

NUC-J6412

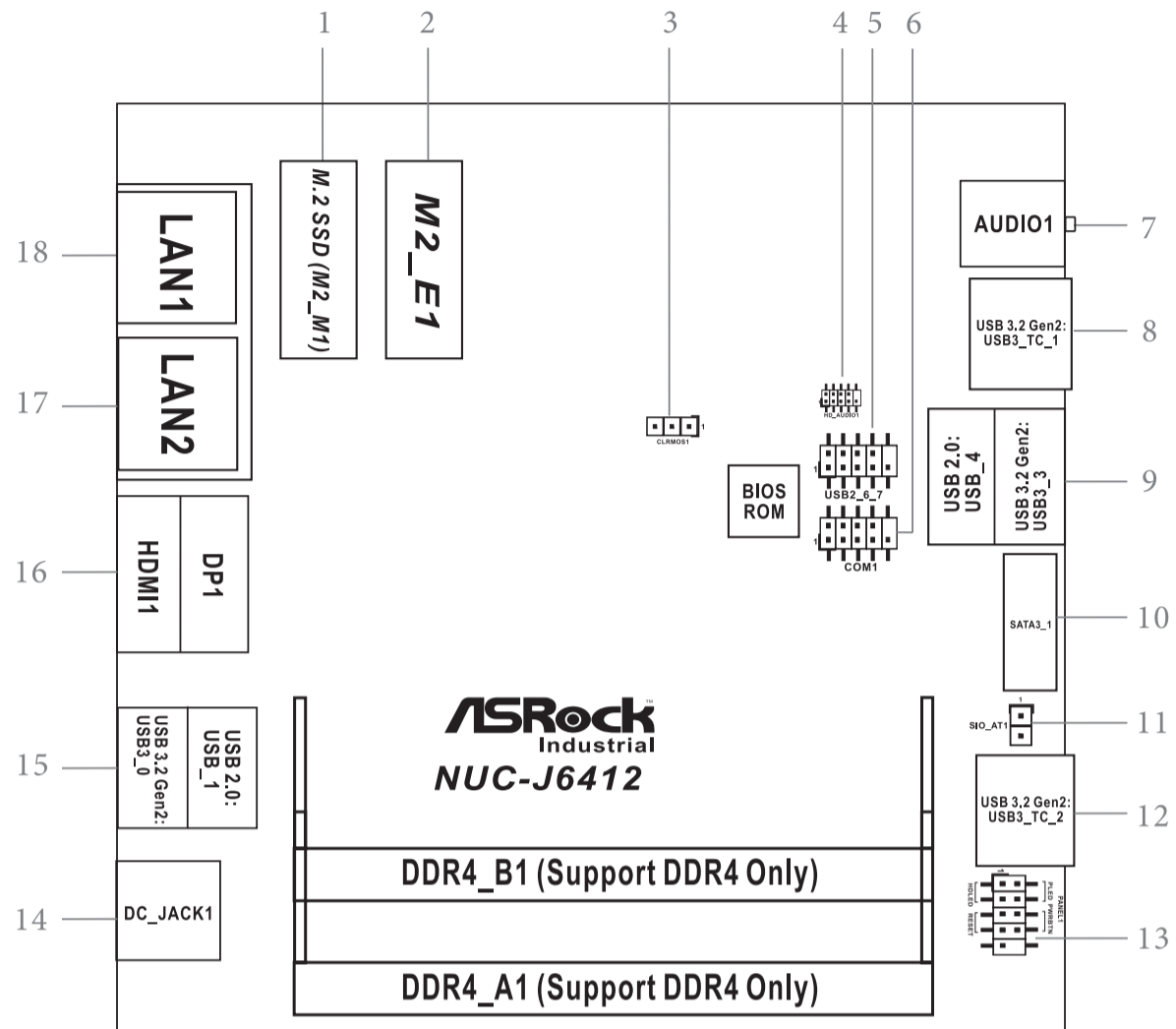
Top View:

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Revision History

Date	Description
July 20, 2021	First Release



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

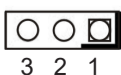
Pin	Signal	Signal	Pin
1	GND	+3.3V	2
3	GND	+3.3V	4
5	NA	USB_D+	6
7	NA	USB_D-	8
9	GND	SATA_LED	10
11	NA	+3.3V	12
13	NA	+3.3V	14
15	GND	+3.3V	16
17	NA	+3.3V	18
19	NA	NA	20
21	GND	NA	22
23	NA	NA	24
25	NA	NA	26
27	GND	NA	28
29	NA	NA	30
31	NA	NA	32
33	GND	NA	34
35	NA	NA	36
37	NA	DEVSLP	38
39	GND	SMB_CLK	40
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	NA	74

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

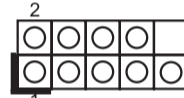
Pin	Signal	Signal	Pin
1	GND	+3.3V	2
3	USB_D+	+3.3V	4
5	USB_D-	NA	6
7	GND	NA	8
9	NA	NA	10
11	NA	NA	12
13	NA	NA	14
15	NA	NA	16
17	NA	GND	18
19	NA	NA	20
21	NA	NA	22
23	NA	NA	22
33	GND	NA	32
35	PETp	NA	34
37	PETn	NA	36
39	GND	NA	38
41	PERp	NA	40
43	PERn	NA	42
45	GND	NA	44
47	PEFCLKp	NA	46
49	PEFCLKn	NA	48
51	GND	SUSCLK	50
53	CLKREQ#	PERST0#	52
55	WAKE#	W_DISABLE1#	54
57	GND	W_DISABLE2#	56
59	NA	SMB_DATA	58
61	NA	SMB_CLK	60
63	GND	NA	62
65	NA	NA	64
67	NA	NA	66
69	GND	NA	68
71	NA	NA	70
73	NA	+3.3V	72
75	GND	+3.3V	74

3 : Clear CMOS Header (CLRMOS1)

- 1-2 : Auto Clear (PWR OFF)
- 2-3 : Clear CMOS

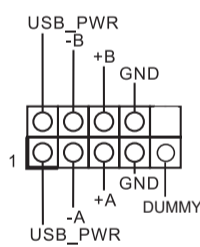


4 : Front Panel Audio Header

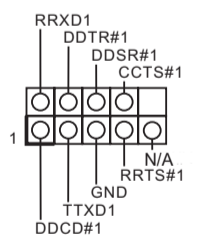


PIN	Signal Name	PIN	Signal Name	PIN	Signal Name	PIN	Signal Name	PIN	Signal Name
2	AGND	4	NC	6	LIN1_JD	8	LIN2_JD	10	NC
1	LIN1_R_IN	3	LIN1_L_IN	5	LIN2_R_OUT	7	AGND	9	LIN2_L_OUT

5 : USB 2.0 Connector (USB2_6_7)



6 : COM Port Header (RS232/422/485)



* This motherboard supports RS232/422/485 on COM1 port. Please refer to below table for the pin definition. In addition, COM1 port (RS232/422/485) can be adjusted in BIOS setup utility > Advanced Screen > Super IO Configuration. You may refer to our user manual for details.

COM1 Port Pin Definition

PIN	RS232	RS422	RS485
1	DCD, Data Carrier Detect	TX-	RTX-
2	RXD, Receive Data	TX+	RTX+
3	TXD, Transmit Data	RX+	N/A
4	DTR, Data Terminal Ready	RX-	N/A
5	GND	GND	GND
6	DSR, Data Set Ready	N/A	N/A
7	RTS, Request To Send	N/A	N/A
8	CTS, Clear To Send	N/A	N/A
9	N/A	N/A	N/A

7 : Audio Jack (AUDIO1)

8 : USB 3.2 Gen2 Type-C Port (USB3_TC_1)

9 : Top : USB 2.0 Port (USB_4)

Bottom : USB 3.2 Gen2 Port (USB3_3)

10 : SATA3 Port (SATA3_1)

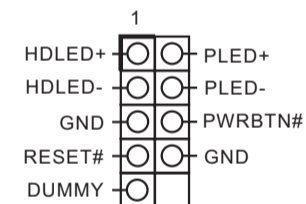
11 : SIO_AT1

- Open : ATX Mode
- Short : AT Mode



12 : USB 3.2 Gen2 Type-C Port (USB3_TC_2)

13 : System Panel Header (PANEL1)



14 : DC-In Jack (DC_IN1)

15 : Top : USB 2.0 Port (USB_1)

Bottom : USB 3.2 Gen2 Port (USB3_0)

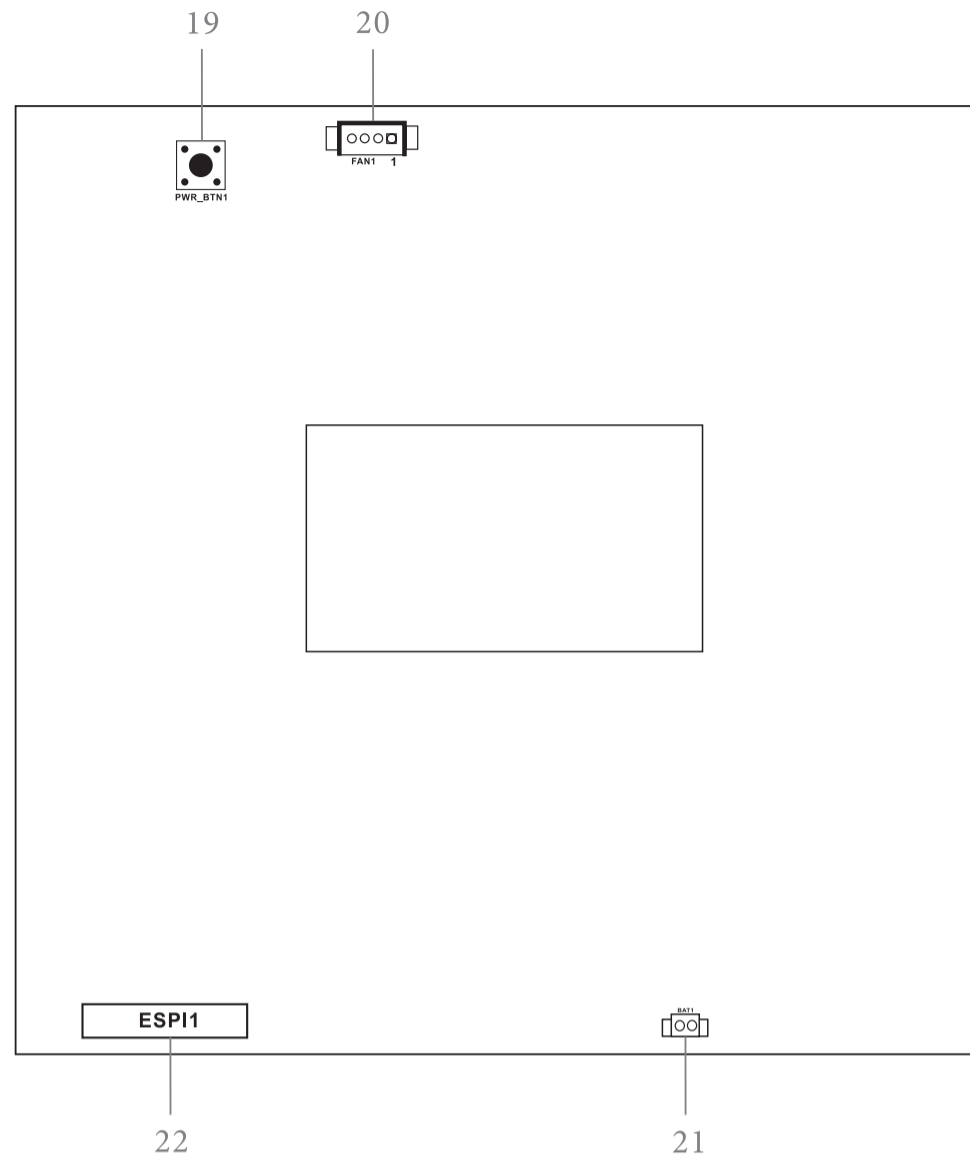
16 : Top : DisplayPort (DP1)

Bottom : HDMI Port (HDMI1)

17 : RJ-45 LAN Port (LAN2)

18 : RJ-45 LAN Port (LAN1)

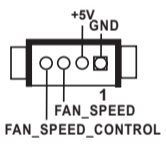
Bottom View:



19 : Power Button (PWR_BTN1)



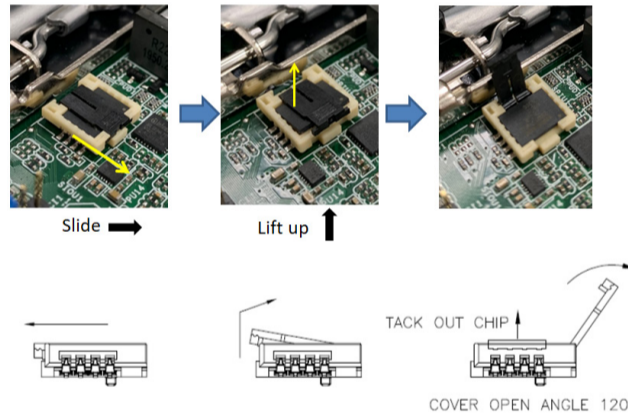
20 : Fan Connector (FAN1)



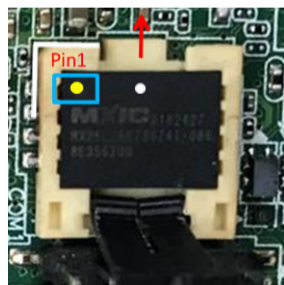
21 : Battery Connector (BAT1)

22 : ESPI Connector (ESPI)

Installation of ROM Socket



* Do not apply force to the actuator cover after ic inserted.
 * Do not apply force to actuator cover when it is opening over 120 degree, Otherwise, the actuator cover may be broken.



* The yellow dot (Pin1) on the ROM must be installed at pin1 position of the socket.
 * Make sure the white dot on the ROM is installed outwards of the socket.
 * For further details of how to install ROM, please refer to ASRI website.
Warning: If the installation does not follow as the picture, then it may cause severe damage to chipset & MB.