

SHEET TITLE

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1150-A
05	CPU_LGA1150-B
06	CPU_LGA1150-C
07	DDR III CHANNEL A
08	DDR III CHANNEL B
09	PCH_FDI,DMI,USB,PCIE,NVRAM
10	PCH_DP,CLK BUFFER
11	PCH_HOST,SATA,PCI
12	PCH_GPIO,CTRL,AUDIO
13	PCH_PWR,GND
14	PCI EXPRESS*16 SLOT
15	PCI EXPRESS X1 *2 SLOT
16	PCI SLOT (NA)
17	ITE 8620 LPC IO
18	COM,KB_MS_USB,USB30_20
19	HWM,FAN CTRL,OV
20	DUAL BIOS
21	FP,FUSB,SPK,SATALED
22	Realtek ALC887-VD2
23	REAR AUDIO JACK
24	REALTEK RTL8111F
25	DISCRETE POWER
26	ATX
27	VCORE ISL95812_1

SHEET TITLE

28	VCORE ISL95812_2
29	RT8120_DDR POWER
30	LPT
31	DVI
32	IT8892E (NA)
33	USB3 VL805 (NA)

Gigabyte Technology

Cover Sheet

Title	Cover Sheet		Rev
Size	Document Number	GA-B85M-D2V	2.0
Custom	Date	Monday, April 07, 2014	Sheet 1 of 33

Model Name: GA-B85M-D2V

Circuit or PCB layout change

Component value change history

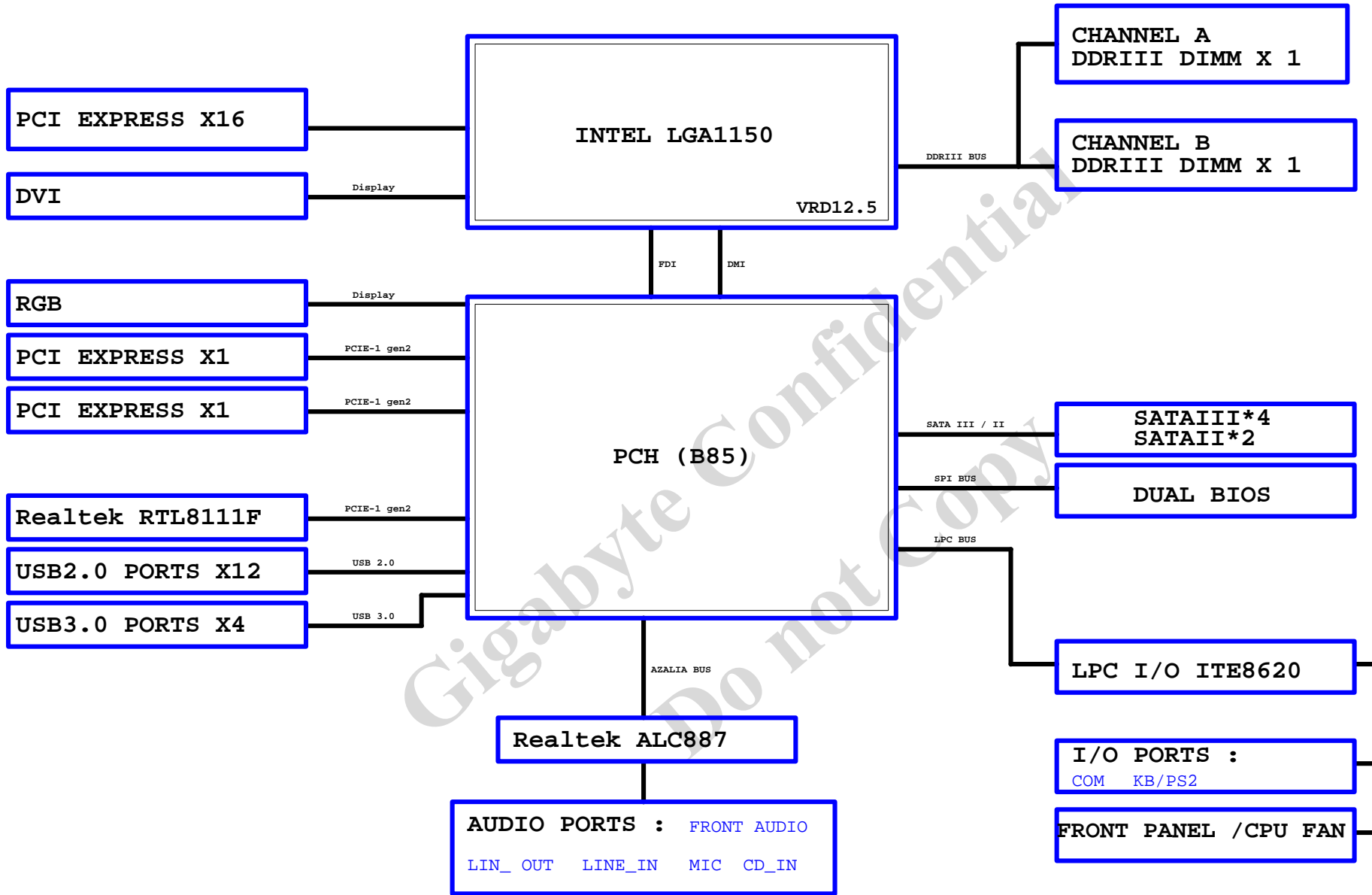
Data	Change Item	Reason
2013/06/26	New BOM	9MB85MD2V-00-01
2013/08/02	1.remove CD1 2.add NR249	9MB85MD2V-00-02
2013/08/14	1.modify BOM 版本 to 11A 2.remove M3 power	9MB85MD2V-00-11A
2013/09/17	1.modify PCB 版本 to 1.11 2.modify USB2.0 短路保護線路	9MB85MD2V-00-11D
2013/10/30	1.modify NX1.NC7.NC8 BOM	9MB85MD2V-00-11E
2013/11/25	1.modify NC7.NC8 DDR防燒線路BOM	9MB85MD2V-00-11F
2013/12/05	1.modify CUIBOM	9MB85MD2V-00-11G
2014/02/25	1.modify Vcore 1H1L 2.modify single BIOS 3.modify 被動DVI	9MB85MD2V-00-20A
2014/04/01	1.modify COM . F_AUDIO connector 2.modify 25M X'tal and cap 3.modify 8620 PROHOT	9MB85MD2V-00-20B

DATE	Change Item	Reason
2013/06/26	1.由H81M-D2V Rev 0.2 修改 2.modify USB3.0 X4 from B85 chip 3.ADD M3 POWER 4.ADD 2 port SATA 3 5.remove VL805 6.modify USB2.0 X12 from B85 chip 7.COM port change to pin header	Rev 0.1
2013/07/24	1.add -SLP_A 2.add front USB2.0 short 保護線路 3.removeMR18 add MF1 並與MR17 co-layout	
2013/08/14	1.modify PCB 版本	
2013/09/12	1.modify FAN 防燒電阻-->0603 2.modify FUSE footprint-->POLYSWITCH-1206-1 3.modify MOS footprint-->Q_TDS0N8-GDS-T	
2013/09/17	1.modify x'tal layout	
2014/02/24	1.modify Vcore 1H1L 2.modify single BIOS 3.modify 被動DVI	Rev 2.0

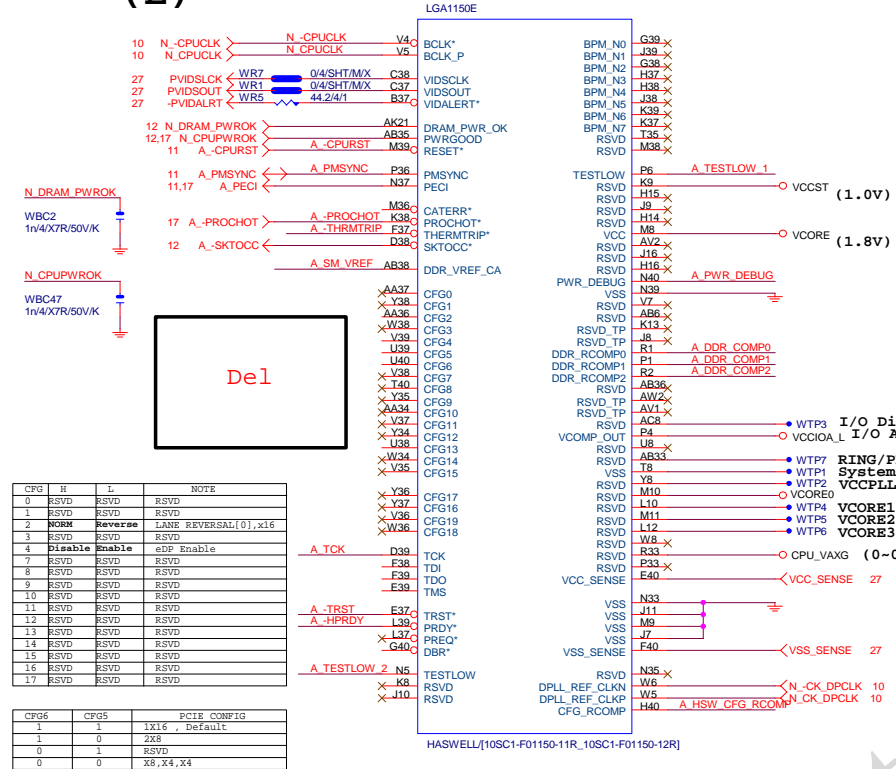
PCB : S4VNB (精成,全成信,伊利安達)
 S:單文
 4:四層板
 V:第二層是VCC
 N:咖啡色
 B:製程

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Title BOM & PCB MODIFY HISTORY		
Size	Document Number	Rev
Custom	GA-B85M-D2V	2.0
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BLOCK DIAGRAM

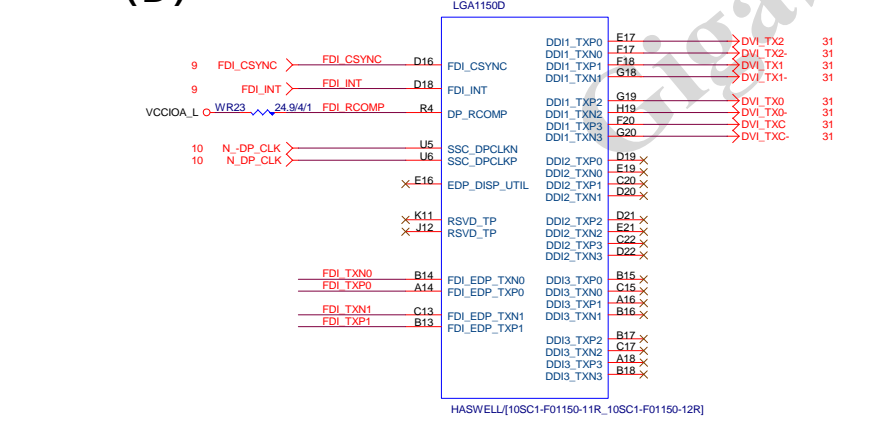


LGA1150 (E)



CFG 0-17 all internal PULL-UP

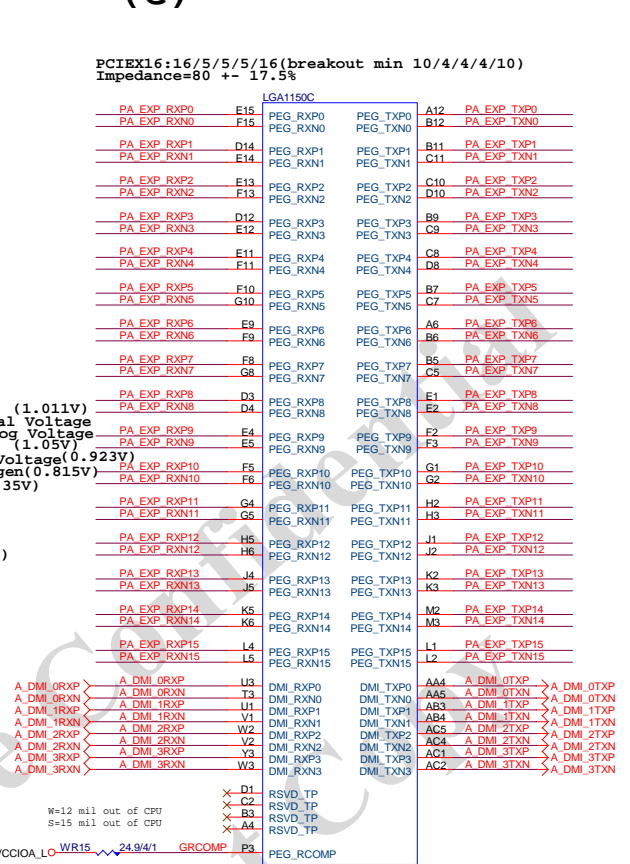
LGA1150 (D)



FDI:12/4/5/4/12(breakout min 6/4/4/4/6)
Impedance=85 +- 17.5%

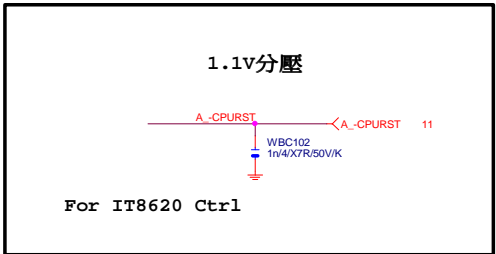


LGA1155 (C)



DMI:12/4/4/12(breakout min 8/4/4/4/8)
Impedance=85 +- 17.5%

-CPURST

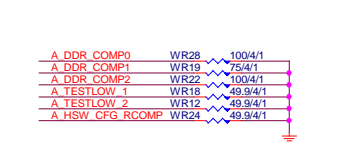
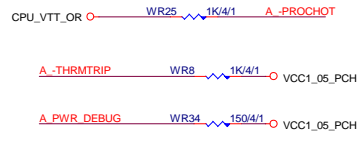
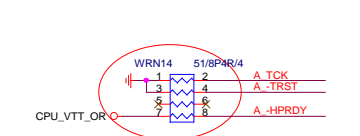


For IT8620 Ctrl

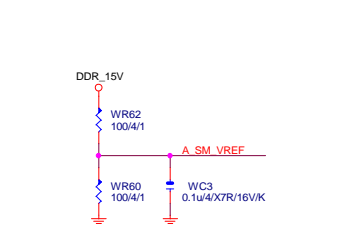
CPU SVID



CPU PU/PD



SM REF



新增



LGA1150 (A)

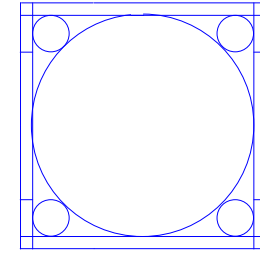
LGA1150 (B)

LGA1150 (CR)

LGA1150A

LGA1150B

CR CPU RETENTION X



LGA1150



ILM_BP1156/CSP/ILM_BP1156/CSP/[12KRC-0F0001-52R_12KRC-0F0001-51R]

DDR BUS

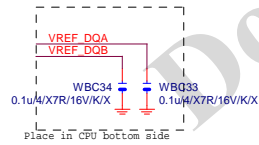
- 7 MODT_A[0..1] ↔ MODT_A0..11
- 8 MODT_B[0..1] ↔ MODT_B0..11
- 7 MDA[0..63] ↔ MDA[0..63]
- 8 MdB[0..63] ↔ MdB[0..63]
- 7 DQSA[0..7] ↔ DQSA[0..7]
- 7 DQSA[0..7] ↔ DQSA[0..7]
- 7 MAA[0..15] ↔ MAA[0..15]
- 8 MAA[0..15] ↔ MAA[0..15]
- 8 DQSB[0..7] ↔ DQSB[0..7]
- 8 DQSB[0..7] ↔ DQSB[0..7]

MAAA0	AU13	DDR0_MA0	DDR0_D00	AD38	MDA0	
MAAA1	AV16	DDR0_MA1	DDR0_D01	AD39	MDA1	
MAAA2	AU16	DDR0_MA2	DDR0_D02	AF38	MDA2	
MAAA3	AW17	DDR0_MA3	DDR0_D03	AF39	MDA3	
MAAA4	AU17	DDR0_MA4	DDR0_D04	AD37	MDA4	
MAAA5	AW18	DDR0_MA5	DDR0_D05	AD40	MDA5	
MAAA6	AV17	DDR0_MA6	DDR0_D06	AE37	MDA6	
MAAA7	AT18	DDR0_MA7	DDR0_D07	AE40	MDA7	
MAAA8	AU18	DDR0_MA8	DDR0_D08	AH40	MDA9	
MAAA9	AT19	DDR0_MA9	DDR0_D09	AH39	MDA10	
MAAA10	AW11	DDR0_MA10	DDR0_D09	AK38	MDA10	
MAAA11	AV19	DDR0_MA10	DDR0_D10	AK39	MDA11	
MAAA12	AU19	DDR0_MA11	DDR0_D011	AH37	MDA12	
MAAA13	AT20	DDR0_MA12	DDR0_D012	AH38	MDA13	
MAAA14	AW20	DDR0_MA13	DDR0_D013	AK37	MDA14	
MAAA15	AU21	DDR0_MA14	DDR0_D014	AK40	MDA15	
		DDR0_MA15	DDR0_D015	AM40	MDA17	
			DDR0_D016	AM39	MDA21	
MODT_A0	AW10	DDR0_ODT0	DDR0_D017	AM39	MDA21	
MODT_A1	AV8	DDR0_ODT1	DDR0_D018	AP39	MDA19	
	AW9	DDR0_ODT2	DDR0_D019	AM37	MDA20	
	AU8	DDR0_ODT3	DDR0_D021	AM38	MDA16	
			DDR0_D022	AP37	MDA22	
			DDR0_D022	AP40	MDA23	
			DDR0_D023	AV37	MDA25	
			DDR0_D024	AW37	MDA29	
			DDR0_EC02	AU35	MDA26	
			DDR0_EC03	AV35	MDA27	
			DDR0_EC04	AT37	MDA28	
			DDR0_EC05	AU37	MDA24	
			DDR0_EC06	DDR0_D028	AT35	MDA30
			DDR0_EC07	DDR0_D029	AW35	MDA31
			DDR0_D031	AW35	MDA33	
			DDR0_D032	AU6	MDA37	
			DDR0_D033	AV4	MDA34	
			DDR0_D034	AU4	MDA35	
			DDR0_D035	AV6	MDA32	
			DDR0_D036	AW4	MDA38	
			DDR0_D037	AV4	MDA39	
			DDR0_D038	AR1	MDA41	
			DDR0_D039	AR4	MDA45	
			DDR0_D041	AN3	MDA42	
			DDR0_D042	AN4	MDA43	
			DDR0_D043	AR2	MDA44	
			DDR0_D044	AR3	MDA40	
			DDR0_D045	AN2	MDA46	
			DDR0_D046	AN1	MDA47	
			DDR0_D047	AL1	MDA49	
			DDR0_D048	AL4	MDA53	
			DDR0_D049	AL3	MDA50	
			DDR0_D050	AJ4	MDA51	
			DDR0_D051	AL2	MDA52	
			DDR0_D052	AL3	MDA48	
			DDR0_D053	AJ2	MDA54	
			DDR0_D054	AJ1	MDA55	
			DDR0_D055	AG1	MDA57	
			DDR0_D057	AG4	MDA61	
			DDR0_D058	AE3	MDA58	
			DDR0_D058	E4	MDA59	
			DDR0_D059	AG2	MDA60	
			DDR0_D060	AG3	MDA56	
			DDR0_D061	AE2	MDA62	
			DDR0_D062	AE2	MDA63	
			DDR0_D063	AE1	MDA63	
			DDR0_D063	AE39	DQSA0	
			DDR0_DOS_P0	AJ39	DQSA1	
			DDR0_DOS_P1	AN39	DQSA2	
			DDR0_DOS_P2	AV36	DQSA3	
			DDR0_DOS_P3	AV5	DQSA4	
			DDR0_DOS_P4	AP3	DQSA5	
			DDR0_DOS_P5	AK3	DQSA6	
			DDR0_DOS_P6	AF3	DQSA7	
			DDR0_DOS_P7	AV32		
			DDR0_DOS_P8	AE38	DQSA0	
			DDR0_DOS_N1	AJ38	DQSA1	
			DDR0_DOS_N2	AN38	DQSA2	
			DDR0_DOS_N3	AJ36	DQSA3	
			DDR0_DOS_N4	AW5	DQSA4	
			DDR0_DOS_N5	AP2	DQSA5	
			DDR0_DOS_N6	AK2	DQSA6	
			DDR0_DOS_N7	AF2	DQSA7	
			DDR0_DOS_N8	AU32		

HASWELL[10SC1-F01150-11R_10SC1-F01150-12R]

MAAB0	AL19	DDR1_MA0	AE34	MDB0
MAAB1	AK23	DDR1_MA1	AE35	MDB1
MAAB2	AM23	DDR1_MA2	AE35	MDB2
MAAB3	AM23	DDR1_MA3	AH35	MDB3
MAAB4	AP23	DDR1_MA4	AQ34	MDB4
MAAB5	AL23	DDR1_MA5	AQ35	MDB5
MAAB6	AV24	DDR1_MA6	AH34	MDB7
MAAB7	AV25	DDR1_MA7	AL34	MDB8
MAAB8	AU26	DDR1_MA8	AL35	MDB9
MAAB9	AW25	DDR1_MA9	AK31	MDB10
MAAB10	AE18	DDR1_MA10	AL31	MDB11
MAAB11	AE18	DDR1_MA11	AK34	MDB12
MAAB12	AV26	DDR1_MA12	AK35	MDB13
MAAB13	AR15	DDR1_MA13	AK32	MDB14
MAAB14	AV27	DDR1_MA14	AL32	MDB15
MAAB15	AY28	DDR1_MA15	AP34	MDB17
			AP34	MDB21
MODT_B0	AM17	DDR1_ODT0	AN31	MDB19
MODT_B1	AL16	DDR1_ODT1	AN31	MDB23
	AM16	DDR1_ODT2	AN35	MDB20
	AK15	DDR1_ODT3	AP35	MDB16
			AN32	MDB18
			AP32	MDB22
			AM29	MDB25
			AM28	MDB28
			AR29	MDB27
			AR28	MDB30
			AL23	MDB34
			AL28	MDB29
			AP29	MDB26
			AP28	MDB31
			AR12	MDB32
			AL12	MDB33
			AL13	MDB34
			AL12	MDB35
			AR13	MDB36
			AP13	MDB37
			AM13	MDB38
			AM12	MDB39
			AR9	MDB45
			AP9	MDB41
			AR6	MDB47
			AP6	MDB43
			AR10	MDB44
			AR7	MDB46
			AP7	MDB42
			AM9	MDB52
			AL9	MDB53
			AL6	MDB50
			AL7	MDB55
			AM10	MDB48
			AL10	MDB49
			AM6	MDB54
			AM2	MDB51
			AH6	MDB61
			AH7	MDB60
			AE6	MDB59
			AE7	MDB63
			AJ6	MDB56
			AF7	MDB57
			AJ7	MDB58
			AF7	MDB62
			AF35	DQSB0
			AL33	DQSB1
			AN28	DQSB2
			AN28	DQSB3
			AN12	DQSB4
			AP8	DQSB5
			AL8	DQSB6
			AG7	DQSB7
			AN25	DQSB0
			AK33	DQSB1
			AN33	DQSB2
			AN29	DQSB3
			AN13	DQSB4
			AR8	DQSB5
			AM8	DQSB6
			AG6	DQSB7
			AN26	

HASWELL[10SC1-F01150-11R_10SC1-F01150-12R]



未上件

Gigabyte Technology

Title			CPU LGA1150-B		
Size			GA-B85M-D2V		
Document Number			Rev 2.0		
Date: Monday, April 07, 2014			Sheet 5 of 33		