

Title	Page
Cover Sheet	1
Block Diagram	2
CLK Distribution, Power Sequence, Delivery	3,4,5
CPU-CLK/Control/MISC/PEG ,CPU-Memory	6,7,8,9,10,11,12
CPU-Power,CPU-GND	13,14
DDR4 DIMM 1,2 DDR4 DIMM 3,4 VREF	15,16,17,18,19
PCH-PCI/E/DMI/USB/CLK	20
PCH-SATA/HOST/FAN/GPIO	21
PCH-SMB/LPC/AUDIO/RTC/RST	22
PCH-POWER,GND/NVRAM	23,24,25
PCIE x16/x1/x16/x4/x16 Slot	26,27,28,29,30
TBT 1*5 header	31
LAN Killer E2205	32
M2_NGFF_S1	33
TPM	34
F_USB3.0 header	35
R_USB3.0 connector	36
F_USB2.0 header	37
R_USB2.0 connector	38
SATA port	39
CREATIVE Sound Core3D	40
NCT6683D-T	41
Fan control	42
VRD12.5 - PWM-ISL6376	43
(Dr.MOS) PHASE1~10	44
Vcore Decoupling Caps	45
DDR Power	46
PCH Core Power	47
ATX/F_Panel/LED	48
CPU XDP	49
Manual parts	50

Centauri

ATX

Ver:A00

CPU:

INTEL HSW-E LGA2011-3

System Chipset:

INTEL - Wellsbug

OnBoard Chipset:

HD Audio Codec:Creative Malcolm

LAN-Killer E2205 x1

eSIO: NCT6683D-T

Flash ROM: 64 Mb SPI Quad Read

Main Memory:

DDR4 (2133MHz) * 4 (Qual Channel) @1.2V

Expansion Slots:

PCI Express (X16) Slot * 3


PCIe(X1) Slot * 1

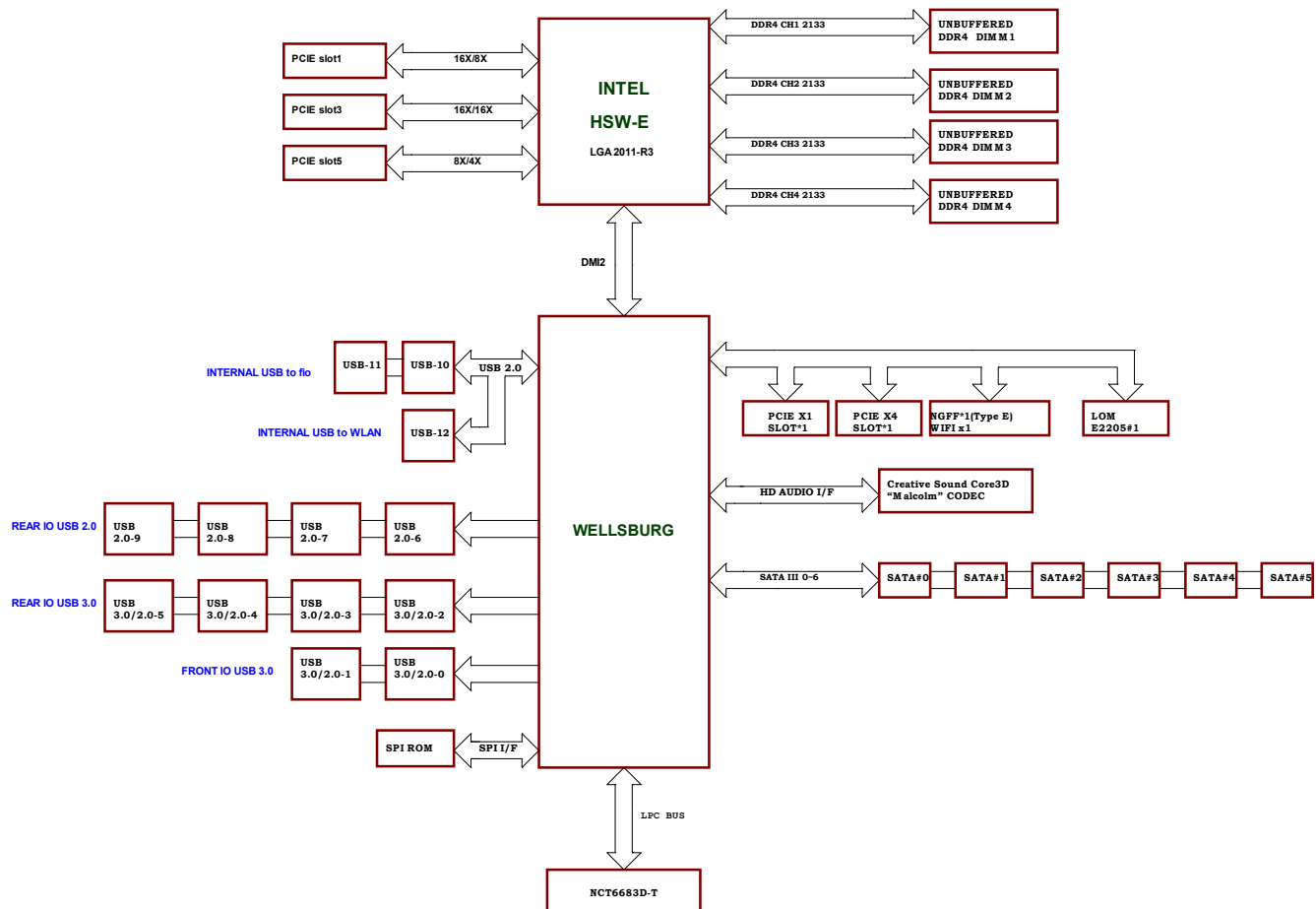
PCIe(X4) Slot * 1


NGFF_S1(WLAN) * 1

PWM:

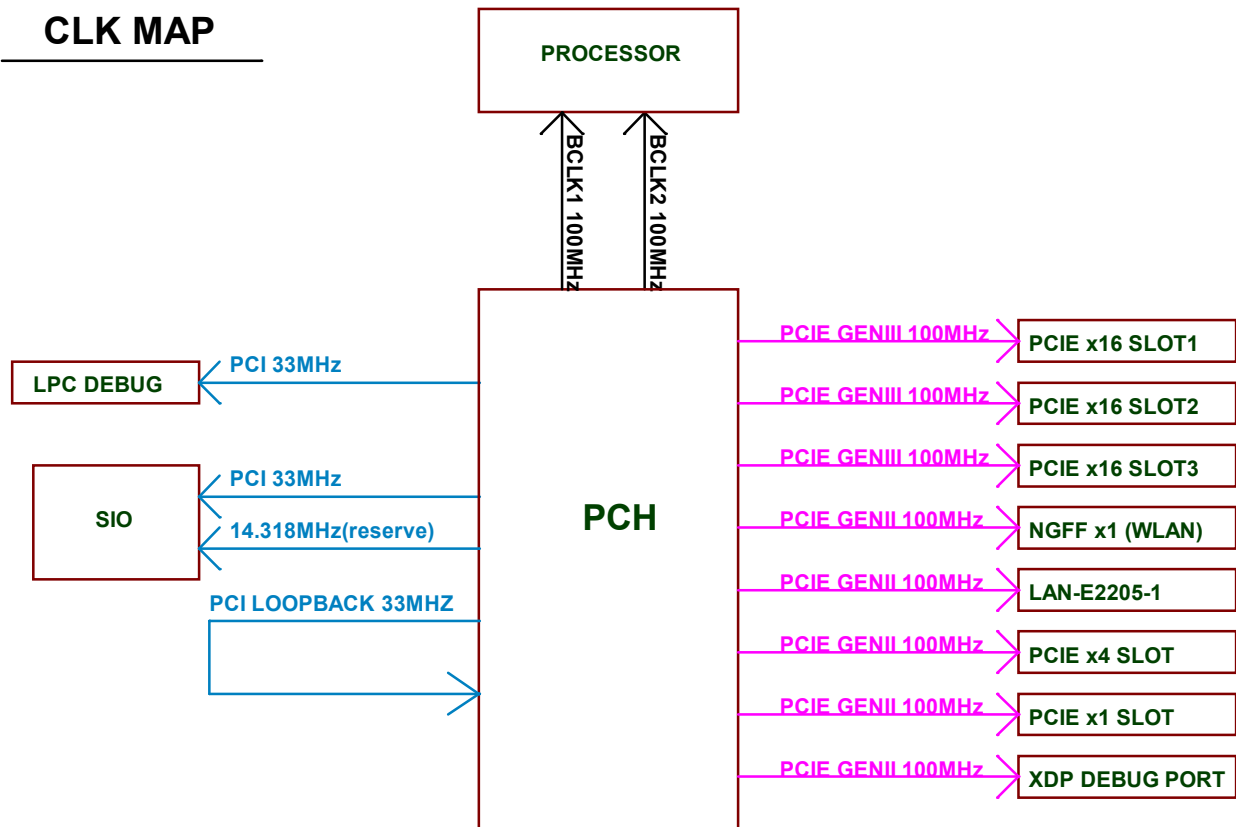
VRD12.5 - ISL6376 Extend to10-Phase Dr.MOS


 MICRO-START INT'L CO.,LTD.		
Title Cover Sheet		
Size	Document Number	Rev
	Centauri	A00
Date: Feb-06-2014 Sheet 1 of 50		



 MICRO-START INT'L CO., LTD.			
File: Block Diagram			
Size:	Document Number:	Rev: A00	
Date: Friday, June 06, 2014		Sheet: 2	of 50

CLK MAP



 MICRO-START INT'L CO.,LTD.			
Title Clock Map			
Size	Document Number		Rev
	Centauri		A00
Date:	Friday, June 06, 2014	Sheet	3 of 50

G3-->S5-->S0

3VSB

PCH_DPWROK

RSMRST#

PSIN#

PWRBTN#

SLP_S5#

SLP_S4#

SLP_S3#

PS_ON#

+12V/VCC5/VCC3

WBG_1P05

CPU_IO

PCH_1P5_PLL

VPP_2P5V

VCC_DDR

VCCP

VRM_PGD


MEM_PWRGD

H_PWRGD

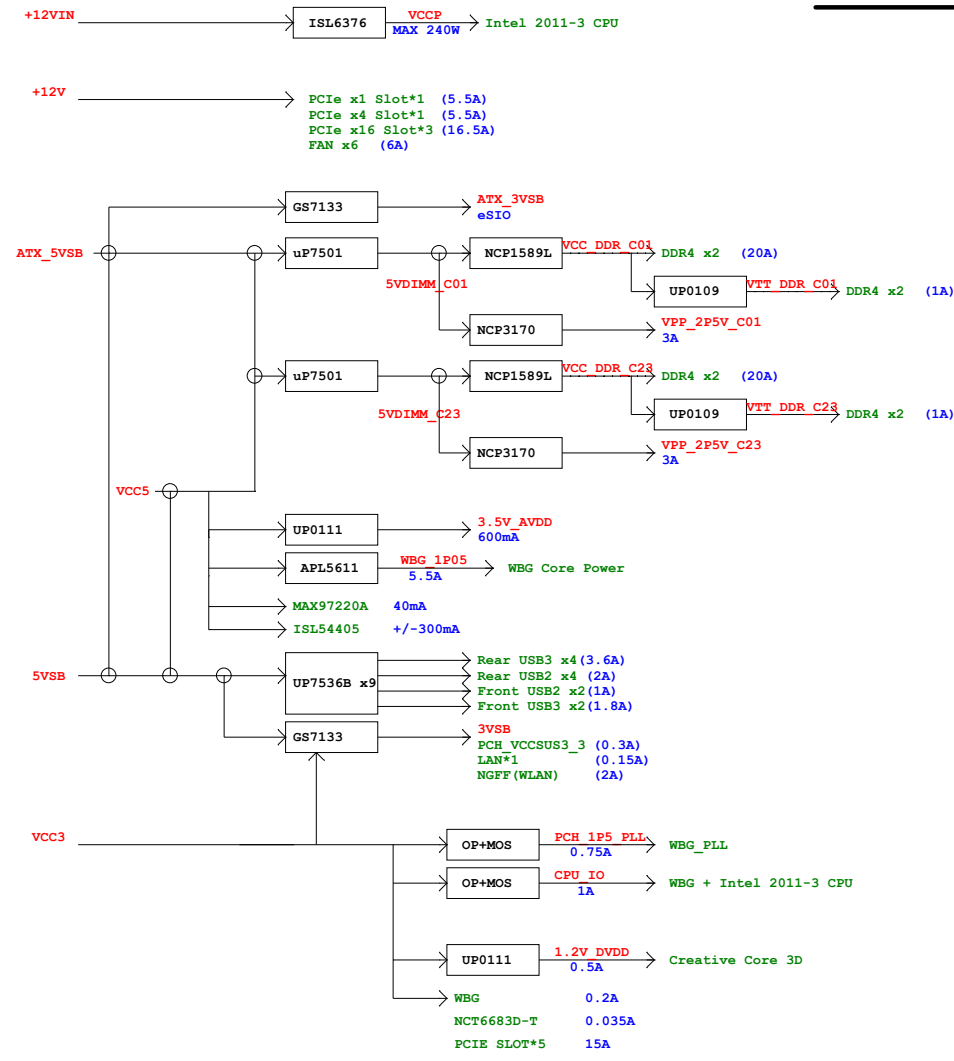
PWRGD_3V

PLTRST#

PLTRST_CPU#

 MICRO-START INT'L CO.,LTD.		
Power Sequence		
File	Document Number	Rev
	Centauri	A00
Date:	Friday, June 06, 2014	Sheet 4 of 50

Power Delivery

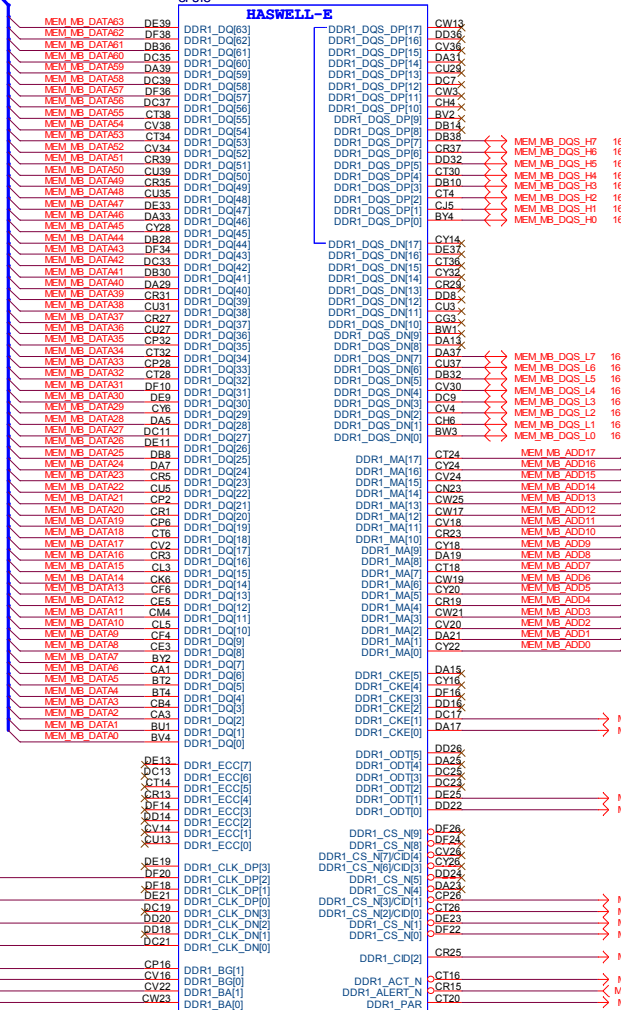


MSI Micro-Start Intl Co., Ltd.		
Power Delivery		
Size	Document Number	Rev
	Centauri	A00
Date	Edin June 08, 2014	Sheet 5 of 56

16 MEM_MB_DATA[63..0] ← MEM_MB_DATA[63..0]

CPUIC

HASWELL-E



ZF-SOCKET2011-RH-6



File		
HSW-E MEMORY 2		
Size	Document Number	Rev
	Centauri	A00
Date	Friday, June 06, 2014	Sheet 7 of 50

18 MEM_MD_DATA[63..0] ← MEM_MD_DATA[63..0]

CPU/E

HASWELL-E

MEM_MD_DATA63 AB6
MEM_MD_DATA62 AC3
MEM_MD_DATA61 V6
MEM_MD_DATA60 V6
MEM_MD_DATA59 AE5
MEM_MD_DATA58 AC5
MEM_MD_DATA57 V6
MEM_MD_DATA56 V4
MEM_MD_DATA55 AL1
MEM_MD_DATA54 AJ3
MEM_MD_DATA53 AE3
MEM_MD_DATA52 AG5
MEM_MD_DATA51 AL5
MEM_MD_DATA50 AL3
MEM_MD_DATA49 AG1
MEM_MD_DATA48 AG3
MEM_MD_DATA47 D6
MEM_MD_DATA46 D6
MEM_MD_DATA45 AG
MEM_MD_DATA44 C9
MEM_MD_DATA43 F8
MEM_MD_DATA42 ES
MEM_MD_DATA41 F8
MEM_MD_DATA40 F8
MEM_MD_DATA39 R3
MEM_MD_DATA38 K2
MEM_MD_DATA37 N3
MEM_MD_DATA36 P4
MEM_MD_DATA35 L1
MEM_MD_DATA34 J1
MEM_MD_DATA33 H4
MEM_MD_DATA32 K4
MEM_MD_DATA31 B24
MEM_MD_DATA30 C25
MEM_MD_DATA29 E29
MEM_MD_DATA28 G29
MEM_MD_DATA27 E24
MEM_MD_DATA26 F24
MEM_MD_DATA25 E27
MEM_MD_DATA24 F28
MEM_MD_DATA23 N61
MEM_MD_DATA22 L31
MEM_MD_DATA21 L35
MEM_MD_DATA20 L35
MEM_MD_DATA19 M30
MEM_MD_DATA18 K30
MEM_MD_DATA17 M34
MEM_MD_DATA16 K34
MEM_MD_DATA15 E33
MEM_MD_DATA14 D32
MEM_MD_DATA13 F35
MEM_MD_DATA12 F34
MEM_MD_DATA11 E31
MEM_MD_DATA10 G31
MEM_MD_DATA9 B34
MEM_MD_DATA8 A35
MEM_MD_DATA7 D33
MEM_MD_DATA6 K38
MEM_MD_DATA5 J39
MEM_MD_DATA4 C39
MEM_MD_DATA3 M38
MEM_MD_DATA2 L37
MEM_MD_DATA1 B38
MEM_MD_DATA0 D38

× K24
× M24
× M28
× K28
× J23
× L23
× L27
× L27

18 MEM_MD_CLK2_H ←
18 MEM_MD_CLK0_H ←
18 MEM_MD_CLK2_L ←
18 MEM_MD_CLK0_L ←

18 MEM_MD_BG1 ←
18 MEM_MD_BG0 ←
18 MEM_MD_BA1 ←
18 MEM_MD_BA0 ←

× A19
× B18
× B20
× A17
× C19
× D18
× D20
× G17
G21
K14
G13

DDR3_DQS_DP[17]
DDR3_DQS_DP[16]
DDR3_DQS_DP[15]
DDR3_DQS_DP[14]
DDR3_DQS_DP[13]
DDR3_DQS_DP[12]
DDR3_DQS_DP[11]
DDR3_DQS_DP[10]
DDR3_DQS_DP[9]
DDR3_DQS_DP[8]
DDR3_DQS_DP[7]
DDR3_DQS_DP[6]
DDR3_DQS_DP[5]
DDR3_DQS_DP[4]
DDR3_DQS_DP[3]
DDR3_DQS_DP[2]
DDR3_DQS_DP[1]
DDR3_DQS_DP[0]

DDR3_DQS_DN[17]
DDR3_DQS_DN[16]
DDR3_DQS_DN[15]
DDR3_DQS_DN[14]
DDR3_DQS_DN[13]
DDR3_DQS_DN[12]
DDR3_DQS_DN[11]
DDR3_DQS_DN[10]
DDR3_DQS_DN[9]
DDR3_DQS_DN[8]
DDR3_DQS_DN[7]
DDR3_DQS_DN[6]
DDR3_DQS_DN[5]
DDR3_DQS_DN[4]
DDR3_DQS_DN[3]
DDR3_DQS_DN[2]
DDR3_DQS_DN[1]
DDR3_DQS_DN[0]

DDR3_MA[17]
DDR3_MA[16]
DDR3_MA[15]
DDR3_MA[14]
DDR3_MA[13]
DDR3_MA[12]
DDR3_MA[11]
DDR3_MA[10]
DDR3_MA[9]
DDR3_MA[8]
DDR3_MA[7]
DDR3_MA[6]
DDR3_MA[5]
DDR3_MA[4]
DDR3_MA[3]
DDR3_MA[2]
DDR3_MA[1]
DDR3_MA[0]

DDR3_CKE[9]
DDR3_CKE[4]
DDR3_CKE[3]
DDR3_CKE[2]
DDR3_CKE[1]
DDR3_CKE[0]
DDR3_ODT[9]
DDR3_ODT[4]
DDR3_ODT[3]
DDR3_ODT[2]
DDR3_ODT[1]
DDR3_ODT[0]

DDR3_CS_N[9]
DDR3_CS_N[8]
DDR3_CS_N[7]CD[4]
DDR3_CS_N[6]CD[3]
DDR3_CS_N[5]
DDR3_CS_N[4]
DDR3_CS_N[3]CD[1]
DDR3_CS_N[2]CD[0]
DDR3_CS_N[1]
DDR3_CS_N[0]
DDR3_CID[2]
DDR3_ACT_N
DDR3_ALERT#
DDR3_PAR

M26
Y6
AH4
B6
M4
F26
J33
C35
F38
L25
AB4
AK2
E7
H2
E25
M32
B32
E37

K26
W5
AJ5
D8
L3
D26
L33
D24
H38
N25
AA5
AJ1
C7
G3
G25
K32
A33
C37

L11
J13
F12
K12
M12
M20
K20
L13
F20
G19
J19
F18
K18
J17
G17
F16
K16
G15

K22
B22
D22
A21
F22
E11
E13
D12
D14
A13
D16

B12
B14
A11
G11
E14
A15
H10
E10
C15
B16
J11
L21
M22
J15

MEM_MD_DQS_H7 18
MEM_MD_DQS_H6 18
MEM_MD_DQS_H5 18
MEM_MD_DQS_H4 18
MEM_MD_DQS_H3 18
MEM_MD_DQS_H2 18
MEM_MD_DQS_H1 18
MEM_MD_DQS_H0 18

MEM_MD_ADD[17..0] 18
MEM_MD_ADD[17..0] 18

MEM_MD_CKE1 18
MEM_MD_CKE0 18
MEM_MD_ODT1 18
MEM_MD_ODT0 18

MEM_MD_CS#3 18
MEM_MD_CS#2 18
MEM_MD_CS#1 18
MEM_MD_CS#0 18
MEM_MD_C2 18
MEM_MD_ACT# 18
MEM_MD_ALERT# 18
MEM_MD_PAR 18

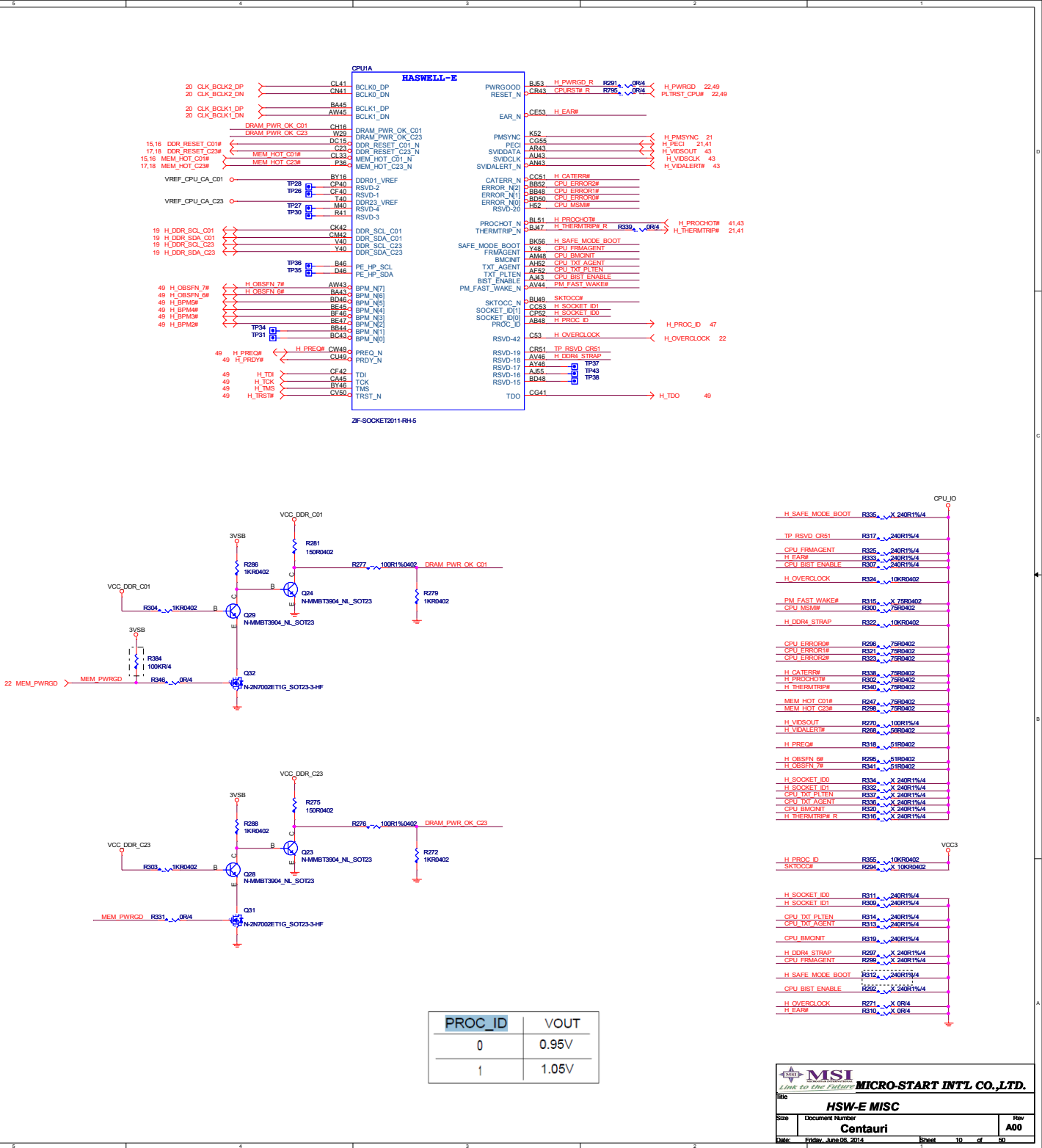
2F-SOCKET2011-RH-5

MSI
Link to the Future
MICRO-START INTL CO.,LTD.

File
HSW-E MEMORY 4

Size Document Number Rev
Centauri A00

Date: Friday, June 06, 2014 Sheet 9 of 50



CPU1 HASWELL-E			
BM17	QPI0_DRX_DP[19]	QPI0_DTX_DP[19]	CE49
BM48	QPI0_DRX_DP[18]	QPI0_DTX_DP[18]	CE51
BM49	QPI0_DRX_DP[17]	QPI0_DTX_DP[17]	CE52
BM49	QPI0_DRX_DP[16]	QPI0_DTX_DP[16]	CE53
BM50	QPI0_DRX_DP[15]	QPI0_DTX_DP[15]	CE54
BM51	QPI0_DRX_DP[14]	QPI0_DTX_DP[14]	CE55
BM52	QPI0_DRX_DP[13]	QPI0_DTX_DP[13]	CE56
BM53	QPI0_DRX_DP[12]	QPI0_DTX_DP[12]	CE57
BM54	QPI0_DRX_DP[11]	QPI0_DTX_DP[11]	CE58
BM55	QPI0_DRX_DP[10]	QPI0_DTX_DP[10]	CE59
BM56	QPI0_DRX_DP[9]	QPI0_DTX_DP[9]	CE60
BM57	QPI0_DRX_DP[8]	QPI0_DTX_DP[8]	CE61
BM58	QPI0_DRX_DP[7]	QPI0_DTX_DP[7]	CE62
BM59	QPI0_DRX_DP[6]	QPI0_DTX_DP[6]	CE63
BM60	QPI0_DRX_DP[5]	QPI0_DTX_DP[5]	CE64
BM61	QPI0_DRX_DP[4]	QPI0_DTX_DP[4]	CE65
BM62	QPI0_DRX_DP[3]	QPI0_DTX_DP[3]	CE66
BM63	QPI0_DRX_DP[2]	QPI0_DTX_DP[2]	CE67
BM64	QPI0_DRX_DP[1]	QPI0_DTX_DP[1]	CE68
BM65	QPI0_DRX_DP[0]	QPI0_DTX_DP[0]	CE69
BM67	QPI0_DRX_DN[19]	QPI0_DTX_DN[19]	CE49
BM68	QPI0_DRX_DN[18]	QPI0_DTX_DN[18]	CE51
BM69	QPI0_DRX_DN[17]	QPI0_DTX_DN[17]	CE52
BM70	QPI0_DRX_DN[16]	QPI0_DTX_DN[16]	CE53
BM71	QPI0_DRX_DN[15]	QPI0_DTX_DN[15]	CE54
BM72	QPI0_DRX_DN[14]	QPI0_DTX_DN[14]	CE55
BM73	QPI0_DRX_DN[13]	QPI0_DTX_DN[13]	CE56
BM74	QPI0_DRX_DN[12]	QPI0_DTX_DN[12]	CE57
BM75	QPI0_DRX_DN[11]	QPI0_DTX_DN[11]	CE58
BM76	QPI0_DRX_DN[10]	QPI0_DTX_DN[10]	CE59
BM77	QPI0_DRX_DN[9]	QPI0_DTX_DN[9]	CE60
BM78	QPI0_DRX_DN[8]	QPI0_DTX_DN[8]	CE61
BM79	QPI0_DRX_DN[7]	QPI0_DTX_DN[7]	CE62
BM80	QPI0_DRX_DN[6]	QPI0_DTX_DN[6]	CE63
BM81	QPI0_DRX_DN[5]	QPI0_DTX_DN[5]	CE64
BM82	QPI0_DRX_DN[4]	QPI0_DTX_DN[4]	CE65
BM83	QPI0_DRX_DN[3]	QPI0_DTX_DN[3]	CE66
BM84	QPI0_DRX_DN[2]	QPI0_DTX_DN[2]	CE67
BM85	QPI0_DRX_DN[1]	QPI0_DTX_DN[1]	CE68
BM86	QPI0_DRX_DN[0]	QPI0_DTX_DN[0]	CE69
BM88	QPI0_CLKRX_DP	QPI0_CLKTX_DP	CE44
BM89	QPI0_CLKRX_DN	QPI0_CLKTX_DN	CE45

ZIF-SOCKET2011-RH45

CPU1 HASWELL-E			
CE55	QPI1_DRX_DP[19]	QPI1_DTX_DP[19]	CE44
CE56	QPI1_DRX_DP[18]	QPI1_DTX_DP[18]	CE45
CE57	QPI1_DRX_DP[17]	QPI1_DTX_DP[17]	CE46
CE58	QPI1_DRX_DP[16]	QPI1_DTX_DP[16]	CE47
CE59	QPI1_DRX_DP[15]	QPI1_DTX_DP[15]	CE48
CE60	QPI1_DRX_DP[14]	QPI1_DTX_DP[14]	CE49
CE61	QPI1_DRX_DP[13]	QPI1_DTX_DP[13]	CE50
CE62	QPI1_DRX_DP[12]	QPI1_DTX_DP[12]	CE51
CE63	QPI1_DRX_DP[11]	QPI1_DTX_DP[11]	CE52
CE64	QPI1_DRX_DP[10]	QPI1_DTX_DP[10]	CE53
CE65	QPI1_DRX_DP[9]	QPI1_DTX_DP[9]	CE54
CE66	QPI1_DRX_DP[8]	QPI1_DTX_DP[8]	CE55
CE67	QPI1_DRX_DP[7]	QPI1_DTX_DP[7]	CE56
CE68	QPI1_DRX_DP[6]	QPI1_DTX_DP[6]	CE57
CE69	QPI1_DRX_DP[5]	QPI1_DTX_DP[5]	CE58
CE70	QPI1_DRX_DP[4]	QPI1_DTX_DP[4]	CE59
CE71	QPI1_DRX_DP[3]	QPI1_DTX_DP[3]	CE60
CE72	QPI1_DRX_DP[2]	QPI1_DTX_DP[2]	CE61
CE73	QPI1_DRX_DP[1]	QPI1_DTX_DP[1]	CE62
CE74	QPI1_DRX_DP[0]	QPI1_DTX_DP[0]	CE63
CE75	QPI1_DRX_DN[19]	QPI1_DTX_DN[19]	CE44
CE76	QPI1_DRX_DN[18]	QPI1_DTX_DN[18]	CE45
CE77	QPI1_DRX_DN[17]	QPI1_DTX_DN[17]	CE46
CE78	QPI1_DRX_DN[16]	QPI1_DTX_DN[16]	CE47
CE79	QPI1_DRX_DN[15]	QPI1_DTX_DN[15]	CE48
CE80	QPI1_DRX_DN[14]	QPI1_DTX_DN[14]	CE49
CE81	QPI1_DRX_DN[13]	QPI1_DTX_DN[13]	CE50
CE82	QPI1_DRX_DN[12]	QPI1_DTX_DN[12]	CE51
CE83	QPI1_DRX_DN[11]	QPI1_DTX_DN[11]	CE52
CE84	QPI1_DRX_DN[10]	QPI1_DTX_DN[10]	CE53
CE85	QPI1_DRX_DN[9]	QPI1_DTX_DN[9]	CE54
CE86	QPI1_DRX_DN[8]	QPI1_DTX_DN[8]	CE55
CE87	QPI1_DRX_DN[7]	QPI1_DTX_DN[7]	CE56
CE88	QPI1_DRX_DN[6]	QPI1_DTX_DN[6]	CE57
CE89	QPI1_DRX_DN[5]	QPI1_DTX_DN[5]	CE58
CE90	QPI1_DRX_DN[4]	QPI1_DTX_DN[4]	CE59
CE91	QPI1_DRX_DN[3]	QPI1_DTX_DN[3]	CE60
CE92	QPI1_DRX_DN[2]	QPI1_DTX_DN[2]	CE61
CE93	QPI1_DRX_DN[1]	QPI1_DTX_DN[1]	CE62
CE94	QPI1_DRX_DN[0]	QPI1_DTX_DN[0]	CE63
CE95	QPI1_CLKRX_DP	QPI1_CLKTX_DP	CE44
CE96	QPI1_CLKRX_DN	QPI1_CLKTX_DN	CE45

ZIF-SOCKET2011-RH45

CPU1 HASWELL-E			
AR55	RSVD-48	RSVD-54	BM46
AR56	RSVD-47	RSVD-53	BM47
AR57	RSVD-46	RSVD-52	BM48
AR58	RSVD-45	RSVD-51	BM49
AR59	RSVD-44	RSVD-50	BM50
AR60	RSVD-43	RSVD-49	BM51
DE51	RSVD-41	TEST[1]	BM52
DE52	RSVD-40	TEST[0]	BM53
DE53	RSVD-39	TEST[2]	BM54
DE54	RSVD-38	TEST[3]	BM55
DE55	RSVD-37	TEST[4]	BM56
DE56	RSVD-36	TEST[5]	BM57
DE57	RSVD-35	TEST[6]	BM58
DE58	RSVD-34	TEST[7]	BM59
DE59	RSVD-33	TEST[8]	BM60
DE60	RSVD-32	TEST[9]	BM61
DE61	RSVD-31	TEST[10]	BM62
DE62	RSVD-30	TEST[11]	BM63
DE63	RSVD-29	TEST[12]	BM64
DE64	RSVD-28	TEST[13]	BM65
DE65	RSVD-27	TEST[14]	BM66
DE66	RSVD-26	TEST[15]	BM67
DE67	RSVD-25	TEST[16]	BM68
DE68	RSVD-24	TEST[17]	BM69
DE69	RSVD-23	TEST[18]	BM70
DE70	RSVD-22	TEST[19]	BM71
DE71	RSVD-21	TEST[20]	BM72
DE72	RSVD-20	TEST[21]	BM73
DE73	RSVD-19	TEST[22]	BM74
DE74	RSVD-18	TEST[23]	BM75
DE75	RSVD-17	TEST[24]	BM76
DE76	RSVD-16	TEST[25]	BM77
DE77	RSVD-15	TEST[26]	BM78
DE78	RSVD-14	TEST[27]	BM79
DE79	RSVD-13	TEST[28]	BM80
DE80	RSVD-12	TEST[29]	BM81
DE81	RSVD-11	TEST[30]	BM82
DE82	RSVD-10	TEST[31]	BM83
DE83	RSVD-9	TEST[32]	BM84
DE84	RSVD-8	TEST[33]	BM85
DE85	RSVD-7	TEST[34]	BM86
DE86	RSVD-6	TEST[35]	BM87
DE87	RSVD-5	TEST[36]	BM88
DE88	RSVD-4	TEST[37]	BM89
DE89	RSVD-3	TEST[38]	BM90
DE90	RSVD-2	TEST[39]	BM91
DE91	RSVD-1	TEST[40]	BM92
DE92	RSVD-0	TEST[41]	BM93
DE93	RSVD-68	TEST[42]	BM94
DE94	RSVD-67	TEST[43]	BM95
DE95	RSVD-66	TEST[44]	BM96
DE96	RSVD-65	TEST[45]	BM97
DE97	RSVD-64	TEST[46]	BM98
DE98	RSVD-63	TEST[47]	BM99
DE99	RSVD-62	TEST[48]	BM100
DE100	RSVD-61	TEST[49]	BM101
DE101	RSVD-60	TEST[50]	BM102
DE102	RSVD-59	TEST[51]	BM103
DE103	RSVD-58	TEST[52]	BM104
DE104	RSVD-57	TEST[53]	BM105
DE105	RSVD-56	TEST[54]	BM106
DE106	RSVD-55	TEST[55]	BM107
DE107	RSVD-54	TEST[56]	BM108
DE108	RSVD-53	TEST[57]	BM109
DE109	RSVD-52	TEST[58]	BM110
DE110	RSVD-51	TEST[59]	BM111
DE111	RSVD-50	TEST[60]	BM112
DE112	RSVD-49	TEST[61]	BM113
DE113	RSVD-48	TEST[62]	BM114
DE114	RSVD-47	TEST[63]	BM115
DE115	RSVD-46	TEST[64]	BM116
DE116	RSVD-45	TEST[65]	BM117
DE117	RSVD-44	TEST[66]	BM118
DE118	RSVD-43	TEST[67]	BM119
DE119	RSVD-42	TEST[68]	BM120
DE120	RSVD-41	TEST[69]	BM121
DE121	RSVD-40	TEST[70]	BM122
DE122	RSVD-39	TEST[71]	BM123
DE123	RSVD-38	TEST[72]	BM124
DE124	RSVD-37	TEST[73]	BM125
DE125	RSVD-36	TEST[74]	BM126
DE126	RSVD-35	TEST[75]	BM127
DE127	RSVD-34	TEST[76]	BM128
DE128	RSVD-33	TEST[77]	BM129
DE129	RSVD-32	TEST[78]	BM130
DE130	RSVD-31	TEST[79]	BM131
DE131	RSVD-30	TEST[80]	BM132
DE132	RSVD-29	TEST[81]	BM133
DE133	RSVD-28	TEST[82]	BM134
DE134	RSVD-27	TEST[83]	BM135
DE135	RSVD-26	TEST[84]	BM136
DE136	RSVD-25	TEST[85]	BM137
DE137	RSVD-24	TEST[86]	BM138
DE138	RSVD-23	TEST[87]	BM139
DE139	RSVD-22	TEST[88]	BM140
DE140	RSVD-21	TEST[89]	BM141
DE141	RSVD-20	TEST[90]	BM142
DE142	RSVD-19	TEST[91]	BM143
DE143	RSVD-18	TEST[92]	BM144
DE144	RSVD-17	TEST[93]	BM145
DE145	RSVD-16	TEST[94]	BM146
DE146	RSVD-15	TEST[95]	BM147
DE147	RSVD-14	TEST[96]	BM148
DE148	RSVD-13	TEST[97]	BM149
DE149	RSVD-12	TEST[98]	BM150
DE150	RSVD-11	TEST[99]	BM151
DE151	RSVD-10	TEST[100]	BM152
DE152	RSVD-9	TEST[101]	BM153
DE153	RSVD-8	TEST[102]	BM154
DE154	RSVD-7	TEST[103]	BM155
DE155	RSVD-6	TEST[104]	BM156
DE156	RSVD-5	TEST[105]	BM157
DE157	RSVD-4	TEST[106]	BM158
DE158	RSVD-3	TEST[107]	BM159
DE159	RSVD-2	TEST[108]	BM160
DE160	RSVD-1	TEST[109]	BM161
DE161	RSVD-0	TEST[110]	BM162
DE162	RSVD-68	TEST[111]	BM163
DE163	RSVD-67	TEST[112]	BM164
DE164	RSVD-66	TEST[113]	BM165
DE165	RSVD-65	TEST[114]	BM166
DE166	RSVD-64	TEST[115]	BM167
DE167	RSVD-63	TEST[116]	BM168
DE168	RSVD-62	TEST[117]	BM169
DE169	RSVD-61	TEST[118]	BM170
DE170	RSVD-60	TEST[119]	BM171
DE171	RSVD-59	TEST[120]	BM172
DE172	RSVD-58	TEST[121]	BM173
DE173	RSVD-57	TEST[122]	BM174
DE174	RSVD-56	TEST[123]	BM175
DE175	RSVD-55	TEST[124]	BM176
DE176	RSVD-54	TEST[125]	BM177
DE177	RSVD-53	TEST[126]	BM178
DE178	RSVD-52	TEST[127]	BM179
DE179	RSVD-51	TEST[128]	BM180
DE180	RSVD-50	TEST[129]	BM181
DE181	RSVD-49	TEST[130]	BM182
DE182	RSVD-48	TEST[131]	BM183
DE183	RSVD-47	TEST[132]	BM184
DE184	RSVD-46	TEST[133]	BM185
DE185	RSVD-45	TEST[134]	BM186
DE186	RSVD-44	TEST[135]	BM187
DE187	RSVD-43	TEST[136]	BM188
DE188	RSVD-42	TEST[137]	BM189
DE189	RSVD-41	TEST[138]	BM190
DE190	RSVD-40	TEST[139]	BM191
DE191	RSVD-39	TEST[140]	BM192
DE192	RSVD-38	TEST[141]	BM193
DE193	RSVD-37	TEST[142]	BM194
DE194	RSVD-36	TEST[143]	BM195
DE195	RSVD-35	TEST[144]	BM196
DE196	RSVD-34	TEST[145]	BM197
DE197	RSVD-33	TEST[146]	BM198
DE198	RSVD-32	TEST[147]	BM199
DE199	RSVD-31	TEST[148]	BM200
DE200	RSVD-30	TEST[149]	BM201
DE201	RSVD-29	TEST[150]	BM202
DE202	RSVD-28	TEST[151]	BM203
DE203	RSVD-27	TEST[152]	BM204
DE204	RSVD-26	TEST[153]	BM205
DE205	RSVD-25	TEST[154]	BM206
DE206	RSVD-24	TEST[155]	BM207
DE207	RSVD-23	TEST[156]	BM208
DE208	RSVD-22	TEST[157]	BM209
DE209	RSVD-21	TEST[158]	BM210
DE210	RSVD-20	TEST[159]	BM211
DE211	RSVD-19	TEST[160]	BM212
DE212	RSVD-18	TEST[161]	BM213
DE213	RSVD-17	TEST[162]	BM214
DE214	RSVD-16	TEST[163]	BM215
DE215	RSVD-15	TEST[164]	BM216
DE216	RSVD-14	TEST[165]	BM217
DE217	RSVD-13	TEST[166]	BM218
DE218	RSVD-12	TEST[167]	BM219
DE219	RSVD-11	TEST[168]	BM220
DE220	RSVD-10	TEST[169]	BM221
DE221	RSVD-9	TEST[170]	BM222
DE222	RSVD-8	TEST[171]	BM223
DE223	RSVD-7	TEST[172]	BM224
DE224	RSVD-6	TEST[173]	BM225
DE225	RSVD-5	TEST[174]	BM226
DE226	RSVD-4	TEST[175]	BM227
DE227	RSVD-3	TEST[176]	BM228
DE228	RSVD-2	TEST[177]	BM229
DE229	RSVD-1	TEST[178]	BM230
DE230	RSVD-0	TEST[179]	BM231
DE231	RSVD-68	TEST[180]	BM232
DE232	RSVD-67	TEST[181]	BM233
DE233	RSVD-66	TEST[182]	BM234
DE234	RSVD-65	TEST[183]	BM235
DE235	RSVD-64	TEST[184]	BM236
DE236	RSVD-63	TEST[185]	BM237
DE237	RSVD-62	TEST[186]	BM238
DE238	RSVD-61	TEST[187]	BM239
DE239	RSVD-60	TEST[188]	BM240
DE240	RSVD-59	TEST[189]	BM241
DE241	RSVD-58	TEST[190]	BM242
DE242	RSVD-57	TEST[191]	BM243
DE243	RSVD-56	TEST[192]	BM244
DE244	RSVD-55	TEST[193]	BM245
DE245	RSVD-54	TEST[194]	BM246
DE246	RSVD-53	TEST[195]	BM247
DE247	RSVD-52	TEST[196]	BM248
DE248	RSVD-51	TEST[197]	BM249
DE249	RSVD-50	TEST[198]	BM250
DE250	RSVD-49	TEST[199]	BM251
DE251	RSVD-48	TEST[200]	BM252
DE252	RSVD-47	TEST[201]	BM253
DE253	RSVD-46	TEST[202]	BM254
DE254	RSVD-45	TEST[203]	BM255
DE255	RSVD-44	TEST[204]	BM256
DE256	RSVD-43	TEST[205]	BM257
DE257	RSVD-42	TEST[206]	BM258
DE258	RSVD-41	TEST[207]	BM259
DE259	RSVD-40	TEST[208]	BM260
DE260	RSVD-39	TEST[209]	BM261
DE261	RSVD-38	TEST[210]	BM262
DE262	RSVD-37	TEST[211]	BM263
DE263	RSVD-36	TEST[212]	BM264
DE264	RSVD-35	TEST[213]	BM265
DE265	RSVD-34	TEST[214]	BM266
DE266	RSVD-33	TEST[215]	BM267
DE267	RSVD-32	TEST[216]	BM268
DE268	RSVD-31	TEST[217]	BM269
DE269	RSVD-30	TEST[218]	BM270
DE270	RSVD-29	TEST[219]	BM271
DE271	RSVD-28	TEST[220]	BM272
DE272	RSVD-27	TEST[221]	BM273
DE273	RSVD-26	TEST[222]	BM274
DE274	RSVD-25	TEST[223]	BM275
DE275	RSVD-24	TEST[224]	BM276
DE276	RSVD-23	TEST[225]	BM277
DE277	RSVD-22	TEST[226]	BM278
DE278	RSVD-21	TEST[227]	BM279
DE279	RSVD-20	TEST[228]	BM280
DE280	RSVD-19	TEST[229]	BM281
DE281	RSVD-18	TEST[230]	BM282
DE282	RSVD-17	TEST[231]	BM283
DE283	RSVD-16	TEST[232]	BM284
DE284	RSVD-15	TEST[233]	BM285
DE285	RSVD-14	TEST[234]	BM286
DE286	RSVD-13	TEST[235]	BM287
DE287	RSVD-12	TEST[236]	BM288
DE288	RSVD-11	TEST[237]	BM289
DE289	RSVD-10	TEST[238]	BM290
DE290	RSVD-9	TEST[239]	BM291
DE291	RSVD-8	TEST[240]	BM292
DE292	RSVD-7	TEST[241]	BM293
DE293	RSVD-6	TEST[242]	BM294
DE294	RSVD-5	TEST[243]	BM295
DE295	RSVD-4	TEST[244]	BM296
DE296	RSVD-3	TEST[245]	BM297
DE297	RSVD-2	TEST[246]	BM298
DE298	RSVD-1	TEST[247]	BM299
DE299	RSVD-0	TEST[248]	BM300
DE300	RSVD-68	TEST[249]	BM301
DE301	RSVD-67	TEST[250]	BM302
DE302	RSVD-66	TEST[251]	BM303
DE303	RSVD-65	TEST[252]	BM304
DE304	RSVD-64	TEST[253]	BM305
DE305	RSVD-63	TEST[254]	BM306
DE306	RSVD-62	TEST[255]	BM307
DE307	RSVD-61	TEST[256]	BM308
DE308	RSVD-60	TEST[257]	BM309
DE309	RSVD-59	TEST[258]	BM310
DE310	RSVD-58	TEST[259]	BM311
DE311	RSVD-57	TEST[260]	BM312
DE312	RSVD-56	TEST[261]	BM313
DE313	RSVD-55	TEST[262]	BM314
DE314	RSVD-54	TEST[263]	BM315
DE315	RSVD-53	TEST[264]	BM316
DE316	RSVD-52	TEST[265]	BM317
DE317	RSVD-51	TEST[266]	BM318
DE318	RSVD-50	TEST[267]	BM319
DE319	RSVD-49	TEST[268]	BM320
DE320	RSVD-48	TEST[269]	BM321
DE321	RSVD-47	TEST[270]	BM322
DE322	RSVD-46	TEST[271]	BM323
DE323	RSVD-45	TEST[272]	BM324
DE324	RSVD-44	TEST[273]	BM325
DE325	RSVD-43	TEST[274]	BM326
DE326	RSVD-42	TEST[275]	BM327
DE327	RSVD-41	TEST[276]	BM328
DE328	RSVD-40	TEST[277]	BM329
DE329	RSVD-39	TEST[278]	BM330
DE330	RSVD-38	TEST[279]	BM331
DE331	RSVD-37	TEST[280]	BM332
DE332	RSVD-36	TEST[281]	BM333
DE333	RSVD-35	TEST[282]	BM334
DE334	RSVD-34	TEST[283]	BM335
DE335	RSVD-33	TEST[284]	BM336
DE336	RSVD-32	TEST[285]	BM337
DE337	RSVD-31	TEST[286]	BM338
DE338	RSVD-30	TEST[287]	BM339
DE339	RSVD-29	TEST[288]	BM340
DE340	RSVD-28	TEST[289]	BM341
DE341	RSVD-27	TEST[290]	BM342
DE342	RSVD-26	TEST[291]	BM343
DE343	RSVD-25	TEST[292]	BM344
DE344	RSVD-24	TEST[293]	BM345
DE345	RSVD-23		

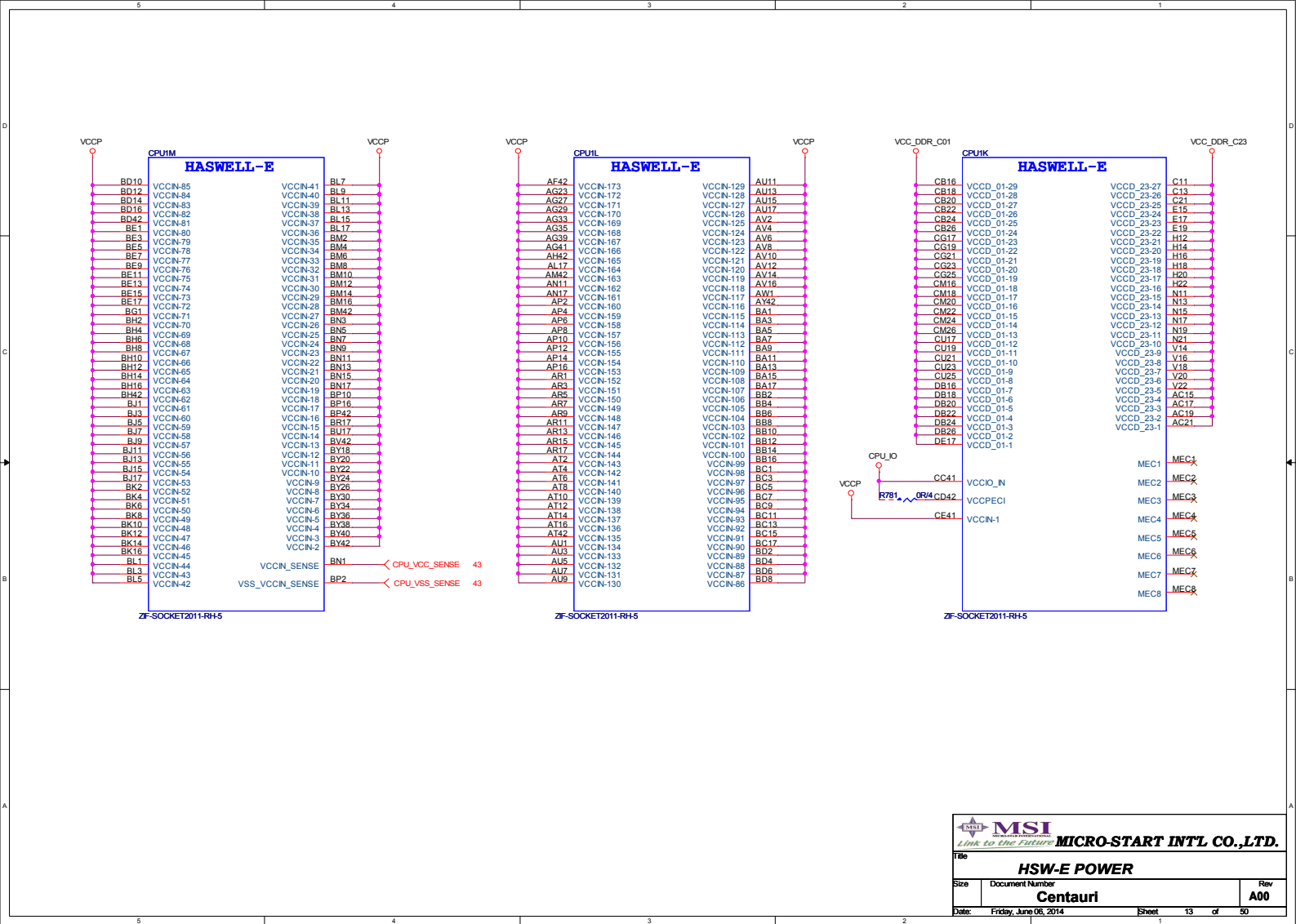
CPUIF									
HASWELL-E									
20	DMI_TX3	C307	C011u1604002	DM TX3	D42	DMI_TX_DP[3]	E47	DMI_RX3	20
20	DMI_TX2	C305	C011u1604002	DM TX2	E43	DMI_TX_DP[2]	D48	DMI_RX2	20
20	DMI_TX1	C333	C011u1604002	DM TX1	D44	DMI_TX_DP[1]	E49	DMI_RX1	20
20	DMI_TX0	C331	C011u1604002	DM TX0	E45	DMI_TX_DP[0]	D50	DMI_RX0	20
20	DMI_TX0M	C336	C011u1604002	DM TX0M	B42	DMI_TX_DN[3]	C47	DMI_RX0M	20
20	DMI_TX0P	C336	C011u1604002	DM TX0P	C43	DMI_TX_DN[2]	B48	DMI_RX0P	20
20	DMI_TX0H	C334	C011u1604002	DM TX0H	B44	DMI_TX_DN[1]	C49	DMI_RX0H	20
20	DMI_TX0L	C332	C011u1604002	DM TX0L	C45	DMI_TX_DN[0]	B50	DMI_RX0L	20
30	EXP_C_TXP_7	L48		PE1B_TX_DP[7]		PE1B_RX_DP[7]	M56	EXP_C_RXP_7	30
30	EXP_C_TXP_6	K46		PE1B_TX_DP[6]		PE1B_RX_DP[6]	L57	EXP_C_RXP_6	30
30	EXP_C_TXP_5	L47		PE1B_TX_DP[5]		PE1B_RX_DP[5]	M54	EXP_C_RXP_5	30
30	EXP_C_TXP_4	K46		PE1B_TX_DP[4]		PE1B_RX_DP[4]	L53	EXP_C_RXP_4	30
30	EXP_C_TXN_7	J49		PE1B_RX_DN[7]		PE1B_RX_DN[7]	K56	EXP_C_RXN_7	30
30	EXP_C_TXN_6	H46		PE1B_TX_DN[6]		PE1B_RX_DN[6]	J57	EXP_C_RXN_6	30
30	EXP_C_TXN_5	J47		PE1B_TX_DN[5]		PE1B_RX_DN[5]	K54	EXP_C_RXN_5	30
30	EXP_C_TXN_4	H46		PE1B_TX_DN[4]		PE1B_RX_DN[4]	J53	EXP_C_RXN_4	30
30	EXP_C_TXP_3	L45		PE1A_TX_DP[3]		PE1A_RX_DP[3]	G55	EXP_C_RXP_3	30
30	EXP_C_TXP_2	L43		PE1A_TX_DP[2]		PE1A_RX_DP[2]	F52	EXP_C_RXP_2	30
30	EXP_C_TXP_1	K42		PE1A_TX_DP[1]		PE1A_RX_DP[1]	F51	EXP_C_RXP_1	30
30	EXP_C_TXP_0	K42		PE1A_TX_DP[0]		PE1A_RX_DP[0]	F51	EXP_C_RXP_0	30
30	EXP_C_TXN_3	J45		PE1A_TX_DN[3]		PE1A_RX_DN[3]	F55	EXP_C_RXN_3	30
30	EXP_C_TXN_2	H44		PE1A_TX_DN[2]		PE1A_RX_DN[2]	D52	EXP_C_RXN_2	30
30	EXP_C_TXN_1	J43		PE1A_TX_DN[1]		PE1A_RX_DN[1]	D52	EXP_C_RXN_1	30
30	EXP_C_TXN_0	H42		PE1A_TX_DN[0]		PE1A_RX_DN[0]	C51	EXP_C_RXN_0	30
26	EXP_A_TXP_15	BA47		PE2D_TX_DP[15]		PE2D_RX_DP[15]	B656	EXP_A_RXP_15	26
26	EXP_A_TXP_14	AY48		PE2D_TX_DP[14]		PE2D_RX_DP[14]	BA57	EXP_A_RXP_14	26
26	EXP_A_TXP_13	BA49		PE2D_TX_DP[13]		PE2D_RX_DP[13]	AT56	EXP_A_RXP_13	26
26	EXP_A_TXP_12	AY50		PE2D_TX_DP[12]		PE2D_RX_DP[12]	AY58	EXP_A_RXP_12	26
26	EXP_A_TXN_15	AW47		PE2D_TX_DN[15]		PE2D_RX_DN[15]	AY56	EXP_A_RXN_15	26
26	EXP_A_TXN_14	AY48		PE2D_TX_DN[14]		PE2D_RX_DN[14]	AY58	EXP_A_RXN_14	26
26	EXP_A_TXN_13	AW49		PE2D_TX_DN[13]		PE2D_RX_DN[13]	AY56	EXP_A_RXN_13	26
26	EXP_A_TXN_12	AY50		PE2D_TX_DN[12]		PE2D_RX_DN[12]	AT58	EXP_A_RXN_12	26
26	EXP_A_TXP_11	BA51		PE2C_TX_DP[11]		PE2C_RX_DP[11]	AL57	EXP_A_RXP_11	26
26	EXP_A_TXP_10	BAS4		PE2C_TX_DP[10]		PE2C_RX_DP[10]	AL57	EXP_A_RXP_10	26
26	EXP_A_TXP_9	BAS3		PE2C_TX_DP[9]		PE2C_RX_DP[9]	AK56	EXP_A_RXP_9	26
26	EXP_A_TXP_8	AY52		PE2C_TX_DP[8]		PE2C_RX_DP[8]	AK56	EXP_A_RXP_8	26
26	EXP_A_TXN_11	AW51		PE2C_TX_DN[11]		PE2C_RX_DN[11]	AR57	EXP_A_RXN_11	26
26	EXP_A_TXN_10	AY54		PE2C_TX_DN[10]		PE2C_RX_DN[10]	AR57	EXP_A_RXN_10	26
26	EXP_A_TXN_9	AR53		PE2C_TX_DN[9]		PE2C_RX_DN[9]	AR56	EXP_A_RXN_9	26
26	EXP_A_TXN_8	AY52		PE2C_TX_DN[8]		PE2C_RX_DN[8]	AR56	EXP_A_RXN_8	26
26	EXP_A_TXP_7	AT54		PE2B_TX_DP[7]		PE2B_RX_DP[7]	AF58	EXP_A_RXP_7	26
26	EXP_A_TXP_6	AR53		PE2B_TX_DP[6]		PE2B_RX_DP[6]	AE55	EXP_A_RXP_6	26
26	EXP_A_TXP_5	AK54		PE2B_TX_DP[5]		PE2B_RX_DP[5]	AE54	EXP_A_RXP_5	26
26	EXP_A_TXP_4	AE53		PE2B_TX_DP[4]		PE2B_RX_DP[4]	AE54	EXP_A_RXP_4	26
26	EXP_A_TXN_7	AP54		PE2B_TX_DN[7]		PE2B_RX_DN[7]	AE57	EXP_A_RXN_7	26
26	EXP_A_TXN_6	AN53		PE2B_TX_DN[6]		PE2B_RX_DN[6]	AC55	EXP_A_RXN_6	26
26	EXP_A_TXN_5	AP54		PE2B_TX_DN[5]		PE2B_RX_DN[5]	AE54	EXP_A_RXN_5	26
26	EXP_A_TXN_4	AE53		PE2B_TX_DN[4]		PE2B_RX_DN[4]	AE54	EXP_A_RXN_4	26
26	EXP_A_TXP_3	AP52		PE2A_TX_DP[3]		PE2A_RX_DP[3]	W55	EXP_A_RXP_3	26
26	EXP_A_TXP_2	AR51		PE2A_TX_DP[2]		PE2A_RX_DP[2]	V56	EXP_A_RXP_2	26
26	EXP_A_TXP_1	AP50		PE2A_TX_DP[1]		PE2A_RX_DP[1]	V54	EXP_A_RXP_1	26
26	EXP_A_TXP_0	AR49		PE2A_TX_DP[0]		PE2A_RX_DP[0]	N55	EXP_A_RXP_0	26
26	EXP_A_TXN_3	AM52		PE2A_TX_DN[3]		PE2A_RX_DN[3]	W55	EXP_A_RXN_3	26
26	EXP_A_TXN_2	AN51		PE2A_TX_DN[2]		PE2A_RX_DN[2]	T56	EXP_A_RXN_2	26
26	EXP_A_TXN_1	AM50		PE2A_TX_DN[1]		PE2A_RX_DN[1]	T54	EXP_A_RXN_1	26
26	EXP_A_TXN_0	AM50		PE2A_TX_DN[0]		PE2A_RX_DN[0]	AE55	EXP_A_RXN_0	26

ZIF-SOCKET2011-RH-5

CPUIG									
HASWELL-E									
28	EXP_B_TXP_15	P44		PE3D_TX_DP[15]		PE3D_RX_DP[15]	AR45	EXP_B_RXP_15	28
28	EXP_B_TXP_14	AA43		PE3D_TX_DP[14]		PE3D_RX_DP[14]	AP46	EXP_B_RXP_14	28
28	EXP_B_TXP_13	AB44		PE3D_TX_DP[13]		PE3D_RX_DP[13]	AR47	EXP_B_RXP_13	28
28	EXP_B_TXP_12	AC45		PE3D_TX_DP[12]		PE3D_RX_DP[12]	AR47	EXP_B_RXP_12	28
28	EXP_B_TXN_15	T44		PE3D_TX_DN[15]		PE3D_RX_DN[15]	AN45	EXP_B_RXN_15	28
28	EXP_B_TXN_14	AC43		PE3D_TX_DN[14]		PE3D_RX_DN[14]	AM46	EXP_B_RXN_14	28
28	EXP_B_TXN_13	Y44		PE3D_TX_DN[13]		PE3D_RX_DN[13]	AM47	EXP_B_RXN_13	28
28	EXP_B_TXN_12	AA45		PE3D_TX_DN[12]		PE3D_RX_DN[12]	AG47	EXP_B_RXN_12	28
28	EXP_B_TXP_11	AB46		PE3C_TX_DP[11]		PE3C_RX_DP[11]	AR49	EXP_B_RXP_11	28
28	EXP_B_TXP_10	AC47		PE3C_TX_DP[10]		PE3C_RX_DP[10]	AR50	EXP_B_RXP_10	28
28	EXP_B_TXP_9	U45		PE3C_TX_DP[9]		PE3C_RX_DP[9]	AR51	EXP_B_RXP_9	28
28	EXP_B_TXP_8	T46		PE3C_TX_DP[8]		PE3C_RX_DP[8]	AR48	EXP_B_RXP_8	28
28	EXP_B_TXN_11	Y46		PE3C_TX_DN[11]		PE3C_RX_DN[11]	AG49	EXP_B_RXN_11	28
28	EXP_B_TXN_10	AA47		PE3C_TX_DN[10]		PE3C_RX_DN[10]	AE50	EXP_B_RXN_10	28
28	EXP_B_TXN_9	R46		PE3C_TX_DN[9]		PE3C_RX_DN[9]	AG51	EXP_B_RXN_9	28
28	EXP_B_TXN_8	P46		PE3C_TX_DN[8]		PE3C_RX_DN[8]	AE48	EXP_B_RXN_8	28
28	EXP_B_TXP_7	U49		PE3B_TX_DP[7]		PE3B_RX_DP[7]	AC51	EXP_B_RXP_7	28
28	EXP_B_TXP_6	T50		PE3B_TX_DP[6]		PE3B_RX_DP[6]	AC53	EXP_B_RXP_6	28
28	EXP_B_TXP_5	U51		PE3B_TX_DP[5]		PE3B_RX_DP[5]	AB52	EXP_B_RXP_5	28
28	EXP_B_TXP_4	T52		PE3B_TX_DP[4]		PE3B_RX_DP[4]	AB50	EXP_B_RXP_4	28
28	EXP_B_TXN_7	R49		PE3B_TX_DN[7]		PE3B_RX_DN[7]	AA51	EXP_B_RXN_7	28
28	EXP_B_TXN_6	P50		PE3B_TX_DN[6]		PE3B_RX_DN[6]	AA53	EXP_B_RXN_6	28
28	EXP_B_TXN_5	RS1		PE3B_TX_DN[5]		PE3B_RX_DN[5]	Y52	EXP_B_RXN_5	28
28	EXP_B_TXN_4	P52		PE3B_TX_DN[4]		PE3B_RX_DN[4]	Y50	EXP_B_RXN_4	28
28	EXP_B_TXP_3	T48		PE3A_TX_DP[3]		PE3A_RX_DP[3]	AC49	EXP_B_RXP_3	28
28	EXP_B_TXP_2	U47		PE3A_TX_DP[2]		PE3A_RX_DP[2]	AR46	EXP_B_RXP_2	28
28	EXP_B_TXP_1	L51		PE3A_TX_DP[1]		PE3A_RX_DP[1]	AR45	EXP_B_RXP_1	28
28	EXP_B_TXP_0	K50		PE3A_TX_DP[0]		PE3A_RX_DP[0]	AR44	EXP_B_RXP_0	28
28	EXP_B_TXN_3	P48		PE3A_TX_DN[3]		PE3A_RX_DN[3]	AA49	EXP_B_RXN_3	28
28	EXP_B_TXN_2	R47		PE3A_TX_DN[2]		PE3A_RX_DN[2]	AE46	EXP_B_RXN_2	28
28	EXP_B_TXN_1	J51		PE3A_TX_DN[1]		PE3A_RX_DN[1]	AG45	EXP_B_RXN_1	28
28	EXP_B_TXN_0	H50		PE3A_TX_DN[0]		PE3A_RX_DN[0]	AE44	EXP_B_RXN_0	28

ZIF-SOCKET2011-RH-5

 MICRO-START INTL CO.,LTD.		
Title HSW-E PCIE/DMI		
Size	Document Number	Rev A00
Centauri		
Date: Friday, June 05, 2014	Sheet 12	of 50



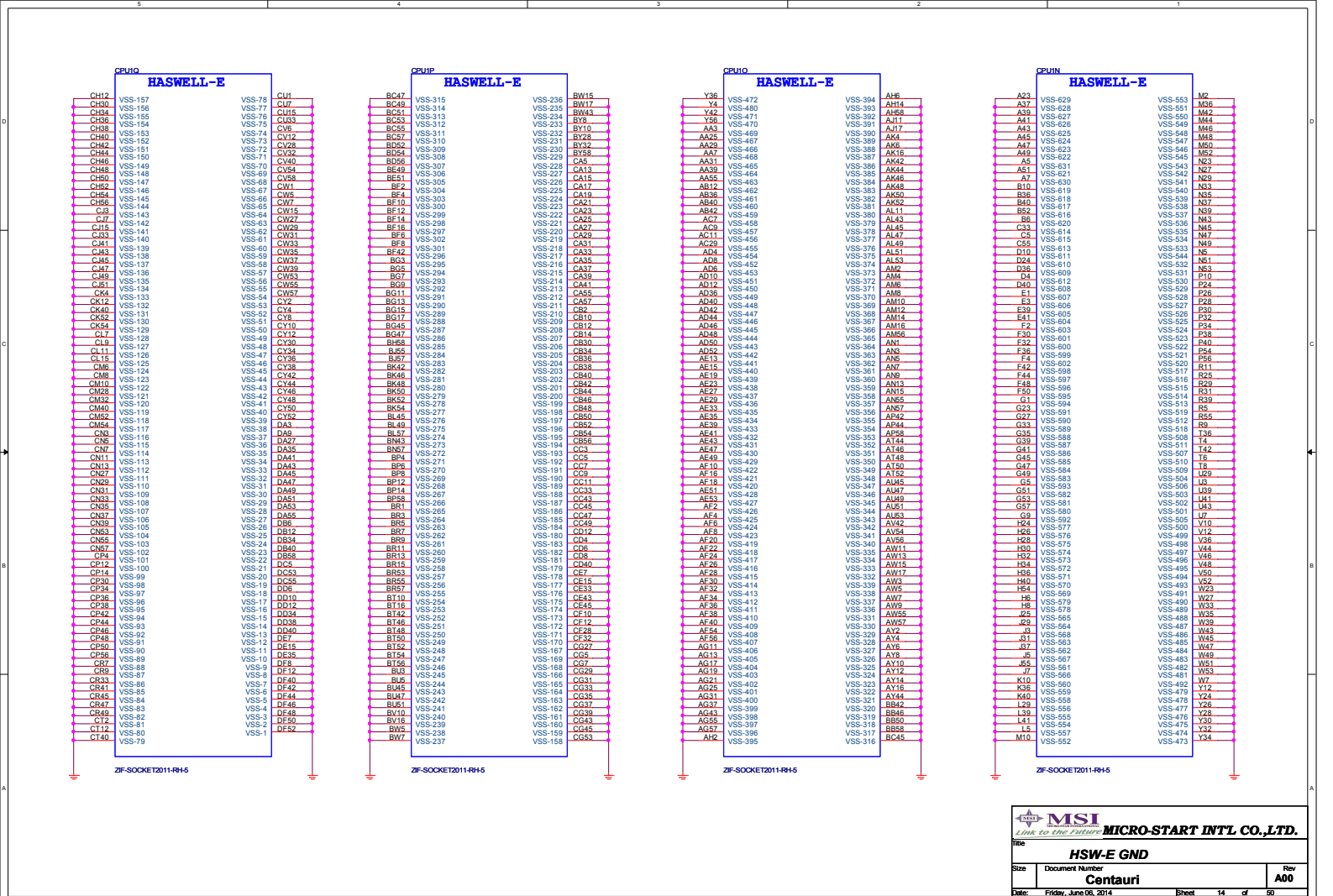
MSI
Link to the Future
MICRO-START INT'L CO.,LTD.

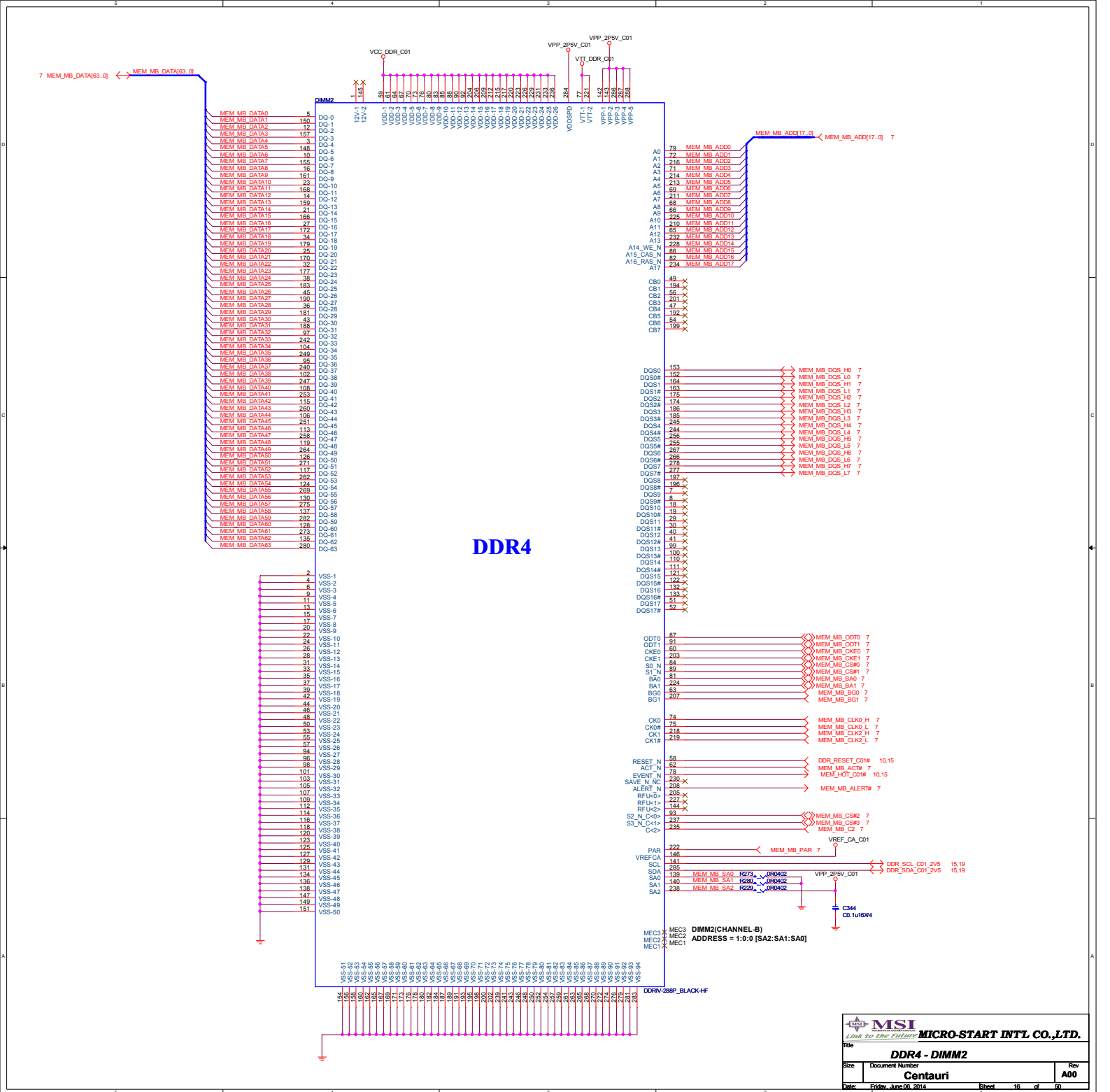
HSW-E POWER

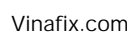
Centauri

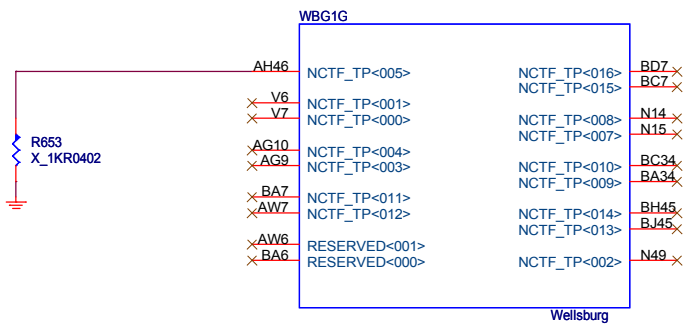
Date: Friday, June 06, 2014 Sheet 13 of 50


Size	Document Number	Rev
		A00

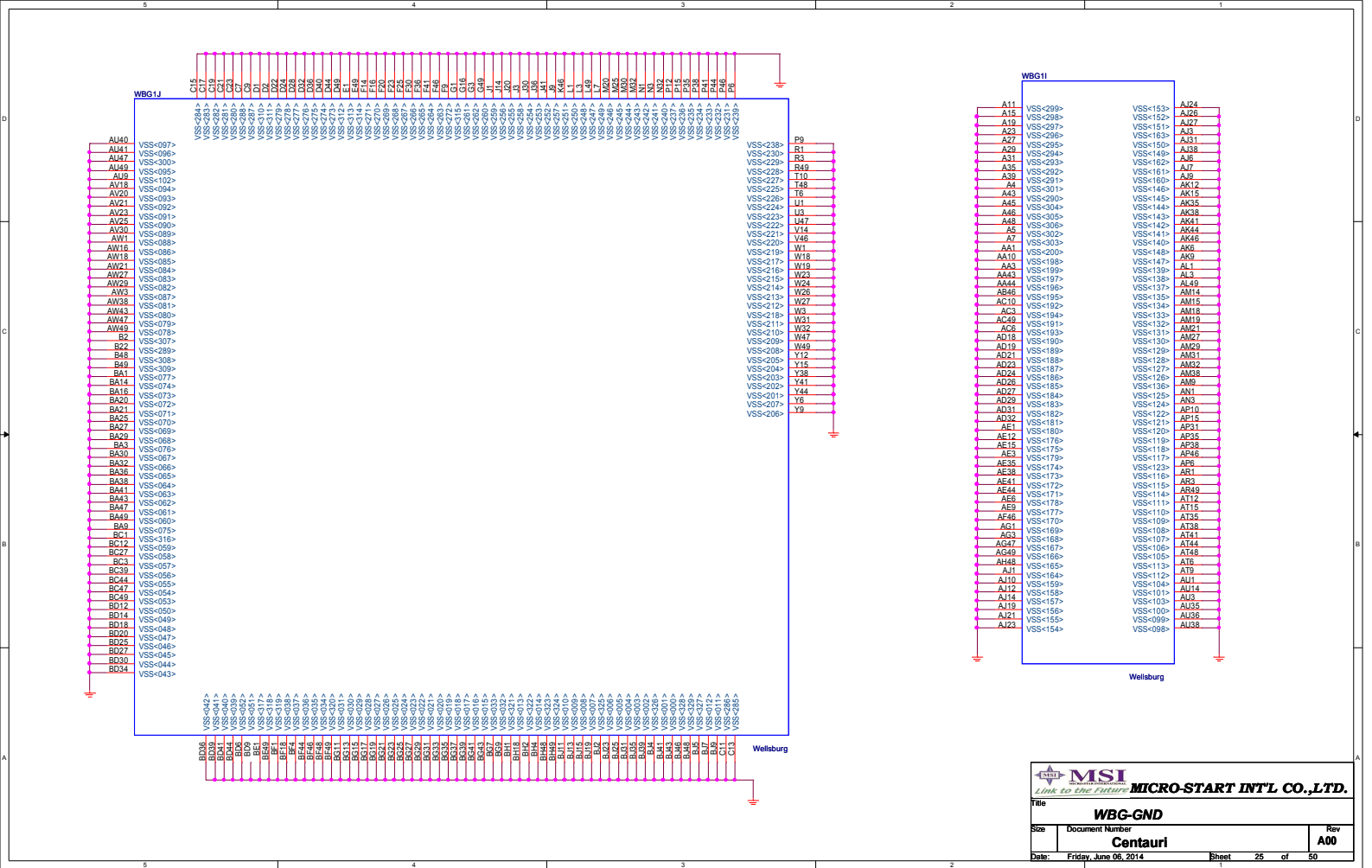


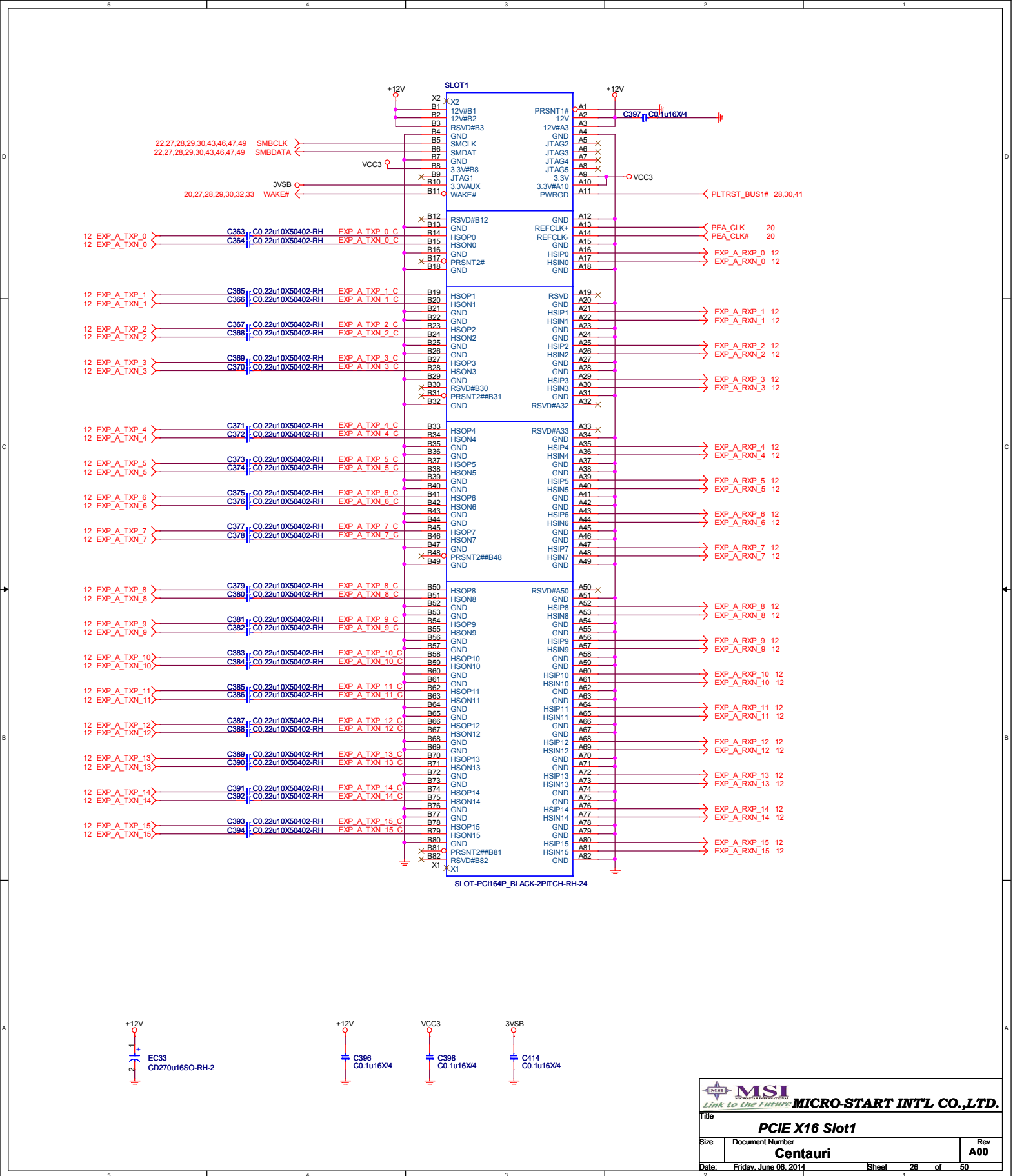




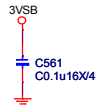
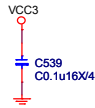
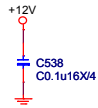
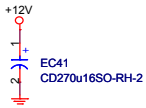
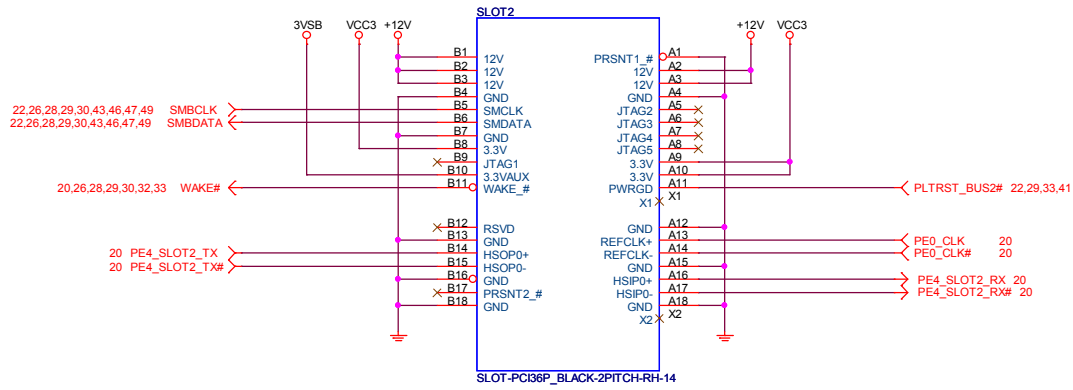



 MSI <small>MICRO-START INTERNATIONAL</small> <i>Link to the Future</i> MICRO-START INT'L CO.,LTD.		
Title		
WBG-NVRM		
Size	Document Number	Rev
	Centauri	A00
Date:	Friday, June 06, 2014	Sheet 23 of 50



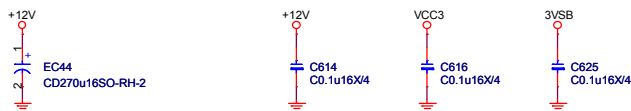
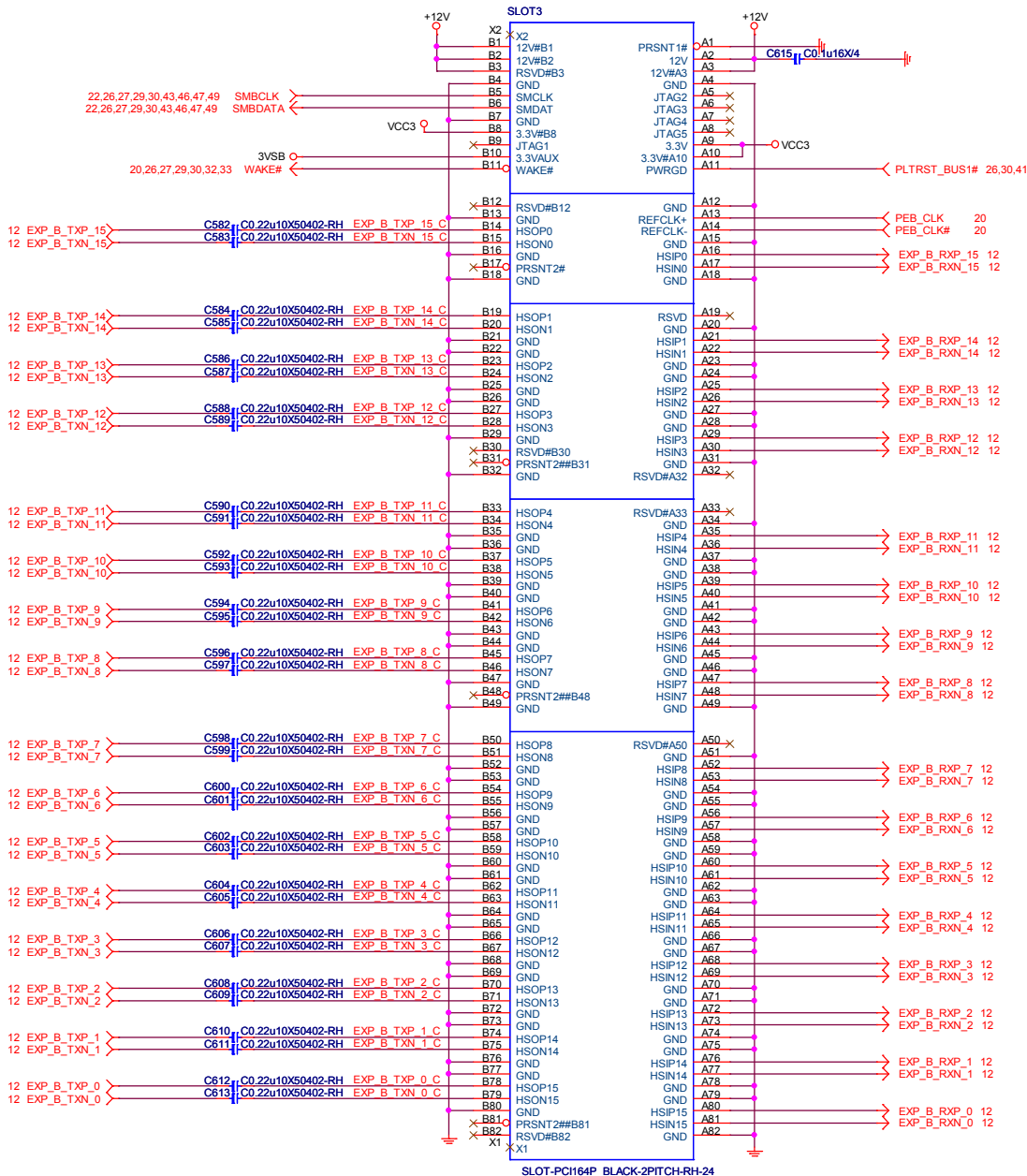


PCI EXPRESS X1 SLOT

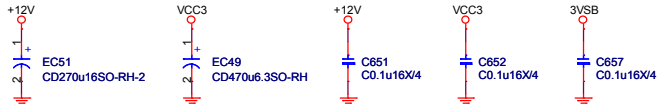
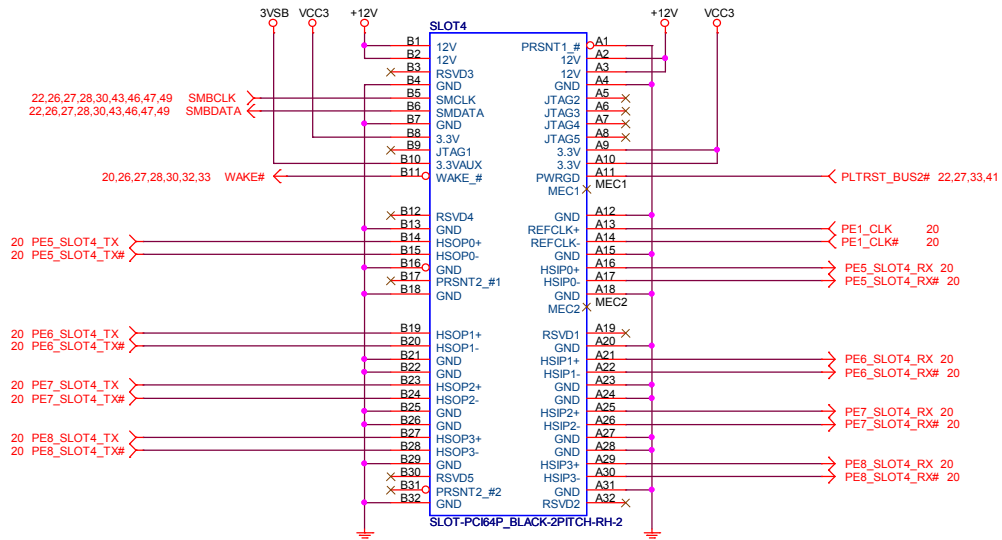



 MSI <small>Micro-Star International Co., Ltd.</small> <i>Link to the Future</i> MICRO-START INT'L CO.,LTD.		
Title PCIE X1 Slot2		
Size	Document Number	Rev
	Centauri	A00
Date	Friday, June 06, 2014	Sheet 27 of 50

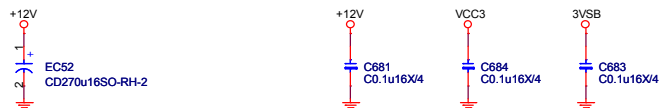
PCI EXPRESS X16 SLOT

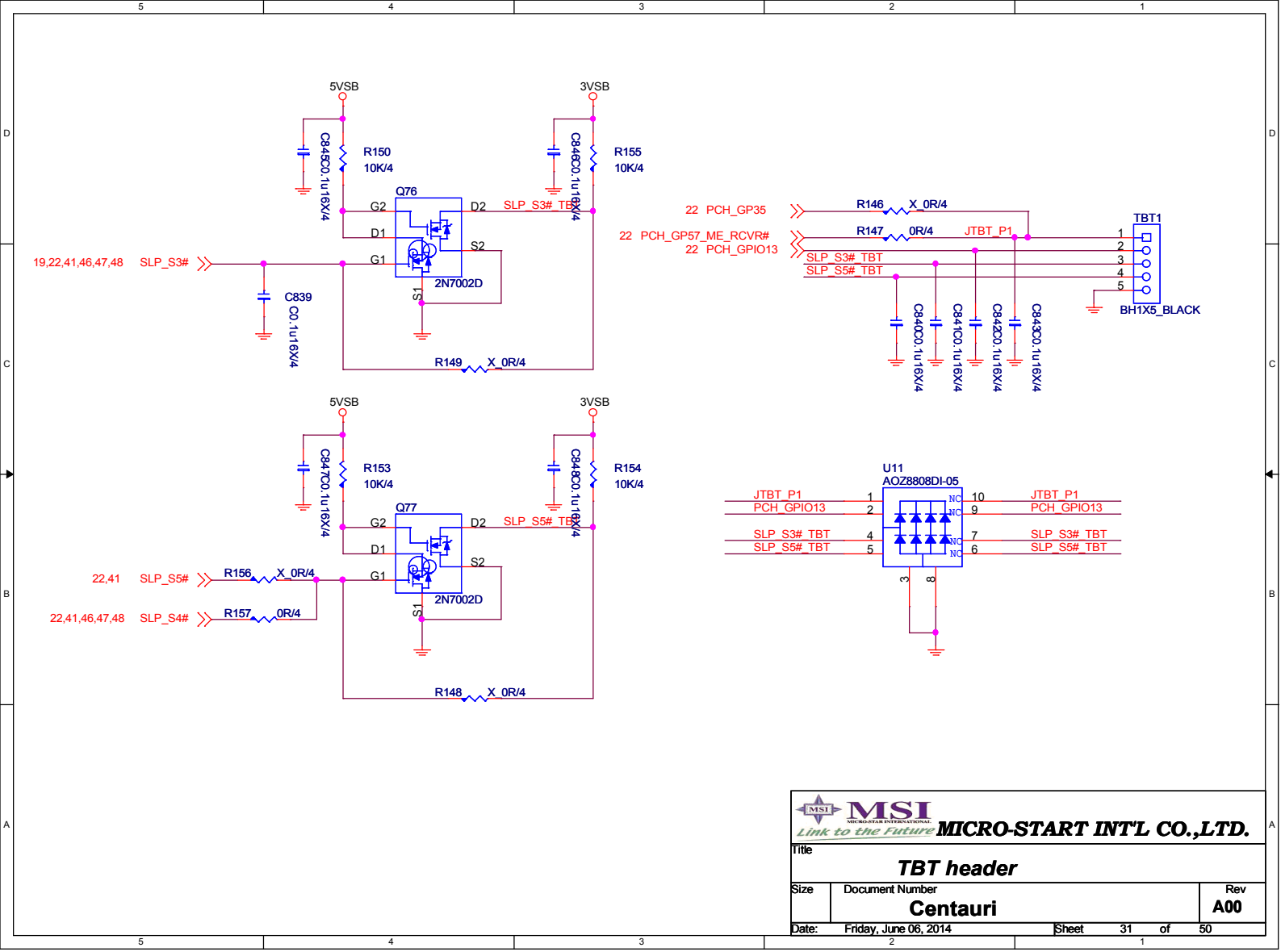


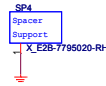
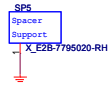
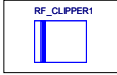
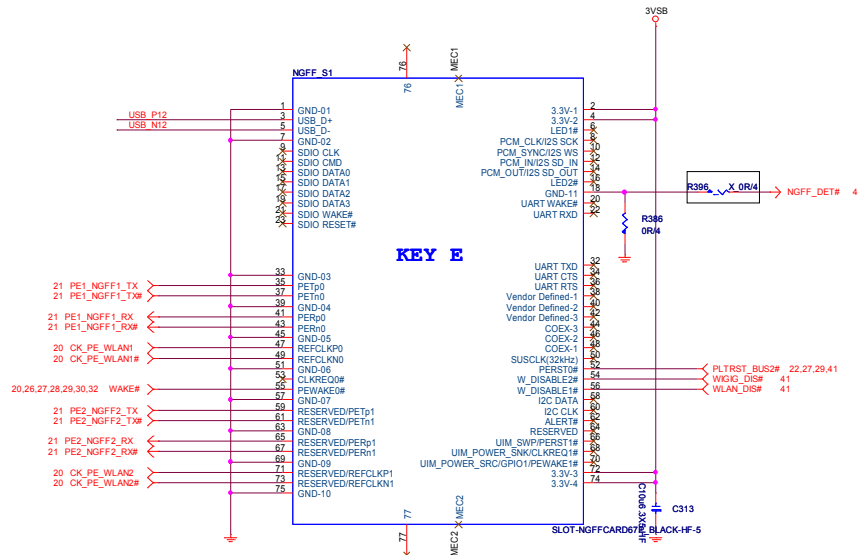
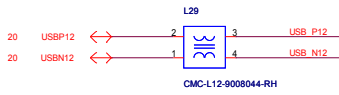
PCI EXPRESS X4 SLOT



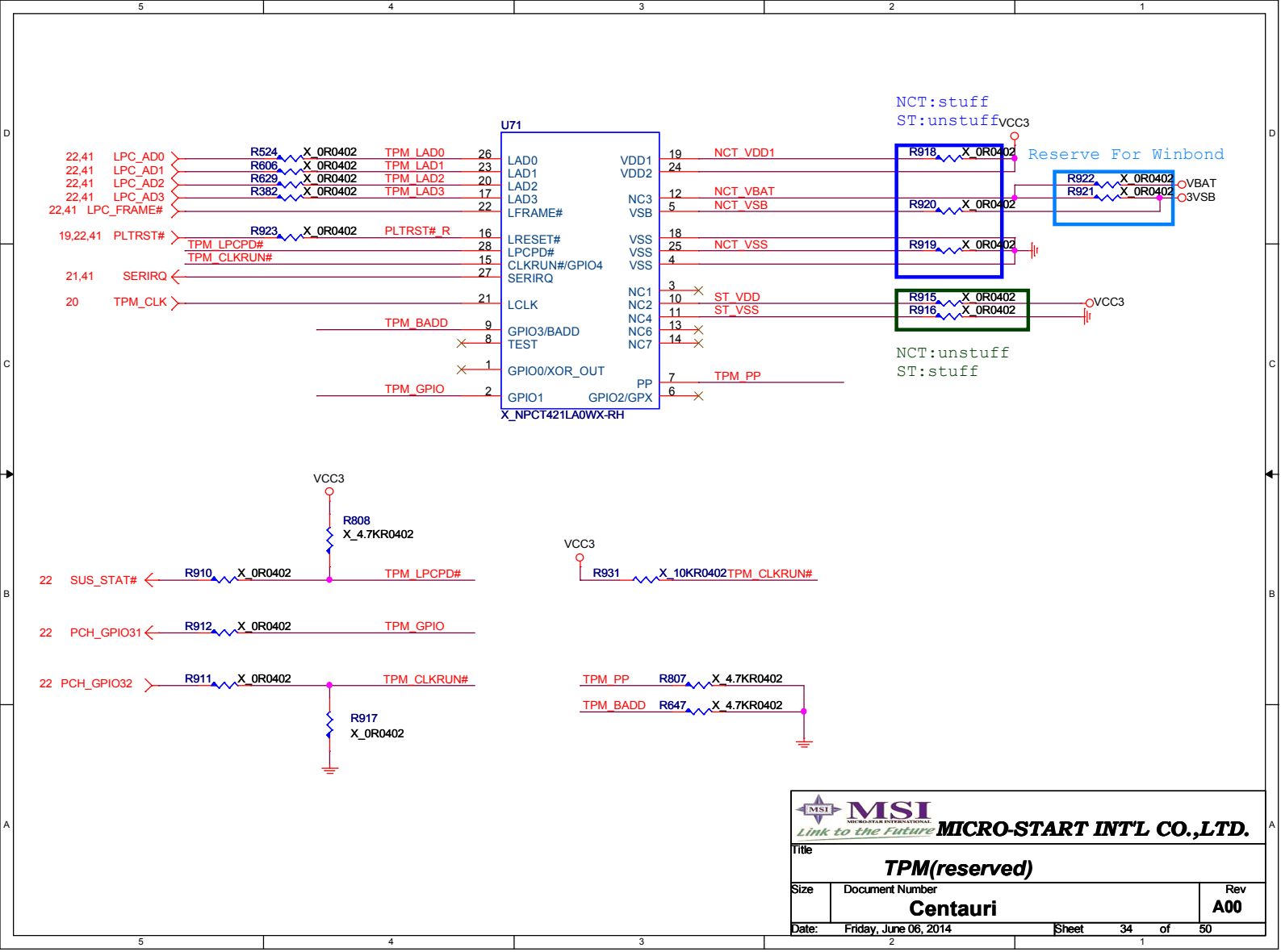
 MICRO-START INT'L CO.,LTD.		
Title: PCIE X4 slot4		
Size:	Document Number:	Rev: A00
Date: Friday, June 06, 2014	Sheet 29 of 50	



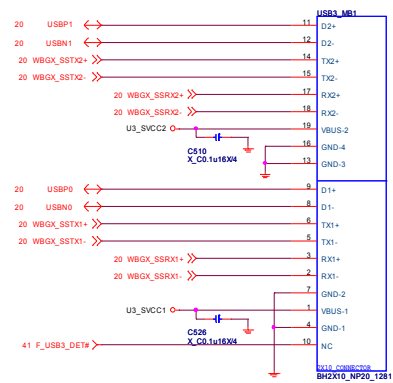
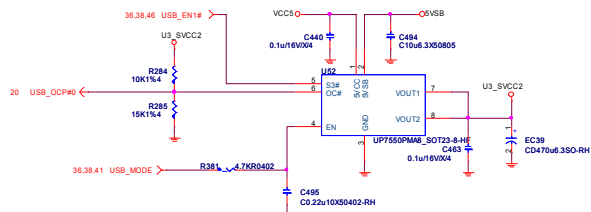
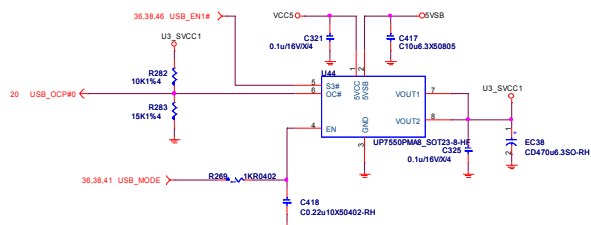




MICRO-START INT'L CO.,LTD.	
NGFF Key E (WLAN)	
Size	Document Number
	Centauri
Date: Friday, June 06, 2014	Rev A00
Sheet 33 of 50	

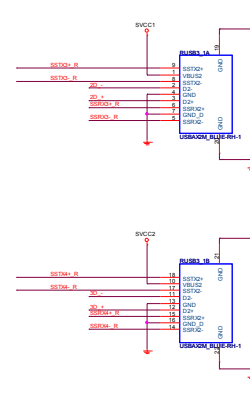
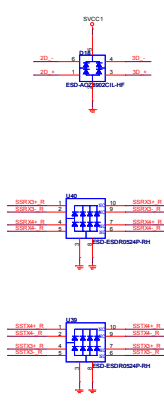
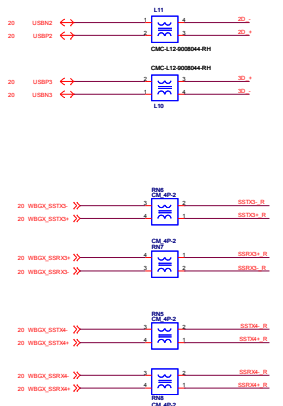
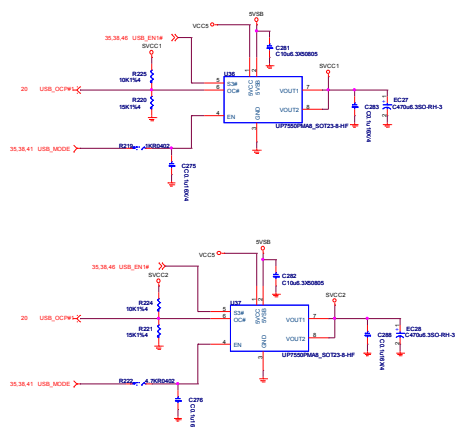


Front USB3.0 Port

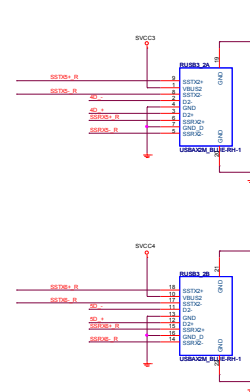
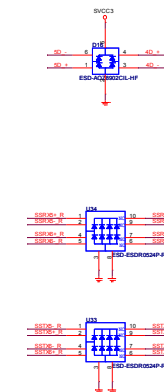
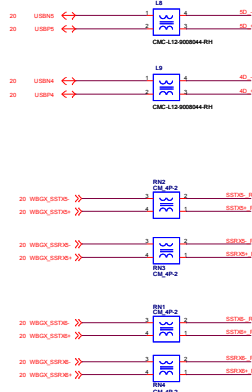
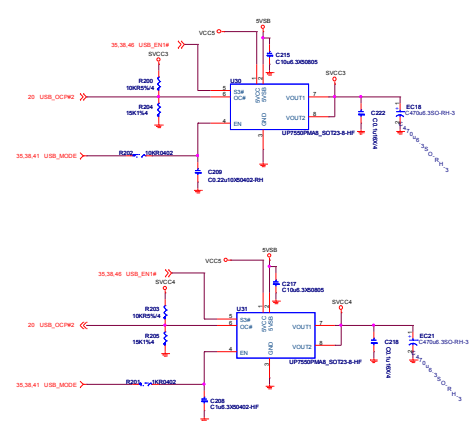


MSI Link to the Future			
MICRO-START INT'L CO., LTD.			
File			
Front USB3.0			
Size			
Document Number			
Centauri			
Date			
Friday, June 28, 2014			
Sheet			
39 of 50			
Rev			
A00			

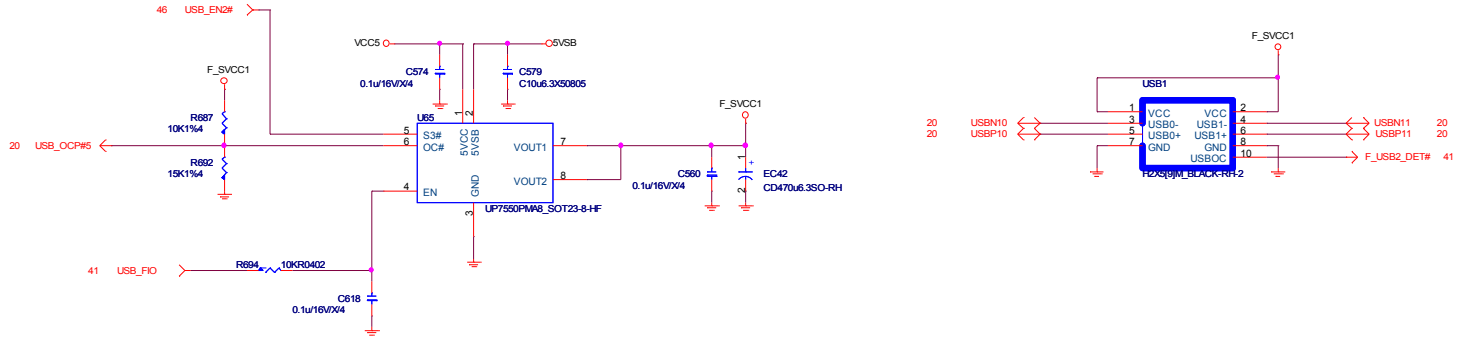
Rear USB3.0 Port 2 / 3




Rear USB3.0 Port 4 / 5

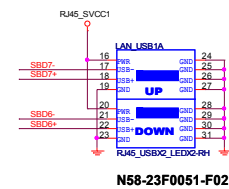
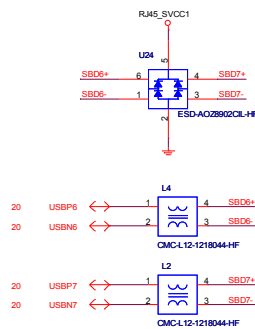


Front USB2.0 Port 11/12

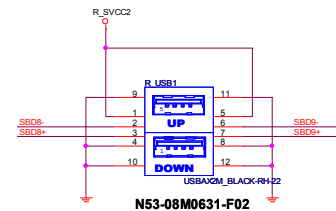
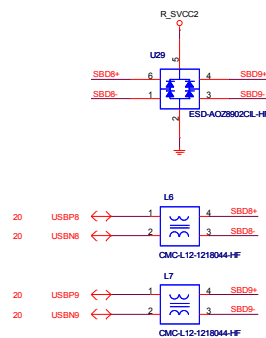


 MICRO-START INT'L CO.,LTD.	
Front USB2.0 x2	
Size	Document Number
	Centauri
Date: Friday, June 06, 2014	Rev A00
Sheet 1	37 of 50

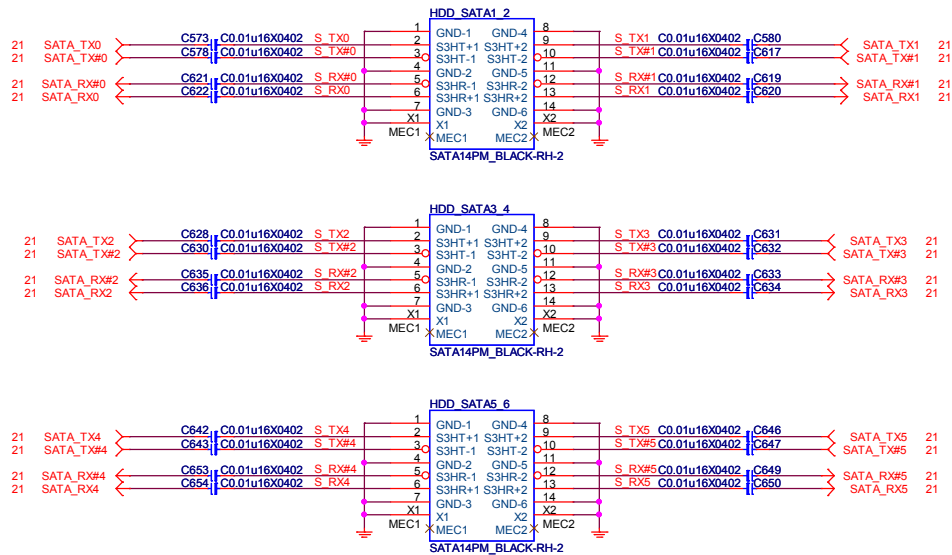
Rear USB2.0 Port 7 / 8




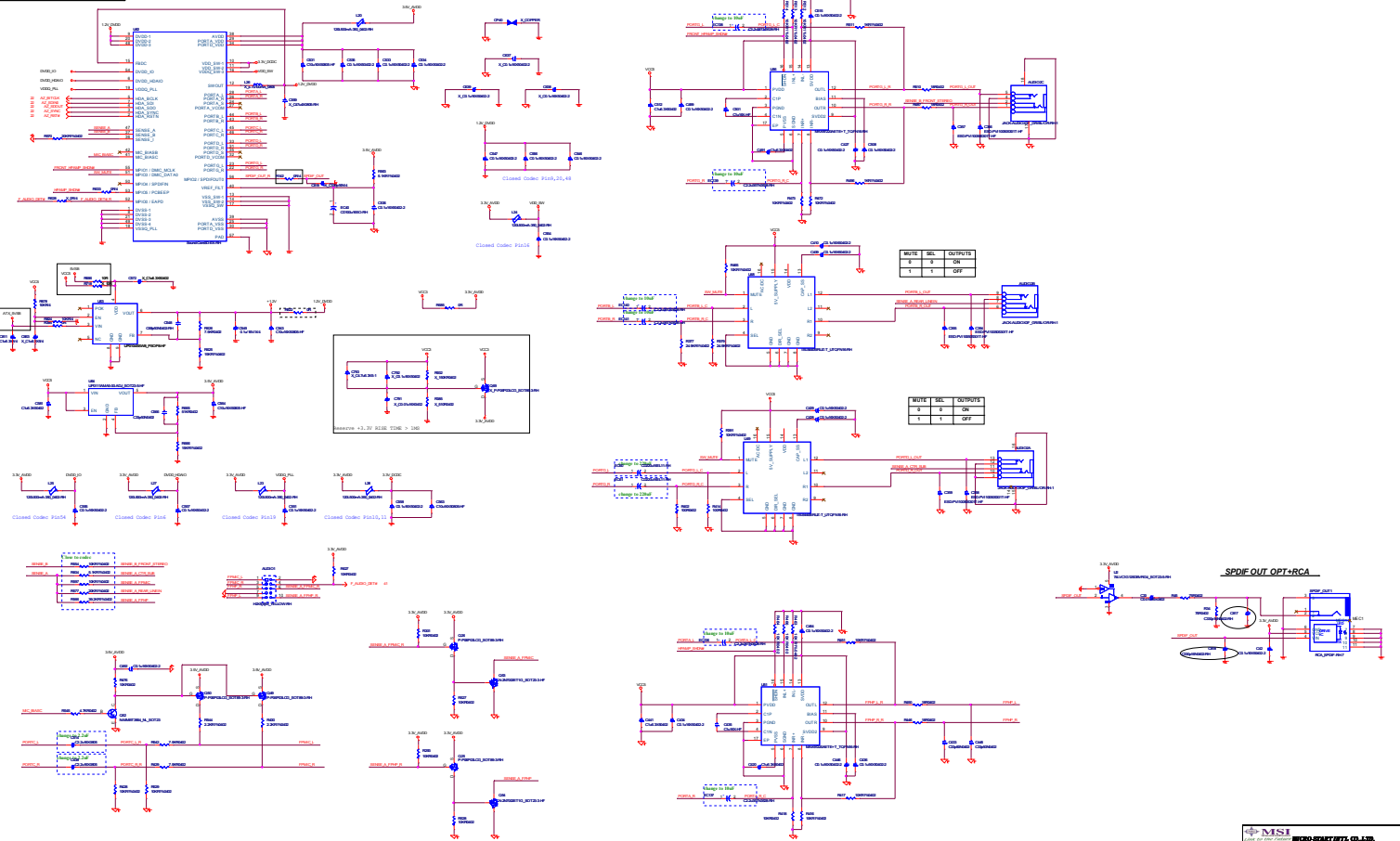
Rear USB2.0 Port 9 / 10



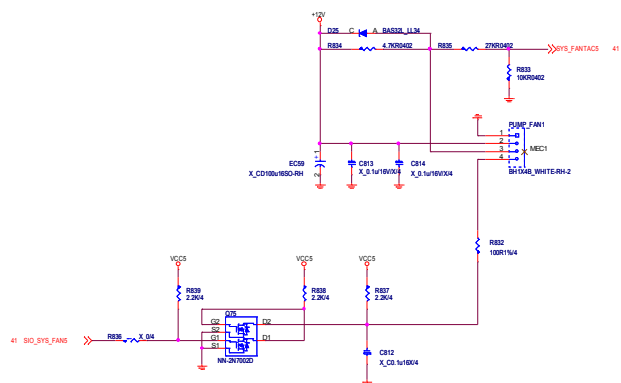
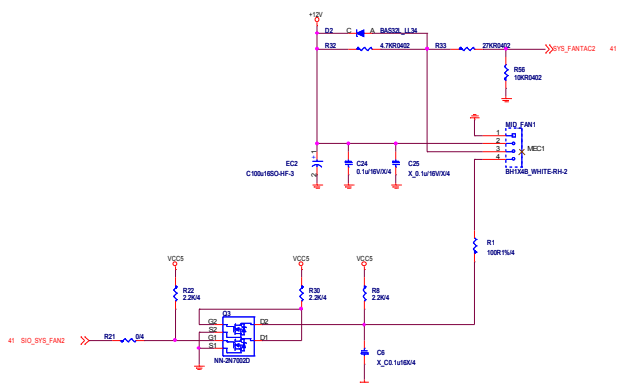
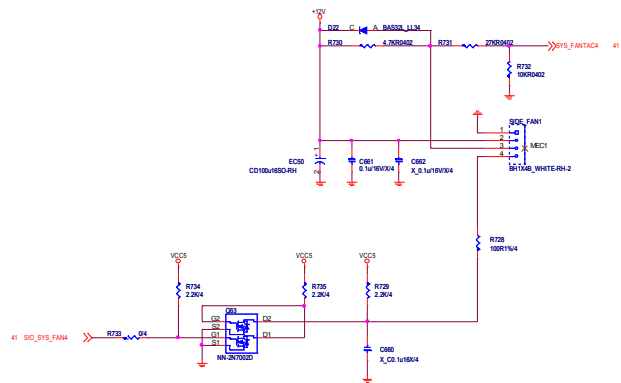
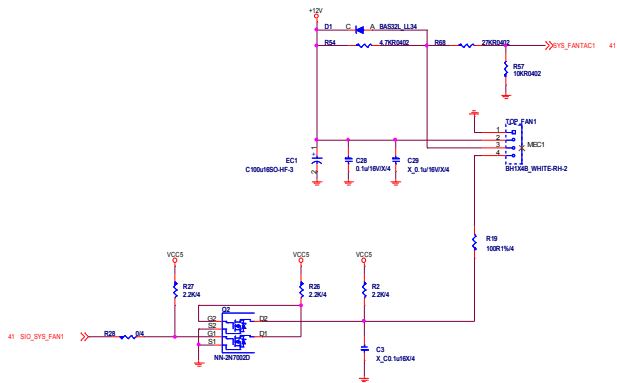
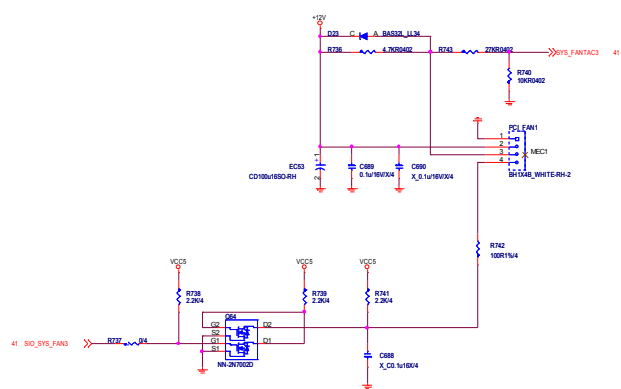
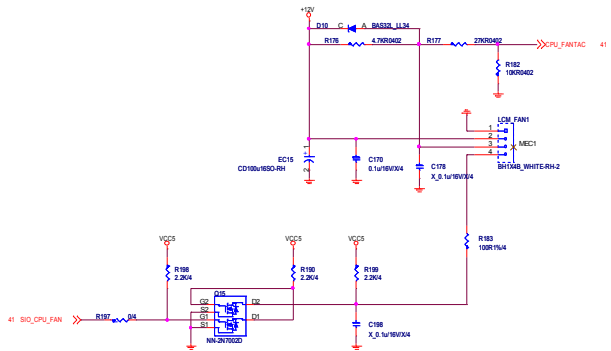
SATA 3.0 Connector



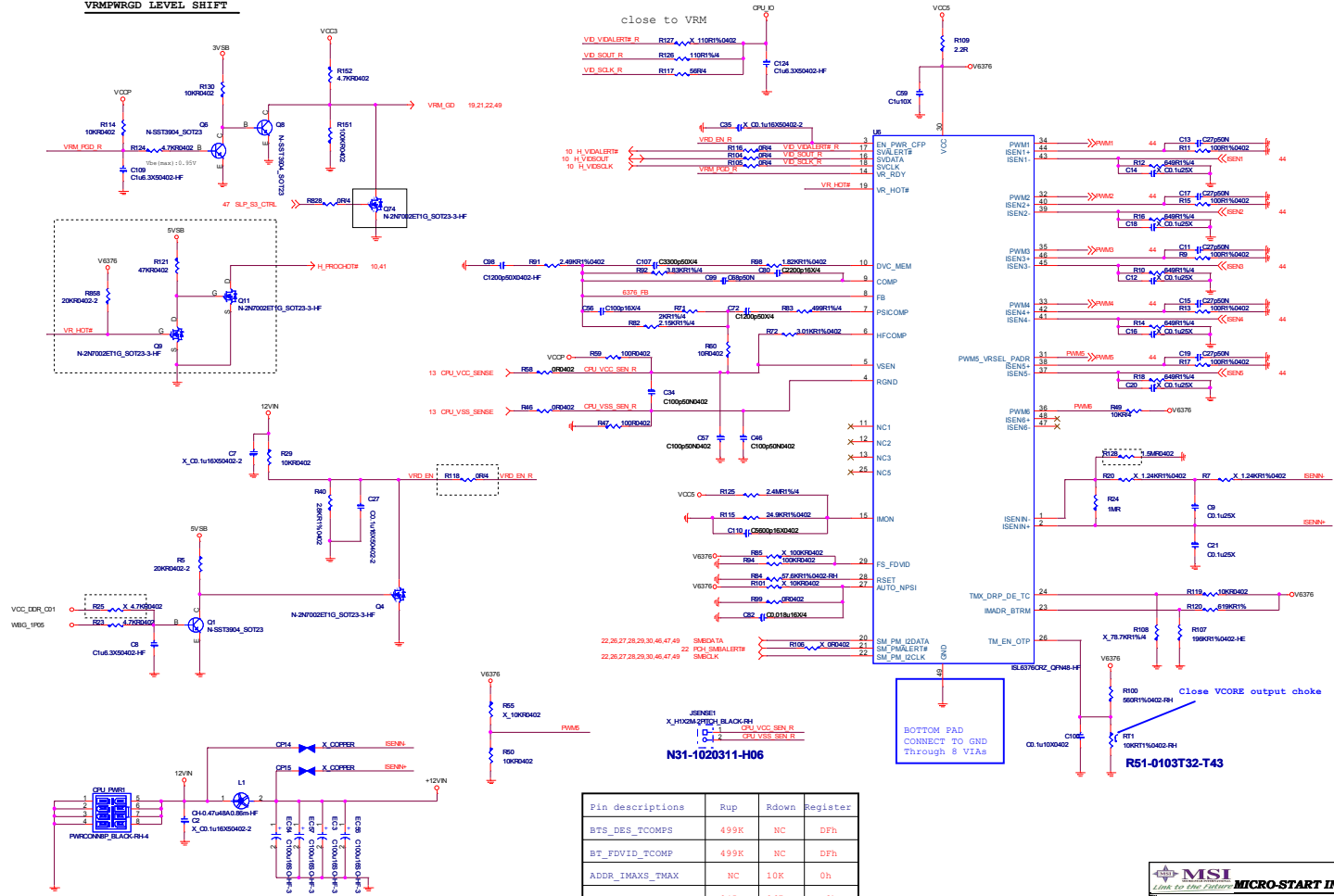
 MSI <small>Micro-Star International Co., Ltd.</small> MICRO-START INT'L CO.,LTD.		
Title		
SATA PORT		
Size	Document Number	Rev
	Centauri	A00
Date	Friday, June 06, 2014	Sheet 39 of 50



CPU Fan

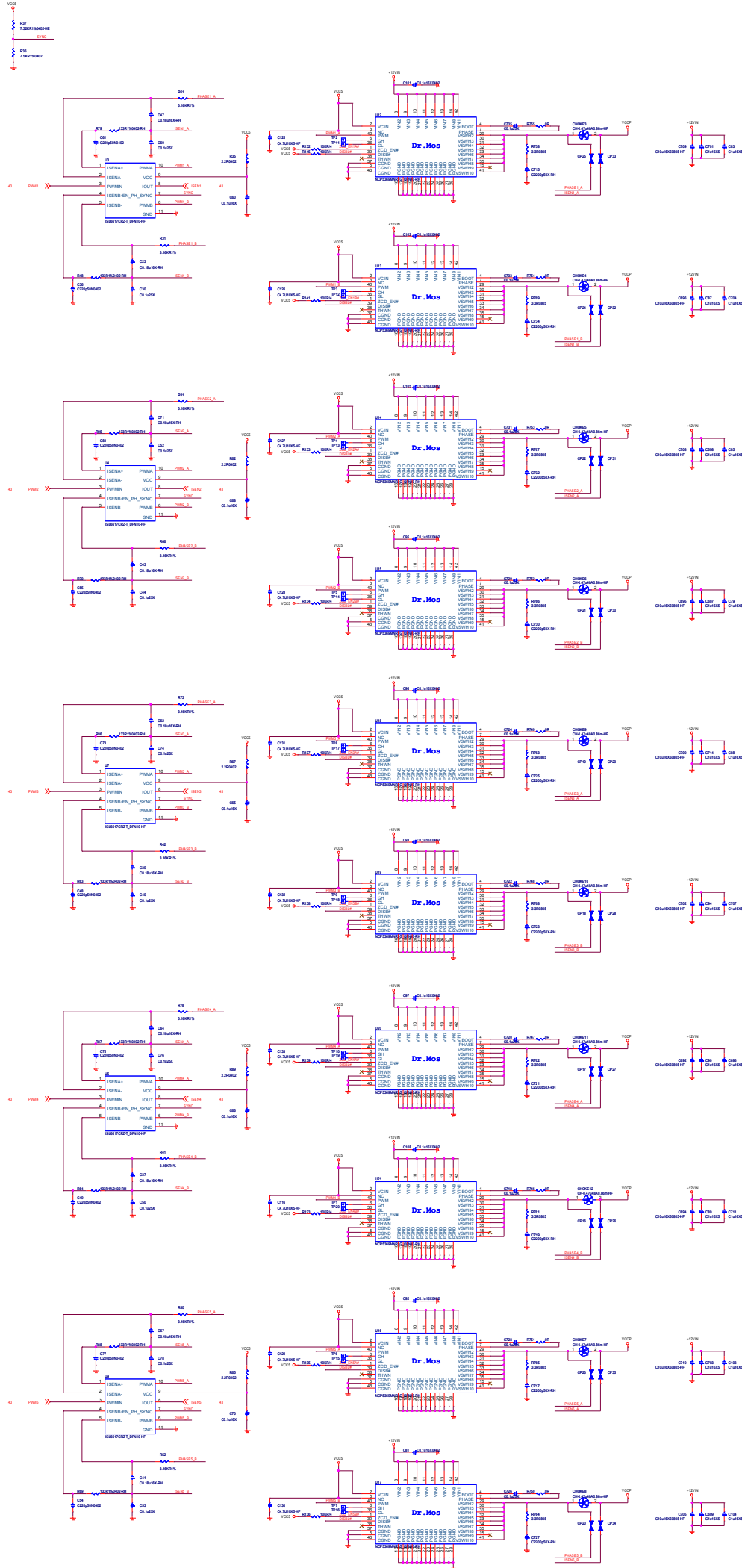


VRMPWRGD LEVEL SHIFT



Pin descriptions	Rup	Rdown	Registers
BTS_DES_TCOMPS	499K	NC	DFh
BT_FVID_TCOMP	499K	NC	DFh
ADDR_IMAXS_TMAX	NC	10K	0h
NPSI_DE_IMAX	845K	267K	C3h


MSI
 Link to the Future **MICRO-START INT'L CO.,LTD.**
 Title **VRD12.5 - PWM-1SL6376**
 Size Document Number **Centauri** Rev **A00**
 Date: Friday, June 08, 2014 Sheet 43 of 50



[illegible]

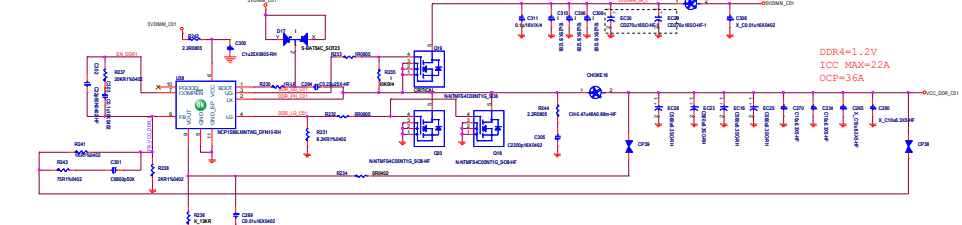
Figure 1 shows four schematic diagrams of test boards. Each diagram illustrates a different connection configuration for the VCC_DDR_C01 and VCC_DDR_C23 power planes. The components are labeled with their part numbers and values.

- (a) Board 1:** VCC_DDR_C01 is connected to C22u6.3X50805-RH. C22u6.3X50805-RH is connected to C22u6.3X50805-RH.
- (b) Board 2:** VCC_DDR_C23 is connected to C747 and C745. C747 and C745 are connected to C22u6.3X50805-RH.
- (c) Board 3:** VCC_DDR_C01 is connected to C827. C827 is connected to C22u6.3X50805-RH.
- (d) Board 4:** VCC_DDR_C23 is connected to C828. C828 is connected to C22u6.3X50805-RH.

Vinafix.com

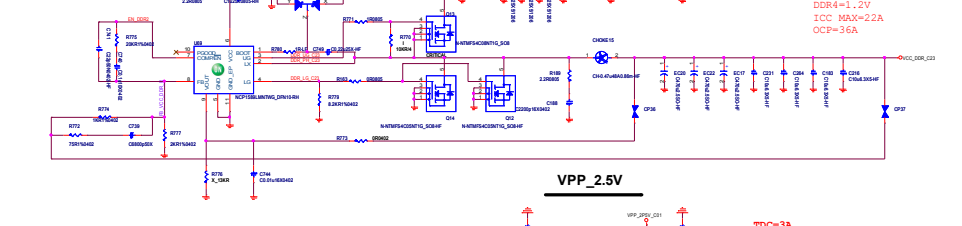
DDR III 1.2V POWER

Switch 1 Phase 1.2V 33A

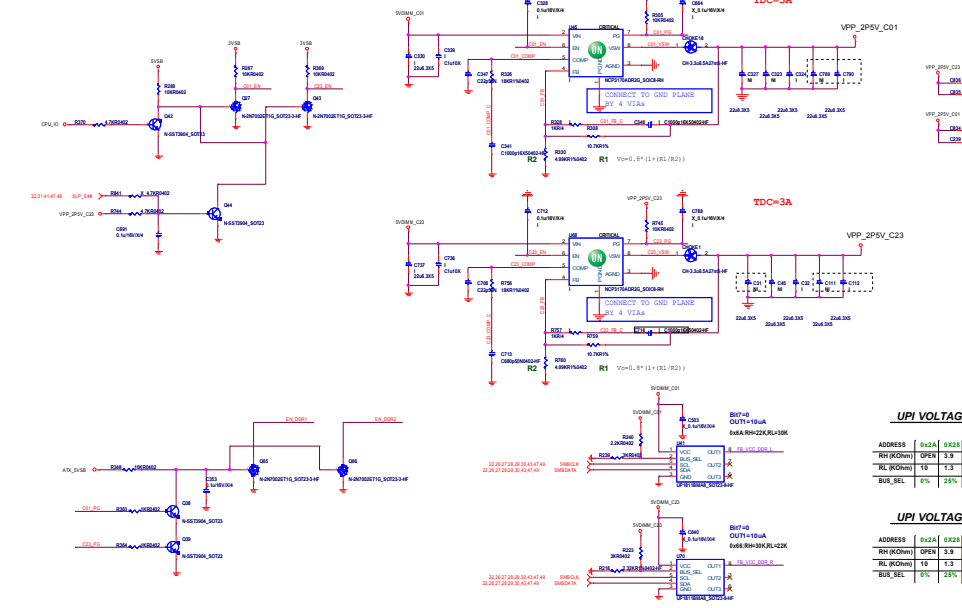


DDR III 1.2V POWER

Switch 1 Phase 1.2V 33A

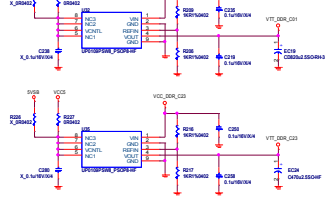


VPP 2.5V

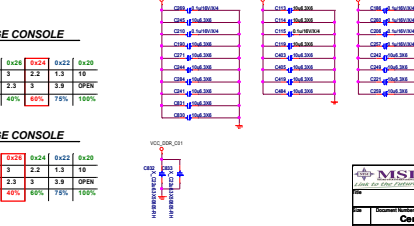
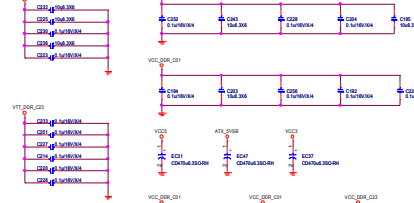
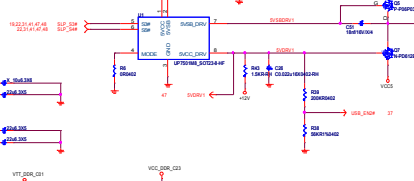
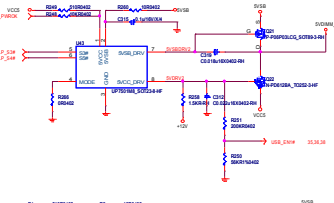


DDR4 Termination Power

VTT=1/2 VDDQ



DDR4 Regulator Power Source



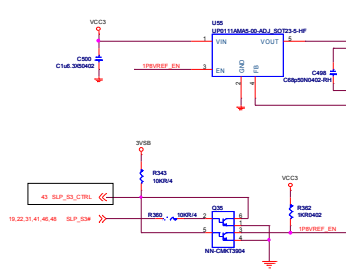
UPI VOLTAGE CONSOLE

ADDRESS	0x2A	0x2B	0x2C	0x2D	0x2E
REL (W/CM)	OPEN	3.3	3	2.2	1.5
REL (W/CM)	1.5	1.3	2.3	1	3.3
BUS_SEL	0%	25%	40%	60%	100%

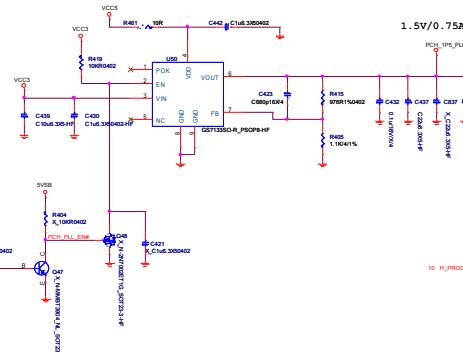
UPI VOLTAGE CONSOLE

ADDRESS	0x2A	0x2B	0x2C	0x2D	0x2E
REL (W/CM)	OPEN	3.3	3	2.2	1.5
REL (W/CM)	1.5	1.3	2.3	1	3.3
BUS_SEL	0%	25%	40%	60%	100%

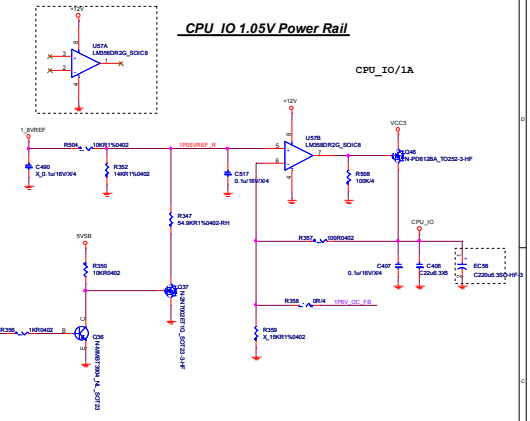
1.8V Reference Power



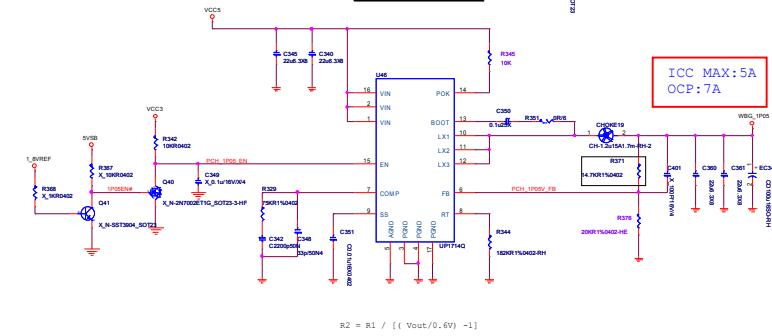
WBG 1.5V PLL Power Rail



CPU IO 1.05V Power Rail



PCH Core Power

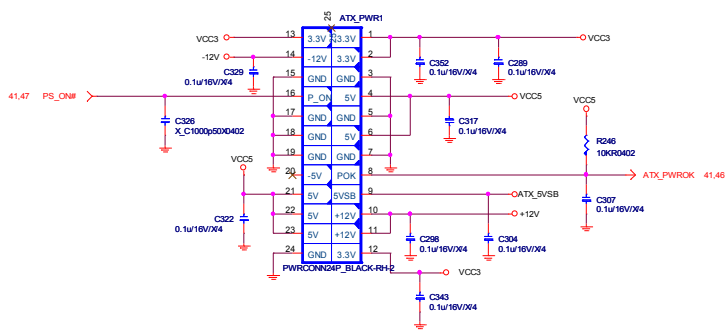


PROC_ID	VOUT
0	0.95V
1	1.05V

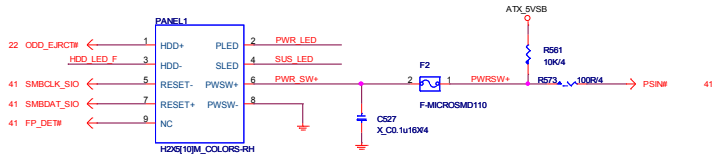
UPI VOLTAGE CONSOLE

ADDRESS	0x2A	0x2B	0x2C	0x2D	0x2E
RH (KOhm)	OPEN	3.9	3	2.2	1.3
RL (KOhm)	10	1.3	2.3	3	3.9
BUS_SEL	0%	25%	40%	60%	75%

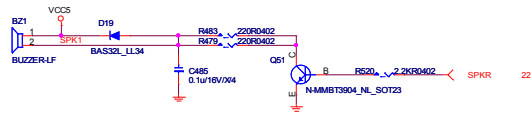
24 Pin ATX Power Connector



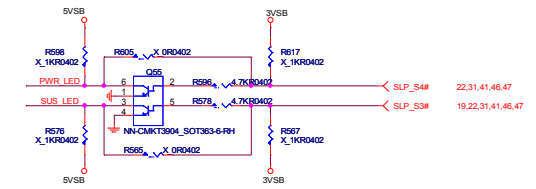
Front Panel



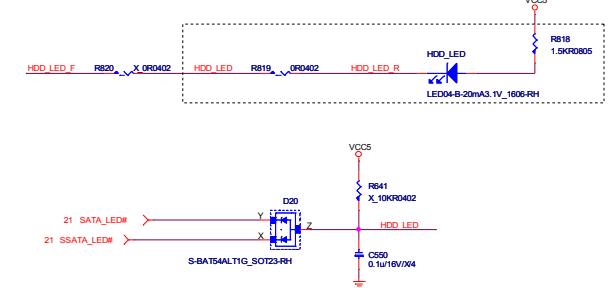
Buzzer Circuit



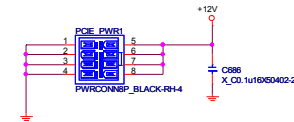
Power LED



HDD LED

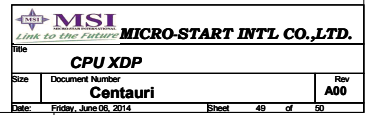
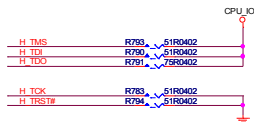


GFX Power

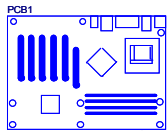


MSI			
Link to the Future			
MICRO-START INTL CO.,LTD.			
Title			
ATX/F Panel/LED			
Size	Document Number	Rev	
		Centauri	
Date	Friday, June 08, 2014	Sheet	48 of 50

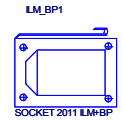
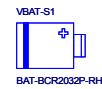
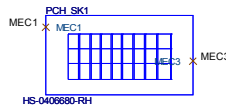
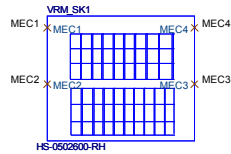
CPU XDP PORT



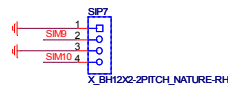
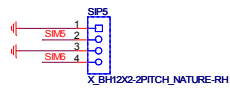
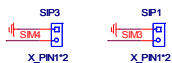
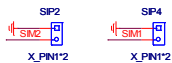
Manual Parts



PF0-0786210-ZX4

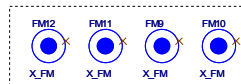


Simulation



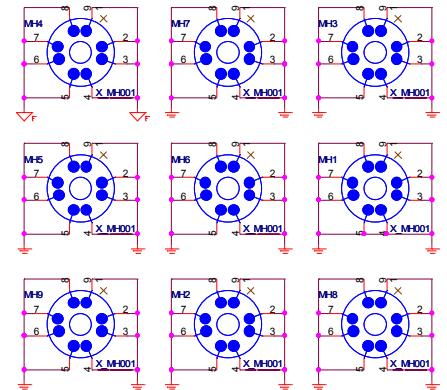
Optics Orientation Holes


Optical Fiducial Marks-120



PCB Mounting Holes

Mounting Holes



 MSI <small>MICRO-STAR INTERNATIONAL</small>		MICRO-START INTL CO.,LTD.	
<i>Link to the Future</i>			
Title			
Manual Parts Parts			
Size	Document Number		Rev
	Centauri		A00
Date:	Friday, June 06, 2014	Sheet	50 of 50