

MS-7437 (MS-6632)

Version 0B

CPU:

Intel Dimondville

System Chipset:

Intel 945GSE (North Bridge)

Intel ICH7M(South Bridge)

On Board Chipset:

Clock Generator - ICS9LPRS113

HD AUDIO CODEC(ALC888)

Giga LAN -- Realtek RTL8111C

LVDS CHRONTEL - CH7308B

SIO-Fintek F71882F

Card Reader RTS5158E

AMP - TPA3005D2

BIOS -- SPI

Main Memory:

DDR II SO-DIMM x 1 (Max 1GB)

Expansion Slots:

Internal Mini PCIE x1

Internal Mini PCIE x2 (Option)

CF Card Connector

Intersil PWM:

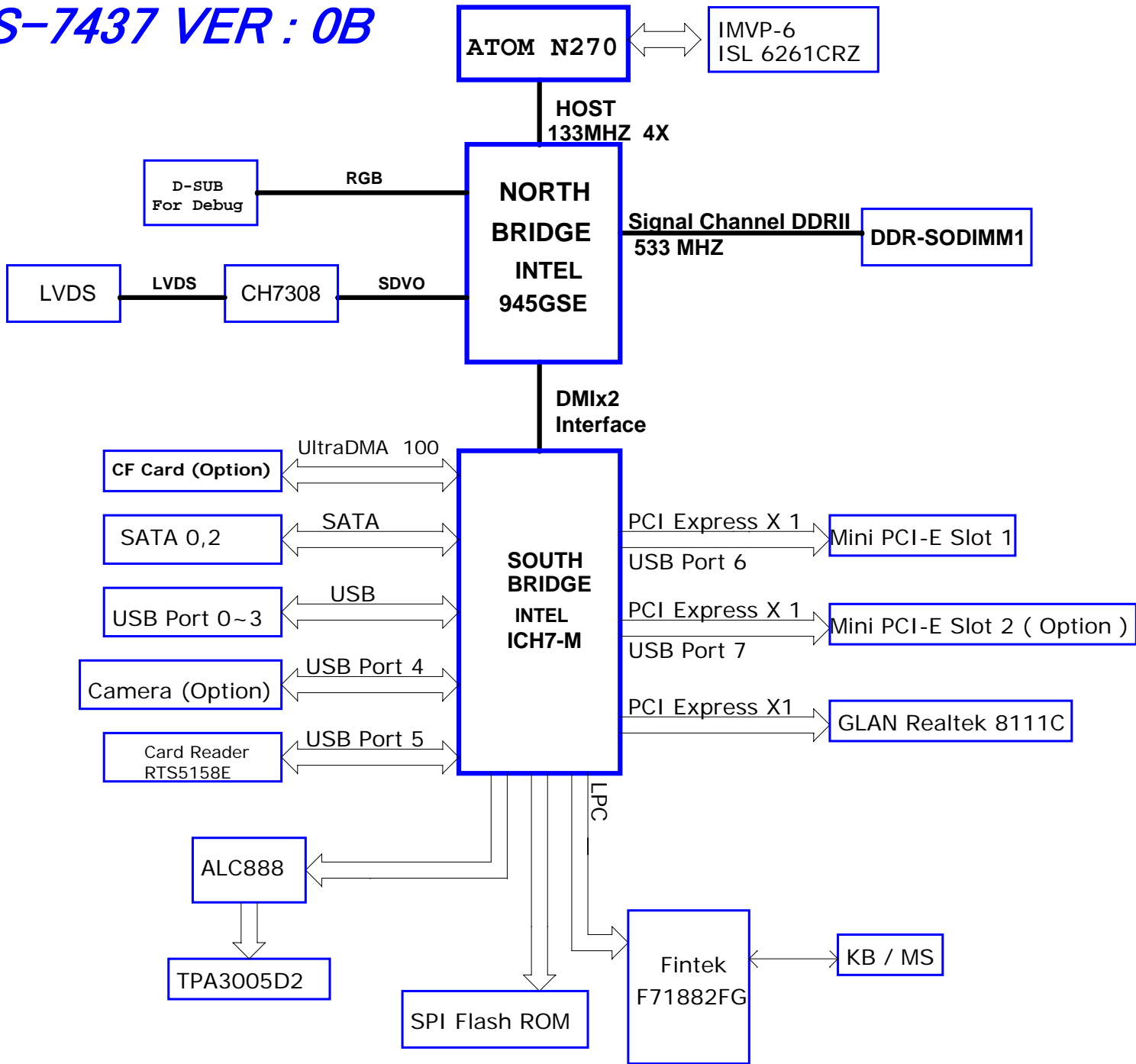
Controller: ISL6261CRZ-T

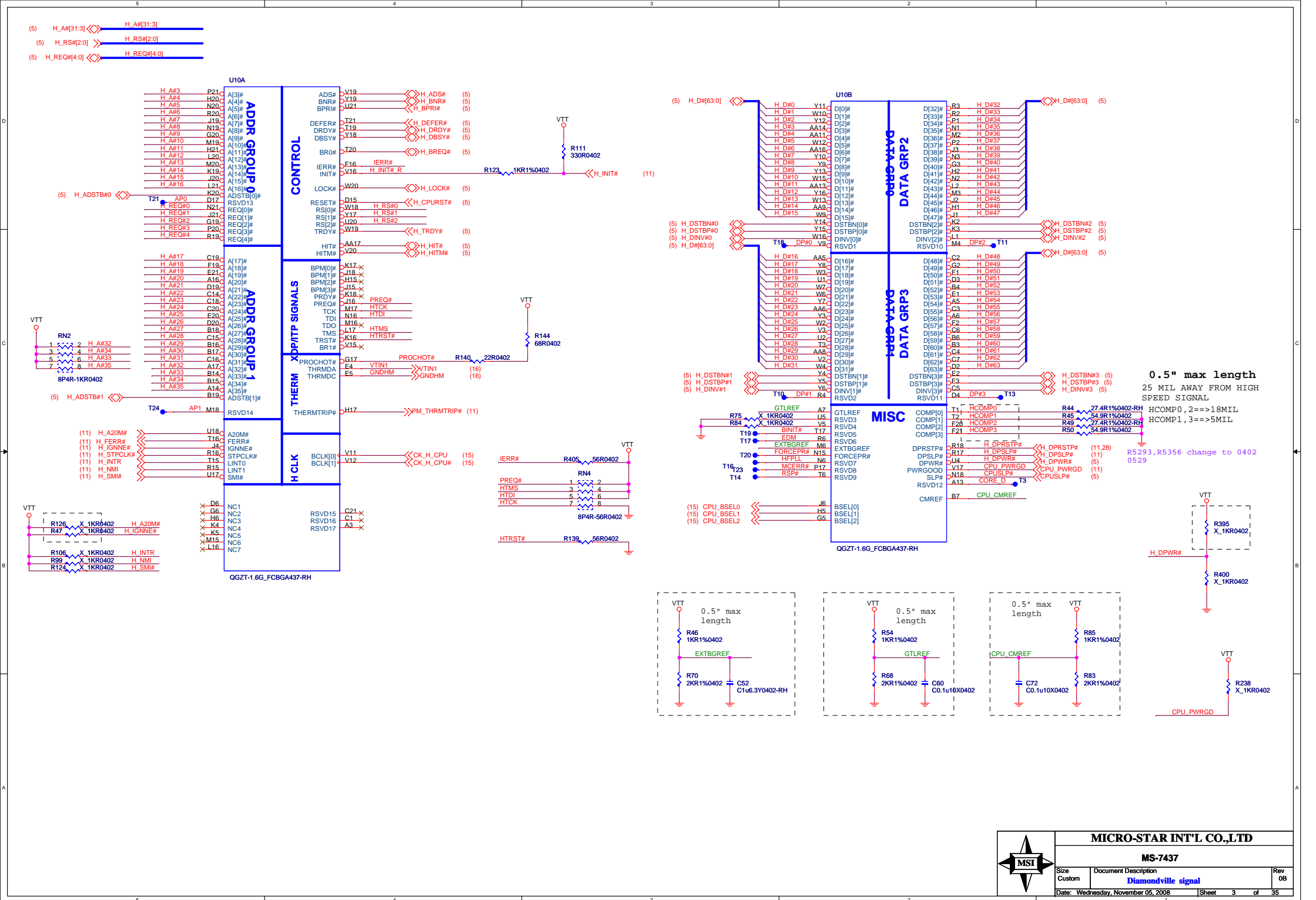
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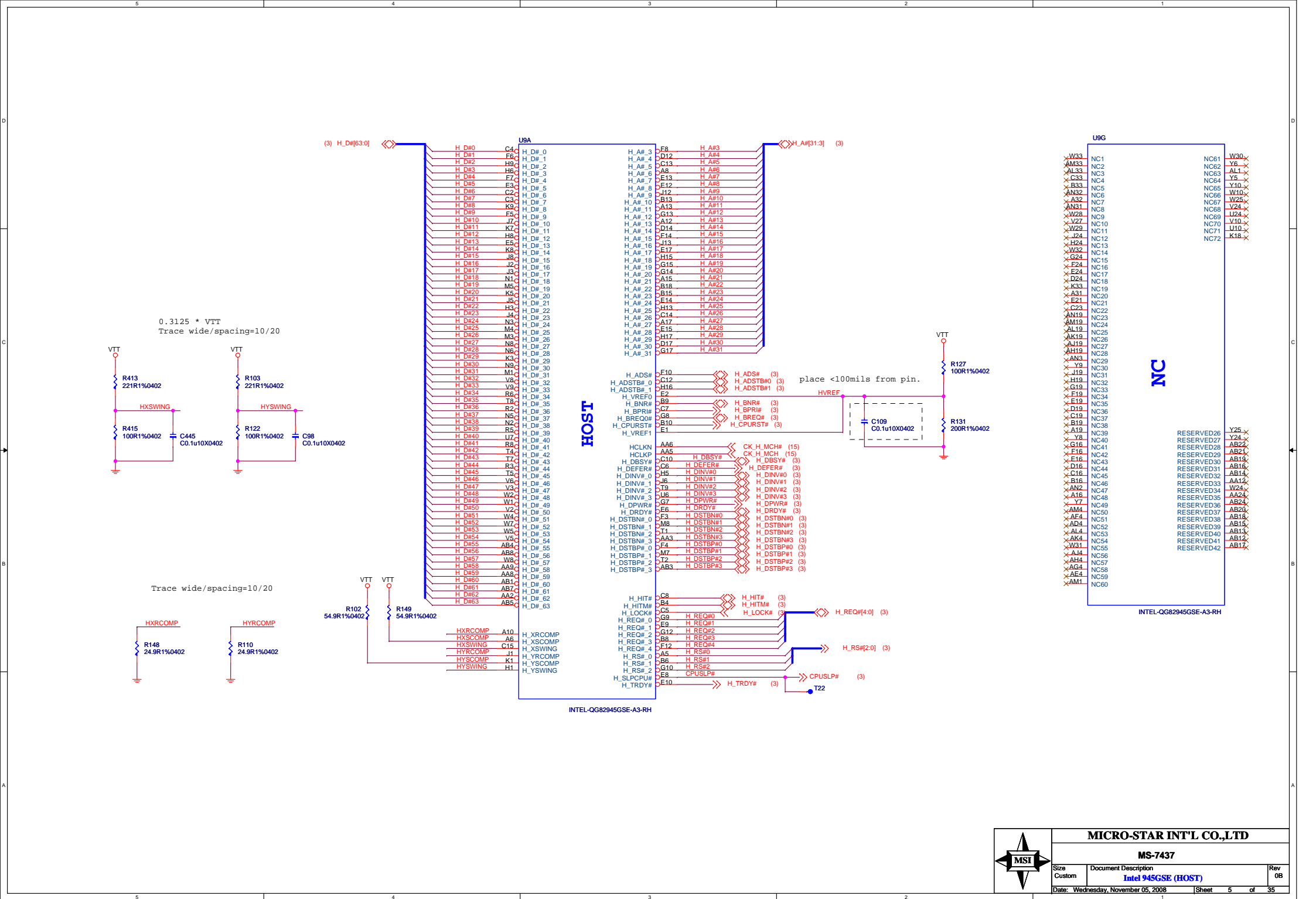


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(9) SA_MD[0..63]

U9C

SA MD0 AC31 SA DO 0
SA MD1 AB28 SA DO 1
SA MD2 AE33 SA DO 2
SA MD3 AF32 SA DO 3
SA MD4 AC32 SA DO 4
SA MD5 AB32 SA DO 5
SA MD6 AB31 SA DO 6
SA MD7 AE31 SA DO 7
SA MD8 AH31 SA DO 8
SA MD9 AK31 SA DO 9
SA MD10 AL28 SA DO 10
SA MD11 AK27 SA DO 11
SA MD12 AH30 SA DO 12
SA MD13 AL32 SA DO 13
SA MD14 AJ28 SA DO 14
SA MD15 AJ27 SA DO 15
SA MD16 AH32 SA DO 16
SA MD17 AE31 SA DO 17
SA MD18 AH27 SA DO 18
SA MD19 AF28 SA DO 19
SA MD20 AJ32 SA DO 20
SA MD21 AG31 SA DO 21
SA MD22 AC28 SA DO 22
SA MD23 AG27 SA DO 23
SA MD24 AN27 SA DO 24
SA MD25 AM26 SA DO 25
SA MD26 AJ26 SA DO 26
SA MD27 AJ25 SA DO 27
SA MD28 AL27 SA DO 28
SA MD29 AN26 SA DO 29
SA MD30 AH25 SA DO 30
SA MD31 AC26 SA DO 31
SA MD32 AM12 SA DO 32
SA MD33 AL11 SA DO 33
SA MD34 AH8 SA DO 34
SA MD35 AK9 SA DO 35
SA MD36 AM11 SA DO 36
SA MD37 AK11 SA DO 37
SA MD38 AM8 SA DO 38
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SA MD40 AK8 SA DO 40
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SA MD42 AF8 SA DO 42
SA MD43 AK6 SA DO 43
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SA MD45 AG11 SA DO 45
SA MD46 AJ6 SA DO 46
SA MD47 AH6 SA DO 47
SA MD48 AN6 SA DO 48
SA MD49 AM6 SA DO 49
SA MD50 AK3 SA DO 50
SA MD51 AL2 SA DO 51
SA MD52 AM5 SA DO 52
SA MD53 AL5 SA DO 53
SA MD54 AJ3 SA DO 54
SA MD55 AJ2 SA DO 55
SA MD56 AG2 SA DO 56
SA MD57 AF3 SA DO 57
SA MD58 AE7 SA DO 58
SA MD59 AF6 SA DO 59
SA MD60 AH5 SA DO 60
SA MD61 AG3 SA DO 61
SA MD62 AG5 SA DO 62
SA MD63 AF5 SA DO 63

DDR2 SYSTEM MEMORY

AG19
AG21C
AG20C

INTEL-QG82945GSE-A3-RH

AK12 SA BS0
AH11 SA BS1
AG17 SA BS2
SA_BS_0
SA_BS_1
SA_BS_2
SA_DM_0
SA_DM_1
SA_DM_2
SA_DM_3
SA_DM_4
SA_DM_5
SA_DM_6
SA_DM_7
AC28 SA DQS0
AJ30 SA DQS1
AK33 SA DQS2
AL25 SA DQS3
AN8 SA DQS4
AM2 SA DQS5
AE3 SA DQS6
AC29 SA DQS#0
AK30 SA DQS#1
AJ33 SA DQS#2
AM25 SA DQS#3
V20 SA DQS#4
AJ8 SA DQS#5
AM3 SA DQS#6
AE2 SA DQS#7
AJ15 SA MA0
AM17 SA MA1
AM15 SA MA2
AH15 SA MA3
AK15 SA MA4
AN15 SA MA5
AJ18 SA MA6
AF19 SA MA7
AN17 SA MA8
AL17 SA MA9
AG16 SA MA10
AL18 SA MA11
AG18 SA MA12
AL14 SA MA13
SA_CAS#
SA_RAS#
SA_RCVENIN#
SA_RCVENOUT#
SA_WE#
SB_BS_0
SB_BS_1
SB_BS_2
SB_MA_0
SB_MA_1
SB_MA_2
SB_MA_3
SB_MA_4
SB_MA_5
SB_MA_6
SB_MA_7
SB_MA_8
SB_MA_9
SB_MA_10
SB_MA_11
SB_MA_12
SB_MA_13
AH21
AJ20
AE2
AN20
AL21
AK21
AK22
AL22
AH22
AG22
AE21
AM21
AE2
AL23
AE23
AE26
AE20

SA_BS[0..2] (9,10)

SA_DM[0..7] (9)

SA_DQS[0..7] (9)

SA_DQS#[0..7] (9)

SA_MA[0..13] (9,10)

SA_CAS# (9,10)

SA_RAS# (9,10)

SA_WE# (9,10)

VTT

U9H

T25 VCC_NCTF1
P25 VCC_NCTF2
N25 VCC_NCTF3
M25 VCC_NCTF4
P24 VCC_NCTF5
N24 VCC_NCTF6
M24 VCC_NCTF7
W22 VCC_NCTF8
W22 VCC_NCTF9
V22 VCC_NCTF10
U22 VCC_NCTF11
U22 VCC_NCTF12
T22 VCC_NCTF13
R22 VCC_NCTF14
P22 VCC_NCTF15
N22 VCC_NCTF16
M22 VCC_NCTF17
Y21 VCC_NCTF18
W21 VCC_NCTF19
V21 VCC_NCTF20
U21 VCC_NCTF21
T21 VCC_NCTF22
R21 VCC_NCTF23
P21 VCC_NCTF24
N21 VCC_NCTF25
M21 VCC_NCTF26
Y20 VCC_NCTF27
W20 VCC_NCTF28
V20 VCC_NCTF29
U20 VCC_NCTF30
T20 VCC_NCTF31
R20 VCC_NCTF32
N20 VCC_NCTF33
M20 VCC_NCTF34
Y19 VCC_NCTF35
P19 VCC_NCTF36
N19 VCC_NCTF37
M19 VCC_NCTF38
Y18 VCC_NCTF39
P18 VCC_NCTF40
N18 VCC_NCTF41
M18 VCC_NCTF42
Y17 VCC_NCTF43
P17 VCC_NCTF44
N17 VCC_NCTF45
M17 VCC_NCTF46
Y16 VCC_NCTF47
P16 VCC_NCTF48
N16 VCC_NCTF49
M16 VCC_NCTF50
Y15 VCC_NCTF51
P15 VCC_NCTF52
N15 VCC_NCTF53
M15 VCC_NCTF54
W14 VCC_NCTF55
V14 VCC_NCTF56
U14 VCC_NCTF57
T14 VCC_NCTF58
R14 VCC_NCTF59
P14 VCC_NCTF60
N14 VCC_NCTF61
M14 VCC_NCTF62
T10 VTT_NCTF1
R10 VTT_NCTF2
P10 VTT_NCTF3
N10 VTT_NCTF4
L10 VTT_NCTF5
D1 VTT_NCTF6
RSVD_3
RSVD_4
RSVD_5
RSVD_6

NCTF

INTEL-QG82945GSE-A3-RH

V_1P5 CORE

VCCAUX_NCTF1
VCCAUX_NCTF2
VCCAUX_NCTF3
VCCAUX_NCTF4
VCCAUX_NCTF5
VCCAUX_NCTF6
VCCAUX_NCTF7
VCCAUX_NCTF8
VCCAUX_NCTF9
VCCAUX_NCTF10
VCCAUX_NCTF11
VCCAUX_NCTF12
VCCAUX_NCTF13
VCCAUX_NCTF14
VCCAUX_NCTF15
VCCAUX_NCTF16
VCCAUX_NCTF17
VCCAUX_NCTF18
VCCAUX_NCTF19
VCCAUX_NCTF20
VCCAUX_NCTF21
VCCAUX_NCTF22
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VCCAUX_NCTF24
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VCCAUX_NCTF35
VCCAUX_NCTF36
VCCAUX_NCTF37
VCCAUX_NCTF38
VSS_NCTF1
VSS_NCTF2
VSS_NCTF3
VSS_NCTF4
VSS_NCTF5
VSS_NCTF6
VSS_NCTF7
VSS_NCTF8
VSS_NCTF9
VSS_NCTF10
VSS_NCTF11
VSS_NCTF12
VSS_NCTF13
VSS_NCTF14
VSS_NCTF15
VSS_NCTF16
VSS_NCTF17
VSS_NCTF18
VSS_NCTF19
RESERVED10
RESERVED11
RESERVED12
RESERVED13
RESERVED14
RESERVED15
RESERVED16
RESERVED17
RESERVED18
RESERVED19
RESERVED20
RESERVED21
RESERVED22
RESERVED23
RESERVED24
RESERVED25

CFG_19: DMI Lane Reversal
0= default (internal pull-down)
1= Reversal Lanes
(945GMS does not support)

VSS

U9E
INTEL-QG82945GSE-A3-RH

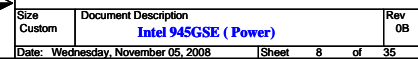
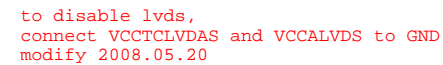


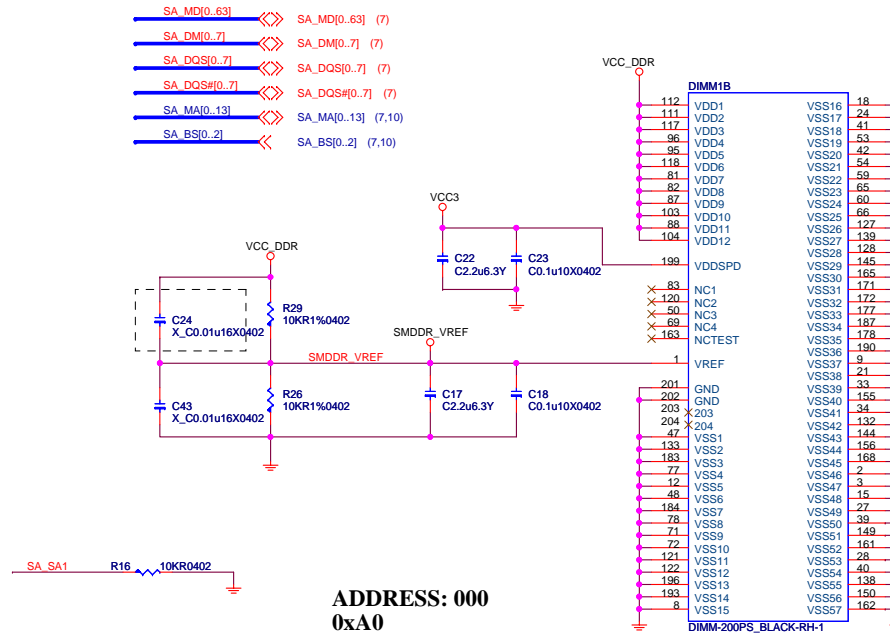
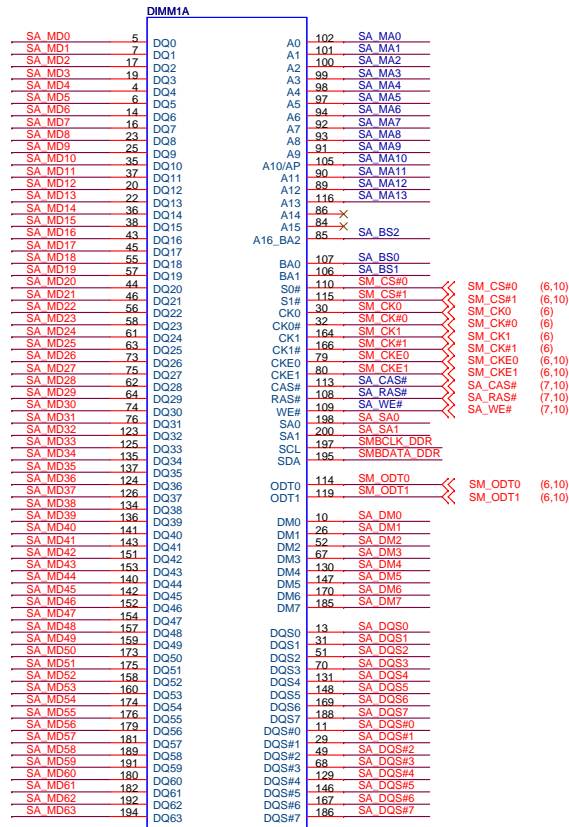
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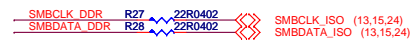
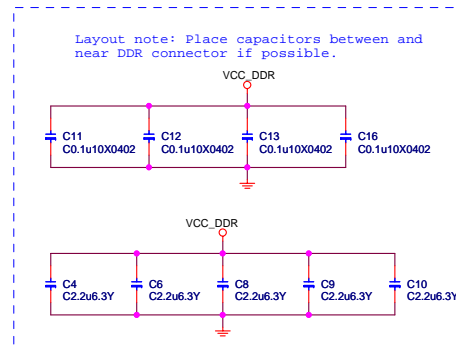
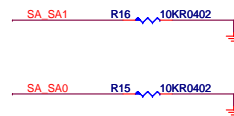
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VCC3=> 40mA OK

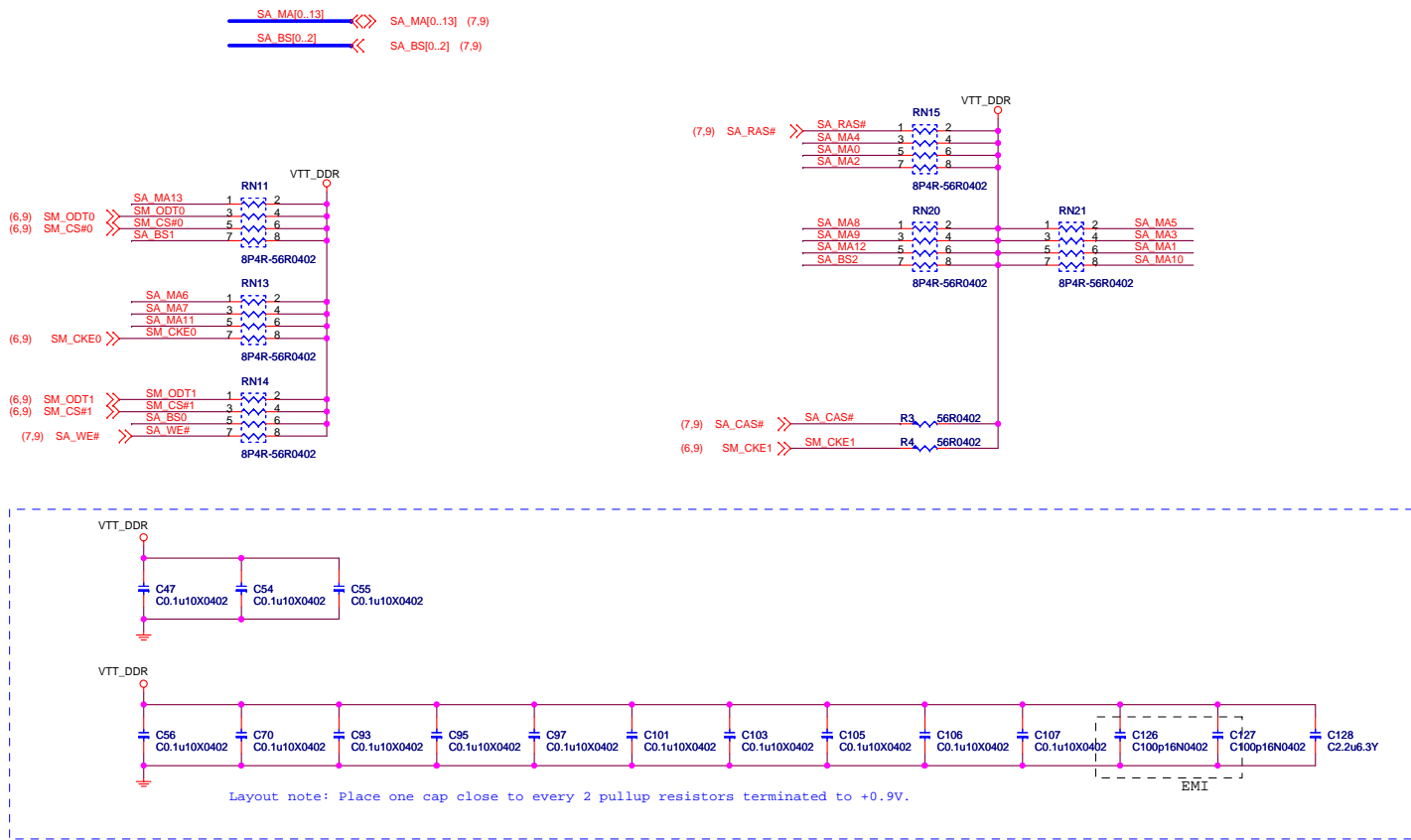


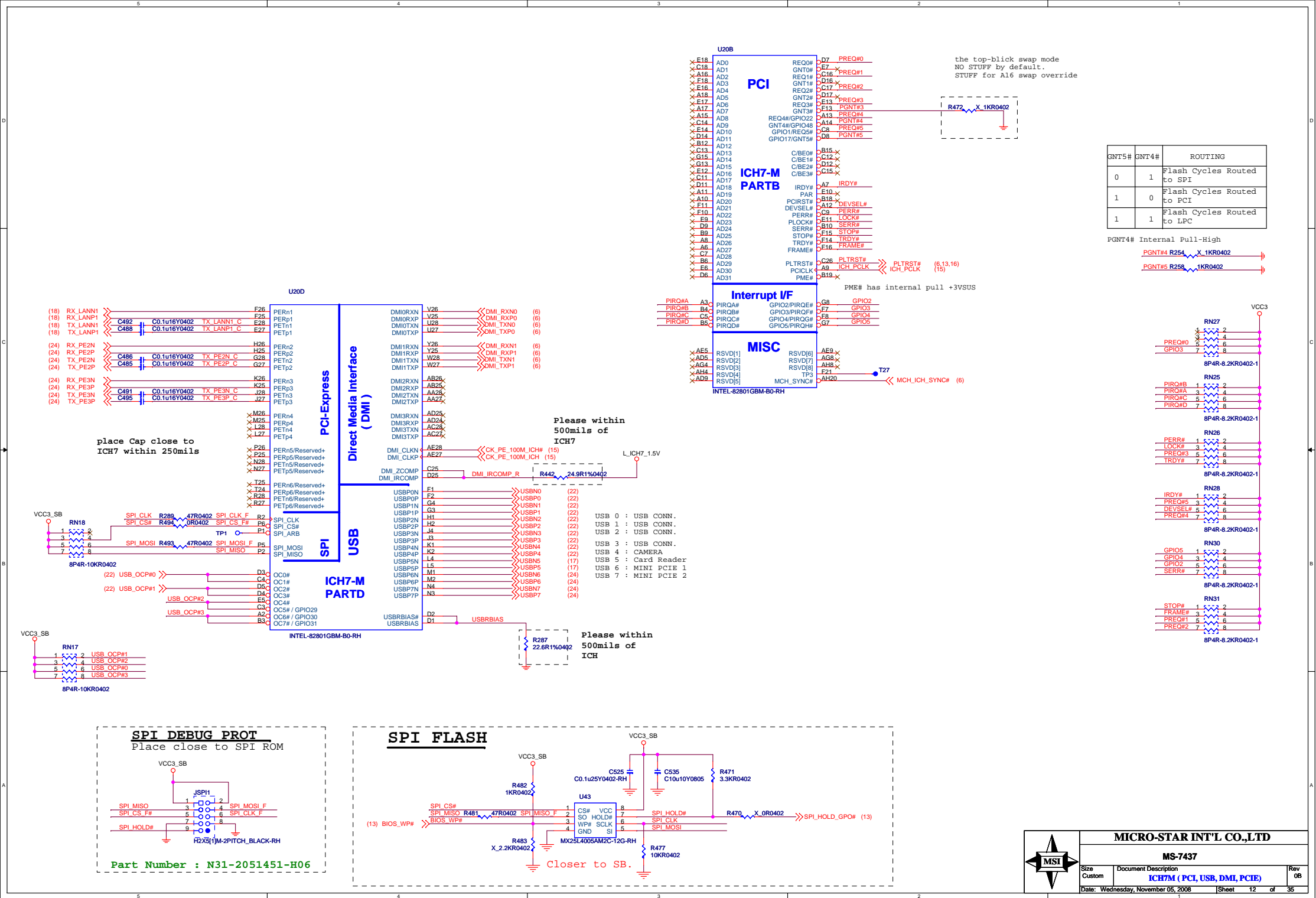


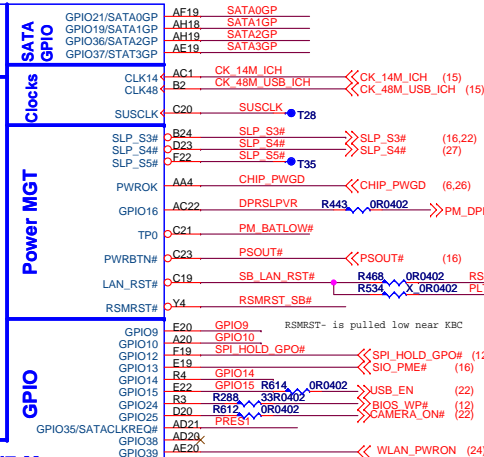
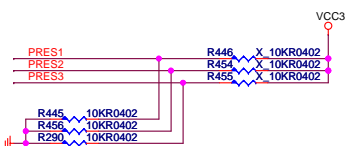
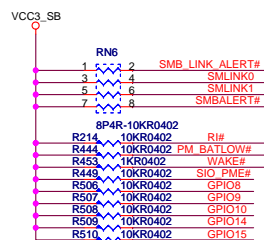
**ADDRESS: 000
0xA0**



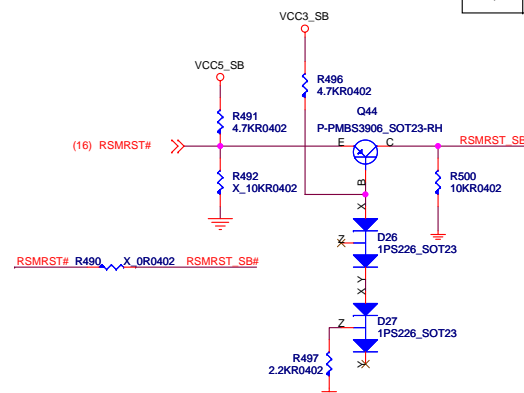
**N13-2000220-A10
Bottom**



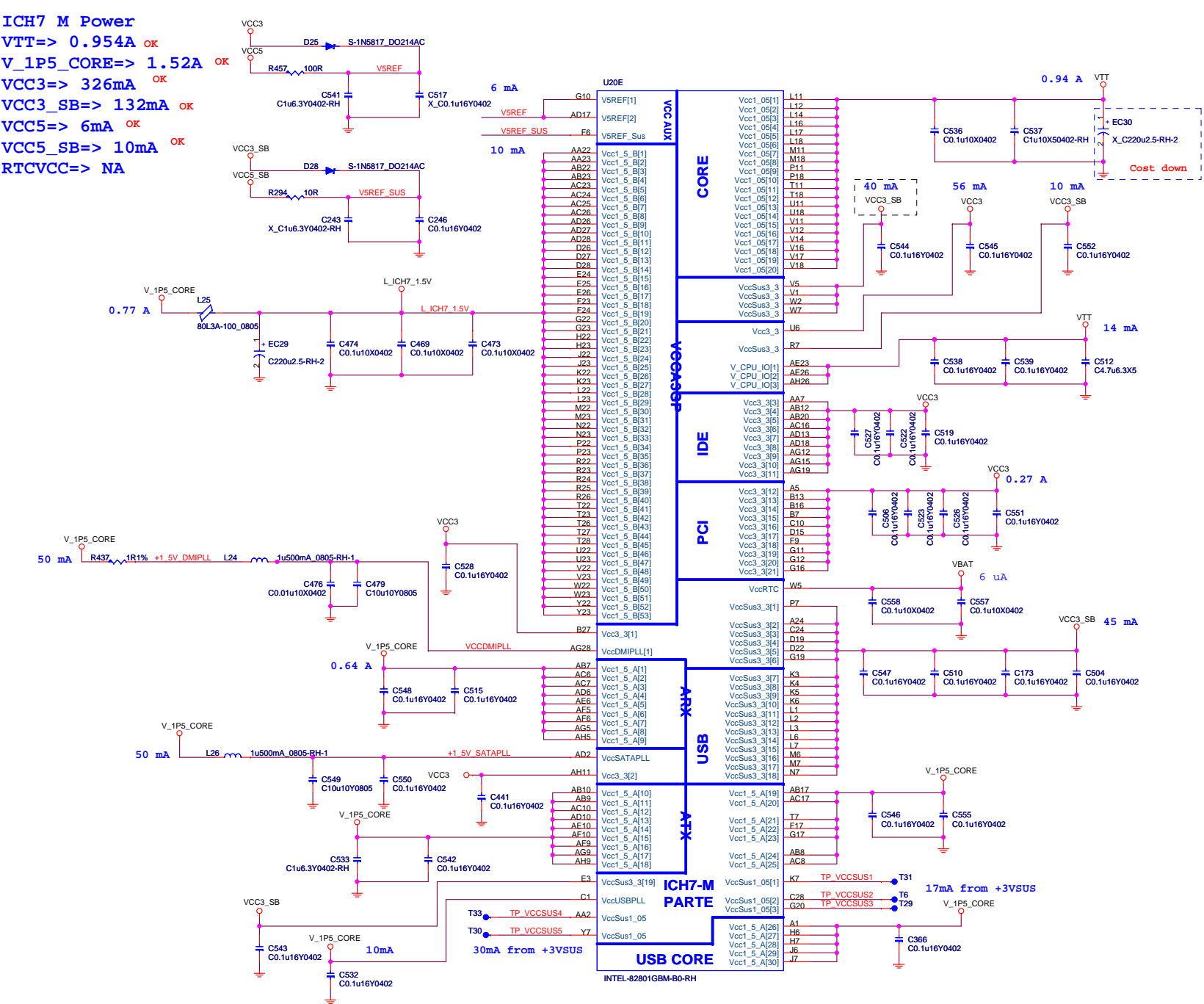




GPIO	Power Plane	Default
6, 7	Core	GPI
8-10	Resume	GPI
12-15	Resume	GPI
24, 25	Resume	GPO
38, 39	Core	GPI



ICH7 M Power
VTT=> 0.954A OK
V_1P5_CORE=> 1.52A OK
VCC3=> 326mA OK
VCC3_SB=> 132mA OK
VCC5=> 6mA OK
VCC5_SB=> 10mA OK
RTCVCC=> NA



PIN AA2,Y7,K7,C28,G20 : VccSus 1.05V for RTCVCC

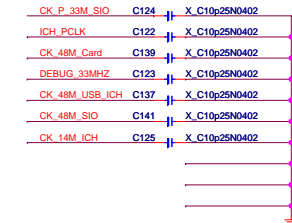
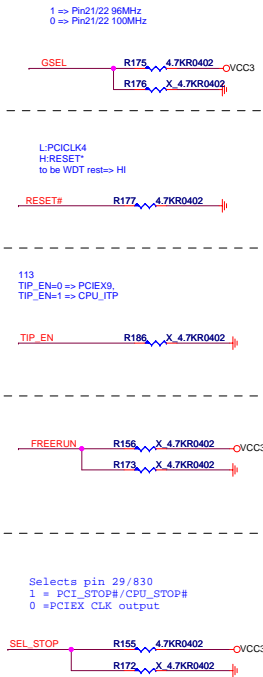
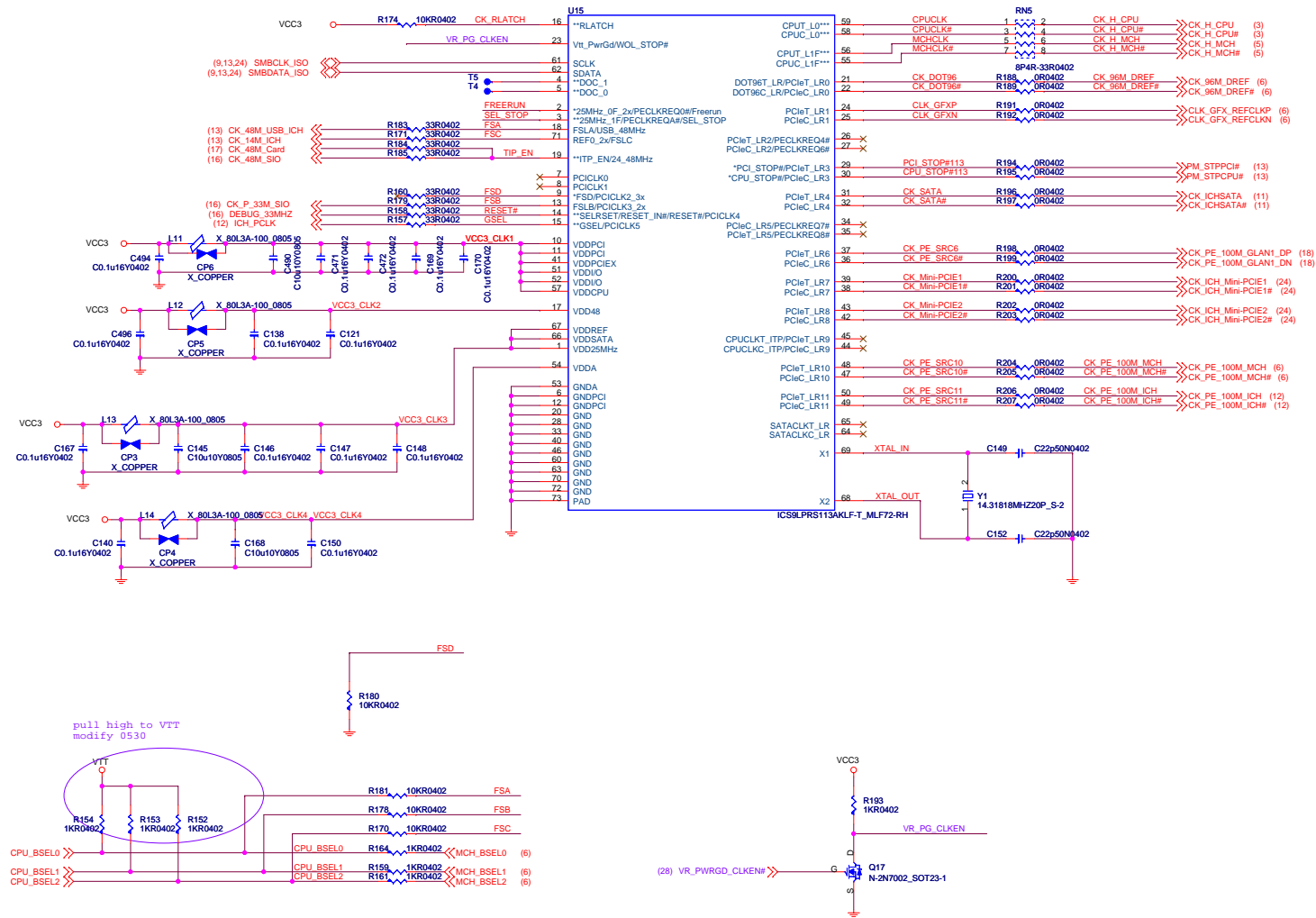
U20F		
A4	VSS	P28
A23	VSS	R1
B1	VSS	R11
B8	VSS	R12
B11	VSS	R13
B14	VSS	R14
B17	VSS	R15
B20	VSS	R16
B26	VSS	R17
B28	VSS	R18
C2	VSS	T6
C6	VSS	T12
C27	VSS	T13
D10	VSS	T14
D17	VSS	T15
D18	VSS	T16
D21	VSS	T17
D24	VSS	U4
E1	VSS	U12
E2	VSS	U13
E4	VSS	U14
E8	VSS	U15
F15	VSS	U16
F3	VSS	U17
F4	VSS	U24
F5	VSS	U25
F12	VSS	U26
F27	VSS	V2
F28	VSS	V13
G1	VSS	V15
G2	VSS	V24
G5	VSS	V27
G6	VSS	V28
G9	VSS	W6
G14	VSS	W24
G18	VSS	W25
G21	VSS	W26
G24	VSS	Y3
G25	VSS	Y28
G26	VSS	Y27
H3	VSS	Y28
H4	VSS	AA1
H5	VSS	AA24
H24	VSS	AA25
H27	VSS	AA26
H28	VSS	AB4
J1	VSS	AB6
J2	VSS	AB11
J5	VSS	AB14
J24	VSS	AB16
J25	VSS	AB19
AB21	VSS	AB21
K24	VSS	AB24
K27	VSS	AB27
K28	VSS	AB28
L13	VSS	AC2
L15	VSS	AC5
L24	VSS	AC9
L26	VSS	AC11
L28	VSS	AD1
M3	VSS	AD3
M4	VSS	AD4
M5	VSS	AD7
M12	VSS	AD8
M13	VSS	AD11
M14	VSS	AD15
M15	VSS	AD19
M16	VSS	AD23
M17	VSS	AE2
M24	VSS	AE4
M27	VSS	AE8
M28	VSS	AE11
N1	VSS	AE13
N2	VSS	AE18
N5	VSS	AE21
N6	VSS	AE24
N11	VSS	AE25
N12	VSS	AF2
N13	VSS	AF4
N14	VSS	AF8
N15	VSS	AF11
N16	VSS	AF27
N17	VSS	AF28
N18	VSS	AG1
N24	VSS	AG3
N25	VSS	AG7
N26	VSS	AG11
P3	VSS	AG14
P4	VSS	AG17
P12	VSS	AG20
P13	VSS	AG25
P14	VSS	AH1
P15	VSS	AH3
P16	VSS	AH7
P17	VSS	AH12
P24	VSS	AH23
P27	VSS	AH27

ICH7-M PART F

INTEL-82801GBM-B0-RH



CLOCK GEN STRAPING



CPU Table

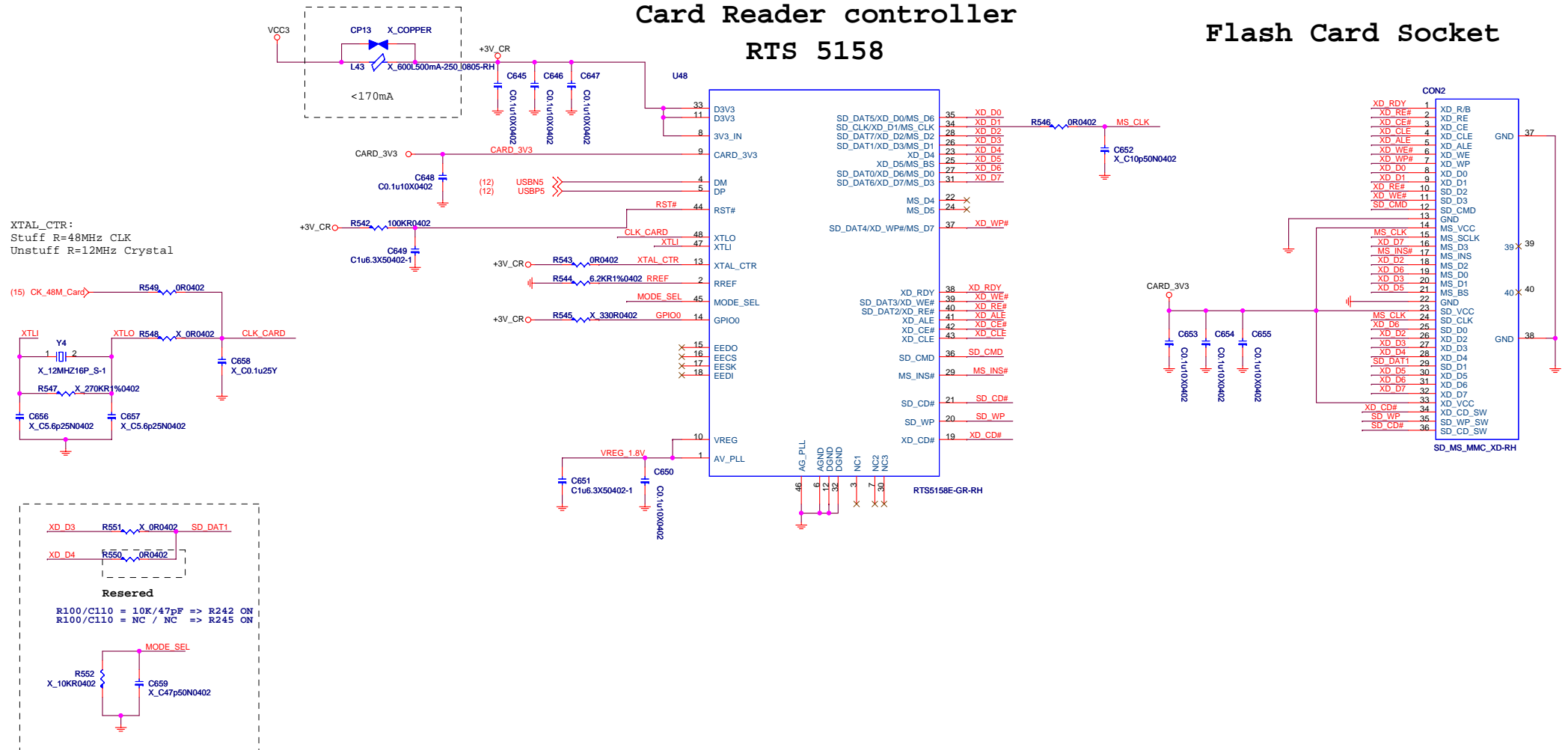
BSEL[2]	BSEL[1]	BSEL[0]	BCLK
L	L	L	100MHZ
L	L	H	133MHZ
L	H	L	RESERVED
L	H	H	166MHZ

CLK Gen 113

BSEL[2]	BSEL[1]	BSEL[0]	BCLK
H	L	H	100MHZ
L	L	H	133MHZ
L	H	L	200MHz
L	H	H	166MHZ



Flash Card Socket



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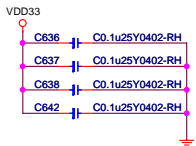
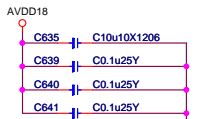
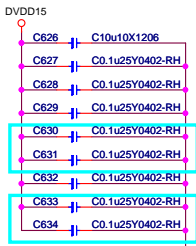
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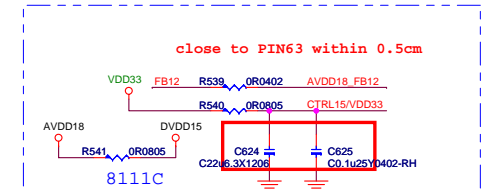
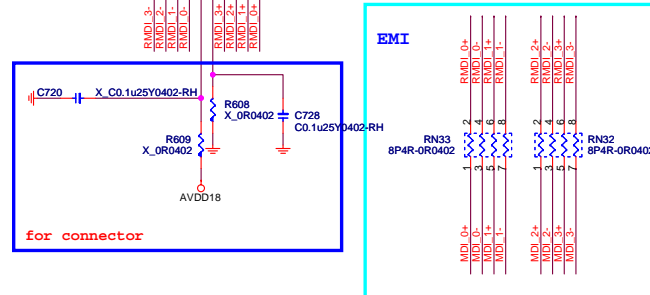
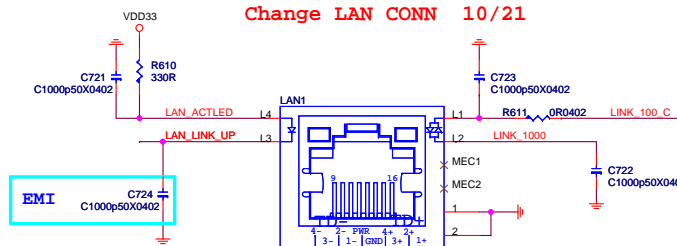
layout close to PIN64

Power domain chart

	RTL8111C
AVDD33	3.3V
AVDD18	1.2V
EVDD18	1.2V
DVDD15	1.2V



Change LAN CONN 10/21



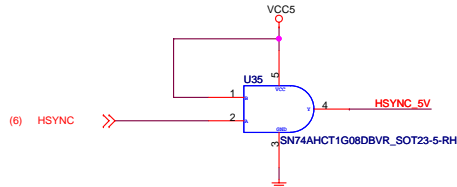
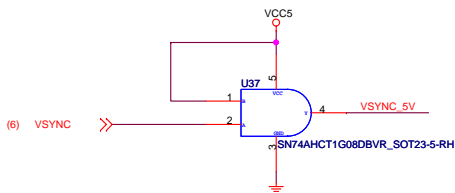
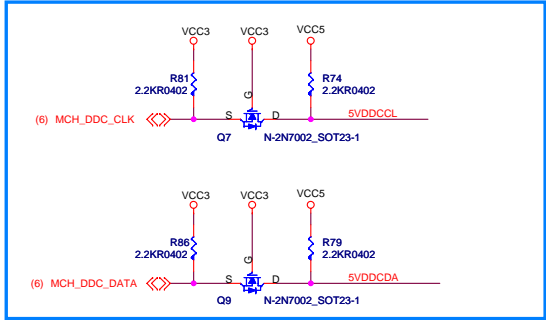
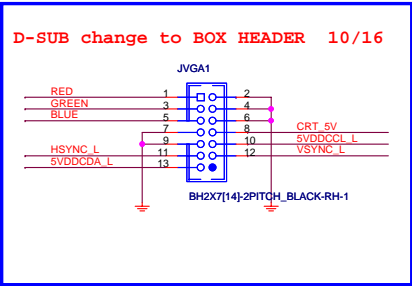
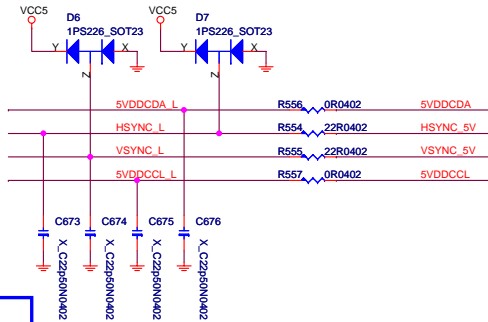
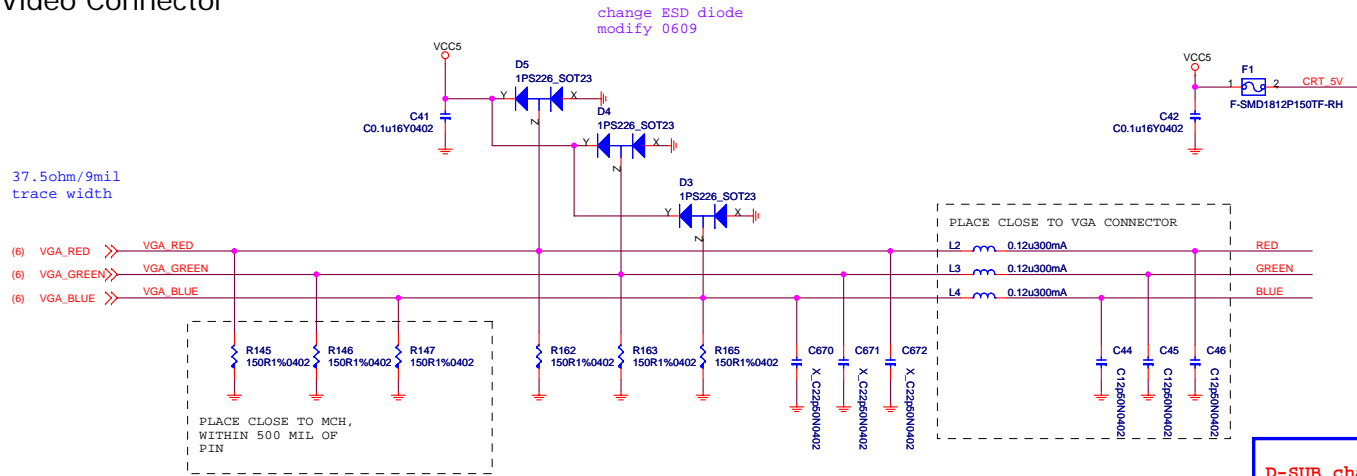
Power consumption			
	1G	100M	
3.3V	103mA	TBD	
1.5V	367mA	TBD	
1.8V	198mA	TBD	



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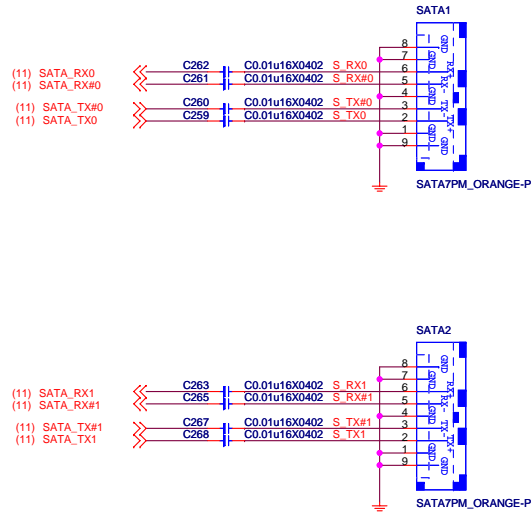
Video Connector

37.5ohm/9mil
trace width

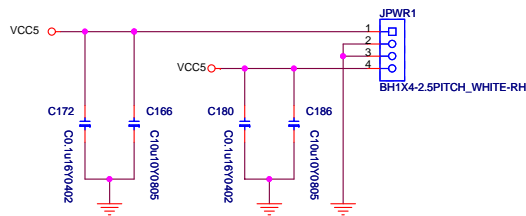


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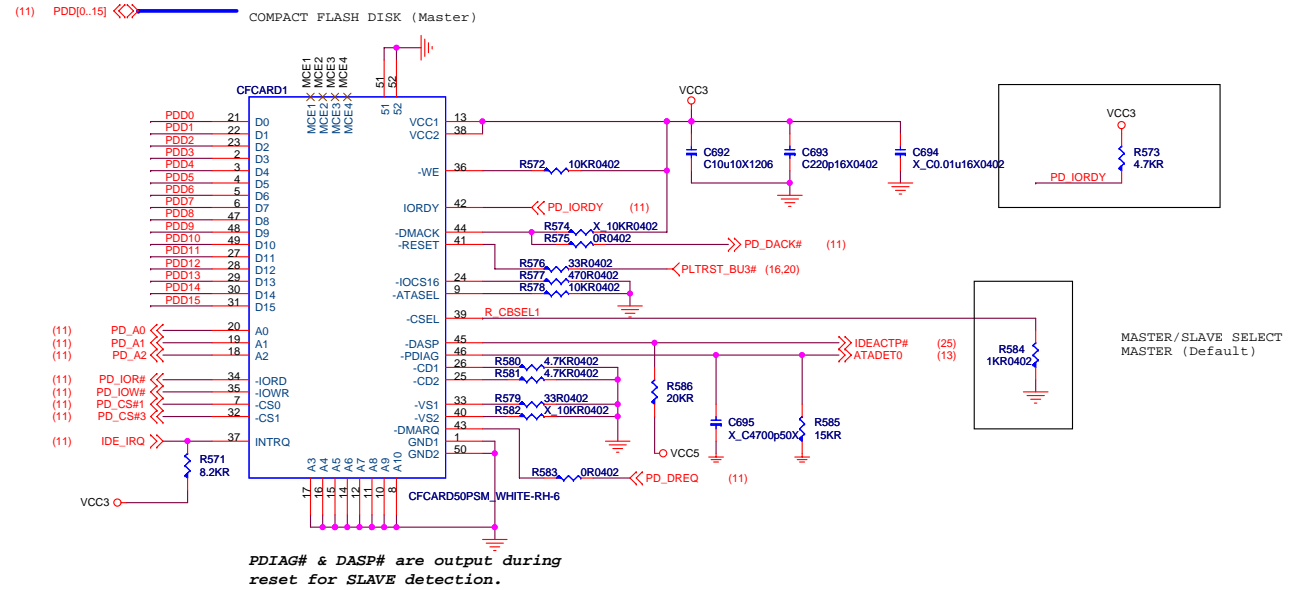
SERIAL ATA CONNECTOR BLOCK



HDD Power For 2.5"

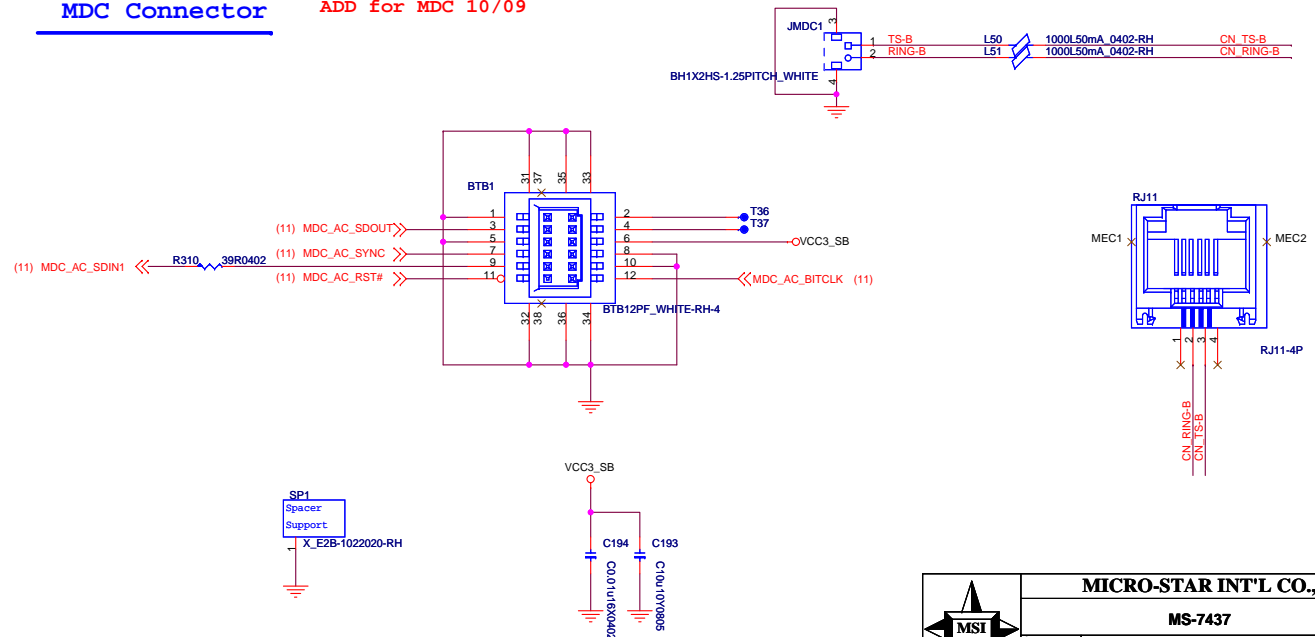


CF Card BLOCK

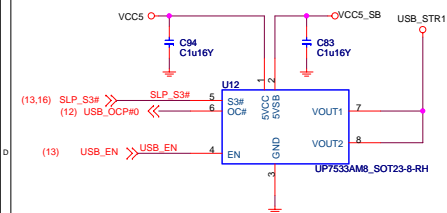


MDC Connector

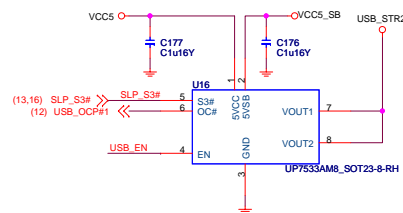
ADD for MDC 10/09



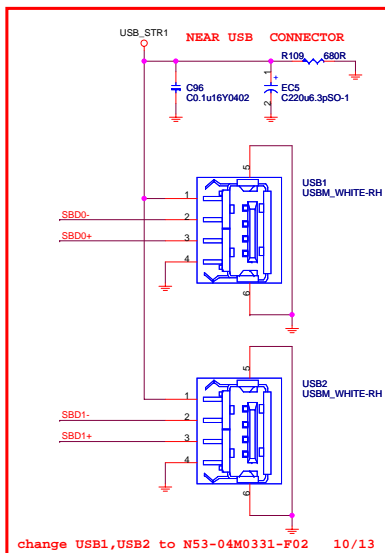
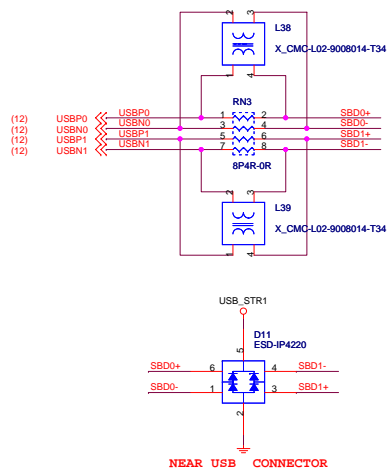
POWER CIRCUIT FOR USB PORT 0,1



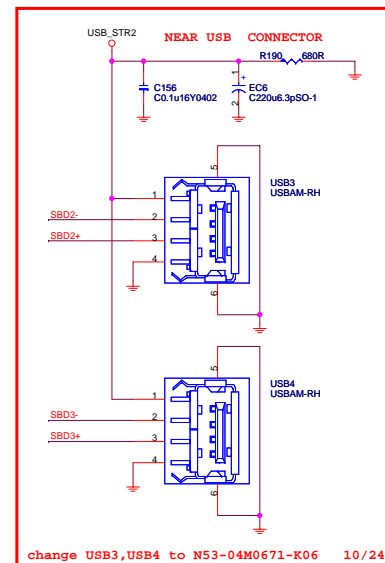
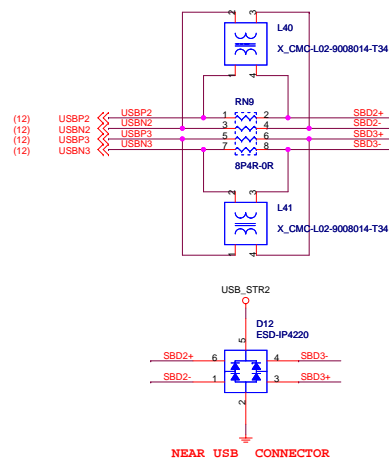
POWER CIRCUIT FOR USB PORT 2,3



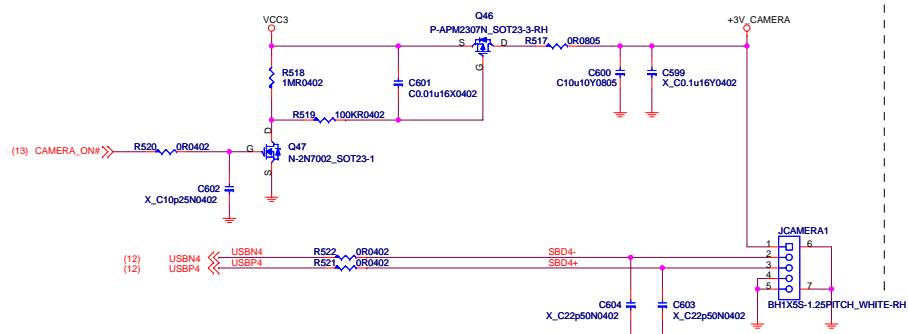
USB CONNECTOR FOR USB PORT 0,1



REAR PANEL USB CONNECTOR FOR USB PORT 2,3



CAMERA



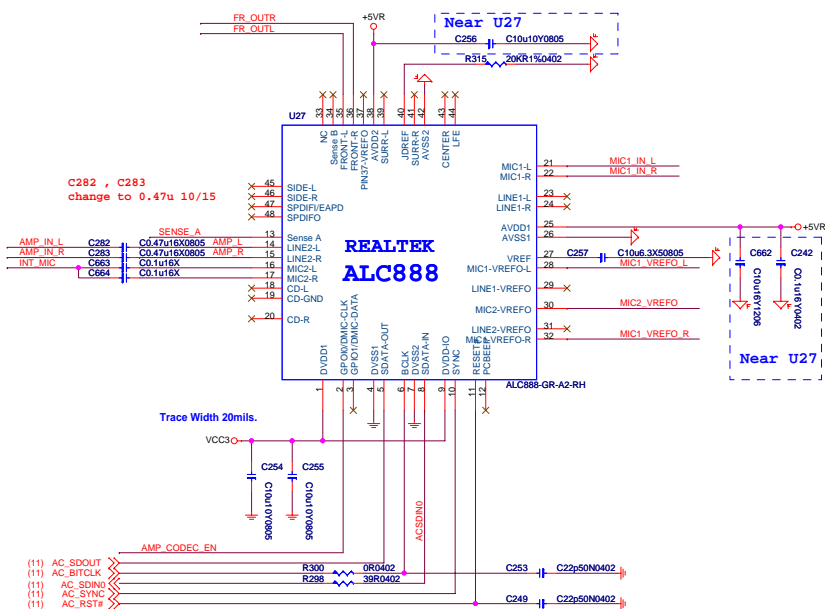
MICRO-STAR INT'L CO.,LTD

MS-7437

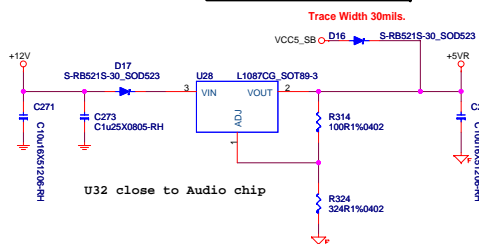
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Custom	USB 0-4 CONNECTORS

Date: Wednesday, November 05, 2008 Sheet 22 of 35

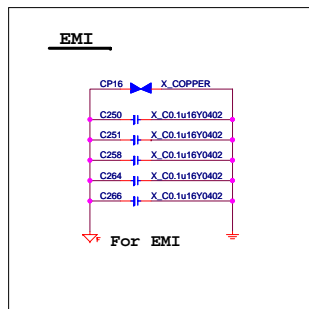
ALC888 CODEC



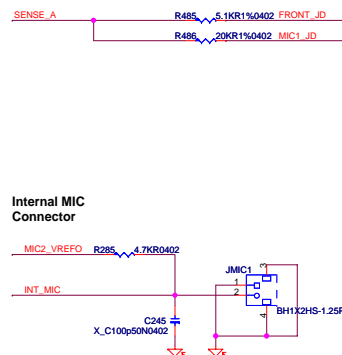
AUDIO CODE REGULATORS



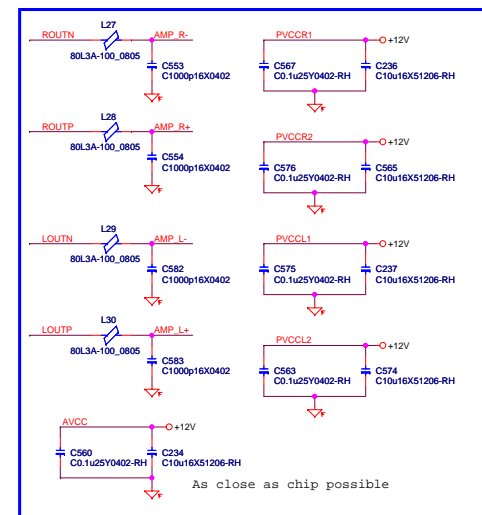
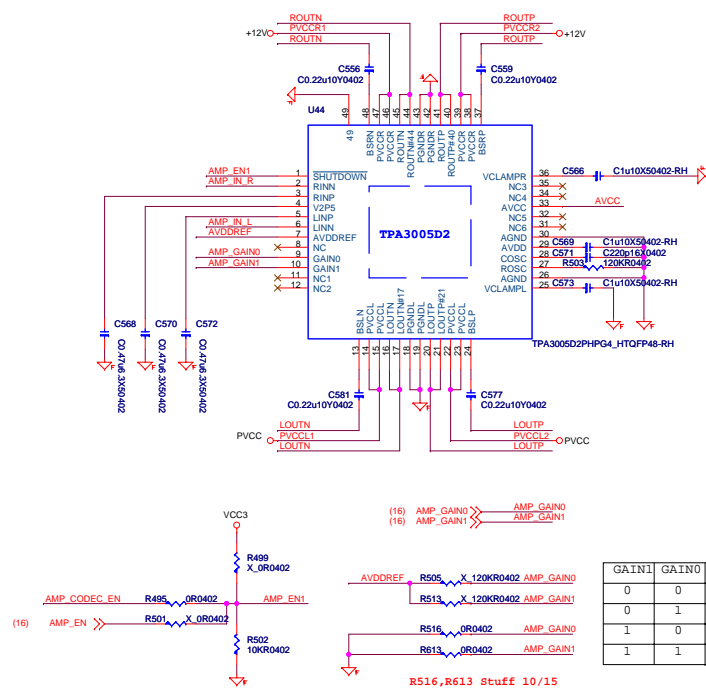
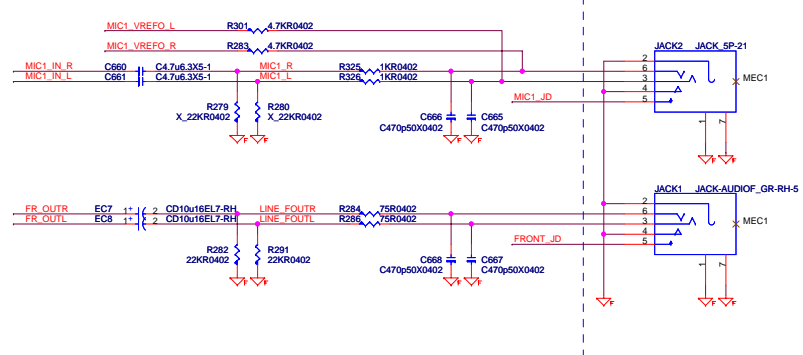
EMI



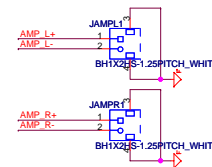
ALC888 JACK DETECT



ALC888 JACK



GAIN1	GAIN0	AV (dB)
0	0	15.3
0	1	21.2
1	0	27.2
1	1	31.8



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7500	7500
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7700	7700
7800	7800
7900	7900
8000	8000
8100	8100
8200	8200
8300	8300
8400	8400
8500	8500
8600	8600
8700	8700
8800	8800
8900	8900
9000	9000
9100	9100
9200	9200
9300	9300
9400	9400
9500	9500
9600	9600
9700	9700
9800	9800
9900	9900
10000	10000

Custom	Azalia - ALC888 & AMP		
Date: Wednesday, November 05, 2008	Sheet	23	of 35

10/20

Mini PCI-E Slot 1



Mini PCI-E Slot 2



MICRO-STAR INT'L CO.,LTD

MS-7437

Size Custom	Document Description Mini PCI-E Slot	Rev 0B
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INTEL/PB Front Panel Connector

D9
S-BAT54A_SOT23

(11) SATALED#

(21) IDEACTP#

VCC5

VCC_SB

(13) FP_RST#

(16) WDT#

R107 330R

R142 10KR0402

R143 33R0402

R150 0R0402

C116 C1u10Y0402-RH

C102 X_C0.1u16Y0402

HDD+
HDD_LED

JFP1

H2X5(1)M-2PITCH_BLACK-RH

R125 100R0402

PWR_LED
SUS_LED

C92 X_C0.1u16Y0402

R136 4.7KR0402

R128 10KR

C108 C1u10Y0402-RH

SW1

SW-TACTB1-4PS_BROWN-RH

SW2
SW-TACTB1-4PS

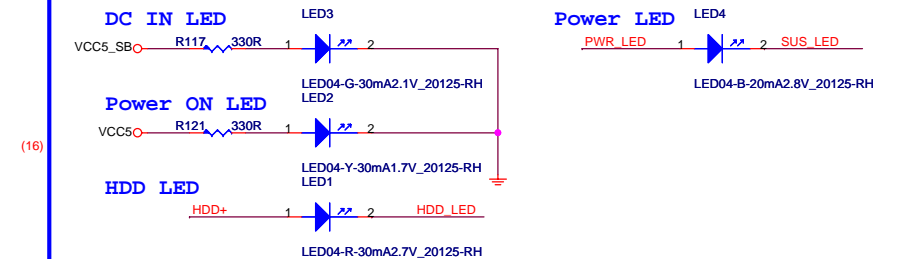
(29) SUS#

The diagram shows the internal circuitry of the alarm system. It includes a BEEP input (16) connected to a 4.7K resistor (R299) and a 10K resistor (R296) leading to a transistor (Q25). The SPKR output (13) is connected to a 470K resistor (R297) and a transistor (Q26). The BZ1 buzzer output is connected to a 8P4R-0R resistor (RN16) and a diode (D14) leading to a BAS32L-LL34 buzzer (BZ1). The circuit is powered by VCC5 and includes a capacitor (C228).

LED (for Fintek 71882)

SYSTEM FAN

The schematic diagram illustrates the SYSTEM FAN circuit. It features a +12V input connected to a diode D29 (1N4148W-F_SOD123-RH) and a MOSFET Q63 (N-2N7002_SOT23-1). The MOSFET is driven by the FAN_CTL2 signal. The MOSFET's drain is connected to a relay P-SI2303BDS-T1-E3_SOT23-3-RH, which in turn controls the fan motor SYS_F1 (BHTX3-2.5PITCH_WHITE-RH-1). The circuit includes several passive components: resistors R602 (10KR0402), R603 (2.2KR0402), R604 (1KR0402), R605 (4.7KR0402), R606 (27KR0402), and R607 (10KR0402); capacitors C719 (C10u16X51206-RH), C718 (X_C10u16Y1206), C717 (C10u16Y1206), C197 (X_C0.1u16Y0402), and C198 (X_C0.1u16Y0402). A dashed blue box labeled 'EMI' encloses the EMI filter components C197, C198, and C717. The fan motor is connected to the output of the relay and is labeled 'SYS_F1'.



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Size Custom	Document Description Front Panel&FAN Control	Rev 0B
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DDR II 1.8V POWER

MAX = 9.2A

VCC_DDR = 9.02A
SO-DIMM X1 --- 2.7A
DDR Terminitor--- 0.6A
1.5V core --- 4A
N.B --- 1.72A

MAX = 7.5A

VTT +/-1.05Vcore
7.174A

Current Limit at 10A
Current MAX at 8A

CPU Vccp: 2500mA
GMCH core:2940mA
GMCH Vccp:780mA
ICH7M core:940mA
ICH7M Vcc_IO:14mA

DDR VTT Power

To CPU Copper trace width > 250mils , Fill
island behind DIMM > 400mils .

VTT_DDR
1.2A

V_1P5_CORE
4.78A

CPU Vccp: 130mA
GMCH core:2130mA
ICH7M core:1520mA
MINI PCIE :1000mA

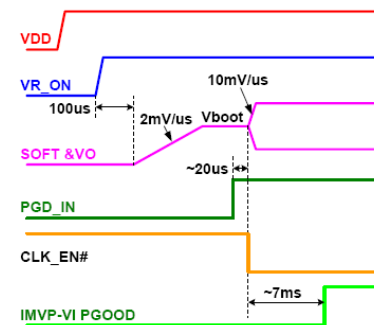
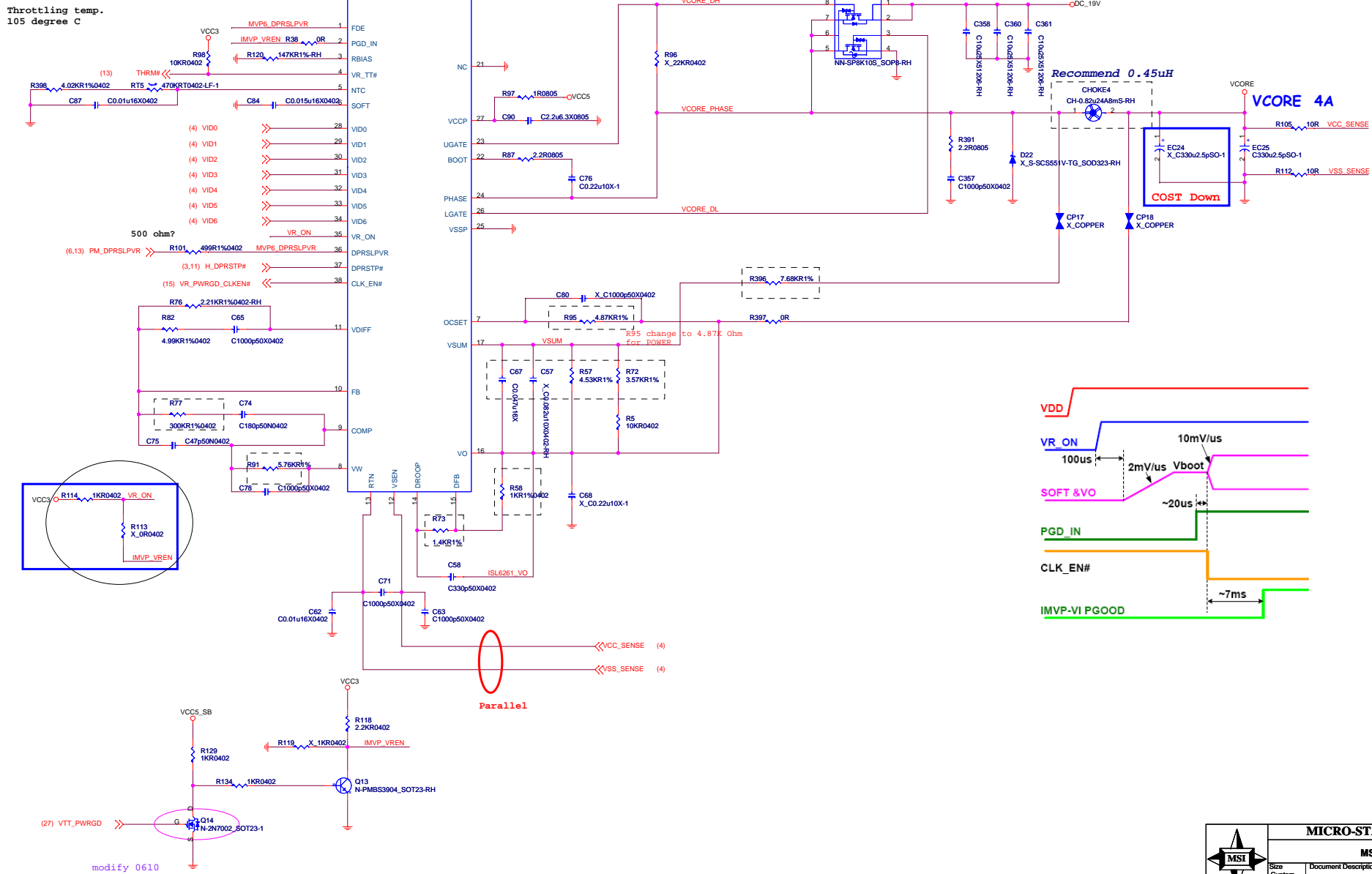
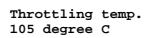
MAX = 5A

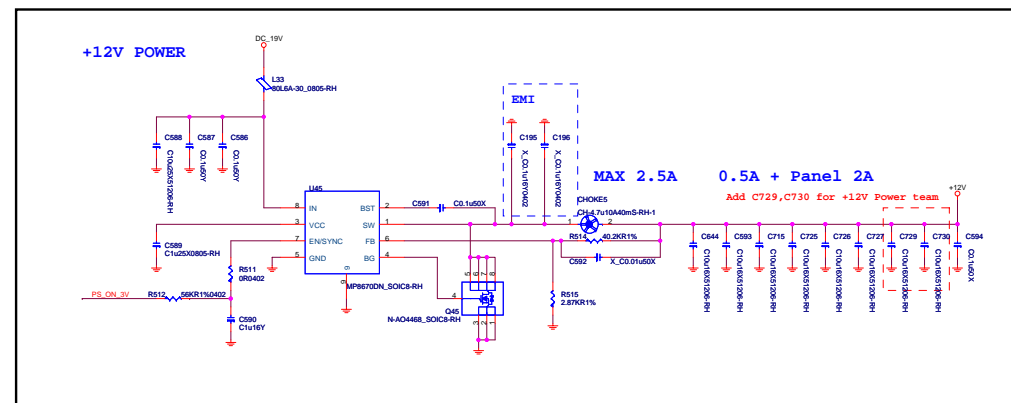
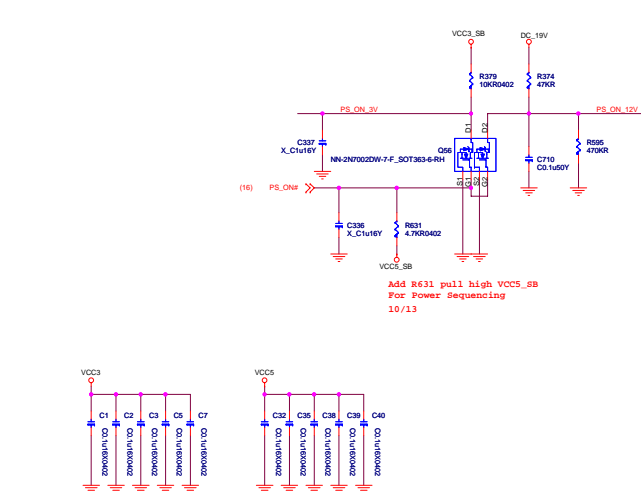


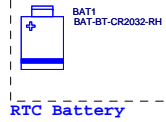
MICRO-STAR INT'L CO.,LTD

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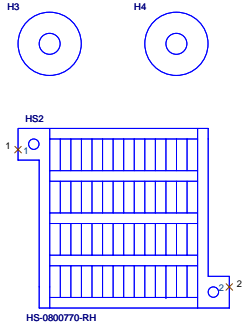
Size	Document Description	Rev
Custom	GMCH VCORE	08
Date: Wednesday, November 05, 2008	Sheet 27 of 35	



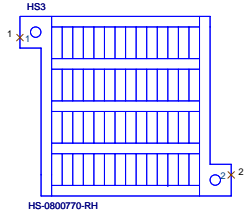




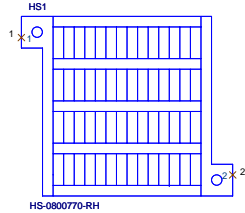
NB HEATSINK



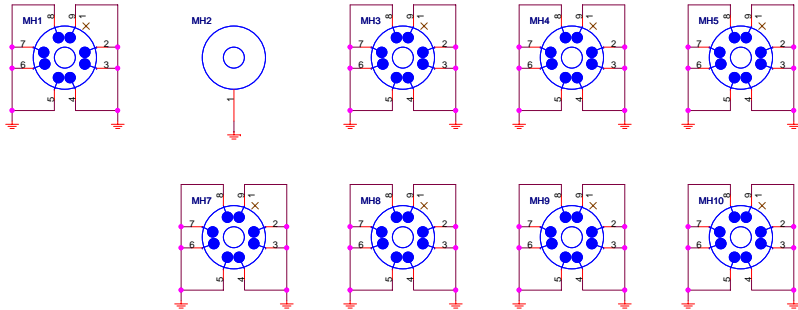
CPU HEATSINK



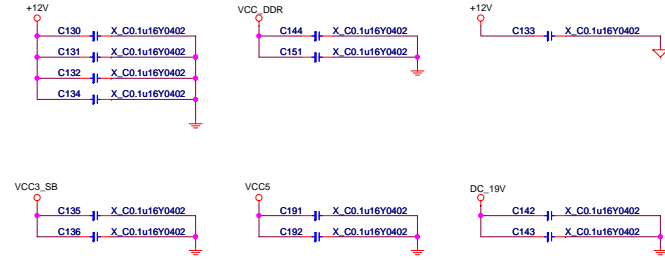
SB HEATSINK



Mounting Holes



EMI

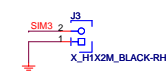


Simulation

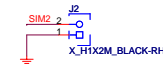
Layer1 / 5mil / 55ohm



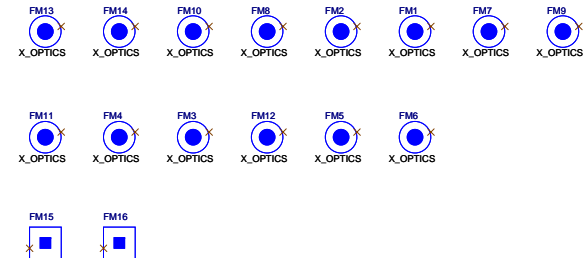
Layer6 / 5mil / 55ohm



Layer4 / 4.5mil / 55ohm



Optics Orientation Holes



ICH7M


GPIO	Alt Func	Pin	I/O/NC	Power	PU	SMI	Tol	Default	Rickles Signal Name
GPIO[0]	BM_BUSY#	AB18	I	VCC3p3	N	Y	3.3	N/A	PM_BMBUSY#
GPIO[1]	REQ[5]#	C8	I	V5REF	Y	N	5	N/A	PREQ#5
GPIO[2]	PIRQE#	G8	I	V5REF	Y	N	5	N/A	GPIO2
GPIO[3]	PIRQF#	F7	I	V5REF	Y	N	5	N/A	GPIO3
GPIO[4]	PIRQG#	F8	I	V5REF	Y	N	5	N/A	GPIO4
GPIO[5]	PIRQH#	G7	I	V5REF	Y	N	5	N/A	GPIO5
GPIO[6]	unmuxed	AC21	I	Vcc3p3	Y	Y	3.3	N/A	ATADET0
GPIO[7]	unmuxed	AC18	I	Vcc3p3	Y	N	3.3	N/A	SIO_OVT#
GPIO[8]	unmuxed	E21	I	VccSus3p3	Y	Y	3.3	N/A	NC
GPIO[9]	unmuxed	E20	I	VccSus3p3	Y	N	3.3	N/A	NC
GPIO[10]	unmuxed	A20	I	VccSus3p3	Y	N	3.3	N/A	NC
GPIO[11]	SMBALERT#	B23	I	VccSus3p3	Y	Y	3.3	N/A	SMBALERT#
GPIO[12]	unmuxed	F19	I	VccSus3p3	Y	N	3.3	N/A	SPI_HOLD_GPO#
GPIO[13]	unmuxed	E19	I	VccSus3p3	Y	Y	3.3	N/A	SIO_PME#
GPIO[14]	unmuxed	R4	I	VccSus3p3	Y	Y	3.3		NC
GPIO[15]	unmuxed	E22	I	VccSus3p3	N	N	3.3	1	NC
GPIO[16]	DPRSLPVR	AC22	O	Vcc3p3	N	N	3.3	1	DPRSLPVR
GPIO[17]	GNT[5]#	D8	O	Vcc3p3	N	N	3.3	1	PGNT#5
GPIO[18]	STPPCI#	AC20	O	Vcc3p3	N	N	3.3	1	PM_STPPCI#
GPIO[19]	SATA1GP	AH18	I	Vcc3p3	D	N	3.3	1	SATA1GP
GPIO[20]	STPCPU#	AF21	O	Vcc3p3	N	N	3.3	0	PM_STPCPU#
GPIO[21]	SATA0GP	AF19	I	Vcc3p3	N	N	3.3	0	SATA0GP
GPIO[22]	REQ4#	A13	I	Vcc3p3	N	N	3.3	0	PREQ#4
GPIO[23]	LDRQ1#	AA5	O	Vcc3p3	N	N	3.3		NC
GPIO[24]	unmuxed	B3	O	VccSus3p3	Y	N	3.3	1	BIOS_WP#
GPIO[25]	unmuxed	D20	O	VccSus3p3	N	N	3.3	N/A	CAMERA_ON#
GPIO[26]	unmuxed	A21	O	VccSus3p3	N	N	3.3	0	NC
GPIO[27]	unmuxed	B21	O	VccSus3p3	N	N	3.3	0	NC
GPIO[28]	unmuxed	E23	O	VccSus3p3	N	N	3.3	0	NC
GPIO[29]	OC#5	C3	I	VccsUS3p3	Y	N	3.3		USB_OCP#2
GPIO[30]	OC#6	A2	I	VccsUS3p3	Y	N	3.3		USB_OCP#3
GPIO[31]	OC#7	B3	I	VccsUS3p3	Y	N	3.3		USB_OCP#3
GPIO[32]	CLKRUN#	AG18	O	Vcc3p3	N	N	3.3	1	CLKRUN#
GPIO[33]	AZ_DOCK_EN#	AC19	O	Vcc3p3	N	N	3.3	1	PRES2
GPIO[34]	AZ_DOCK_RST#	U2	O	Vcc3p3	N	N	3.3	0	PRES3
GPIO[35]	SATACLKREQ#	AD21	O	Vcc3p3	N	N	3.3	0	PRES1
GPIO[36]	SATA2GP	AH19	I	Vcc3p3	N	N	3.3	0	SATA2GP
GPIO[37]	SATA3GP	AE19	I	Vcc3p3	N	N	3.3	0	SATA3GP
GPIO[38]	unmuxed	AD20	I	Vcc3p3	Y	N	3.3	1	NC
GPIO[39]	unmuxed	AE20	I	Vcc3p3	Y	N	3.3	1	WLAN_PWRON
GPIO[48]	GNT4#	A14	O	Vcc3p3	N	N	3.3	1	PGNT#4
GPIO[49]	CPUPWRGD	AG24	OD	V_FSB_VTT	Y	N	3.3	1	CPU_PWRGD

SIO(F71882)

PIN NAME	USAGE	Input/Output	NOTES
GPIO[2:0]	UNUSED		
GPIO3	UNUSED		
GPIO4	UNUSED		
GPIO5	UNUSED		
GPIO6	UNUSED		
GPIO7	WDT#	OUTPUT	WATCH DOG TIMER RESET OUTPUT
GPIO10	UNUSED		
GPIO11	UNUSED		
GPIO12	UNUSED		
GPIO13	BEEP	OUTPUT	
GPIO14	AMP_EN	OUTPUT	RESERVED TO ENABLE THE AMPLIFIER
GPIO15	LED_VSB	OUTPUT	OUTPUT FOR PWR LED
GPIO16	LED_VCC	OUTPUT	OUTPUT FOR PWR LED
GPIO17	UNUSED		
GPIO20	PLTRST_BU#1	OUTPUT	PCI RESET BUFFER1
GPIO21	PLTRST_BU#2	OUTPUT	PCI RESET BUFFER2
GPIO22	PLTRST_BU#3	OUTPUT	PCI RESET BUFFER3
GPIO23	UNUSED		
GPIO24	UNUSED		
GPIO26	PSIN	INPUT	FRONT PANNEL POWER BUTTON
GPIO27	PSOUT#	OUTPUT	POWER BUTTON BUFFER OUT TO SB
GPIO30	SLP_S3#	INPUT	FROME SOUTHBRIDGE S3#
GPIO31	PS_ON#	OUTPUT	OUTPUT FOR POWER ON
GPIO32	UNUSED		
GPIO33	RSMRST#	OUTPUT	OUTPUT FOR SOUTHRBRIDGE RSMRST#
GPIO40	AMP_GAIN0	OUTPUT	SET AMPLIFIER GAIN
GPIO41	UNUSED		
GPIO42	UNUSED		
GPIO43	AMP_GAIN1	OUTPUT	SET AMPLIFIER GAIN

DDR-II DIMM Config.

DEVICE	ADDRESS	CLOCK
DIMM 1	00	SM_CK0/#0 SM_CK1/#1



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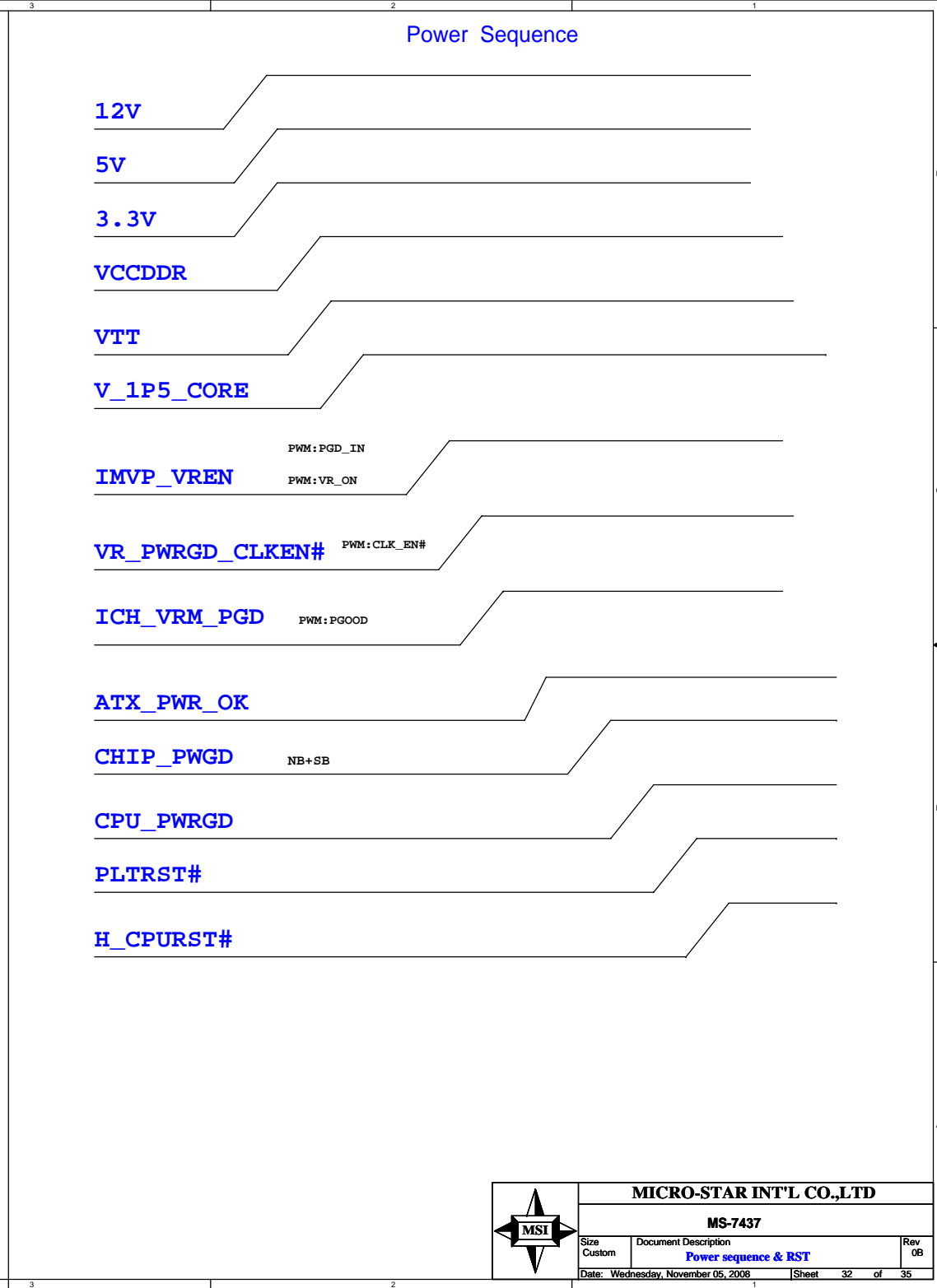
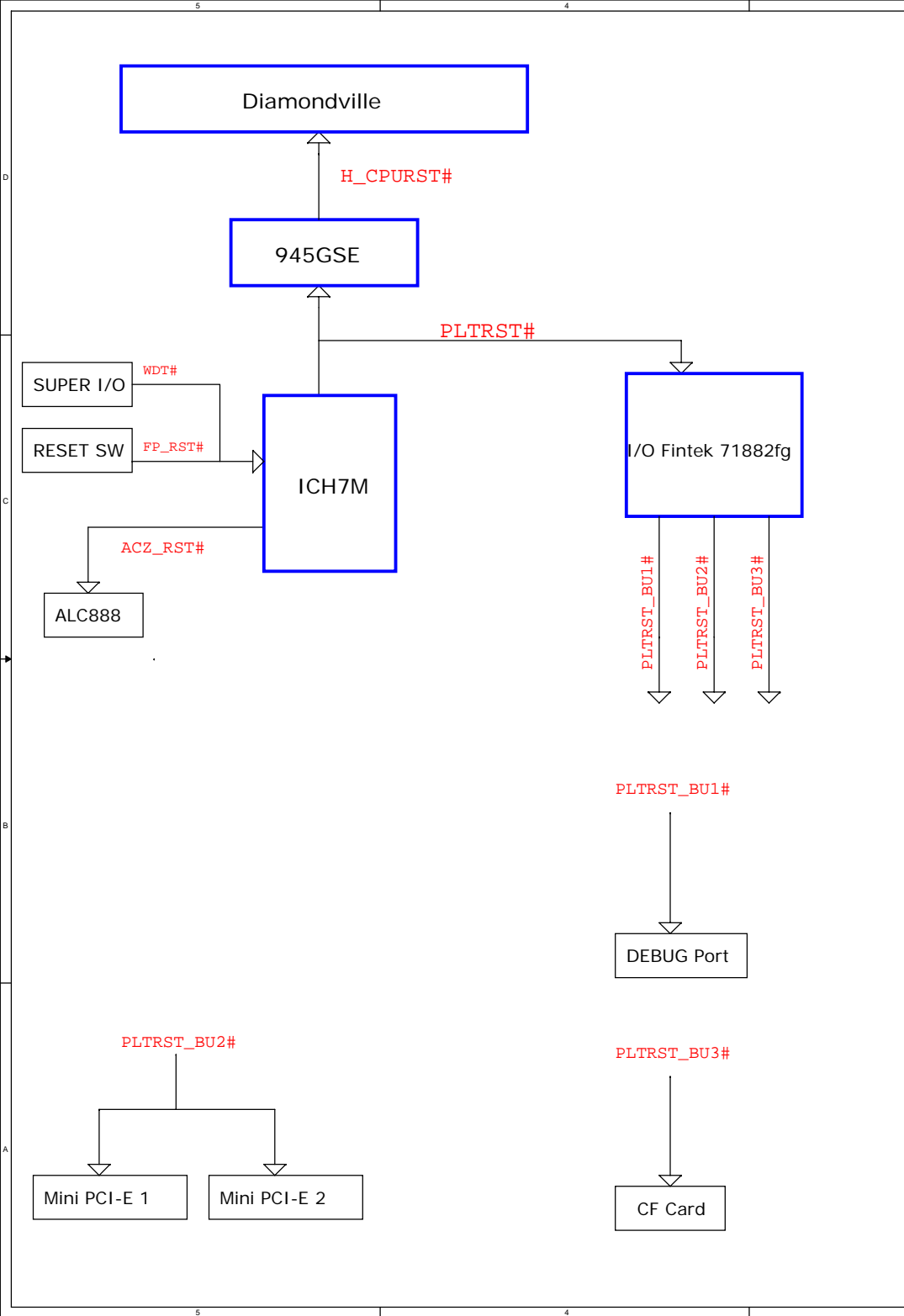
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Document Description
GPIO Setting& PCI Routing

Rev 08

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ATOM N270		
0.65V - 1.2V Core	-	4A
1.05V Vtt	-	2.5 A
1.5V VCCA	-	130m A

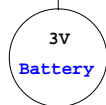
945GME GMCH TDP: 14 - 16W		
1.05V Vtt	-	780mA
1.05V Core(integrated GFX)	-	2.94A
1.8V DDR2 I/O	-	1.72A
2.5V CRTDAC	-	142mA
2.5V LVDS	-	
1.5V PLL	-	2.13A
3.3V VCC3	-	40mA

ICH7-M		
1.05V VTT	-	0.954A
1.5V Core	-	1.41A
1.5V USB	-	10mA
1.5V SATA	-	50mA
1.5V DMI	-	50mA
+3.3V VccSus	-	132mA
RTC (G3)	-	5uA
5VRef	-	6mA
5VrefSus	-	10mA
+3.3V	-	326mA

HD Audio ALC888		
3.3V AUDIO	-	40mA
5V AUDIO	-	200mA

CLK Gen 113 3VRUN		
3.3V	-	200mA

Cardreader 3VRUN		
3.3V	-	170mA



ISL6261		
V CORE		
0.7625-1.325V		
1-Phase Switch	4A	

W83310DS		
VTT_DDR		
0.9V Linear	1.2A	

TPS51124RGER		
VTT		
1.05V Switch	7.174A	
VCC_DDR		
1.8V Switch	9.2A	

V_1P5_Core		
1.5V Linear	4.78A	

TPS51125		
VCC3 Switch	3A	
VCC5 Switch	5.3A	
VCC3_SB	0.8A	
VCC5_SB	10mA	

UP7707		
V_2P5_MCH		
2.5V Linear	142mA	

MP8670DN		
+12V	0.5A+?A	
LT1087S	0.1A	

DDR2 SDRAM & TERMINATOR		
0.9V VTT_DDR	-	1.2A
1.8V VCC_DDR (S0,S1)	-	2.7A

MINI PCI-Express slot 1		
V_1P5_Core	-	500mA
+3.3VSB	-	330mA
+3.3V	-	1.0A

MINI PCI-Express slot 2		
V_1P5_Core	-	500mA
+3.3VSB	-	330mA
+3.3V	-	1.0A

USB		
+5V (S0,S1)	-	2.5A

SYS FAN		
+12V	-	0.4A

PS/2		
+5V (S0,S1)	-	345mA
+5V	-	2.0mA

SATA HDD 2.5" POWER		
+5V		1A

SATA ODD DVD-ROM		
+5V		1.3A

Panel POWER 17W		
+12V		?A

AOC Total = MAX 57 W (no Panel)
Channel Total = MAX 67 W (no Panel)

DC_IN (+19V)

VCC3 + VCC3_SB = MAX 3.8A
VCC5 + VCC5_SB = MAX 5.4A
+12V = MAX 0.8A
VTT 1.05V = MAX 7.2A
VCC_DDR 1.8V = MAX 9.2A

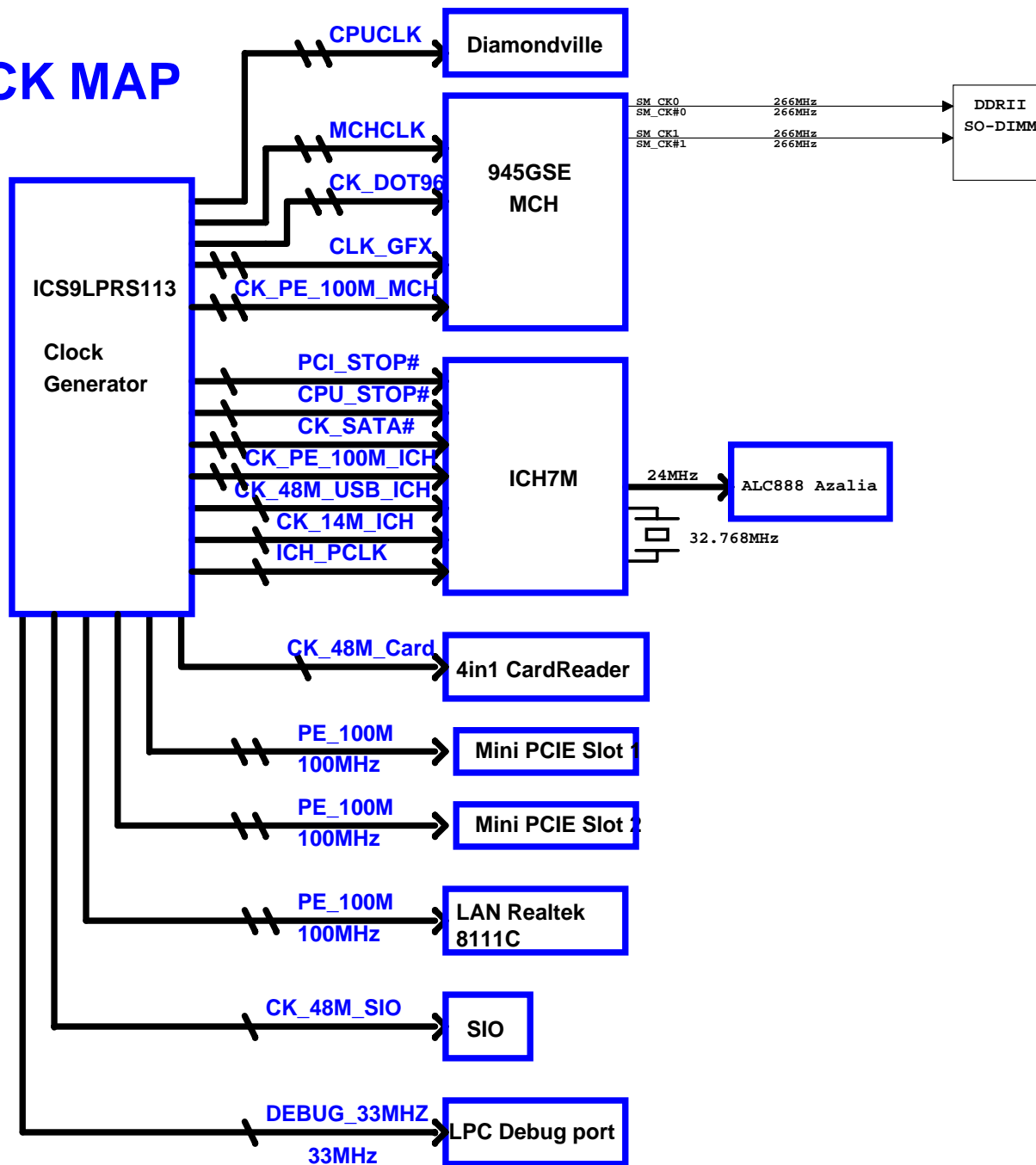


MICRO-STAR INT'L CO.,LTD

MS-7437

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Custom	POWER MAP	08
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CLOCK MAP



1	modify EC21 to 220u/2.5V for Cost	10/6
2	modify EC23 to 220u/2.5V for Cost	10/6
3	modify EC14,EC15,EC16 to 220u/2.5V for Cost	10/6
4	modify EC18 to 220u/2.5V for Cost	10/6
5	modify +3VRun to Vcc3	10/6
6	Add C728 for Lan conn	10/6
7	PS_ON# pull High 4.7K(R631) to VCC5_SB	10/6
8	Add BTB1,C193,C194,R310,SP1 for MDC	10/9
9	Add R302-R309 , Remove RN19,C129 for MDC	10/9
10	change USB1,USB2 to N53-04M0331-F02	10/13
11	change R296 to 10K ohm for BUZZER	10/13
12	NO Stuff R346 For Power Sequencing	10/13
13	Add R349 For Power Sequencing	10/13
14	Change PWRJACK1 to N32-1040901-H06	10/15
15	C282 , C283 change to 0.47u for POP Noise	10/15
16	R516,R613 Stuff	10/15
17	D-SUB change to BOX HEADER (JVGA1)	10/16
18	Add EC33 for Power team	10/17
19	Change Jack1,2 P/N for EMI	10/20
20	Change Mini PCIE Slot Main SOURCE to K06	10/20
21	Change LAN CONN	10/21
22	R338 change to 14K Ohm for POWER	10/27
23	R337 change to 9.09K Ohm for POWER	10/27
24	R95 change to 4.87K Ohm for POWER	10/27
25	R560 change to 68.1K Ohm and stuff for POWER	10/27
26	Add C195 , C196 , C197 , C198 for EMI	10/27
27	Add C199 for LAN EMI	10/28
28	Add C729,C730 for +12V (Power team)	10/29
29	NO Stuff EC24 For Cost down	10/31
30		

[illegible]