USB2- [20]
USB3_P	G25	USB3+	USB3+ [20]
USB3_N	H25	USB3-	USB3- [20]
USB4_P	E25	USB4+	USB4+ [20]
USB4_N	F25	USB4-	USB4- [20]
USB5_P	H23	USB5+	USB5+ [20]
USB5_N	J23	USB5-	USB5- [20]
USB6_P	G23	USB6+	USB6+ [20]
USB6_N	F23	USB6-	USB6- [20]
USB7_P	E23	USB7+	USB7+ [20]
USB7_N	D23	USB7-	USB7- [20]
USB8_P	J22	USB8+	USB8+ [20]
USB8_N	J21	USB8-	USB8- [20]
USB9_P	H21	USB9+	USB9+ [20]
USB9_N	G21	USB9-	USB9- [20]

USB_OC0#/GPIO_25	B14	OC#1 [20]
USB_OC1#/GPIO_26	C14	OC#2 [20]
USB_OC2#/GPIO_27	D13	OC#3 [20]
USB_OC3#/GPIO_28/MGPIO_1	C13	R463 10KR0402
USB_OC4#/GPIO_29/MGPIO_3	D12	R505 10KR0402 — VCC3_SB
USB_RBIAS_GND	B26	R506 1.1KR1%0402

RN80 (8P4R-15KR0402): USB5+, USB5-, USB4+, USB4-
RN81 (8P4R-15KR0402): USB1-, USB1+, USB0+, USB0-
RN82 (8P4R-15KR0402): USB3+, USB3-, USB2+, USB2-
RN83 (8P4R-15KR0402): USB7+, USB7-, USB6-, USB6+
RN84 (8P4R-15KR0402): USB9-, USB9+, USB8-, USB8+

Close to U1

[19] RGMII_TXD0	R807 33R0402	RGMII_TXD_0
[19] RGMII_TXD1	R808 33R0402	RGMII_TXD_1
[19] RGMII_TXD2	R809 33R0402	RGMII_TXD_2
[19] RGMII_TXD3	R810 33R0402	RGMII_TXD_3
[19] RGMII_TXCLK	R811 33R0402	RGMII_TX_CLK
[19] RGMII_TXCTRL	R812 33R0402	RGMII_TX_CTRL

MICRO-START INTL CO.,LTD.

Title: MCP73 HDA/MII/USB

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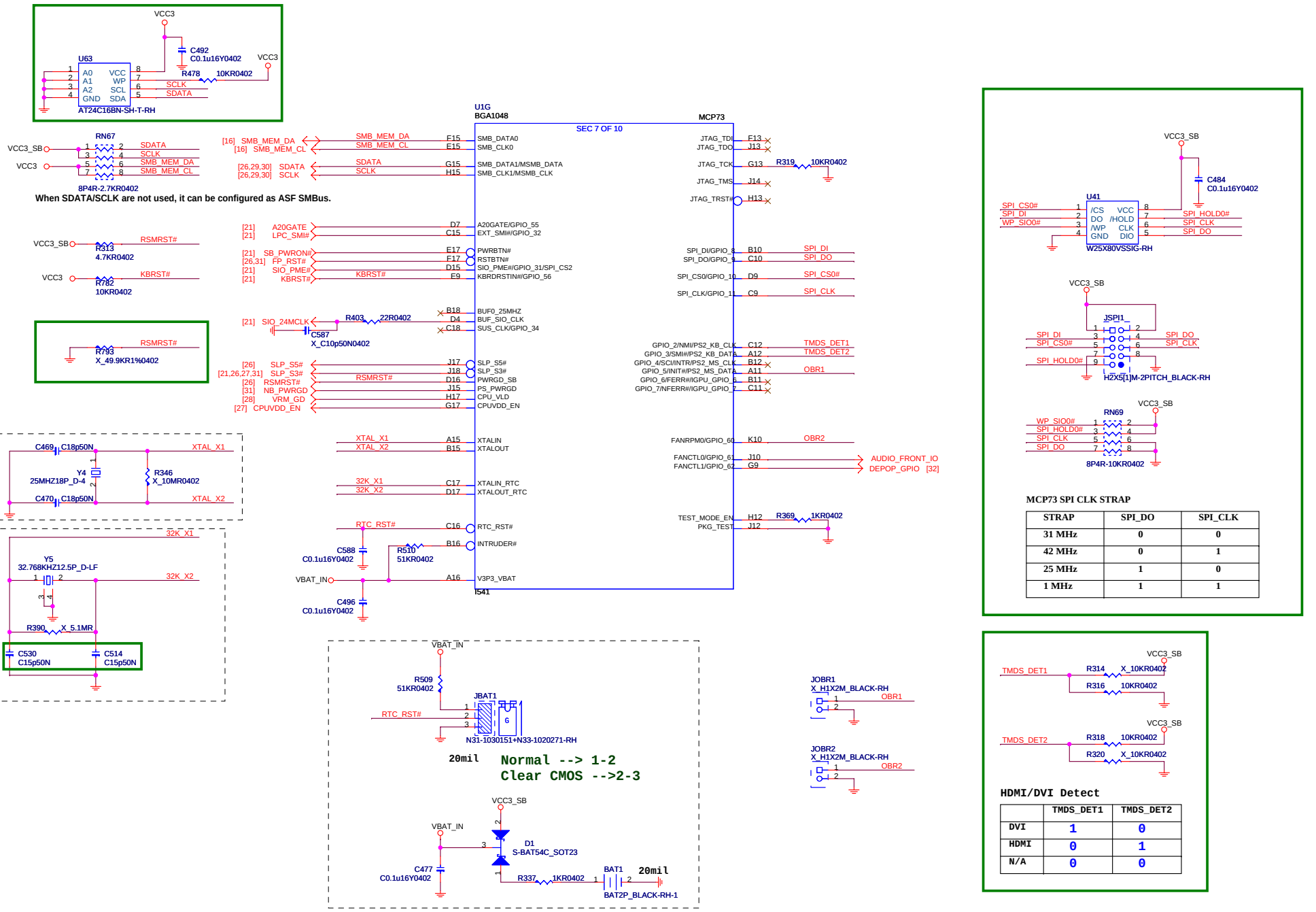

When SDATA/SCLK are not used, it can be configured as ASF SMBus.

MCP73 SPI CLK STRAP

STRAP	SPI_DO	SPI_CLK
31 MHz	0	0
42 MHz	0	1
25 MHz	1	0
1 MHz	1	1

HDMI/DVI Detect

	TMDS_DET1	TMDS_DET2
DVI	1	0
HDMI	0	1
N/A	0	0

MSI MICRO-START INTL CO.,LTD.

Title: MCP73 SPI/PS2/JTAG

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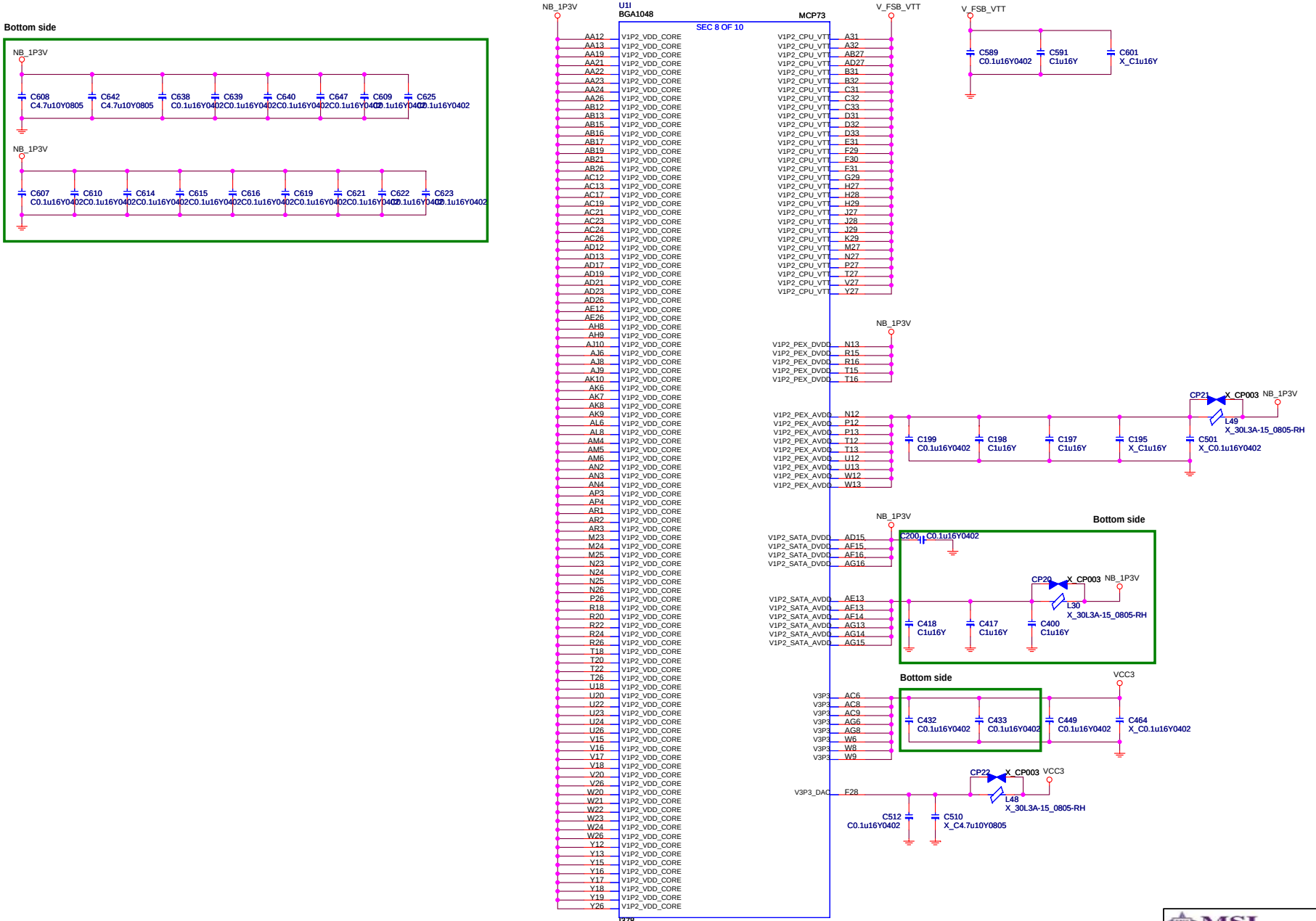

MICRO-START INT'L CO.,LTD.

Title	MCP73 CORE/VTT POWER	
Size: Custom	Document Number: acer Persian / MS-7399	Rev: 0A
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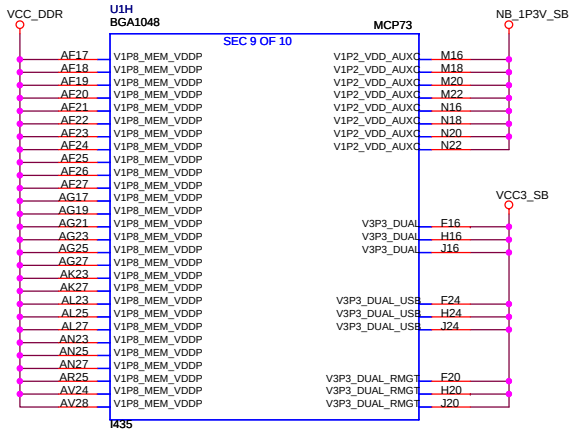
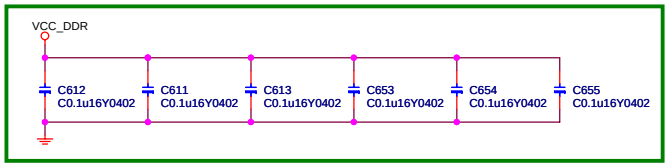
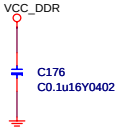
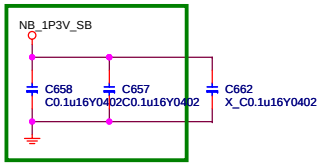


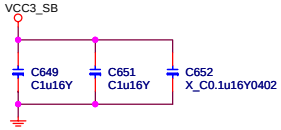
Bottom side

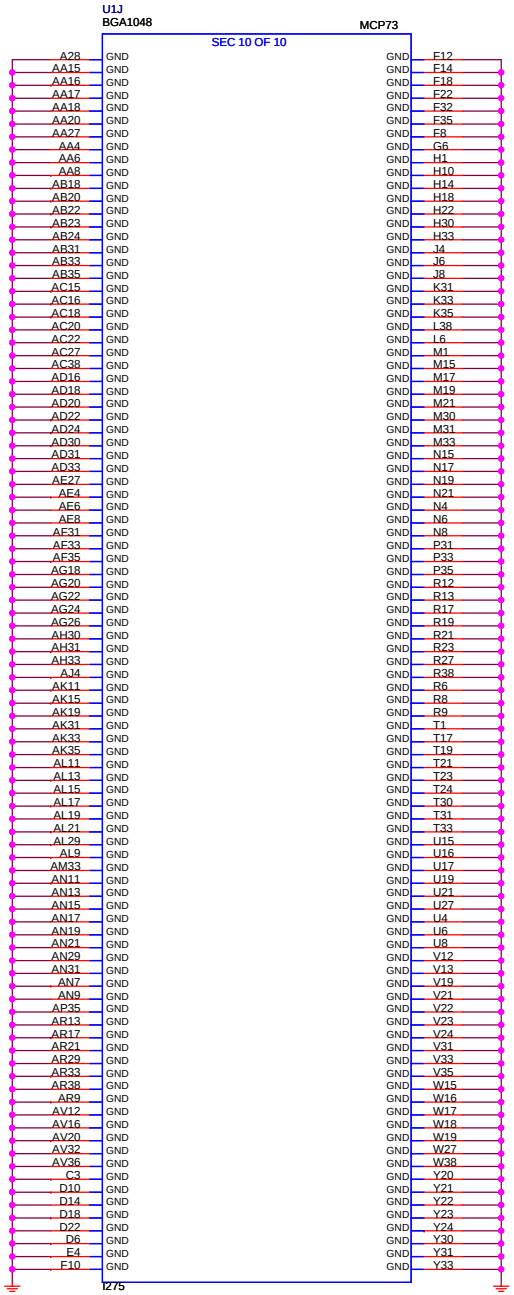




Bottom side







MICRO-START INT'L CO.,LTD.

Title: MCP73 MEM POWER & GND		
Size: Custom	Document Number: acer Persian / MS-7399	Rev: 0A
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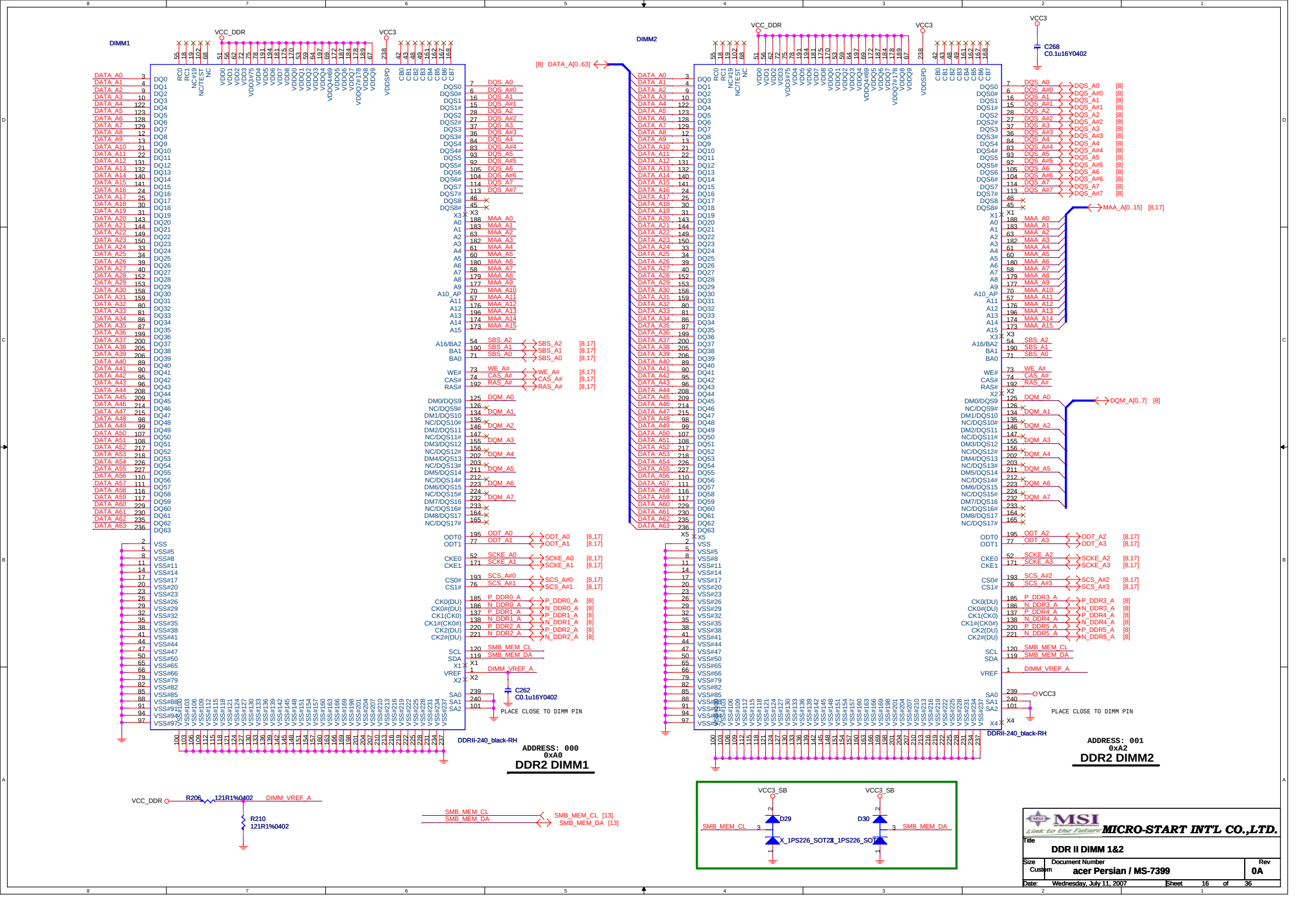
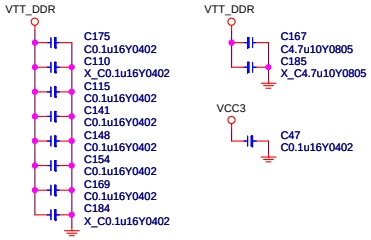
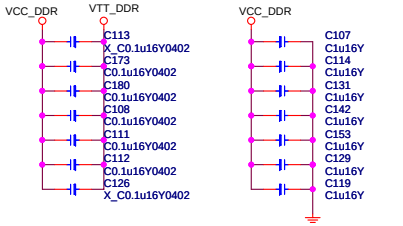
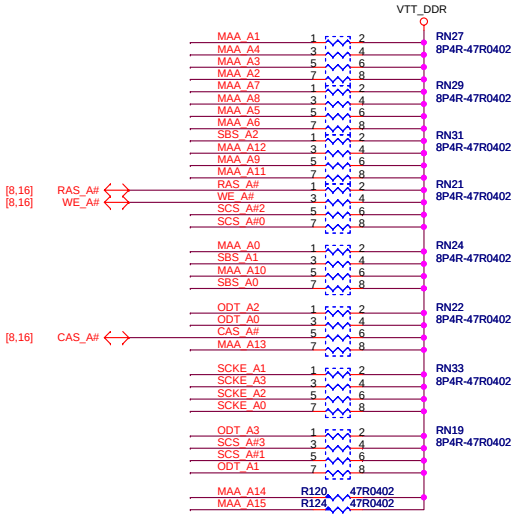

DIMM1
DIMM2
VCC_DDR
VCC3
DDRII-240_black-RH
ADDRESS: 000
0xA0
DDR2 DIMM1
ADDRESS: 001
0xA2
DDR2 DIMM2
C262
C0.1u16Y0402
C268
C0.1u16Y0402
PLACE CLOSE TO DIMM PIN
R206
121R1%0402
R210
121R1%0402
DIMM_VREF_A
SMB_MEM_CL
SMB_MEM_DA
D29
D30
VCC3_SB
MICRO-START INT'L CO.,LTD.
DDR II DIMM 1&2
acer Persian / MS-7399
0A
Wednesday, July 11, 2007
16
36

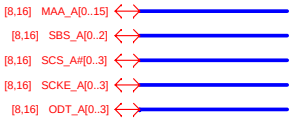
CHANNEL A VTT_DDR
DECOUPLING CAPS





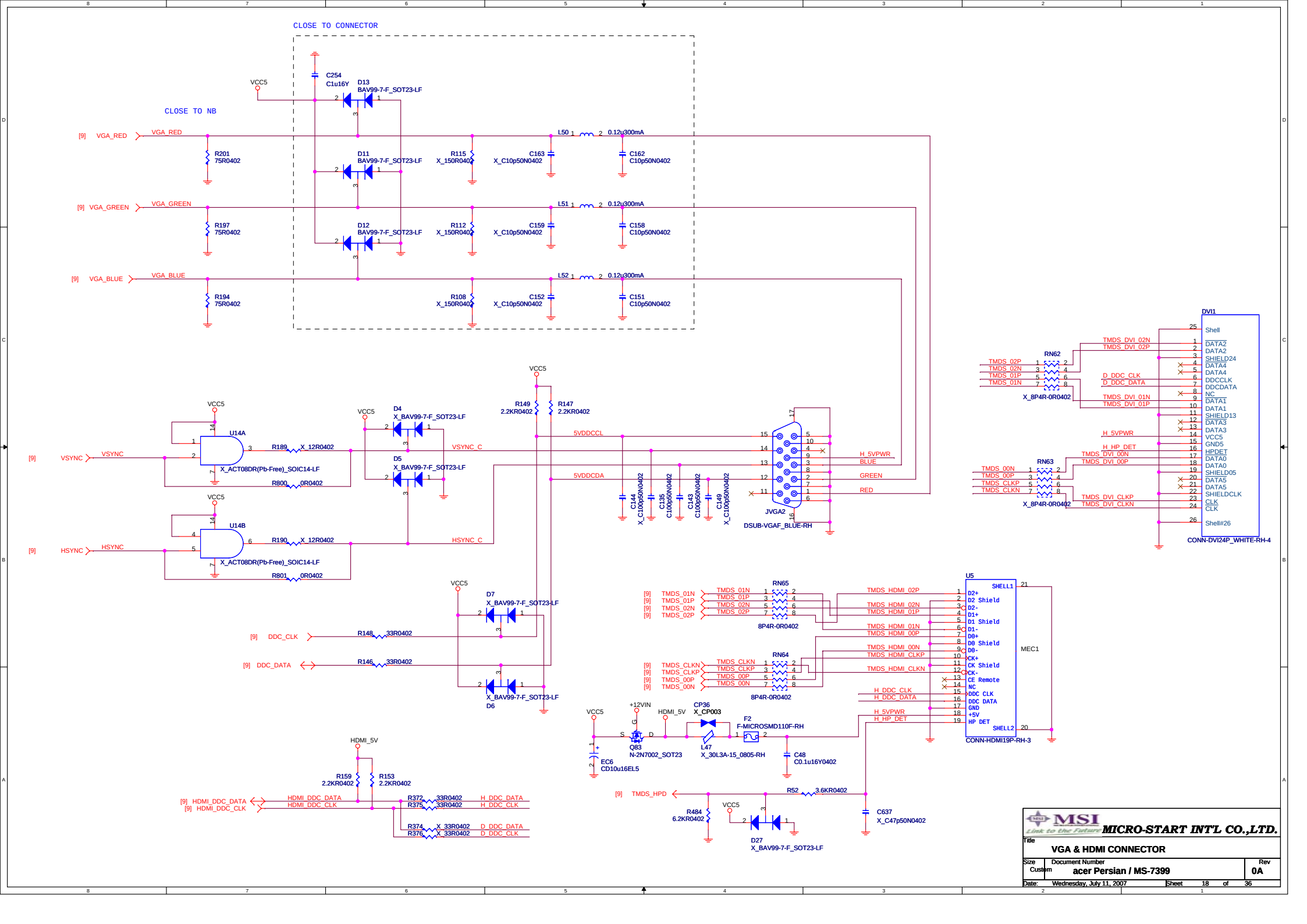
DDR II TERMINATION

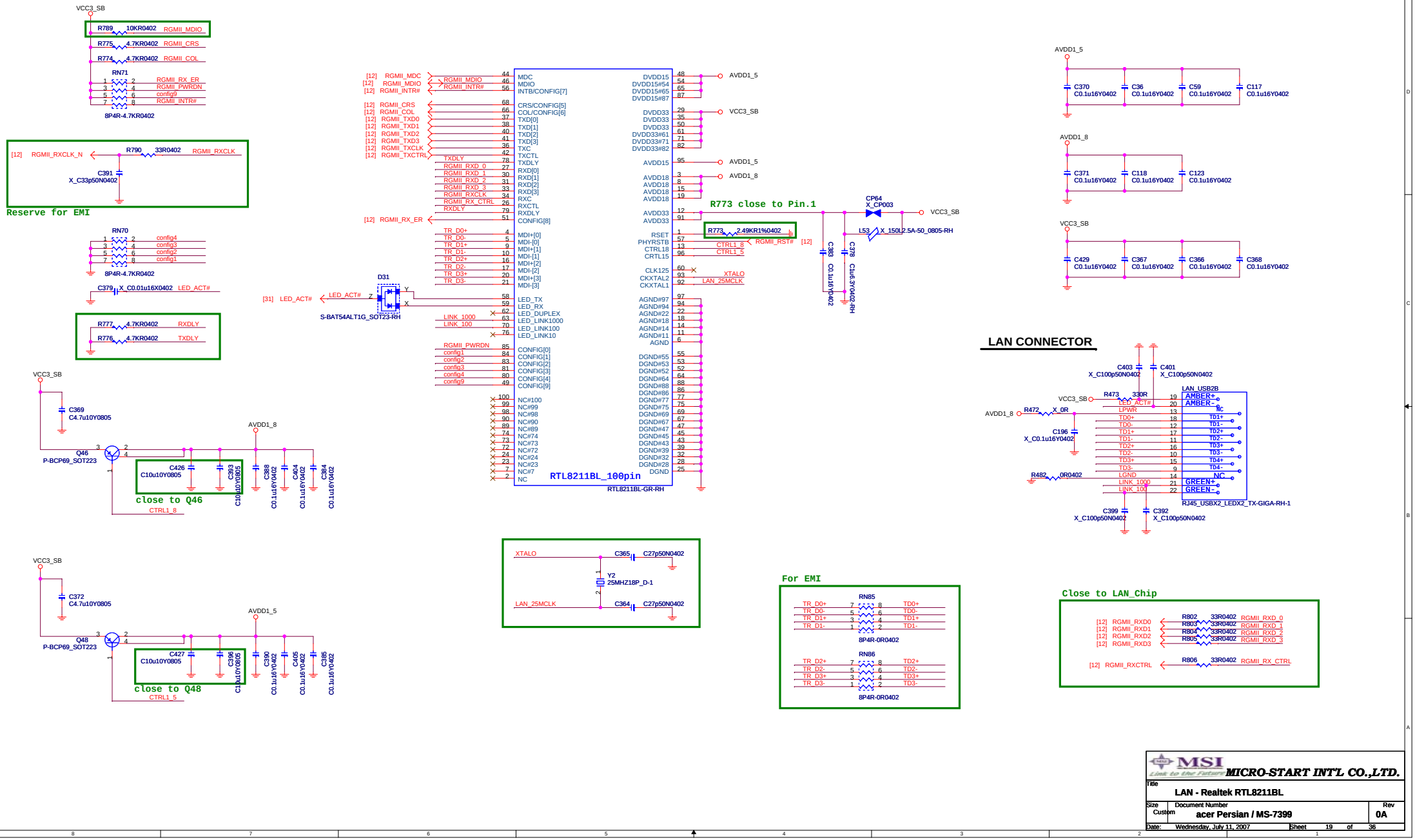




MICRO-START INT'L CO.,LTD.

Title: DDR II Termination		
Size: Custom	Document Number: acer Persian / MS-7399	Rev: 0A
Date: Wednesday, July 11, 2007	Sheet 17 of 36	


CLOSE TO CONNECTOR
CLOSE TO NB
VCC5
C254
C1u16Y
D13
BAV99-7-F_SOT23-LF
D11
BAV99-7-F_SOT23-LF
D12
BAV99-7-F_SOT23-LF
[9] VGA_RED
VGA_RED
[9] VGA_GREEN
VGA_GREEN
[9] VGA_BLUE
VGA_BLUE
R201
75R0402
R197
75R0402
R194
75R0402
R115
X_150R0402
R112
X_150R0402
R108
X_150R0402
C163
X_C10p50N0402
C159
X_C10p50N0402
C152
X_C10p50N0402
L50
L51
L52
0.12u300mA
C162
C10p50N0402
C158
C10p50N0402
C151
C10p50N0402
U14A
U14B
X_ACT08DR(Pb-Free)_SOIC14-LF
[9] VSYNC
VSYNC
[9] HSYNC
HSYNC
R189
X_12R0402
R190
X_12R0402
R800
0R0402
R801
0R0402
D4
X_BAV99-7-F_SOT23-LF
D5
X_BAV99-7-F_SOT23-LF
VSYNC_C
HSYNC_C
R149
2.2KR0402
R147
2.2KR0402
5VDDCCL
5VDDCDA
C144
C135
C143
C149
X_C100p50N0402
JVGA2
DSUB-VGAF_BLUE-RH
H_5VPWR
BLUE
GREEN
RED
DVI1
CONN-DVI24P_WHITE-RH-4
RN62
RN63
X_8P4R-0R0402
TMDS_02P
TMDS_02N
TMDS_01P
TMDS_01N
TMDS_00N
TMDS_00P
TMDS_CLKP
TMDS_CLKN
TMDS_DVI_02N
TMDS_DVI_02P
TMDS_DVI_01N
TMDS_DVI_01P
TMDS_DVI_00N
TMDS_DVI_00P
TMDS_DVI_CLKP
TMDS_DVI_CLKN
D_DDC_CLK
D_DDC_DATA
H_5VPWR
H_HP_DET
D7
D6
X_BAV99-7-F_SOT23-LF
[9] DDC_CLK
[9] DDC_DATA
R148
33R0402
R146
33R0402
RN65
RN64
8P4R-0R0402
TMDS_HDMI_02P
TMDS_HDMI_02N
TMDS_HDMI_01P
TMDS_HDMI_01N
TMDS_HDMI_00P
TMDS_HDMI_00N
TMDS_HDMI_CLKP
TMDS_HDMI_CLKN
H_DDC_CLK
H_DDC_DATA
H_HP_DET
U5
CONN-HDMI19P-RH-3
MEC1
HDMI_5V
+12VIN
CP36
X_CP003
F2
F-MICROSMD110F-RH
Q83
N-2N7002_SOT23
L47
X_30L3A-15_0805-RH
EC6
CD10u16EL5
C48
C0.1u16Y0402
[9] TMDS_HPD
R52
3.6KR0402
R484
6.2KR0402
D27
X_BAV99-7-F_SOT23-LF
C637
X_C47p50N0402
[9] HDMI_DDC_DATA
[9] HDMI_DDC_CLK
R159
2.2KR0402
R153
2.2KR0402
R372
R375
R374
R376
33R0402
X_33R0402
MSI
MICRO-START INT'L CO.,LTD.
Title
VGA & HDMI CONNECTOR
Size
Custom
Document Number
acer Persian / MS-7399
Rev
0A
Date: Wednesday, July 11, 2007
Sheet 18 of 36



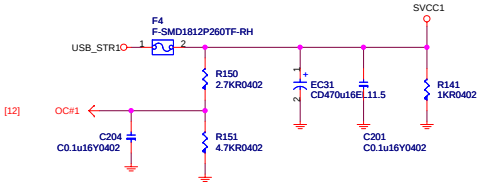
MSI MICRO-START INT'L CO.,LTD.

Title: LAN - Realtek RTL8211BL

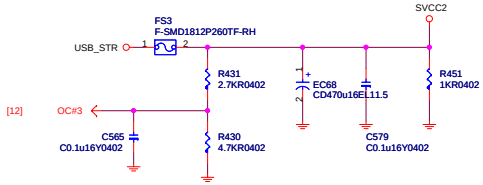
Size: Custom | Document Number: acer Persian / MS-7399 | Rev: 0A

Date: Wednesday, July 11, 2007 | Sheet 19 of 36

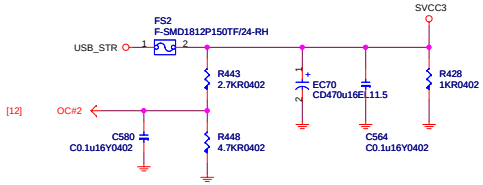
POWER CIRCUIT FOR USB PORT 0,1,2,3



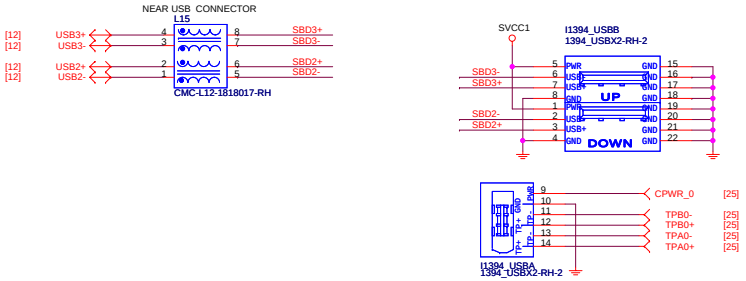
POWER CIRCUIT FOR USB PORT 4,5,6,7



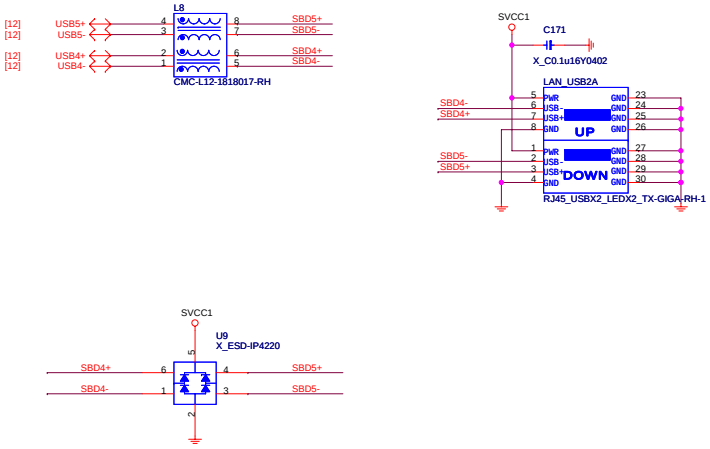
POWER CIRCUIT FOR USB PORT 8,9



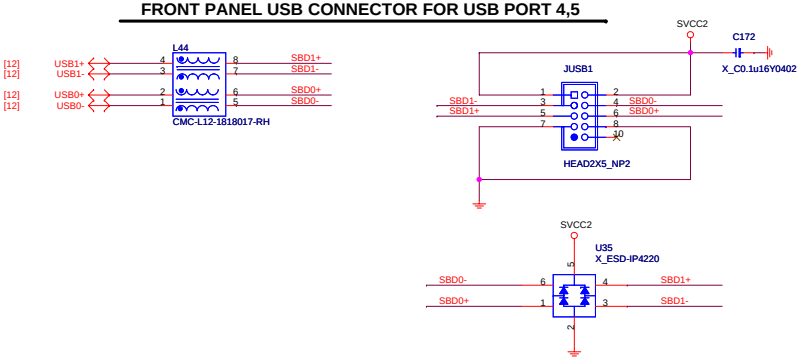
REAR PANEL USB CONNECTOR FOR USB PORT 0,1



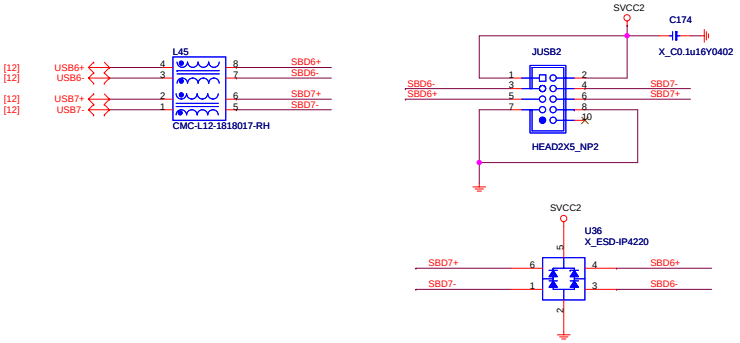
REAR PANEL USB CONNECTOR FOR USB PORT 2,3



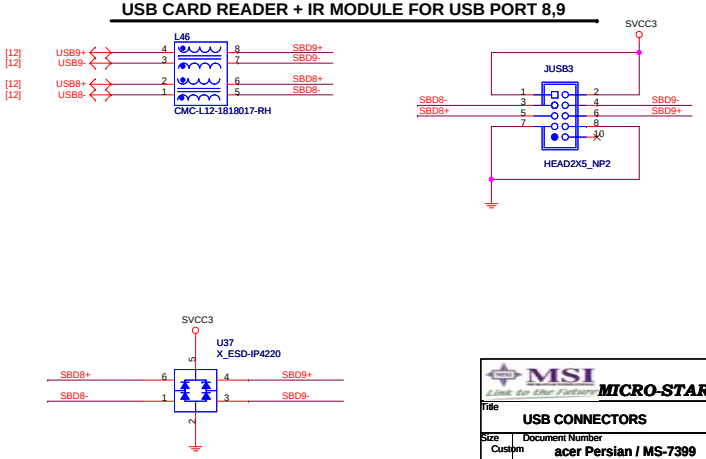
FRONT PANEL USB CONNECTOR FOR USB PORT 4,5



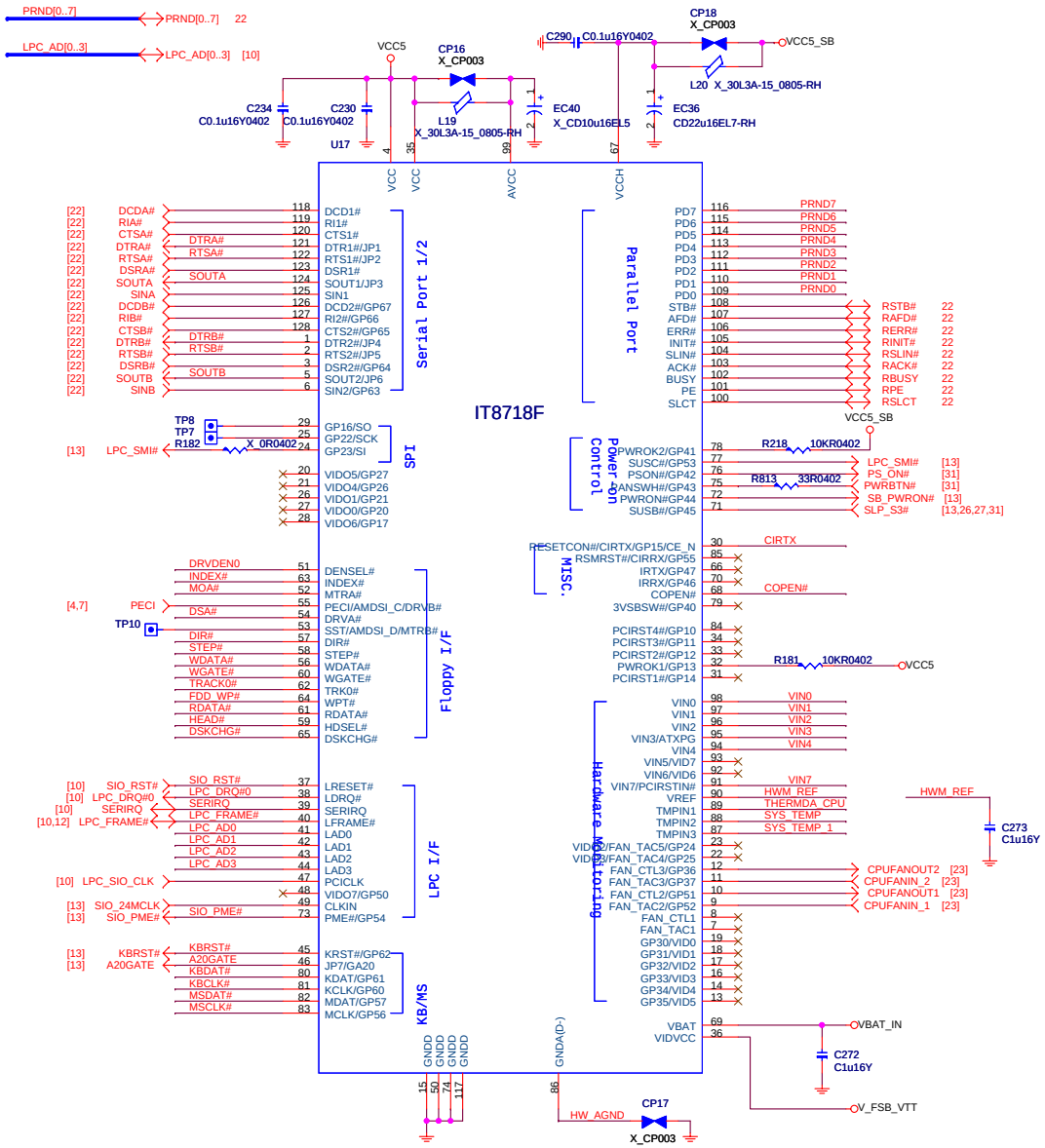
FRONT PANEL USB CONNECTOR FOR USB PORT 6,7

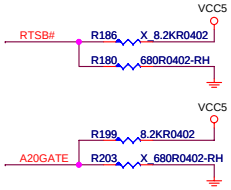


USB CARD READER + IR MODULE FOR USB PORT 8,9



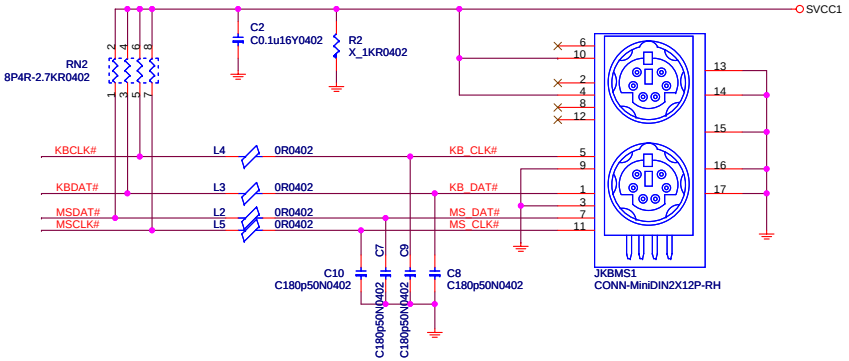
MSI Link to the Future	MICRO-START INTL CO.,LTD.	
Title: USB CONNECTORS		
Size: Custom	Document Number: acer Persian / MS-7399	Rev: 0A
Date: Thursday, July 12, 2007	Sheet 20 of 36	



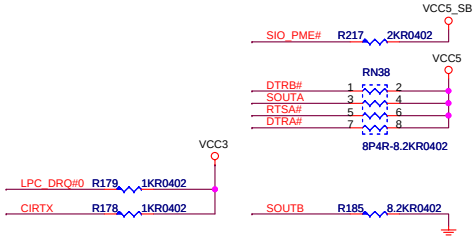


RTSB#	A20GATE	FAN DUTY
1	1	100%
1	0	75%
0	1	50%
0	0	25%

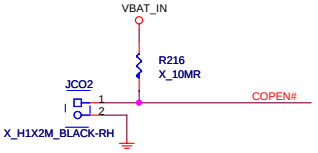
PS2 KEYBOARD & MOUSE CONNECTOR



SUPER I/O STRAPPING RESISTOR

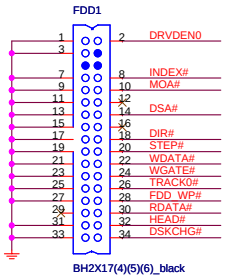


Chasiss Intrusion



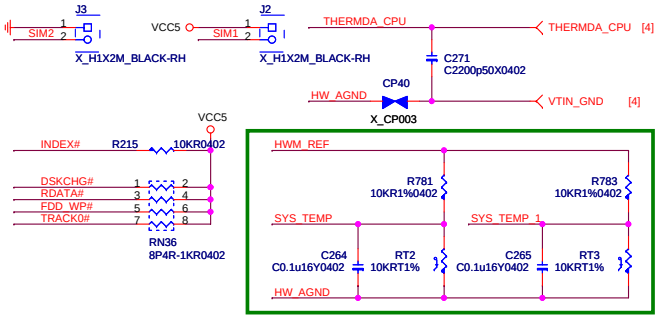
* If case open, system enters S4

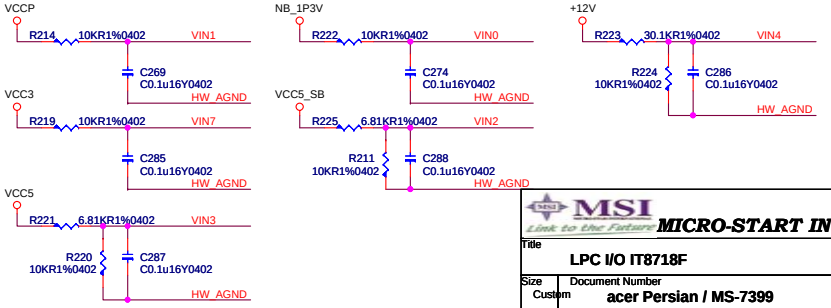
FLOPPY CONNECTOR



Simulation

RT2 close to Super I/O
RT3 close to Chipset (acer request)

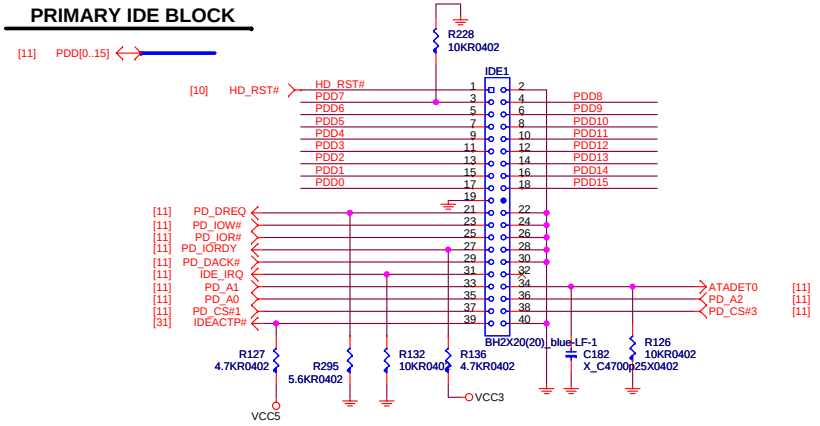




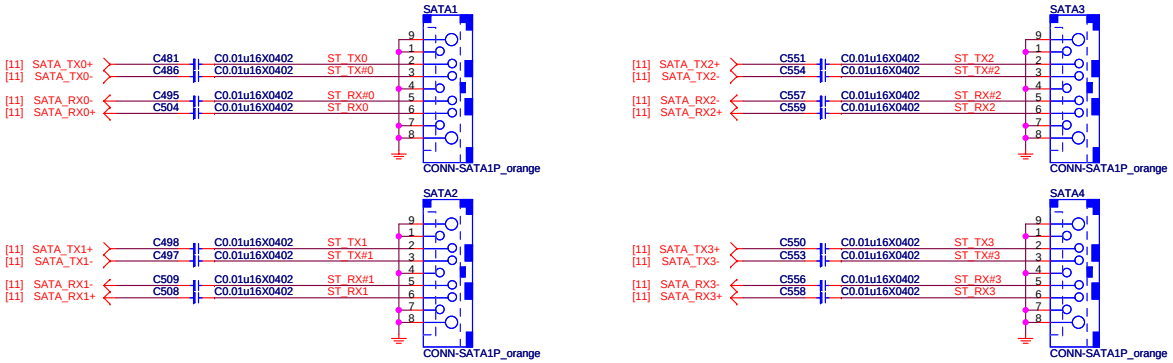
MSI Link to the Future MICRO-START INT'L CO.,LTD.

Title	LPC I/O IT8718F	
Size: Custom	Document Number: acer Persian / MS-7399	Rev: 0A
Date: Friday, July 13, 2007	Sheet 21 of 36	

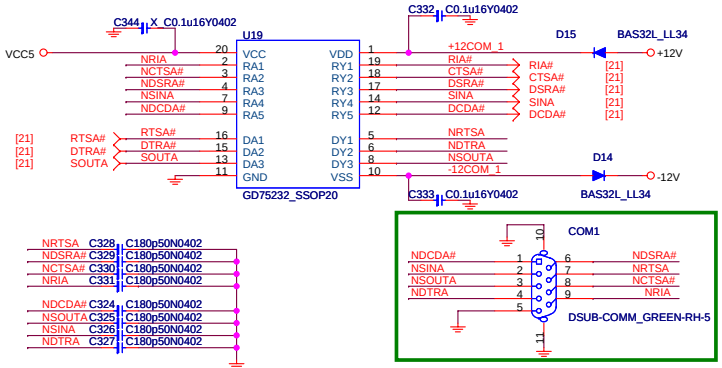
PRIMARY IDE BLOCK



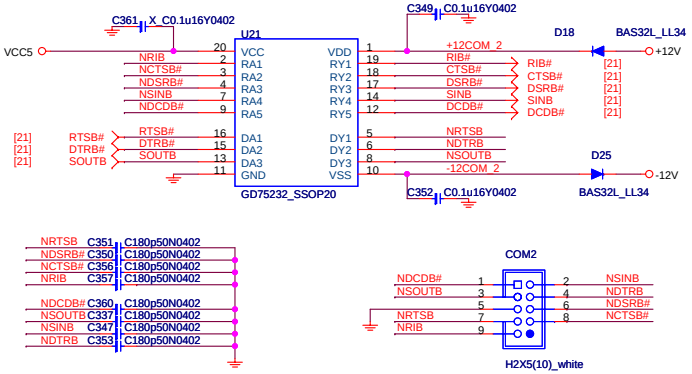
SERIAL ATA CONNECTOR BLOCK



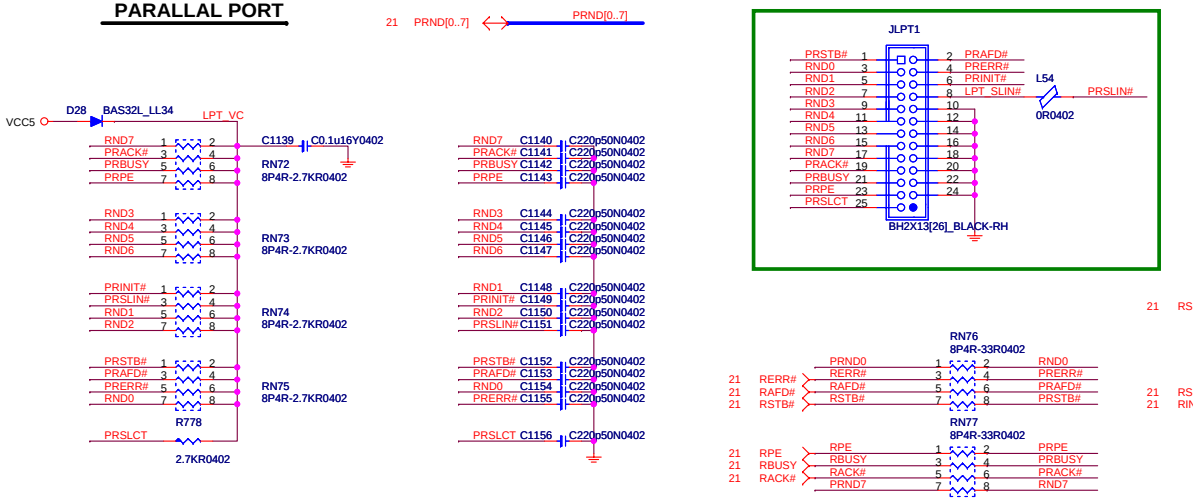
SERIAL PORT 1



SERIAL PORT 2



PARALLAL PORT



Title	IDE & SATA & COM1 & LPT
Size	Custom
Document Number	acer Persian / MS-7399
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Date:	Wednesday, July 11, 2007
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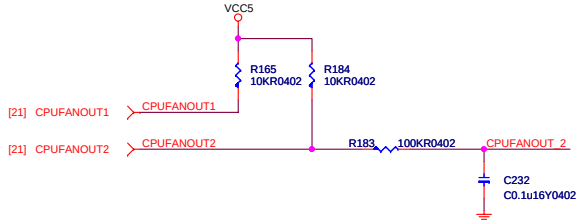
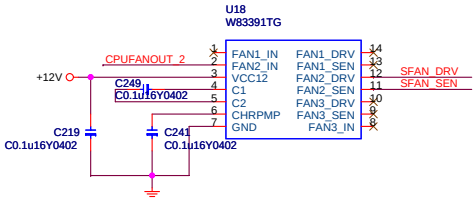
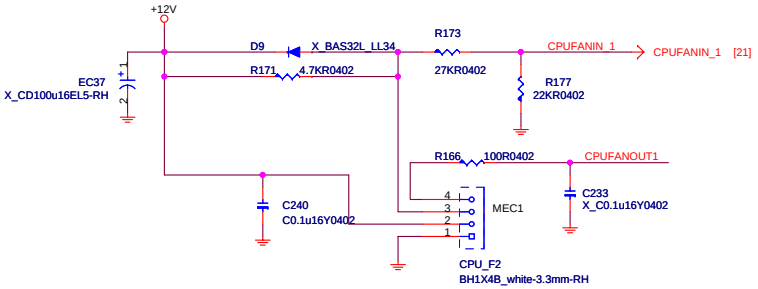
MICRO-START INT'L CO.,LTD.

PWM FAN CONTROL

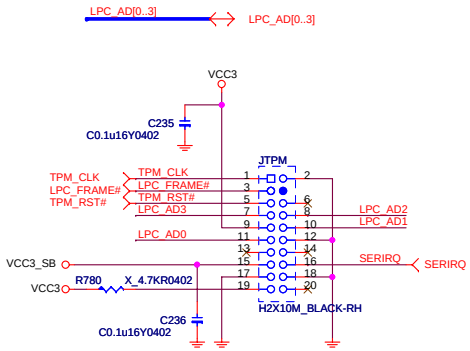




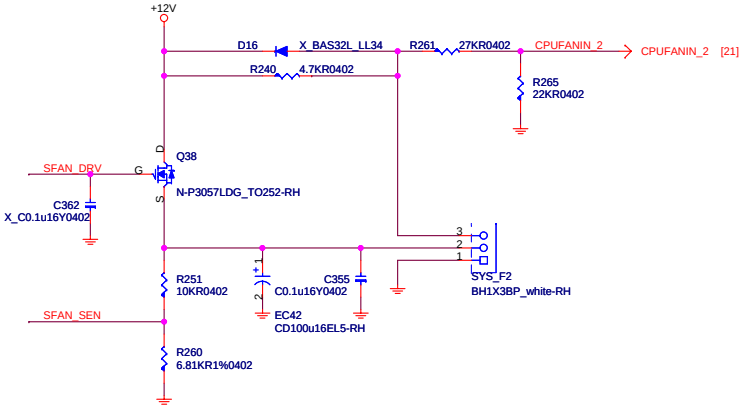
CPU FAN



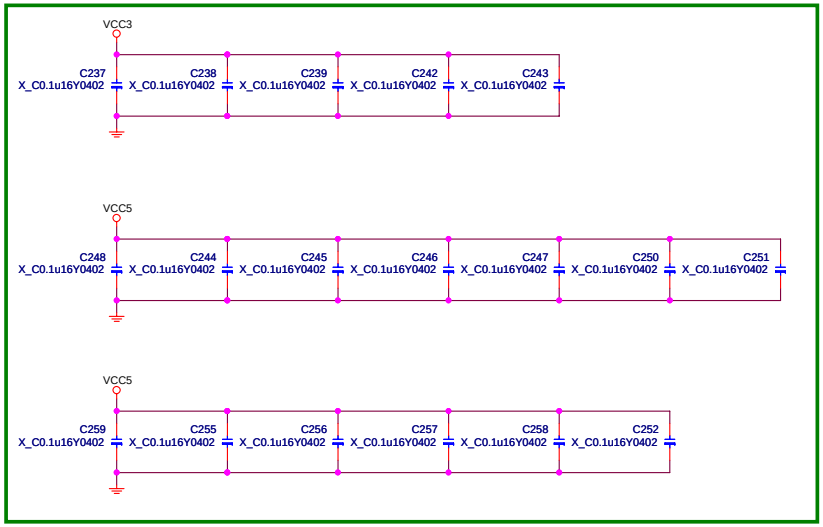
TPM Header



SYS FAN

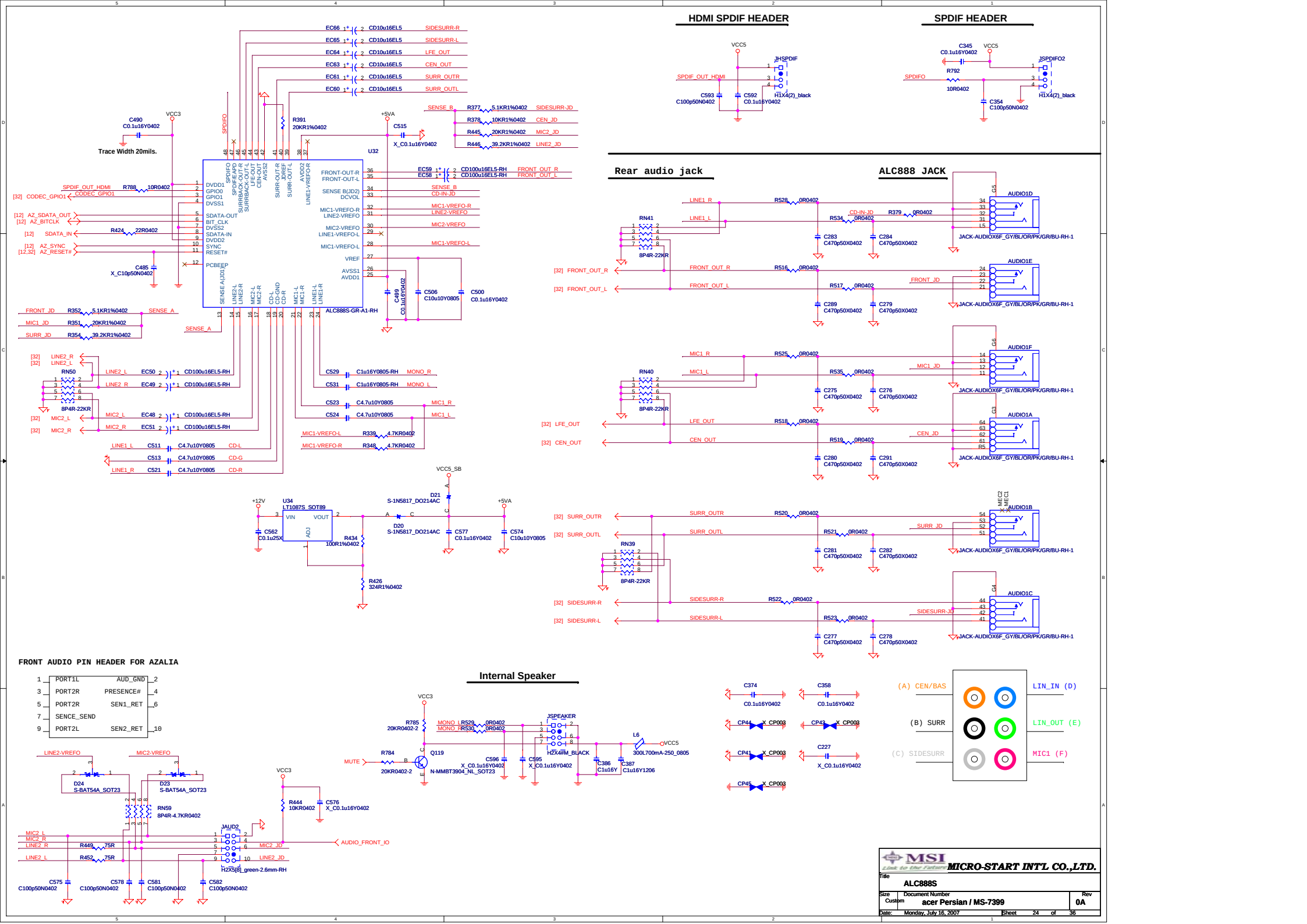


For EMI



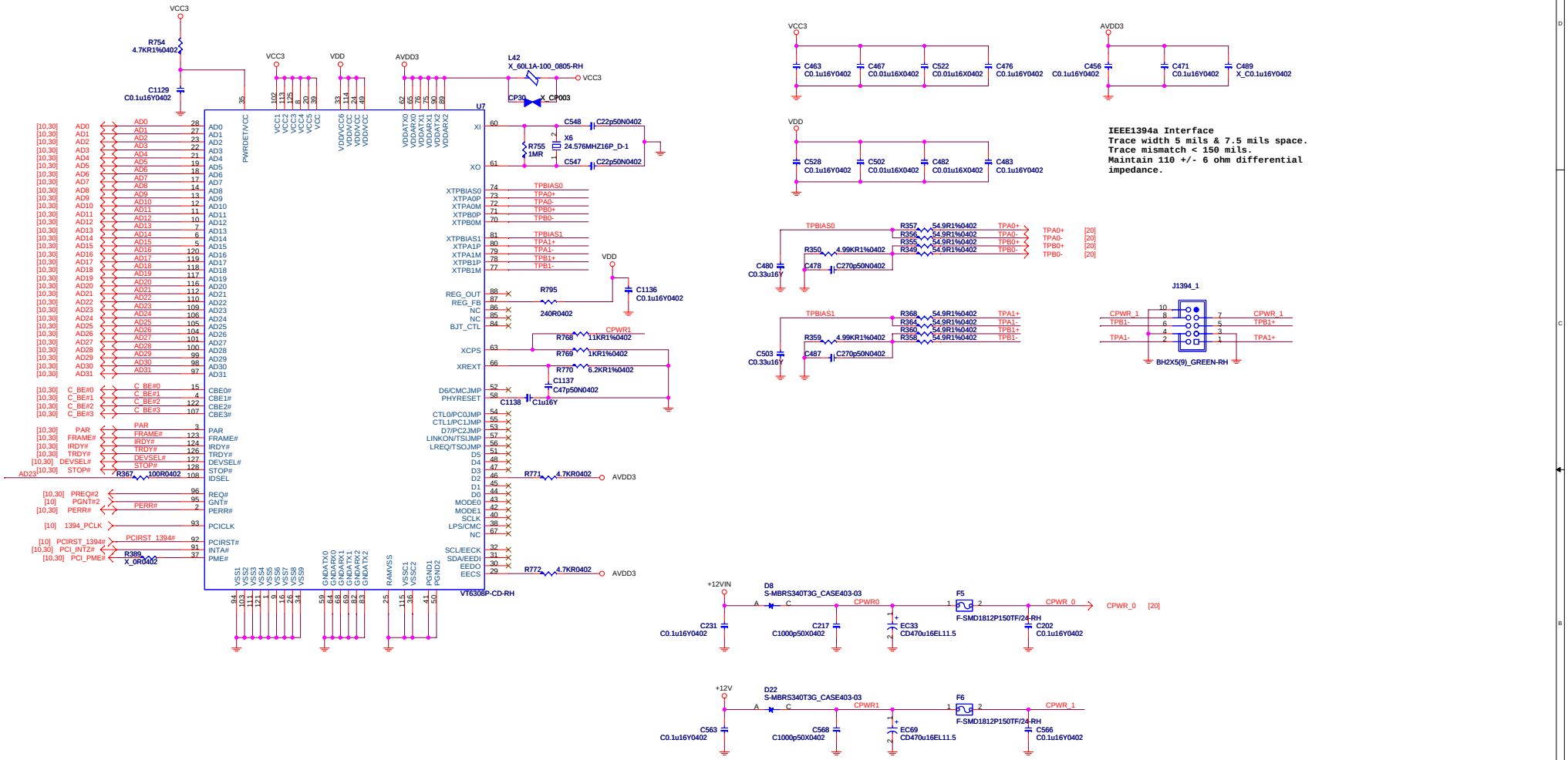
MICRO-START INT'L CO.,LTD.

Title: FAN & TPM		
Size: Custom	Document Number: acer Persian / MS-7399	Rev: 0A
Date: Wednesday, July 11, 2007	Sheet 23 of 36	


HDMI SPDIF HEADER
SPDIF HEADER
Rear audio jack
ALC888 JACK
Internal Speaker
FRONT AUDIO PIN HEADER FOR AZALIA
ALC888S-GR-A1-RH
JACK-AUDIOX6F_GY/BL/OR/PK/GR/BU-RH-1
H2X4(2)_black
H2X5[8]_green-2.6mm-RH
(A) CEN/BAS
(B) SURR
(C) SIDESURR
LIN_IN (D)
LIN_OUT (E)
MIC1 (F)
Trace Width 20mils.
MICRO-START INTL CO.,LTD.
ALC888S
acer Persian / MS-7399
Monday, July 16, 2007

1394a OHCI Link Layer Controller

IDSEL = AD23
MASTER = PREQ#2/PGNT#2
PCI_INTZ#



MICRO-START INT'L CO.,LTD.

Title	VIA VT6308P	
Size C	Document Number: acer Persian / MS-7399	Rev 0A
Date: Wednesday, July 11, 2007	Sheet 25 of 36	

ACPI Controller

3VSB MODE SELECT

3VSB MODE	3VDLDEC#
SINGLE MOSFET	PULL HIGH
DUAL MOSFET	PULL LOW

VDIMM LINEAR OR PWM SELECT

VDIMM MODE	EXTRAM
LINEAR REGULATOR	PULL LOW
PWM REGULATOR	PULL HIGH

DDR AND DDR II VOLT SELECT

DDRTYPE	VDIMM
PULL LOW	2.5V
PULL HIGH	1.8V

Close to MS-11

DDR II 1.8V POWER

5V DUAL Power

DDR II VTT POWER

Title	MS-7 ACPI Controller
Size	Custom
Document Number	acer Persian / MS-7399
Rev	0A
Date:	Monday, July 16, 2007
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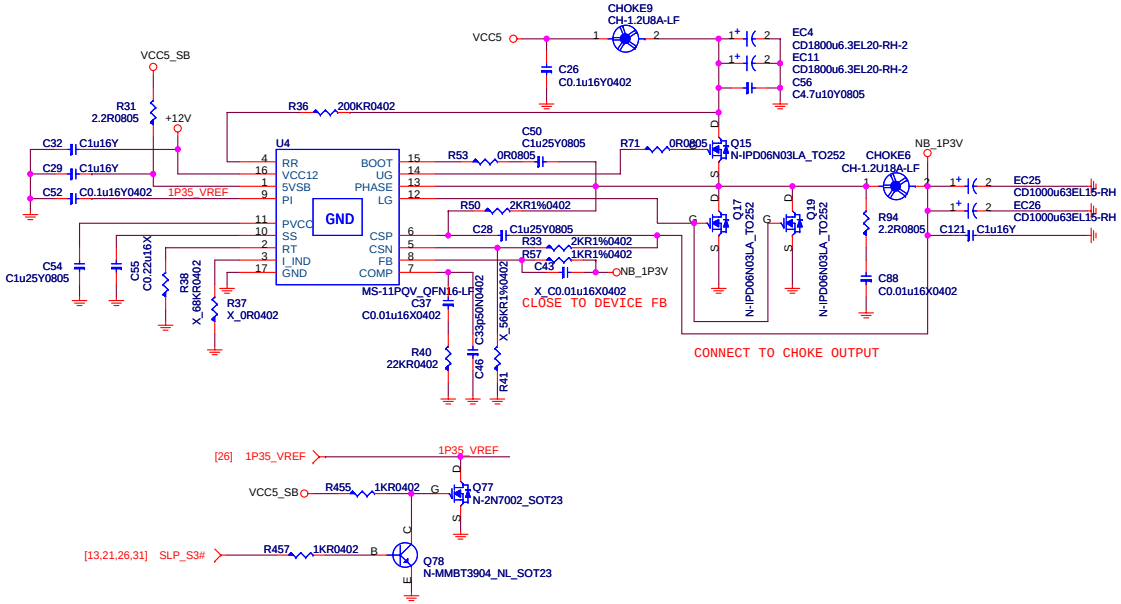
MICRO-START INT'L CO.,LTD.

NB 1.3V CORE POWER

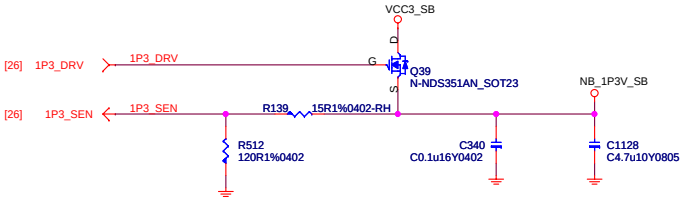
(1.3V--8.776A+V_FSB_VTT---5.6A=14.376)

```
The Ripple Current For V_1P25_CORE:
Duty = (1.35V/5V)*(100%/80%) = 0.3375  (Efficiency: 80%)
Irms = Io * { [ Duty * ( 1 - Duty ) ] ^ 0.5 }
     = 14.4 * {[0.27 * 0.73] ^ 0.5} = 6.393 (A)

Rated Ripple Curren (65 degree): 1800mA * 2.3 * 2 = 8.28A > 6.393A
```

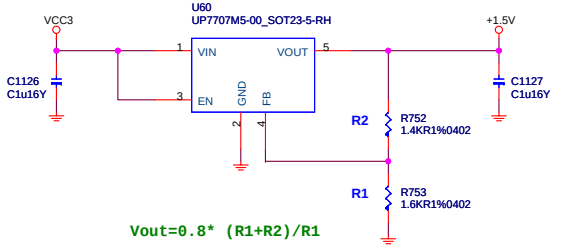


NB 1.3VSB POWER 25mA

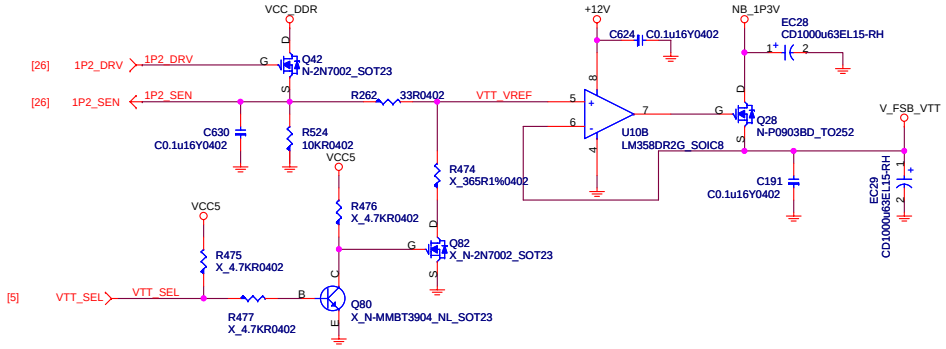


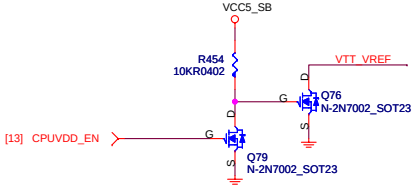
+1.5V POWER

up7707: 600mA Low Dropout Linear Regulator



CPU FSB VTT POWER





VTT_SEL = L	V_FSB_VTT=1.1V	For future KENTSFIELD processor. (FSB1333, Quad-Core)
VTT_SEL = H	V_FSB_VTT=1.2V	For normal processors.

MSI MICRO-START INT'L CO.,LTD.

Title	FSB_VTT & NB_1P2V	
Size: Custom	Document Number: acer Persian / MS-7399	Rev: 0A
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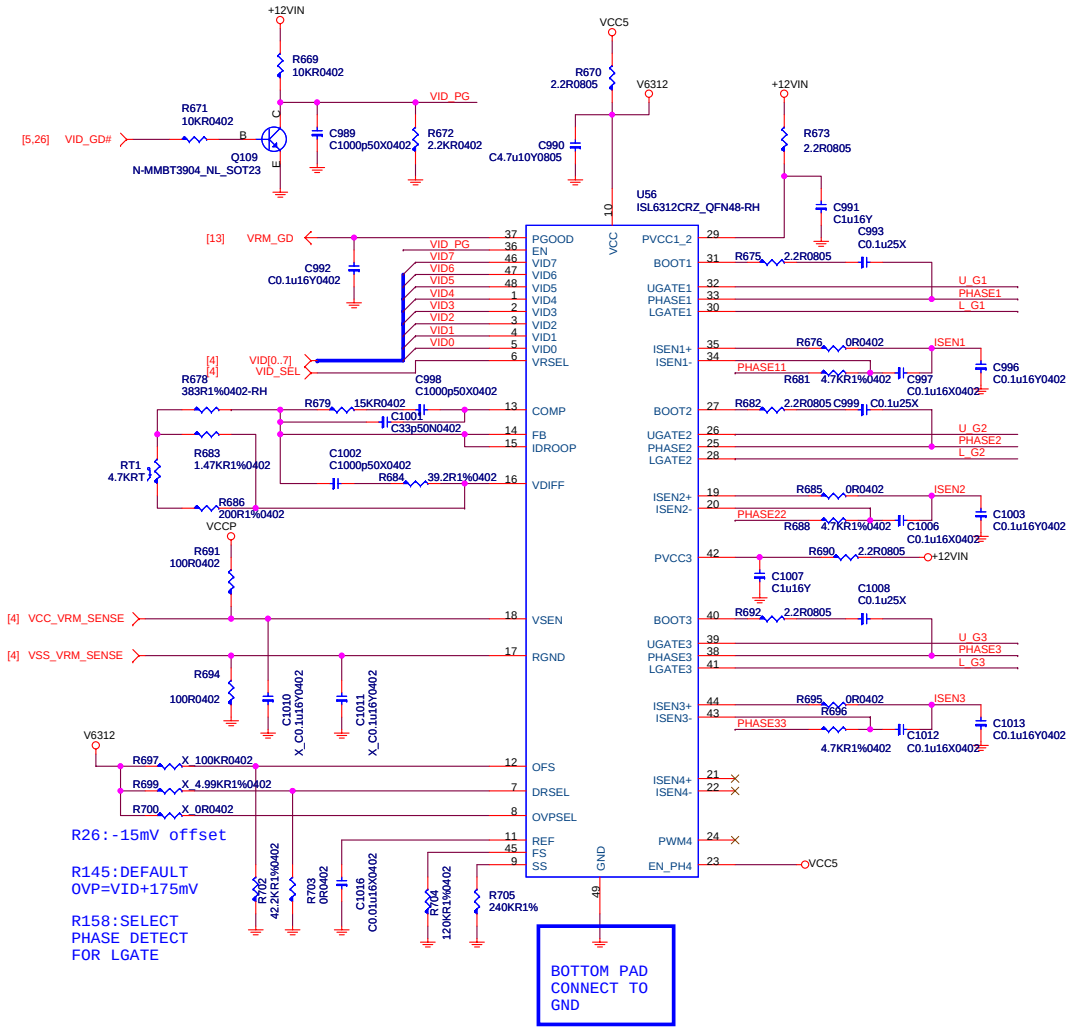
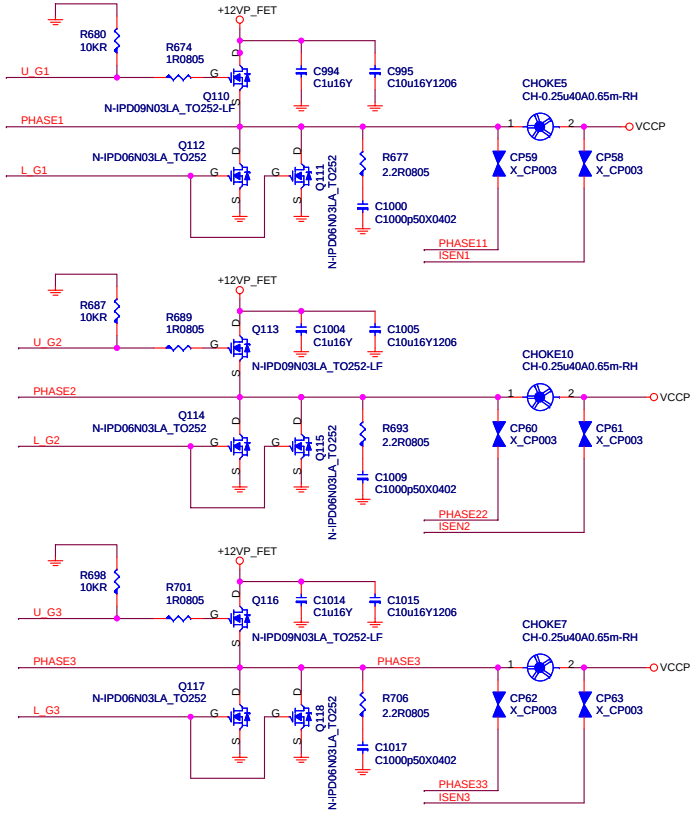
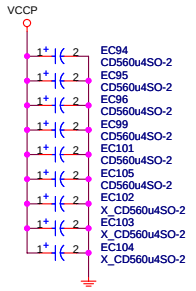
ISL6312 FOR Intel P4 VRD11 POWER CKT

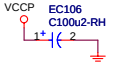


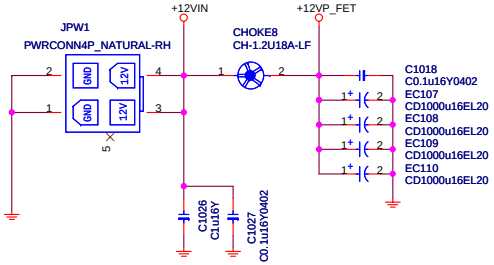


OS-CON Capactiors



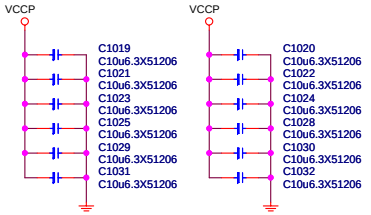
SP Capacitors

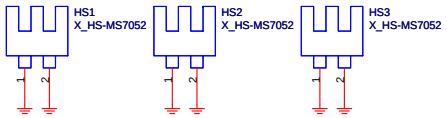




CPU DECOUPLING CAPACITORS

Place these caps within socket cavity





MICRO-START INT'L CO.,LTD.

Title: VRM11 Intersil 6312 3Phase		
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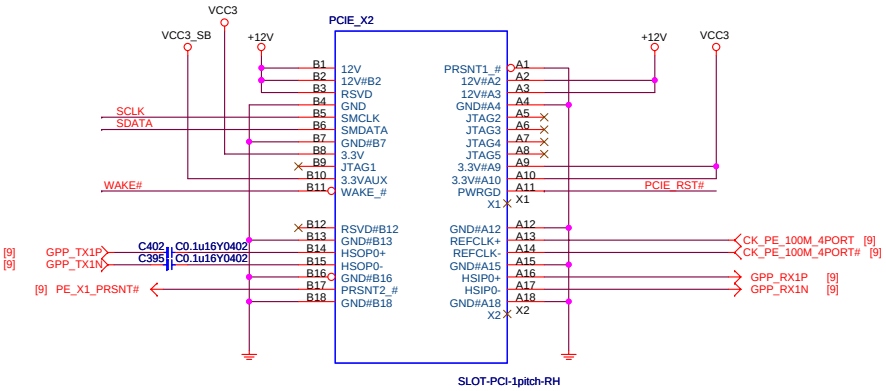
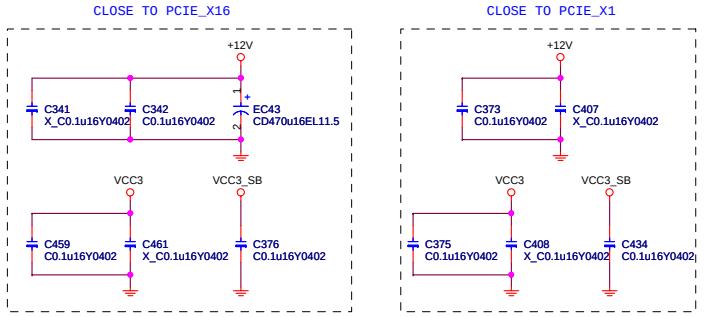
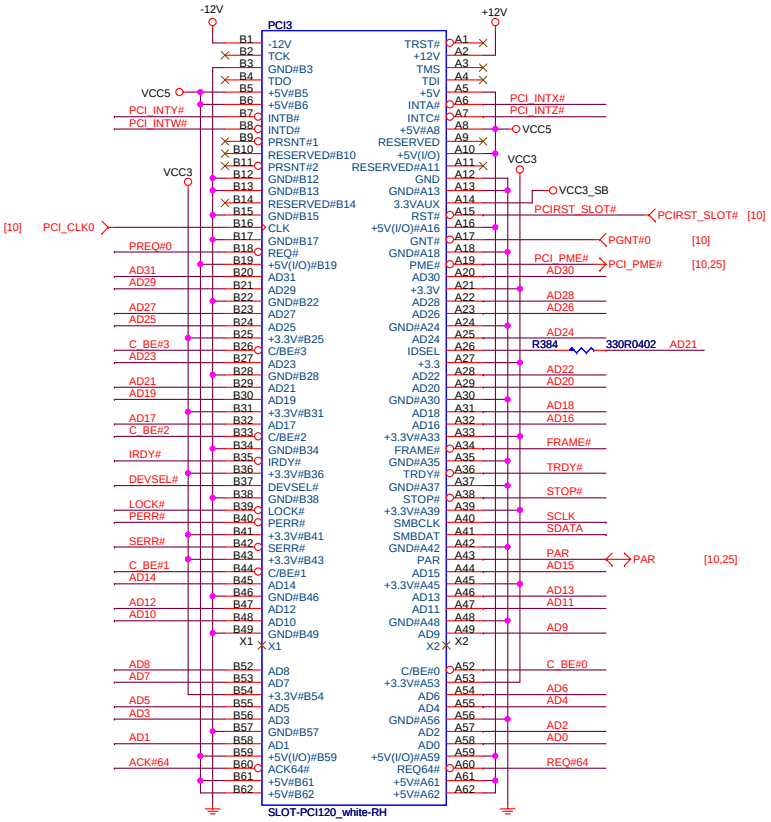
PCI EXPRESS 1-PORT





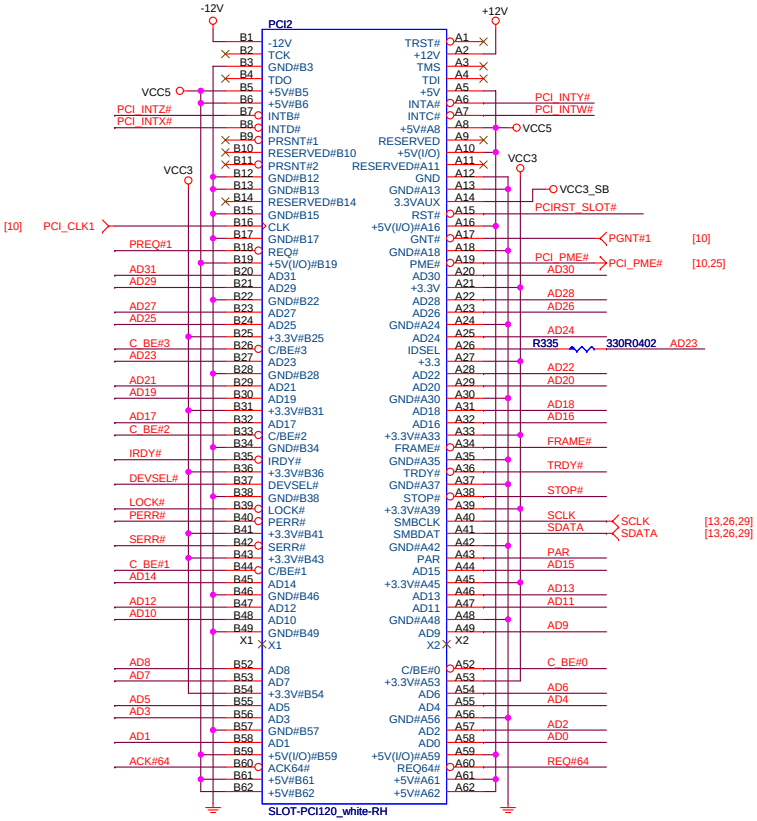
MSI Link to the Future	MICRO-START INT'L CO.,LTD.		
Title	PCI EXPRESS X16 & X1 SLOT		
Size: Custom	Document Number: acer Persian / MS-7399	Rev: 0A	
Date: Wednesday, July 11, 2007	Sheet 29 of 36		

PCI SLOT 1 (PCI VER: 2.3 COMPLY)



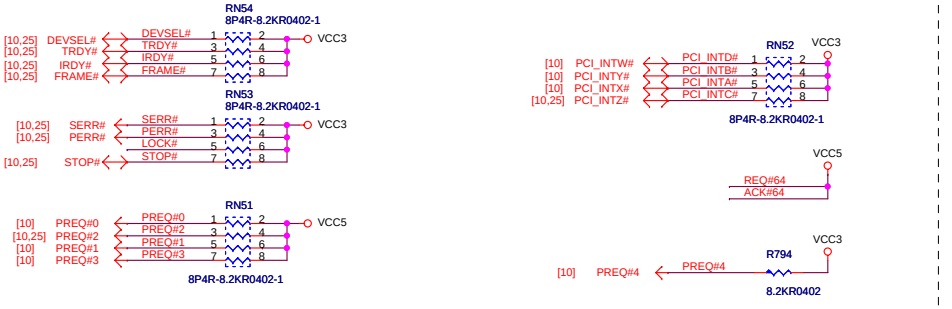
IDSEL = AD21
MASTER = PREQ#0
PCI_INTX#

PCI SLOT 2 (PCI VER: 2.3 COMPLY)

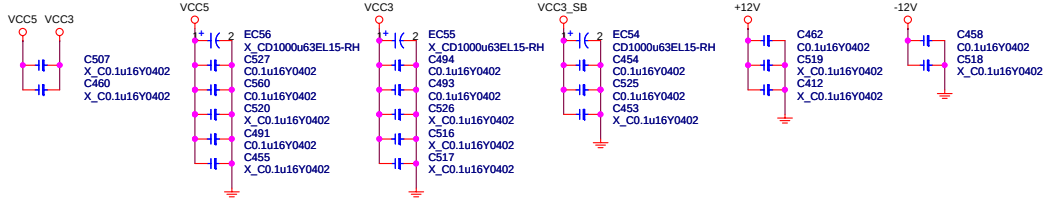


IDSEL = AD22
MASTER = PREQ#1
PCI_INTY#

PCI PULL-UP / DOWN RESISTORS



PCI SLOT DECOUPLING CAPACITORS



MICRO-START INT'L CO.,LTD.

Title	PCI SLOT 1 & 2	
Size: Custom	Document Number: acer Persian / MS-7399	Rev: 0A
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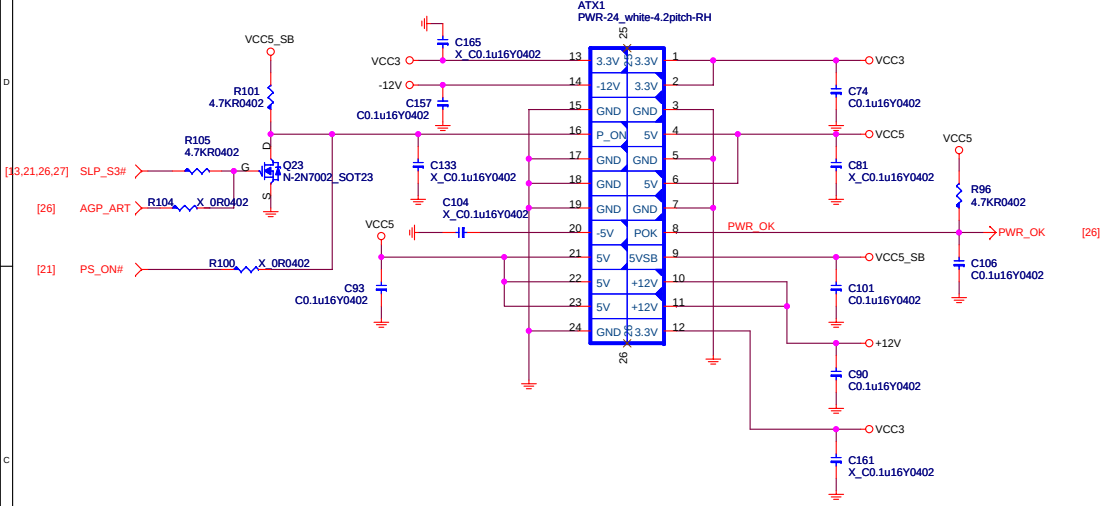
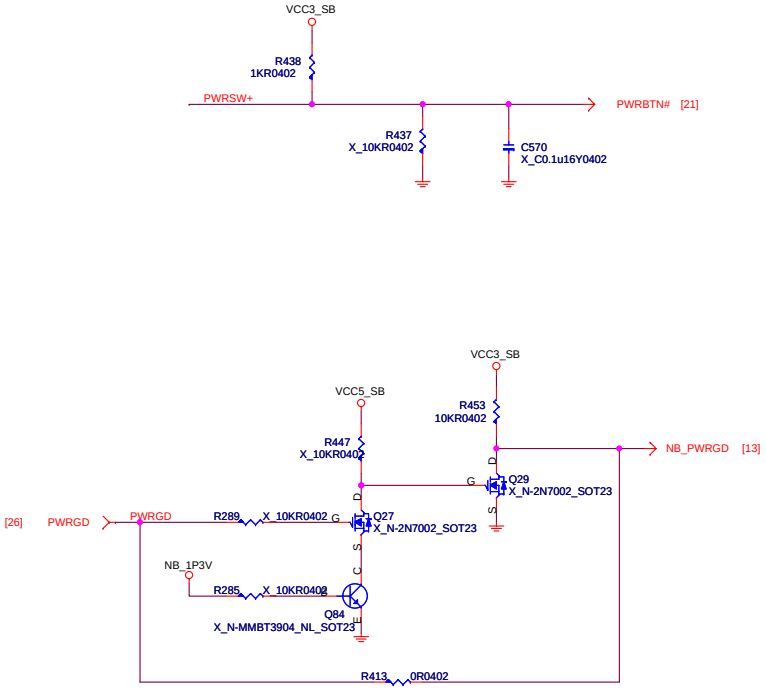
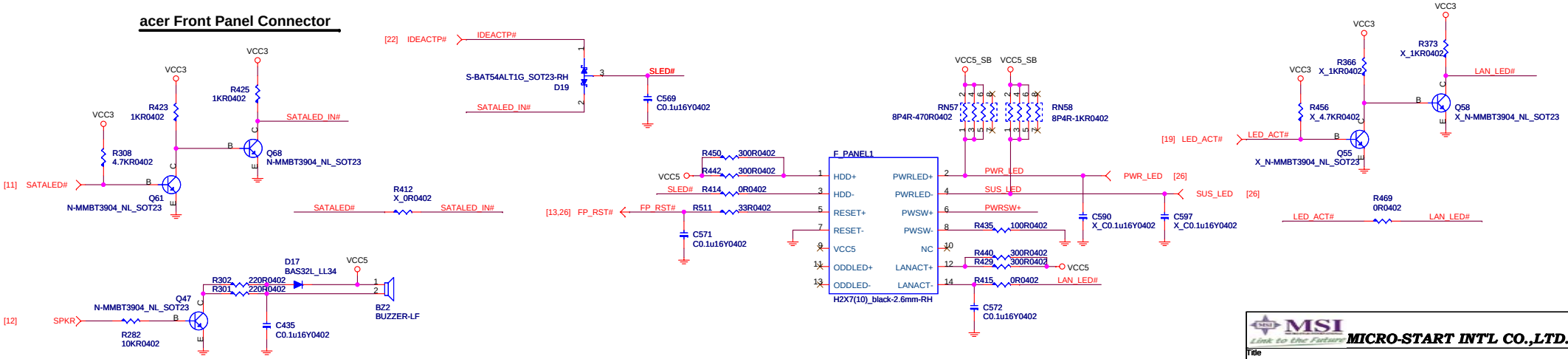
ATX CONNECTOR



POWER BUTTON



acer Front Panel Connector



MSI Link to the Future	MICRO-START INT'L CO.,LTD.	
Title: ATX & FRONT PANEL		
Size: Custom	Document Number: acer Persian / MS-7399	Rev: 0A
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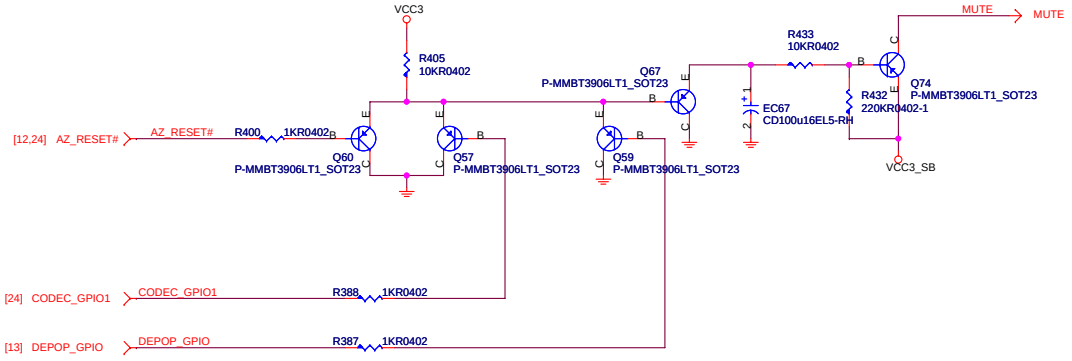
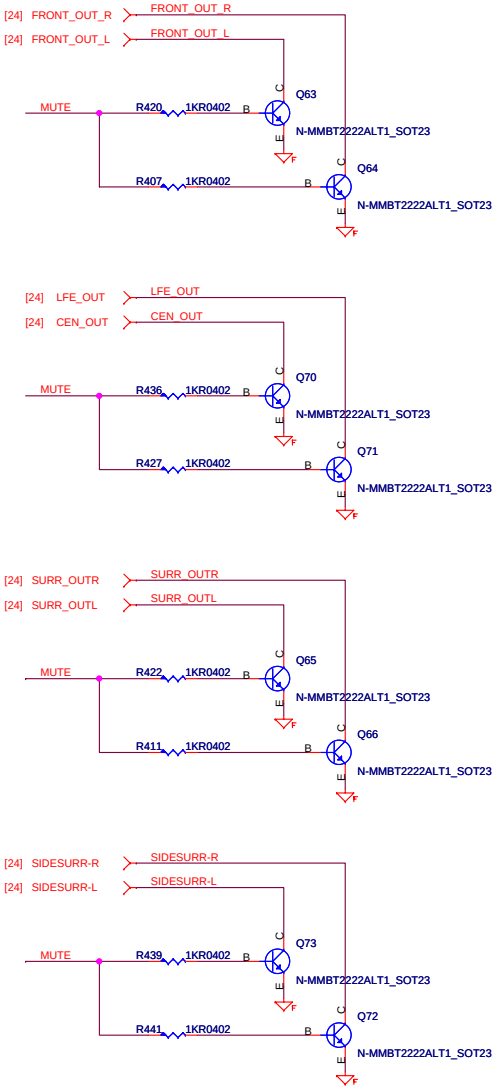
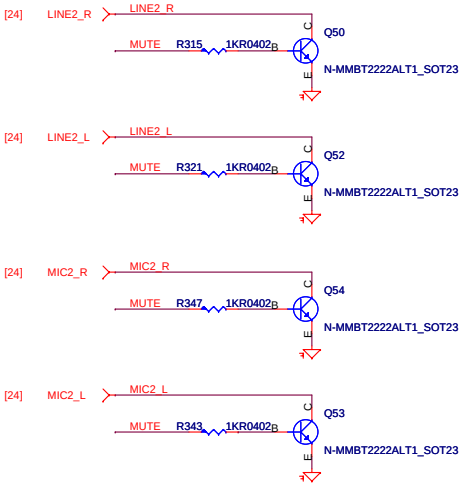
Audio De-Pop Control Circuit



Rear Audio Port De-Pop Circuit



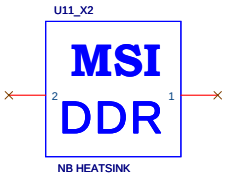
Front Audio Port De-Pop Circuit



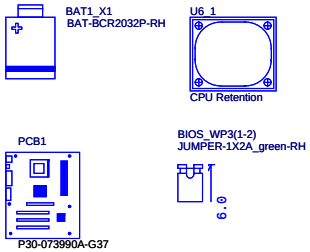
MICRO-START INTL CO.,LTD.

Title: Audio De-Pop Circuit		
Size: Custom	Document Number: acer Persian / MS-7399	Rev: 0A
Date: Wednesday, July 11, 2007	Sheet 32 of 36	

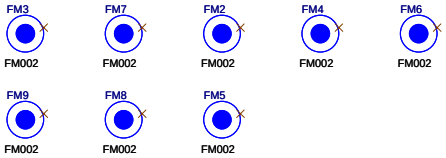
HEAT SINK

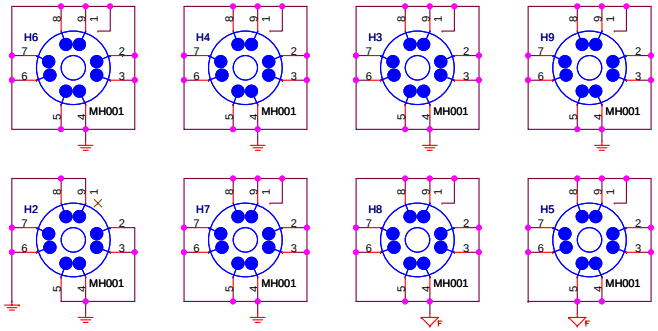


MANUAL PART



Optics Orientation Holes





MSI Link to the Future MICRO-START INT'L CO.,LTD.

Title: Auto BOM Mnaual		
Size: Custom	Document Number: acer Persian / MS-7399	Rev: 0A
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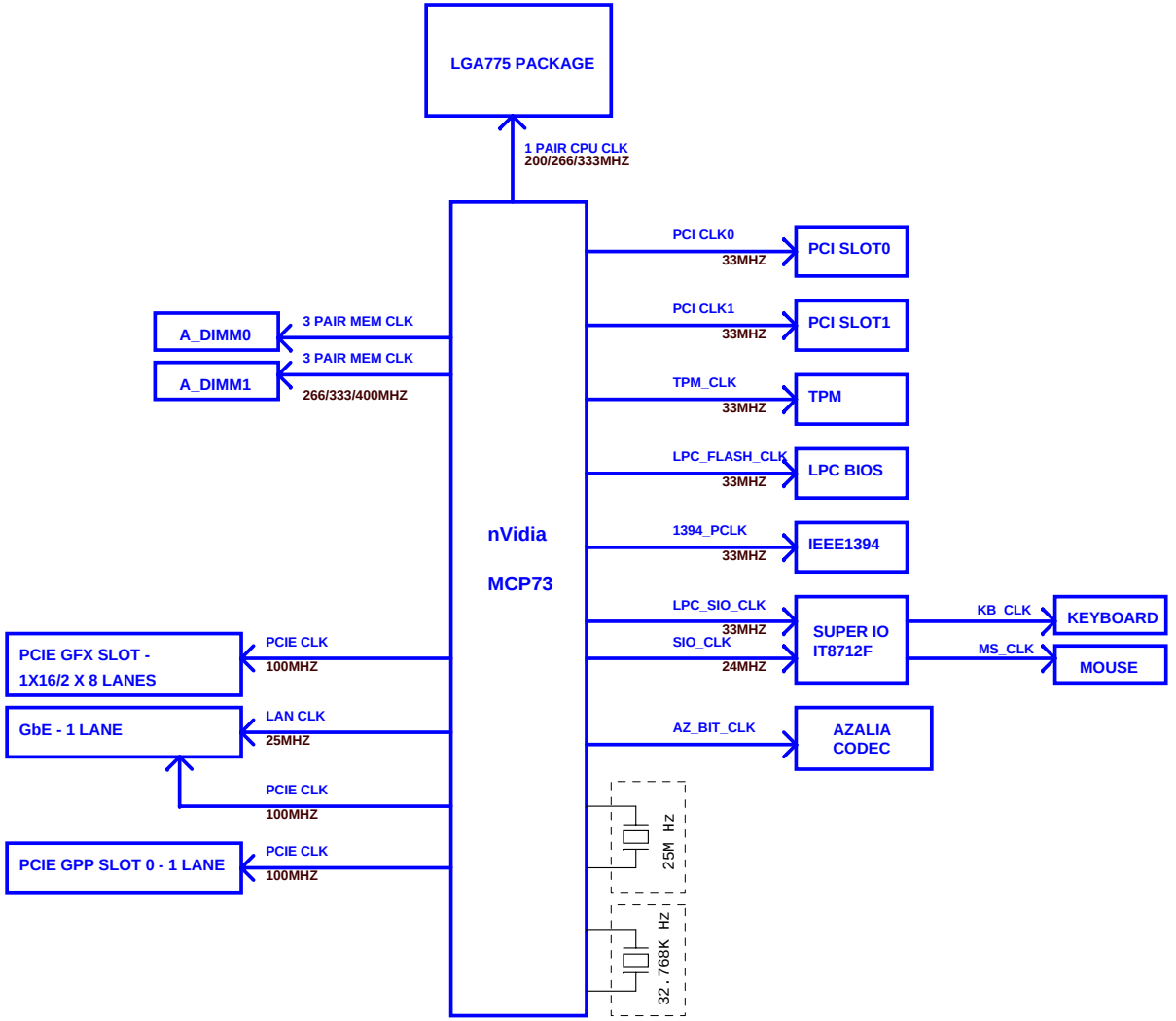

MSI MICRO-START INTL CO.,LTD.

Title: Clock Distribution Chart

Size: Custom | Document Number: acer Persian / MS-7399 | Rev: 0A

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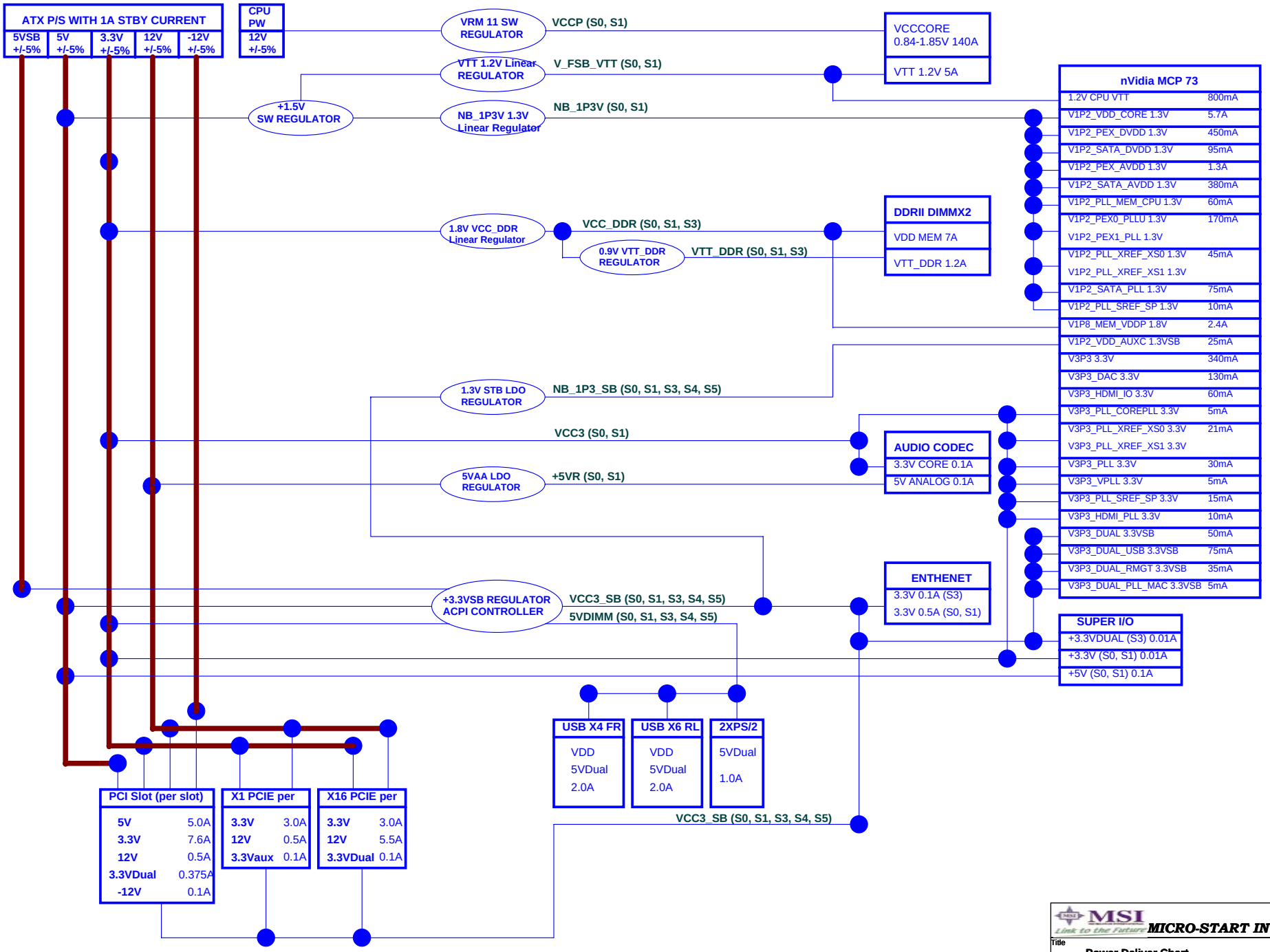

MSI MICRO-START INTL CO.,LTD.

Title: Power Deliver Chart

Size: Custom | Document Number: acer Persian / MS-7399 | Rev: 0A

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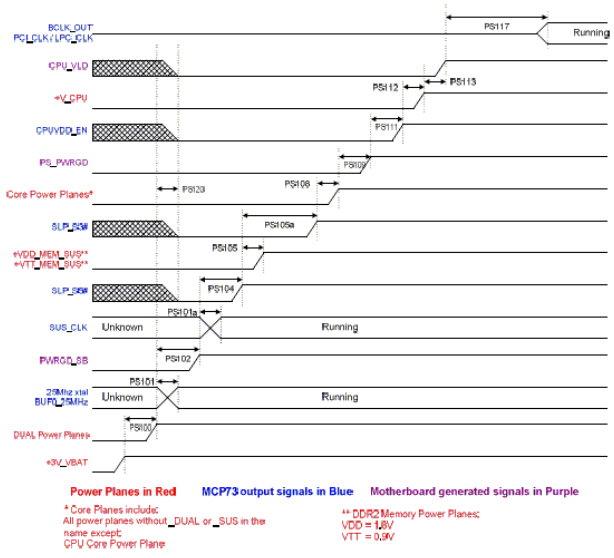
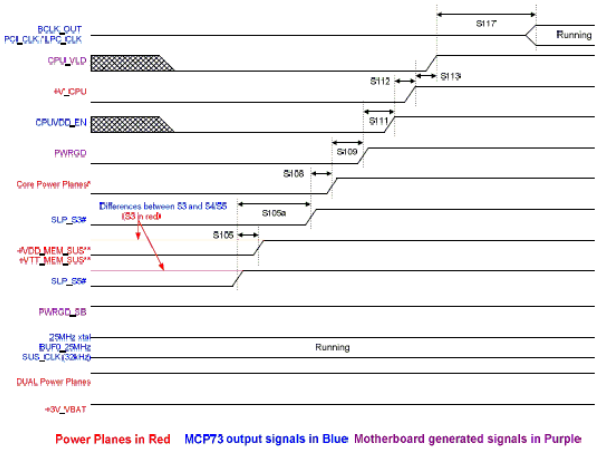
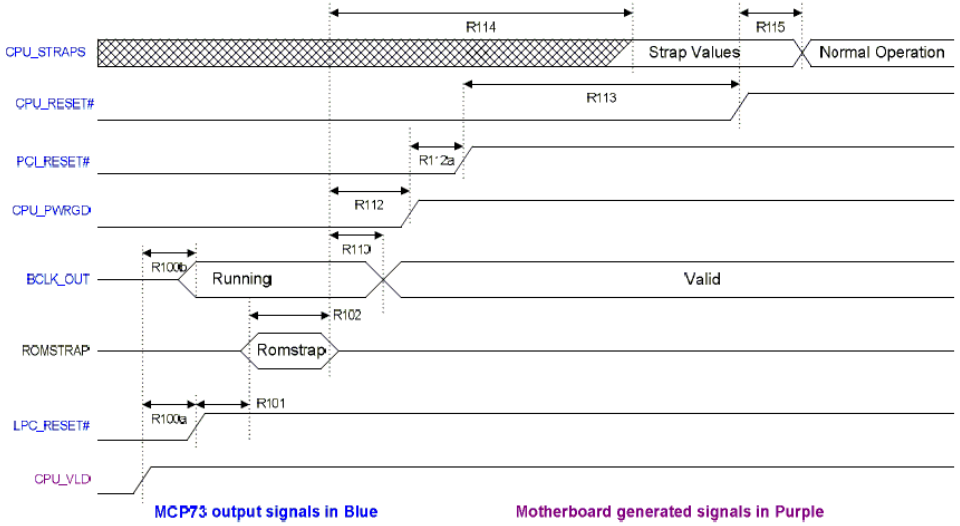


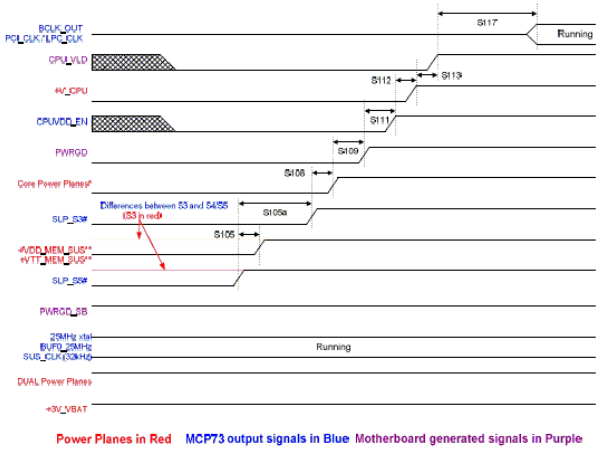
MCP73 G3-to-S0 Power-Up Sequence



MCP73 S3/S4/S5 to S0 Power Resume Sequence



MCP73 Cold Reset Power-Up Sequence



MCP73 S3/S4/S5 to S0 Power Resume Sequence

MSI Link to the Future **MICRO-START INT'L CO.,LTD.**

Title: Power Sequence		
Size: Custom	Document Number: acer Persian / MS-7399	Rev: 0A
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