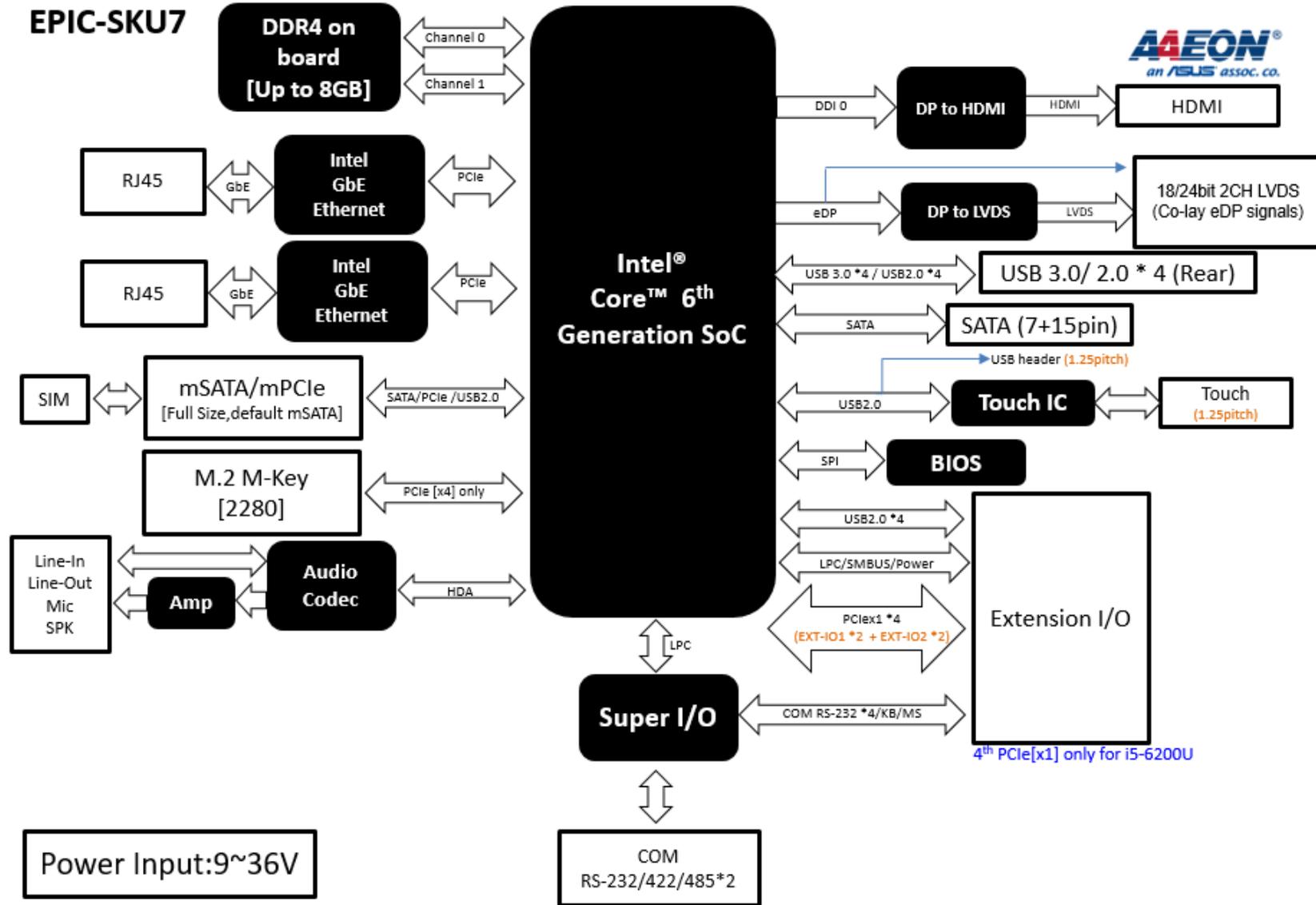




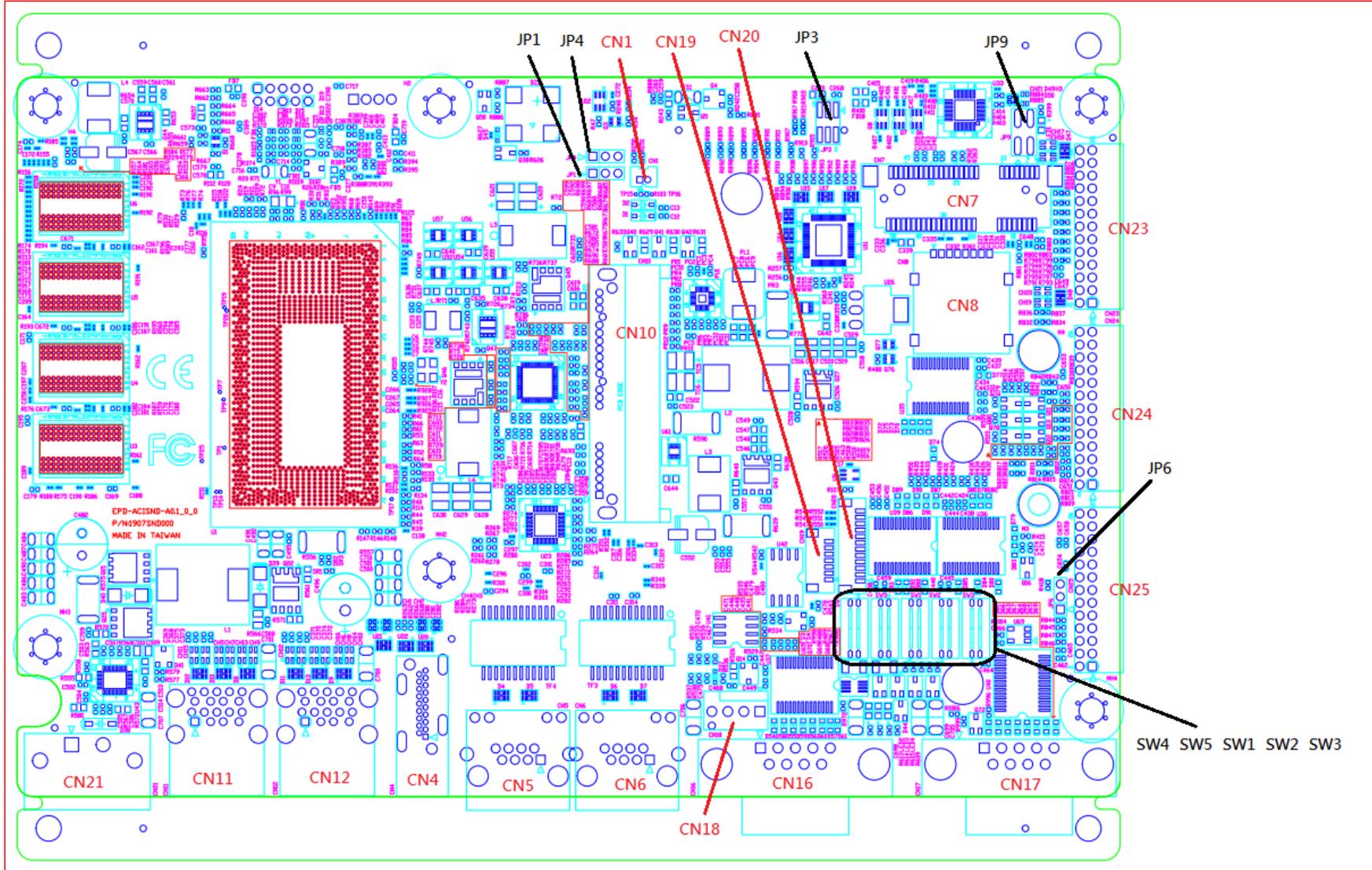
EPIC-SKU7
Jumper and Connector Settings
QIG

Function Block:

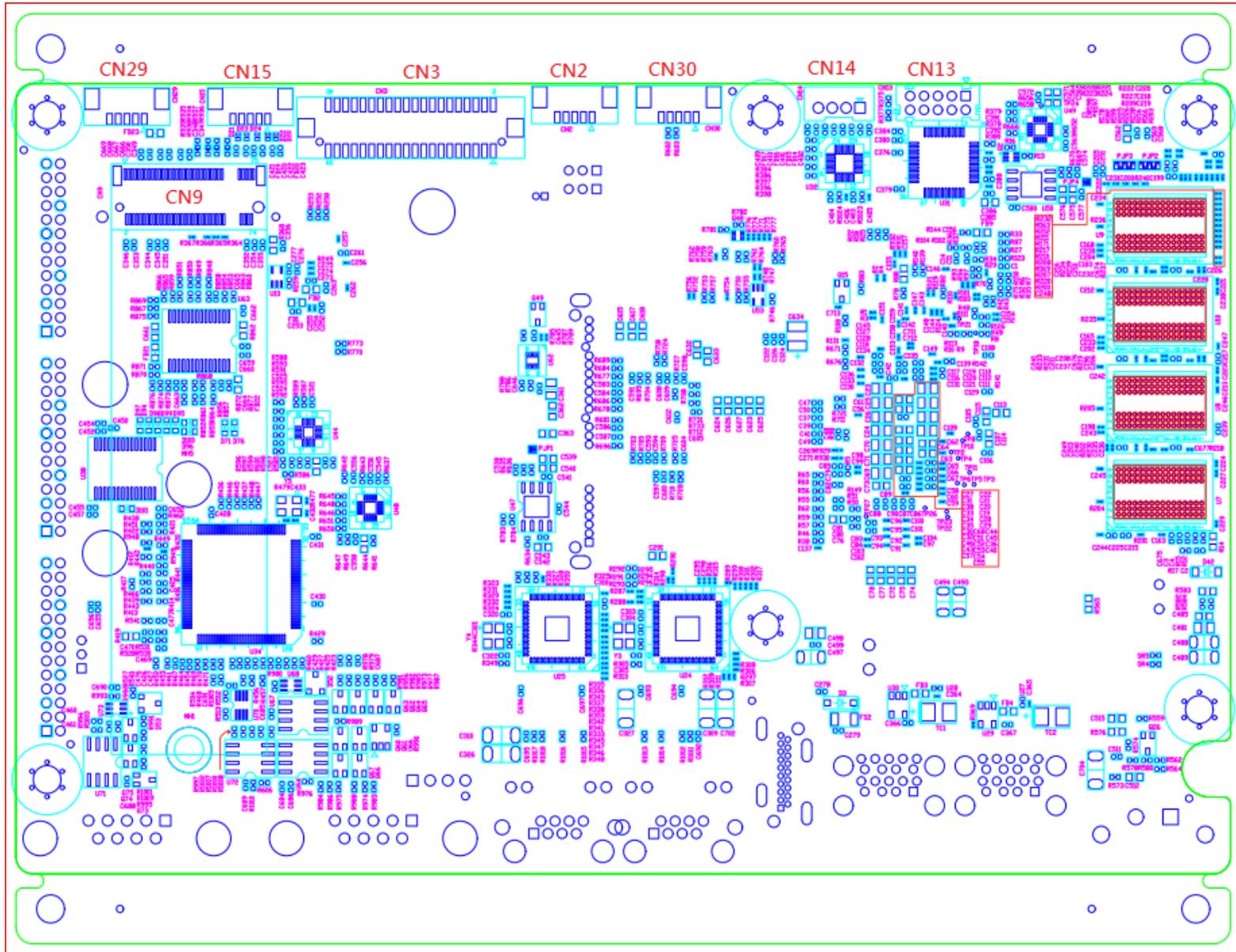


Board Layout:

TOP View:



BOT View:



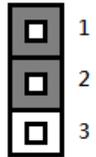
List of Jumpers

Jumpers allow users to manually customize system configurations to their suitable application needs.

The following chart consist the list of each jumper function:

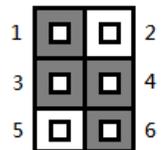
Label	Function
JP1	Clear CMOS Jumper
JP3	LVDS Operating Voltage & BKLT Inverter Voltage Selection
JP4	LVDS BKLT Control Mode Selection
JP6	AT / ATX Mode Selection
JP9	Front Panel PIN Header
SW1.SW2.SW3	COM1&COM2 RS232/422/485 setting
SW4	COM1 Ring setting
SW5	Com2 Ring setting

(JP1) Clear CMOS Jumper



Clear CMOS Jumper		
1-2	Save CMOS	Default
2-3	Clear CMOS	

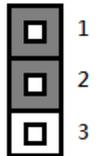
(JP3) LVDS Operating Voltage & BKLT Inverter Voltage Selection



BKLT Inverter Voltage Selection		
1-3	+12V	Default
3-5	+5V	

LVDS Operating Voltage		
2-4	+3.3V	
4-6	+5V	Default

(JP4) LVDS BKLT Control Mode Selection



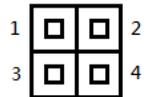
VDS BKLT Control Mode Selection		
1-2	VR Mode	Default
2-3	PWM Mode	

(JP6) AT / ATX Mode Selection



AT / ATX Mode Selection		
1-2	ATX Mode	Default
2-3	AT Mode	

(JP9) Front Panel PIN Header



Pin	Pin Name	Signal Type	Signal level
1	GND	GND	GND
2	EXT_PWRBTN#	IN	
3	GND	GND	GND
4	HWRST#	IN	

(SW1) COM1&COM2 RS232/422/485 setting

COM1 : RS232

COM2 : RS422

COM PORT	COMPONENT		RS232	RS422	RS485
COM1	SW1	1-20	OFF	ON	ON
		2-19	OFF	ON	OFF
		3-18	OFF	OFF	ON
COM2		4-17	OFF	ON	ON
		5-16	OFF	ON	OFF
		6-15	OFF	OFF	ON

(SW1) COM1 Ring setting

COMPONENT		+V5S	RING(Default)
SW1	7-14	OFF	ON
	8-13	ON	OFF

(SW1) COM2 Ring setting

COMPONENT		+V5S(Default)	RING
SW1	9-12	OFF	ON
	10-11	ON	OFF

List of Connectors

Connectors on board access link to external devices such as hard disk drives, a keyboard.

Label	Function
CN1	RTC Battery Connector
CN2	LVDS Back Light Inverter
CN3	LVDS/eDP [Reserved]
CN4	HDMI
CN5	LAN RJ45
CN6	LAN RJ45
CN7	Mini-Card
CN8	SIM Card
CN9	M.2 M-Key
CN10	SATA
CN11	USB 2.0/3.0 Port 1~Port 2
CN12	USB 2.0/3.0 Port 3~Port 4
CN13	Audio MIC/Lin[Reserved]/Lout
CN14	Audio Amp
CN15	Touch Panel Connector
CN16	COM1 RS232/422/485
CN17	COM2 RS232/422/485
CN18	Smart FAN 4-pin
CN19	SPI
CN20	LPC

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CN21	Power Input 9-36V
CN23	Extension I/O_1
CN24	Extension I/O_2
CN25	Extension I/O_3
CN29	USB2.0 [Reserved]
CN30	External LED Wafer

(CN1) RTC Battery Connector

Pin	Pin Name	Signal Type	Signal level
1	+3.3V	PWR	+3.3V
2	GND	GND	

(CN2) LVDS Back Light Inverter

Pin	Pin Name	Signal Type	Signal level
1	BLK_PWR	PWR	+5V / +12V
2	BLK_PWR	PWR	+5V / +12V
3	BKL_ENABLE		+3.3V
4	BKL_CONTROL		
5	GND	GND	

(CN3) LVDS/eDP [Reserved]

Pin	Pin Name	Signal Type	Signal level
1	+VDD_LVD1	PWR	+5V / +3.3V
2	+VDD_LVD1	PWR	+5V / +3.3V
3	GND	GND	

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4	GND	GND	
5	+VDD_LVD1	PWR	+5V / +3.3V
6	Pull High 10 K to +VDD_LVD1		+5V / +3.3V
7	LVD1_CA_0_DN/ EDP_LANE1_DN	DIFF	
8	LVD1_CB_0_DN	DIFF	
9	LVD1_CA_0_DP/ EDP_LANE1_DP	DIFF	
10	LVD1_CB_0_DP	DIFF	
11	GND	GND	
12	GND	GND	
13	LVD1_CA_1_DN/ EDP_LANE0_DN	DIFF	
14	LVD1_CB_1_DN	DIFF	
15	LVD1_CA_1_DP/ EDP_LANE0_DP	DIFF	
16	LVD1_CB_1_DP	DIFF	
17	GND	GND	
18	GND	GND	
19	LVD1_CA_2_DN/ EDP_VDDEN	DIFF	

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20	LVD1_CB_2_DN	DIFF	
21	LVD1_CA_2_DP/ HPD	DIFF	
22	LVD1_CB_2_DP	DIFF	
23	GND	GND	
24	GND	GND	
25	LVD1_CA_CLKN/ EDP_AUXN	DIFF	
26	LVD1_CB_CLKN	DIFF	
27	LVD1_CA_CLKP/ EDP_AUXP	DIFF	
28	LVD1_CB_CLKP	DIFF	
29	GND	GND	
30	GND	GND	
31	LVD1_CA_3_DN	DIFF	
32	LVD1_CB_3_DN	DIFF	
33	LVD1_CA_3_DP	DIFF	
34	LVD1_CB_3_DP	DIFF	
35	GND	GND	
36	GND	GND	
37	LVD1_BKLTEN/		

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	EPD_BKLTEN		
38	BLK_PWR	PWR	+5V / +12V
39	LVD1_BKLCTL/ EPD_BKLTCTL		
40	BLK_PWR	PWR	+5V / +12V

(CN4) HDMI

Pin	Pin Name	Signal Type	Signal level
1	HDMI_TX2+	DIFF	
2	GND	GND	
3	HDMI_TX2-	DIFF	
4	HDMI_TX1+	DIFF	
5	GND	GND	
6	HDMI_TX1-	DIFF	
7	HDMI_TX0+	DIFF	
8	GND	GND	
9	HDMI_TX0-	DIFF	
10	HDMI_CLK+	DIFF	

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11	GND	GND	
12	HDMI_CLK-	DIFF	
13	NC		
14	NC		
15	DDC_CLK	I/O	+5V
16	DDC_DATA	I/O	+5V
17	GND	GND	
18	+5V	PWR	+5V
19	HDMI_HPD		

(CN5) LAN RJ45

Pin	Pin Name	Signal Type	Signal level
1	MDIO+	DIFF	
2	MDIO-	DIFF	
3	MDI1+	DIFF	
4	MDI2+	DIFF	
5	MDI2-	DIFF	
6	MDI1-	DIFF	
7	MDI3+	DIFF	

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8	MDI3-	DIFF	
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(CN6) LAN RJ45

Pin	Pin Name	Signal Type	Signal level
1	MDI0+	DIFF	
2	MDI0-	DIFF	
3	MDI1+	DIFF	
4	MDI2+	DIFF	
5	MDI2-	DIFF	
6	MDI1-	DIFF	
7	MDI3+	DIFF	
8	MDI3-	DIFF	

(CN7) Mini-Card

Pin	Pin Name	Signal Type	Signal level
1	PCIE_WAKE#	IN	
2	+3.3VSB	PWR	+3.3V
3	NC		
4	GND	GND	
5	NC		

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Pin	Pin Name	Signal Type	Signal level
6	+1.5V	PWR	+1.5V
7	PCIE_CLK_REQ#	IN	
8	UIM_PWR	PWR	+5V/+3V/+1.8V
9	GND	GND	
10	UIM_DATA		
11	PCIE_REF_CLK-	DIFF	
12	UIM_CLK		
13	PCIE_REF_CLK+	DIFF	
14	UIM_RST		
15	GND	GND	
16	UIM_VPP		
17	NC		
18	GND	GND	
19	NC		
20	W_DISABLE#	OUT	+3.3V
21	GND	GND	
22	PCIE_RST#	OUT	+3.3V
23	PCIE_RX-	DIFF	
24	+3.3VSB	PWR	+3.3V
25	PCIE_RX+	DIFF	

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Pin	Pin Name	Signal Type	Signal level
26	GND	GND	
27	GND	GND	
28	+1.5V	PWR	+1.5V
29	GND	GND	
30	SMB_CLK	I/O	+3.3V
31	PCIE_TX-	DIFF	
32	SMB_DATA	I/O	+3.3V
33	PCIE_TX+	DIFF	
34	GND	GND	
35	GND	GND	
36	USB_D-	DIFF	
37	GND	GND	
38	USB_D+	DIFF	
39	+3.3VSB	PWR	+3.3V
40	GND	GND	
41	+3.3VSB	PWR	+3.3V
42	NC		
43	GND	GND	
44	NC		
45	NC		

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Pin	Pin Name	Signal Type	Signal level
46	NC		
47	NC		
48	+1.5V	PWR	+1.5V
49	NC		
50	GND	GND	
51	NC		
52	+3.3VSB	PWR	+3.3V

(CN7) SIM Card

Pin	Pin Name	Signal Type	Signal level
1	UIM_PWR	PWR	+5V/+3V/+1.8V
2	UIM_RST		
3	UIM_CLK		
4	NC		
5	GND-	GND	
6	UIM_VPP		
7	UIM_DATA		

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Pin	Pin Name	Signal Type	Signal level
8	NC		

(CN9) M.2 M-Key

Standard specification

(CN10) SATA

Standard specification

(CN11) USB2.0/3.0 Port1~Port2

Pin	Pin Name	Signal Type	Signal level
1	+V5SB	PWR	+5V
2	USB3_D-	DIFF	
3	USB3_D+	DIFF	
4	GND	GND	
5	USB3_SSRX-	DIFF	
6	USB3_SSRX+	DIFF	
7	GND	GND	
8	USB3_SSTX-	DIFF	
9	USB3_SSTX+	DIFF	

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10	+V5SB	PWR	+5V
11	USB4_D-	DIFF	
12	USB4_D+	DIFF	
13	GND	GND	
14	USB4_SSRX-	DIFF	
15	USB4_SSRX+	DIFF	
16	GND	GND	
17	USB4_SSTX-	DIFF	
18	USB4_SSTX+	DIFF	

(CN12) USB2.0/3.0 Port3~Port4

Pin	Pin Name	Signal Type	Signal level
1	+V5SB	PWR	+5V
2	USB3_D-	DIFF	
3	USB3_D+	DIFF	
4	GND	GND	
5	USB3_SSRX-	DIFF	
6	USB3_SSRX+	DIFF	
7	GND	GND	
8	USB3_SSTX-	DIFF	

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9	USB3_SSTX+	DIFF	
10	+V5SB	PWR	+5V
11	USB4_D-	DIFF	
12	USB4_D+	DIFF	
13	GND	GND	
14	USB4_SSRX-	DIFF	
15	USB4_SSRX+	DIFF	
16	GND	GND	
17	USB4_SSTX-	DIFF	
18	USB4_SSTX+	DIFF	

(CN13) Audio MIC/Lin[Reserved]/Lout

Pin	Pin Name	Signal Type	Signal level
1	MIC_R/LIN_R		
2	GND	GND	
3	MIC_L/LIN_L		
4	GND	GND	
5	LOUT_R		
6	MIC_JD/LIN_JD		
7	LOUT_JD		
8	GND	GND	

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9	LOUT_L		
10	GND	GND	

(CN14) Audio Amp

Pin	Pin Name	Signal Type	Signal level
1	AMP_L+		
2	AMP_L-		
3	AMP_R+		
4	AMP_R-		

(CN15) Touch Panel Connector

Pin	Pin Name	Signal Type	Signal level
1	Y-		
2	X-		
3	SENSE		
4	X+		
5	Y+		

(CN16) COM1 RS232/422/485

Pin	Pin Name_RS232	Pin Name_RS422	Pin Name_RS485
1	DCD#		
2	RXD	RX+	
3	TXD	TX-	Data-
4	DTR#		
5	GND		
6	DSR#		
7	RTS#	TX+	Data+
8	CTS#	RX-	
9	RI#/+5V		

(CN17) COM2 RS232/422/485

Pin	Pin Name_RS232	Pin Name_RS422	Pin Name_RS485
1	DCD#		
2	RXD	RX+	
3	TXD	TX-	Data-

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4	DTR#		
5	GND		
6	DSR#		
7	RTS#	TX+	Data+
8	CTS#	RX-	
9	RI#/+5V		

(CN18) Smart FAN 4-pin

Pin	Pin Name	Signal Type	Signal level
1	GND	GND	
2	+VCC_FAN_CON	PWR	+12V / +5V
3	FAN_1_TAC_CON		
4	FAN_1_CTL_CON		

(CN19) Touch Panel Connector

Pin	Pin Name	Signal Type	Signal level
1	SPI_SO		
2	GND	GND	
3	SPI_CLK		

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4	+V3P3A	PWR	+3.3V
5	SPI_SI		
6	SPI_CS0#		
7	NC		

(CN20) LPC

Pin	Pin Name	Signal Type	Signal level
1	LPC_AD0	IN/OUT	+3.3V
2	LPC_AD1	IN/OUT	+3.3V
3	LPC_AD2	IN/OUT	+3.3V
4	LPC_AD3	IN/OUT	+3.3V
5	+V3.3S	PWR	+3.3V
6	LPC_FRAME#	IN	
7	LPC_RESET#	OUT	+3.3V
8	GND	GND	
9	LPC_CLK	OUT	
10	SMB_DATA/ I2C_SDA	IN/OUT	
11	SMB_CLK/ I2C_CLK	OUT	

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12	SMB_ALERT/ INT_SERIRQ	IN	+3.3V
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(CN21) Power Input 9-36V

Pin	Pin Name	Signal Type	Signal level
1	+V_IN	PWR	9-36V
2	GND	GND	

(CN23) Extension I/O 1

Pin	Pin Name	Signal Type	Signal level
1	DCD_3		
2	RX_3		
3	TX_3		
4	DTR_3		
5	GND		
6	DSR_3		
7	RTS_3		
8	CTS_3		
9	RI_3		
10	+V5S		

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11	DCD_4/PCIE_10_TXN		
12	RX_4/PCIE_10_RXN		
13	TX_4/PCIE_10_TXP		
14	DTR_4/PCIE_10_RXP		
15	GND		
16	DSR_4/+V3.3S		
17	RTS_4/PCIE_11_TXN		
18	CTS_4/PCIE_11_RXN		
19	RI_4/PCIE_11_TXP		
20	+V5S/PCIE_11_RXP		
21	GND		
22	GND		
23	USB2_7_DN		
24	USB2_8_DN		
25	USB2_7_DP		
26	USB2_8_DP		

(CN24) Extension I/O 2

Pin	Pin Name	Signal Type	Signal level
1	DCD_5/PCIE_12_RXN		
2	RX_5		
3	TX_5/ PCIE_12_RXP		
4	DTR_5		
5	GND		
6	DSR_5/+V3.3S		
7	RTS_5/PCIE_12_TXN		
8	CTS_5		
9	RI_5/PCIE_12_TXP		
10	+V5S		
11	DCD_6/PCIE_01_CLKN		
12	RX_6/PCIE_03_CLKN		
13	TX_6/PCIE_01_CLKP		
14	DTR_6/ PCIE_03_CLKP		
15	GND		
16	DSR_6/+V3.3S		

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17	RTS_6/PCIE_02_CLKN		
18	CTS_6/ PCIE_04_CLKN		
19	RI_6/PCIE_02_CLKP		
20	+V5S/ PCIE_04_CLKP		
21	GND		
22	GND		
23	USB2_10_DN		
24	USB2_9_DN		
25	USB2_10_DP		
26	USB2_9_DP		

(CN25) Extension I/O 3

Pin	Pin Name	Signal Type	Signal level
1	LPC_AD3		
2	LPC_CLK		
3	LPC_AD2		
4	PLT_RST#		
5	LPC_AD1		
6	LPC_FRAME#		
7	LPC_AD0		

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8	SATA_LED_N/ PM_SLP_S3#		
9	INT_SERIRQ		
10	MS_DATA		
11	SMBALERT#/ PCIE_WAKE#		
12	MS_CLK		
13	SMB_CLK		
14	KB_DATA		
15	SMB_DATA		
16	KB_CLK		
17	GND		
18	GND		
19	PWRBTN#		
20	+V12S		
21	HWRST#		
22	+V5A		
23	+V3.3A		
24	+V5A		
25	+V3.3A		
26	+V5A		

(CN29) USB2.0 [Reserved]

Pin	Pin Name	Signal Type	Signal level
1	+V5A	PWR	+5V
2	USB_Data-		
3	USB_Data+		
4	GND	GND	
5	GND	GND	

(CN30) External LED Wafer

Pin	Pin Name	Signal Type	Signal level
1	GND		
2	SB_PWR_ON		
3	SYS_PWR_ON		
4	SATA_LED+		
5	SATA_LED-		