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MS-7883

ATX
Ver: 10

Haswell-E Platform

CPU:

System Chipset:

Haswell-E

Wellsburg

Onboard Chip:

HD Audio Codec: ALC1150

LAN-Killer LAN LAN-Killer LAN

SIO:NTC6792D

Dual Flash ROM: SPI 64 MB X2

Main Memory:

DDRIV (1666MHz) * 8 (Dual Channel)

ACPI:

PWM:

ISL6388

VRD12.5 -ISL6388

Expansion Slots:

PCI Express (X16) Slot1

PCI Express (X8) Slot2

PCI Express (X16) Slot3

PCI Express (X16) Slot4

PCI Express (X8) Slot5

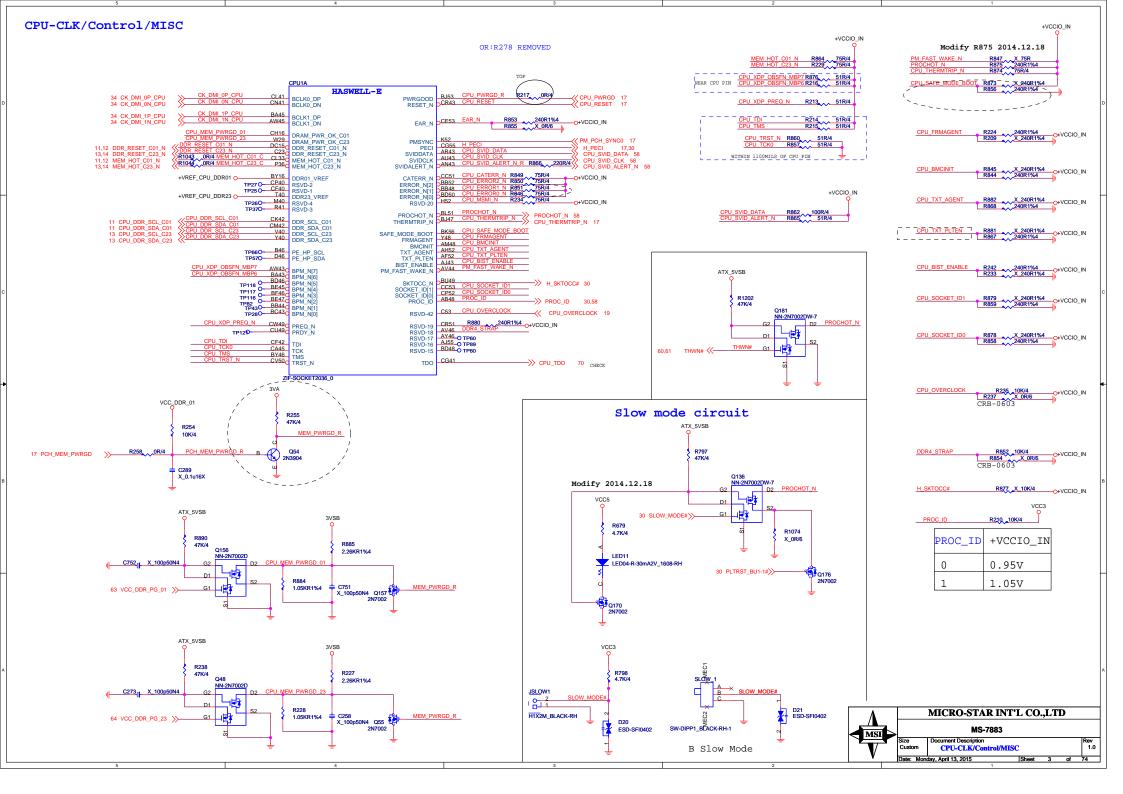
Other: SATA3.0 *8

USB2.0 *8

USB3.1 *1

REAL USB3.0 *6 FRONT USB2.0 *4 FRONT USB3.0 *4

MS-7882 Block Diagram UDIMM CHANNEL C UDIMM CHANNEL A DDRIV DIMM5.6 DDRIV DIMM1.2 **HASWELL-E** LGA2011 UDIMM CHANNEL B UDIMM CHANNEL D DDRIV DIMM3.4 DDRIV DIMM7.8 DMI 0/1/2/3 Front USB20 VCCP 1.8V ISL6388+6617 10/11,12/13(JUSB1/2) PCIE3 0,1,2,3(JUSB3/4) LAN-Killer E2205 REAR USB20 PCIE4 4,5-LAN 8,9-PS2 VL805-USB30 4PORT **DDR 1.2V** PV3203+UP1959 REAR IO USB 3.0 0,1,2,3(JUSB3/4) PCIE5,6 USB31 uP0109-VTTDDR USB 3.0 PCIE7 USB-4,5(REAR) WIFI VPP2.5V MP2145 WELLSBURG FCBGA836 PCIE8 LAN-Killer E2205 HD AUDIO HD AUDIO I/F ALC1150 PCH 1.05V NB675GL-CORE PCIE1/2 ASM106SE-SATAEX Slot: SPI ROM SATA30:01-23-67-89 SWITCH PCIE X16(PORTB) SPI ROM switch PCIE X8(PORTB) TPM 1.2 LPC I/F PCIE X16(PORTB) SIO NV6792 switch PCIE X16(PORTA) KBD MOUSE MICRO-STAR INT'L CO.,LTD PCIE X8(PORTC) MS-7883 MSI Rev 1.0



	CPU1F	
18 DML RX3	HASWELL-E DMLRX_DP[3]	D42 DMI CPU TX3 C252 O.1u/10X4 DMI TX3 DMI TX3 18
18	DMI_RX_DN[3] DMI_TX_DN[3] DMI_RX_DN[2] DMI_TX_DN[2] DMI_RX_DN[1] DMI_TX_DN[1] DMI_RX_DN[0] DMI_TX_DN[0]	B42
54 EXP_C_RXP_7 54 EXP_C_RXP_6 54 EXP_C_RXP_5 54 EXP_C_RXP_4 54 EXP_C_RXP_4	PE1B_RX_DP[7]	L49
54 EXP_C_RXN_7	PE1B_RX_DN[7] PE1B_TX_DN[7] PE1B_RX_DN[6] PE1B_TX_DN[6] PE1B_RX_DN[5] PE1B_TX_DN[5] PE1B_RX_DN[4] PE1B_TX_DN[4]	J49
29 EXP_C_RXP_3 3 G55. 29 EXP_C_RXP_2 5 F54. 29 EXP_C_RXP_1 5 F52. 29 EXP_C_RXP_1 6 F51. 29 EXP_C_RXP_3 5 F55.	PE1A RX DP(3) PE1A TX DP(3) PE1A TX DP(2) PE1A TX DP(2) PE1A TX DP(1) PE1A TX DP(1) PE1A TX DP(1) PE1A TX DP(0) PE1A TX DP(0)	L45
29 EXP C RXN 2 D54 29 EXP C RXN 1 D52 29 EXP C RXN 0 C51 Not functional in HSW-E 28-lane SKU	PE1A_RX_DN[3] PE1A_TX_DN[3] PE1A_RX_DN[2] PE1A_TX_DN[2] PE1A_RX_DN[1] PE1A_TX_DN[1] PE1A_RX_DN[0] PE1A_TX_DN[0]	H44
28 EXP A RXP 15 28 EXP A RXP 14 1 BA57 28 EXP A RXP 13 1 A T56 28 EXP A RXP 12 28 EXP A RXP 12 4 AV58	PE2D_RX_DP[15] PE2D_TX_DP[15] PE2D_RX_DP[14] PE2D_TX_DP[14] PE2D_RX_DP[13] PE2D_TX_DP[13] PE2D_RX_DP[12] PE2D_TX_DP[12]	BA47
28 EXP_A_RXN_15 AY56. 28 EXP_A_RXN_14 AY58. 28 EXP_A_RXN_13 AP56. 28 EXP_A_RXN_12 AT58.	PE2D_RX_DN[15] PE2D_TX_DN[15] PE2D_RX_DN[14] PE2D_TX_DN[14] PE2D_RX_DN[13] PE2D_TX_DN[13] PE2D_RX_DN[12] PE2D_TX_DN[12]	AW47
28 EXP A RXP 11 AUST 1 28 EXP A RXP 10 AUST 28 EXP A RXP 9 AM58 28 EXP A RXP 9 AK56 28 EXP A RXN 11 \rightarrow AR57.	PE2C_RX_DP[11] PE2C_TX_DP[11] PE2C_RX_DP[10] PE2C_TX_DP[10] PE2C_RX_DP[8] PE2C_TX_DP[8]	BA51
28 EXP A RXN 10 28 EXP A RXN 9 28 EXP A RXN 9 30 EXP A RXN 9 4H56. 28 EXP A RXP 7 4F58.	PE2C_RX_DN[11] PE2C_TX_DN[11] PE2C_RX_DN[10] PE2C_TX_DN[10] PE2C_RX_DN[9] PE2C_TX_DN[8] PE2C_RX_DN[8] PE2C_TX_DN[8] PE2B_RX_DP[7] PE2B_RX_DP[7]	AY54
28 EXP_A_RXP_6	PE2B_RX_DP[6] PE2B_TX_DP[6] PE2B_RX_DP[5] PE2B_TX_DP[5] PE2B_RX_DP[4] PE2B_TX_DP[4] PE2B_RX_DN[7] PE2B_TX_DN[7]	AB53
22 EXP A RXN 5 28 EXP A RXN 5 28 EXP A RXN 5 28 EXP A RXN 3 28 EXP A RXP 3 28 EXP A RXP 3 28 EXP A RXP 3 29 EXP A RXP 3	PE2B RX_DN[6] PE2B TX_DN[6] PE2B RX_DN[5] PE2B_TX_DN[5] PE2B_TX_DN[4] PE2B_TX_DN[4] PE2B_TX_DN[4] PE2A_TX_DP[3]	ANS3
28 EXP A RXP 2 V56. 28 EXP A RXP 1 V54. 28 EXP A RXP 0 N55. 28 EXP A RXN 3 U55. 28 EXP A RXN 2 T56.	PE2A_RX_DP[2] PE2A_TX_DP[2] PE2A_RX_DP[1] PE2A_TX_DP[1] PE2A_RX_DP[0] PE2A_TX_DP[0] PE2A_RX_DN[3] PE2A_TX_DN[3]	AB51
28 EXP_A_RXN_1 T54 28 EXP_A_RXN_0 L55	PE2A_RX_DN[2] PE2A_TX_DN[2] PE2A_RX_DN[1] PE2A_TX_DN[1] PE2A_RX_DN[0] PE2A_TX_DN[0]	AM50

	CPU1G			
	HASWELL-E			
24 EXP B RXP 15 >> AR45	PE3D RX DP[15]	PE3D_TX_DP[15]	P44	XEXP B TXP 15 24
24 FXP B RXP 14 S AP46	PE3D RX DP[14]	PE3D TX DP[14]	AA43	SEXP B TXP 14 24
24 FXP B RXP 13 \$\ AR47	PE3D_RX_DP[13]	PE3D_TX_DP[13]	AB44	SEXP B TXP 13 24
24 EXP_B_RXP_12 \$\ AJ47	PE3D RX DP[12]	PE3D TX DP[13]	AC45	SEXP B TXP 12 24
//	1 E3D_10_D1 [12]	1 L30_17_01 [12]		//
24 EXP B RXN 15 >> AN45	PE3D_RX_DN[15]	PE3D TX DNI151	T44	XEXP B TXN 15 24
24 EXP B RXN 14 S AM46	PE3D_RX_DN[14]	PE3D TX DN[14]	AC43	SEXP B TXN 14 24
24 EXP B RXN 13 SAN47	PE3D RX DN[13]	PE3D TX DN[13]	Y44	SEXP B TXN 13 24
24 EXP B RXN 12 S AG47	PE3D_RX_DN[12]	PE3D TX DN[13]	AA45	SEXP B TXN 12 24
//	T ESD_TOX_DIN[12]	I LOD_IX_DIN[12]		// =
24 EXP B RXP 11 >>AJ49	PE3C RX DP[11]	PE3C TX DPI111	AB46.	XEXP_B_TXP_11 24
24 EXP B RXP 10 SAH50	PE3C RX DP[10]	PE3C TX DP[10]	AC47	SEXP B TXP 10 24
24 FXP B RXP 9 S AJ51	PE3C_RX_DP[9]	PE3C_TX_DP[9]	U45	SEXP B TXP 9 24
24 EXP_B_RXP_8 \$\ AH48	PE3C_RX_DP[8]	PE3C_TX_DP[8]	T46	SEXP_B_TXP_8 24
//	FE3C_RX_DF[0]	FE3C_IX_DF[0]		//
24 EXP B RXN 11 >> AG49	PE3C RX DN[11]	PE3C_TX_DN[11]	Y46	
24 EXP_B_RXN_10 \$\infty AF50	PE3C_RX_DN[10]	PE3C_TX_DN[11]	AA47	SEXP B TXN 10 24
24 EXP B RXN 9 AG51	PE3C_RX_DN[10] PE3C_RX_DN[9]	PE3C_TX_DN[10]	R45	SEXP B TXN 9 24
24 EXP B RXN 8 AF48	PE3C_RX_DN[8]	PE3C_TX_DN[8]	P46	SEXP B TXN 8 24
24 250 25200020 //	FE3C_RX_DIN[0]	FE3C_IX_DIN[0]		//2/11 _5_1/11 _5
25 EXP_B_RXP_7 >> AC51_	PE3B RX DPI71	PE3B TX DPI71	U49	SEXP B TXP 7 25
25 EXP B RXP 6 AC53	PE3B_RX_DP[7] PE3B_RX_DP[6]	PE3B_TX_DP[6]	T50	SEXP B TXP 6 25
25 EXP B RXP 5 AB52	PE3B_RX_DP[6]	PE3B_TX_DP[6]	U51	SEXP B TXP 5 25
25 EXP_B_RXP_4 AB50	PE3B_RX_DP[4]	PE3B_TX_DP[5] PE3B_TX_DP[4]	T52	SEXP_B_TXP_4 25
20 230 202100 24 //	PE3B_RX_DP[4]	PE3B_TX_DP[4]		//=// _5_1// _1 20
25 EXP B RXN 7 >> AA51	PE3B_RX_DN[7]	PE3B_TX_DN[7]	R49	SEXP_B_TXN_7 25
25 EXP B RXN 6 SAA53	PE3B_RX_DN[6]	PE3B_TX_DN[7]	P50	SEXP_B_TXN_6 25
25 EXP B RXN 5 Y52		PE3B_TX_DN[6]	R51	SEXP B TXN 5 25
25 EXP B RXN 4 Y50	PE3B_RX_DN[5] PE3B_RX_DN[4]	PE3B_TX_DN[5] PE3B_TX_DN[4]	P52	SEXP B TXN 4 25
25 EXI_B_IOXIV_4 //	PE3B_RX_DN[4]	PE3B_TX_DN[4]		//CXI_D_IXIV_4 25
25 EXP B RXP 3 >> AC49	DEAL BY DRIVE	DEAL TV DOM	T48	SEXP B TXP 3 25
25 EXP B RXP 2 AH46	PE3A_RX_DP[3]	PE3A_TX_DP[3]	U47	SEXP B TXP 2 25
25 EXP B RXP 1 AJ45	PE3A_RX_DP[2]	PE3A_TX_DP[2]	L51	SEXP_B_TXP_1 25
25 EXP_B_RXP_0 AH44	PE3A_RX_DP[1]	PE3A_TX_DP[1]	K50	SEXP_B_TXP_0 25
25 EAF_B_RAF_0	PE3A_RX_DP[0]	PE3A_TX_DP[0]		- SEAF_B_TAF_0 23
25 EXP B RXN 3 >> AA49	PE3A RX DN(3)	PE3A TX DN[3]	P48	EXP B TXN 3 25
25 EXP B RXN 2 AF46			R47	SEXP B TXN 2 25
25 EXP B RXN 1 AG45	PE3A_RX_DN[2]	PE3A_TX_DN[2]	J51	SEXP_B_TXN_1 25
25 EXP B RXN 0 AF44	PE3A_RX_DN[1]	PE3A_TX_DN[1]	H50	EXP_B_TXN_0 25
25 EXP_B_KXIN_0 //	PE3A_RX_DN[0]	PE3A_TX_DN[0]		NEAF_B_IAN_U 25
	ZIF-SOCKET2036_0		="	

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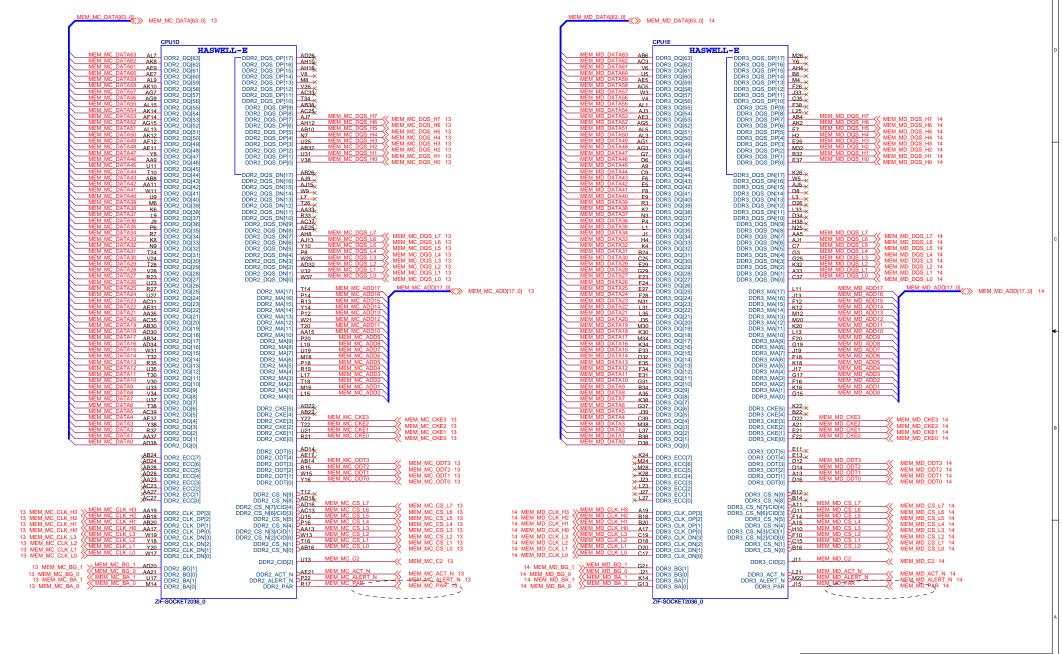
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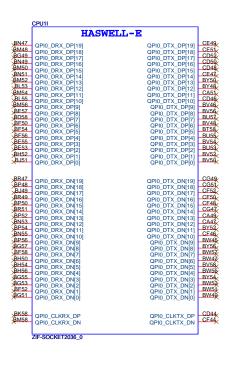
CPU-Memory0/1 MEM_MA_DATA[63..0] 11 MEM_MB_DATA[63..0] 12 HASWELL-E HASWELL-E DDR0_DQS_DP[17] DDR0_DQS_DP[16] DDR0_DQS_DP[15] DDR0_DQS_DP[14] DDR0_DQS_DP[13] CU9 CM36 CW13 DD36 DDR1_DQ[63] DDR0_DQ[63] DDR1_DQS_DP[17 CM38 DF38 DDR1_DQS_DP[16] DDR1_DQS_DP[15] DDR1_DQS_DP[14] DDR1_DQS_DP[13] DDR0_DQ[62] DDR0_DQ[61] DDR1_DQ[62] CK34 CF36 CE29 CL29 DB36 CV36 DA31 CU29 DDR1_DQ[60] DDR1_DQ[59] DA39 CJ39 CG13 CG9 BU13 DC7 CW3 CH4 CI 30 DC39 DDR0_DO[58] DDR0_DQS_DP[12 DDR0_DQS_DP[11 DDR0_DQS_DP[10 DDR1 DQI58 DDR1_DQS_DP[12] DDR1_DQS_DP[11] DDR1_DQS_DP[10] DDR0_DQ[57] DDR0_DQ[57] DDR0_DQ[56] DDR1_DQ[57] DDR1_DQ[56] CL35 DC37 CD38 BV8 × CV10 CJ37 CC37 CT38 BV2 DB14 DB38 DDR0_DQS_DP[0] DDR0_DQS_DP[8] DDR0_DQS_DP[7] DDR0_DQS_DP[6] DDR1_DQ[55] DDR1_DQ[54] DDR1_DQ[53] DDR1_DQ[52] DDR1_DQS_DP[9] DDR1_DQS_DP[8] DDR1_DQS_DP[7] DDR1_DQS_DP[6] DDR0_DQ[55 DDR0_DQ[54 CV38 CT34 C.V.16: MEM. MA. DQS. H7 C.G.37 MEM. MA. DQS. H6 C.G30 MEM. MA. DQS. H5 C.K30 MEM. MA. DQS. H5 C.K30 MEM. MA. DQS. H5 C.K14 MEM. MA. DQS. H3 C.K14 MEM. MA. DQS. H3 C.H10 MEM. MA. DQS. H3 C.H10 MEM. MA. DQS. H2 BV12 MEM. MA. DQS. H2 BV12 MEM. MA. DQS. H2 BV12 MEM. MA. DQS. H1 BV6 MEM. MA. DQS. H0 MEM. MA. DQS. H1 III BV6 MEM. MA. DQS. H0 MEM. MA. DQS. H1 III BV6 MEM. MA. DQS. H1 III BV7 MEM. MA MEM_MB_DQS_H7 MEM_MB_DQS_H6 MEM_MB_DQS_H5 MEM_MB CD34 DDR0_DQ[53 DDR0_DQ[52 CF34 CV34 CR37 DDR0_DQS_DP[6] DDR0_DQS_DP[4] DDR0_DQS_DP[3] DDR1_DQS_DP[5] DDR1_DQS_DP[4] DDR1_DQS_DP[3] CE39 CU39 CT30 DDR0 DQI50 DDR1 DQI50 CC35 CR35 DB10 DDR0 DQI49 DDR1 DQI49 CE35 DDR0_DQ[48] DDR0_DQ[47] DDR0_DQ[46] DDR0_DQS_DP[2] DDR0_DQS_DP[1] DDR0_DQS_DP[0] DDR1_DQ[48] DDR1_DQ[47] DDR1_DQ[46] DDR1_DQS_DP[3] DDR1_DQS_DP[1] DDR1_DQS_DP[0] CC31 DE33 CE31 DA33 DDR1_DQ[45] DDR1_DQ[44] CW9 CK36 CD36 CC29 CJ29 CF14 CH8 DDR0_DQS_DN[17] DDR0_DQS_DN[16] DDR0_DQS_DN[16] DDR0_DQS_DN[14] DDR0_DQS_DN[14] DDR0_DQS_DN[13] DDR0_DQS_DN[13] DDR0_DQS_DN[11] DDR0_DQS_DN[11] DDR0_DQS_DN[10] CY14 DE37 CE27 DB28 DDR1_DQS_DN[17] CB32 DF34 DDR1 DQS DN[16] DDR0 DQI43 DDR1 DQI43 CT36 CY32 CR29 DD8 CU3 CG3 CD32 DC33 DDR1_DQ[43] DB30 DDR1_DQ[42] DDR1_DQS_DN[16] DDR1_DQS_DN[15] DDR1_DQS_DN[14] DDR1_DQS_DN[13] DDR1_DQS_DN[12] DDR1_DQS_DN[11] DDR1_DQS_DN[10] DDR0 DQ[42 CB28 DDR0_DQ[41 DDR0_DQ[40 DDR1_DQ[41] DDR1_DQ[40] CD28 DA29 CJ31 CL31 CR31 CU31 DDR0_DQ[39 DDR1 DQ[39] | CLIAD | CLIA DDR1_DQ[38] DDR0 DQI38 C.127 CR27 DDR0 DQI37 DDR1 DQI37 BW1 DA13 DA37 CL 27 DDR0_DQS_DN[9] DDR0_DQS_DN[9] DDR0_DQS_DN[8] DDR0_DQS_DN[7] DDR0_DQS_DN[6] DDR0_DQS_DN[6] DDR0_DQS_DN[5] CU27 DDR1_DQS_DN[10] DDR1_DQS_DN[8] DDR1_DQS_DN[7] DDR1_DQS_DN[7] DDR1_DQS_DN[6] DDR1_DQS_DN[5] DDR0 DQI36 DDR1 DQI36 CP32 DDR1_DQ[35] DDR1_DQ[34] CK32 CT32 DDR0_DQ[34 CH28 CK28 CP28 CT28 CU37 DB32 DDR1 DQ[33 CI 13 DF10 CV30 DDR0 DQI31 DDR0 DQS DN[4] DDR1 DQI31 DDR1 DQS DN[4] DE9 DDR1_DQ[30] CY6 DDR1_DQ[29] DC9 CV4 CH6 CM12 DDR0_DQS_DN[4] DDR0_DQS_DN[3] DDR0_DQS_DN[2] DDR0_DQS_DN[1] DDR0_DQS_DN[0] DDR1_DQS_DN[4] DDR1_DQS_DN[3] DDR1_DQS_DN[2] DDR1_DQS_DN[1] DDR1_DQS_DN[0] DDR0_DQ[30] CC13 DA5 DDR0 DQI28 DDR1_DQ[28] CH14 DC11 DDR1 DQ[27 DE11 DB8 DDR1_DQ[26] DDR1_DQ[25] MEM_MB_ADD[17..0] CT24 CG15 DDR1_MA[17] MEM_MB_ADD[17..0] 12 CL23 CL25 CJ21 CE23 CY24 CY24 CV24 CN23 CW25 CF13 DA7 DDR0_MA[16] DDR0_MA[15] DDR0_MA[14] DDR1_MA[16] DDR1_MA[15] DDR1_MA[14] DDR0_DOI24 CR5 DDR1_DQ[23] CU5 DDR1_DQ[22] DDR1 DOI24 DDR0_DQ[23] DDR0_DQ[23] DDR0_DQ[22] CK8 CF11 DDR1_DQ[21] DDR1_DQ[20] DDR1_DQ[19] DDR1_MA[13] DDR1_MA[12] DDR1_MA[11] DDR0 DQ[21 DDR0_MAI13 CD10 CJ11 CR17 CP18 CP24 CR1 CP6 CT6 CW17 CV18 CR23 DDR0_MA[12 DDR0_MA[11 CK10 DDR0 DO[18] DDR0_MAI10 DDR1 DOI18 DDR1 MAI101 CV2 DDR1_DQ[17] CR3 DDR1_DQ[16] CF8 CE9 CK18 CJ19 CH18 CY18 DA19 DDR0_MA[9] DDR0_MA[8] DDR1_MA[10] DDR1_MA[9] DDR1_MA[8] DDR1_MA[7] BY12 CT18 DDR1 DQI15 DDR0 DQI15 DDR0 MAI71 CN19 CL19 CP20 CN21 CT22 CR21 CA11 BU15 CK6 CF6 CE5 CW19 CY20 CR19 DDR0_DQ[14 DDR0_DQ[13 DDR0_DQ[12 DDR0_MA[6] DDR0_MA[5] DDR0_MA[4] DDR1_DQ[14] DDR1_DQ[13] DDR1_DQ[12] DDR1_MA[6] DDR1_MA[5] DDR1_MA[4] BT14 CM4 CL5 DDR0_MA[3] DDR0_MA[2] DDR1_DQ[11] DDR1_DQ[10] DDR1_MA[3] DDR1_MA[2] DDR1_MA[1] MEM MA BW13 CV20 BU11 CF4 DA21 DDR0 DQ[9] DDR0 MAI1 DDR1 DQi9 BT12 CF3 DDR1_DQ[8] DDR1_DQ[7] DDR1_DQ[6] DDR1_DQ[6] DDR1_DQ[5] DDR0_DQ[8] DDR0_MA[0] DDR1_MA[0 BY2 CC15 CN15 CC17 MEM MA CKE3 CF16 MEM MA CKE2 MA CKE2 MA CKE2 DDR0_CKE[5] DDR0_CKE[4] DDR0_CKE[3] DDR1_CKE[5] DDR1_CKE[4] DDR1_CKE[3] CA7 CA1 DDR0_DQI6 BU9 BT2 BT4 DDR0 DQI5 MEM MA CKE3 11 DDR1_DQ[4] DDR1_DQ[3] MEM MB CKE3 12 CB8 CB4 DD16 MEM_MB_CKE DDR0 DQI3 DDR0 CKEI21 DDR1 CKEI2I CA3 DDR1_DQ[2] BU1 DDR1_DQ[1] CA9 DDBU_DOIS DDR0_CKEI1 DDR1 CKEI1 BV4 DDR1_DQ[0] BU7 DDR0_DQ[0] CE25 CF24 CC23 DD26 DA25 DC25 DDR1 ODTIS DE13 DDR1_ECC[7] DC13 DDR1_ECC[6] CT14 DDR1_ECC[5] CR13 DDR1_ECC[4] DF14 DDR1_ECC[3] DDR1_ECC[3] DDR1_ECC[3] DDR1_ECC[3] DDR0_ECC[7 DDR0_ODT[4] DDR0_ODT[3] DDR1_ODT[4] DDR1_ODT[3] CN9 DDR0_ECC[6] CDR0 DDR0_ECC[5] CP8 DDR0_ECC[4] CU11 DDR0_ECC[3] CW11 DDR0_ECC[2] CV8 DDR0_ECC[1] CT8 DDR0_ECC[0] DDR0 ECCI6 C.123 DC23 MEM_MA_ODT2 11 MEM_MA_ODT1 11 MEM_MB_ODT2 12 MEM_MB_ODT1 12 DDR0 ODTi2 DDR1 ODTi2 CN25 CF22 DDR1_ODT[1] DDR1_ODT[0] DD22 DDR0_ODT[0] CW11 CV8 CT8 CK26, CK24, CD26 MEM MA CS L7 CH26 MEM MA CS L6 CH24 MEM MA CS L5 CK22 MEM MA CS L6 DF26 DF24 CV26 CY26 DD24 CV14 DDR1_ECC[1] DDR1_ECC[0] DDR0_CS_N[9] DDR0_CS_N[8] DDR1_CS_N[9] DDR1_CS_N[8] MEM_MA_CS_L7 11 MEM_MA_CS_L6 11 MEM_MA_CS_L5 11 MEM_MA_CS_L4 11 MEM_MA_CS_L3 11 DDR0_CS_N[7]/CID[4] DDR0_CS_N[6]/CID[3] DDR0_CS_N[5] DDR1_CS_N[7]/CID[4] DDR1_CS_N[6]/CID[3] DDR1_CS_N[5] 12 MEM_MB_CLK_H3 12 MEM_MB_CLK_H2 12 MEM_MB_CLK_H2 13 MEM_MB_CLK_H1 DE19 DDR1_CLK_DP[3] DDR1_CLK_DP[2] DDR1_CLK_DP[1] MEM_MB_CS_L6 12 MEM_MB_CS_L5 12 MEM_MB_CS_L4 12 MEM_MB_CS_L3 12 DDR0_CLK_DP[3] DDR0_CLK_DP[2] DA23 1 DDR0_CLK_DPI DDR0 CS NI4 DDR1 CLK DPI1 DDR1 CS NI4 CC21 CE19 CC25 CF26 CP26 CT26 DE23 DE21 DC19 MEM MA CLK HO DDR0_CLK_DP[0] DDR0_CLK_DN[3] DDR0_CS_N[3]/CID[1] DDR0_CS_N[2]/CID[0] 12 MEM_MB_CLK_H0 12 MEM_MB_CLK_L3 12 MEM_MB_CLK_L2 DDR1_CLK_DP[0 DDR1_CLK_DN[3 DDR1_CS_N[3]/CID[1] DDR1_CS_N[2]/CID[0] MEM_MA_CS_L2 11 MEM_MA_CS_L1 11 MEM_MA_CS_L0 11 MEM MA CIK IS MEM MB CS L MEM_MB_CS_L1 12 MEM_MB_CS_L1 12 MEM_MB_CS_L0 12 CF20 CH22 DD20 DDR0 CLK DNI2 DDR0 CS NI1 DDR1 CLK DNI2 DDR1_CS_N[1] DDR1_CS_N[0] CF18 DDR0_CLK_DN[1] DDR0_CLK_DN[0] DDR1_CLK_DN[1] DDR1_CLK_DN[0] DDR0_CS_N[0] CR25 MEM_MB_C2 CJ25 MEM_MA_C2 -</ MEM_MA_C2 11 12 MEM_MB_BG_1 CP16 12 MEM_MB_BG_0 MEM_MB_BG_1 CV16 12 MEM_MB_BA_1 12 MEM_MB_BA_0 MEM_MB_BA_0 CW23 DDR1 CIDI21 MEM_MB_C2 12 DDR0 CIDI21 DDR1_BG[1 DDR1_BG[0 DDR1_BA[1] DDR0_ACT_N DDR0_ALERT_N DDR0_PAR DDR0_P CT16 MEM MB ACT N CR15 MEM MB ALERT N CT20 MEM MB-PAR WEM_MB_PAR 12 DDR1_ACT_N DDR1_ALERT_N 11 MEM_MA_BG_0 11 MEM_MA_BA_1 12 MEM_MB_BG_0 12 MEM_MB_BA_1 DDR0_BG[0] DDR0_BA[1] DDR1_PAR 11 MEM MA BA 0 DDR0_BA[0] 12 MEM MB BA 0 DDR1_BA[0] ZIF-SOCKET2036_0 ZIF-SOCKET2036_0 www.teknisi-indonesia.com MICRO-STAR INT'L CO.,LTD MS-7883 MSI 1.0 CPU-Memory0/1

CPU-Memory2/3





CPU-QPI/RESERVE



CPU1J								
HASWELL-E								
C55 C056 C056 C056 C056 C057 C057 C057 C055 C055 C055 C055 C055	OPI1 DRX DPI19 OPI1 DRX DPI19 OPI1 DRX DPI19 OPI1 DRX DPI17 OPI1 DRX DPI17 OPI1 DRX DPI16 OPI1 DRX DPI16 OPI1 DRX DPI16 OPI1 DRX DPI14 OPI1 DRX DPI14 OPI1 DRX DPI19 OPI1 DRX DPI3	QPI DTX DPI(9) QPI DTX DPI(9) QPI DTX DPI(1)	CT44, CT46, CT46, DB52, DE51, CU45, DE49, CU45, DB46, DC45, CU45, DD46, DC45, CT42, DD46, DC43, CT42, DD44, DC43, DC43, DC43, DC43, DC43, DC43, DC43, DC43,					
CE55 CE56 CE56 CE56 CE56 CE55 CE55 CE55	OPI1_DRX_DP[0] OPI1_DRX_DN[19] OPI1_DRX_DN[19] OPI1_DRX_DN[19] OPI1_DRX_DN[19] OPI1_DRX_DN[16] OPI1_DRX_DN[16]	OPH_DTX_DP(0) OPH_DTX_DN(1)						
CJ53 CL53	QPI1_CLKRX_DP QPI1_CLKRX_DN ZIF-SOCKET2036_0	QPI1_CLKTX_DP QPI1_CLKTX_DN	DB54 CY54					

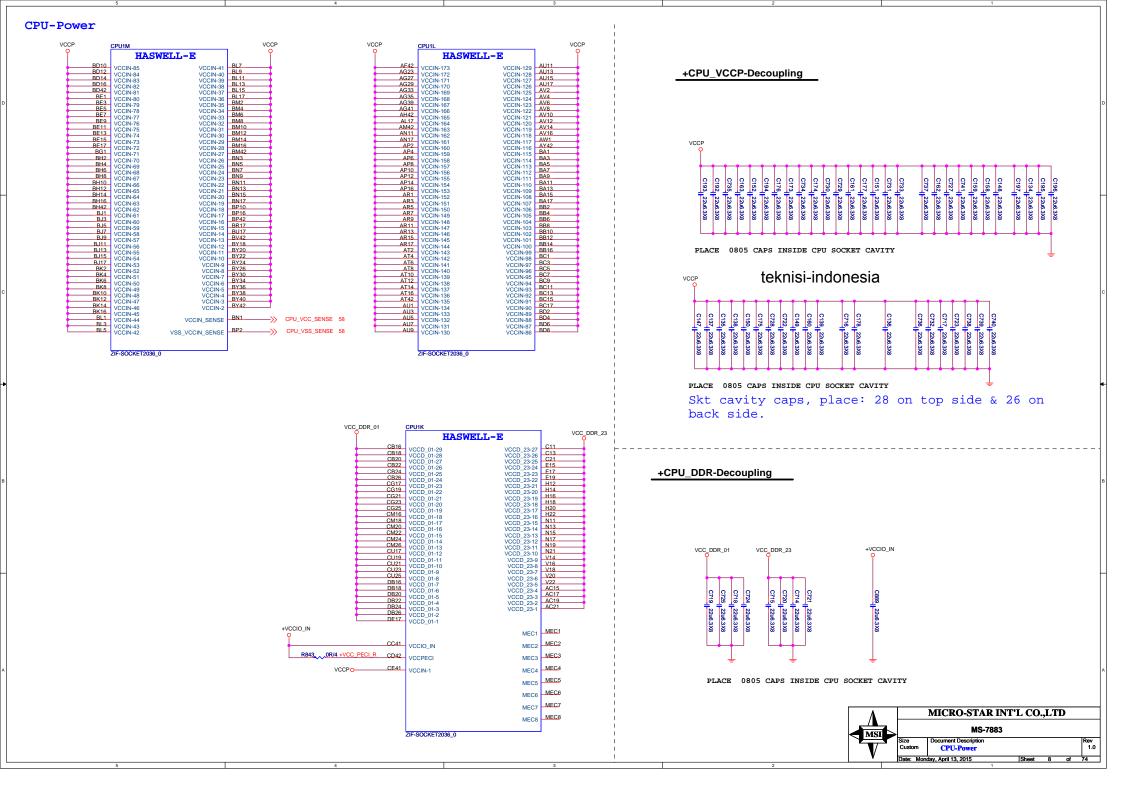
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TP870AR55_	RSVD-48	HASWELL-E RSVD-5	4 BM46	OTP67			CPU_PWR_DEBUG_N		10K/4	O+VCCIO_IN
TP910AU55_ TP10H58_	RSVD-47	RSVD-5	3 BP46	TP72 TP90			FIVR_FAULT	R863	10K/4	J
TP6 0. K58	RSVD-46 RSVD-45	RSVD-5 RSVD-5	CY58	TP88						
TP94 <u>D56</u> TP9 <u>F56</u>	RSVD-44 RSVD-43	RSVD-5 RSVD-4		OTP77	500MIL					
R861 X49.9R1%4 CPU_N_COMP DE53	RSVD-41	TESTI	201	CPU_TEST1						
"		TEST	DB2		R155 49.9R1%4 R154 49.9R1%4	→				
TP510BH44_	RSVD-28 RSVD-27	TEST[: TEST]:	D0		R153 49.9R1%4	⊒				
TP540BJ45_ TP290BE43_	RSVD-26	•		OTP52						
TP30 BG43	RSVD-25 RSVD-24	RSVD-8 RSVD-8	CI 40	TP46						
TP310 BF44	RSVD-23 RSVD-36	PWR DEBUG	AC41	CPU_PWR_D	EBUG_N					
TP38 BD44 TP34 BR43	RSVD-35 RSVD-34	FIVR_FAUL RSVD-	T CY40	FIVR_FAULT TP85						
TP49 BU43	RSVD-33	RSVD-	8 CW51	TP76						
TP330BL43	RSVD-32 RSVD-31	RSVD- RSVD-	N41	TP73 TP39						
TP710BR45_ TP450BM44_	RSVD-30	DEBUG_EN_		CPU_L	DEBUG_EN_N >>>	CPU_DEBUG_	EN_N 70			
TP64 BN45 TP56 BK44	RSVD-29 RSVD-22	RSVD-	5 BA55	$\overline{}$) -					
	RSVD-21	RSVD-1	1 E57	OTP7						
TP530BY44 TP620BV44	RSVD-40 RSVD-39	RSVD-1 RSVD-1	0 558	OTP11						
TP50 CA43 TP59 BT44	RSVD-38	RSVD-1	2 DB56		3 ₁₈ X_0.1u/10X4 ₁₁	—OCPU_CORE	3			
	RSVD-37	RSVD-1	*							
TP63 <u>AM44</u> TP69 <u>BH48</u>	RSVD-80 RSVD-79	RSVD-6 RSVD-6	7 Y54 6 AA41	OTP92 OTP35						
TP36C41_ TP78BF48_	RSVD-78	RSVD-6	5 AE45.	OTP58	OR:R259 REM	IOVED				
TP790E53	RSVD-77 RSVD-76	RSVD-6 RSVD-6	3 AM54	TP95						
TP650F46_ TP440G43	RSVD-75 RSVD-74	RSVD-6 RSVD-6		OTP75						
TP8 0	RSVD-73	RSVD-6	0 DA11	OTP24						
TP550 P42	RSVD-72 RSVD-71	RSVD-5 RSVD-5	8 U53	TP93						
TP410 V42	RSVD-70 RSVD-69	RSVD-5 RSVD-5	CY56	TP84 TP86						
TP42 W41	RSVD-68	RSVD-5		OTP23						
	ZIF-SOCKET	2036_0								

MICRO-STAR INT'L CO.,LTD

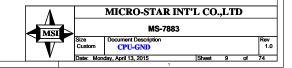
MS-7883

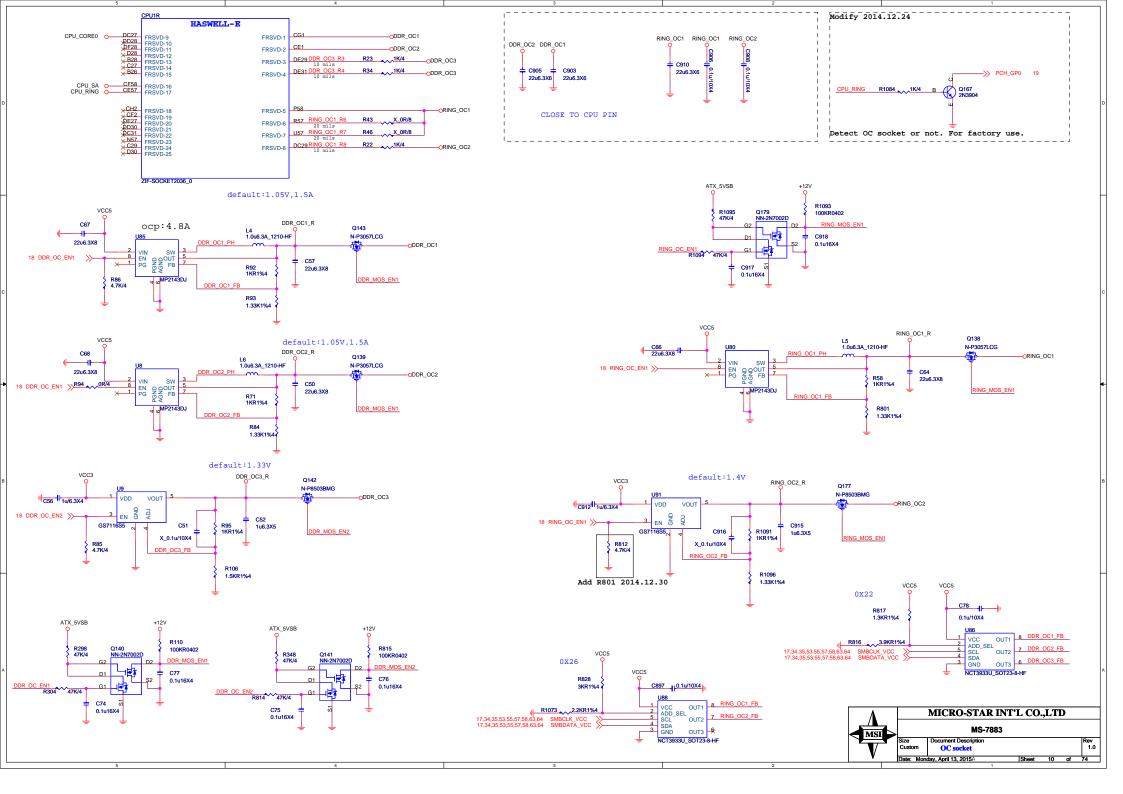
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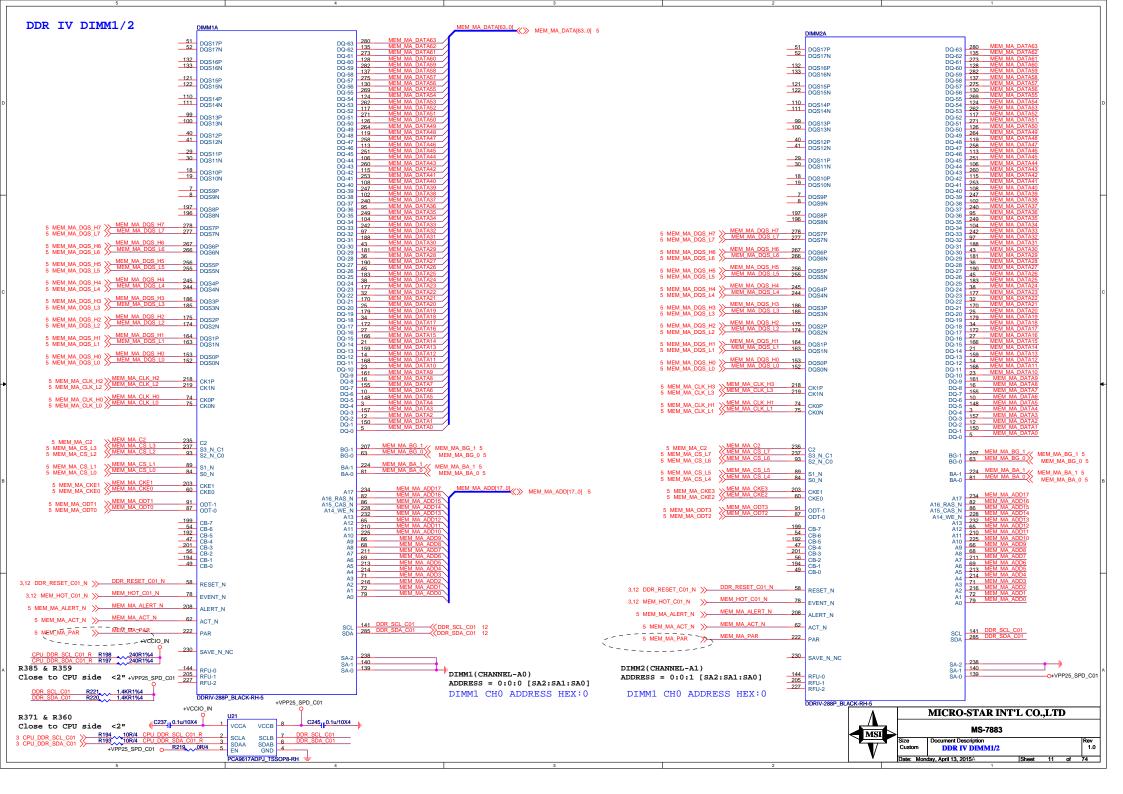
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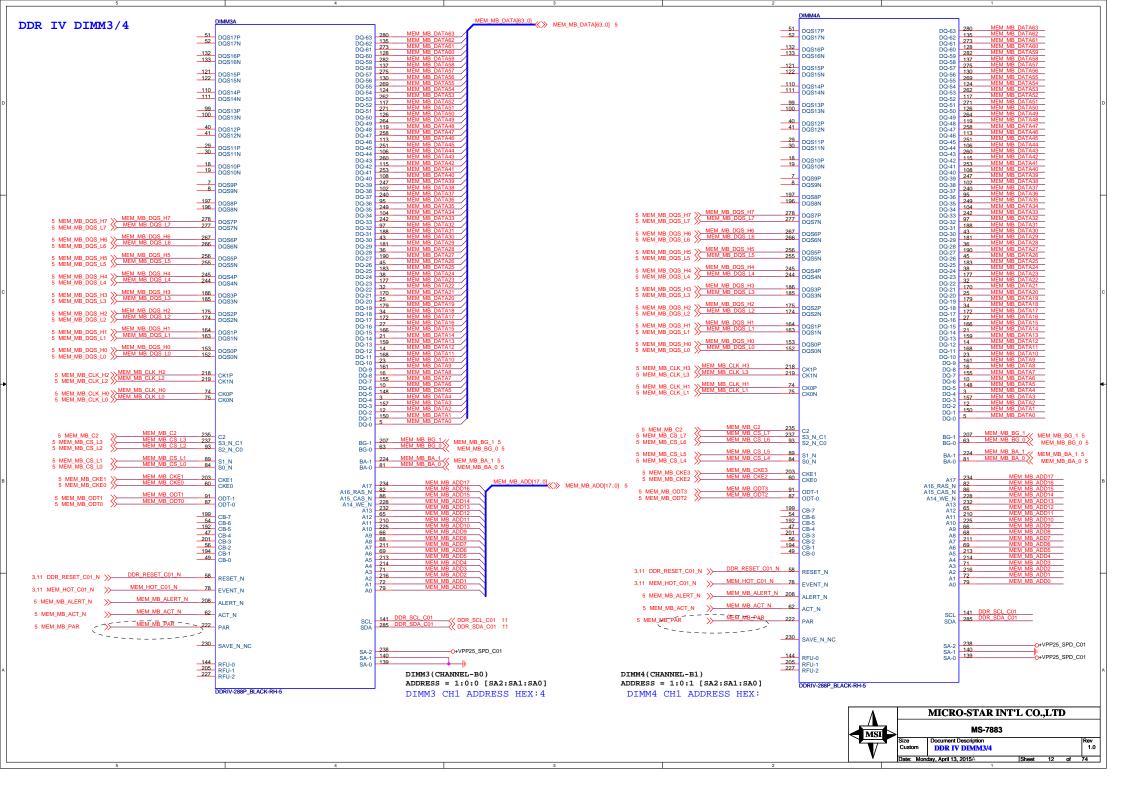


CPU1N		CPU1O		CPU1P		CPU1Q	
HASWELL-		HASWE	4110	HASWEL	L-E	HASWEL	L-E
VSS-629 VSS-628	VSS-553 VSS-551 M36	Y36 Y4 VSS-472 VSS-480	VSS-394 VSS-393	BC47 VSS 245	VSS-236 BW15	CH12VSS 1E7	Vec 70 CU1
VSS-627	VSS-550 M42	VEC VSS-471	VSS-392 AH14	BC49 VSS-314	VSS-235 BW17	CH30 VSS-156	VSS-77 CU15
43	VSS-549 M46	AA3 VSS-470	VSS-391 VSS-390 AJ17	BC53 VSS-313	VSS-234 VCC 222 BY8	CH36 VSS-155	VSS-76 CU33
45 VSS-624	VSS-547 M48	AA25 VSS-467	VSS-380 AK4	BC55 VSS-311	VSS-232 BY10	CH38 VSS-153	1/CC 74 CV6
47 VSS-623 49 VSS-622	VSS-546 M52	AA29 VSS-466 AA7 VSS-468	VSS-388 AK6 AK16	BC57 VSS-310 VSS-310	VSS-231 BY28 VSS-231 BY32	CH40 VSS-152 CH42 VSS-152	VSS-74 VSS-73 VSS-72 CV28
VSS-631	V00 540 N23	AA31 VSS-465	VSS-386 AK42	BD52 BD54 VSS-309 VSS-308	VSS-230 VSS-229 BY58	CH44 VSS-151 CH44 VSS-150	VSS-71 CV32
VSS-621	VSS-542	AA39 VSS-464	VSS-385 AK44	BD56 VSS-307	VSS-228 CA5	CH40 VSS-149	VSS-70 CV40
0 VSS-630 VSS-619	VSS-541 N33	AB33 VSS-463 AB12 VSS-462	VSS-384 VSS-383	BE51 VSS-306 VSS-305	VSS-227 VSS 226 CA15	CH50 VSS-148	VCC 60 CV58
VSS-618	VSS-539 VSS-538 N37	AB36 VSS-461	VSS-382 VSS-381 AK52	BF2 VSS-304 VSS-304	VSS-225 CA17	CH52 VSS-146	VSS-67 CW1
VSS-616		AB42 VSS-450	VSS-380 AL11	BF10 VSS-300	VSS-223 CA21	CH56 VSS-144	VSS-65 CW7
VSS-620	VSS-536	AC7 VSS-458	VSS-379 AL43	BF12 VSS-299	VSS-222 CA23	CJ3 VSS-143	VSS-64 CW15
V00 64E	VSS-534 N47	AC11 VSS-456	VSS-377 AL47	BF16 VSS-297	VSS-220 CA27	CJ15 VSS-142	VSS 63 CW29
VSS-613	VSS-533 N49	AC29 VSS-455	VSS-376	BF6 VSS-302	VSS-219 CA29	CJ33 VSS-140	VSS-61 CW31
VSS-611 VSS-610	VSS-544 VSS-532	AD8 VSS 453	VSS-375 AL53	BF8 BF42 VSS-301 VSS-296	VSS-216 CA33	CJ41 CJ43 VSS-139 VSS-138	VSS 50 CW35
VSS-609	VSS-531 N53	AD6 VSS-453		BG3 VSS-295	VSS-216 CA35		VSS-58 CW37
VSS-612 VSS-608	VSS-530 VSS-529 P10 P24	AD10 VSS-451 VSS-450	VSS-373 VSS-372 VSS-371 AM4 AM6 AM8	BG5 VSS-294 VSS-293	VSS-215 VSS-214 CA37 CA39	CJ47 VSS-137 VSS-136 CJ49 VSS-135	VSS-56 CW39 VSS-56 CW53
VSS-607		AD36 VSS-449		BG9 VSS-292	VSS-213 CA41	CJ51 VSS-134	VSS-55 CW55
VSS-606	VSS-527 P28	AD40 VSS-448	VSS-369 AM10	VSS-291	VSS-212 CA55	VSS-133	VSS-54 CW57
VSS-604	V33-320 V60 505 P32	AD44 VSS 446	VSS-368 VSS-367 AM14	BG15 VSS-290	VSS-210 CB2	CK40 VSS-132	VSS-52 CY4
VSS-603	VSS-524 P34	AD46 VSS-445	VSS-366 AM16	BG17 VSS-288	VSS-209 CB10	CK52 VSS-130	VSS-51 CY8
VSS-600	VSS-522 P40	AD50 VSS-444	VSS-364 AN1	BG47 VSS-286	VSS-207 CB14	CL7 VSG-129	VSS-40 CY12
VSS-599	VSS-521	AU52 VSS-442	VSS-363 AN3	BH58 VSS-285	VSS-206 CB30	CL9 VSS-127	VSS-48 CY30
VSS-602 VSS-608	VSS-520 VSS 517 R11	AE15 VCC 440	VSS-362 VSS-361 AN7	BJ57 VSS-283	VSS-205 VSS-204 CB36	CL15 VSS-126	VSS-46 CY36
VSS-597		AF19 VSS-439	VSS-360 AN9	BK42 VSS-282	VSS-203 CB38	CM6 VSS-124	VSS-45 CY38
VSS-596 VSS-595	VSS-515 R31	AE23 VSS-438 AE27 VSS-437	VSS-359 VSS-358 AN15	BK48 VSS-281	VSS-202 VSS-201 CB42	CM10 VSS-123	VSS-44 VSS-43 CY44
VSS-594	VSS-513	AE29 VSS-436	VSS-357 AN55	BK50 BK52 VSS-279	VSS-200 CB44	CM28 VSS-121	VSS-42 CY46
VSS-591 VSS-590	VSS-519 R55	AE33 VSS-435 VSS-434	VSS-356 VSS-355 AP42	BK52 BK54 VSS-277	VSS-199 VSS-199 CB48 CB48	CM32 CM40 VSS-120 VSS-119	VSS-41 VSS-40 CY50
VSS-580		AE39 VCC 422	VSS-354 AP44	BL45 VSS-276	VSS-197 CB50	CM52 VSS-118	Vec 20 CY52
VSS-588	VSS-508	AE41 VSS-432 VSS-432 VSS-431	VSS-353 VSS-352 AT44 AT46	BI 49 VSS-275	VSS-196 CB52 CB54	CM54 VSS-117 CN3	VSS-38 DA3
V00 506	V66 507 T42	AE47 VGC 400		BL37 BN43 VSS-274 VSS-273	VSS-195 VSS-195 CB56	CN5 V00 445	VCC 2C DA27
VSS-585	VSS-500 T6 VSS-500 T8	AE49 VSS-429 AF10 VSS-429	VSS-350 VSS-349 AT50	BN57 VSS-272 VSS-272	VSS-193 CC3	CN7 VSS-115 VSS-114 VSS-114	VSS-36 VSS-35 DA41
VSS-583	VSS-504 U29	AF16 VSS 422	VSS-348 A132	BP6 VSS-270	VSS-191 CC7	CN13 VSS-113	Vec 22 DA43
VSS-593	VSS-506	AF18 VSS-420	VSS-347 AU45	BP8 VSS-269	VSS-190 CC9	CN27 VSS-111	VSS-32 DA45
VCC 501	VSS-502 U41	AE53 VSS 427	VSS-345 AU49	BP14 VSS-200	VCC 100 CC33	CN31 VSS-100	Vec 20 DA49
VSS-580	VSS-501 U43	AF2 VSS-426		BP58 VSS-266	VSS-187 CC43	CN33 VSS-108	VSS-29 DA51
VSS-592	VSS-505 VSS 500 V10	AF6 VSS-425	VSS-344 VSS-343 AU53 AV42 AV54	BR3 VSS-265	VSS-100 VCC 105 CC47	CN37 VSS-107	VSS-28 VSS-27 DA55
VSS-576	VSS-400 V12	AF8 VSS-423 AF20 VSS-423	VSS-341 AV54 AV56	BR5 VSS-263	VSS-184 CC49 CD12	CN39 VSS-105 CN53	VSS-26 DB6 DB12
VSS-575 VSS-574	VSS-498 VSS-497	AF20 VSS-419 AF22 VSS-418	VSS-340 AW11	BR9 VSS-262 VSS-261	VSS-180 VSS-183	CN55 VSS-104 VSS-103	VSS-25 VSS-24 DB34
VSS-573	VSS-496 V46	AF24 VSS-417	VSS-334 AW13	BR11 Vec 260	VSS-182 CD6	CN57 VSS-103	VSS-24 DB40
V33-3/2	VSS-495 VSS-495 VSS-495 V50	AF26 VSS-416	VSS-333	BR13 VSS-259 VSS-259	VSS-181 CD8	CP4 VSS-101 CP12 VSS-101	VSS-22 DB58 VSS-21 DC5
VSS-570	V52 402 V52	AF30 VSS-415	VSS-330 AW3	BR53 VSS-236	VSS-179 CE7	CP14 VSS-100	Vec 20 DC53
VSS-569	VSS-491 W23	AF32 VSS-413	VSS-338	BR55 VSS-256	VSS-177 CE15	CP30 VSS-98	VSS-19 DC55
VSS-579	VSS-490 W33	AF36 VSS-412	VSS-337 VSS-336 AW9	BT10 VSS-255	VSS-176 CE43	CP36 VSS-97	VSS-18 DD10
VSS-565		AF38 VSS-410	VSS-331 AW55	B116 VSS-253	VSS-174 CE45	CP38 VSS-95	VSS-16 DD12
VSS-564 VSS-568	VSS-488 VSS-487 VSS-486 W43	AF54 VSS-408	VSS-330 AY2	BT46 VSS-251	VSS-173 CF12	CP44 VSS-03	VSS-14 DD38
VSS-563	VSS-485	AF56 VSS-407	VSS-328 AY4	B148 VSS-250	VSS-171 CF28	CP46 VSS-92	VSS-13 DD40
VSS-562 VSS-567	VSS-484 W49	AG11 AG13 VSS-406 VSS-405	VSS-327 VSS-326 AY8	BT52 VSC 249	VSS-170 CG27	CP50 VSS 00	VSS-12 DE15
VSS-561	VSS-482	AG17 VSS-404	VSS-325 AY10	B154 VSS-247	VSS-167 VSS-169 CG5	VSS-89	VSS-10 DE35
VSS-566	VSS-481	AG19 VSS-403 VSS-402	VSS-325 VSS-324 AY12 AY14	B156 B112 VSS-246	VSS-168 CG7	VSS-88	VSS-9 DF8
VSS-560 VSS-559	VSS-492 Y12	AG25 VSS-402 VSS-401	VSS-323 VSS-322 AY16	BU5 VSS-245 VSS-244	VSS-165 CG31	CR33 VSS-86	VSS-7 DF40_
VSS-558	VSS-478 Y24 Y26	AG31 VSS-400	VSS-321 AY44.	BU45 VSS-243	VSS-164 CG33	CR41 VSS-85	VSS-6 DF42
VSS-555	V33-477 Y28	AG43 VSS.308	VSS-320 BB46	BU51 VSS-242	VSS-163 CG37	CR47 VSS-83	VSS-4 DF46
VSS-554		AG55 VSS-397	VSS-318 BB50.	BV10 VSS-240	VSS-161 CG39	VSS-82	VSS-3 DF48
VSS-557 VSS-552	VSS-475 VSS-474 VSS-473	AG57 VSS-396 VSS-395	VSS-317 VSS-316 BC45	BW5 VSS-238	VSS-160 CG45	CT12 VSS-80	VSS-2 VSS-1 DF52
ZIF-SOCKET2036_0	V00*473	ZIF-SOCKET2036_0	V33*310	BW7 VSS-236 VSS-237	VSS-158 CG53	CT40 VSS-79	V33*1
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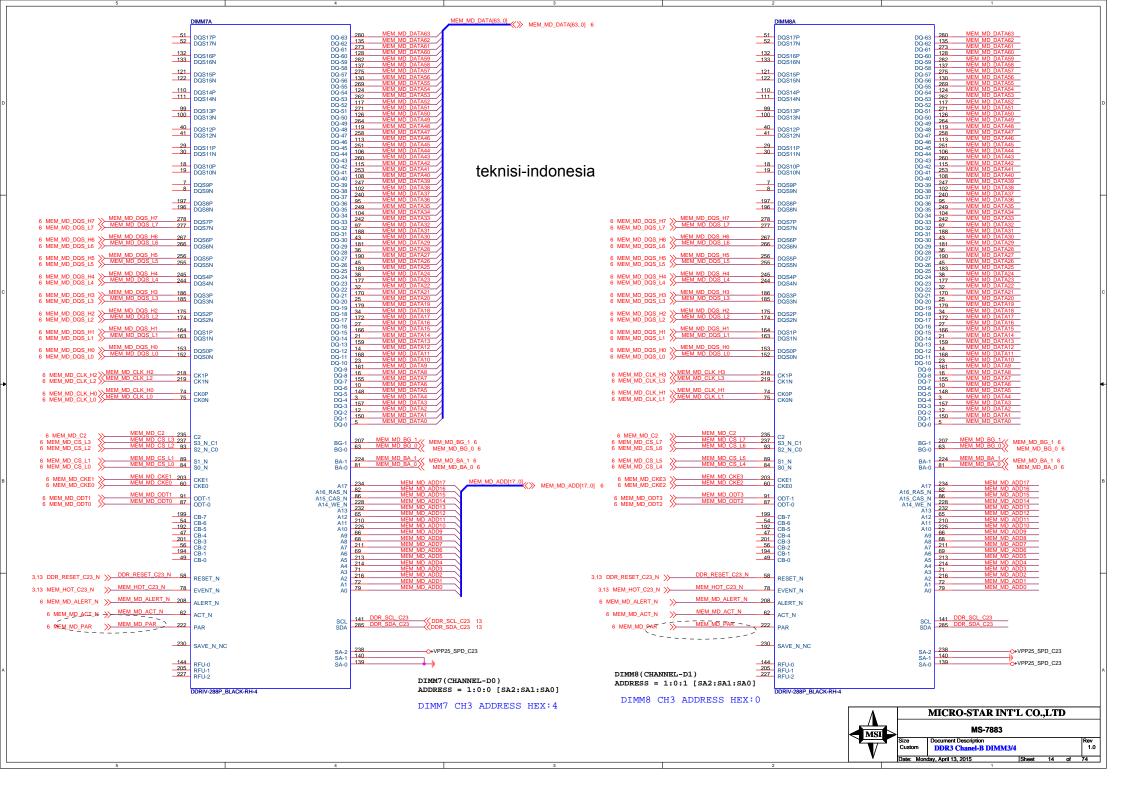


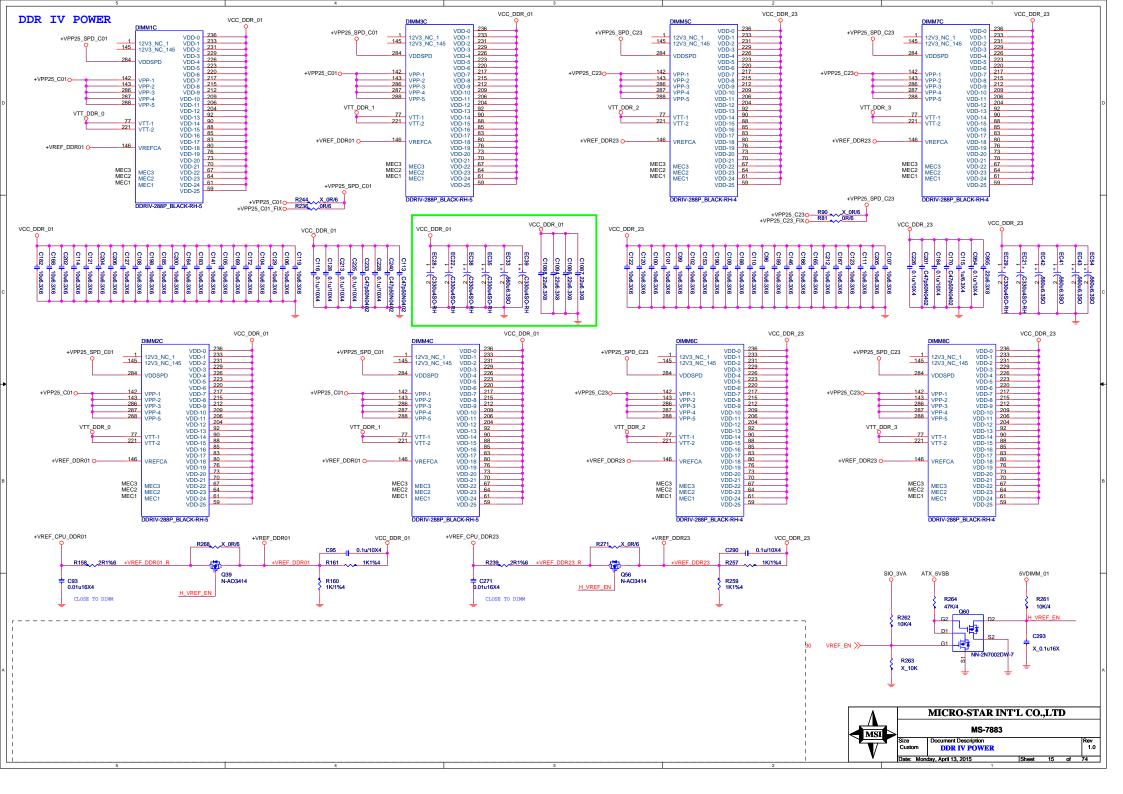


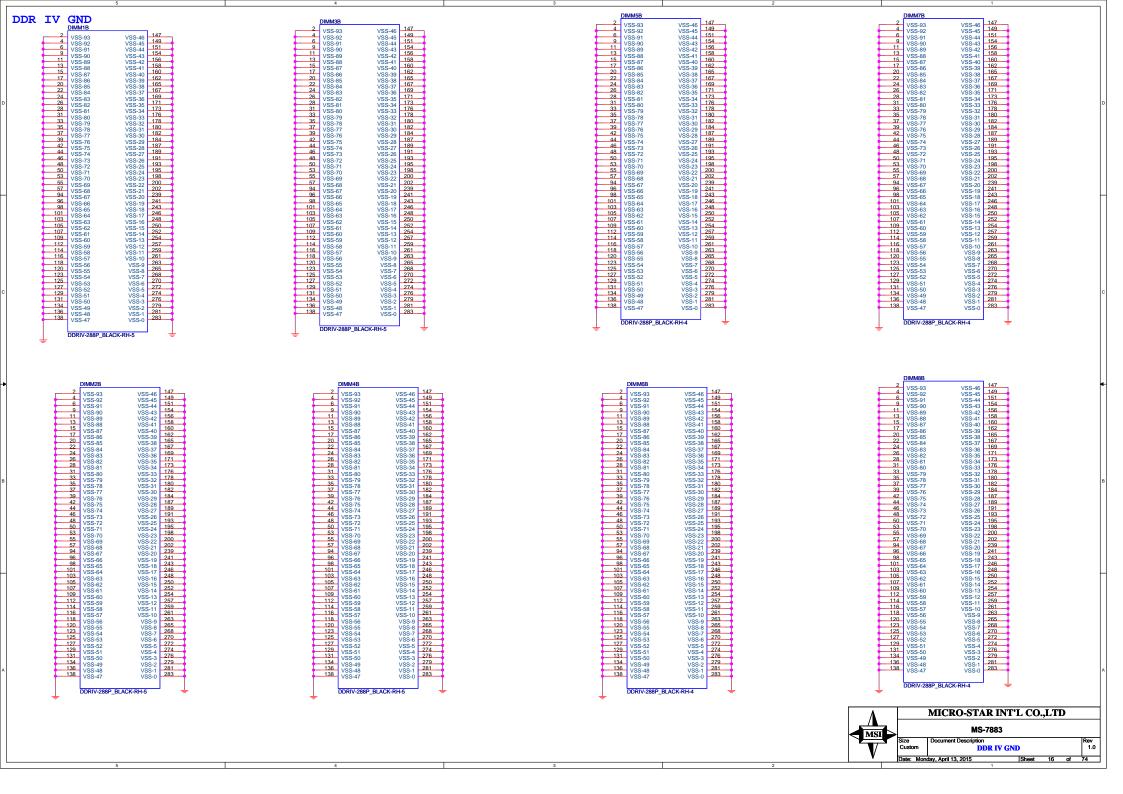


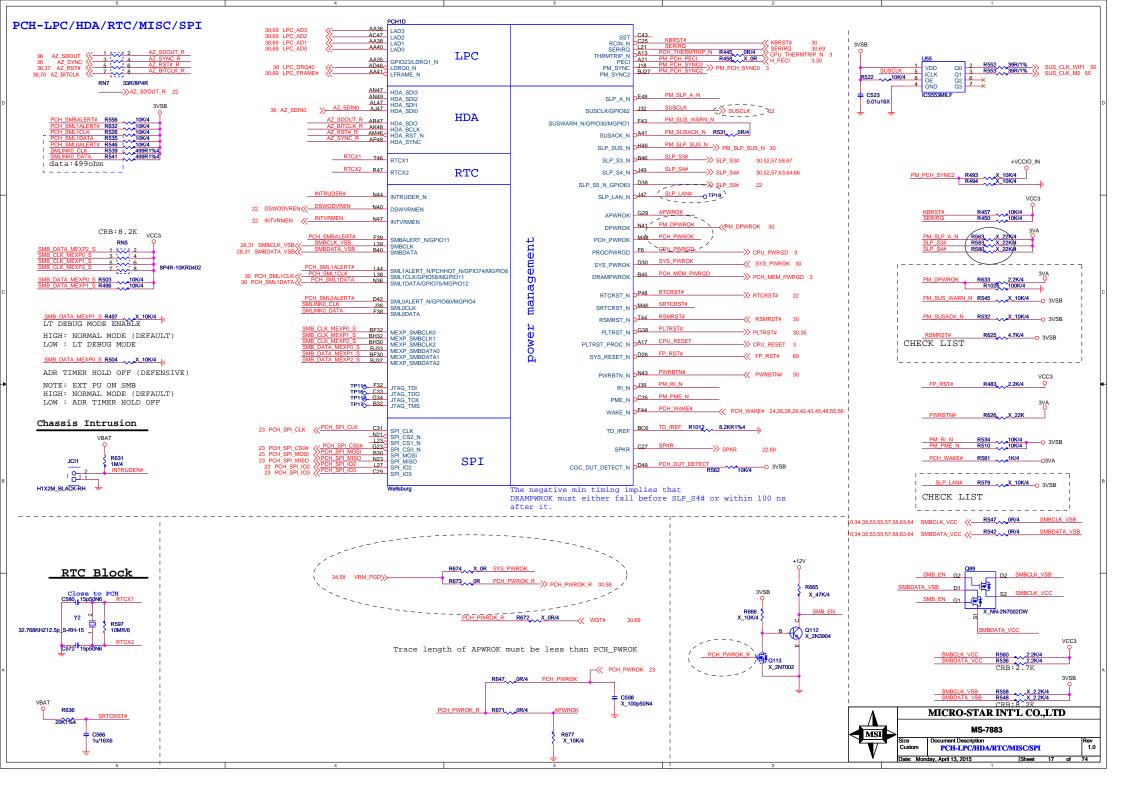


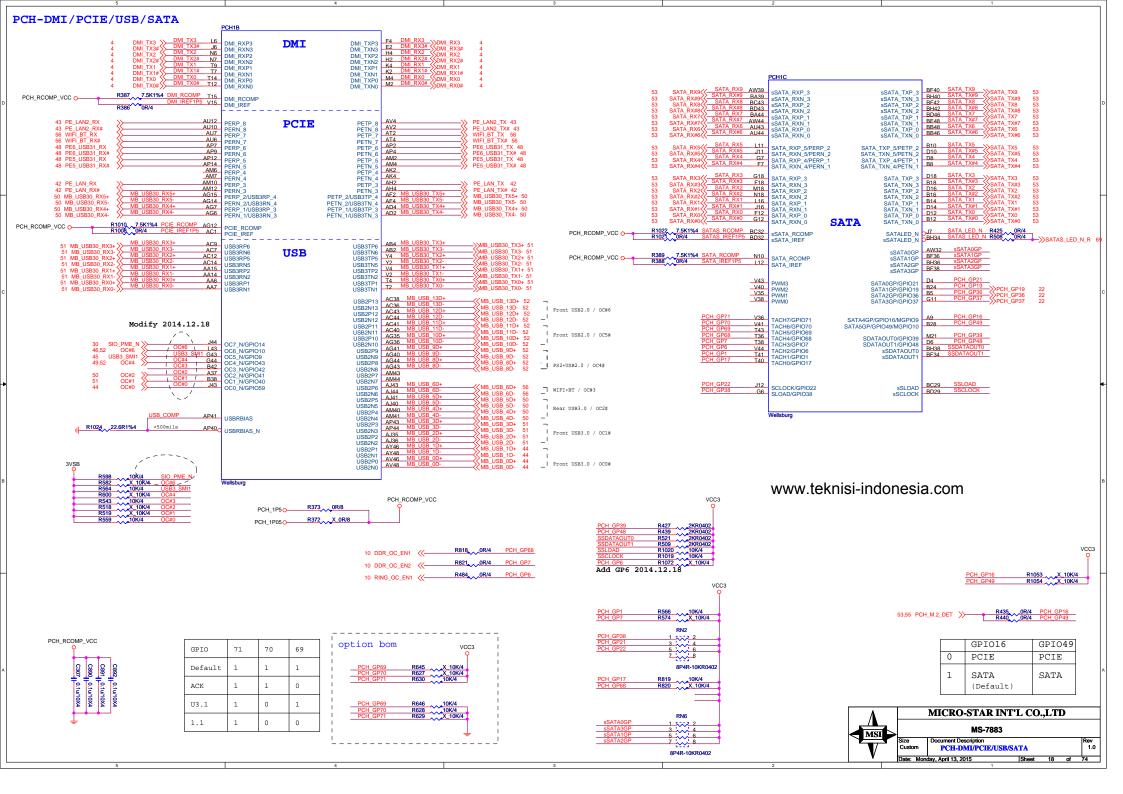


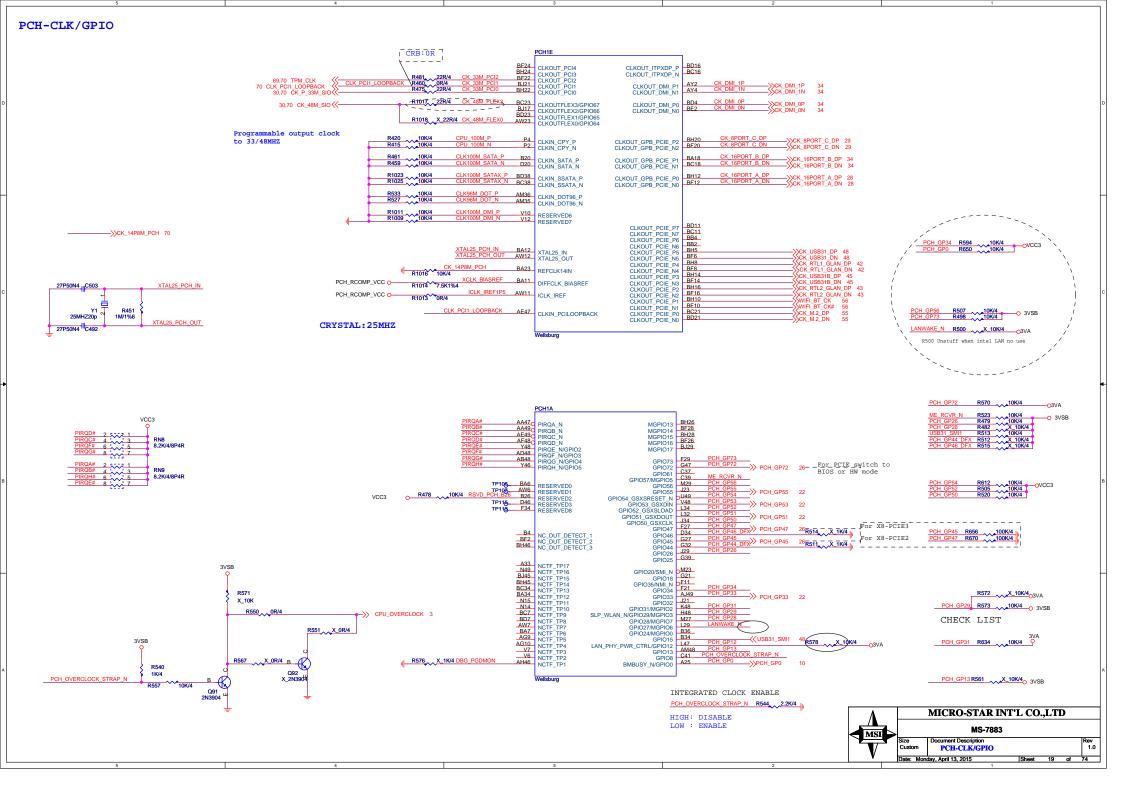


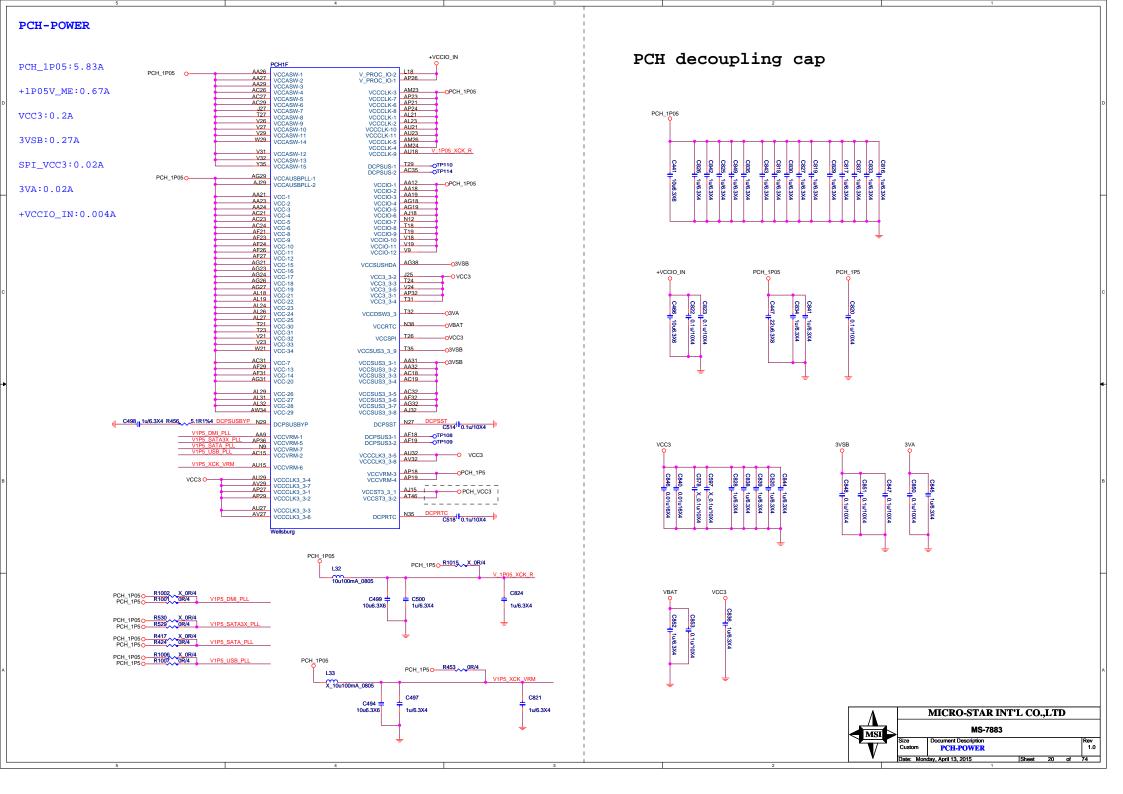




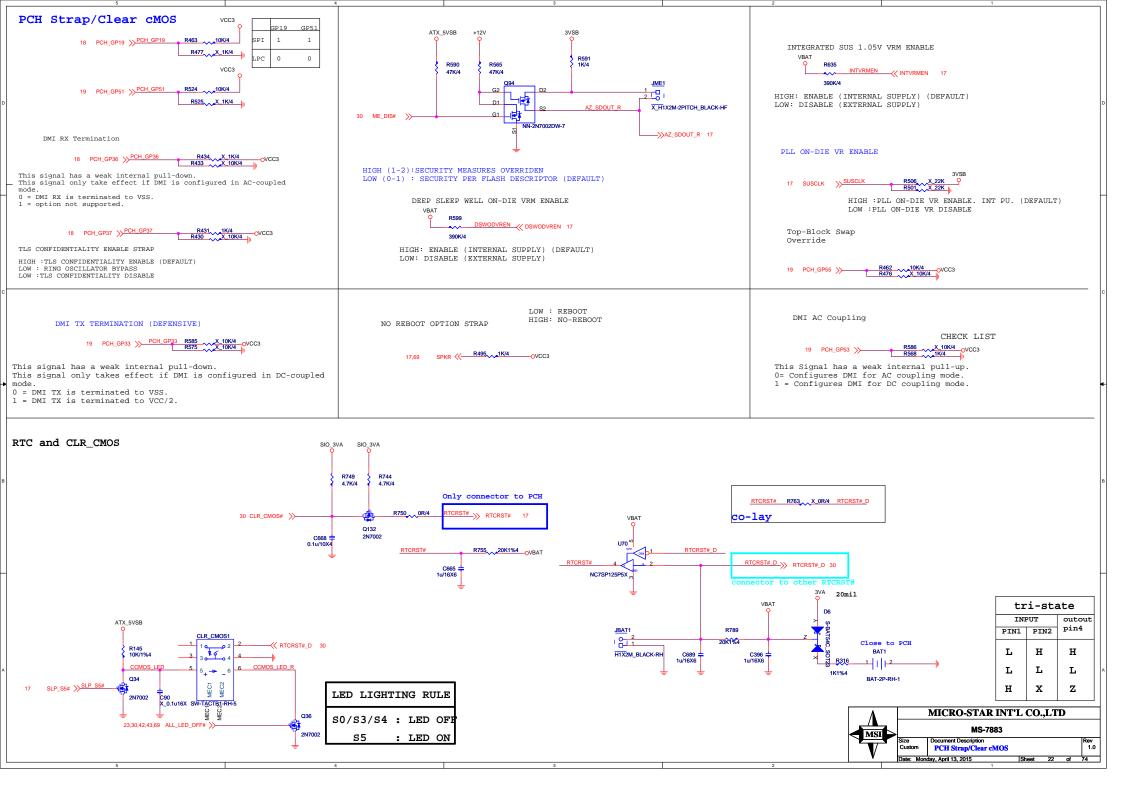


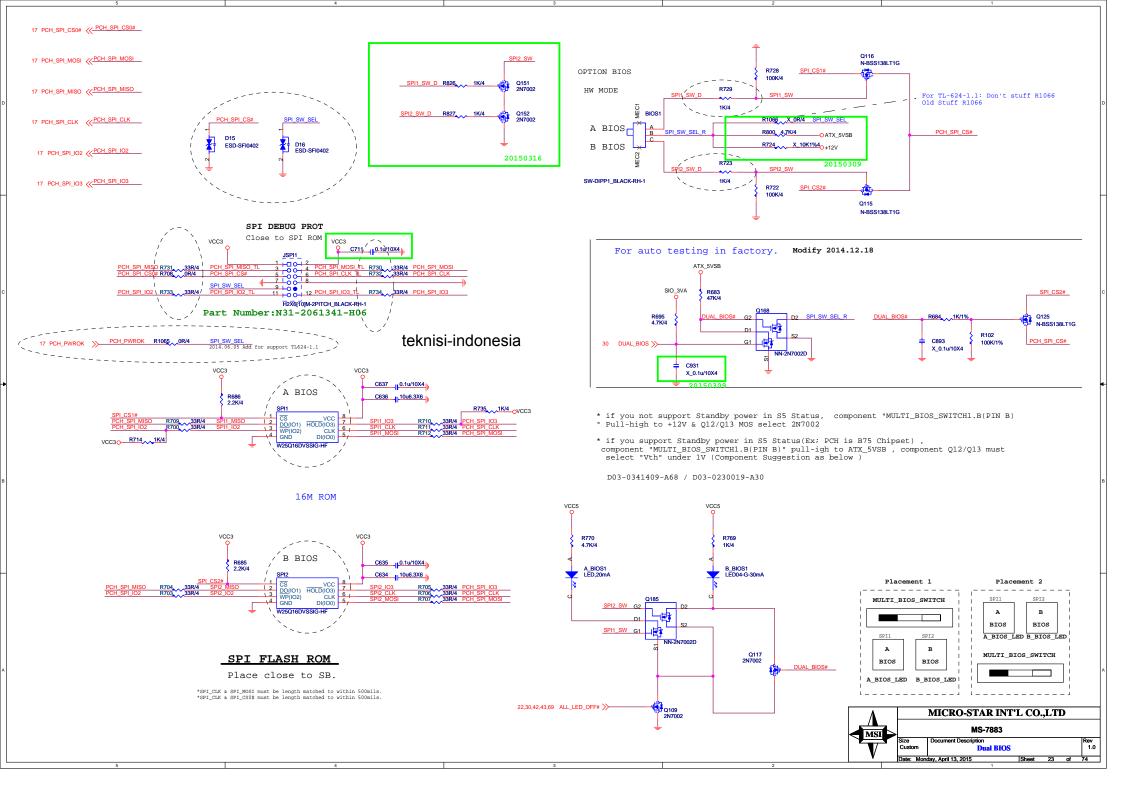


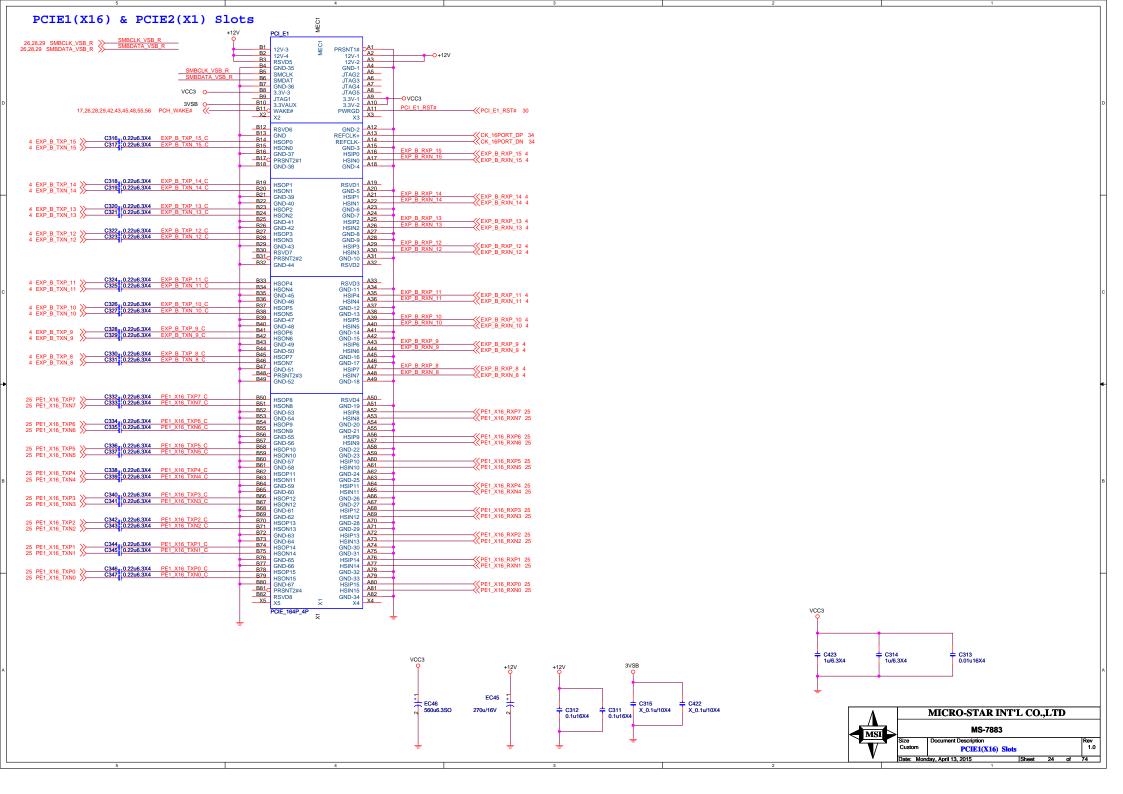


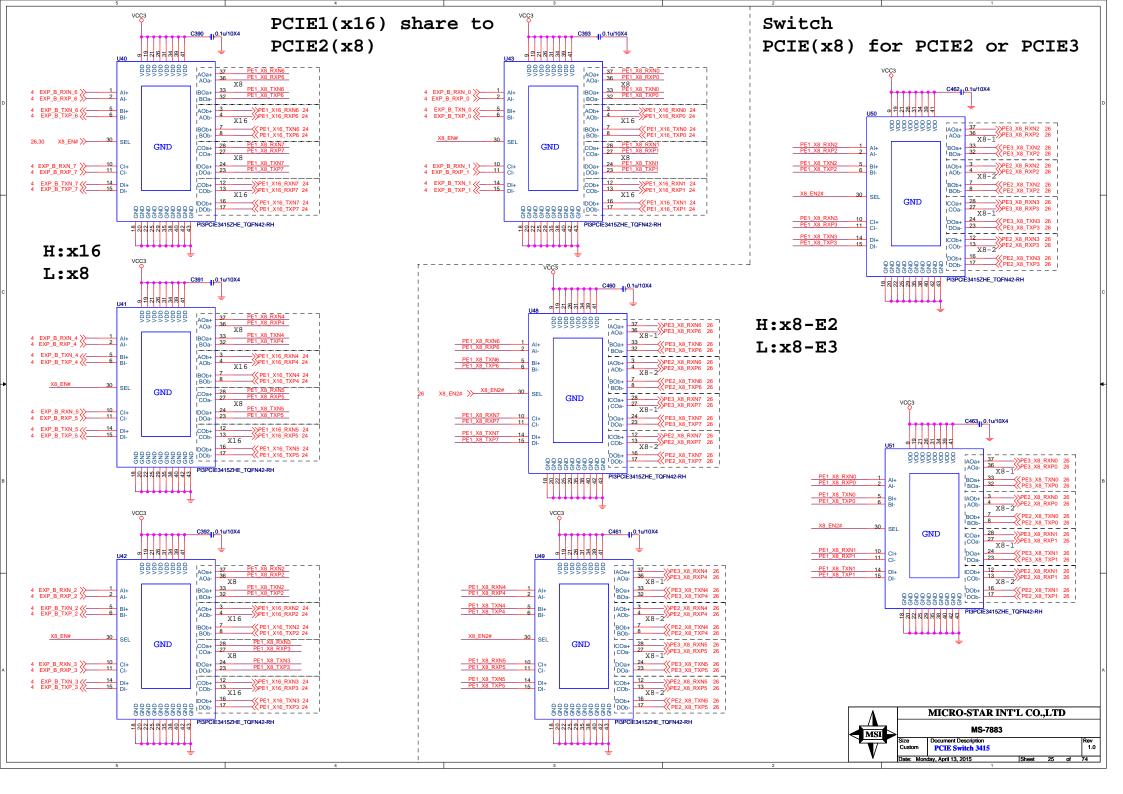


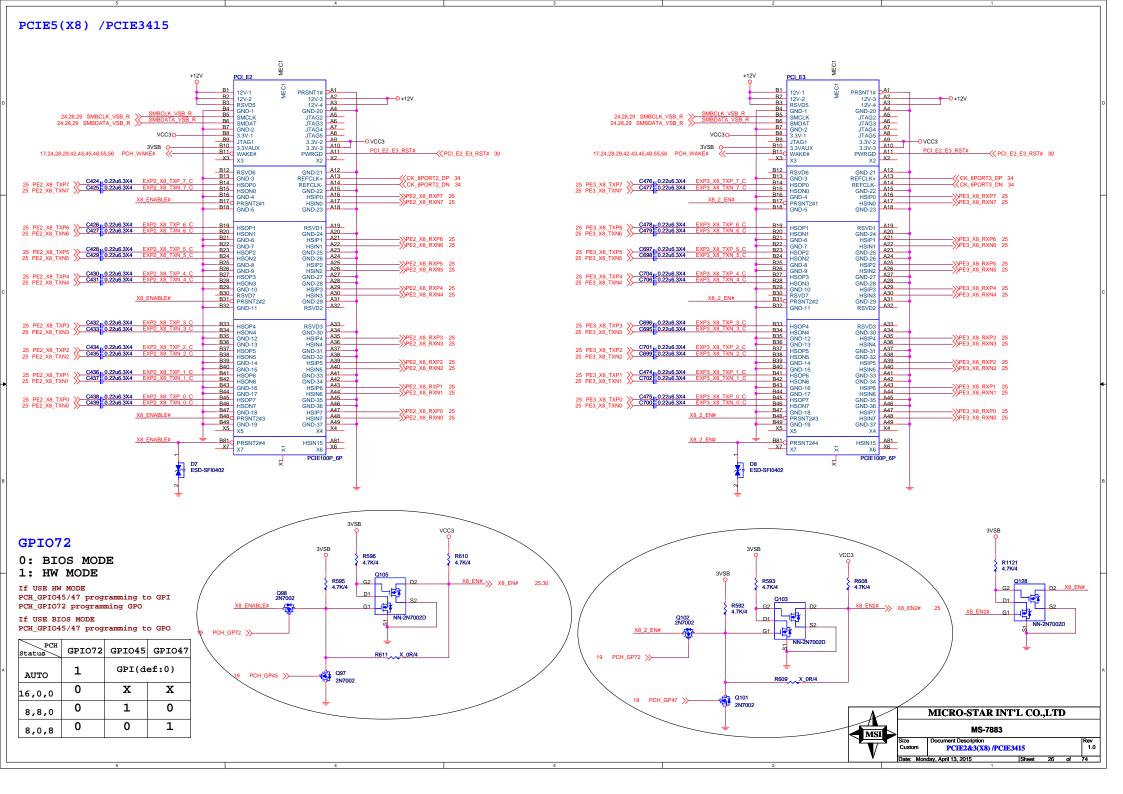
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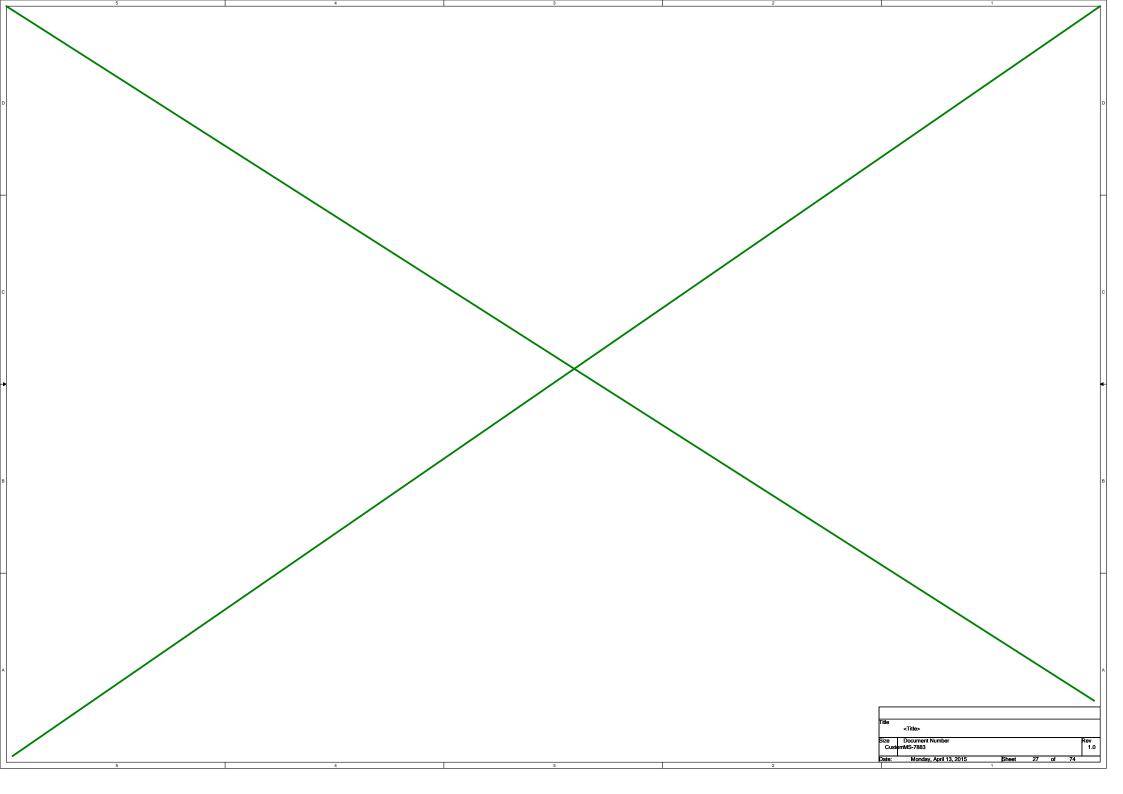


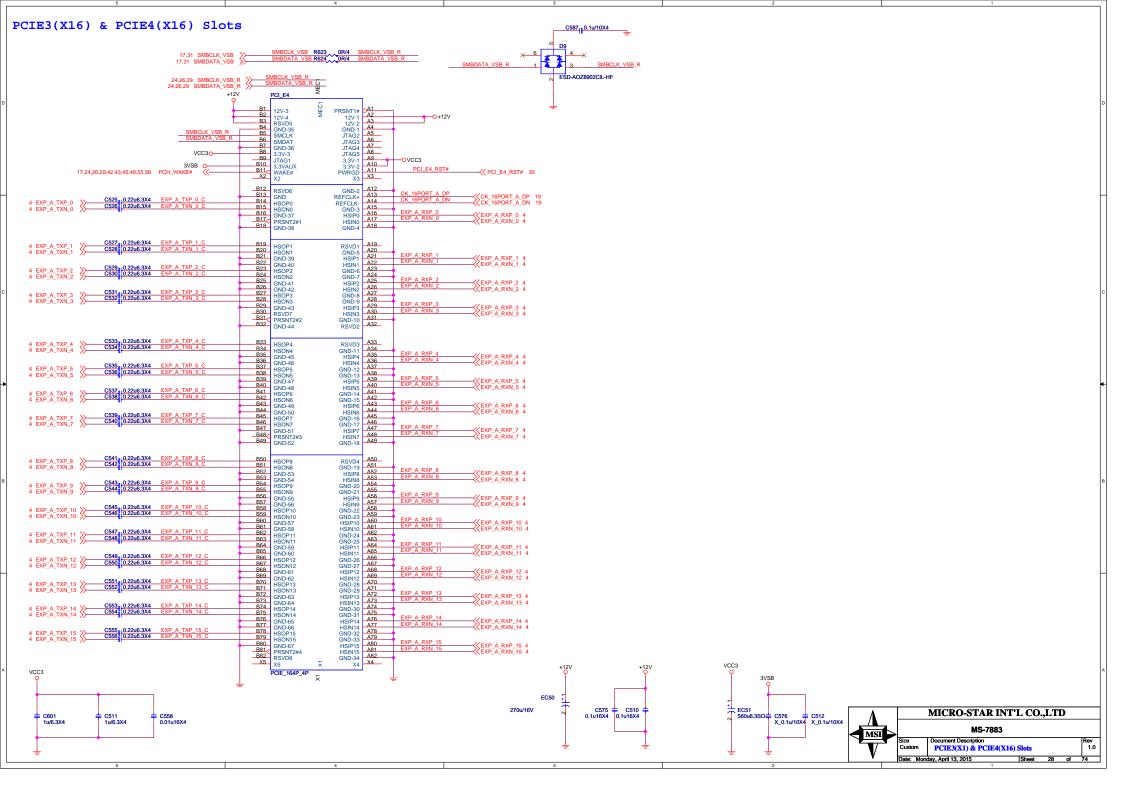


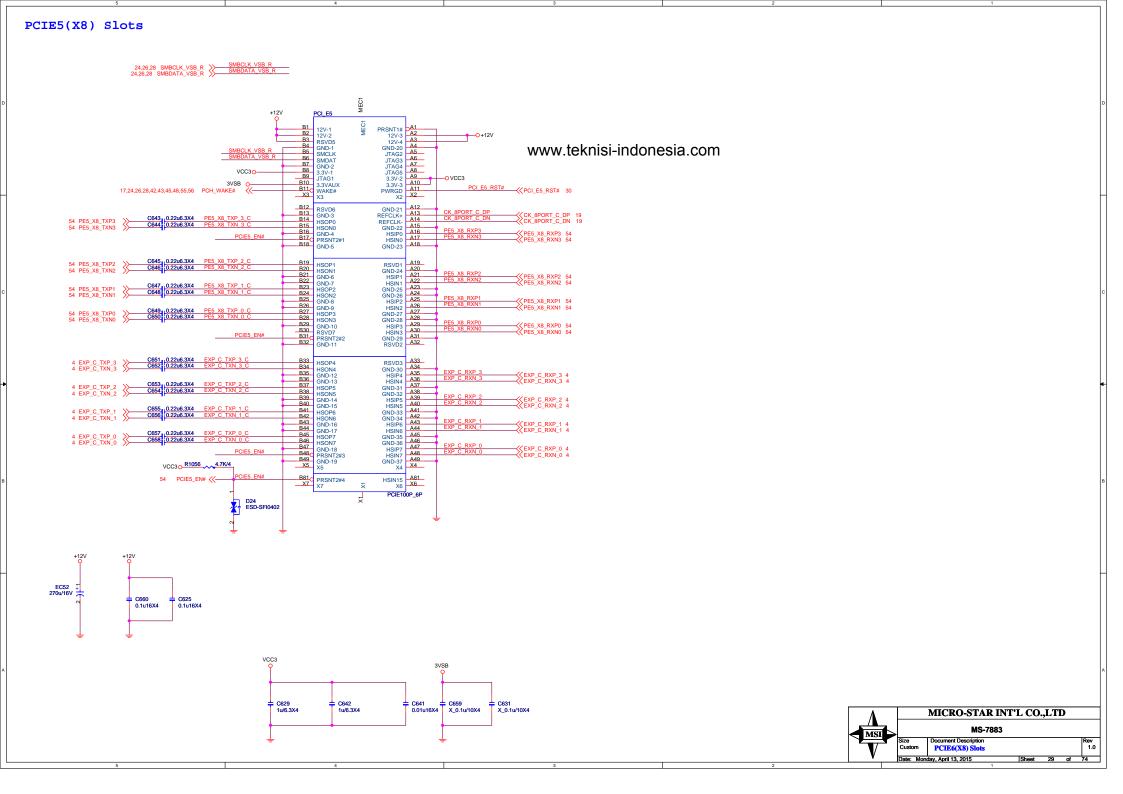


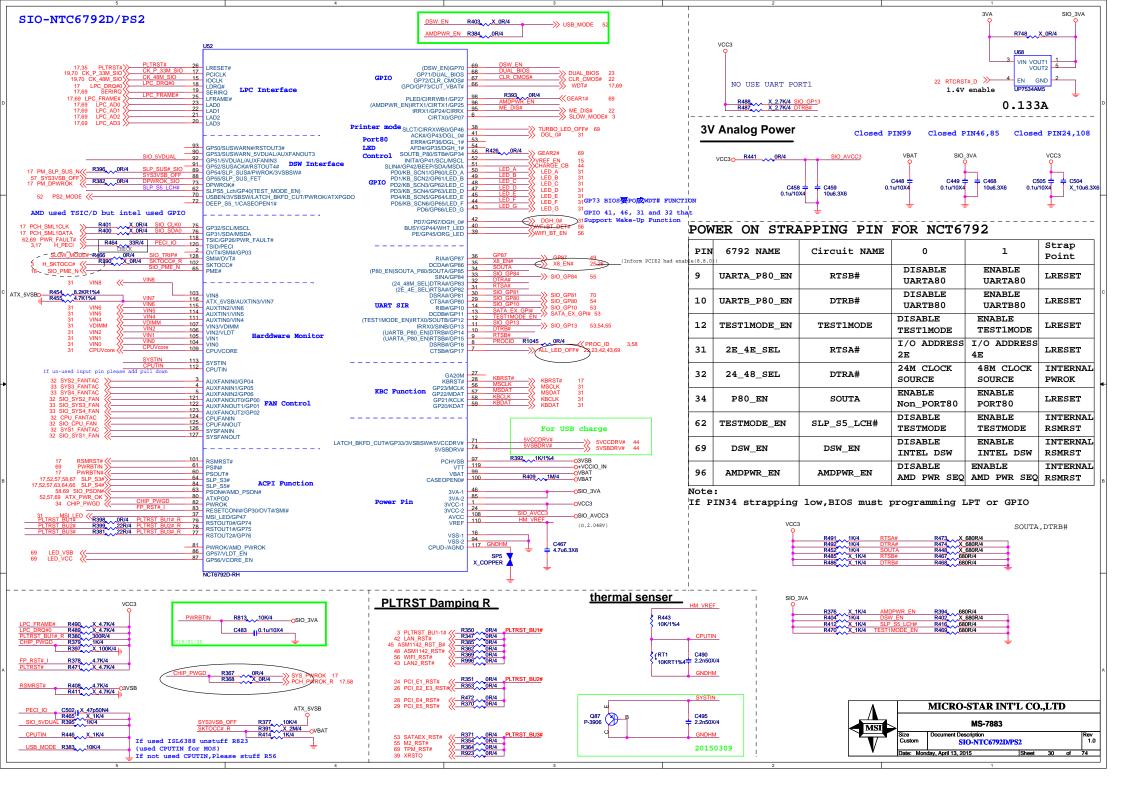


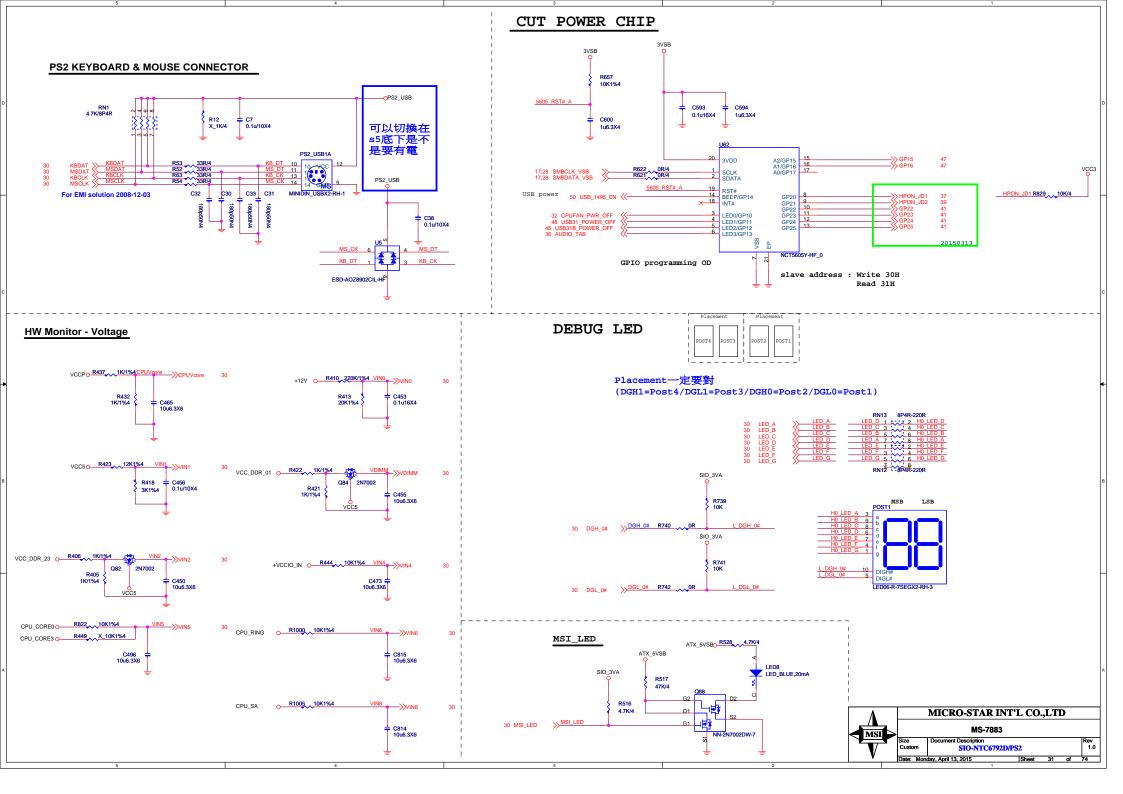


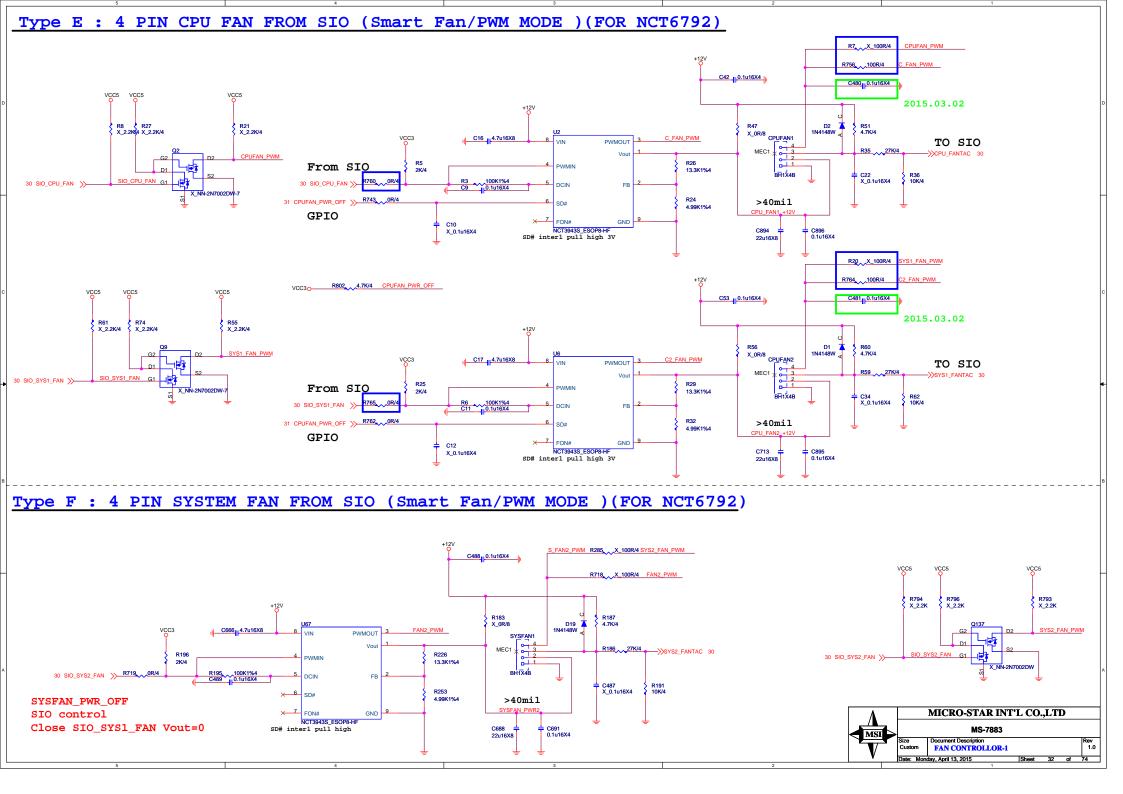




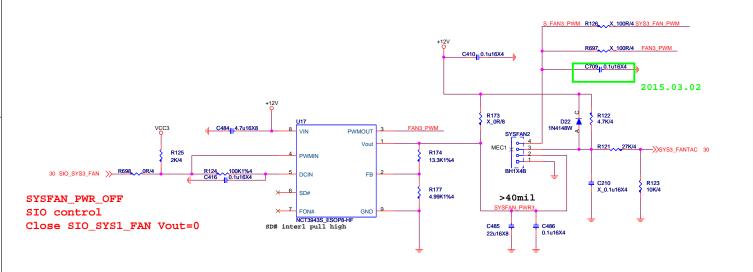


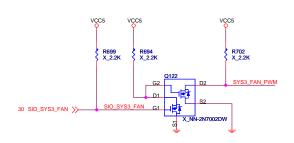


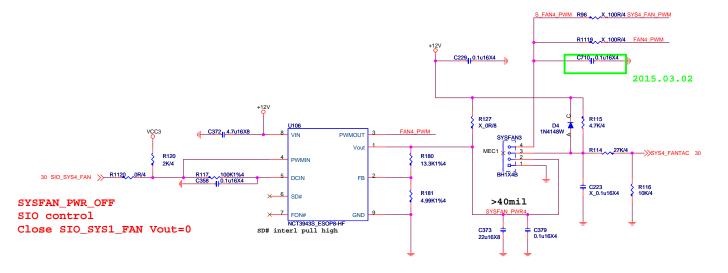


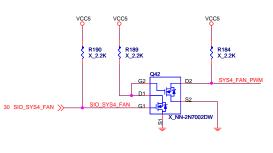


Type F: 4 PIN SYSTEM FAN FROM SIO (Smart Fan/PWM MODE)(FOR NCT6792)

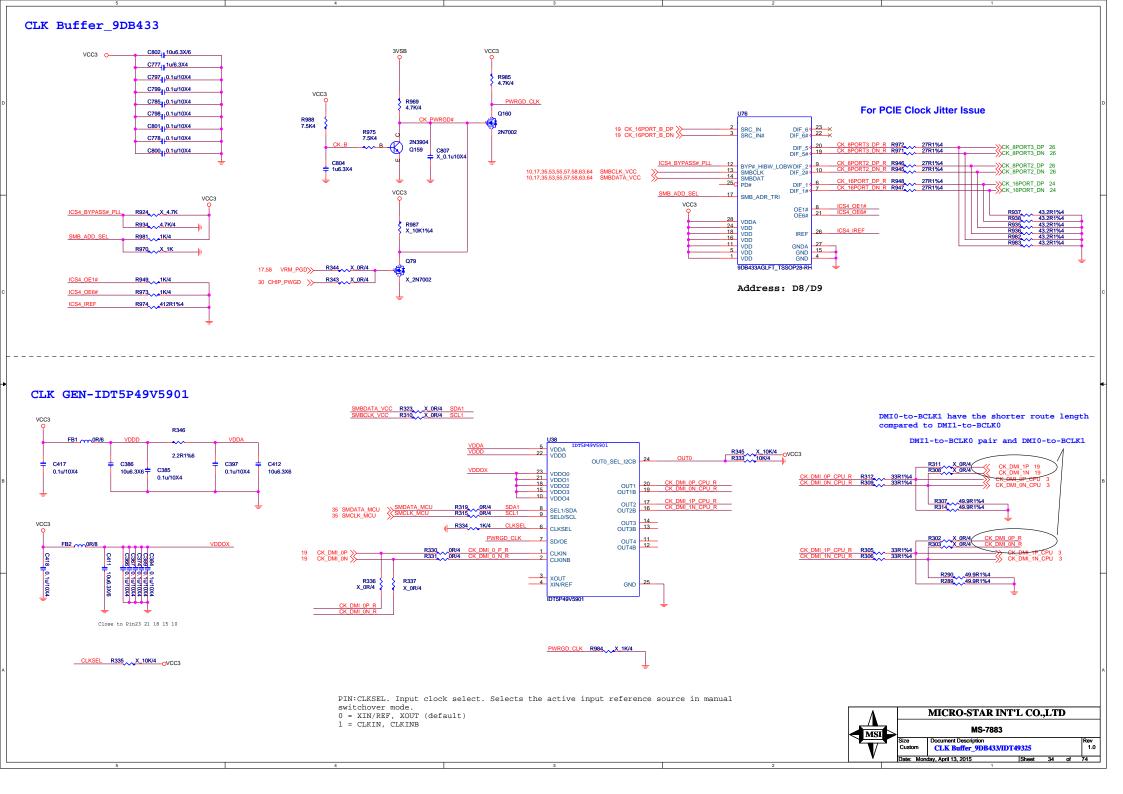


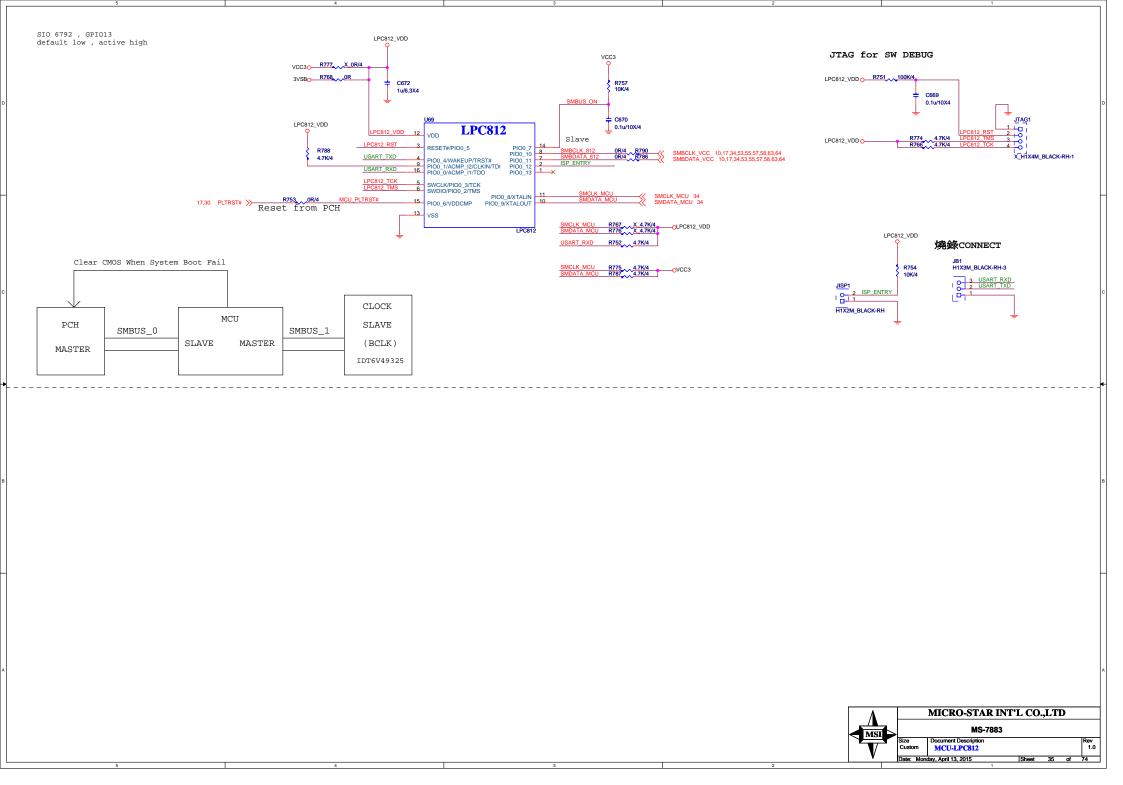


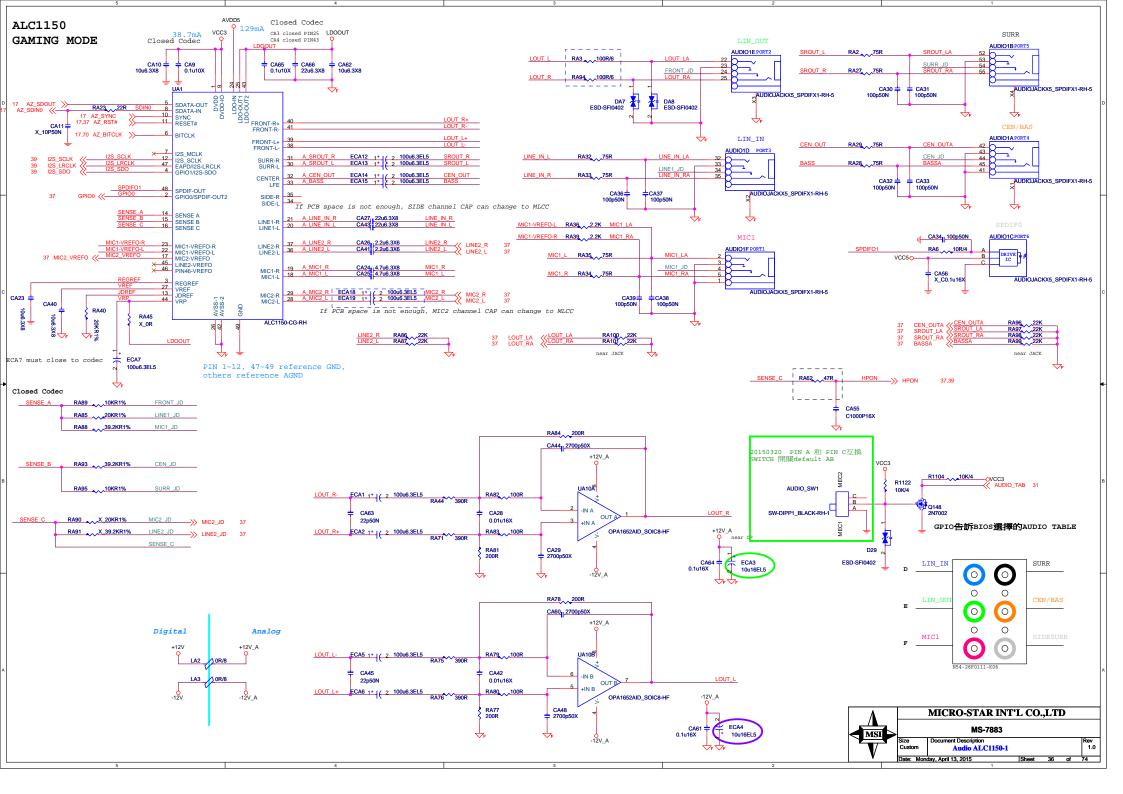


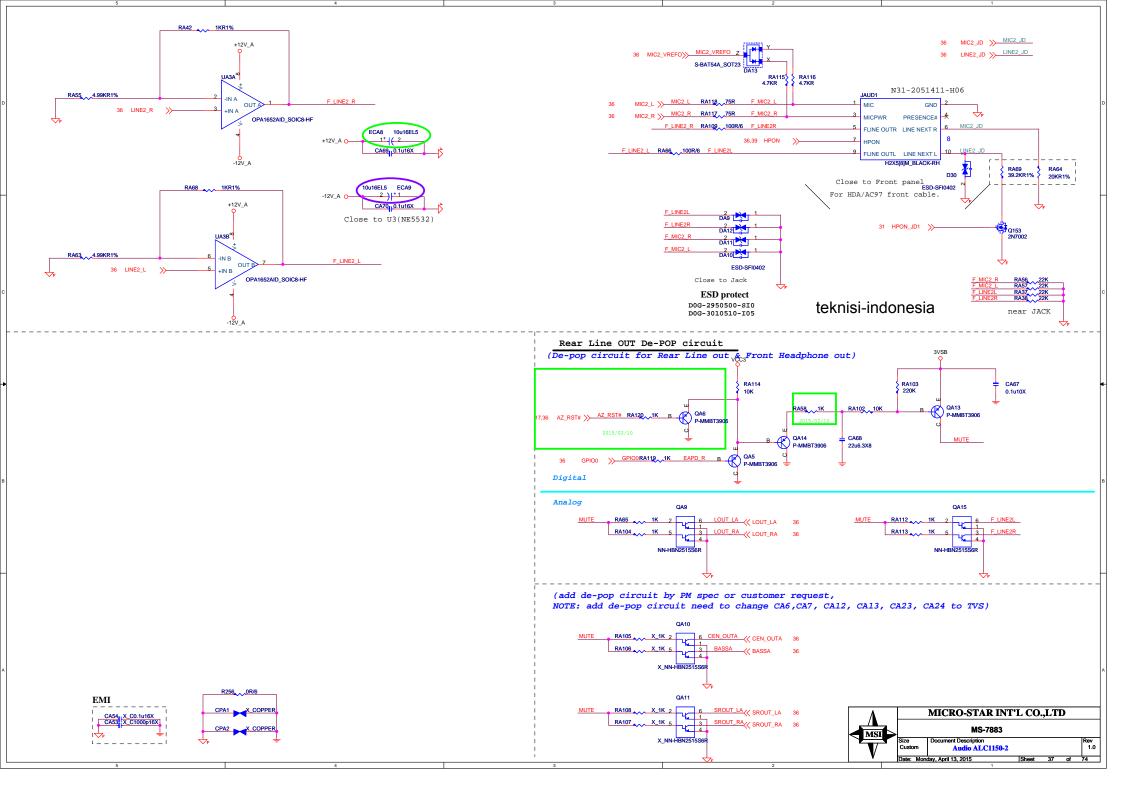


Λ		MICRO-STAR INT	'L CO	"LTI	D	
MSI	_	MS-7883				
V	Size Custom	Document Description FAN CONTROLLOR-2				Rev 1.0
	Date: Mon	day, April 13, 2015	Sheet	33	of	74
		1				

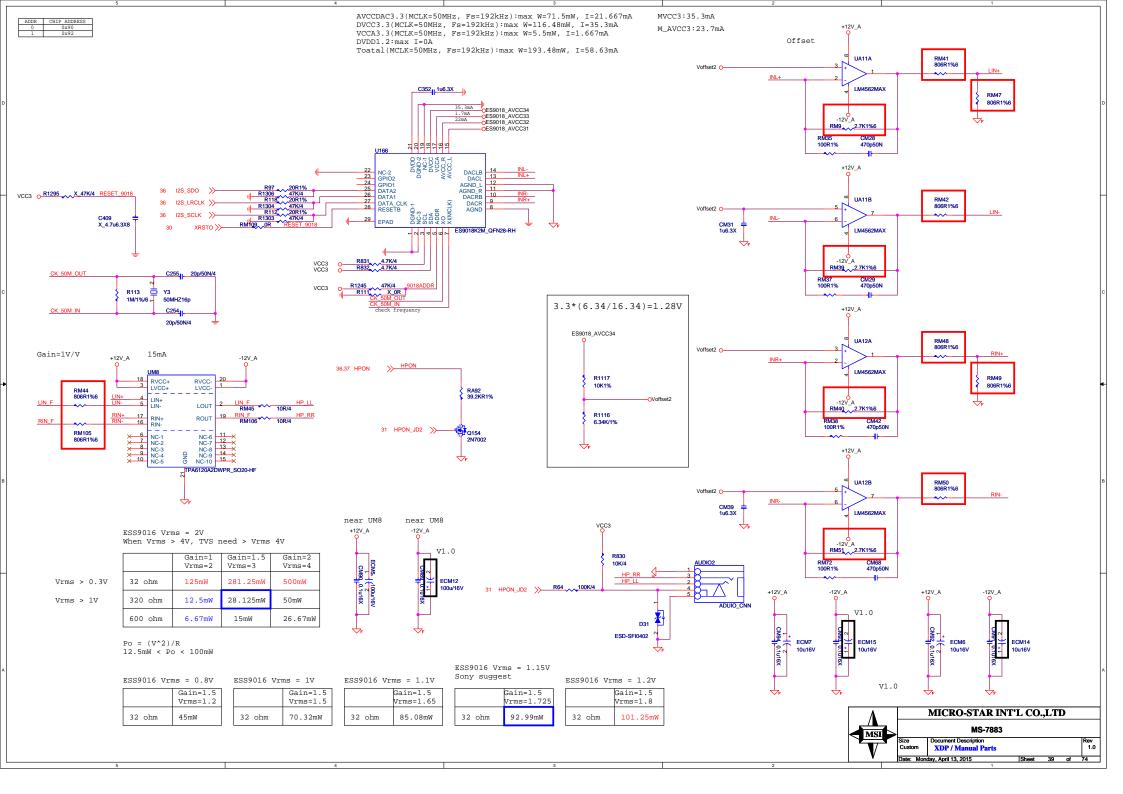


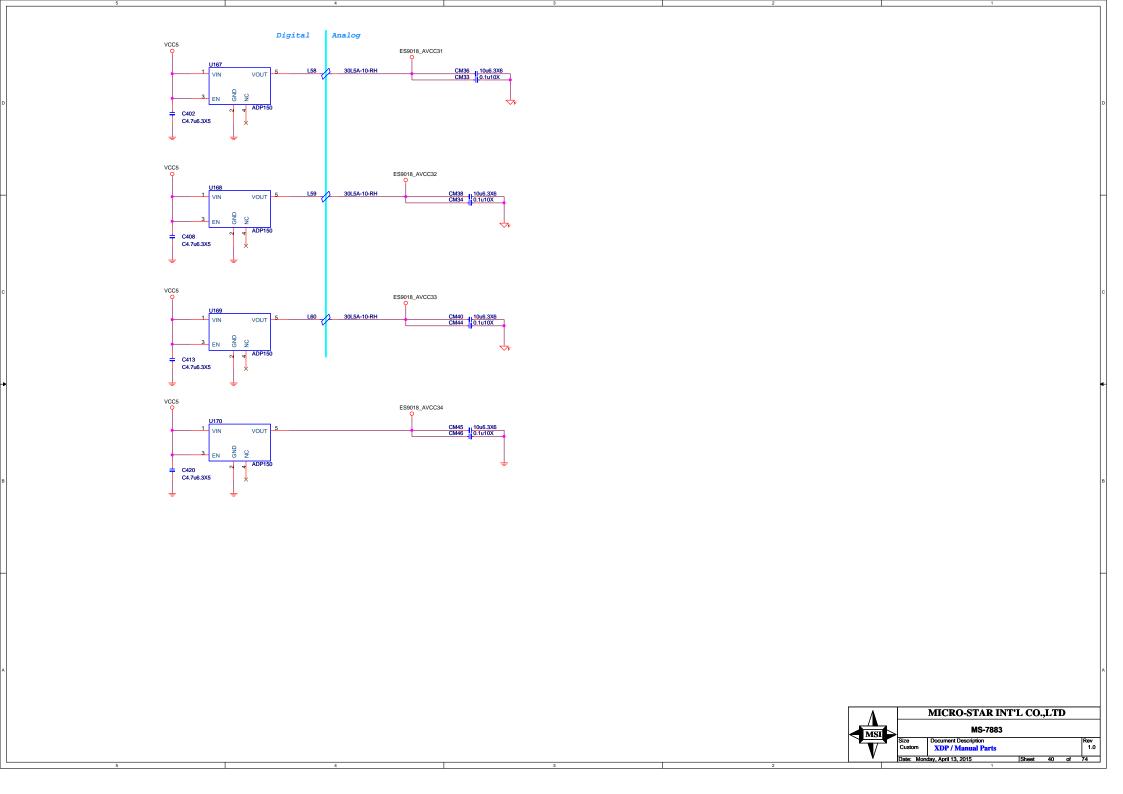


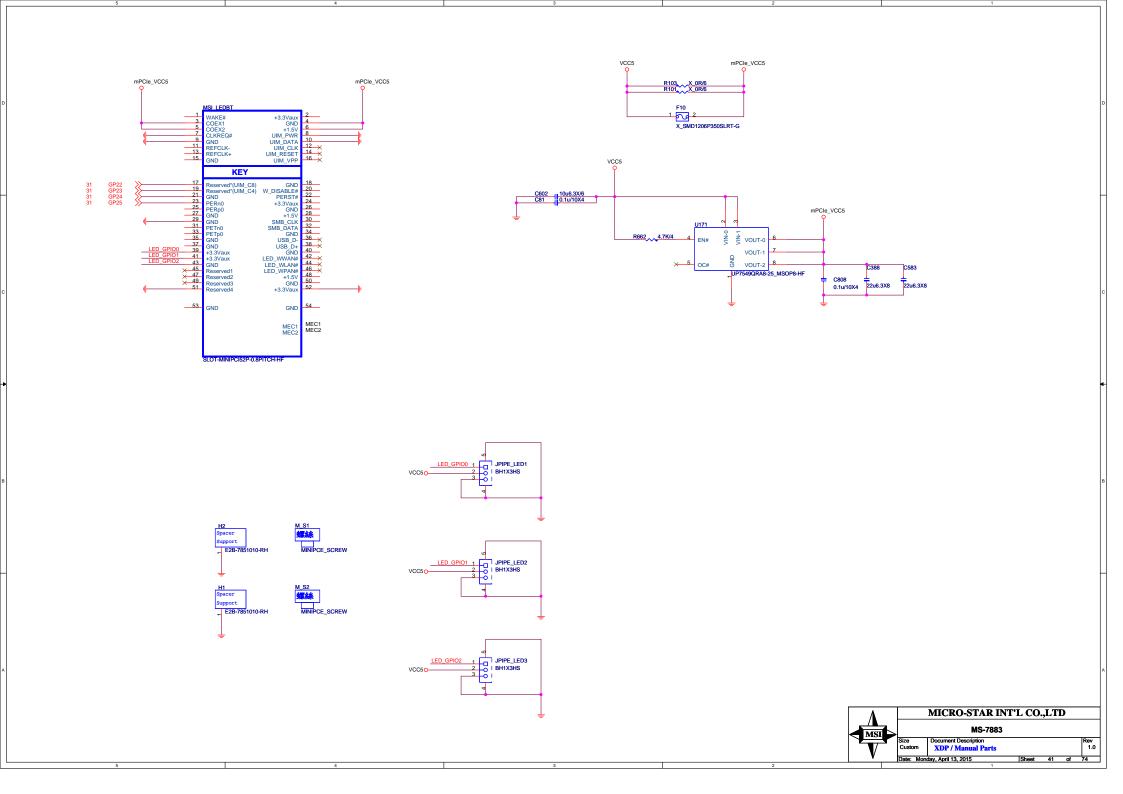




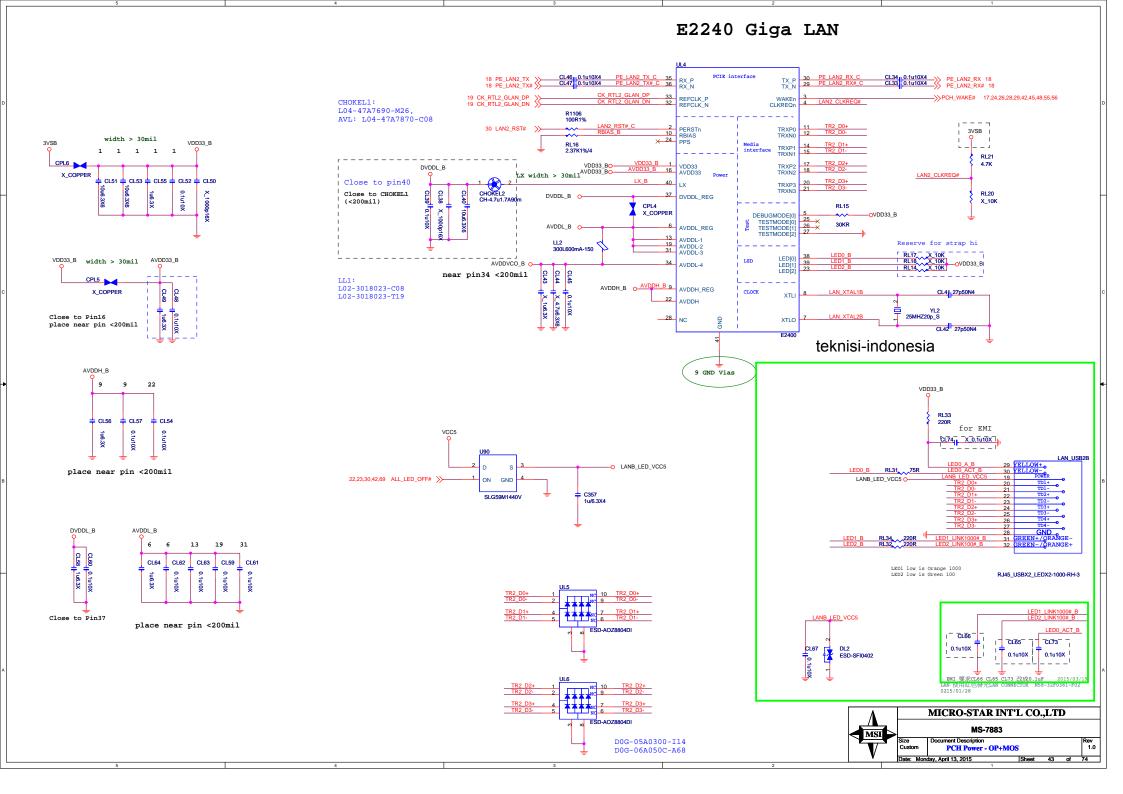
Audio moat is transparent and width 40mil Digital Analog VCC5 RA67 X_1K RA130 129mA X_1K X_1K X_1K AVDD5 O-ATX_5VSB LEDA1 LEDA2 LEDA3 LEDA4 X_LED04-R-30mA X_LED04-R-30mA X_LED04-R-30mA CA77 10u6.3X8 CA78 0.1u10X QA1 ALL_LED_OFF_R X_N-2N7002 VCC5 VCC5 VCC5 VCC5 VCC5 VCC5 VCC5 VCC5 RA131 X_1K RA72 X_1K RA73 X_1K RA125 X_1K RA127 X_1K RA128 X_1K RA74 RA126 X_1K X_1K LEDA9 X_LED04-R-30m2 X_LED04-R-30m2 X_LED04-R-30mA X_LED04-R-30m2 X_LED04-R-30m2 X_LED04-R-30mA QA2 QA4 ALL_LED_OFF_R ALL_LED_OFF_R X_N-2N7002 X_N-2N7002 VCC5 VCC5 VCC5 RA141 X_1K RA140 X_1K RA139 X_1K RA138 X_1K LEDA16 LEDA15 LEDA14 LEDA17 X_LED04-R-30mA X_LED04-R-30mA X_LED04-R-30mA X_LED04-R-30mA QA7 ALL_LED_OFF_R X_N-2N7002 MICRO-STAR INT'L CO.,LTD MS-7883 MSI cument Description Audio power/ LED Rev 1.0

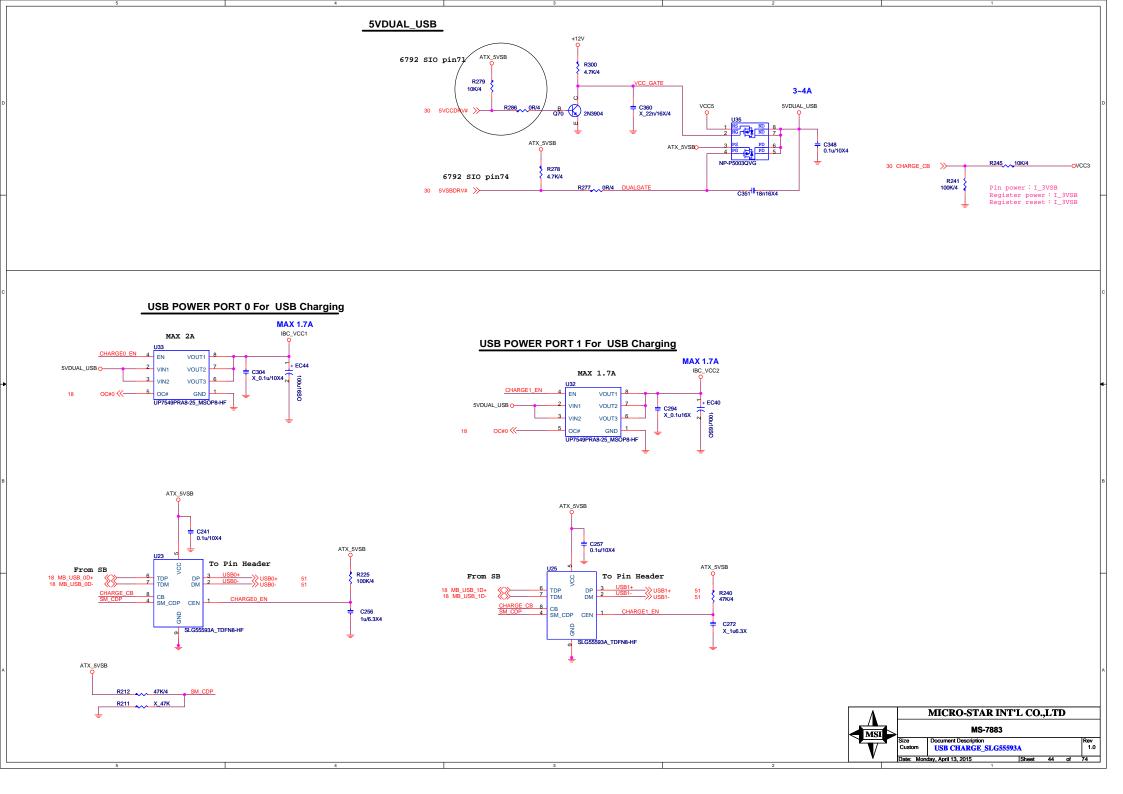


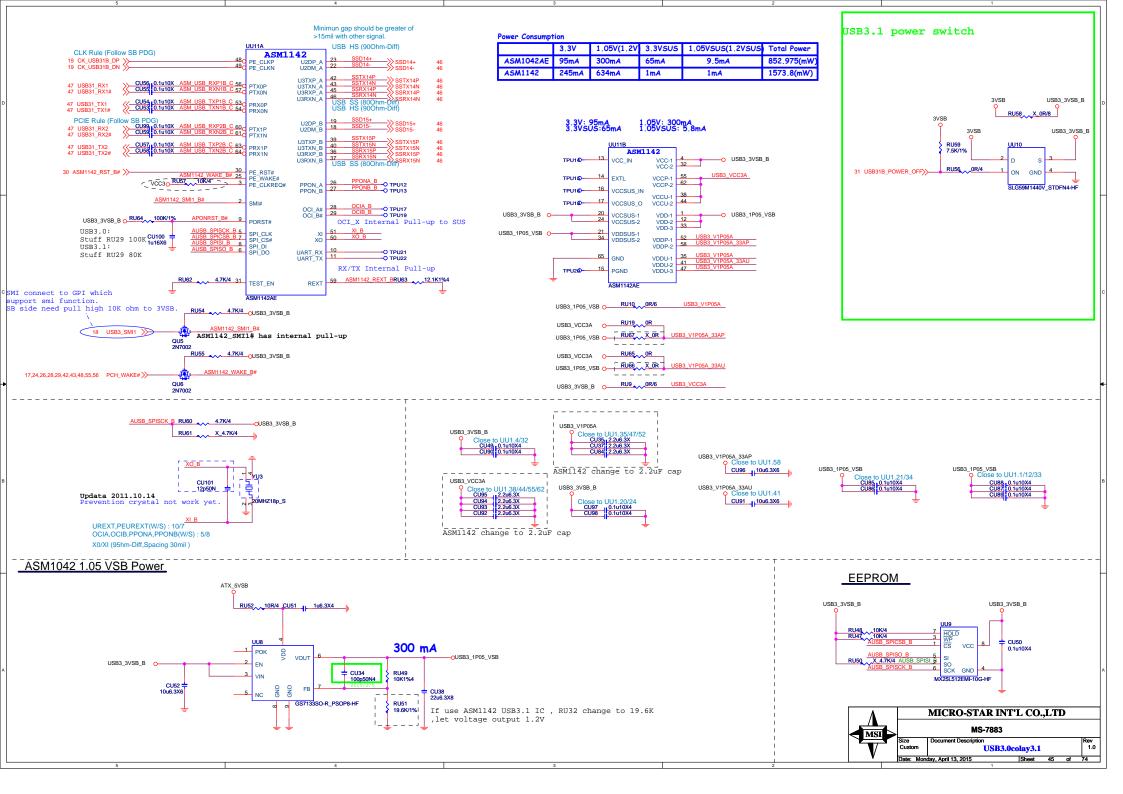


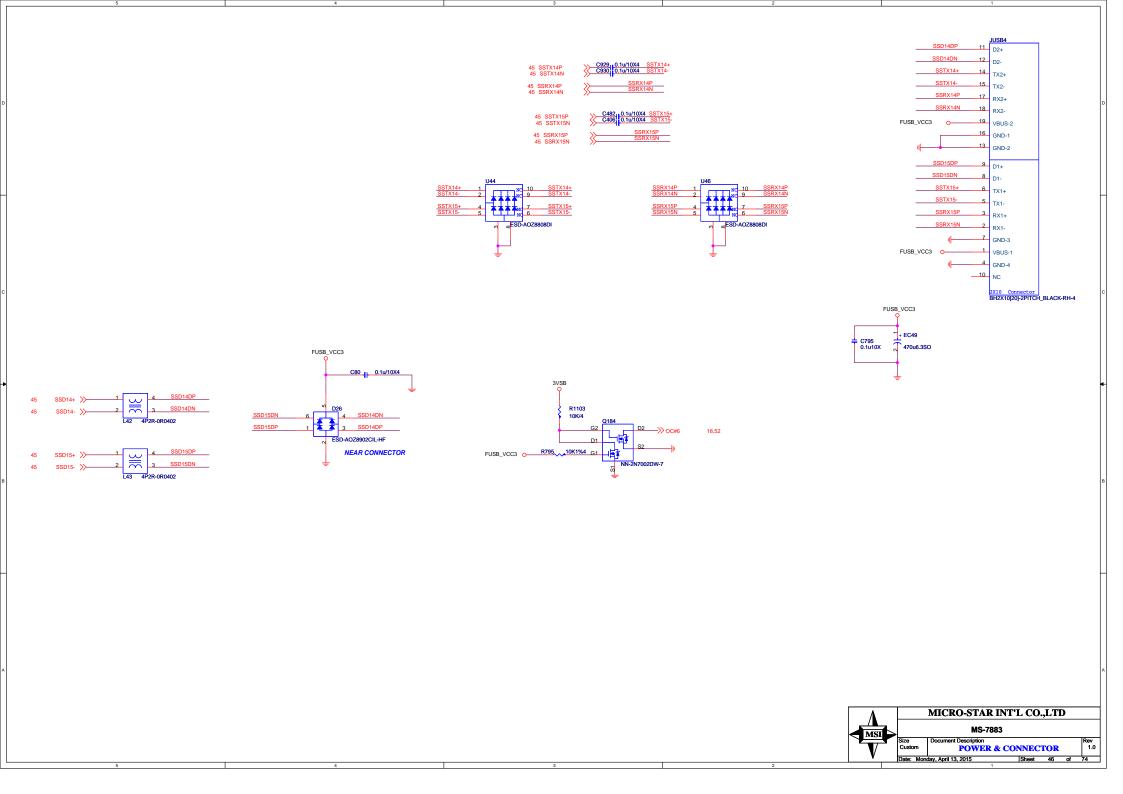


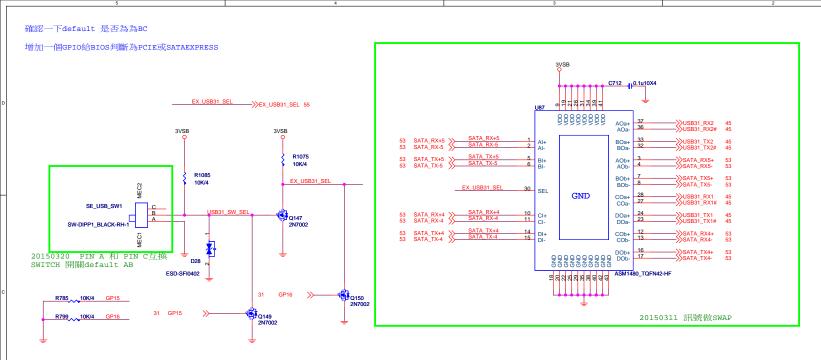
E2400 Giga LAN PCIE interface 19 CK_RTL1_GLAN_DP 19 CK_RTL1_GLAN_DN ->> PCH_WAKE# 17,24,26,28,29,43,45,48,55,56 REECLK F WAKEn CHOKEL1: CLKREQn L04-47A7690-M26, R1105 100R1% AVL: L04-47A7870-C08 30 LAN_RST# >> PERSTn 10 RBIAS 3VSB RRIAS TRXNO RL11 2.37K1%/4 note: TRXN1 RL6 4.7K 1 VDD33 16 AVDD33 DVDDL LED0: LX width > 30mil LAN CLKREQ 1=High core voltage Close to pin40 0=Low core voltage CHOKEL1 TRXN3 RI 10 Close to CHOKEL1 width > 30mil DVDDLO DVDDL_REG 3VSB VDD33 CH-4.7u1.7A90m X_10K (<200mil) 4 X_1000p1 CPL2 1 1 1 1 1 LED1: X_COPPER DEBUGMODE[0] TESTMODE[0] TESTMODE[1] TESTMODE[2] OVDD33 1=SWR mode CPL1 25 × 26 × 30KR 0=LDO mode AVDDL O AVDDL REG X_COPPER CL7 CL8 10u6.3X6 CL9 CL10 + CL11 AVDDL-1 AVDDL-2 Reserve for strap hi LED2: 300L600mA-150 1=25MHz clock AVDDL-3 RL12 X 10K RL13 X 10K RL8 X 10K 0=48MHz clock AVDDVCO AVDDL-4 LED[1] CL37 CL35 near pin34 <200mil L02-3018023-C08 AVDDH O AVDDH 9 AVDDH REG VDD33 >= 30mils; CL12 27p50N4 L02-3018023-T19 XTLI 8 AVDD33 >= 30mils; 22 AVDDH AVDDH >= 20mils; AVDDL >= 20mils. VDD33 width > 30mil AVDD33 25MHZ20p_S XTLO DVDDL >= 20mils. CL22 27p50N4 Pin LX to L1 >= 30mils. F2400 X_COPPER Close to Pin16 9 GND Vias place near pin <200mil VCC5 RL1 220R for EMI CL1 0.1u10X LAN_LED_VCC5 q 22 22,23,30,43,69 ALL_LED_OFF# >>-ON GND LAN_USB1B C356 1u/6.3X4 RL2 75R SI G59M1440V LAN_LED_VCC5 O LU31 LU31 place near pin <200mil LED1 low is Orange 1000 LED2 low is Green 100 RJ45_USBX2_LEDX2-1000-RH-3 DVDDL AVDDL | _ CL3 19 CL4 CL2 0.1u10X CL17 CL18 CL26 0.1u10X 0.1u10X 0.1u10X 0.1u10X DI 1 ESD-SFI0402 LAN 使用紅色發光LAN CONNECTOR N58-32F0381-F02 Close to Pin37 place near pin <200mil MICRO-STAR INT'L CO.,LTD MS-7883 MSI Description LAN RTL8111G/8106E D0G-05A0300-I14 1.0 D0G-06A050C-A68











BIOS_MODE

GP23	GP24	SEL	Mode
О	o	SATA	default
1	0	SATA	
1	1	USB3.1	

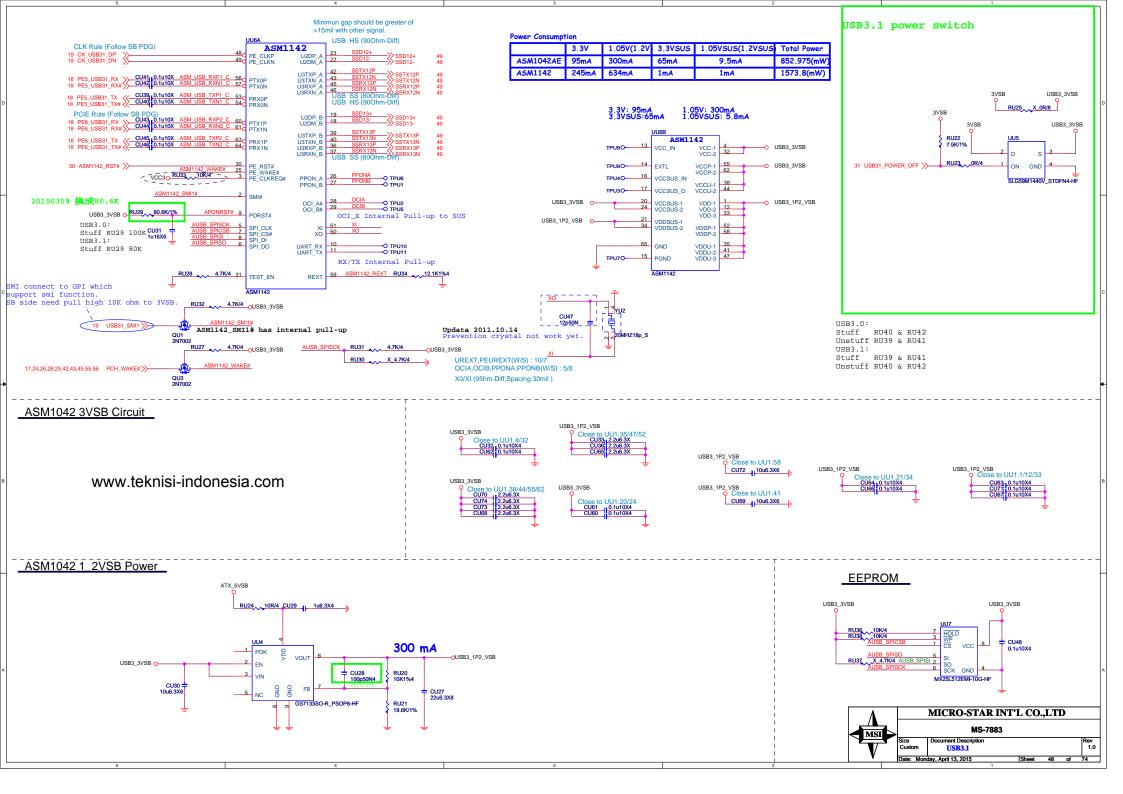
$Switch_MODE$

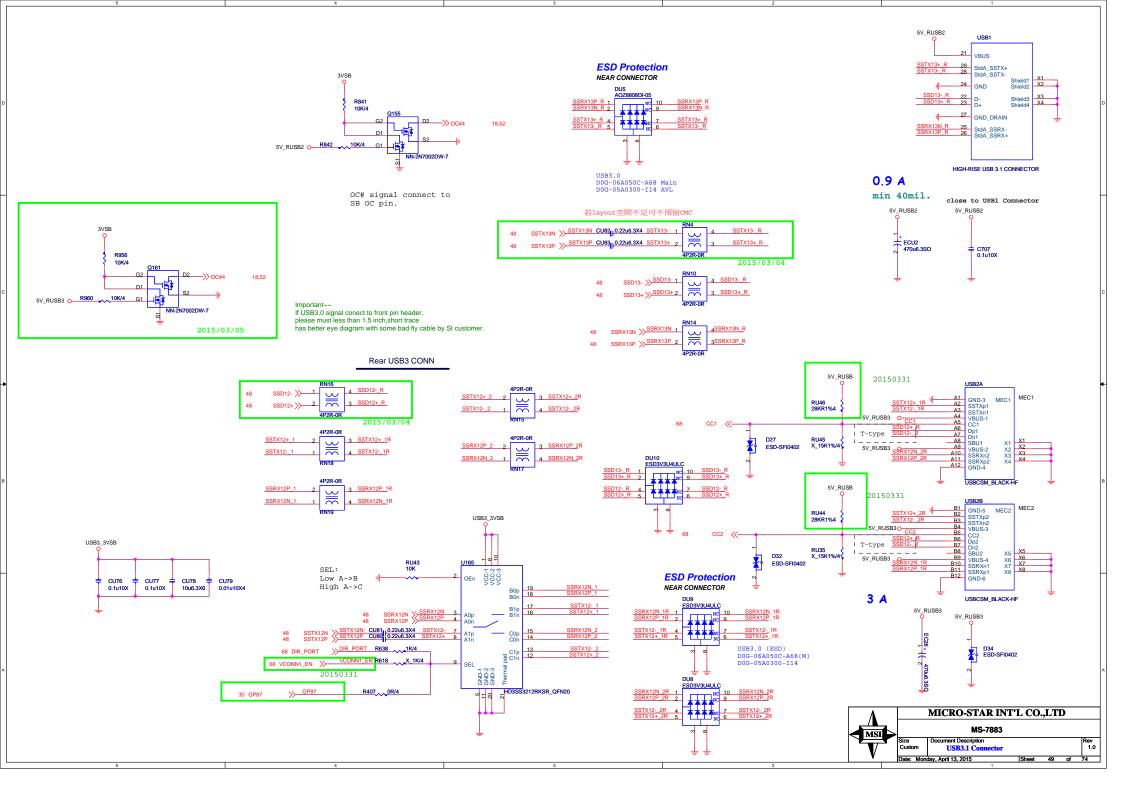
Switch	SEL	Mode	
A_B	SATA	default	
B_C	USB3.1		

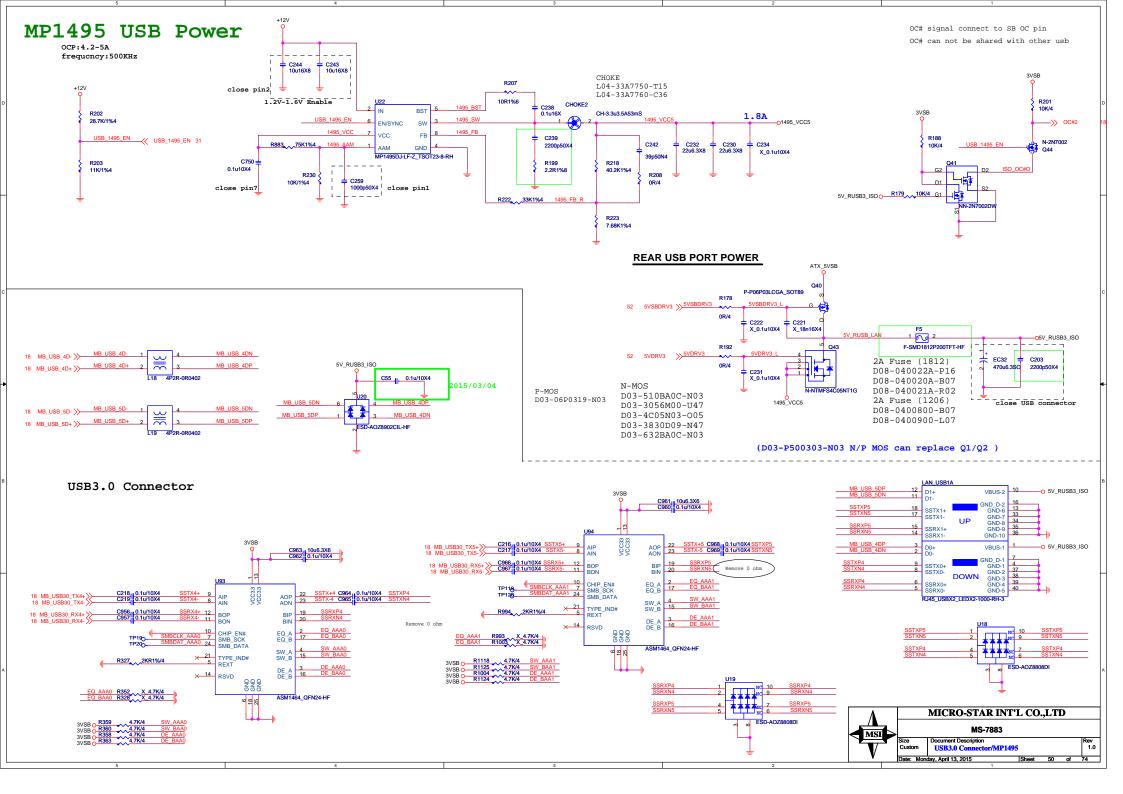
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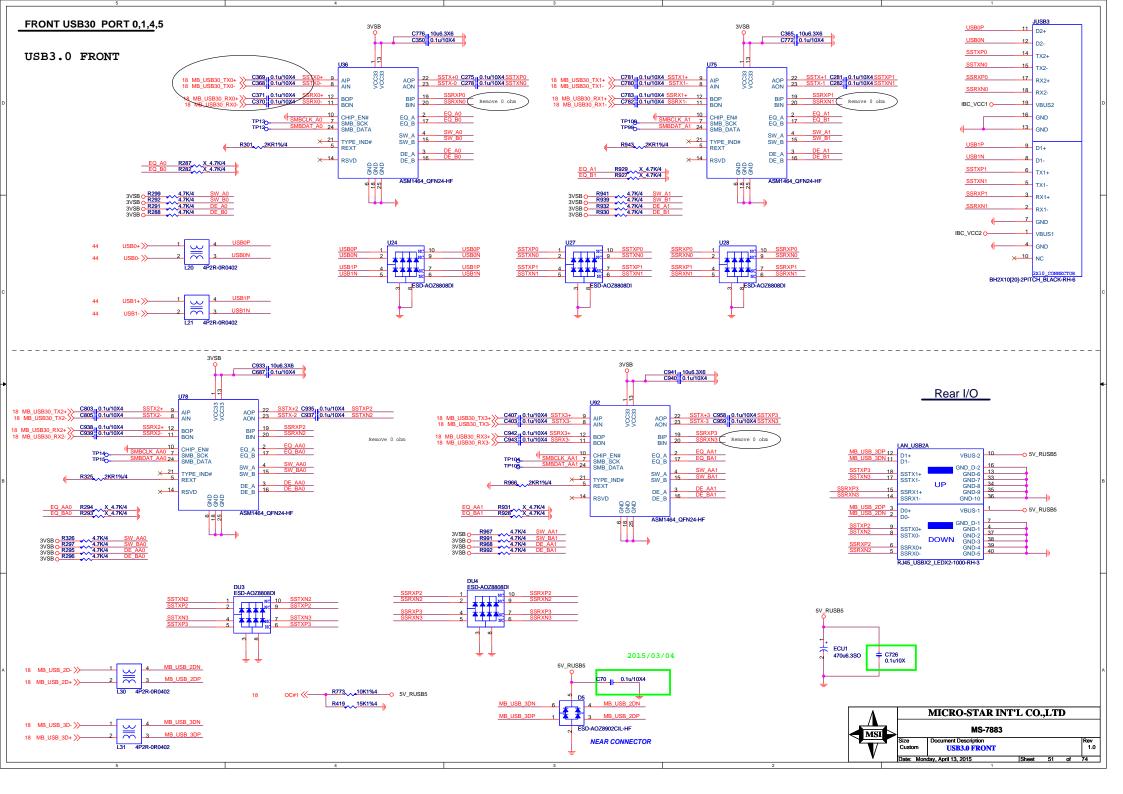
MS-7883

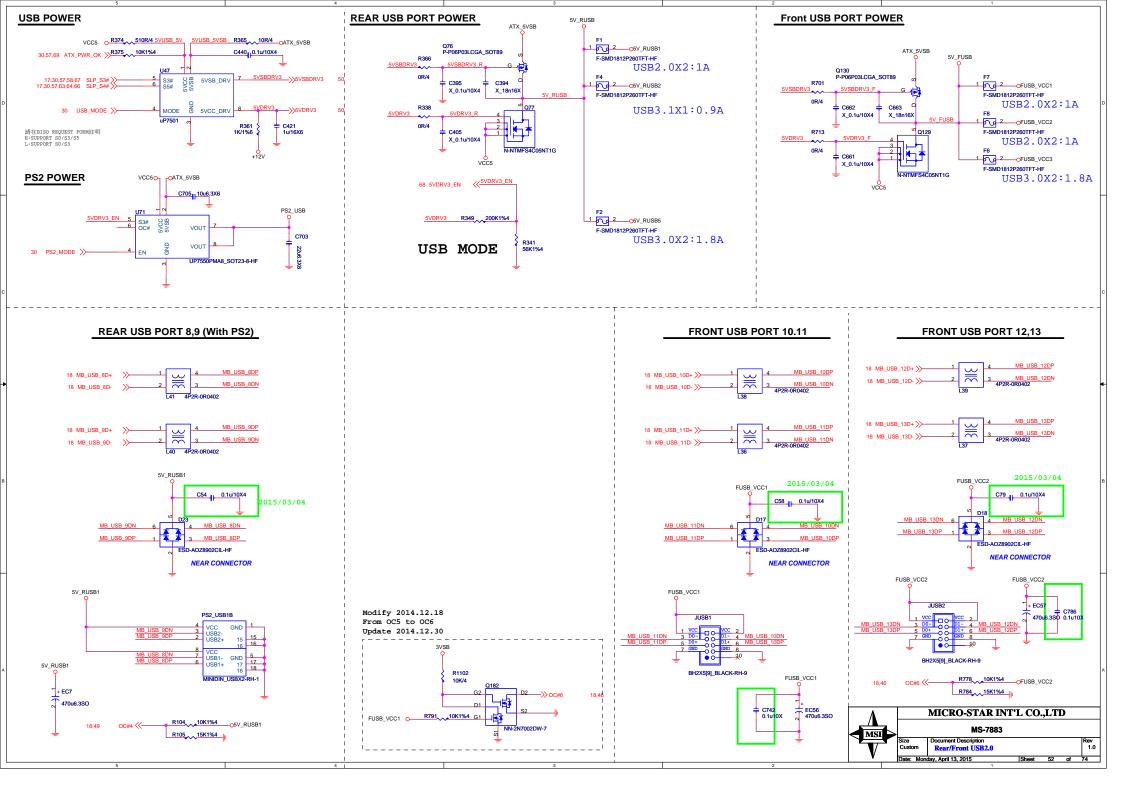
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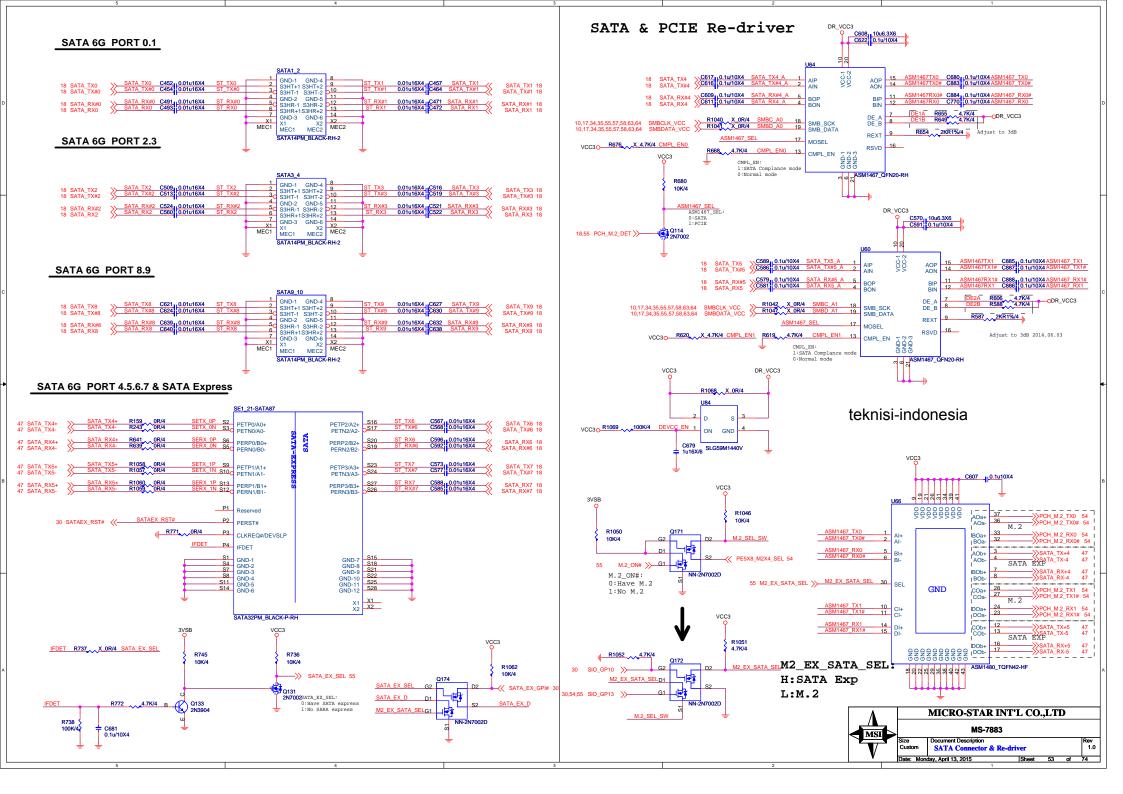




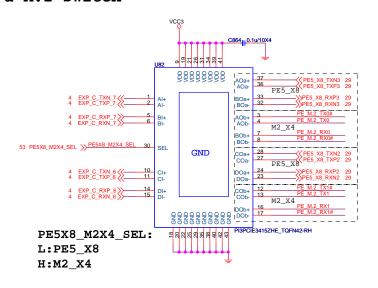


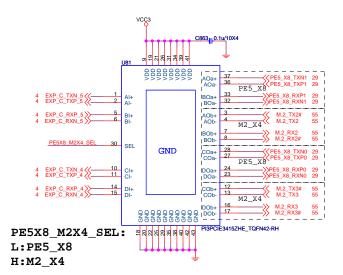


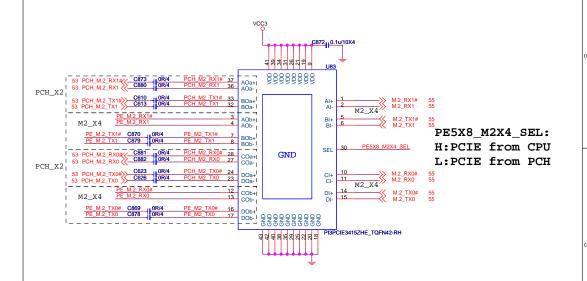


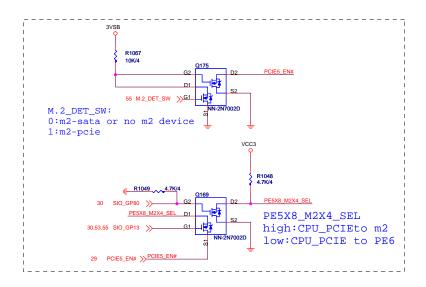


PCIE5 & M.2 Switch

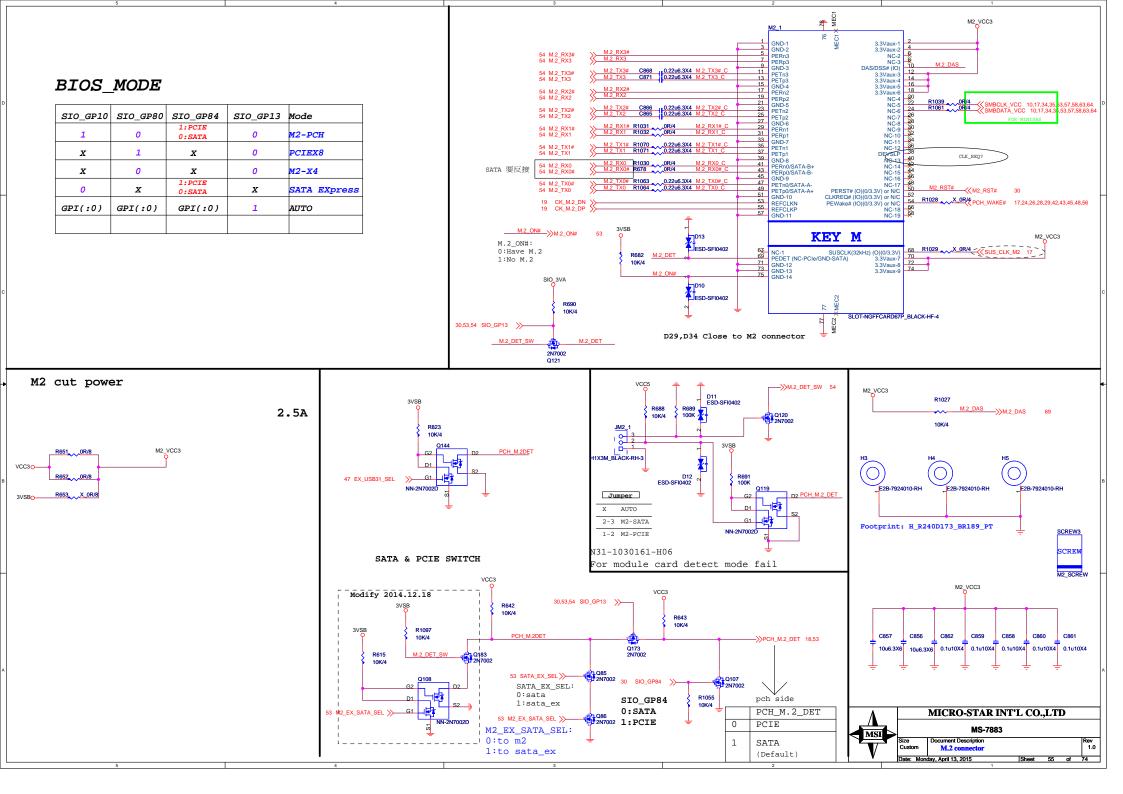




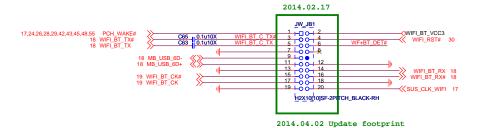


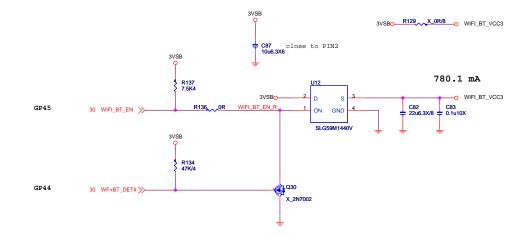






WIFI + Buletooth





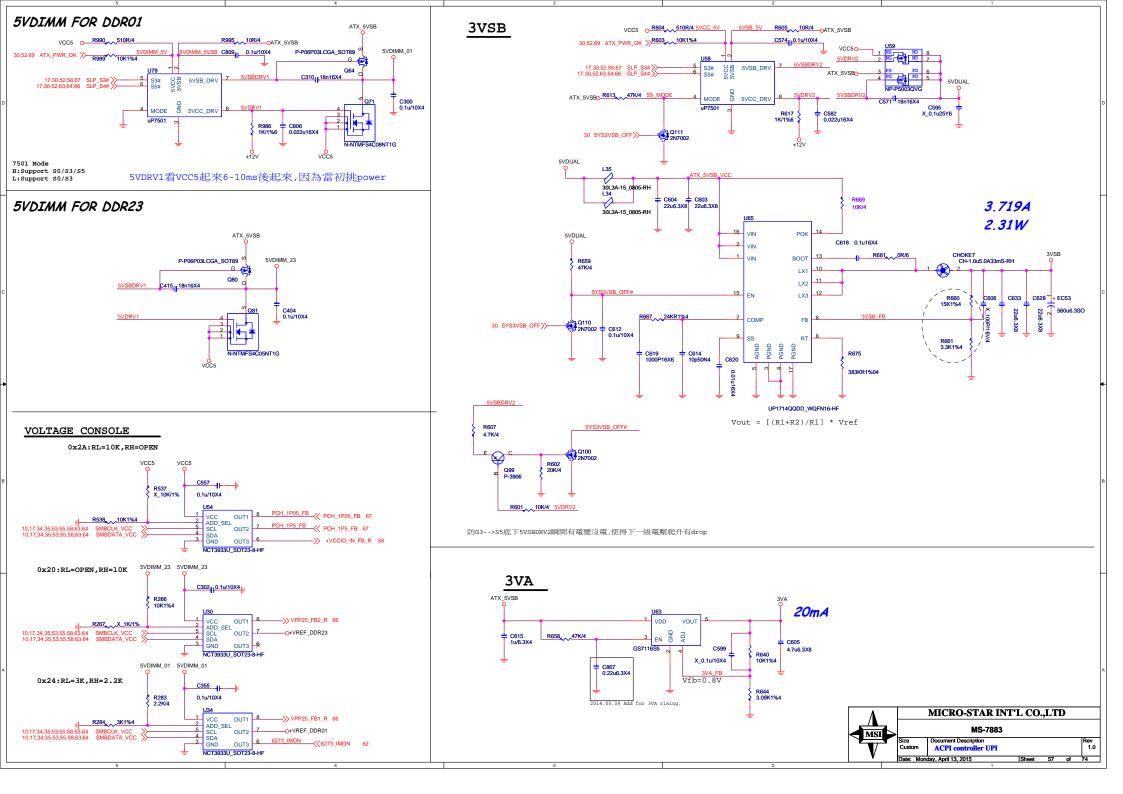


2014.04.02 Update footprint

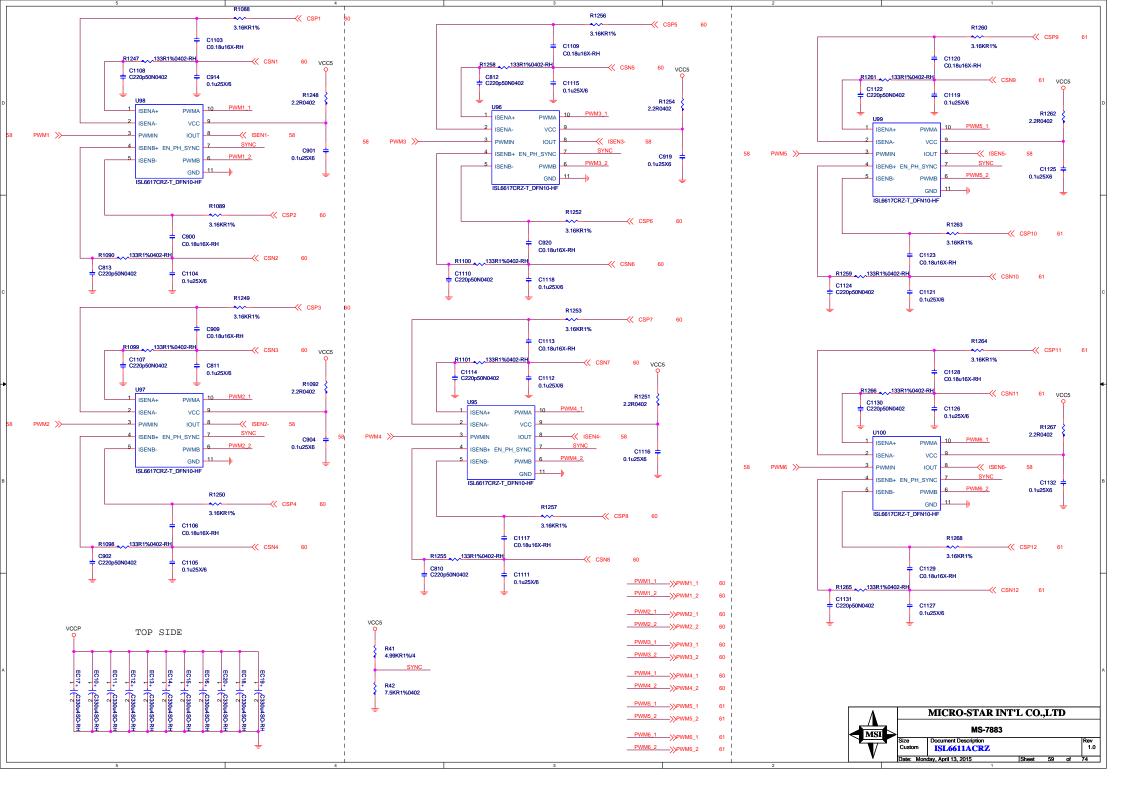
MICRO-STAR INT'L CO.,LTD

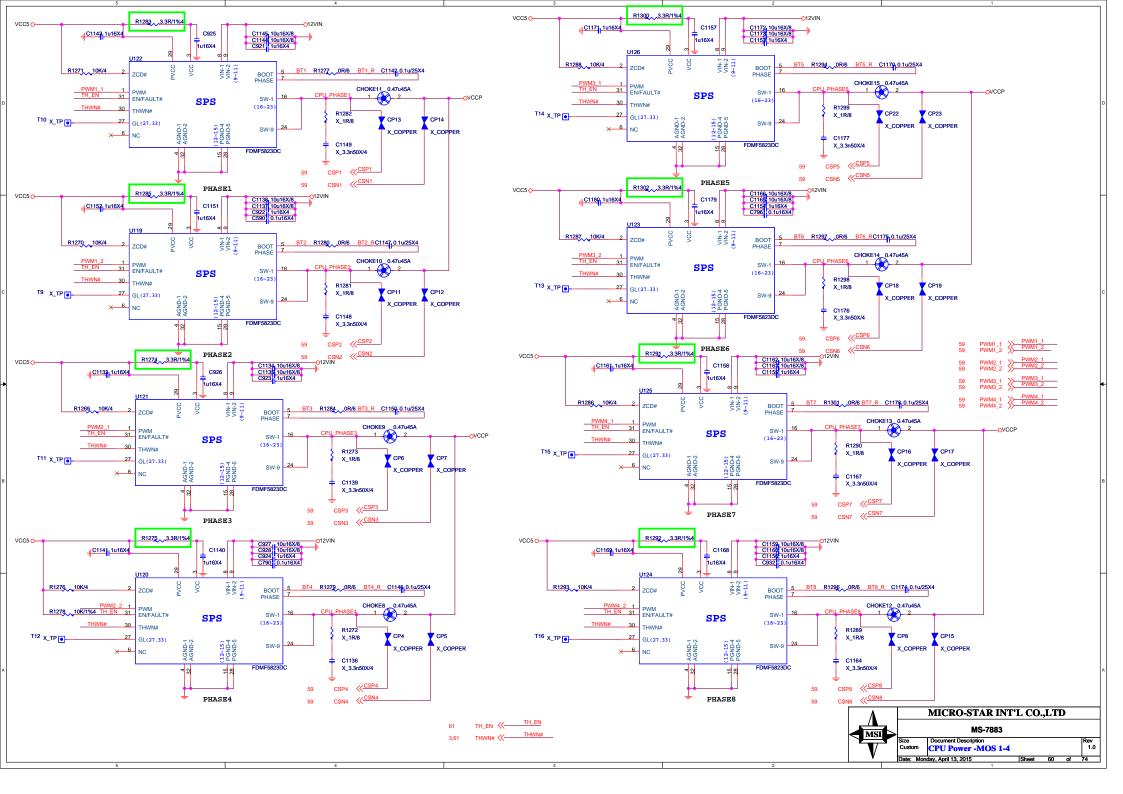
MS-7883

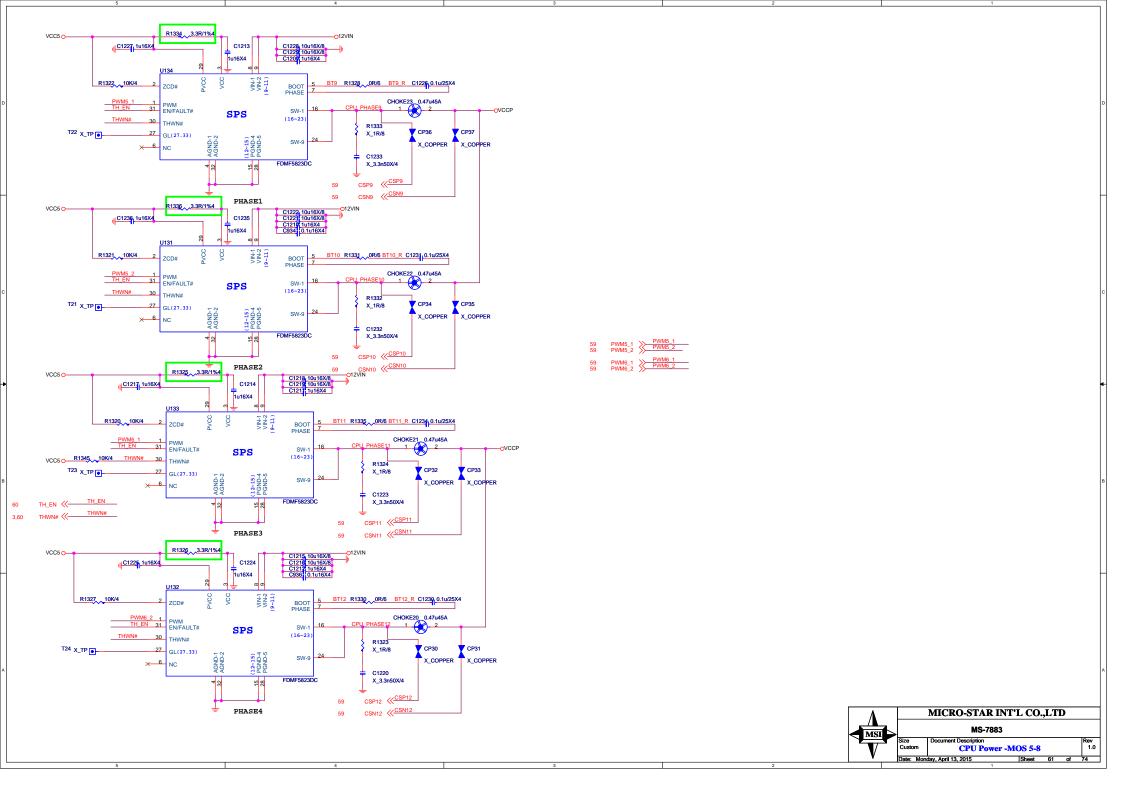
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Utf1+BT Connector
Date: Monday, April 13, 2015 Sheet 56 of 74



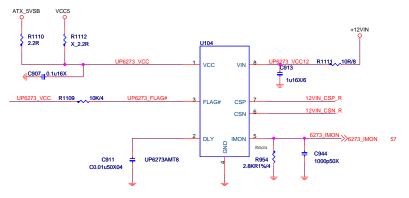
CPU Power-ISL6388-12Phase VCCP_1.8V 180A, OC margin 2.5V=240A OCP:336A for 12Phase +VCCIO_IN close to VRM 3 CPU_SVID_ALERT_N >> CPU_SVID_ALERT_N R39 C6 0.01u16X4 0.1u/10X4 O12VIN 3 CPU_SVID_DATA
CPU_SVID_DATA
R33 100R/4 VRMPWRGD LEVEL SHIFT 1u16X/6 between 3 to 6 inches ->>VRM_PGD Vbe(max):0.95V R69 X_10K/1% VRM_PGD_ R50 100K/4 C21 100p16X4 SVCLK SVALERT# R49 PWM2 67 SLP_S3_CTRL >> 100R/4 C693 X_0.1u16X4 PWM3 8 CPU_VCC_SENSE >R807____OR/4 ATX_5VSB 100R1%/4 C27p50N/4 C692 X_0.1u16X4 8 CPU_VSS_SENSE >>R806____OR/4_ RGND Q7 NN-2N7002DW-7 C8 X_0.1u16X4 V63880 R14 X 1K 100R1%/4 C27p50N/4 C13 X_0.1u16X 67 PCH ENABLE R2 35.7K1%4 R16 13.7K1%4 C694 X 0.01u16X4 R811 182KR1%/4 VRSEL_ADDR ATX_5VSB R811 stuff 232K for APS =>23=>41=>61 R38 4.7K/4 ATX_5VSBO_R79____47K/4 R1123 47K/4 O 20 BUF_COMP OCP:347A 100R1%/4 (240A / 12 Phase) * DCR / (Risen + Rset/64) close phase sequence 6-3-5-2-4-1 = 10011A R753=4.64k ohm 2014.05.26 Make sure VCCIN after VCCDDR Golden Point only for 7882 VCCIO_IN_1.05V 431mA, OC margin 1.6V=1A Modify 2014.12.18 H1X2M-2PITCH C501 1u/6.3X4 H2X2[4]M_BLACK-RH +VCCIO_IN POK C469 0.015u16X4 R436 1KR1%0402 R428 NOR/4 >>+VCCIO_IN_FB_R 57 Vfb=0.8V C507 10u6.3X6 R429 R438 8.06KR1%04 5.23KR1%04 PROC_ID +VCCIO_IN MICRO-STAR INT'L CO.,LTD R28 ____0R/4 3.30 PROC ID >> ->> PCH_PWROK_R 17,30 H1X2M-2PITCH J_VBOOT1 MS-7883 0.95V MSI ument Description
VRD12.5 - PWM-uP1649 1.05V X_H1X3M_BLACK-RH-3



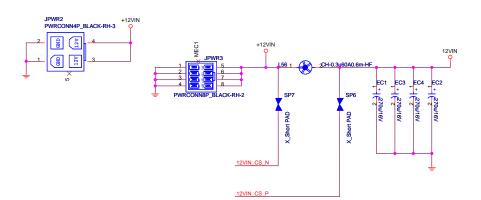


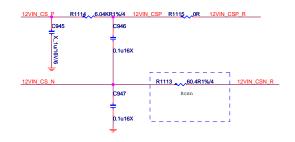


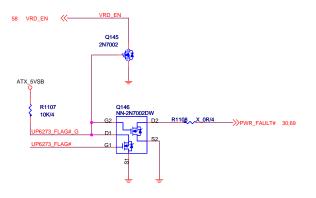
POWER METER OCP: 120A

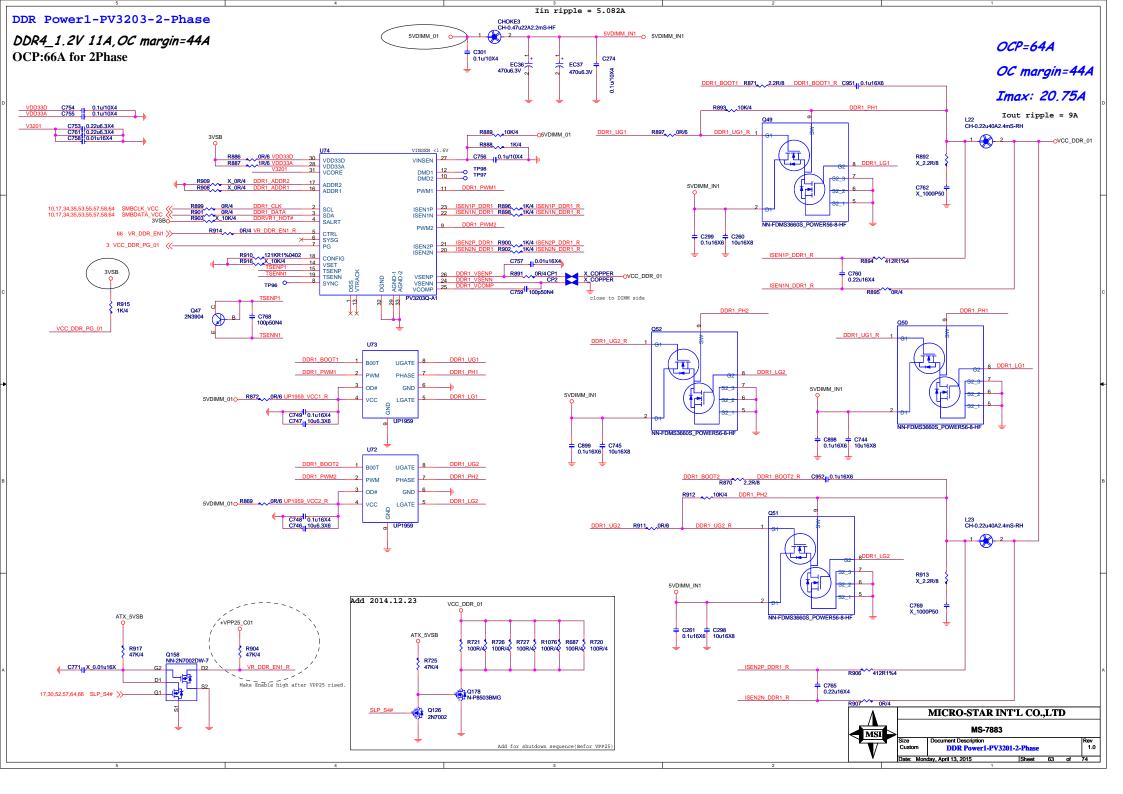


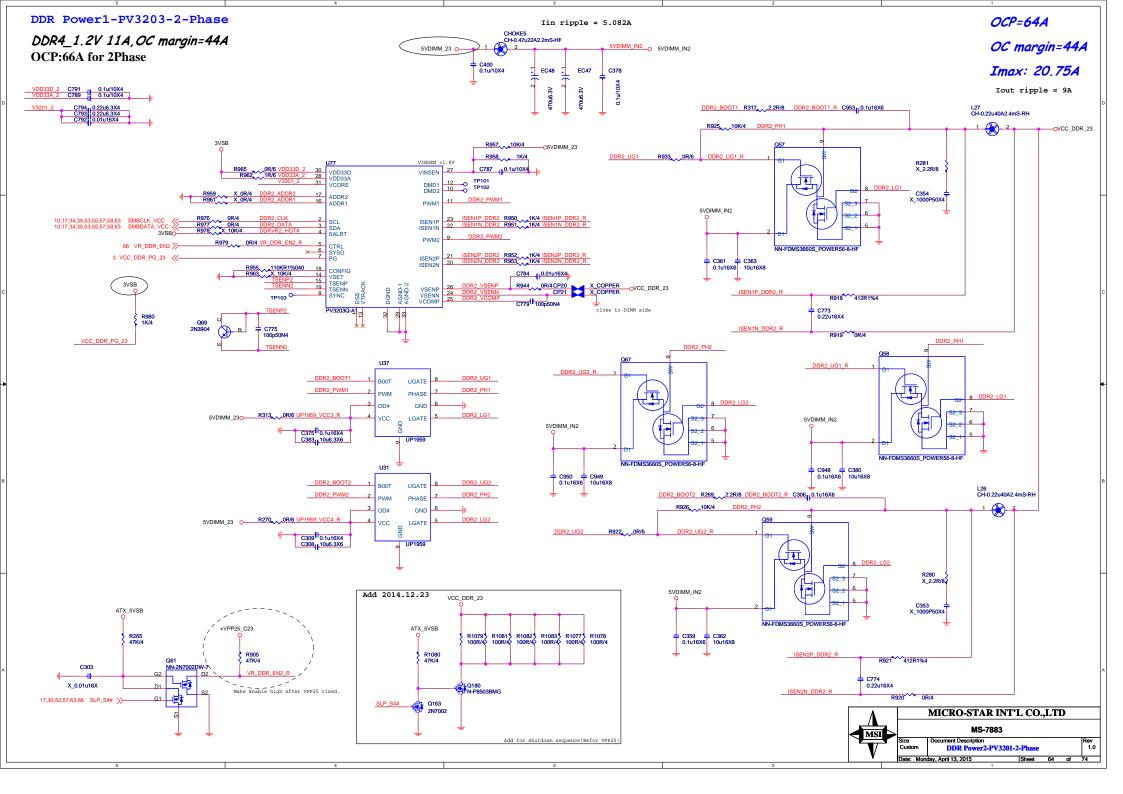
Iin=(Vmon*Rcsn)/(Rmon*Rdc)
Vmon=1.2
can change OCP trigger level by Rcsn and Rmon
(1.2 * 0.2) / (10K* 0.3m) = 80A











4DIMM: 1.2A FOR DDR VTT 4DIMM: 3A FOR OC margin

