B365

Version : 10

CPU :

Intel CoffeeLake-S

System Chipset :

Intel CannonLake-H Chipset

On Board Chipset :

IMVP8 -- NCP81220+NCP81258 7Phase
Gigabit LAN -- RTL8111HN
HDA Codec -- Realtek ALC623
Super I/O --NCT6686D-L
SPI Flash 128Mb + 64Mb

Main Memory :

2 Channel DDR 4 * 4 (Max 64GB)

Expansion Slot :

PCI Express x16 Slot * 1
PCI Express x4 Slot * 1
PCI Express x1 Slot * 1
PCI SLOT * 1

lenovo

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Title: Cover Sheet		
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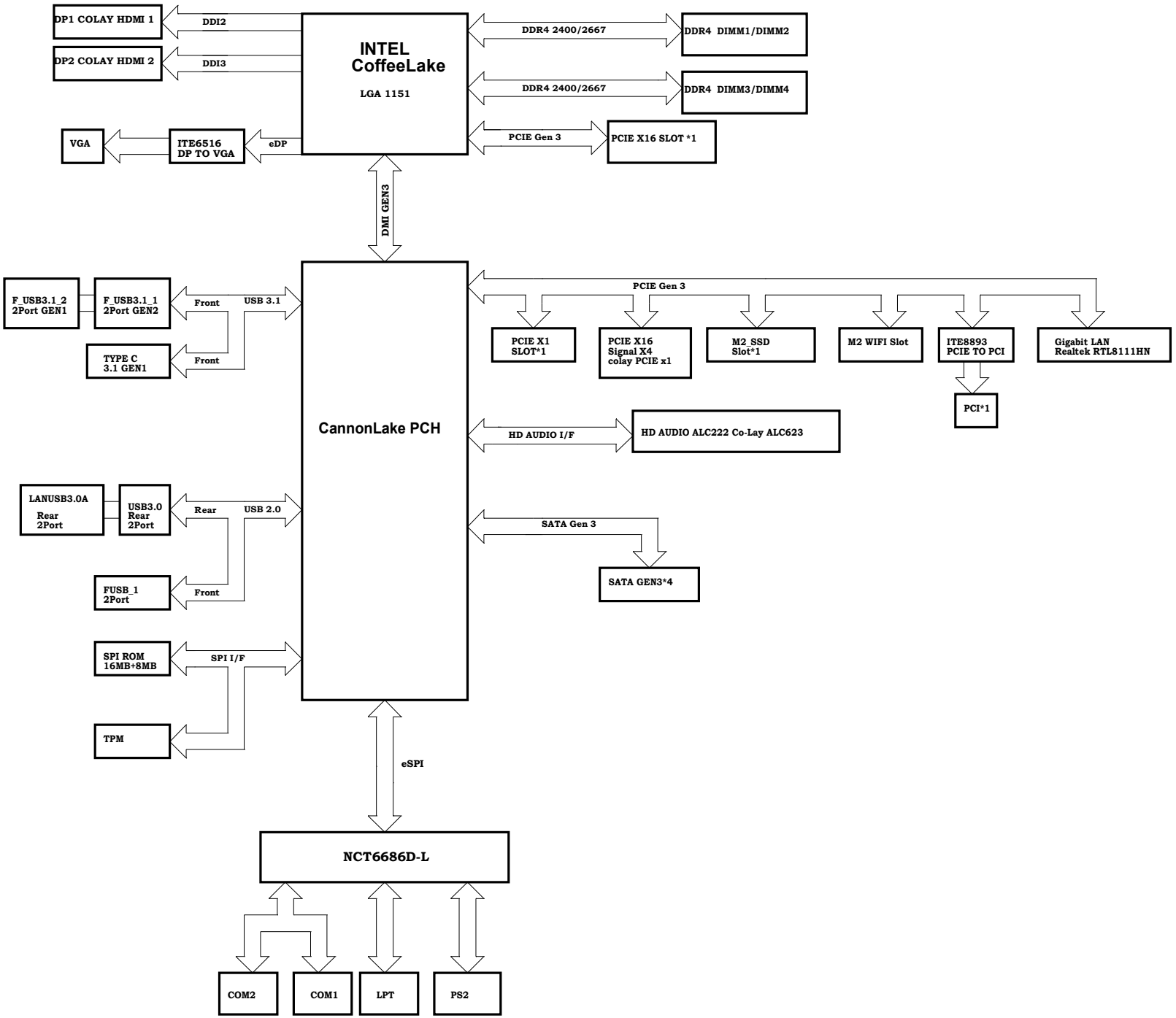

Slot Sequence:

- PCIE X16
- PCIE X1
- PCIE X16(signal x4)
- PCI SLOT

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Title: ***Block Diagram***		
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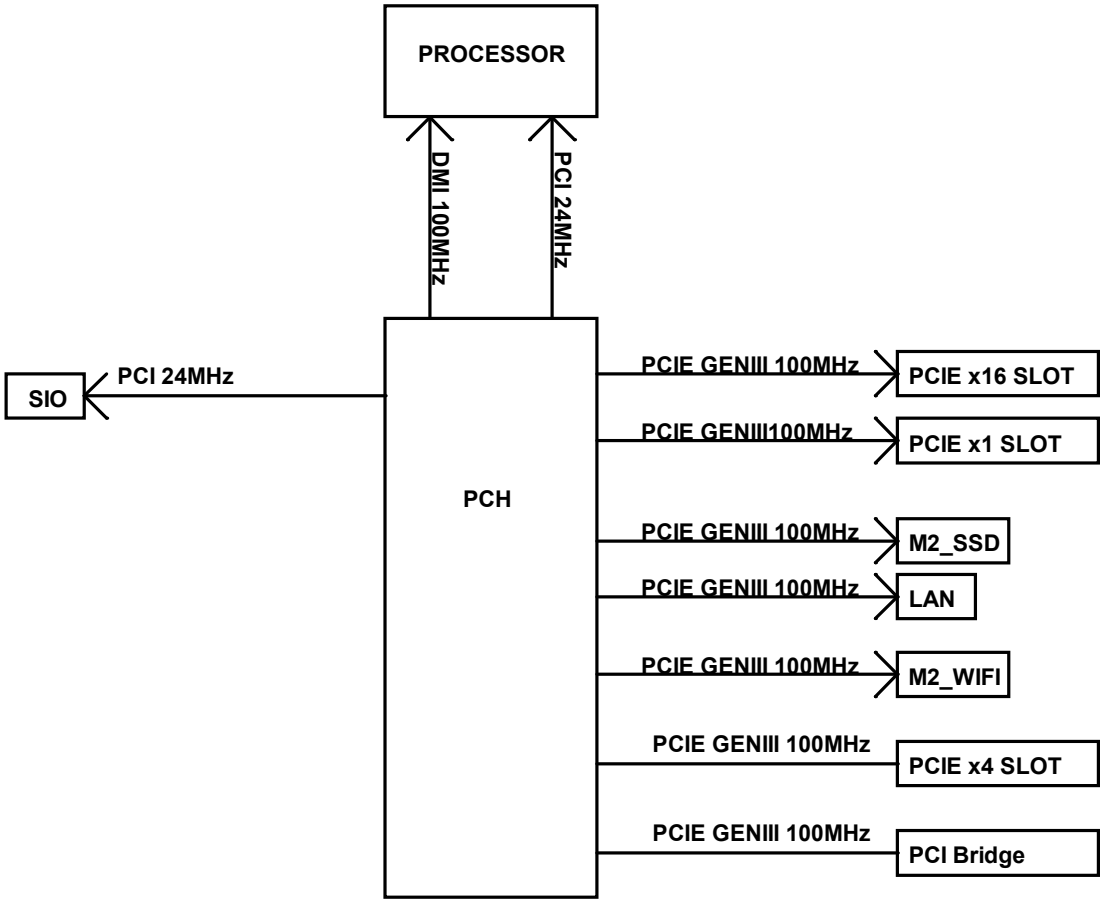

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Title: Clock Distribution		
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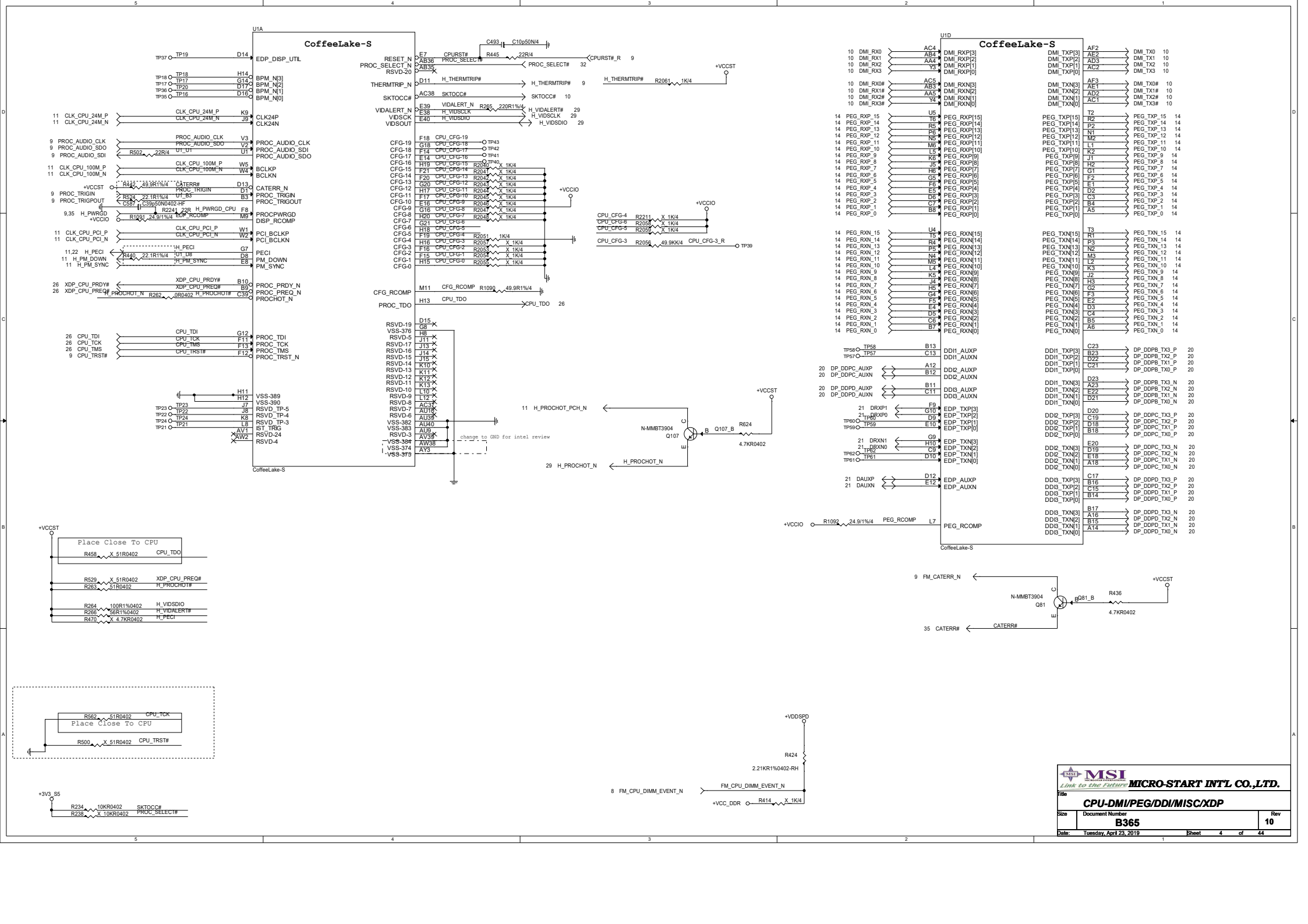
U1A
CoffeeLake-S
EDP_DISP_UTIL
BPM_N[3]
BPM_N[2]
BPM_N[1]
BPM_N[0]
CLK24P
CLK24N
PROC_AUDIO_CLK
PROC_AUDIO_SDI
PROC_AUDIO_SDO
BCLKP
BCLKN
CATERR_N
PROC_TRIGIN
PROC_TRIGOUT
PROCPWRGD
DISP_RCOMP
PCI_BCLKP
PCI_BCLKN
PECI
PM_DOWN
PM_SYNC
PROC_PRDY_N
PROC_PREQ_N
PROCHOT_N
PROC_TDI
PROC_TCK
PROC_TMS
PROC_TRST_N
VSS-389
VSS-390
RSVD_TP-5
RSVD_TP-4
RSVD_TP-3
IST_TRIG
RSVD-24
RSVD-4
RESET_N
PROC_SELECT_N
RSVD-20
THERMTRIP_N
SKTOCC#
VIDALERT_N
VIDSCK
VIDSOUT
CFG_RCOMP
PROC_TDO
RSVD-19
VSS-376
RSVD-5
RSVD-17
RSVD-16
RSVD-15
RSVD-14
RSVD-13
RSVD-12
RSVD-11
RSVD-10
RSVD-9
RSVD-8
RSVD-7
RSVD-6
VSS-382
VSS-383
RSVD-3
VSS-373
VSS-374
VSS-375
change to GND for intel review
U1D
CoffeeLake-S
DMI_RXP[3]
DMI_RXP[2]
DMI_RXP[1]
DMI_RXP[0]
DMI_RXN[3]
DMI_RXN[2]
DMI_RXN[1]
DMI_RXN[0]
DMI_TXP[3]
DMI_TXP[2]
DMI_TXP[1]
DMI_TXP[0]
DMI_TXN[3]
DMI_TXN[2]
DMI_TXN[1]
DMI_TXN[0]
PEG_RXP[15]
PEG_RXP[14]
PEG_RXP[13]
PEG_RXP[12]
PEG_RXP[11]
PEG_RXP[10]
PEG_RXP[9]
PEG_RXP[8]
PEG_RXP[7]
PEG_RXP[6]
PEG_RXP[5]
PEG_RXP[4]
PEG_RXP[3]
PEG_RXP[2]
PEG_RXP[1]
PEG_RXP[0]
PEG_RXN[15]
PEG_RXN[14]
PEG_RXN[13]
PEG_RXN[12]
PEG_RXN[11]
PEG_RXN[10]
PEG_RXN[9]
PEG_RXN[8]
PEG_RXN[7]
PEG_RXN[6]
PEG_RXN[5]
PEG_RXN[4]
PEG_RXN[3]
PEG_RXN[2]
PEG_RXN[1]
PEG_RXN[0]
PEG_TXP[15]
PEG_TXP[14]
PEG_TXP[13]
PEG_TXP[12]
PEG_TXP[11]
PEG_TXP[10]
PEG_TXP[9]
PEG_TXP[8]
PEG_TXP[7]
PEG_TXP[6]
PEG_TXP[5]
PEG_TXP[4]
PEG_TXP[3]
PEG_TXP[2]
PEG_TXP[1]
PEG_TXP[0]
PEG_TXN[15]
PEG_TXN[14]
PEG_TXN[13]
PEG_TXN[12]
PEG_TXN[11]
PEG_TXN[10]
PEG_TXN[9]
PEG_TXN[8]
PEG_TXN[7]
PEG_TXN[6]
PEG_TXN[5]
PEG_TXN[4]
PEG_TXN[3]
PEG_TXN[2]
PEG_TXN[1]
PEG_TXN[0]
DDI1_AUXP
DDI1_AUXN
DDI2_AUXP
DDI2_AUXN
DDI3_AUXP
DDI3_AUXN
EDP_TXP[3]
EDP_TXP[2]
EDP_TXP[1]
EDP_TXP[0]
EDP_TXN[3]
EDP_TXN[2]
EDP_TXN[1]
EDP_TXN[0]
EDP_AUXP
EDP_AUXN
PEG_RCOMP
DDI1_TXP[3]
DDI1_TXP[2]
DDI1_TXP[1]
DDI1_TXP[0]
DDI1_TXN[3]
DDI1_TXN[2]
DDI1_TXN[1]
DDI1_TXN[0]
DDI2_TXP[3]
DDI2_TXP[2]
DDI2_TXP[1]
DDI2_TXP[0]
DDI2_TXN[3]
DDI2_TXN[2]
DDI2_TXN[1]
DDI2_TXN[0]
DDI3_TXP[3]
DDI3_TXP[2]
DDI3_TXP[1]
DDI3_TXP[0]
DDI3_TXN[3]
DDI3_TXN[2]
DDI3_TXN[1]
DDI3_TXN[0]
Place Close To CPU
Place Close To CPU
N-MMBT3904
Q107
Q107_B
R624
4.7KR0402
N-MMBT3904
Q81
Q81_B
R436
4.7KR0402
R424
2.21KR1%0402-RH
FM_CPU_DIMM_EVENT_N
R414
X_1K/4
R2061
1K/4
R445
22R/4
C493
C10p50N/4
R1090
49.9R1%/4
R1092
24.9/1%/4
PEG_RCOMP
R2056
49.9KK/4
CPU_CFG-3_R
R2211
X_1K/4
R2058
X_1K/4
R2059
X_1K/4
R458
X_51R0402
CPU_TDO
R529
X_51R0402
R263
51R0402
XDP_CPU_PREQ#
H_PROCHOT#
R264
100R1%0402
R266
56R1%0402
R470
X_4.7KR0402
H_VIDSDIO
H_VIDALERT#
H_PECI
R562
51R0402
CPU_TCK
R500
X_51R0402
CPU_TRST#
R234
10KR0402
R238
X_10KR0402
SKTOCC#
PROC_SELECT#
MSI
Link to the Future
MICRO-START INT'L CO.,LTD.
Title
CPU-DMI/PEG/DDI/MISC/XDP
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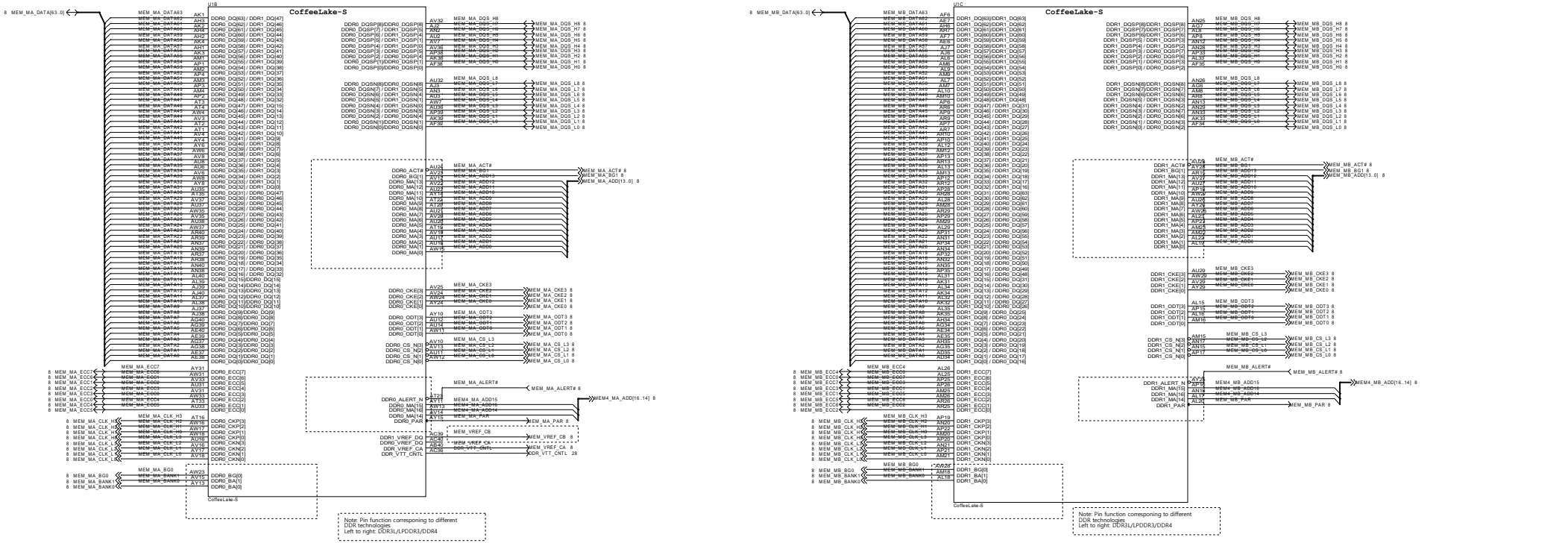

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Title	CPU-Memory	
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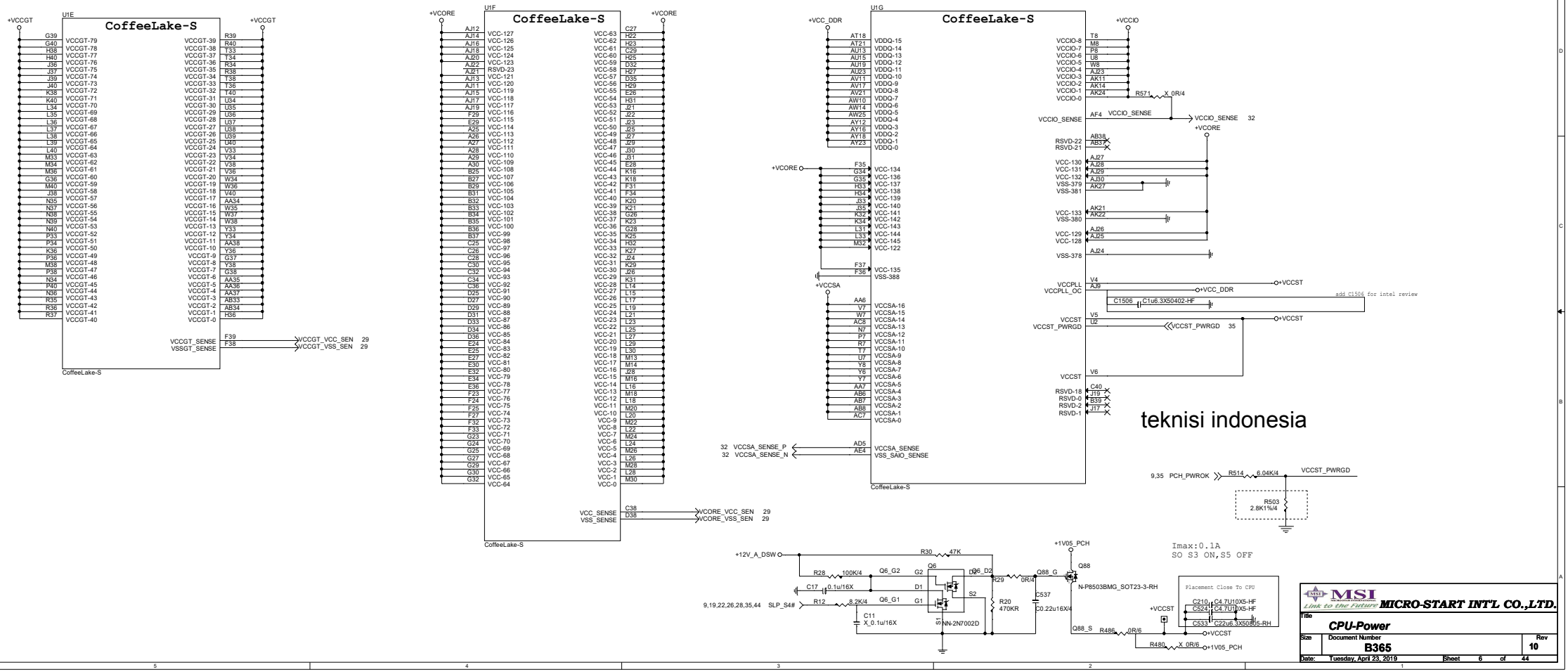

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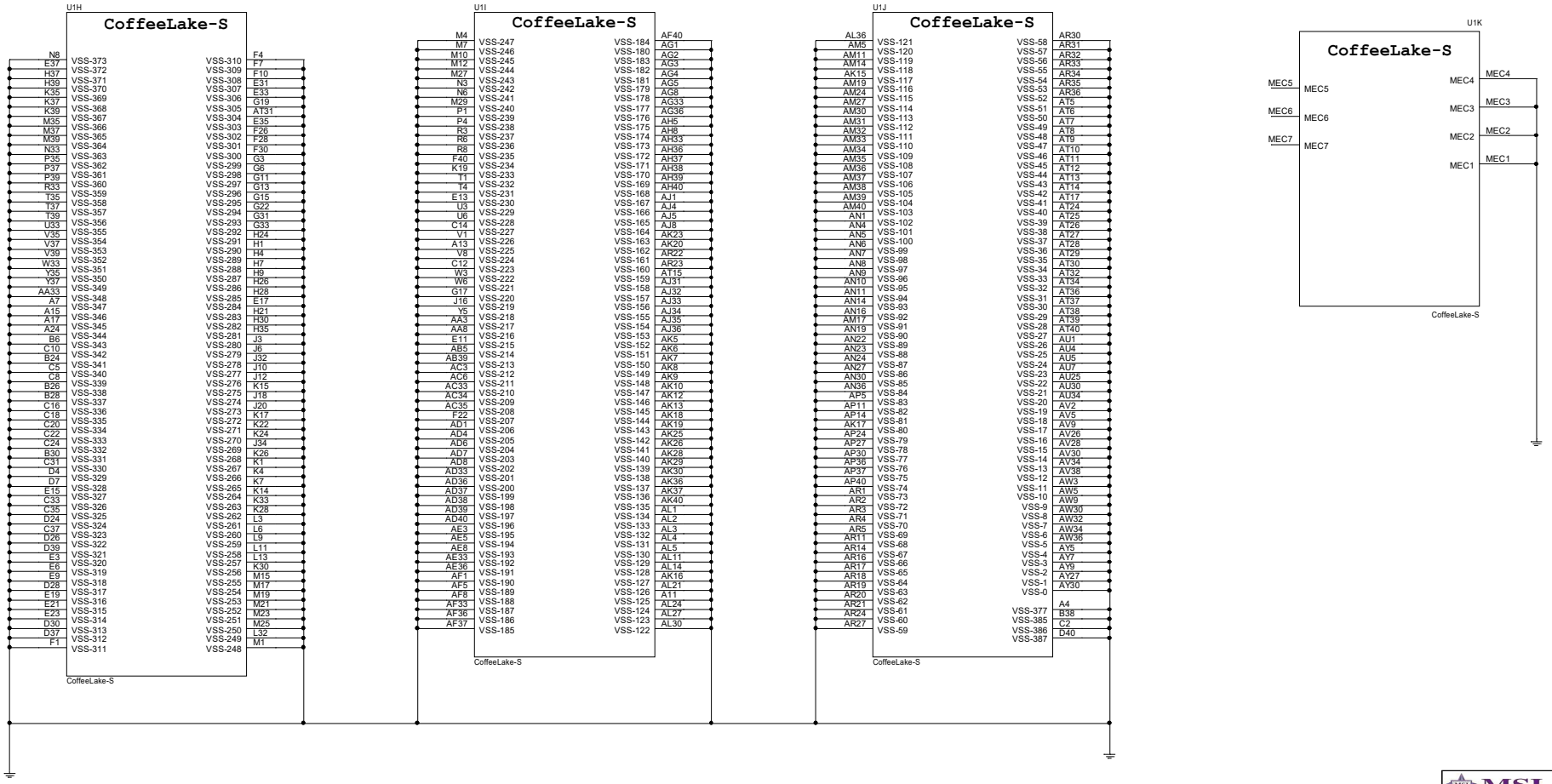
Link to the Future

Title	CPU-Power	
Size	Document Number B365	Rev 10
Date: Tuesday, April 23, 2019	Sheet 6 of 44	



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

Title: **CPU-GND**

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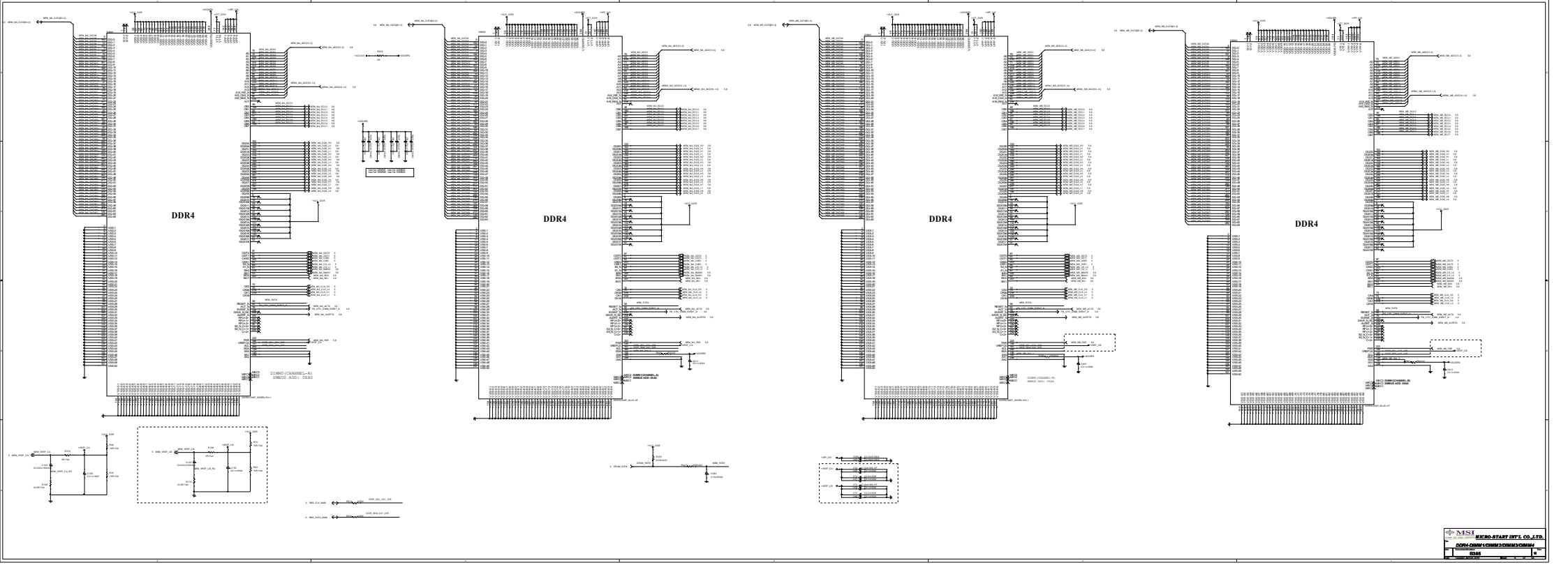
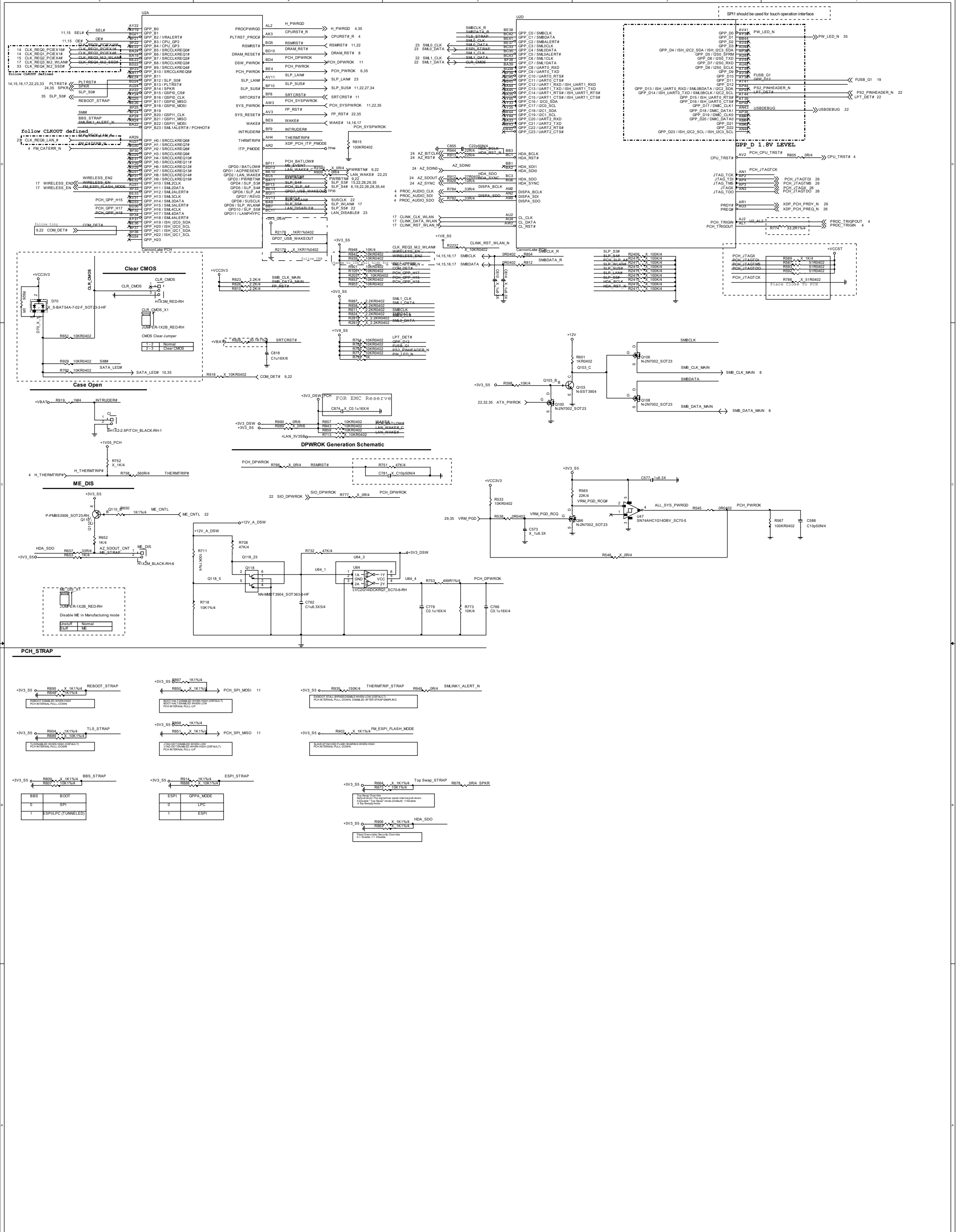

DDR4
DDR4
DDR4
DDR4
DIMM0(CHANNEL-A)
DIMM1(CHANNEL-B)
MICRO-STAR INT'L CO.,LTD.
DDR4-DIMM1/DIMM2/DIMM3/DIMM4
MS65



MICRO-START INTL CO.,LTD.		
Title: PCH-PME/SMBUS/UART/I2C/HDA		
Size	Document Number: B365	Rev: 10
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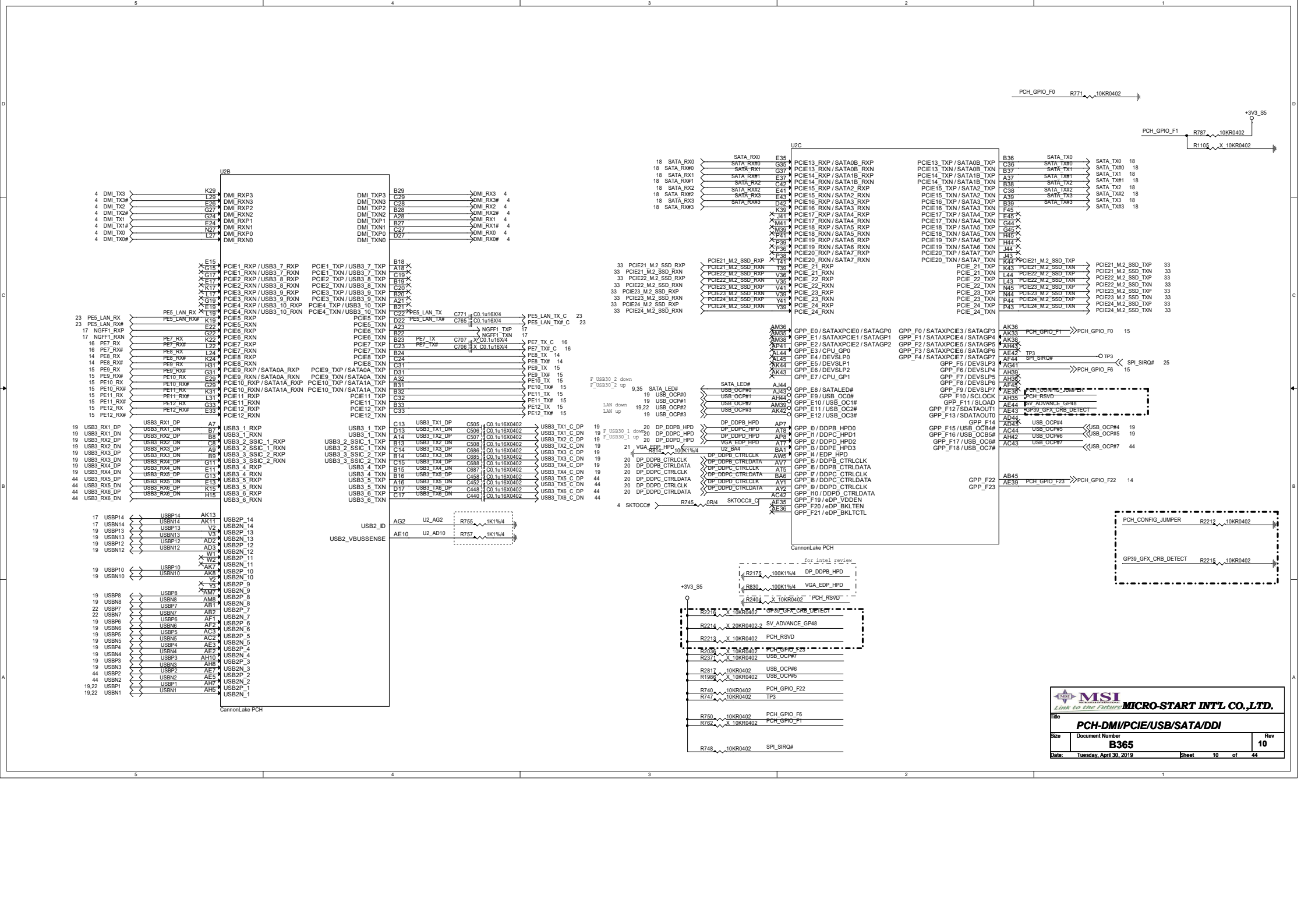
U2B
CannonLake PCH
U2C
CannonLake PCH
PCH_GPIO_F0
R771
10KR0402
+3V3_S5
PCH_GPIO_F1
R787
10KR0402
R1105
X_10KR0402
SATA_RX0
SATA_RX#0
SATA_RX1
SATA_RX#1
SATA_RX2
SATA_RX#2
SATA_RX3
SATA_RX#3
SATA_TX0
SATA_TX#0
SATA_TX1
SATA_TX#1
SATA_TX2
SATA_TX#2
SATA_TX3
SATA_TX#3
PCIE21_M.2_SSD_TXP
PCIE21_M.2_SSD_TXN
PCIE22_M.2_SSD_TXP
PCIE22_M.2_SSD_TXN
PCIE23_M.2_SSD_TXP
PCIE23_M.2_SSD_TXN
PCIE24_M.2_SSD_TXP
PCIE24_M.2_SSD_TXN
PCH_CONFIG_JUMPER
R2212
10KR0402
GP39_GFX_CRB_DETECT
R2215
10KR0402
for intel review
R2175
100K1%/4
DP_DDPB_HPD
R830
100K1%/4
VGA_EDP_HPD
R2401
X_10KR0402
PCH_RSVD
R2216
X_10KR0402
GP39_GFX_CRB_DETECT
R2214
X_20KR0402-2
SV_ADVANCE_GP48
R2213
X_10KR0402
PCH_RSVD
R2238
X_10KR0402
PCH_GPIO_F23
R2371
X_10KR0402
USB_OCP#7
R2817
10KR0402
USB_OCP#6
R1986
X_10KR0402
USB_OCP#5
R740
10KR0402
PCH_GPIO_F22
R747
10KR0402
TP3
R750
10KR0402
PCH_GPIO_F6
R762
X_10KR0402
PCH_GPIO_F1
R748
10KR0402
SPI_SIRQ#
MICRO-STAR INT'L CO.,LTD.
Link to the Future
Title
PCH-DMI/PCIE/USB/SATA/DDI
Size
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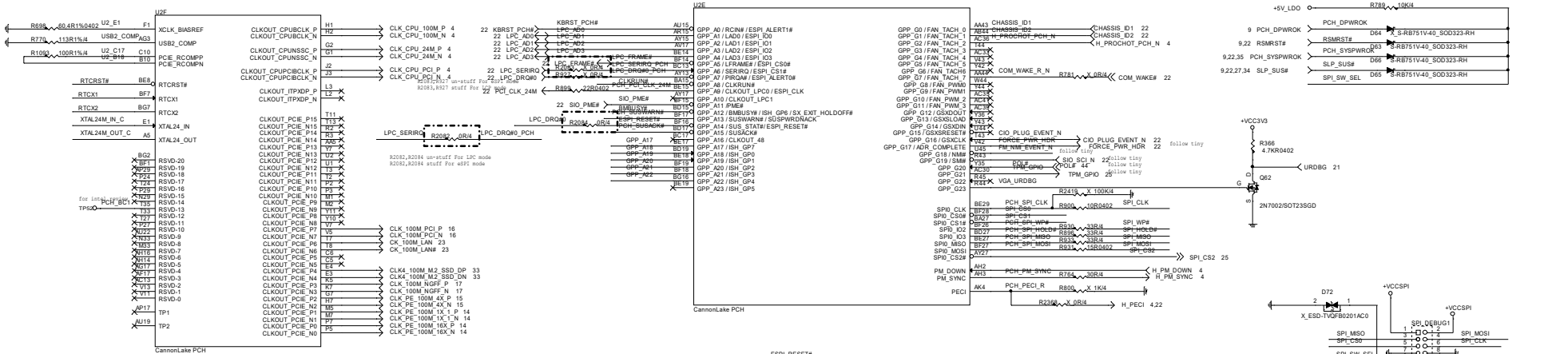

Bom Option Configuration

GPP_A22	GPP_A21	GPP_A20	GPP_A19	GPP_A18	GPP_A17	Project	BOM Opt
1	0	0	0	0	0	Think ROW M720t/s	
1	0	0	0	0	1	Cosumer B365	
1	0	0	0	1	0		
1	0	0	0	1	1		
1	0	0	1	0	0		
1	0	0	1	0	1		
1	0	0	1	1	0		
1	0	0	1	1	1		
1	0	1	0	0	0		

GPIO	Board ID
GPP_A17	BRD_ID0
GPP_A18	BRD_ID1
GPP_A19	BRD_ID2
GPP_A20	BRD_ID3
GPP_A21	BRD_ID4
GPP_A22	BRD_ID5

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File: PCH-Clock/LPC/FAN/SPI/PECI

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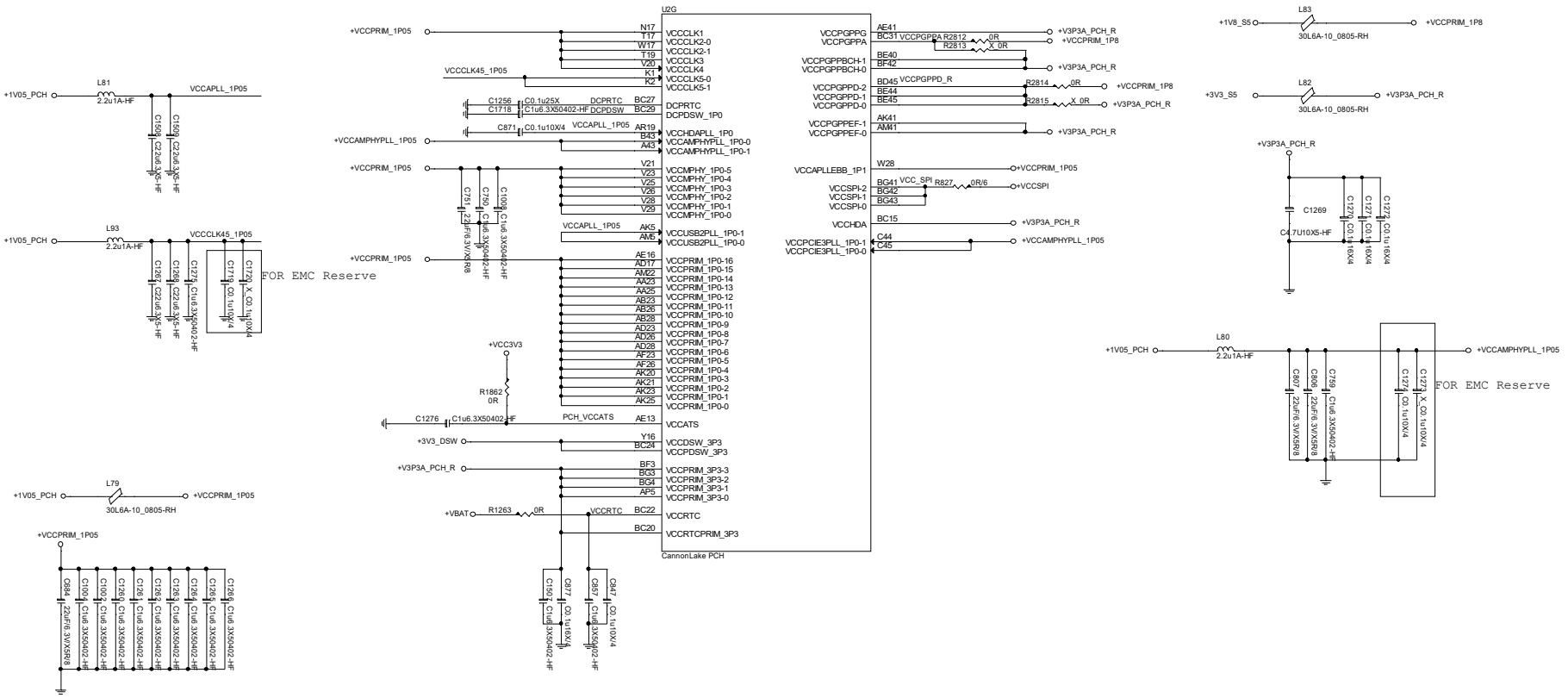
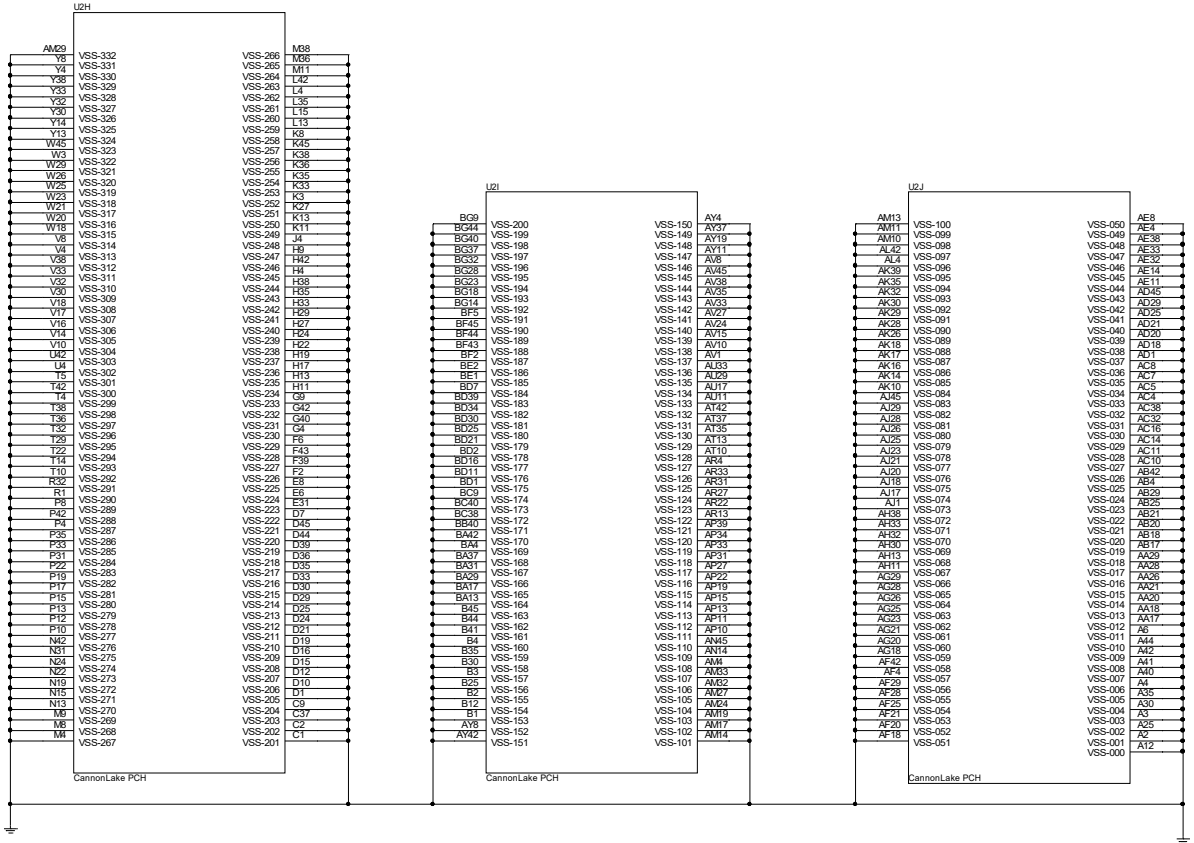

U2G
CannonLake PCH
+1V05_PCH
VCCAPLL_1P05
2.2u1A-HF
L81
L93
VCCCLK45_1P05
FOR EMC Reserve
+VCCPRIM_1P05
+VCCAMPHYPLL_1P05
+VCC3V3
+3V3_DSW
+V3P3A_PCH_R
+VBAT
PCH_VCCATS
L79
30L6A-10_0805-RH
+V1V8_S5
+3V3_S5
L83
L82
+V3P3A_PCH_R
C1269
C4.7U10X5-HF
L80
+VCCAMPHYPLL_1P05
FOR EMC Reserve



MSI MICRO-STAR INTL CO.,LTD.

Link to the Future

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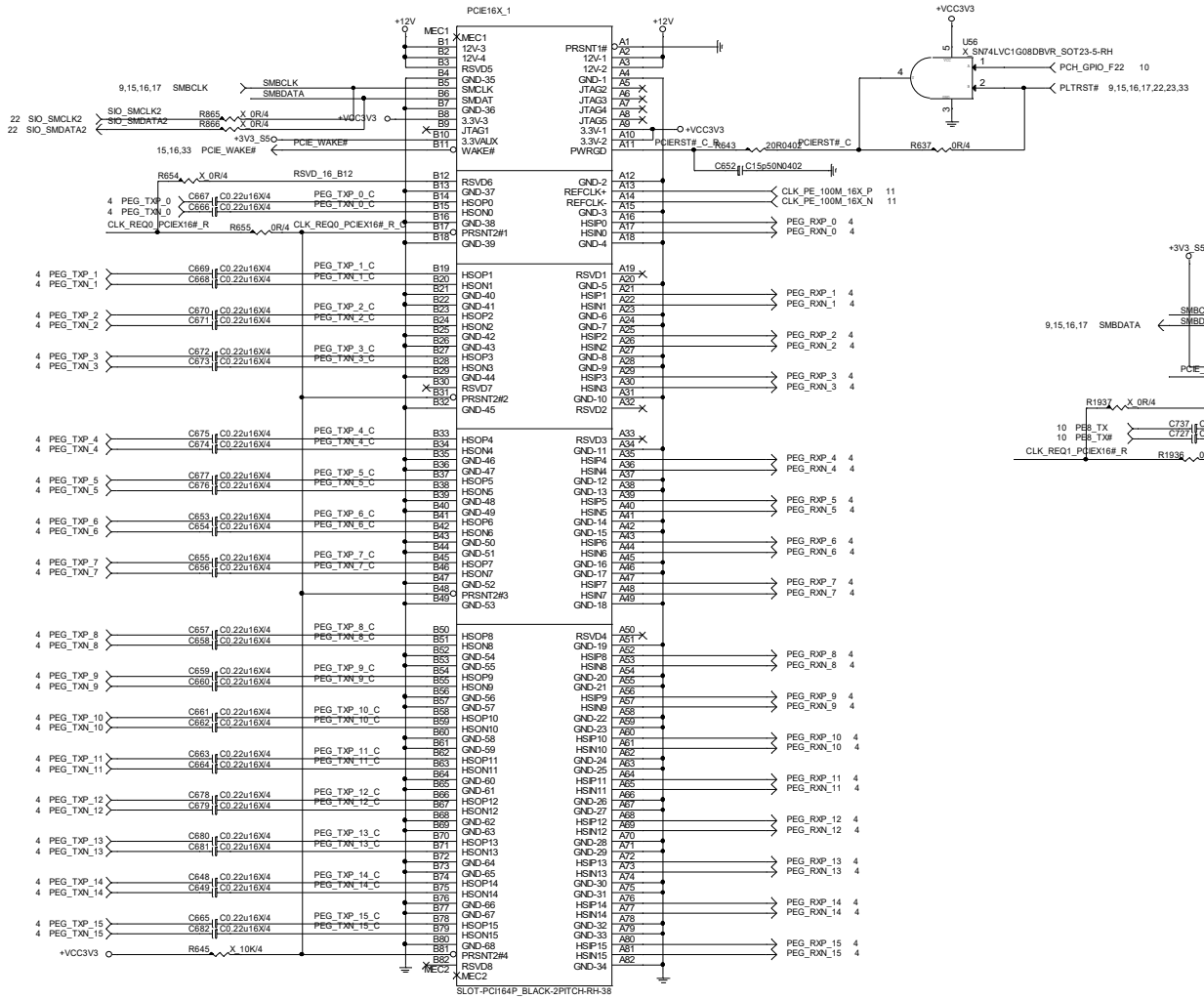
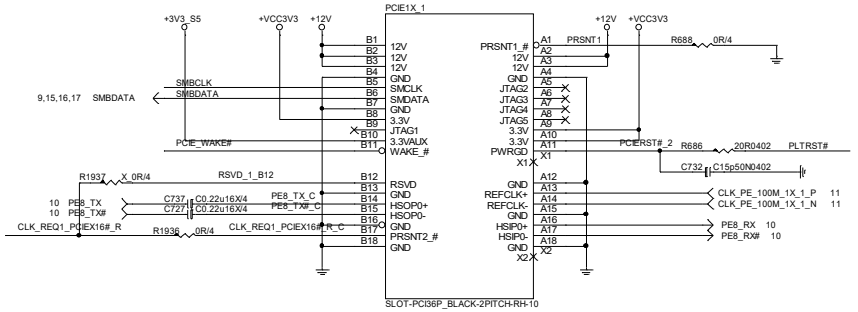
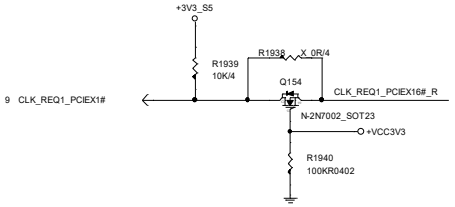
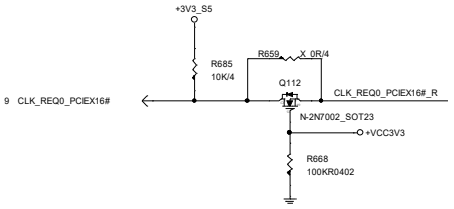
PCI_EXPRESS X16 SLOT

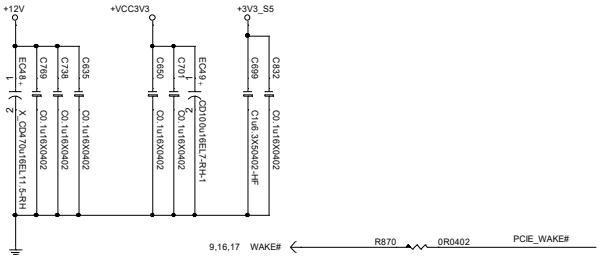


PCI_EXPRESS x1-PORT









MSI MICRO-STAR INTERNATIONAL Link to the Future MICRO-START INTL CO.,LTD.			
Title: PCIE x16/x1 slot			
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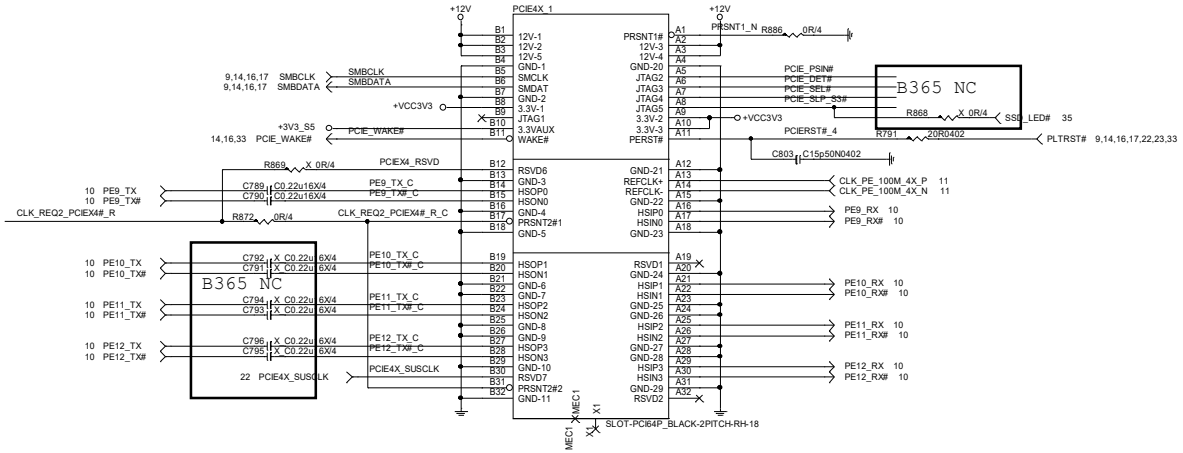
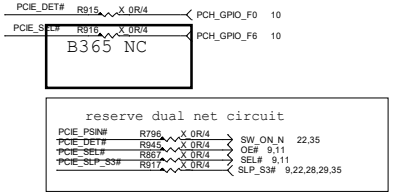
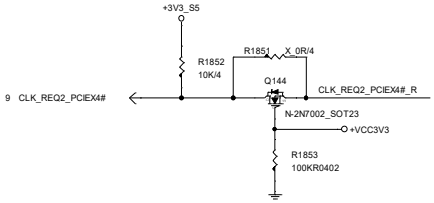
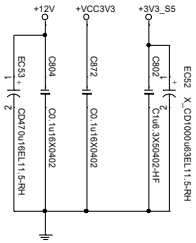
PCI_EXPRESS X4 SLOT colay PCI_Ex1









MSI MICRO-STAR INT'L CO.,LTD.			
Title: PCIE 4X			
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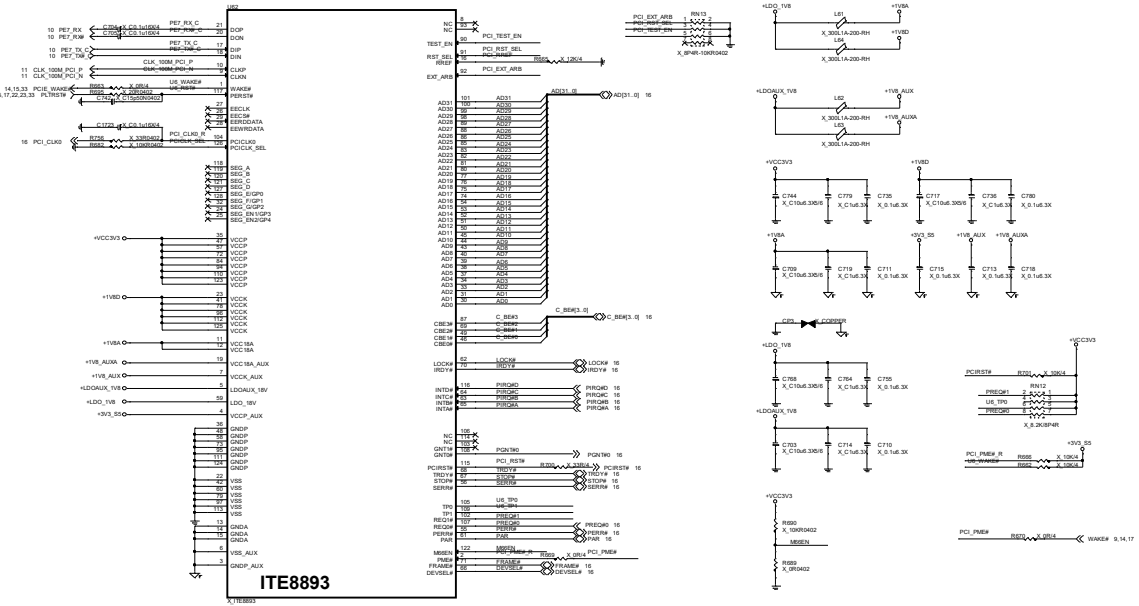
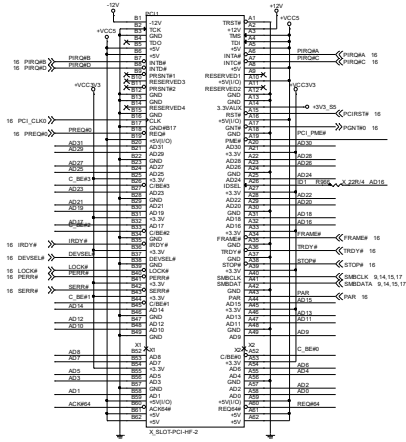
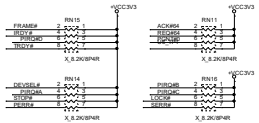


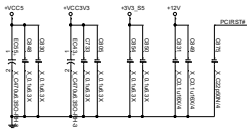


IDSEL = AD16
MASTER = PREQ#0
PIRQ#A

PCI PULL-UP / DOWN RESISTORS



PCI slot		
+3VSB	(wake)	- 375mA
+3VSB	(no wake)	- 20mA
+3.3V		- 7.6A
+5V		- 5A
+12V		- 0.5A



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

Title: PCI Slot

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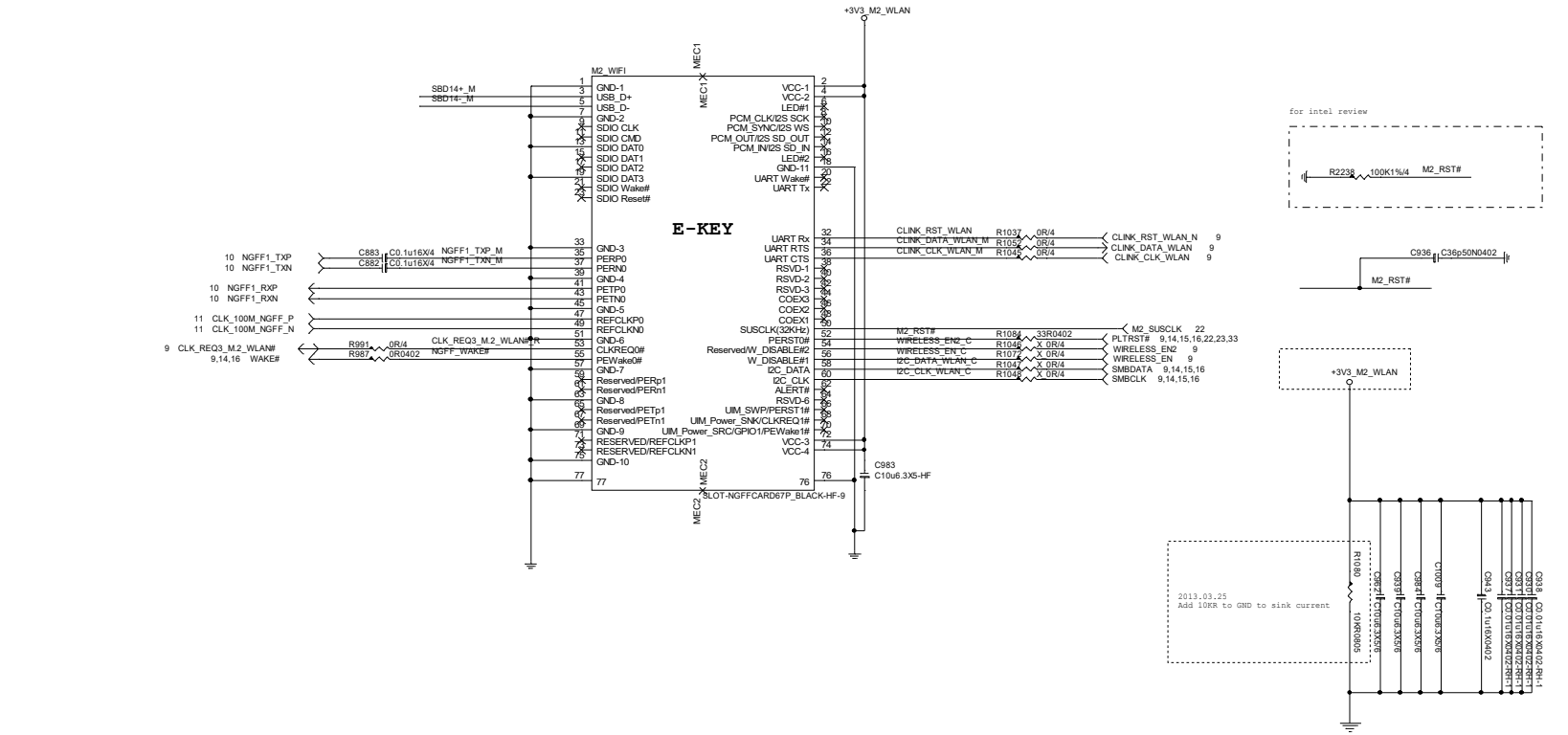
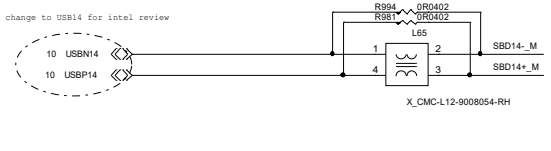
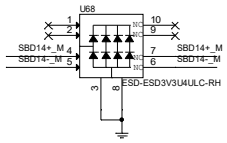
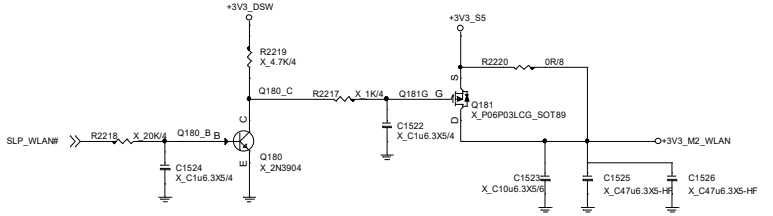






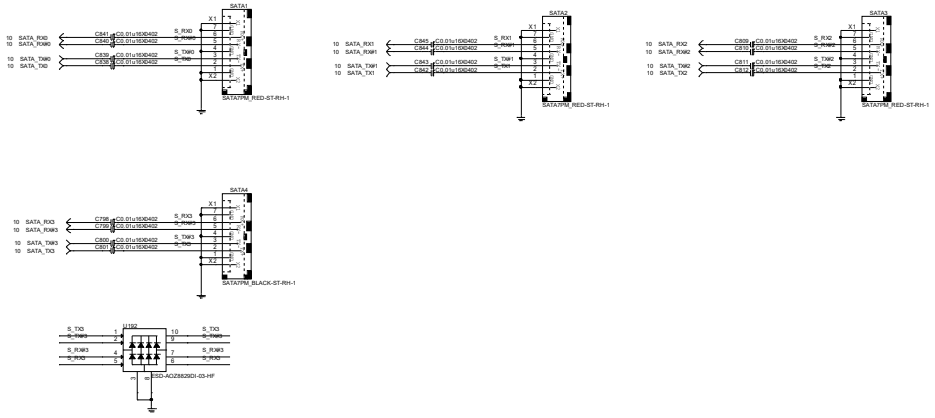


MICRO-START INT'L CO.,LTD.

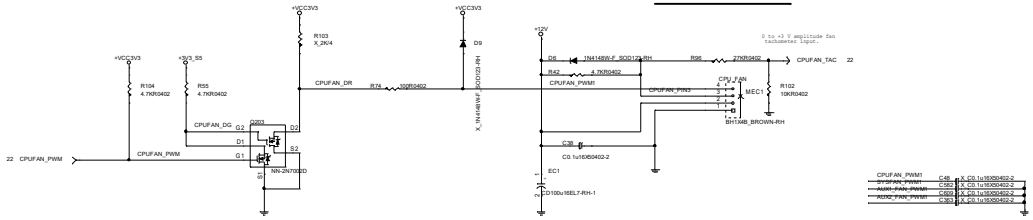
Title: **M2 Connector**

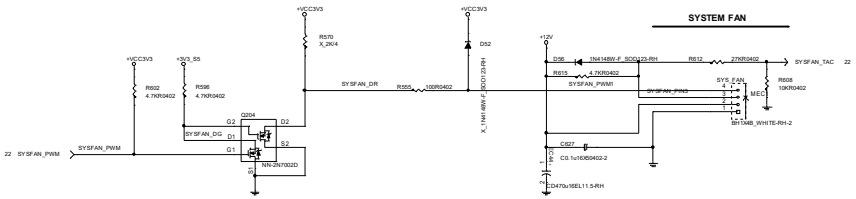
Size	Document Number	Rev
	B365	10

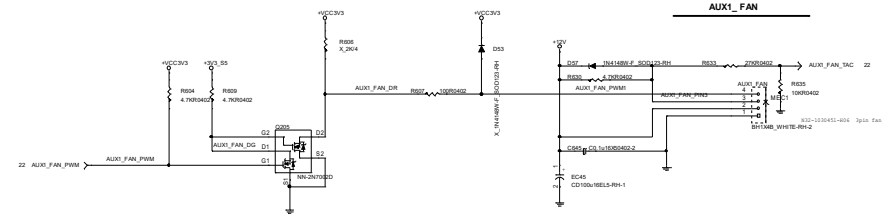
Date: Tuesday, April 30, 2019 Sheet 17 of 44

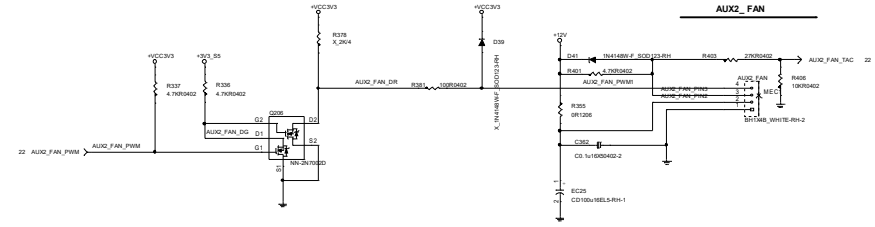


CPU FAN /SYSTEM FAN /POWER FAN









MSI	MICRO-START INT'L CO.,LTD.		
Title	SATA/FAN		
Size	Document Number		Rev
	B365		1.0
Date:	Tuesday, April 30, 2019	Sheet 18 of 44	

Front Panel USB Connnector For USB Port 3 / 4

Front Panel USB Connnector For USB Port 1/2

Rear USB Connnector For USB Port 9 / 10

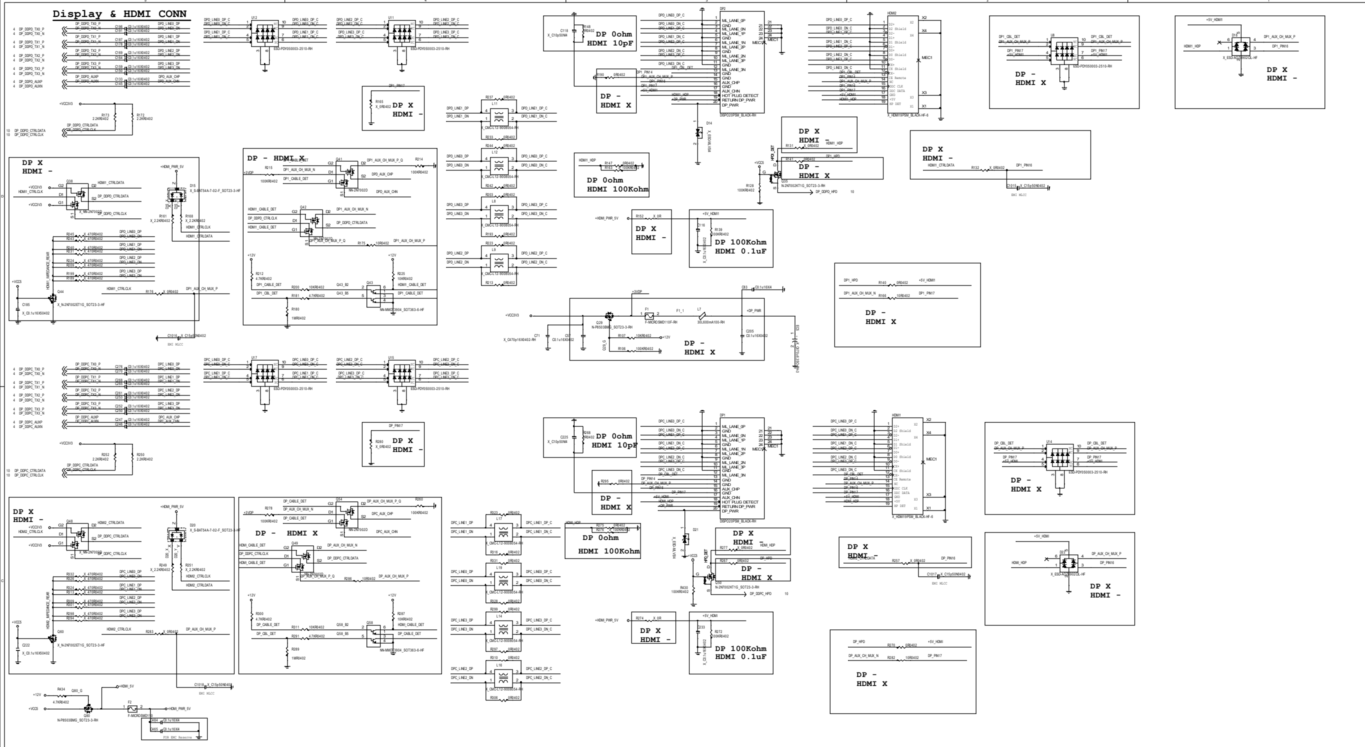
Front IO USB Connnector For USB Port 1/2/3/4

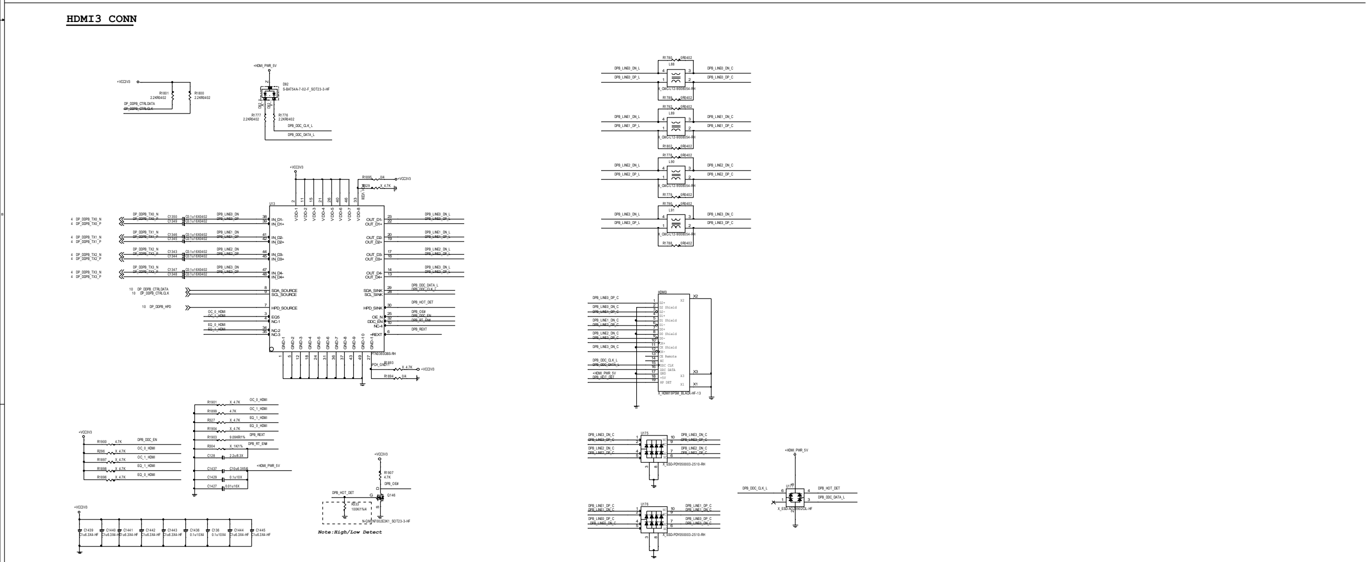
Rear IO USB Connnector For USB Port 7/8

Stuff For internal

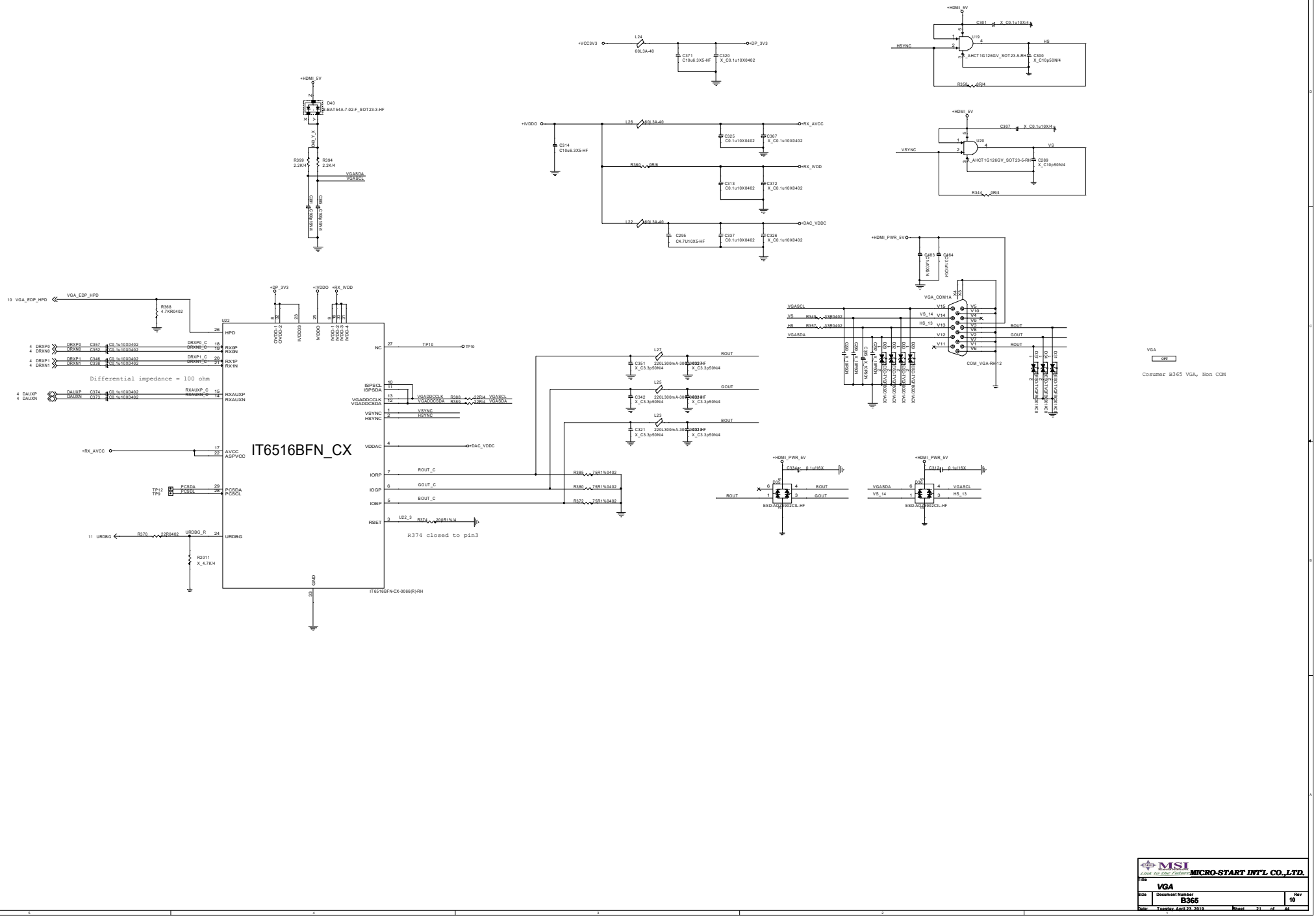
Stuff For No USB SWITCH

MSI	MICRO-START INT'L CO.,LTD.	
Title	Front / Rear USB Connectors	
Size	Document Number: B365	Rev: 1.0
Date: Tuesday, April 30, 2019	Sheet 10 of 45	

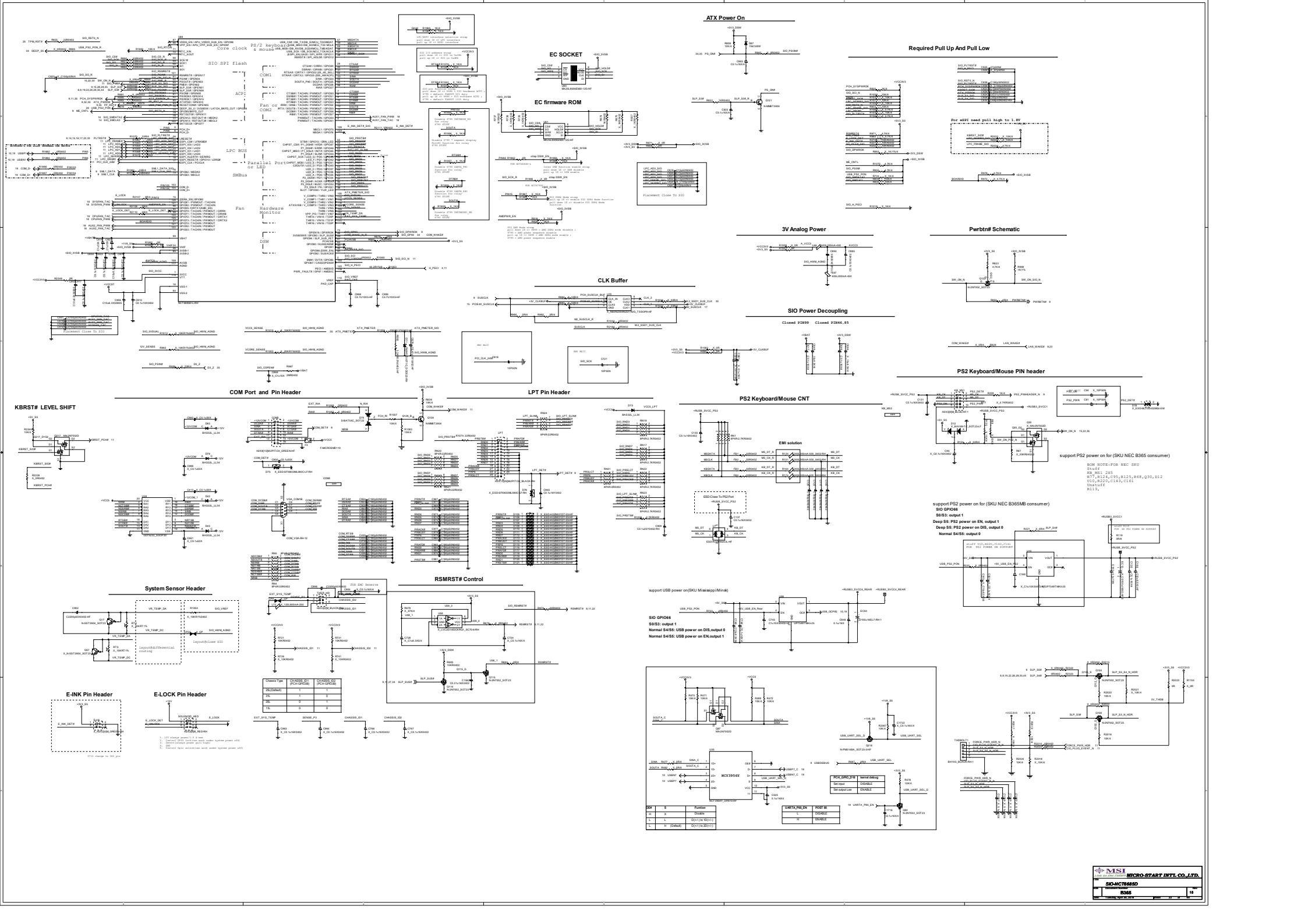




MSI Link to the Future	MICRO-START INT'L CO.,LTD.	
Title: Display Port/HDMI Port		
Size	Document Number: B365	Rev: 10
Date: Wednesday, April 24, 2019	Sheet 20 of 44	

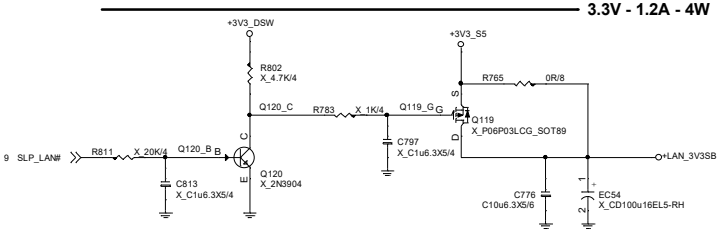


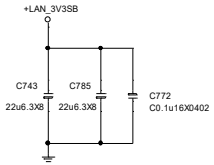
MSI MICRO-START INT'L CO.,LTD.			
Title: VGA			
Size	Document Number: B365		Rev: 10
Date: Tuesday, April 23, 2019	Sheet 21 of 44		

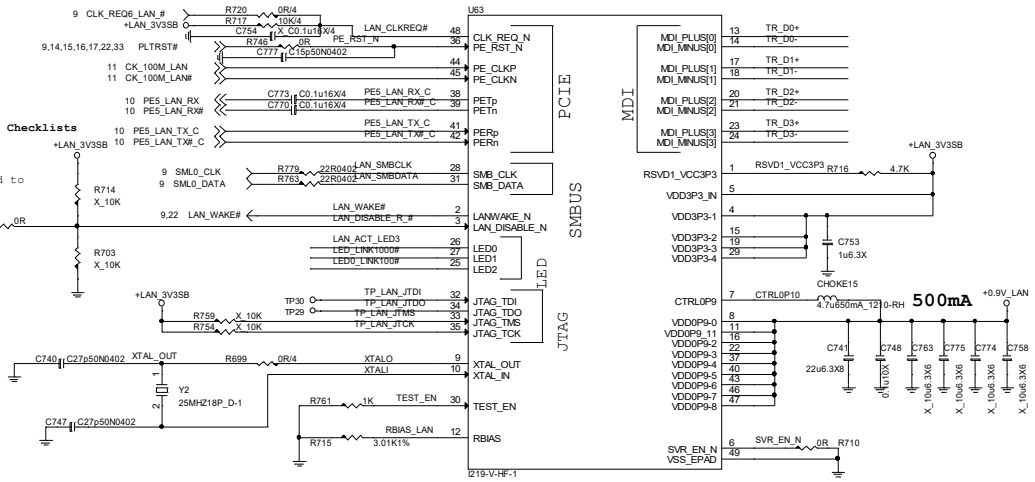

ATX Power On
EC SOCKET
EC firmware ROM
Required Pull Up And Pull Low
3V Analog Power
Pwrbtn# Schematic
CLK Buffer
SIO Power Decoupling
PS2 Keyboard/Mouse PIN header
COM Port and Pin Header
LPT Pin Header
PS2 Keyboard/Mouse CNT
KBRST# LEVEL SHIFT
EMI solution
support PS2 power on for (SKU NEC B365 consumer)
SIO GPIO66
S0/S3: output 1
Deep S5: PS2 power on EN, output 1
Deep S5: PS2 power on DIS, output 0
Normal S4/S5: output 0
support USB power on(SKU Mississippi/Minsk)
SIO GPIO66
S0/S3: output 1
Normal S4/S5: USB power on DIS,output 0
Normal S4/S5: USB power on EN,output 1
System Sensor Header
RSMRST# Control
E-INK Pin Header
E-LOCK Pin Header
MICRO-STAR INT'L CO.,LTD.
SIO-NCT6685D
B365

LAN Power

3.3V - 1.2A - 4W



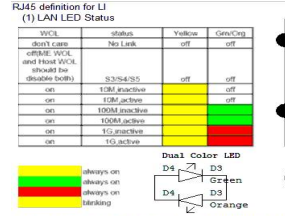




RJ45 definition for LI

(1) LAN LED Status

WOL	status	Yellow	Grn/Org
don't care	No Link	off	off
off(ME WOL and Host WOL should be disable both)	S3/S4/S5	off	off
on	10M,inactive		off
on	10M,active		off
on	100M,inactive		
on	100M,active		
on	1G,inactive		
on	1G,active		



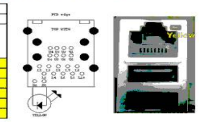
Yellow: Domin Wavelength (λp) 582-593nm,Luminous Intensity (Iv) 12-50mcd.
Green: Domin Wavelength (λp) 567-578nm, Luminous Intensity (Iv) 10-50mcd.
Orange: Domin Wavelength (λp) 600-613nm, Luminous Intensity (Iv) 9-60mcd.
(2)need to follow "RJ45 common spec"

1.2 definition for LC

(1) LAN LED Status

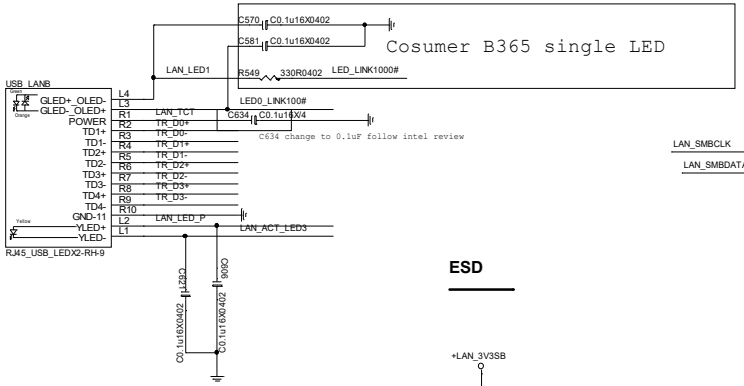
(2) Yellow: Domin Wavelength (λp) 582-593nm,Luminous Intensity (Iv) 12-50mcd.

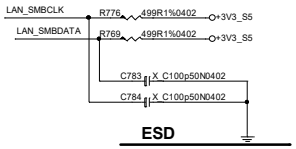
WOL	status	Yellow
don't care	No Link	off
off(ME WOL and Host WOL should be disable both)	S3/S4/S5	off
on	10M,inactive	
on	10M,active	
on	100M,inactive	
on	100M,active	
on	1G,inactive	
on	1G,active	



always on

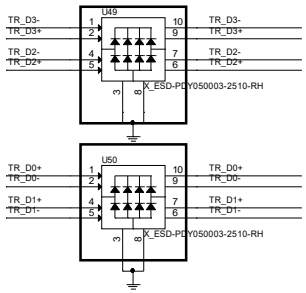
blinking



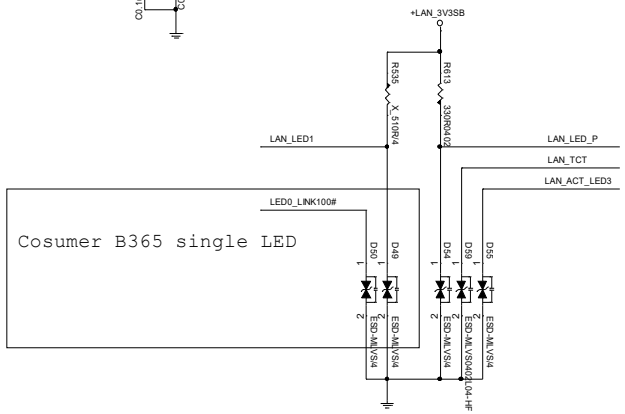


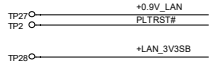
ESD

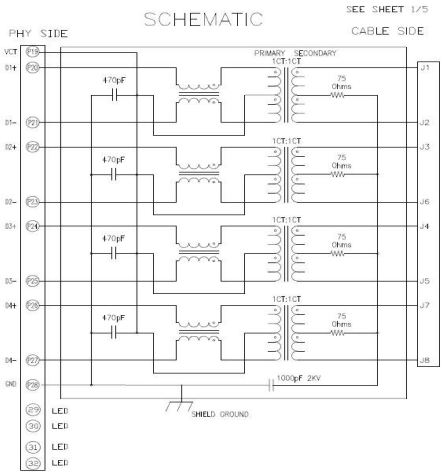
EMI solution: can be unmounted if LAN connector has surge protect



ESD







MSI Link to the Future	MICRO-START INT'L CO.,LTD.	
Title: LAN-i219V		
Size	Document Number: B365	Rev: 10
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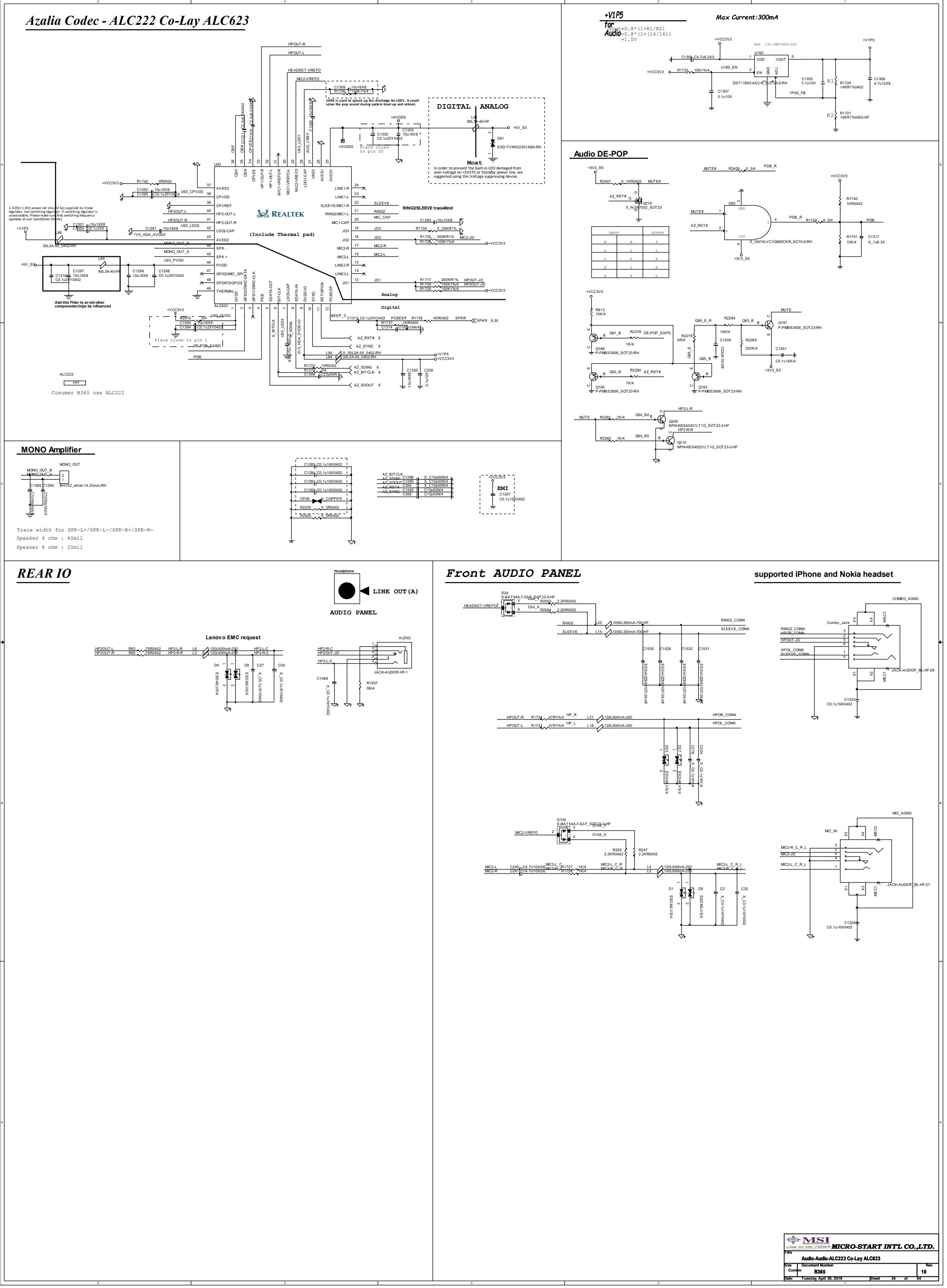

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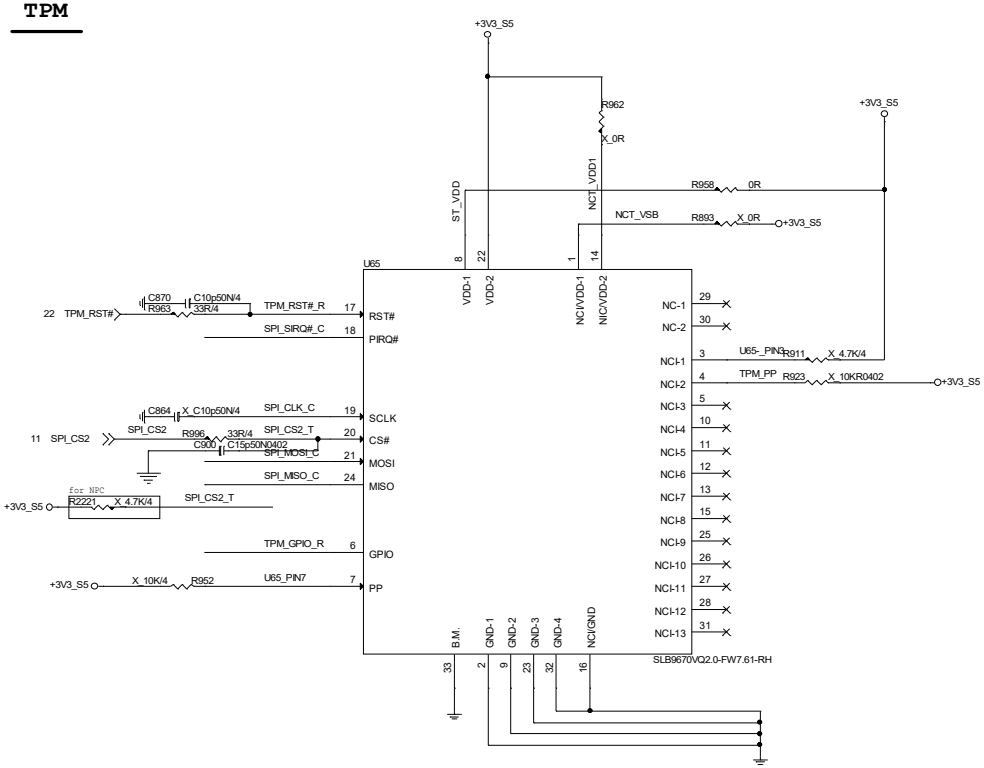
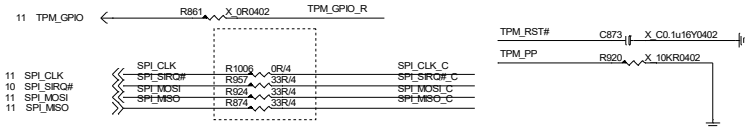
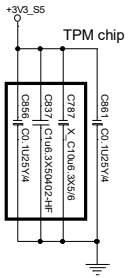
TPM





	R893	R911	R923	R920	R952	R958	R962	R861
ST----ST33HTPH2E32AHB4(SPI)	X	X	X	X	X	X	X	X
NPC----NPCT750 (SPI)	V	X	X	X	X	V	V	X
Infineon SLB 9670VQ2.0 (SPI)	X	X	X	X	X	V	X	X



MICRO-START INT'L CO.,LTD.

Link to the Future

Title: TPM & Asset ID

Size: | Document Number: B365 | Rev: 10

Date: Tuesday, April 23, 2019 | Sheet 25 of 44

XDP_CPU_PREQ#
XDP_CPU_PRDY#
CPU_TCK
CPU_TDO
CPU_TDI
CPU_TMS

CPU_TCK	R563	0/4	PCH_JTAGX	PCH_JTAGX 9
CPU_TDI	R505	0/4	PCH_JTAGTDI	PCH_JTAGTDI 9
CPU_TMS	R506	0/4	PCH_JTAGTMS	PCH_JTAGTMS 9
CPU_TDO	R498	0/4	PCH_JTAGTDO	PCH_JTAGTDO 9
XDP_CPU_PRDY#	R554	0/4	XDP_PCH_PRDY_N	XDP_PCH_PRDY_N 9
XDP_CPU_PREQ#	R553	0/4	XDP_PCH_PREQ_N	XDP_PCH_PREQ_N 9

USB power discharge circuit

+3V3_DSW R672 10KR0402 SVCC_DIS
6,9,19,22,28,35,44 SLP_S4# R82 8.2KR0402 Q33_B
Q33 NPN-MMBT2222A-7-F_SOT23-RH
C96 X_C0.1u16X0402
C67 X_C0.1u16X0402

NO USB and PS2 POWER ON SUPPORT:
unstuff Q116,R677,R694

+3V3_DSW R677 10KR0402 SVCC_DIS1
22 USB_PS2_PON R694 49.9KR1%0402 Q116_B
Q116 NPN-MMBT2222A-7-F_SOT23-RH
C725 X_C0.1u16X0402
C734 X_C0.1u16X0402

+RUSB3_SVCC4_REAR RN9 Q113_D
8P4R-270R
Q113 2N7002LT1G_SOT23-RH

NO USB POWER ON SUPPORT:
unstuff RN9,Q113

+FUSB3_SVCC2 RN6 Q73_D
8P4R-270R
Q73 N-2N7002LT1G_SOT23-RH

+RUSB3_SVCC1 RN7 Q83_D
8P4R-270R
Q83 N-2N7002LT1G_SOT23-RH

+RUSB3_SVCC3 RN8 Q111_D
8P4R-270R
Q111 N-2N7002LT1G_SOT23-RH

+RUSB_SVCC_PS2 RN2 Q47_D
X_8P4R-270R
Q47 X_N-2N7002LT1G_SOT23-RH
Q47_G R246 X_0/4 SVCC_DIS
R254 X_0/4 SVCC_DIS1

stuff RN2,Q47,R254
FOR PS2 POWER ON SUPPORT

+FUSB_SVCC1 RN19 Q125_D
8P4R-270R
Q125 N-2N7002LT1G_SOT23-RH

+FUSB3_SVCC1 RN3 Q69_D
8P4R-270R
Q69 N-2N7002LT1G_SOT23-RH

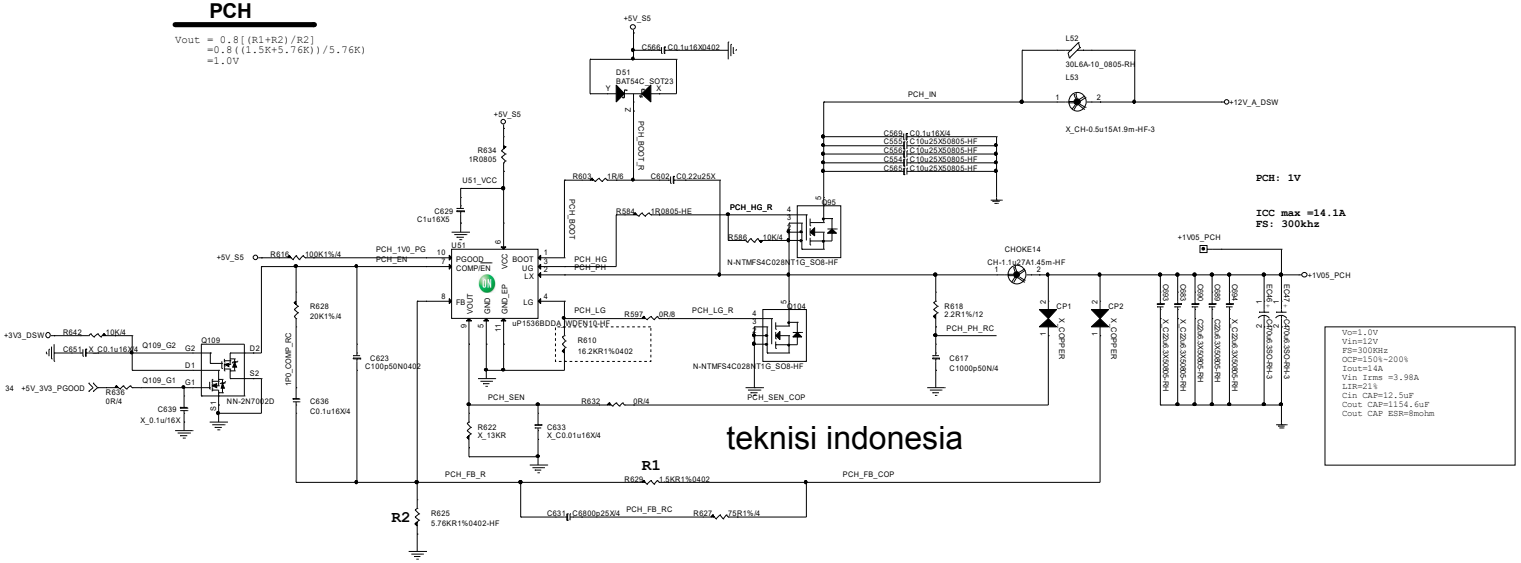
+FUSB3_SVCC3 RN30 Q158_D
8P4R-270R
Q158 N-2N7002LT1G_SOT23-RH

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

Title	XDP/USB Power Dischage	
Size	Document Number B365	Rev 10
Date: Tuesday, April 23, 2019	Sheet 26 of 44	

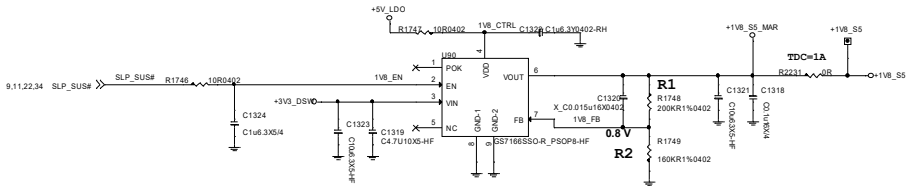
PCH

Vout = 0.8[(R1+R2)/R2]
=0.8((1.5K+5.76K))/5.76K)
=1.0V

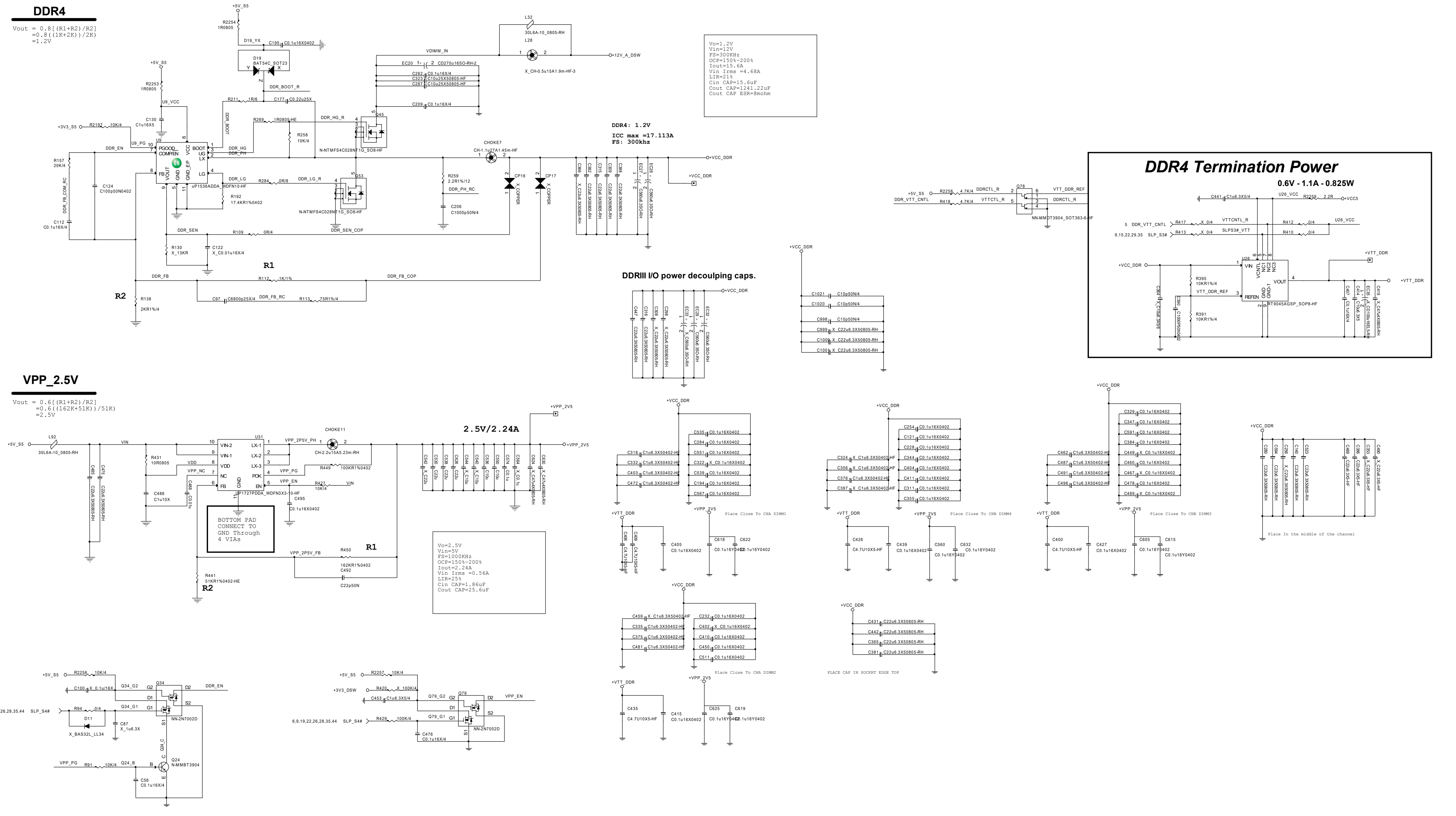


+1V8_S5

Vout = 0.8[(R1+R2)/R2]
=0.8((15K+12K))/12K)
=1.8V



MSI Link to the Future	MICRO-START INT'L CO.,LTD.	
Title: PCH Core Power		
Size	Document Number: B365	Rev: 10
Date: Tuesday, April 30, 2019	Sheet 27 of 44	



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

Title	DDR4 Power	
Size	Document Number B365	Rev 10
Date: Tuesday, April 30, 2019	Sheet 28 of 44	

Intel Coffee Lake IMVP8 POWER CKT - 4+2 PHASE

CFL S-line 62_65W
Vcore loadline=2.1mohm
VGT loadline=3.1mohm

O/P Choke:
0.3uH/0.6mohm

Unstuff Q20,Stuff R1016

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VCORE PORTION

VCCGT PORTION

3 PHASE OPTION

6X6 52PIN QFN

PUT COLSE TO VCORE HOT SPOT

PUT COLSE TO VCCGT HOT SPOT

BOTTOM PAD CONNECT TO GND Through 4 VIAs

PUT CLOSE TO PWM

place close to R66

place close to R218

Power Sequence

VCORE SVID ADDRESS=00h

VCCGT SVID ADDRESS=01h

VCORE IMAX SET AT 138A

VCORE VBOOT SET AT 0V, SVID ADDRESS=00h

VCCGT VBOOT SET AT 0V, SVID ADDRESS=01h

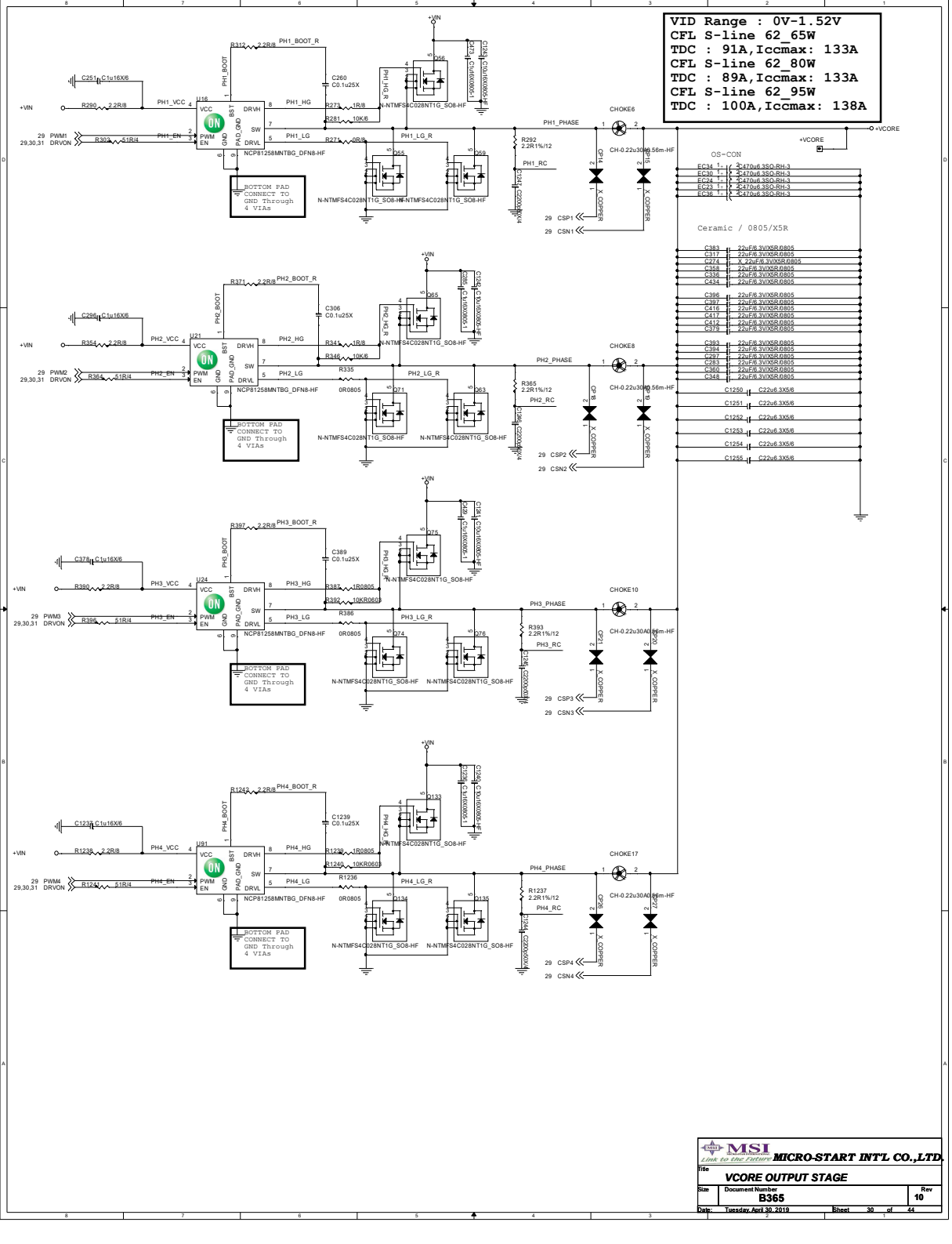
Working F~400Khz

VCCGT IMAX SET AT 45A

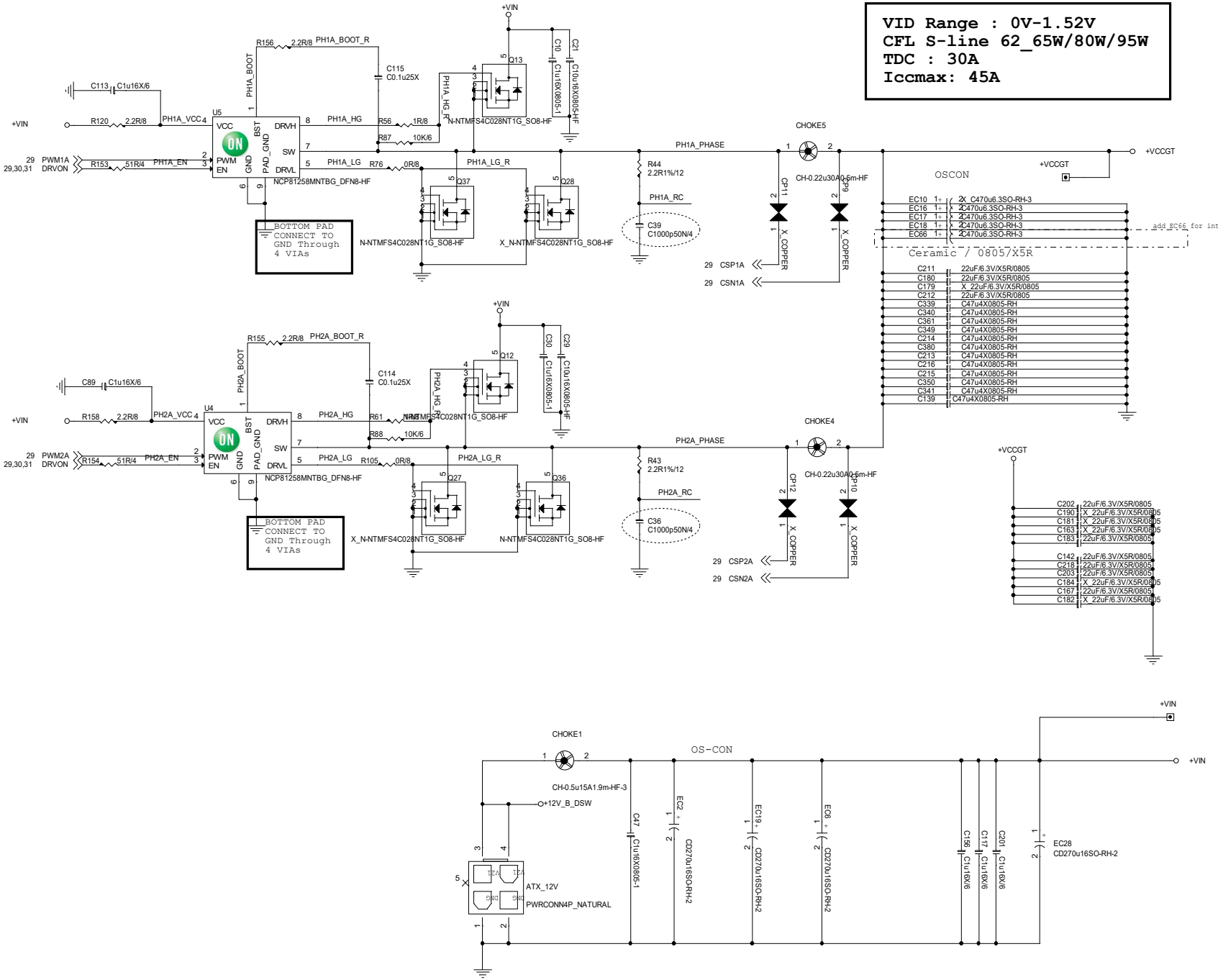
MICRO-START INT'L CO.,LTD.

Link to the Future

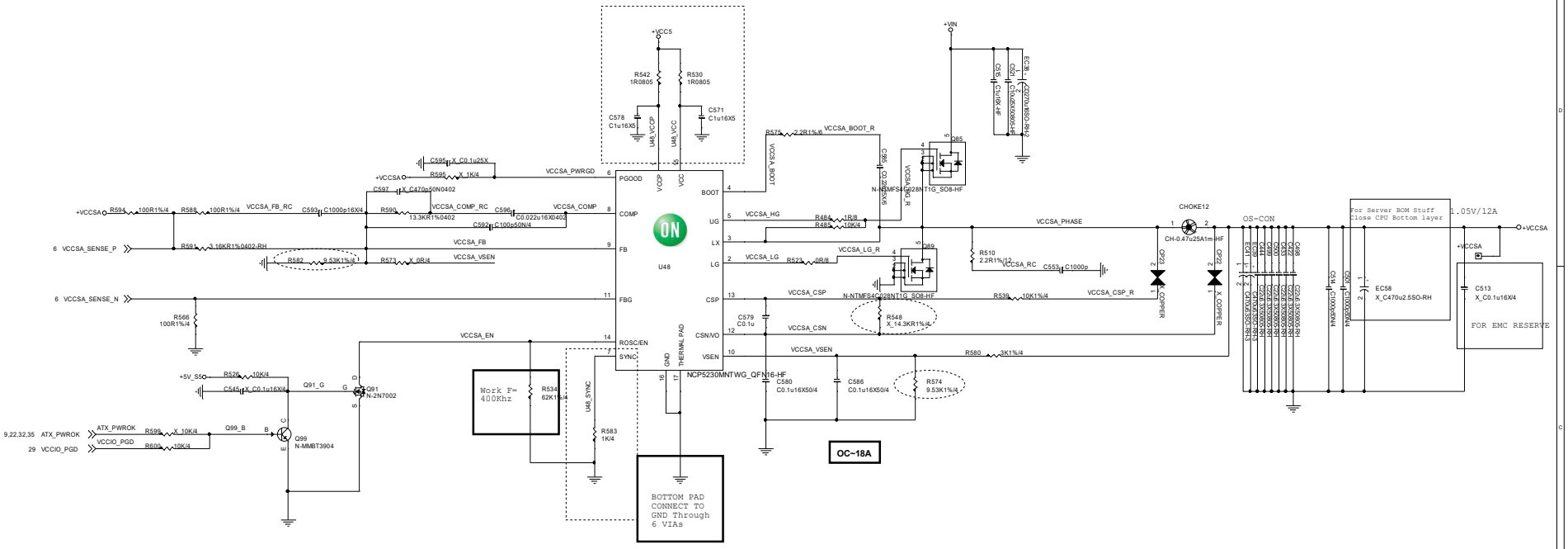
Title: IMVP8-NCP81203 5 Phase		
Size	Document Number: B365	Rev: 10
Date: Tuesday, April 23, 2019	Sheet 29 of 44	


VID Range : 0V-1.52V
CFL S-line 62_65W
TDC : 91A,Iccmax: 133A
CFL S-line 62_80W
TDC : 89A,Iccmax: 133A
CFL S-line 62_95W
TDC : 100A,Iccmax: 138A
+VIN
+VCORE
PH1_PHASE
PH2_PHASE
PH3_PHASE
PH4_PHASE
CHOKE6
CHOKE8
CHOKE10
CHOKE17
CH-0.22u30A0.56m-HF
OS-CON
Ceramic / 0805/X5R
NCP81258MNTBG_DFN8-HF
N-NTMFS4C028NT1G_SO8-HF
BOTTOM PAD CONNECT TO GND Through 4 VIAs
29 CSP1
29 CSN1
29 CSP2
29 CSN2
29 CSP3
29 CSN3
29 CSP4
29 CSN4
MICRO-START INT'L CO.,LTD.
VCORE OUTPUT STAGE
B365
Rev 10
Tuesday, April 30, 2019
Sheet 30 of 44

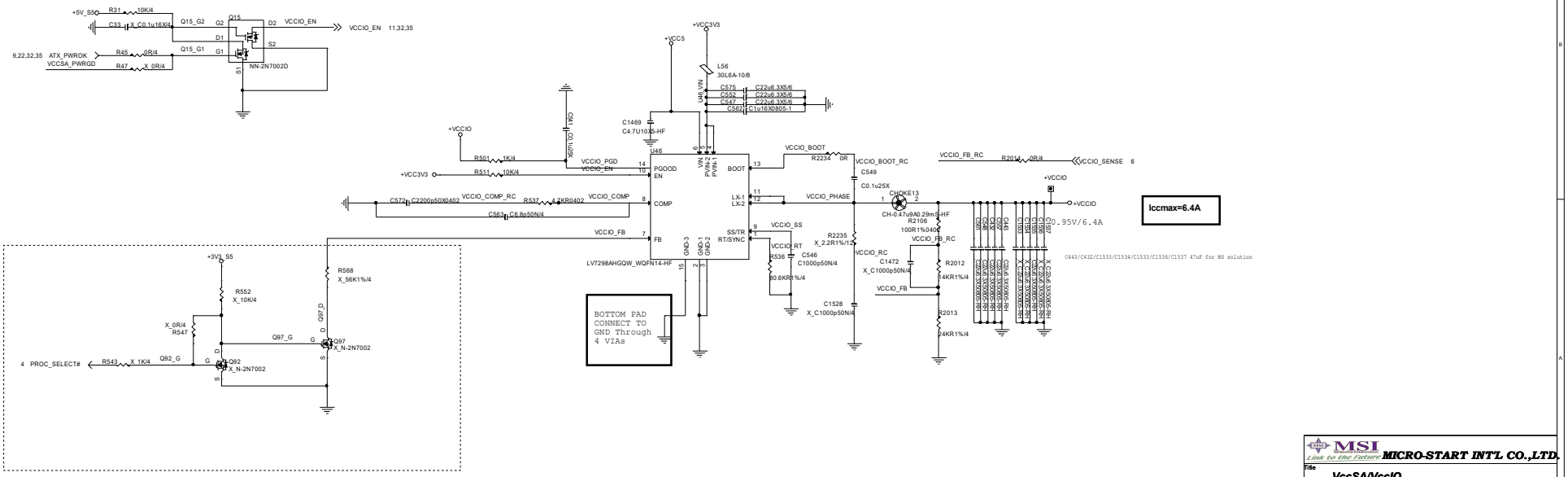
VID Range : 0V-1.52V
CFL S-line 62_65W/80W/95W
TDC : 30A
Iccmax: 45A



VCCSA



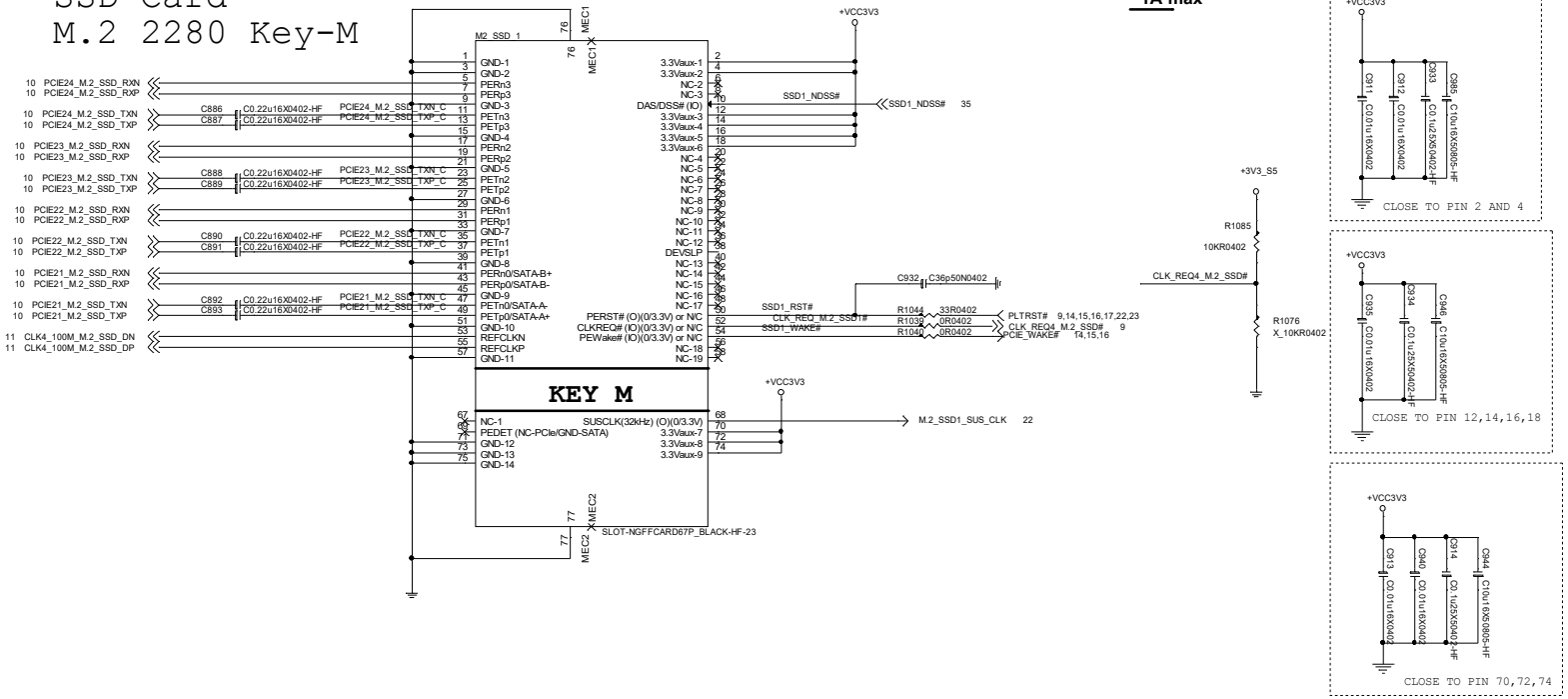
VCCIO



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

Title	VccSA/VccIO	
Size	Document Number B365	Rev 10
Date: Tuesday, April 30, 2019	Sheet 32 of 44	

SSD Card
M.2 2280 Key-M



Title		
Nothing		
Size	Document Number	Rev
	B365	10
Date: Tuesday, April 23, 2019	Sheet 33 of 44	

MICRO-START INTL CO.,LTD.

VCC3&VCC5 Power

MOS AVL
1. D03-4C10N03-C05
D03-4C10N03-C05
2. D03-516BA0C-N03
D03-516BA0C-N03
3. D03-4377N00-ST8
D03-4377N00-ST8

Vo=5V
Vin=12V
FS=360KHz
OCP=150%~200%
Iout=20A
Vin Irms =9.86A
LIR=22%
Cin CAP=54.01uF
Cout CAP=989.6uF
Cout CAP ESR=8mohm

Vo=3.3V
Vin=12V
FS=300KHz
OCP=150%~200%
Iout=20A
Vin Irms =8.93A
LIR=36%
Cin CAP=44.3uF
Cout CAP=853.15uF
Cout CAP ESR=8mohm

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OCP 37.94A
OCP 35.14A

DC IN: VCC5/12A

VCC3&VCC5 Power Output Connector

support NEC Consumer PS2 power on
SIO GPIO40 output
Deep S5: PS2 power on EN, output 0
Deep S5: PS2 power on DIS, output 1

MSI Link to the Future	MICRO-START INT'L CO.,LTD.		
Title	VCC3/VCC5/3VSB/5VSB		
Size	Document Number B365		Rev 10
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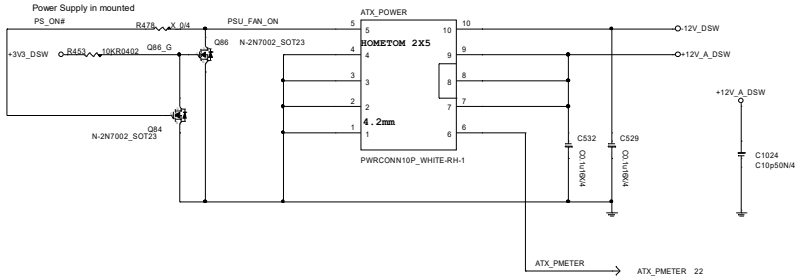
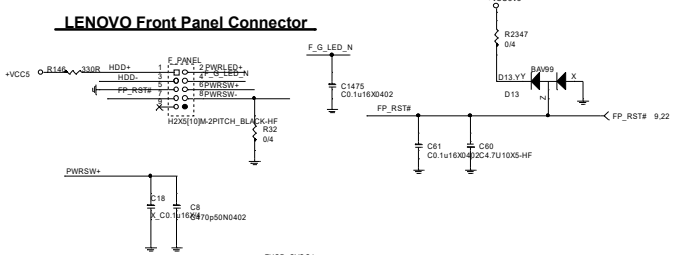
ATX Power Connector / Front Panel / LED/DSW

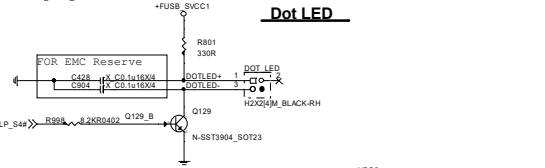
8 Pin ATX Power Connector



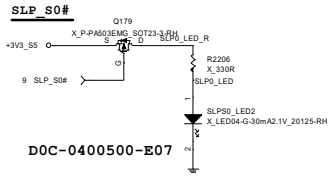
LENOVO Front Panel Connector



Dot LED

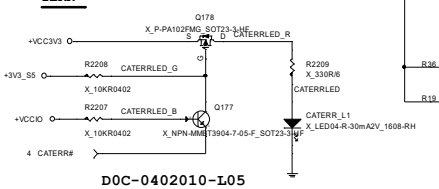


SLP_S0#



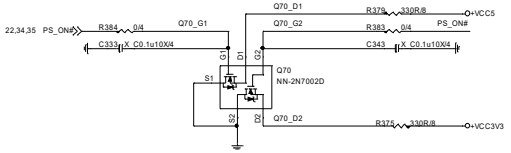
D0C-0400500-E07

IERR

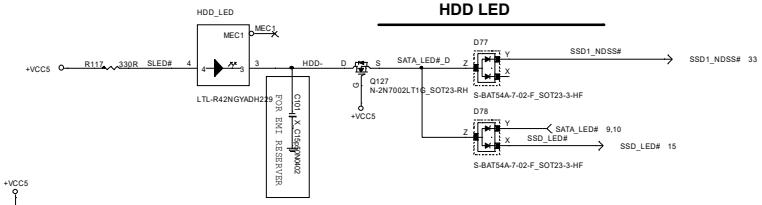


D0C-0402010-L05

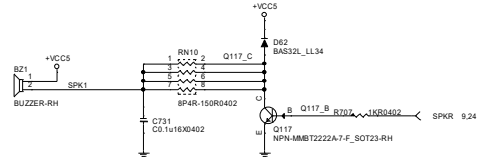
VCC3/VCC5 Discharge



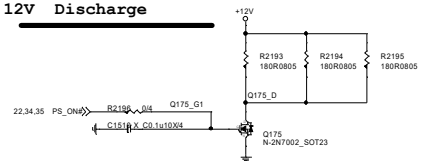
HDD LED



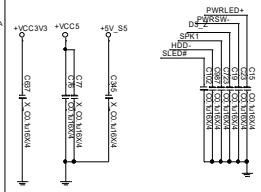
Buzzer Circuit



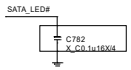
12V Discharge



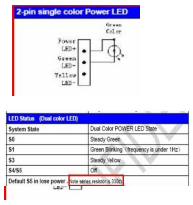
Cap For EMI

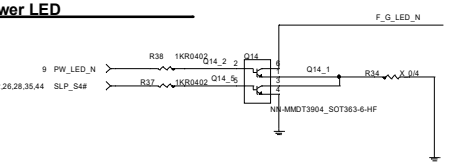


Lenovo EMC suggestion for 144MHz harmonic wave



Power LED





HD （IDE Hard Disk Active LED）	Pin 1:LED anode(+) Pin 8:LED cathode(-)
(Power LED)	Pin 3:LED cathode(-) (green) Pin 2:LED cathode(-) (yellow)
Power Switch	Open:Normal Operation Close:Power on /Off

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

Title	ATX/F_Panel/EMI/LED	
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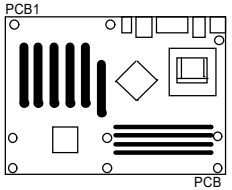
Manual Parts

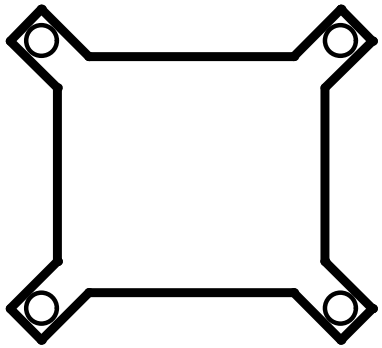
PCB1



PCB

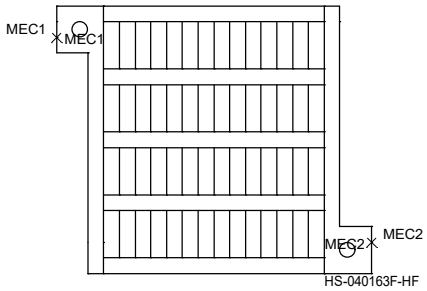
P30-07C5010-E48

XU1_X2

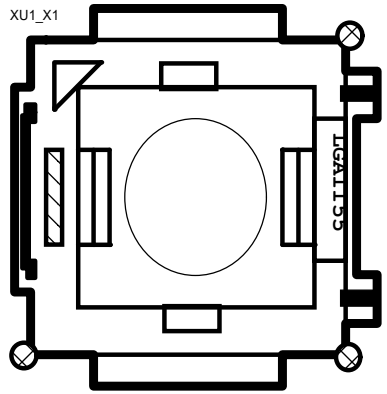


X_CPU Backplate

PCH1



XU1_X1



CPU SOCKET

USB_LAN5

OPT

Q270LC

6KV

with surge single LED +USB3.0 X2 connector: N58-30F0151-F02

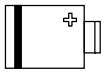
USB_LAN2

OPT

Q270LI

without surge +USB3.0 X2 connector: N58-32F0531-S42

VBAT-S1



BAT-BCR2032P-RH

USB_LAN

OPT

USB_LAN4

OPT

NEC Q270

without surge +USB3.0 X2 connector: N58-32F0221-F02

LABEL1 OPT

HDMI_LABEL OPT

HDMI_LABEL1 OPT

WIN10KEY1 OPT

WIN10KEY2 OPT

AMI_KEY1 OPT

USB_LAN6

OPT

without surge +USB2.0 X2 connector: N58-27F0021-F02

USB_LAN3

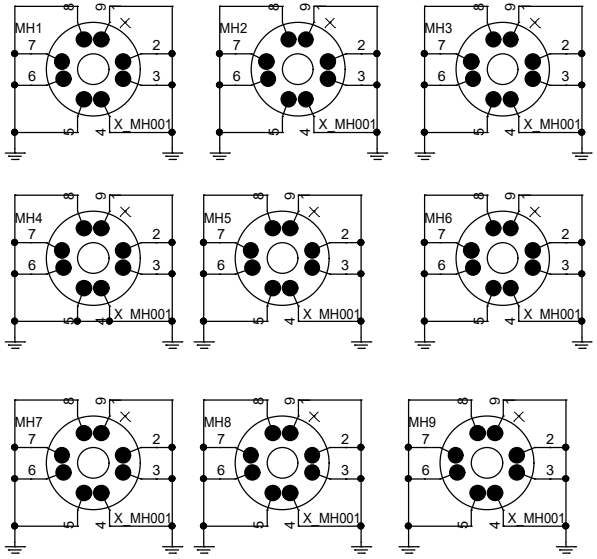
OPT

Cosumer B360

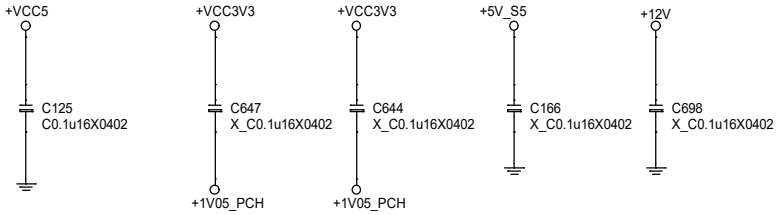
6KV N58-25F0321-S42 N58-27F0071-U30

with surge single LED +USB2.0 X2 connector: N58-25F0291-F02

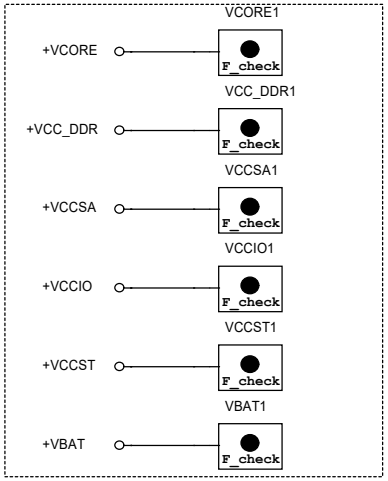
MH1 MH2 MH3 MH4 MH5 MH6 MH7 MH8 MH9

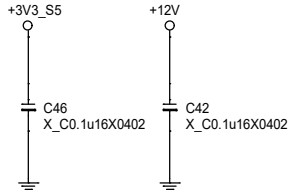


For EMI For Moat CAP



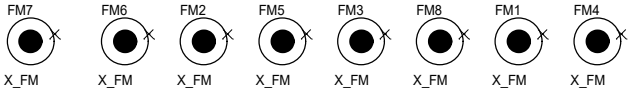
VCORE1





Optics Orientation Holes

Optical Fiducial Marks-120



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

Link to the Future

Title: Manual & Option Parts		
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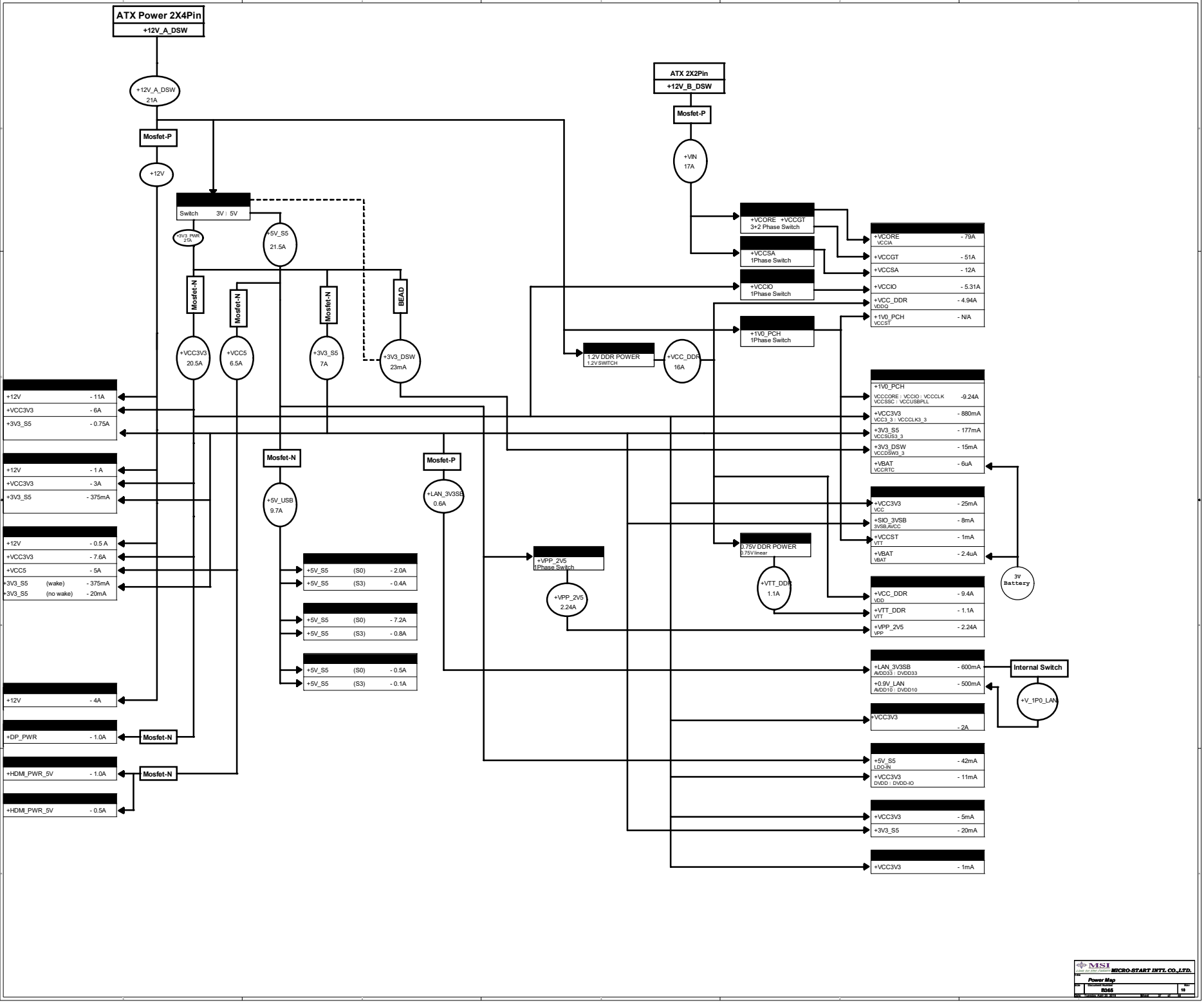
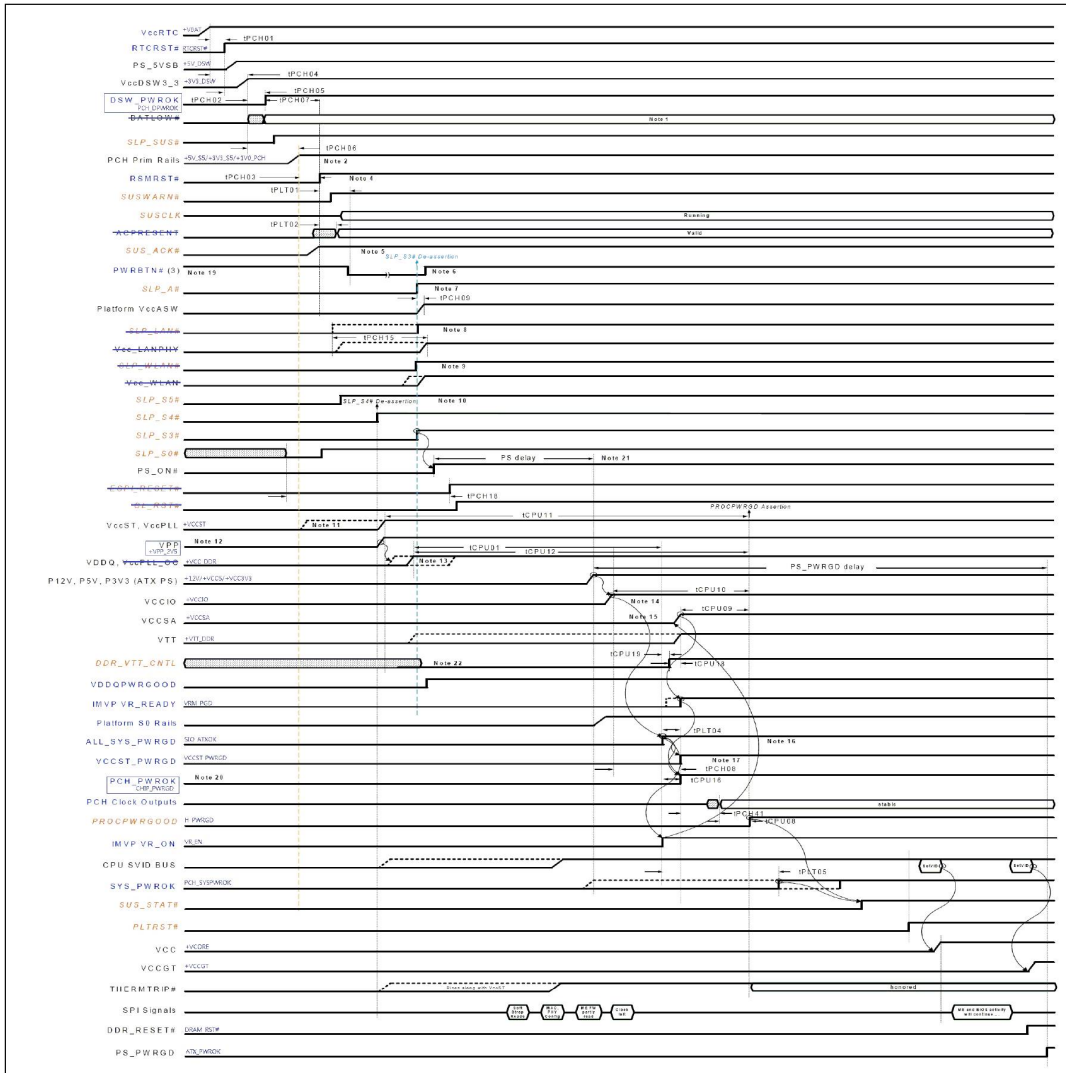

ATX Power 2X4Pin
+12V_A_DSW
+12V_A_DSW
21A
Mosfet-P
+12V
Switch 3V / 5V
+3V3_PWR
2.5A
+5V_S5
21.5A
Mosfet-N
Mosfet-N
Mosfet-N
BEAD
+VCC3V3
20.5A
+VCC5
6.5A
+3V3_S5
7A
+3V3_DSW
23mA
ATX 2X2Pin
+12V_B_DSW
Mosfet-P
+VIN
17A
+VCORE +VCCGT
3+2 Phase Switch
+VCCSA
1Phase Switch
+VCCIO
1Phase Switch
+1V0_PCH
1Phase Switch
1.2V DDR POWER
1.2V SWITCH
+VCC_DDR
16A
+VCORE - 79A
VCCIA
+VCCGT - 51A
+VCCSA - 12A
+VCCIO - 5.31A
+VCC_DDR - 4.94A
VDDQ
+1V0_PCH - N/A
VCCST
+12V - 11A
+VCC3V3 - 6A
+3V3_S5 - 0.75A
+1V0_PCH
VCCCORE / VCCIO / VCCCLK -9.24A
VCCSSC / VCCUSBPLL
+VCC3V3 - 880mA
VCC3_3 / VCCCLK3_3
+3V3_S5 - 177mA
VCCSUS3_3
+3V3_DSW - 15mA
VCCDSW3_3
+VBAT - 6uA
VCCRTC
+12V - 1 A
+VCC3V3 - 3A
+3V3_S5 - 375mA
Mosfet-N
Mosfet-P
+5V_USB
9.7A
+LAN_3V3SB
0.6A
+VCC3V3 - 25mA
VCC
+SIO_3VSB - 8mA
3VSB,AVCC
+VCCST - 1mA
VTT
+VBAT - 2.4uA
VBAT
3V
Battery
+12V - 0.5 A
+VCC3V3 - 7.6A
+VCC5 - 5A
+3V3_S5 (wake) - 375mA
+3V3_S5 (no wake) - 20mA
+5V_S5 (S0) - 2.0A
+5V_S5 (S3) - 0.4A
+5V_S5 (S0) - 7.2A
+5V_S5 (S3) - 0.8A
+5V_S5 (S0) - 0.5A
+5V_S5 (S3) - 0.1A
+VPP_2V5
1Phase Switch
+VPP_2V5
2.24A
0.75V DDR POWER
0.75V linear
+VTT_DDR
1.1A
+VCC_DDR - 9.4A
VDD
+VTT_DDR - 1.1A
VTT
+VPP_2V5 - 2.24A
VPP
+LAN_3V3SB - 600mA
AVDD33 / DVDD33
+0.9V_LAN - 500mA
AVDD10 / DVDD10
Internal Switch
+V_1P0_LAN
+12V - 4A
+DP_PWR - 1.0A
Mosfet-N
+VCC3V3
- 2A
+HDMI_PWR_5V - 1.0A
Mosfet-N
+5V_S5 - 42mA
LDO-IN
+VCC3V3 - 11mA
DVDD / DVDD-IO
+HDMI_PWR_5V - 0.5A
+VCC3V3 - 5mA
+3V3_S5 - 20mA
+VCC3V3 - 1mA
MSI
MICRO-STAR INT'L CO.,LTD.
Power Map
Document Number
R946
Rev
1.0

SKL-S Timing Diagram for G3 to S0 [Deep Sx Platform]



teknisi indonesia

with Deep Sx support

source	destination		G3	DEEP S5	S0
board	PCH	VBAT			
board	PCH	RTCRST#			
PSU	board	+5VSB_DSW			
board	PCH	+3VSB_DSW			
board	PCH	PCH_DPWROK			
PCH	SIO	PCH_SUSWARN#			
SIO	PCH	PCH_SUSACK#			
PCH	SIO	SLP_SUS#			
board	board	+5V_S5			
board	PCH	+3V3_S5			
board	PCH	+1V0_PCH			
SIO	PCH	RSMRST#			

MSI — Lead on the Future — MICRO-START INT'L CO.,LTD.

Title: Power Sequence1

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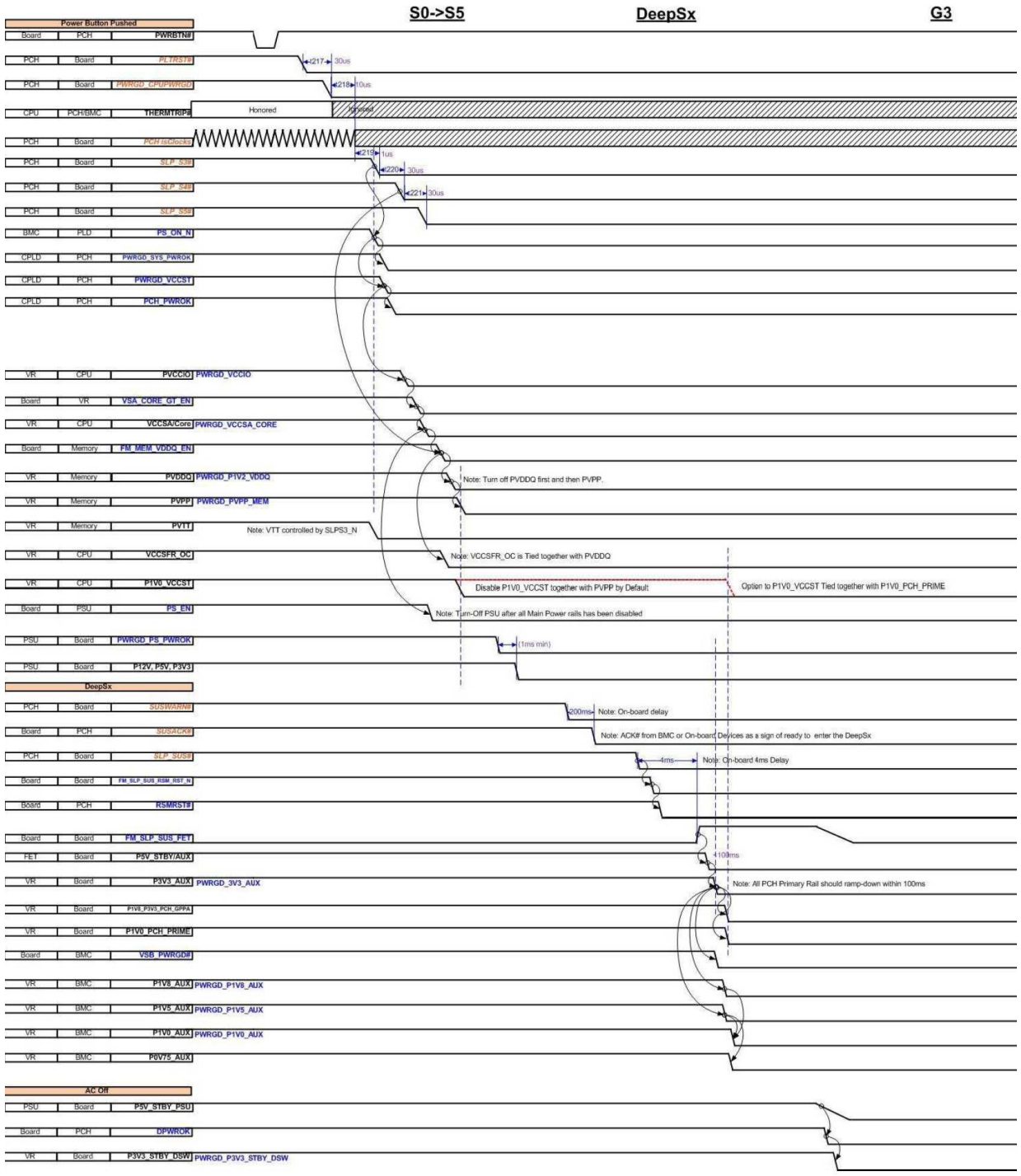

MSI Link to the Future MICRO-START INT'L CO.,LTD.

Title: Power Sequence2

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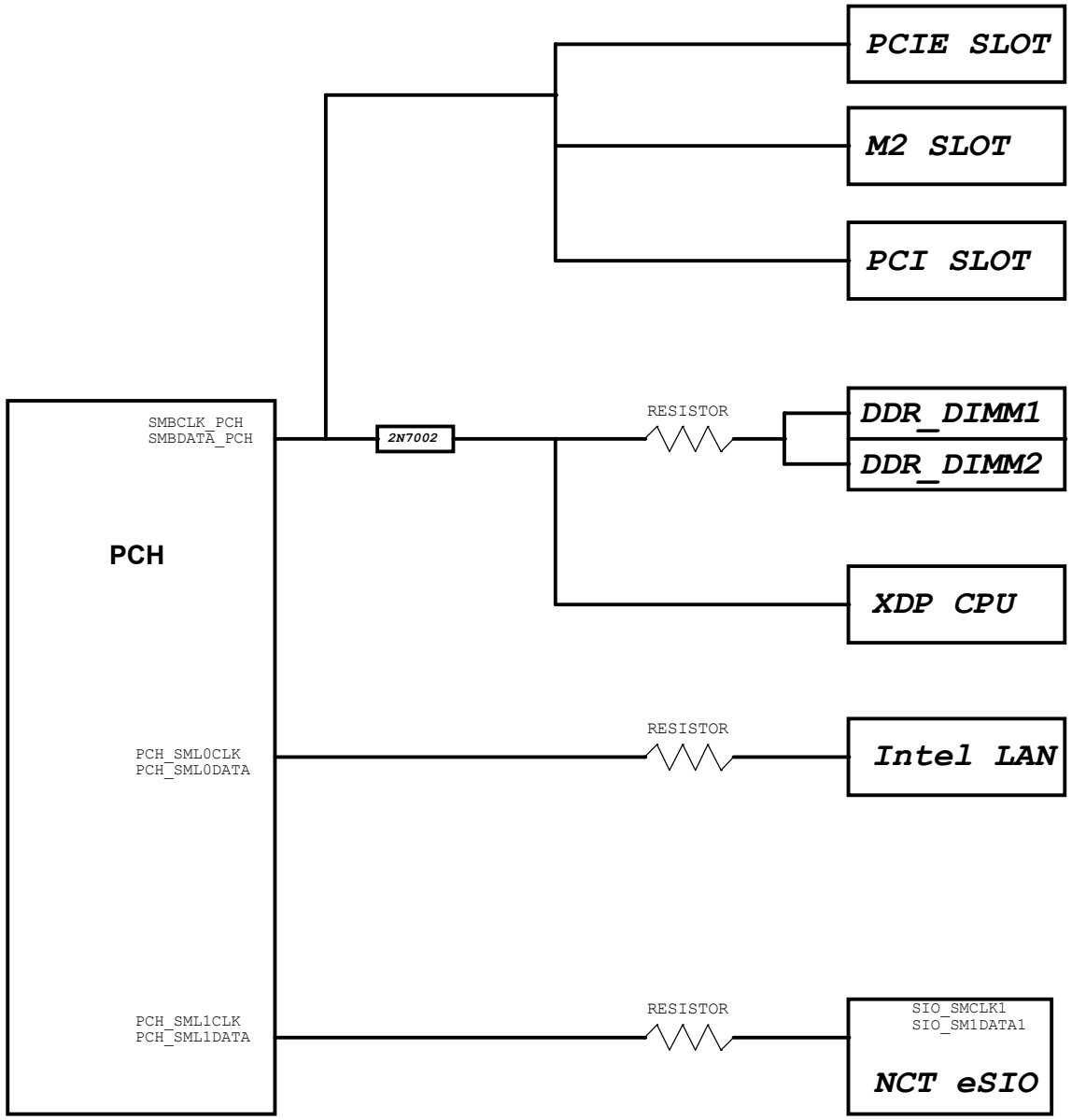

MSI MICRO-STAR INT'L CO.,LTD.
Link to the Future

Title: SMBUS Block Diagram		
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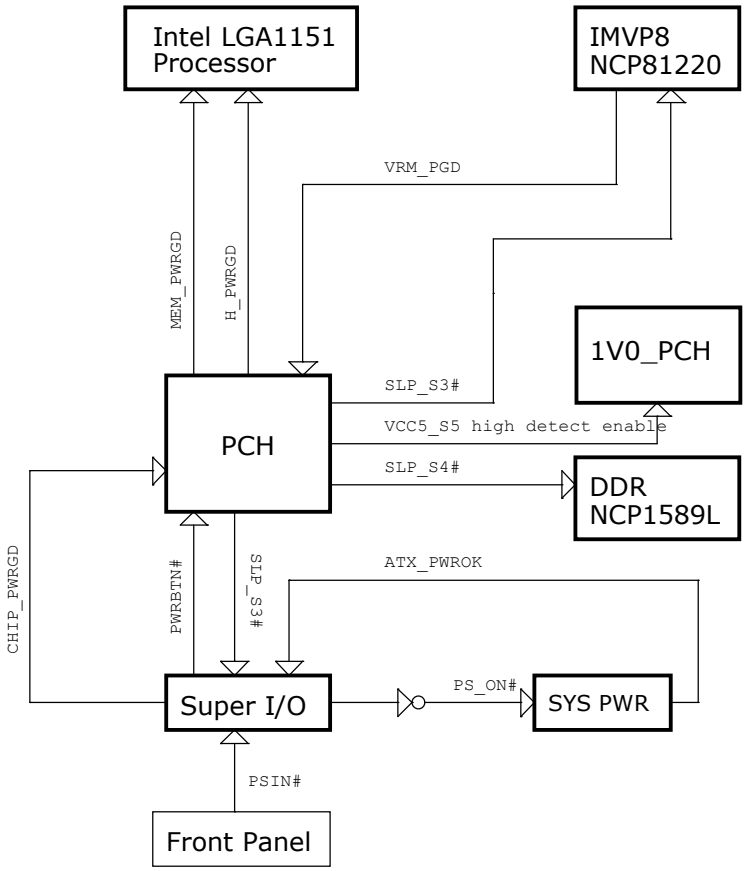
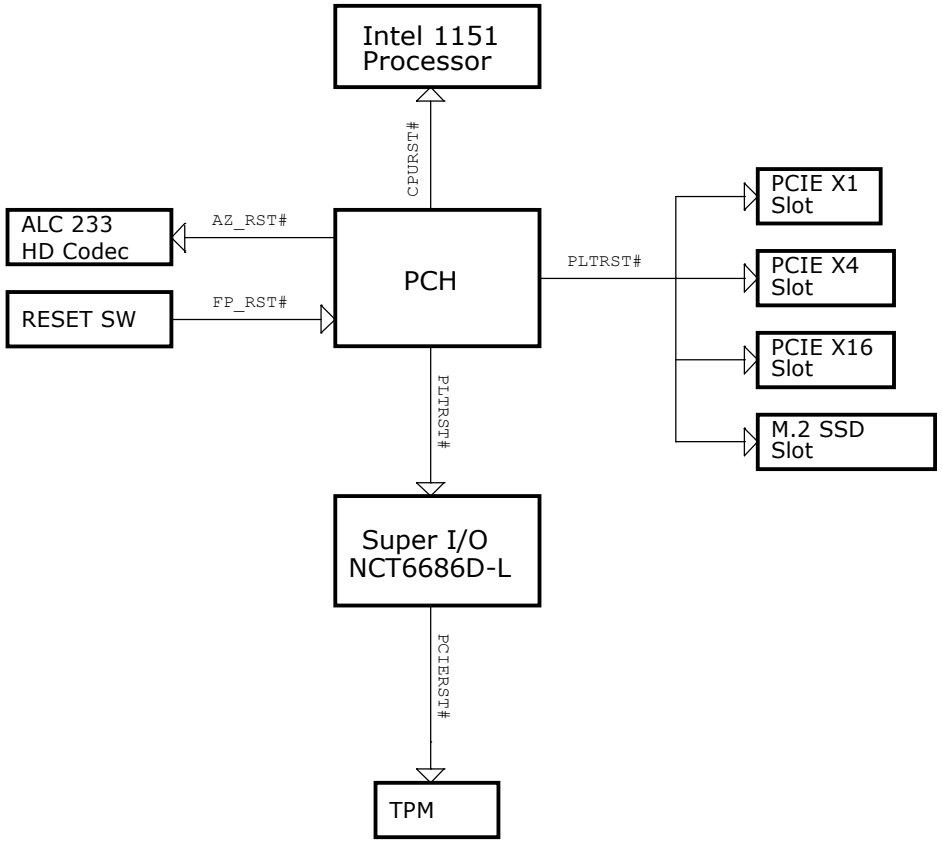
PWROK MAP



RESET MAP



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

Title: Power & Reset Map		
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GPIO	Signal Name	Power Well	IN/OUT	Usage
GPP_A0	GPP_A0_RCIN_N_ESPI_ALERT1_N	SB3V	Native	KBRST#
GPP_A1	GPP_A1_LAD0_ESPI_IO0	SB3V	Native	LPC_AD0
GPP_A2	GPP_A2_LAD1_ESPI_IO1	SB3V	Native	LPC_AD1
GPP_A3	GPP_A3_LAD2_ESPI_IO2	SB3V	Native	LPC_AD2
GPP_A4	GPP_A4_LAD3_ESPI_IO3	SB3V	Native	LPC_AD3
GPP_A5	GPP_A5_LFRAME_N_ESPI_CS_N	SB3V	Native	LPC_FRAME#
GPP_A6	GPP_A6_SERIRQ	SB3V	Native	LPC_SERIRQ
GPP_A7	GPP_A7_PIRQA_N_ESPI_ALERT0_N	SB3V	Native	LPC_DRQ#0
GPP_A8	GPP_A8_CLKRUN_N	SB3V	Native	CLKRUN#
GPP_A9	GPP_A9_CLKOUT_LPC0_ESPI_CLK	SB3V	Native	LEO_CHIP_CLK
GPP_A10	GPP_A10_CLKOUT_LPC1	SB3V	Native	PCI_CLK_24M
GPP_A11	GPP_A11_PME_N	SB3V	Native	SIO_PME#
GPP_A12	GPP_A12_BMBUSY_N	SB3V	Native	BMBUSY#
GPP_A13	GPP_A13_SUSWARN_N_SUSPWRDNACK	SB3V	Native	PCH_SUSWARN#
GPP_A14	GPP_A14_SUS_STAT_N_ESPI_RST_N	SB3V	Native	SUS_STAT#
GPP_A15	GPP_A15_SUSACK_N	SB3V	Native	PCH_SUSACK#
GPP_A16	GPP_A16_CLKOUT_48	SB3V	Native	N.C
GPP_A17	GPP_A17_ISH_GP7	SB3V	OUT	BT_DISABLE_N
GPP_A18	GPP_A18_ISH_GP0	SB3V	IN	OE#
GPP_A19	GPP_A19_ISH_GP1	SB3V	Native	N.C
GPP_A20	GPP_A20_ISH_GP2	SB3V	OUT	SEL#
GPP_A21	GPP_A21_ISH_GP3	SB3V	IN	WLAN_DETECT_N
GPP_A22	GPP_A22_ISH_GP4	SB3V	IN	COM_GPIO1
GPP_A23	GPP_A23_ISH_GP5	SB3V	IN	LEO_CHIP_GPIO
GPP_B0	GPP_B0	SB3V	Native	N.C
GPP_B1	GPP_B1	SB3V	Native	N.C
GPP_B2	GPP_B2_VRALERT_N	SB3V	Native	PCH_VRALERT#
GPP_B3	GPP_B3_CPU_GP2	SB3V	Native	N.C
GPP_B4	GPP_B4_CPU_GP3	SB3V	Native	N.C
GPP_B5	GPP_B5_SRCCLKREQ0_N	SB3V	IN	PCIEX16_PRSNT2_R2_N
GPP_B6	GPP_B6_SRCCLKREQ1_N	SB3V	Native	PCIECLKREQ1#
GPP_B7	GPP_B7_SRCCLKREQ2_N	SB3V	IN	PCIEX4_SLOT3_PRSNT2_R_N
GPP_B8	GPP_B8_SRCCLKREQ3_N	SB3V	IN	CLK_REQ1_M.2_WLAN_N
GPP_B9	GPP_B9_SRCCLKREQ4_N	SB3V	Native	CLK_REQ1_M.2_SSD#
GPP_B10	GPP_B10_SRCCLKREQ5_N	SB3V	Native	N.C
GPP_B11	GPP_B11	SB3V	Native	N.C
GPP_B12	GPP_B12_SLP_S0_N	SB3V	Native	SLP_S0#
GPP_B13	GPP_B13_PLTRST_N	SB3V	Native	PLTRST#
GPP_B14	GPP_B14_SPKR	SB3V	Native	SPKR
GPP_B15	GPP_B15_GSPI0_CS_N	SB3V	Native	N.C
GPP_B16	GPP_B16_GSPI0_CLK	SB3V	Native	N.C
GPP_B17	GPP_B17_GSPI0_MISO	SB3V	Native	N.C
GPP_B18	GPP_B18_GSPI0_MOSI	SB3V	Native	REBOOT_STRAP
GPP_B19	GPP_B19_GSPI1_CS_N	SB3V	Native	N.C
GPP_B20	GPP_B20_GSPI1_CLK	SB3V	IN	SMI#
GPP_B21	GPP_B21_GSPI1_MISO	SB3V	Native	N.C
GPP_B22	GPP_B22_GSPI1_MOSI	SB3V	IN	BBS_STRAP
GPP_B23	GPP_B23_SML1ALERT_N_PCHHOT_N	SB3V	IN	SMLINK1_ALERT_N
GPP_C0	GPP_C0_SMBCLK	SB3V	Native	SMBCLK_R
GPP_C1	GPP_C1_SMBDATE	SB3V	Native	SMBDATA_R
GPP_C2	GPP_C2_SMBALERT_N	SB3V	Native	TLS_STRAP
GPP_C3	GPP_C3_SML0CLK	SB3V	Native	SML0_CLK
GPP_C4	GPP_C4_SML0DATA	SB3V	Native	SML0_DATA
GPP_C5	GPP_C5_SML0ALERT_N	SB3V	Native	ESPI_STRAP
GPP_C6	GPP_C6_SML1CLK	SB3V	Native	SML1_CLK
GPP_C7	GPP_C7_SML1DATA	SB3V	Native	SML1_DATA
GPP_C8	GPP_C8_UART0_RXD	SB3V	IN	CLR_CMOS
GPP_C9	GPP_C9_UART0_TXD	SB3V	Native	N.C
GPP_C10	GPP_C10_UART0_RTS	SB3V	Native	IBUTTON
GPP_C11	GPP_C11_UART0_CTS_N	SB3V	Native	N.C
GPP_C12	GPP_C12_UART1_RXD_ISH_UART1_RXD	SB3V	IN	PCH_GPIO22
GPP_C13	GPP_C13_UART1_TXD_ISH_UART1_TXD	SB3V	IN	PCH_GPIO23
GPP_C14	GPP_C14_UART1_RTS_N_ISH_UART1_RTS_	SB3V	IN	PCH_GPIO21
GPP_C15	GPP_C15_UART1_CTS_N_ISH_UART1_CTS_	SB3V	OUT	WLAN_DISABLE_N
GPP_C16	GPP_C16_I2C0_SDA	SB3V	Native	N.C
GPP_C17	GPP_C17_I2C0_SCL	SB3V	Native	N.C
GPP_C18	GPP_C18_I2C1_SDA	SB3V	Native	N.C
GPP_C19	GPP_C19_I2C1_SCL	SB3V	Native	N.C
GPP_C20	GPP_C20_UART2_RXD	SB3V	Native	N.C
GPP_C21	GPP_C21_UART2_TXD	SB3V	Native	N.C
GPP_C22	GPP_C22_UART2_RTS_N	SB3V	Native	N.C
GPP_C23	GPP_C23_UART2_CTS_N	SB3V	Native	N.C

GPIO	Signal Name	Power Well	IN/OUT	Usage
GPP_D0	GPP_D0_SPI1_CS_N	SB3V	Native	N.C
GPP_D1	GPP_D1_SPI1_CLK	SB3V	OUT	PW_LED_N
GPP_D2	GPP_D2_SPI1_MISO	SB3V	IN	PD_PCH_GPP_D_2
GPP_D3	GPP_D3__SPI1_MOSI	SB3V	IN	PD_PCH_GPP_D_3
GPP_D4	GPP_D4_ISH_I2C2_SDA	SB3V	OUT	SUS_LED_N
GPP_D5	GPP_D5_SSP0_SFRM	SB3V	Native	N.C
GPP_D6	GPP_D6_SSP0_TXD	SB3V	Native	N.C
GPP_D7	GPP_D7_SSP0_RXD	SB3V	Native	N.C
GPP_D8	GPP_D8_SSP0_SCLK	SB3V	Native	N.C
GPP_D9	GPP_D9_ISH_SPI_CS_N	SB3V	Native	N.C
GPP_D10	GPP_D10_ISH_SPI_CLK	SB3V	Native	N.C
GPP_D11	GPP_D11_ISH_SPI_MISO	SB3V	IN	FUSB_G1
GPP_D12	GPP_D12_ISH_SPI_MOSI	SB3V	IN	FUSB_G2
GPP_D13	GPP_D13_ISH_UART0_RXD	SB3V	IN	FUSB_G3
GPP_D14	GPP_D14_ISH_UART0_TXD	SB3V	IN	PS2_PINHEADER_N
GPP_D15	GPP_D15_ISH_UART0_RTS_N	SB3V	IN	LPT_DET#
GPP_D16	GPP_D16_ISH_UART0_CTS_N	SB3V	Native	N.C
GPP_D17	GPP_D17_DMIC_CLK1	SB3V	Native	COM_WAKE#
GPP_D18	GPP_D18_DMIC_DATA1	SB3V	IN	PCH_GPIO_D18
GPP_D19	GPP_D19_DMIC_CLK0	SB3V	Native	N.C
GPP_D20	GPP_D20_DMIC_DATA0	SB3V	Native	N.C
GPP_D21	GPP_D21_SPI1_IO2	SB3V	Native	N.C
GPP_D22	GPP_D22_SPI1_IO3	SB3V	Native	N.C
GPP_D23	GPP_D23_ISH_I2C2_SCL	SB3V	Native	N.C
GPP_E0	GPP_E0_SATAXPCIE0_SATAGP	SB3V	Native	N.C
GPP_E1	GPP_E1_SATAXPCIE1_SATAGP1	SB3V	Native	N.C
GPP_E2	GPP_E2_SATAXPCIE2_SATAGP2	SB3V	Native	N.C
GPP_E3	GPP_E3_CPU_GP0	SB3V	Native	BMC_PCH_SCI_N
GPP_E4	GPP_E4_DEVSLP0	SB3V	Native	BMC_FORCE_SMI_N
GPP_E5	GPP_E5_DEVSLP1	SB3V	Native	N.C
GPP_E6	GPP_E6_DEVSLP2	SB3V	Native	N.C
GPP_E7	GPP_E7_CPU_GP1	SB3V	Native	N.C
GPP_E8	GPP_E8_SATALED_N	SB3V	OUT	SATA_LED#
GPP_E9	GPP_E9_USB2_OC0_N	SB3V	Native	USB_OCP#0
GPP_E10	GPP_E10_USB2_OC1_N	SB3V	Native	USB_OCP#1
GPP_E11	GPP_E11_USB2_OC2_N	SB3V	Native	USB_OCP#2
GPP_E12	GPP_E12_USB2_OC3_N	SB3V	Native	USB_OCP#3
GPP_F0	GPP_F17_USB2_OCB_6	SB3V	Native	PCH_GPIO_F1
GPP_F1	GPP_F1_SATAXPCIE4_SATAGP4	SB3V	IN	M.2_SSD1_PEDET#
GPP_F2	GPP_F2_SATAXPCIE5_SATAGP5	SB3V	Native	PCH_GPIO_F2
GPP_F3	GPP_F3_SATAXPCIE6_SATAGP6	SB3V	Native	N.C
GPP_F4	GPP_F4_SATAXPCIE7_SATAGP7	SB3V	Native	TP20
GPP_F5	GPP_F5_DEVSLP3	SB3V	IN	SPI_SIRQ#
GPP_F6	GPP_F6_DEVSLP4	SB3V	Native	PCH_GPIO_F6
GPP_F7	GPP_F7_DEVSLP5	SB3V	Native	SSD1_SATA_DEVSLP
GPP_F8	GPP_F8_DEVSLP6	SB3V	Native	N.C
GPP_F9	GPP_F9_DEVSLP7	SB3V	Native	USB_DISABLE#
GPP_F10	GPP_F10_SCLOCK	SB3V	OUT	N.C
GPP_F11	GPP_F11_SLOAD	SB3V	OUT	N.C
GPP_F12	GPP_F12_SDATAOUT1	SB3V	OUT	N.C
GPP_F13	GPP_F13_SDATAOUT0	SB3V	OUT	N.C
GPP_F14	GPP_F14	SB3V	IN	SKTOCC#
GPP_F15	GPP_F15_USB2_OCB_4	SB3V	Native	USB_OCP#4
GPP_F16	GPP_F16_USB2_OCB_5	SB3V	Native	USB_OCP#5
GPP_F17	GPP_F17_USB2_OCB_6	SB3V	Native	USB_OCP#6
GPP_F18	GPP_F18_USB2_OCB_7	SB3V	Native	USB_OCP#7
GPP_F19	GPP_F19_EDP_VDDEN	SB3V	Native	N.C
GPP_F20	GPP_F20_EDP_BKLTEN	SB3V	Native	N.C
GPP_F21	GPP_F21_EDP_BKLTCTL	SB3V	Native	N.C
GPP_F22	GPP_F22	SB3V	OUT	PCH_GPIO_F22
GPP_F23	GPP_F23	SB3V	Native	N.C
GPD0	GPD0_BATLOW_N	SB3V_DSW	Native	PCH_BATLOW#
GPD1	GPD1_ACPRESENT	SB3V_DSW	OUT	SUS_LED_N
GPD2	GPD2_LAN_WAKE_N	SB3V_DSW	Native	LAN_WAKE#_C
GPD3	GPD3_PWRBTN_N	SB3V_DSW	Native	PWRBTN#
GPD4	GPD4_SLP_S3_N	SB3V_DSW	Native	SLP_S3#
GPD5	GPD5_SLP_S4_N	SB3V_DSW	Native	SLP_S4#
GPD6	GPD5_SLP_A_	SB3V_DSW	Native	PCH_SLP_A#
GPD7	GPD7_USB2_WAKEOUT_N	SB3V_DSW	Native	N.C
GPD8	GPD8_SUSCL	SB3V_DSW	Native	SUSCLK
GPD9	GPD9_SLP_WLAN_N	SB3V_DSW	Native	N.C
GPD10	GPD10_SLP_S5_N	SB3V_DSW	Native	SLP_S5#
GPD11	GPD11_LANPHYPC	SB3V_DSW	Native	LAN_DISABLE#

GPIO	Signal Name	Power Well	IN/OUT	Usage
GPP_G0	GPP_G0_FAN_TACH_0	SB3V	IN	CHASSIS_ID1
GPP_G1	GPP_G1_FAN_TACH_1	SB3V	IN	CHASSIS_ID2
GPP_G2	GPP_G2_FAN_TACH_2	SB3V	IN	H_PROCHOT_PCH_N
GPP_G3	GPP_G3_FAN_TACH_3	SB3V	Native	PCH_BMC_FOURCE_INT_N
GPP_G4	GPP_G4_FAN_TACH_4	SB3V	Native	N.C
GPP_G5	GPP_G5_FAN_TACH_5	SB3V	Native	N.C
GPP_G6	GPP_G6_FAN_TACH_6	SB3V	Native	N.C
GPP_G7	GPP_G7_FAN_TACH_7	SB3V	Native	N.C
GPP_G8	GPP_G8_FAN_PWM_0	SB3V	Native	N.C
GPP_G9	GPP_G9_FAN_PWM_1	SB3V	Native	N.C
GPP_G10	GPP_G10_FAN_PWM_2	SB3V	Native	N.C
GPP_G11	GPP_G11_FAN_PWM_3	SB3V	IN	BMC_THROTTLE_N
GPP_G12	GPP_G12_GSXDOUT	SB3V	IN	GPP_G0
GPP_G13	GPP_G13_GSXSLOAD	SB3V	IN	GPP_G1
GPP_G14	GPP_G14_GSXDIN	SB3V	IN	GPP_G2
GPP_G15	GPP_G15_GSXSRESET_N	SB3V	IN	GPP_G3
GPP_G16	GPP_G16_GSXCLK	SB3V	IN	GPP_G4
GPP_G17	GPP_G17_ADR_COMPLETE	SB3V	IN	GPP_G5
GPP_G18	GPP_G18_NMI_N	SB3V	Native	FM_NMI_EVENT_N
GPP_G19	GPP_G19_SMI_N	SB3V	IN	SIO_SCI_N
GPP_G20	GPP_G20	SB3V	Native	BMC_READY
GPP_G21	GPP_G21	SB3V	IN	PCH_GPIO20
GPP_G22	GPP_G22	SB3V	Native	BMC_CARD_DET_R_N
GPP_G23	GPP_G23	SB3V	OUT	VGA_URDBG
GPP_H0	GPP_H0_SRCCLKREQ6_N	SB3V	Native	FM_MEM_THERM_EVENT_LVT3_N
GPP_H1	GPP_H1_SRCCLKREQ7_N	SB3V	Native	FM_NM_THROTTLE_N
GPP_H2	GPP_H2_SRCCLKREQ8_N	SB3V	OUT	FM_CATERR_N
GPP_H3	GPP_H3_SRCCLKREQ9_N	SB3V	Native	PCH_BMC_ALERT
GPP_H4	GPP_H4_SRCCLKREQ10_N	SB3V	Native	N.C
GPP_H5	GPP_H5_SRCCLKREQ11_N	SB3V	Native	N.C
GPP_H6	GPP_H6_SRCCLKREQ12_N	SB3V	Native	N.C
GPP_H7	GPP_H7_SRCCLKREQ13_N	SB3V	Native	N.C
GPP_H8	GPP_H8_SRCCLKREQ14_N	SB3V	Native	N.C
GPP_H9	GPP_H9_SRCCLKREQ15_N	SB3V	Native	N.C
GPP_H10	GPP_H10_SML2CLK	SB3V	OUT	WIRELESS_EN2
GPP_H11	GPP_H11_SML2DATA	SB3V	OUT	WIRELESS_EN
GPP_H12	GPP_H12_SML2ALERT_N	SB3V	Native	FM_ESPI_FLASH_MODE
GPP_H13	GPP_H13_SML3CLK	SB3V	Native	N.C
GPP_H14	GPP_H14_SML3DATA	SB3V	Native	N.C
GPP_H15	GPP_H15_SML3ALERT_N	SB3V	Native	PCH_GPP_H15
GPP_H16	GPP_H16_SML4CLK	SB3V	Native	N.C
GPP_H17	GPP_H17_SML4DATA	SB3V	Native	N.C
GPP_H18	GPP_H18_SML4ALERT_N	SB3V	Native	PCH_GPP_H18
GPP_H19	GPP_H19_ISH_I2C0_SDA	SB3V	Native	N.C
GPP_H20	GPP_H20_ISH_I2C0_SCL	SB3V	Native	N.C
GPP_H21	GPP_H21_ISH_I2C1_SDA	SB3V	Native	N.C
GPP_H22	GPP_H22_ISH_I2C1_SCL	SB3V	Native	N.C
GPP_H23	GPP_H23	SB3V	Native	N.C
GPP_I0	GPP_I0_DDPB_HPD0	SB3V	IN	VGA_DDI3_HPD
GPP_I1	GPP_I1_DDPC_HPD1	SB3V	IN	DP_DDPC_HPD
GPP_I2	GPP_I2_DDPD_HPD2	SB3V	IN	DP_DDPD_HPD
GPP_I3	GPP_I3_DDPE_HPD3	SB3V	IN	U2_BA4
GPP_I4	GPP_I4_EDP_HPD	SB3V	IN	U2_BD7
GPP_I5	GPP_I5_DDPB_CTRLCLK	SB3V	Native	TP30
GPP_I6	GPP_I6_DDPB_CTRLDATA	SB3V	Native	DDPD_CTRLDATA
GPP_I7	GPP_I7_DDPC_CTRLCLK	SB3V	Native	DP_DDPC_CTRLCLK
GPP_I8	GPP_I8_DDPC_CTRLDATA	SB3V	Native	DP_DDPC_CTRLDATA
GPP_I9	GPP_I9_DDPD_CTRLCLK	SB3V	Native	DP_DDPD_CTRLCLK
GPP_I10	GPP_I10_DDPD_CTRLDATA	SB3V	Native	DP_DDPD_CTRLDATA

SIO GPIO (NCT6685D)

GPIO	Signal Name	PIN	ower We	In/Out	Usage
GPIO00	PWMOUT/TACHIN/GPIO00	3	SB3V	IN	FM_CATERR_N
GPIO95	GPIO95/BKFD_CUT	74	SB3V	OUT	ME_CNTL
GPIO85	SMI#/OVT#/GPIO85	2	SB3V	----	SIO_SCI_N
GPIO74	GPIO74 / TACHIN / PWMOUT	37	SB3V	OD	BMC_THROTTLE_N
GPIO77	SKTOCC# / GPIO77	102	SB3V	IN	IS1XXM_BOARDID
GPIO66	P_S5_0 / 3VSBSW / LATCH_BKFD_CUT / GP	70	SB3V	OUT	USB_PS2_PON
GPIO93	3VSBSW#/GPIO93/SLP_SUS#	89	3V_DSW	OUT	SIO_GP93
GPIO94	GPIO94/SLP_SUS_FET	88	3V_DSW	IN	COM_WAKE#

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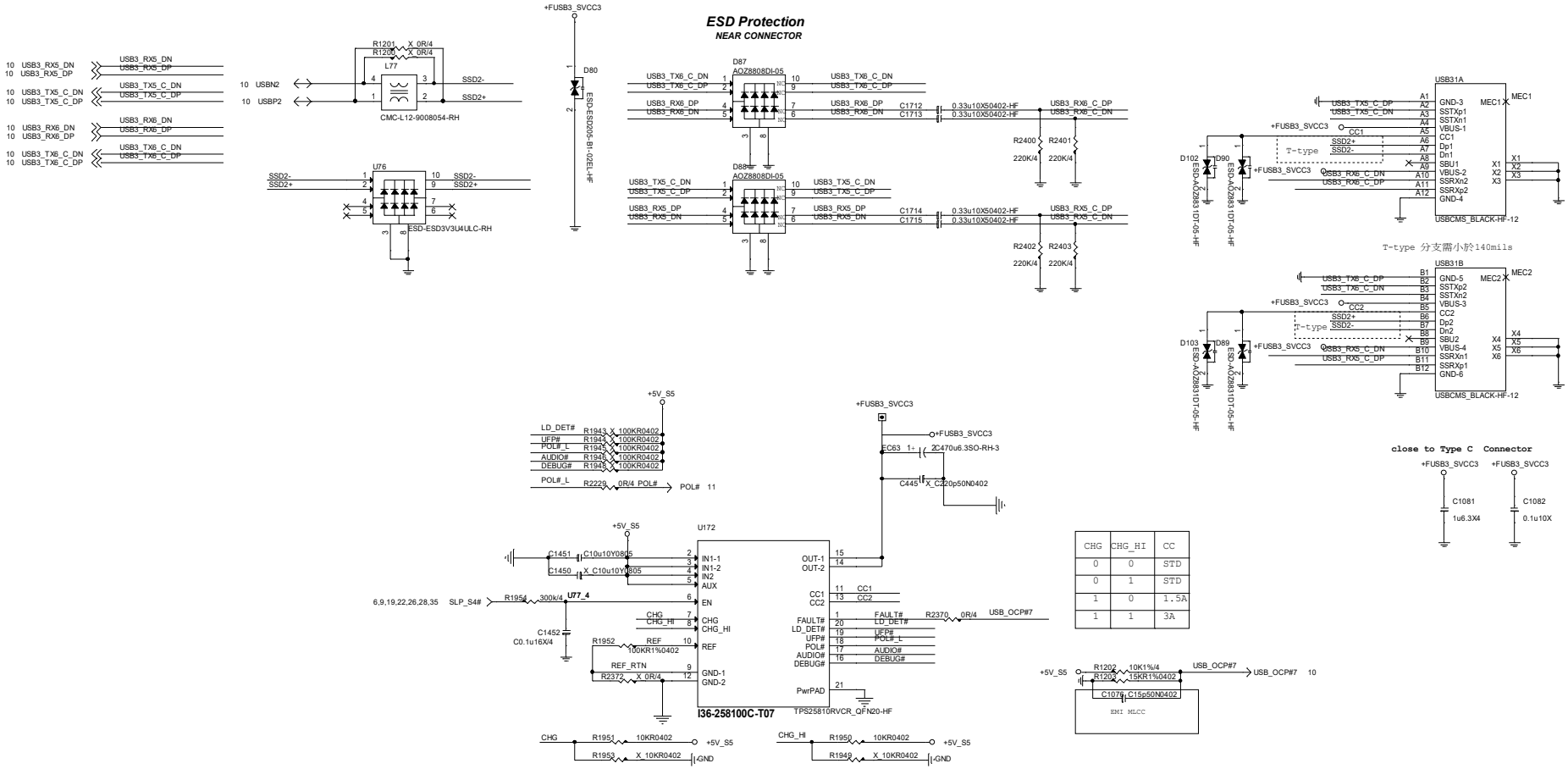

CHG	CHG_HI	CC
0	0	STD
0	1	STD
1	0	1.5A
1	1	3A

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