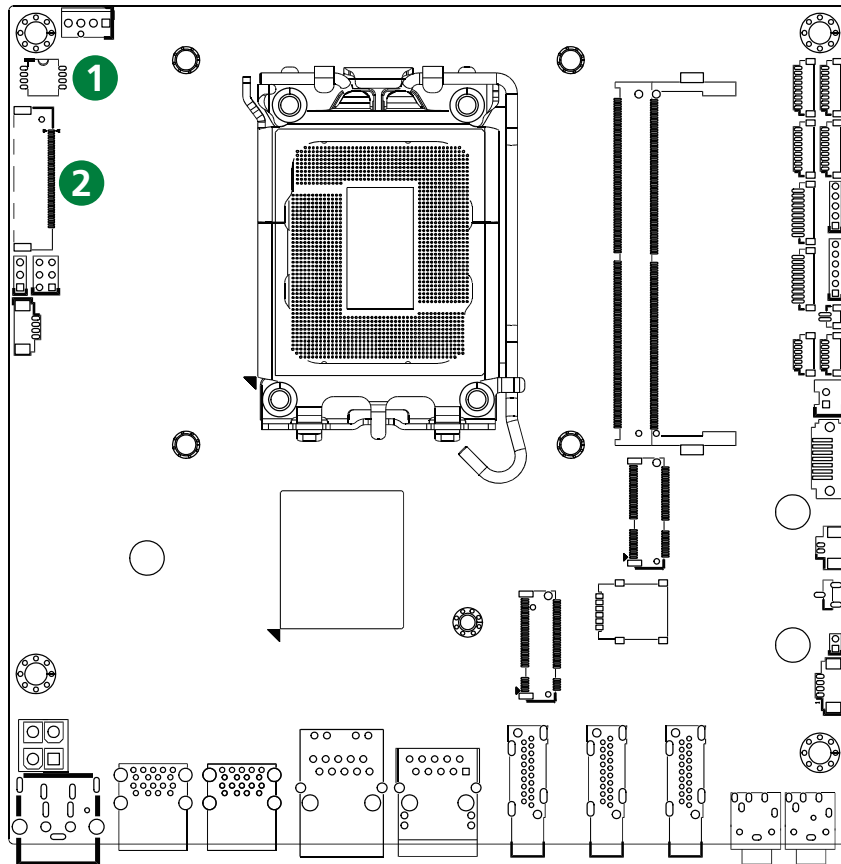


# X304 Quick Reference Guide



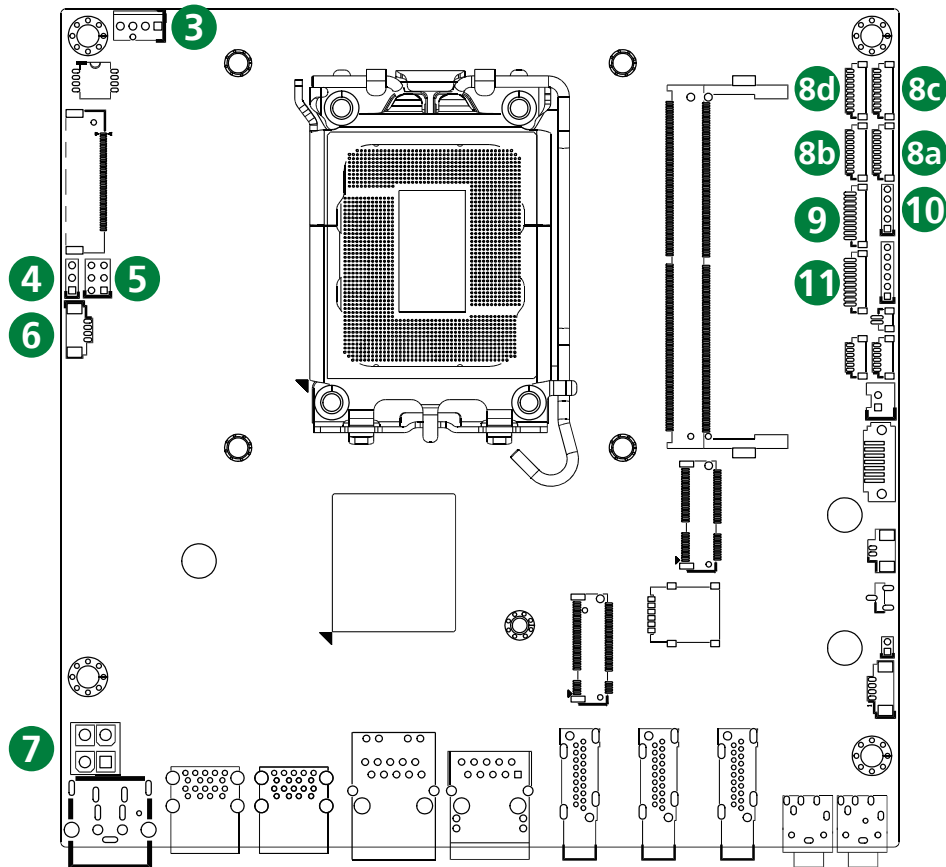
## 1. SW1: LVDS Panel Resolution Select

	SW [3:0]	SW1 [3]	SW1 [2]	SW1 [1]	SW1 [0]	HA	VA	CD(bit)	Port	Setting
LVDS	0000	ON	ON	ON	ON	800	480	6	Single	
	0001	ON	ON	ON	OFF	1024	768	6	Single	
	0010	ON	ON	OFF	ON	1024	768	8	Single	
	0011	ON	ON	OFF	OFF	1280	768	6	Single	
	0100	ON	OFF	ON	ON	1280	800	6	Single	
	0101	ON	OFF	ON	OFF	1280	800	8	Single	
	0110	ON	OFF	OFF	ON	1280	1024	8	Dual	
	0111	ON	OFF	OFF	OFF	1366	768	6	Single	
	1000	OFF	ON	ON	ON	1366	768	8	Single	
	1001	OFF	ON	ON	OFF	1440	900	8	Dual	
	1010	OFF	ON	OFF	ON	1400	1050	8	Dual	
	1011	OFF	ON	OFF	OFF	1600	900	8	Dual	
1100	OFF	OFF	ON	ON	1680	1050	8	Dual		
1101	OFF	OFF	ON	OFF	1600	1200	8	Dual		
1110	OFF	OFF	OFF	ON	1920	1080	8	Dual		
1111	OFF	OFF	OFF	OFF	1920	1200	8	Dual	Default	
eDP	1111	OFF	OFF	OFF	OFF	Auto				

## 2. LVDS\_EDP: LVDS or eDP Panel Connector (Neu-X304-Q670W only)

eDP Definition							
Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	N.C.	2	N.C.	21	GND	22	+V_PANEL
3	EDP_TX0P	4	EDP_TX0N	23	GND	24	GND
5	EDP_TX1P	6	EDP_TX1N	25	GND	26	EDP_AUXP
7	EDP_HPDP	8	N.C.	27	EDP_AUXN	28	GND
9	N.C.	10	N.C.	29	GND	30	GND
11	N.C.	12	N.C.	31	Hot-Plug Detect	32	INV_BKLTEN
13	N.C.	14	N.C.	33	INV_BKLTCTRL	34	N.C.
15	N.C.	16	N.C.	35	N.C.	36	+V_INV
17	GND	18	+V_PANEL	37	+V_INV	38	+V_INV
19	+V_PANEL	20	+V_PANEL	39	+V_INV	40	GND
LVDS Definition							
Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	LVDS_DAT3P	2	LVDS_DAT3N	21	GND	22	+V_PANEL
3	LVDS_DAT2P	4	LVDS_DAT2N	23	GND	24	GND
5	LVDS_DAT1P	6	LVDS_DAT1N	25	GND	26	LVDS_CLK1P
7	LVDS_DAT0P	8	LVDS_DAT0N	27	LVDS_CLK1N	28	GND
9	LVDS_DAT7P	10	LVDS_DAT7N	29	GND	30	GND
11	LVDS_DAT6P	12	LVDS_DAT6N	31	Hot-Plug Detect	32	INV_BKLTEN
13	LVDS_DAT5P	14	LVDS_DAT5N	33	INV_BKLTCTRL	34	LVDS_CLK2P
15	LVDS_DAT4P	16	LVDS_DAT4N	35	LVDS_CLK2N	36	+V_INV
17	GND	18	+V_PANEL	37	+V_INV	38	+V_INV
19	+V_PANEL	20	+V_PANEL	39	+V_INV	40	N.C.

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### 3. CPU\_FAN: FAN Connector

Pin	Definition
1	GND
2	+12V
3	CPU FAN SPEED DETECT
4	CPU FAN SPEED CONTROL

### 4. LCD\_PWR: LVDS Panel Voltage Select

Pin	Definition
1-2 On	3.3V* (Default)
2-3 On	5V

### 5. INV1: LVDS Inverter Connector

Pin	Definition
1	GND
2	GND
3	+V_INV
4	+V_INV
5	INV_BKLTEN
6	INV_BKLTCTRL

### 6. SYS\_FAN: FAN Connector

Pin	Definition
1	GND
2	+12V
3	SYS FAN SPEED DETECT
4	SYS FAN SPEED CONTROL

### 7. CON1: ATX+12V Power Connector

Pin	Definition
1	GND
2	GND
3	+12VSUS
4	+12VSUS

### 8. COM1(8a), COM2(8b), COM3(8c), COM4(8d): COM Port

Pin	Definition
1	RH#
2	CTS#
3	RTS#
4	DSR#
5	GND
6	DTR#
7	TXD
8	RXD
9	DCD#

COM3 and COM4 are optional upon request.

### 9. GPIO: GPIO Connector

Pin	Definition
1	+5V
2	GND
3	GPO0
4	GPO1
5	GPO2
6	GPO3
7	GPIO
8	GP11
9	GP12
10	GP13

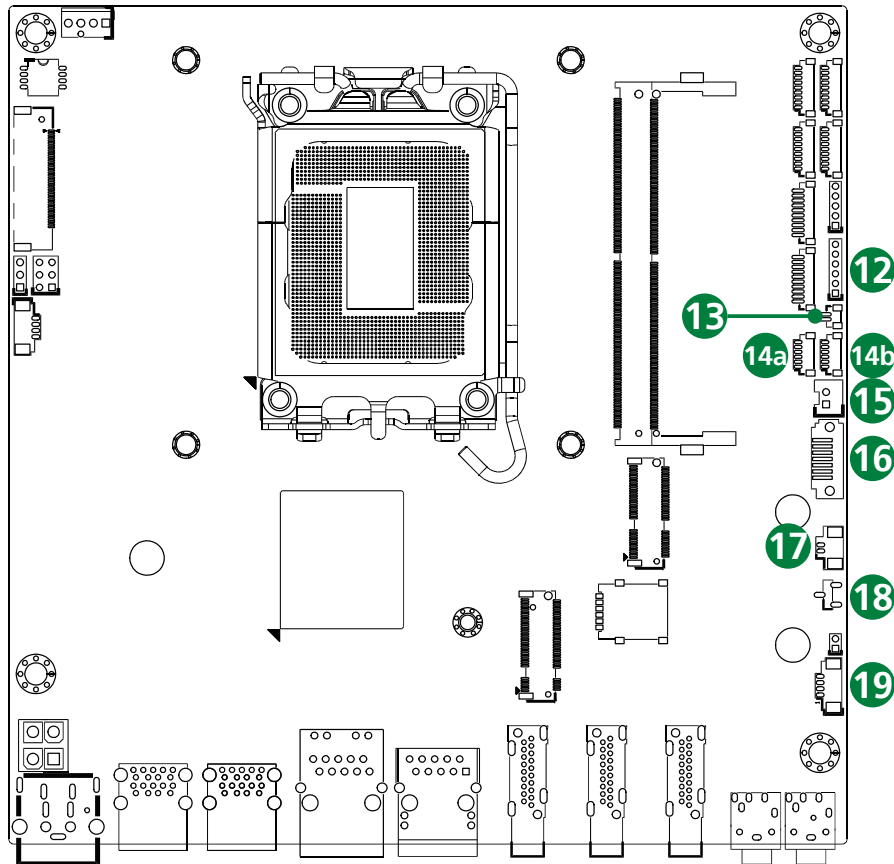
### 10. JP1: COM2 RI Select

Pin	Function
1-2	COM2 RI = Ring (Default)
2-3	COM2 RI = +5V
4-5	COM2 RI = +12V

### 11. DEBUG: 80 Debug Port

Pin	Definition
1	GND
2	PLTRST#
3	ESPI_CLK
4	ESPI_CS#
5	ESPI_IO3
6	ESPI_IO2
7	ESPI_IO1
8	ESPI_IO0
9	ESPI_RST#
10	3.3V

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**12. RESET\_LED: System Reset Button, HDD LED, and Power LED**

Pin	Definition
1	GND
2	RESET#
3	HDD_LED+
4	HDD_LED-
5	PWR_LED+
6	PWR_LED-

**13. PWR BTN: System Power Button Connector**

Pin	Definition
1	GND
2	PWRBTN#

**14. USB2\_914P<sup>(14a)</sup>, USB2\_56P<sup>(14b)</sup>: Internal USB 2.0 Connector**

Pin	Definition
1	GND
2	USB2N
3	USB2P
4	USB1N
5	USB1P
6	+5VSB

**15. SATA\_PWR1: SATA Power Connector**

Pin	Definition
1	+5V
2	GND

**16. SATA1: SATA Connector**

Pin	Definition
1	GND
2	SATA_TXP
3	SATA_TXN
4	GND
5	SATA_RXN
6	SATA_RXP
7	GND

**17. BAT1: Battery Connector**

Pin	Definition
1	GND
2	BAT

**18. CLRCMOS: Battery Connector**

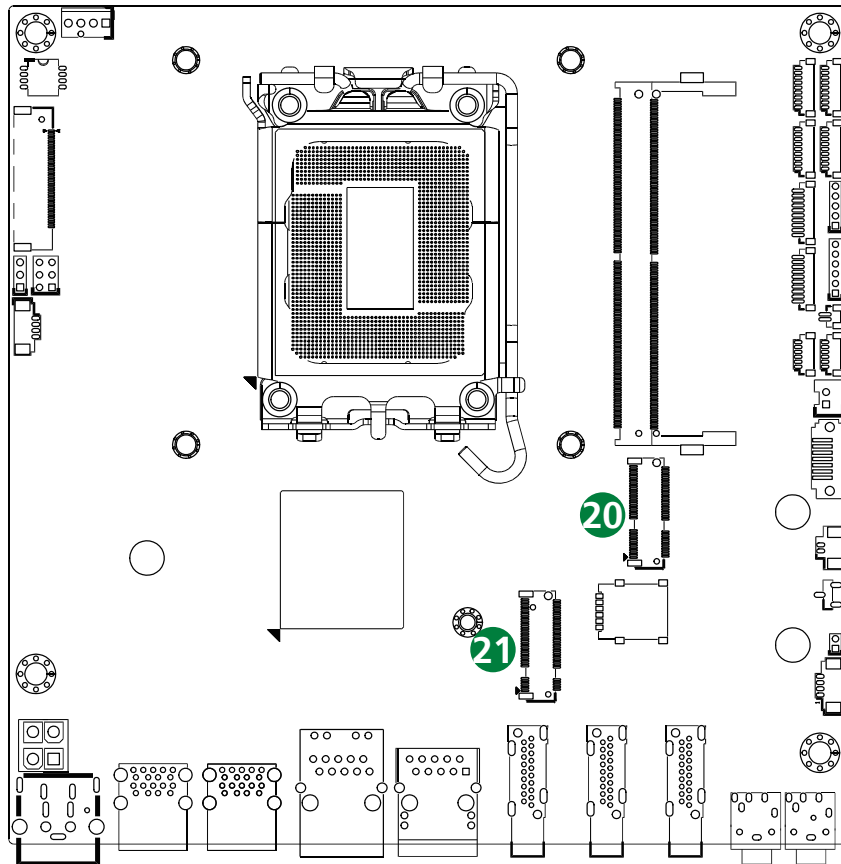
Pin	Definition
1-2	Normal (Default)
2-3	Clear CMOS

**19. SPK: Speaker Connector**

Pin	Definition
1	L_OUT+
2	L_OUT-
3	R_OUT+
4	R_OUT-



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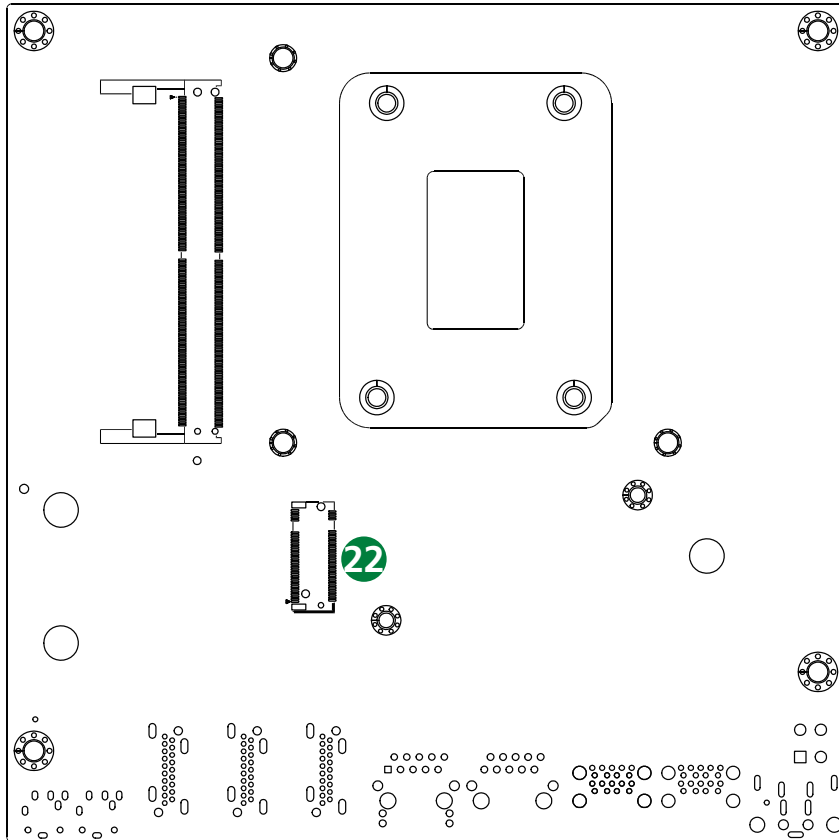
**20. M2E: M.2 Key E Connector (2230)**

1	GND	2	3.3V_1	41	PERP0	42	RESERVED_3
3	USB_D+	4	3.3V_2	43	PERN0	44	COEX3
5	USB_D-	6	LED1#	45	GND6	46	COEX2
7	GND2	8	PCM_CLK	47	REFCLKP0	48	COEX1
9	SDIO_CLK	10	PCM_SYNC	49	REFCLKN0	50	SUSCLK
11	SDIO_CMD	12	PCM_IN	51	GND7	52	PERST0#
13	SDIO_DATA0	14	PCM_OUT	53	CLKREQ0#	54	W_DISABLE2#
15	SDIO_DATA1	16	LED2#	55	PEWAKE0#	56	W_DISABLE1#
17	SDIO_DATA2	18	GND3	57	GND8	58	I2C_DATA
19	SDIO_DATA3	20	UART_WAKE#	59	PETP1	60	I2C_CLK
21	SDIO_WAKE#	22	UART_RXD	61	PETN1	62	ALERT#
23	SDIO_RESET#	24		63	GND9	64	RESERVED
				65	PERP1	66	UIM_SWP
		32	UART_TXD	67	PERN1	68	UIM_POWER_SNK
33	GND4	34	UART_CTS	69	GND10	70	UIM_POWER_SRC
35	PETP0	36	UART_RTS	71	PEFCLKP1	72	3.3V_3
37	PETN0	38	RESERVED_1	73	PEFCLKN1	74	3.3V_4
39	GND5	40	RESERVED_2	75	GND11		

**21. M2B: M.2 Key B Connector (3042/3052)**

1	CONFIG3	2	3.3V	41	PCIE_RXN	42	NC
3	GND	4	3.3V	43	PCIE_RXP	44	NC
5	GND	6	POWER_OFF#	45	GND	46	NC
7	USB2_5P	8	WIFI_DIS#	47	PCIE_TXN	48	NC
9	USB2_5N	10	LED#	49	PCIE_TXP	50	RESET(3.3V)
11	NC			51	GND	52	CLKREQ#
				53	CLK_DN	54	WAKE#
		20	Telit FN980 PCIe/USB Select Pin	55	CLK_DP	56	NC
21	CONFIG0	22	NC	57	GND	58	NC
23	NC	24	NC	59	NC	60	NC
25	NC	26	WWAN_GPS_ON	61	NC	62	NC
27	GND	28	NC	63	NC	64	NC
29	USB3_RXN	30	UIM_RESET	67	NC	68	NC
31	USB3_RXP	32	UIM_CLK	69	RESET(1.8V)	70	SUS_CLK
33	GND	34	UIM_DATA	71	CONFIG1	72	3.3V
35	USB3_TXN	36	UIM_PWR	73	GND	74	3.3V
37	USB3_TXP	38	NC	75	GND		
39	GND	40	NC				

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## 22. M2M: M.2 Key M Connector (2280, support PCIe4, SATA signal)

1	GND	2	VCC3	37	PCIE1_TXP	38	DEVSLP
3	GND	4	VCC3	39	GND	40	NC
5	PCIE3_RXN	6	NC	41	SATA_RXP(PCI0_RXP)	42	DEVSLP
7	PCIE3_RXP	8	NC	43	SATA_RXN(PCI0_RXN)	44	NC
9	GND	10	M2M_LED#	45	GND	46	NC
11	PCIE3_TXN	12	VCC3	47	SATA_TXN(PCI0_TXN)	48	NC
13	PCIE3_TXP	14	VCC3	49	SATA_TXP(PCI0_TXP)	50	NC
15	GND	16	VCC3	51	GND	52	NC
17	PCIE2_RXN	18	VCC3	53	CLK_PCIEN	54	RESET#
19	PCIE2_RXP	20	NC	55	CLK_PCIEP	56	CLKREQ#
21	GND	22	NC	57	GND	58	WAKE#
23	PCIE2_TXN	24	NC				
25	PCIE2_TXP	26	NC	67	NC	68	NC
27	GND	28	NC	69	M2M_PEDET	70	VCC3
29	PCIE1_RXN	30	NC	71	GND	72	VCC3
31	PCIE1_RXP	32	NC	73	GND	74	VCC3
33	GND	34	NC	75	GND		
35	PCIE1_TXN	36	NC				