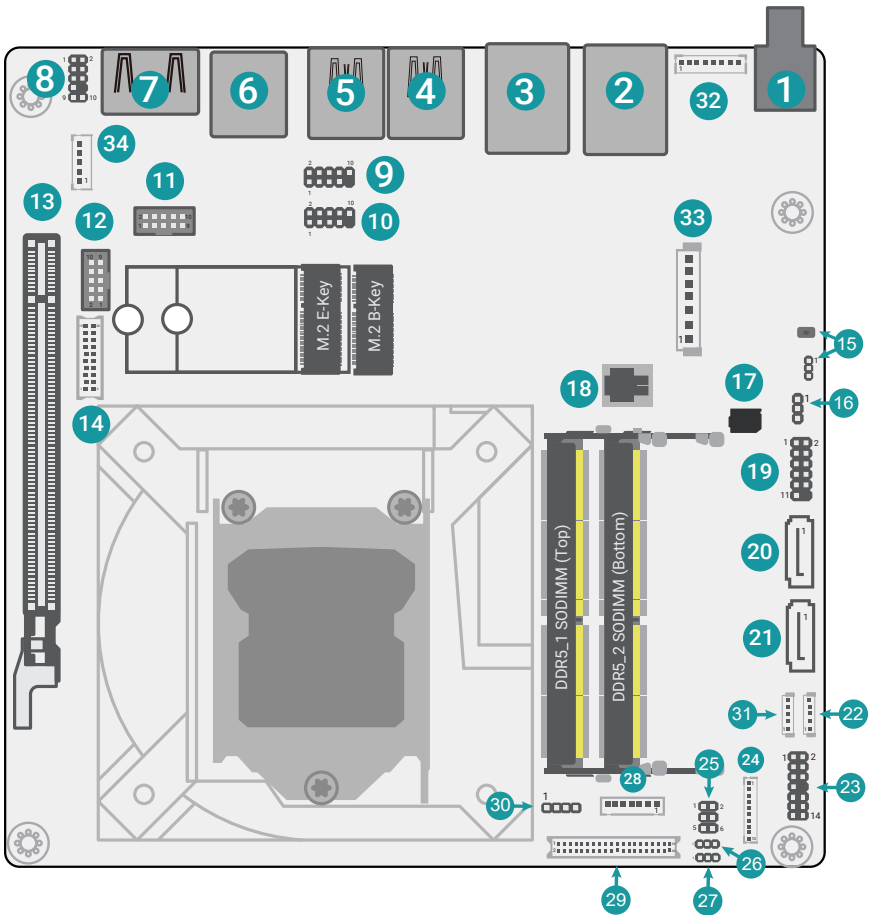
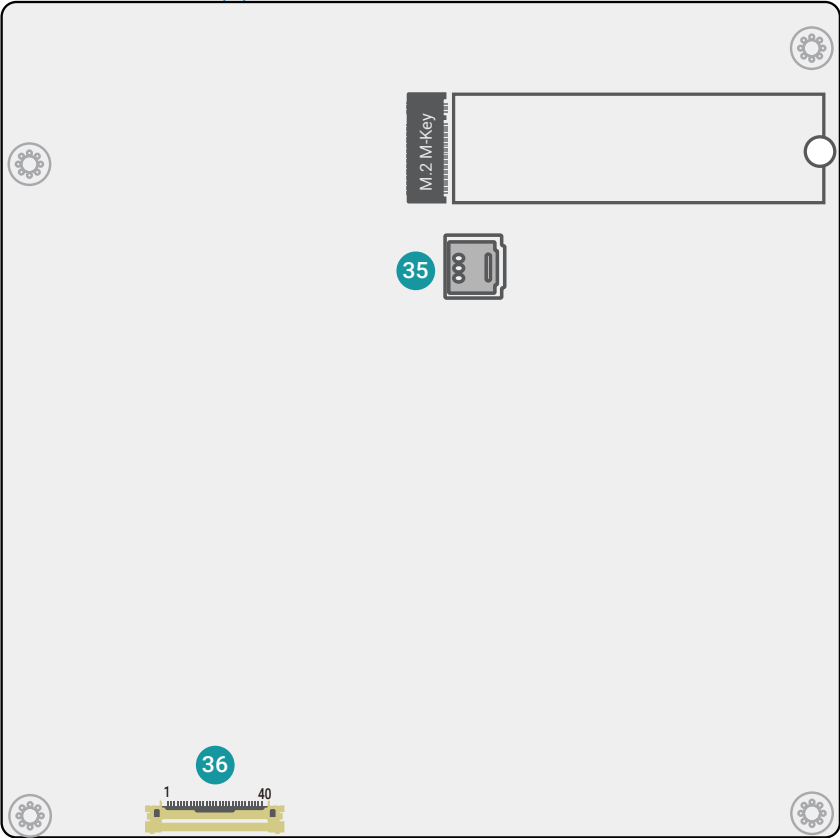


## Board Layout

### Top View



Bottom View



<p>1 DC-in</p> <hr/> <p>2 2.5G LAN 1</p> <hr/> <p>3 2.5G LAN 2</p> <hr/> <p>4 USB3.2 Gen2</p> <hr/> <p>5 R680E/Q670E - USB3.2 Gen2 H610E - USB2.0</p> <hr/> <p>6 R680E/Q670E - ▲ USB3.2 Gen2 ▼USB Type-C H610E - ▲ USB3.2 Gen1</p> <hr/> <p>7 ▲DP++ ▼HDMI2.0</p> <hr/> <p>8 Front Audio</p> <hr/> <p>9 USB2_10/11</p> <hr/> <p>10 USB2_5/6</p> <hr/> <p>11 COM2</p> <hr/> <p>12 COM1</p> <hr/> <p>13 PCIE1</p> <hr/> <p>14 DDI</p> <hr/> <p>15 Clear CMOS/Clear CMOS button (Pin Header option) * Press and hold the "CMOS" button for 5-10 seconds</p> <hr/> <p>16 System Fan</p> <hr/> <p>17 Buzzer</p> <hr/> <p>18 SPI</p> <hr/> <p>19 Front Panel</p> <hr/> <p>20 SATA1 (R5)</p> <hr/>	<p>21 SATA1 (R4)</p> <hr/> <p>22 SATA Power Connector</p> <hr/> <p>23 eSPI Connector</p> <hr/> <p>24 DIO Connector</p> <hr/> <p>25 LCD Panel Power Supply</p> <hr/> <p>26 LVDS LCD Inverter Connector</p> <hr/> <p>27 LVDS LCD Panel Power Supply</p> <hr/> <p>28 LCD Inverter Power</p> <hr/> <p>29 LVDS</p> <hr/> <p>30 CPU Fan</p> <hr/> <p>31 SATA Power Connector</p> <hr/> <p>32 SMBUS &amp; I2C Header</p> <hr/> <p>33 OOB SPI Header</p> <hr/> <p>34 OOB I2C Header</p> <hr/> <p>35 SIM Card Slot</p> <hr/> <p>36 eDP</p> <hr/>
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## Jumper Settings

<b>15</b> Clear CMOS Data	<b>JP5</b>
Normal (Default)	1-2 On
Clear CMOS Data	2-3 On

<b>27</b> LVDS LCD Panel Power Supply	<b>DPJP601</b>
3.3V (Default)	1-2 On
5V	2-3 On

<b>26</b> LVDS LCD Inverter Connector	<b>DPJP602</b>
+12V (Default)	1-2 On
+5V	2-3 On

<b>25</b> LCD Panel Power Supply	<b>DPJP603</b>
+12V	1-2 On
+5V	3-4 On
+3.3V (Default)	5-6 On

## PIN Assignment

### **16** ▶ System Fan (J9)

Pin	Assignment
<b>1</b>	GND
<b>2</b>	PWM
<b>3</b>	TACH

### **30** ▶ CPU Fan (J10)

Pin	Assignment
<b>1</b>	GND
<b>2</b>	Power
<b>3</b>	Sense
<b>4</b>	Speed Control

### **22** ▶ SATA Power Connector (CN5)

### **31** ▶ SATA Power Connector (CN4)

Pin	Assignment
<b>1</b>	5V
<b>2</b>	5V
<b>3</b>	12V
<b>4</b>	GND
<b>5</b>	GND

### **28** ▶ LCD Inverter Power (DPJ601)

Pin	Assignment
<b>1</b>	GND
<b>2</b>	GND
<b>3</b>	Panel Inverter Brightness Voltage Control
<b>4</b>	Panel Power
<b>5</b>	+3.3V
<b>6</b>	Panel Backlight On/Off
<b>7</b>	LCD/Inverter Power
<b>8</b>	LCD/Inverter Power

## 24 ▶ DIO Connector (J6)

Pin	Assignment
1	DI3
2	DI2
3	DI1
4	DI0
5	DO3
6	DO2
7	DO1
8	DO0
9	5VSB
10	GND

## 11 12 ▶ COM1 (J44) , COM2 (J45)

Pin	RS232	RS422 Full Duplex	RS485
1	DCD-	TXD-	Data-
2	RD	TXD+	Data+
3	TD	RXD+	N.C
4	DTR-	RXD-	N.C
5	GND	GND	GND
6	DSR-	N.C	N.C
7	RTS-	N.C	N.C
8	CTS-	N.C	N.C
9	RI-	N.C	N.C
10	N.C	N.C	N.C

## 9 10 ▶ USB2\_10/11 (UBJ8) , USB2\_5/6 (UBJ7)

Pin	Assignment	Pin	Assignment
1	VCC	2	VCC
3	Data-	4	Data-
5	Data+	6	Data+
7	GND	8	GND
9	----	10	NC

## 8 ▶ Front Audio (AUJ1)

Pin	Assignment	Pin	Assignment
1	Mic-L	2	GND
3	Mic-R	4	N.C
5	Line-Out-R	6	Mic-JD (sense)
7	GND	8	KEY
9	Line-Out-L	10	Line-JD (sense)

### 19 ▶ Front Panel (J40)

Pin	Assignment	Pin	Assignment
1	N.C.	2	LED PWR
3	HDD PWR	4	LED PWR
5	Signal	6	Signal
7	GND	8	GND
9	Signal	10	Signal
11	N.C.	12	---

HDD-LED
PWR-LED
RESET
ATX-SW

### 33 ▶ OOB SPI Header (J38)

Pin	Assignment
1	EXT_SPI_SW
2	EXT_MOSI
3	EXT_MISO
4	EXT_CLK
5	EXT_CS0
6	GND
7	V_3P3_SPI

### 32 ▶ SMBUS & I2C Header (J37)

Pin	Assignment	Pin	Assignment
1	3V3SB	2	GND
3	SMB_CLK	4	SMB_DATA
5	SMB_ALERT	6	I2C_CLK
7	I2C_DATA	8	I2C_INT

### 34 ▶ OOB I2C Header (SOJ1)

Pin	Assignment
1	NC
2	GND
3	SIO_SCL
4	SIO_SDA
5	NC

### 23 ▶ eSPI Connector (J3)

Pin	Assignment	Pin	Assignment
1	3V3SB	2	ESPI_CLK
3	ESPI_RESET#	4	GND
5	ESPI_ALT#	6	UART_TX
7	ESPI_D0	8	---
9	ESPI_D1	10	ESPI_CS
11	ESPI_D2	12	UART_RX
13	ESPI_D3	14	3V3SB

## 14 ► DDI (J19)

Pin	Assignment	Pin	Assignment
1	DDI5_TX1N	2	DDI5_TX2N
3	DDI5_TX1P	4	DDI5_TX2P
5	GND	6	GND
7	DDI5_TX0P	8	DDI5_TX3N
9	DDI5_TX0N	10	DDI5_TX3P
11	GND	12	GND
13	DDI5_AUXP	14	CLK
15	DDI5_AUXN	16	DATA
17	GND	18	PCH_SYSPWROK
19	Hot Plug Detect	20	DP_PWR

## 29 ► LVDS (DPCN601)

Pin	Assignment	Pin	Assignment
1	GND	2	GND
3	LVDSA_3+	4	LVDSB_3+
5	LVDSA_3-	6	LVDSB_3-
7	GND	8	GND
9	LVDSA_2+	10	LVDSB_2+
11	LVDSA_2-	12	LVDSB_2-
13	GND	14	GND
15	LVDSA_1+	16	LVDSB_1+
17	LVDSA_1-	18	LVDSB_1-
19	GND	20	GND
21	LVDSA_0+	22	LVDSB_0+
23	LVDSA_0-	24	LVDSB_0-
25	GND	26	GND
27	LVDSA_CLK+	28	LVDSB_CLK+
29	LVDSA_CLK-	30	LVDSB_CLK-
31	GND	32	GND
33	DDC_CLK	34	NC
35	DDC_DATA	36	+3.3V
37	Panel POWER	38	Panel POWER
39	Panel POWER	40	Panel POWER

## 32 ▶ eDP (CN23)

Pin	Assignment	Pin	Assignment
1	NC	21	eDP Panel PWR
2	Interter Power	22	eDP Panel PWR
3	Interter Power	23	eDP Panel PWR
4	Interter Power	24	GND
5	Interter Power	25	eDP_AUX-
6	NC	26	eDP_AUX+
7	NC	27	GND
8	Panel Inverter Brightness Voltage Control	28	eDP_Lane 0+
9	Panel Backlight On/Off Control	29	eDP_Lane 0-
10	eDP_GND	30	GND
11	eDP_GND	31	eDP_Lane 1+
12	eDP_GND	32	eDP_Lane 1-
13	eDP_GND	33	GND
14	eDP_Hot Plug	34	eDP_Lane 2+
15	GND	35	eDP_Lane 2-
16	GND	36	GND
17	GND	37	eDP_Lane 3+
18	GND	38	eDP_Lane 3-
19	NC	39	GND
20	eDP Panel PWR	40	NC



DFI reserves the right to change the specifications at any time prior to the product's release. This QR may be based on the product's revision. For more documentation and drivers, please visit the download page at [www.dfi.com/downloadcenter](http://www.dfi.com/downloadcenter), or via the QR codes to the right.

