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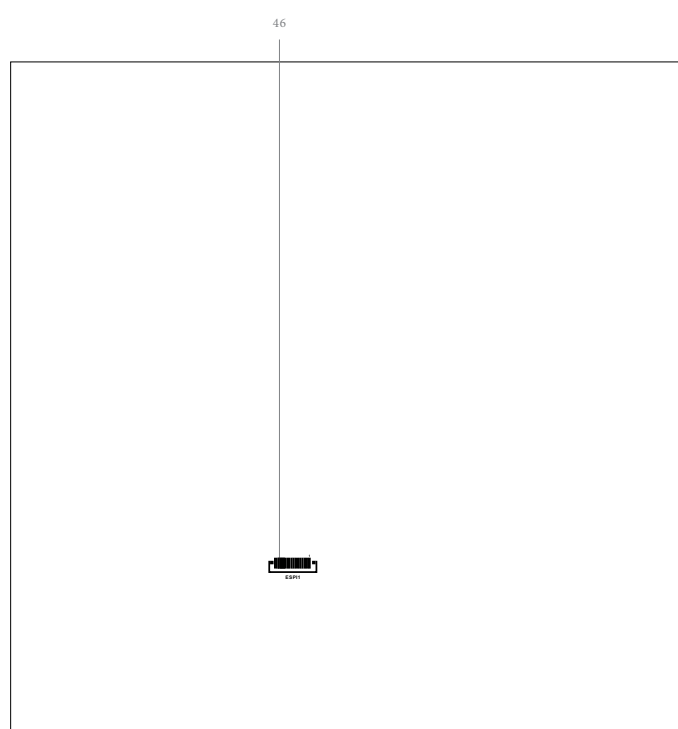
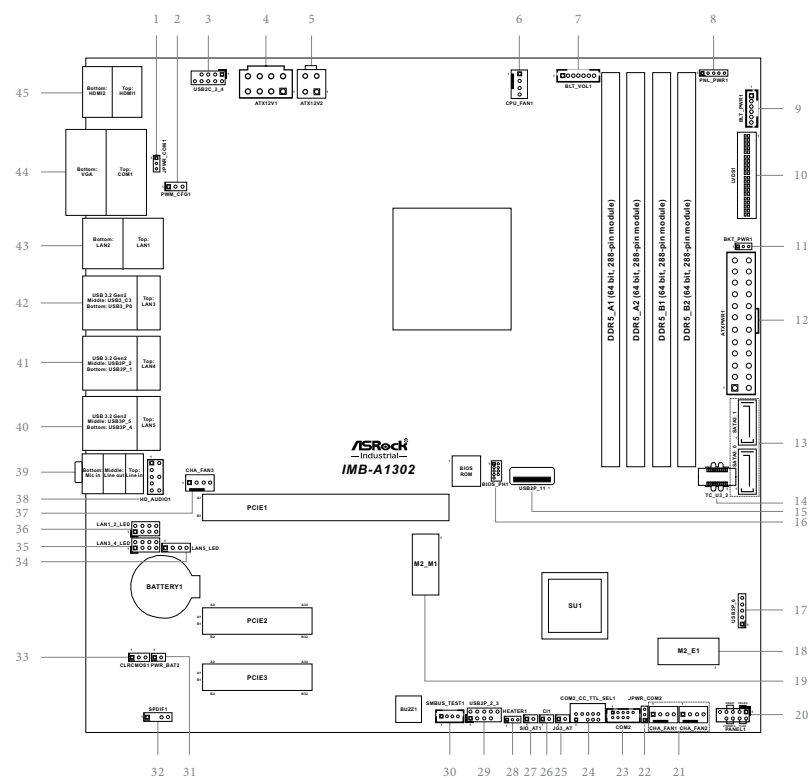
Revision History

Date	Description
August 11, 2025	First Release
November 7, 2025	Second Release
December 18, 2025	Third Release

Jumpers and Headers Setting Guide

Top:

Bottom:



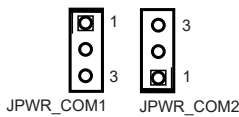
COM Port PWR Setting Jumpers

1 : JPWR_COM1 (For COM Port1)

22 : JPWR_COM2 (For COM Port2)

1-2: +5V (Default)

2-3: +12V



2 : PWM_CFG1 (for internal test)

Pin	Signal Name
1	GND
2	VCORE_SDA
3	VCORE_SCL

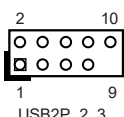
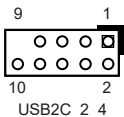


USB 2.0 Headers

3 : USB2C_2_4

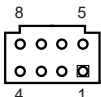
29 : USB2P_2_3

Pin	Signal Name	Signal Name	Pin
1	USB_PWR	USB_PWR	2
3	P-	P-	4
5	P+	P+	6
7	GND	GND	8
9		DUMMY	10



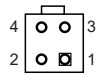
4 : 8-pin ATX 12V Power Connector (ATX12V1)

Pin	Signal Name	Signal Name	Pin
1	GND	ATX12V	5
2	GND	ATX12V	6
3	GND	ATX12V	7
4	GND	ATX12V	8



5 : 4-pin ATX 12V Power Connector (ATX12V2)

Pin	Signal Name	Signal Name	Pin
1	GND	GND	2
3	ATX12V	ATX12V	4



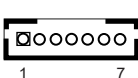
6 : CPU FAN Connector (+12V) (CPU_FAN1)

Pin	Signal Name
1	GND
2	+12V
3	CPU_FAN_SPEED
4	FAN_SPEED_CONTROL



7 : Backlight Volume Control (BLT_VOL1)

Pin	Signal Name
1	GPIO_VOL_UP
2	GPIO_VOL_DW
3	PWRDN
4	BLT_UP
5	BLT_DW
6	GND
7	GND



8 : Panel Power Select (LCD_VCC) (PNL_PWR1)

1-2: LCD_VCC : +3V (Default)

2-3: LCD_VCC : +5V

4-5: LCD_VCC : +12V



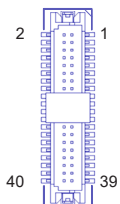
9 : Inverter Power Control Wafer (BLT_PWR1)

Pin	Signal Name
1	GND
2	GND
3	CON_LBKLT_CTL
4	CON_LBKLT_EN
5	LCD_BLT_VCC
6	LCD_BLT_VCC



10 : LVDS Panel Connector (LVDS1)

Pin	Signal Name	Signal Name	Pin
1	LCD_VCC	LCD_VCC	2
3	+3V	N/A	4
5	N/A	LVDS_A_DATA0#	6
7	LVDS_A_DATA0	GND	8
9	LVDS_A_DATA1#	LVDS_A_DATA1	10
11	GND	LVDS_A_DATA2#	12
13	LVDS_A_DATA2	GND	14
15	LVDS_A_DATA3#	LVDS_A_DATA3	16
17	GND	LVDS_A_CLK#	18
19	LVDS_A_CLK	GND	20
21	LVDS_B_DATA0#	LVDS_B_DATA0	22
23	GND	LVDS_B_DATA1#	24
25	LVDS_B_DATA1	GND	26
27	LVDS_B_DATA2#	LVDS_B_DATA2	28
29	DPLVDD_EN	LVDS_B_DATA3#	30
31	LVDS_B_DATA3	GND	32
33	LVDS_B_CLK#	LVDS_B_CLK	34
35	GND	CON_LBKLT_EN	36
37	CON_LBKLT_CTL	LCD_BLT_VCC	38
39	LCD_BLT_VCC	LCD_BLT_VCC	40



11 : Backlight Power Select (LCD_BLT_VCC) (BKT_PWR1)

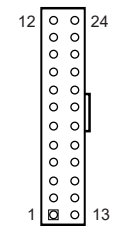
1-2: LCD_BLT_VCC: +5V (Default)

2-3: LCD_BLT_VCC: +12V



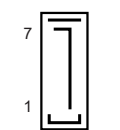
12 : 24-pin ATX Power Input Connector (ATXPWR1)

Pin	Signal Name	Signal Name	Pin
1	+3V	+3V	13
2	+3V	-12V	14
3	GND	GND	15
4	+5V	PSON#	16
5	GND	GND	17
6	+5V	GND	18
7	GND	GND	19
8	PWROK_PS	NA	20
9	ATX+5VSB	+5V	21
10	+12V	+5V	22
11	+12V	+5V	23
12	+3V	GND	24



13 : SATA3 Connectors (SATA3_0, SATA3_1)

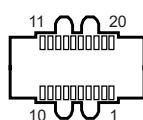
Pin	Signal Name
1	GND
2	SATA-A+
3	SATA-A-
4	GND
5	SATA-B-
6	SATA-B+
7	GND



* The SATA3_1 port is shared with the M.2 Key M slot.

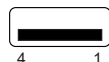
14 : Front Panel Type-C USB 3.2 Gen1 Header (TC_U3_3)

Pin	Signal Name	Signal Name	Pin
10	DUMMY	VBUS	11
9	DUMMY	F_TC_USB_SSTXP1	12
8	CC2	F_TC_USB_SSTXN1	13
7	VBUS	GND	14
6	F_TC_USB_SSRXN2	F_TC_USB_SSRXP1	15
5	F_TC_USB_SSRXP2	F_TC_USB_SSRXN1	16
4	GND		17
3	F_TC_USB_SSTXN2	P-	18
2	F_TC_USB_SSTXP2	P+	19
1	VBUS	CC1	20



15 : USB 2.0 Type-A port (Veritcal) (USB2P_11)

Pin	Signal Name
1	USB_PWR
2	USB_D-
3	USB_D+
4	GND



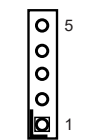
16 : BIOS_PH1

Pin	Signal Name	Signal Name	Pin
1	F1_SPI_CS#	+1.8VSB_SPI_FLASH	2
3	F1_SPI_MISO	F1_SPI_DQ3	4
5	F1_SPI_DQ2	F1_SPI_CLK	6
7	RSMRST#	F1_SPI_MOSI	8
9	GND		10



17 : USB 2.0 Header (USB2P_6)

Pin	Signal Name
1	USB_PWR
2	P-
3	P+
4	GND
5	DUMMY



18 : M.2 Key-E Socket (M2_E1)

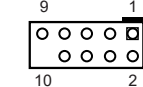
Pin	Signal Name	Signal Name	Pin
1	GND	+3.3V	2
3	USB_D+	+3.3V	4
5	USB_D-	NA	6
7	GND	NA	8
9	NA	NA	10
11	NA	NA	12
13	NA	NA	14
15	NA	NA	16
17	NA	GND	18
19	NA	NA	20
21	NA	NA	22
23	NA		
		NA	32
33	GND	NA	34
35	PETp	NA	36
37	PETn	NA	38
39	GND	NA	40
41	PERp	NA	42
43	PERn	NA	44
45	GND	NA	46
47	PEFCLKp	NA	48
49	PEFCLKn	NA	50
51	GND	PERST0#	52
53	CLKREQ#	BT_ON/OFF#	54
55	WAKE#	WLAN_ON/OFF#	56
57	GND	SMB_DATA	58
59	NA	SMB_CLK	60
61	NA	NA	62
63	GND	NA	64
65	NA	NA	66
67	NA	NA	68
69	GND	NA	70
71	NA	+3.3V	72
73	NA	+3.3V	74
75	GND		

19 : M.2 Key-M Socket (M2_M1)

Pin	Signal Name	Signal Name	Pin
1	GND	+3.3V	2
3	GND	+3.3V	4
5	PERn3	NA	6
7	PERp3	NA	8
9	GND	M2M_LED	10
11	PETn3	+3.3V	12
13	PETp3	+3.3V	14
15	GND	+3.3V	16
17	PERn2	+3.3V	18
19	PERp2	NA	20
21	GND	NA	22
23	PETn2	NA	24
25	PETp2	NA	26
27	GND	NA	28
29	PERn1	NA	30
31	PERp1	GND	32
33	GND	USB_D+	34
35	PETn1	USB_D-	36
37	PETp1	NA	38
39	GND	SMB_CLK	40
41	PERn0/SATA-B+	SMB_DATA	42
43	PERp0/SATA-B-	NA	44
45	GND	NA	46
47	PETn0/SATA-A-	NA	48
49	PETp0/SATA-A+	PERST#	50
51	GND	CLKREQ#	52
53	PEFCLKn	WAKE#	54
55	PEFCLKp	NA	56
57	GND	NA	58
67	NA	NA	68
69	PEDET	+3.3V	70
71	GND	+3.3V	72
73	GND	+3.3V	74
75	GND		

20 : System Panel Header (PANEL1)

Pin	Signal Name	Signal Name	Pin
1	HDLED+	PLED+	2
3	HDLED-	PLED-	4
5	GND	PWRBTN#	6
7	RESET#	GND	8
9	+5VSB		10



Chassis FAN Connector (+12V)

21 : CHA_FAN1, CHA_FAN2

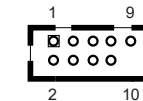
37 : CHA_FAN3

Pin	Signal Name
1	GND
2	+12V
3	CHA_FAN_SPEED
4	FAN_SPEED_CONTROL



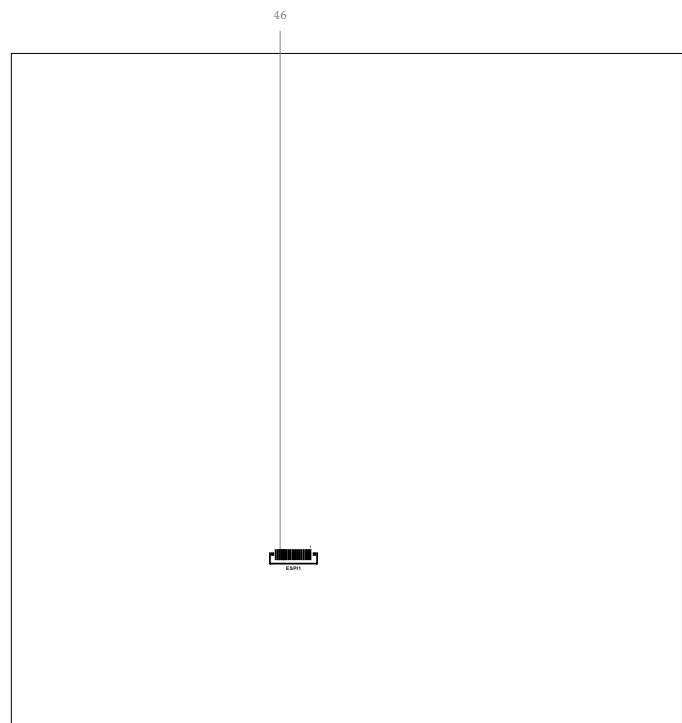
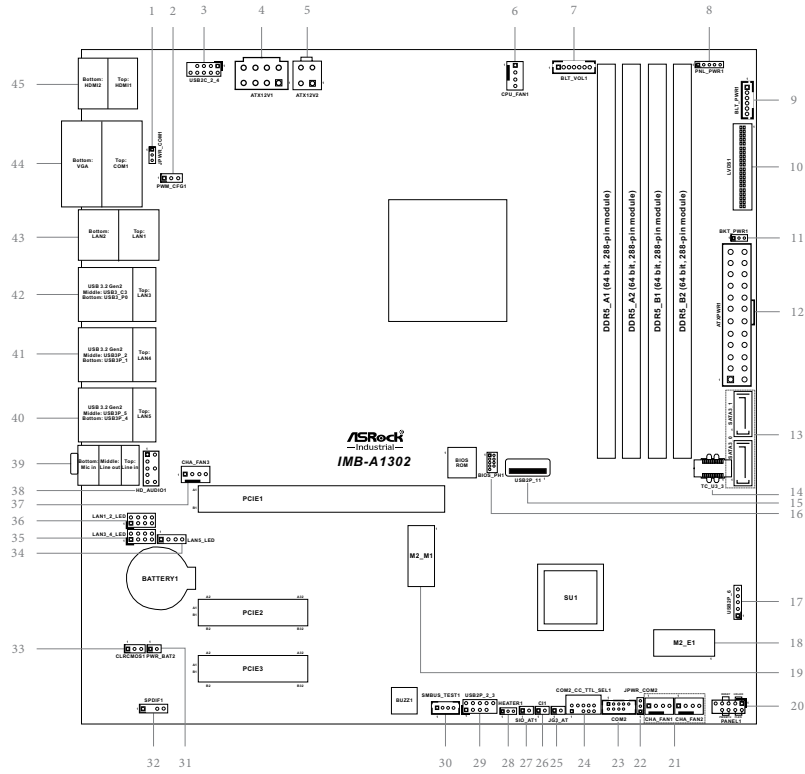
23 : COM Port Header (COM2) (RS-232)

Pin	Signal Name	Signal Name	Pin
1	DDCD#	RRXD	2
3	TTXD	DDTR#	4
5	GND	DDSR#	6
7	RRTS#	CCTS#	8
9	PWR		10



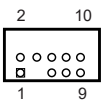
Top:

Bottom:



24 : COM2_CC_TTL_SEL1

Pin	Signal Name	Signal Name	Pin
1	+5V	GND	2
3		N/A	4
5	TTXD_2_TTL	RRXD_2_TTL	6
7	TTXD_2	RRXD_2	8
9	TTXD_2_RS232	RRXD_2_RS232	10



COM_CC_TTL_SEL1:79 COM_CC_TTL_SEL1:80



MINI_JUMPER

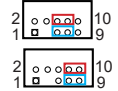


MINI_JUMPER

Open: CCTALK function

• Supported by CCTALK Card (optional).

5-7 + 6-8 : TTL function
7-9 + 8-10 : COM (RS232)
(Default)



25 : JG3_AT1

(For internal test)



26 : Chassis Intrusion Header (CI1)

Open : Normal (Default)

Short : Active Case Open



27 : ATX/AT Mode Jumper (SIO_AT1)

Open : AT Mode

Short : ATX Mode (Default)



28 : HEATER1 Header (HEATER1) (Preheat function)

Pin	Signal Name
1	Heater PWR (5V/1A)
2	GND
3	NTC (Negative Temperature Coefficient) thermistors

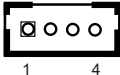


• The 10k Ohm NTC thermistor is suggested.

• Deep mode is not supported when the preheat function is enabled.

30 : SMBUS_TEST1

Pin	Signal Name
1	SMB_W_GPIO_PROM21
2	SMB_CLK_MAIN
3	SMB_DATA_MAIN
4	GND



31 : PWR_BAT2

Open : Normal (Default)

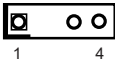
Short : Charge Battery*

• Only supported by chargeable battery.



32 : SPDIF Header (SPDIF1)

Pin	Signal Name
1	+5V
2	
3	SPDIF OUT
4	GND



33 : Clear CMOS Header (CLRMOS1)

Short Pin 1-2 : Clear CMOS

Short Pin 2-3 : Normal (Default)



LAN LED Headers

34 : LAN5_LED (For LAN5 Port)

35 : LAN3_4_LED (For LAN3, LAN4 Ports)

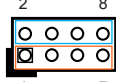
36 : LAN1_2_LED (For LAN1, LAN2 Ports)

LAN1_2_LED:

LAN1_LED

Pin	Signal Name	Signal Name	Pin
1	LAN1_ACT+	LAN2_ACT+	2
3	226_1_LED_LNK#_ACT	226_2_LED_LNK#_ACT	4
5	LAN1_1000#_C	LAN2_1000#_C	6
7	LAN1_2500#_C	LAN2_2500#_C	8

LAN2_LED



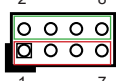
LAN1_2_LED

LAN3_4_LED:

LAN3_LED

Pin	Signal Name	Signal Name	Pin
1	LAN3_ACT+	LAN4_ACT+	2
3	226_3_LED_LNK#_ACT	226_4_LED_LNK#_ACT	4
5	LAN3_1000#_C	LAN4_1000#_C	6
7	LAN3_2500#_C	LAN4_2500#_C	8

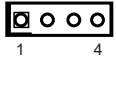
LAN4_LED



LAN3_4_LED

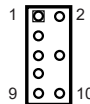
LAN5_LED:

Pin	Signal Name
1	LAN5_ACT+
2	LAN5_LED_LNK#_ACT
3	LINK5_100#_C
4	LINK5_1000#_C



38 : Front Panel Audio Header (HD_AUDIO1)

Pin	Signal Name	Signal Name	Pin
1	MIC2_L	GND	2
3	MIC2_R		4
5	OUT2_R	MIC_RET	6
7	J SENSE		8
9	OUT2_L	OUT_RET	10



39 : Audio Jacks

Top : Blue: Line-in

Middle : Green: Line-out

Bottom : Pink: Mic-in

40 : Top : RJ45 LAN Port (LAN5)

Middle: USB 3.2 Gen2 Port (USB3P_5)

Bottom: USB 3.2 Gen2 Port (USB3P_4)

41 : Top : RJ45 LAN Port (LAN4)

Middle: USB 3.2 Gen2 Port (USB3P_2)

Bottom: USB 3.2 Gen2 Port (USB3P_1)

42 : Top : RJ45 LAN Port (LAN3)

Middle: USB 3.2 Gen2 Port (USB3_C3)

Bottom: USB 3.2 Gen2 Port (USB3P_0)

43 : RJ45 LAN Ports

Top : LAN1

Bottom : LAN2

44 : Top : COM Port (COM1) (RS232/422/485)* Bottom : D-Sub Port (VGA1)

* This motherboard supports RS232/422/485 on COM1 port. Please refer to the table below for the pin definition. In addition, COM1 port (RS232/422/485) can be adjusted by Jumper Setting. You may refer to our user manual for details.

COM1 Port Pin Definition

Pin	RS232	RS422	RS485
1	DCD	TX-	RTX-
2	RXD	TX+	RTX+
3	TXD	RX+	NA
4	DTR	RX-	NA
5	GND	GND	GND
6	DSR	NA	NA
7	RTS	NA	NA
8	CTS	NA	NA
9	PWR	PWR	PWR

45 : HDMI Ports

Top: HDMI1

Bottom: HDMI2

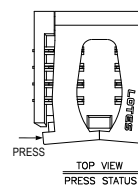
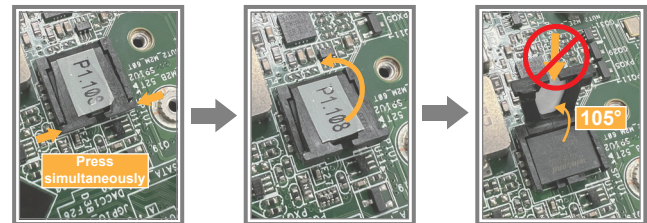
Backside:

46 : ESPI Header (ESPI1)

Pin	Signal Name
1	GND
2	ESPI_CLK
3	GND
4	ESPI_CS#
5	ESPI_RESET#
6	GND
7	+3V
8	GND
9	SMB_SCL
10	SMB_SDA
11	ESPI_IO0
12	ESPI_IO1
13	ESPI_IO2
14	ESPI_IO3
15	GND
16	+3VSB
17	Internal Use
18	Internal use
19	ESPI_ALERT#
20	GND



Installation of LOTES ROM Socket



- Do not press one side of the actuator cover at a time. Always apply even and simultaneous force to both sides to avoid damage.
- Do not apply force to the actuator cover after the IC is inserted, especially when it is fully opened at 105 degrees. Pressing vertically at this angle may cause the cover to break.



- The white dot (Pin 1) on the ROM must align with the Pin 1 position of the socket (white arrow area).
 - Ensure the white dot on the ROM is facing outward from the socket.
- Warning: Incorrect installation may damage the chipset and motherboard. Refer to the picture for proper orientation.**

Recommended Memory Configuration:

DIMM Card	A1	A2	B1	B2
1				V
2		V		V
4	V	V	V	V

* The symbol "V" indicates the slot is populated.