

Product Manual

CW-Q670-NAS-4L

Ver1.0

RevisionHistory			
Revision	Date	Description	Author
Y4I3	5357037044	Initial Release	

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1.1 Packaging List

Thank you for choosing our product. Upon receiving the product, please ensure that the packaging is intact. If there is any damage or missing accessories, please contact your dealer.

- XXX V1.0 Motherboard x1
- Cables and accessories (varies by order; please contact sales for specific needs)
- Warranty Card
- Certificate of Compliance

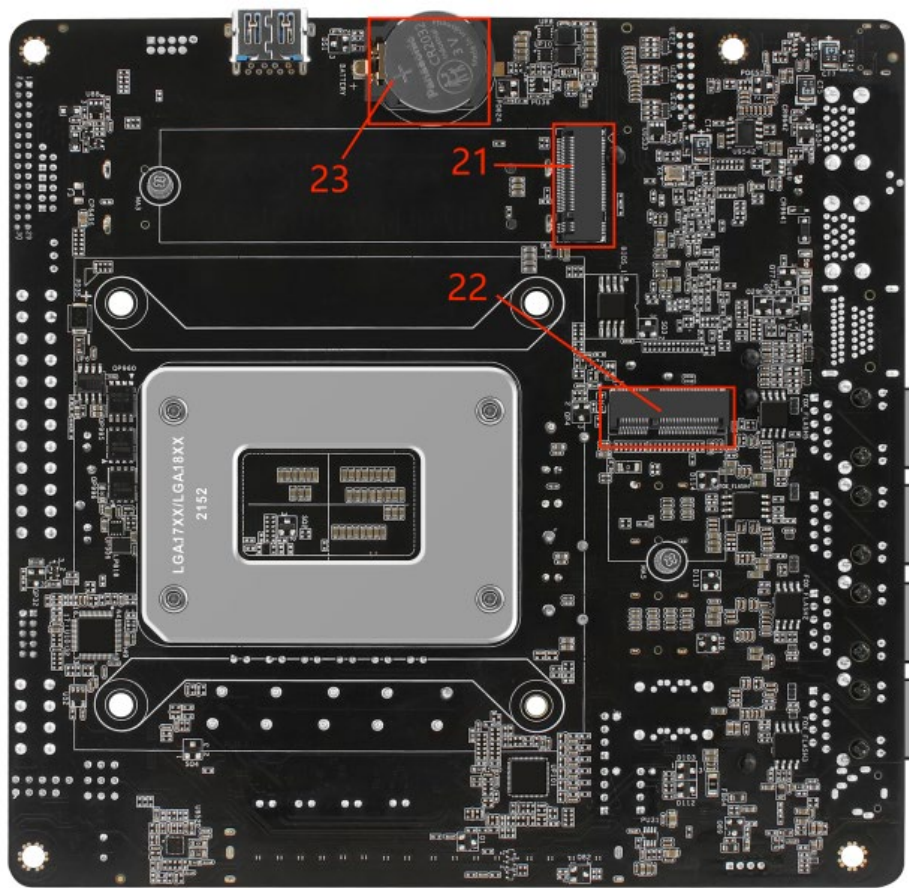
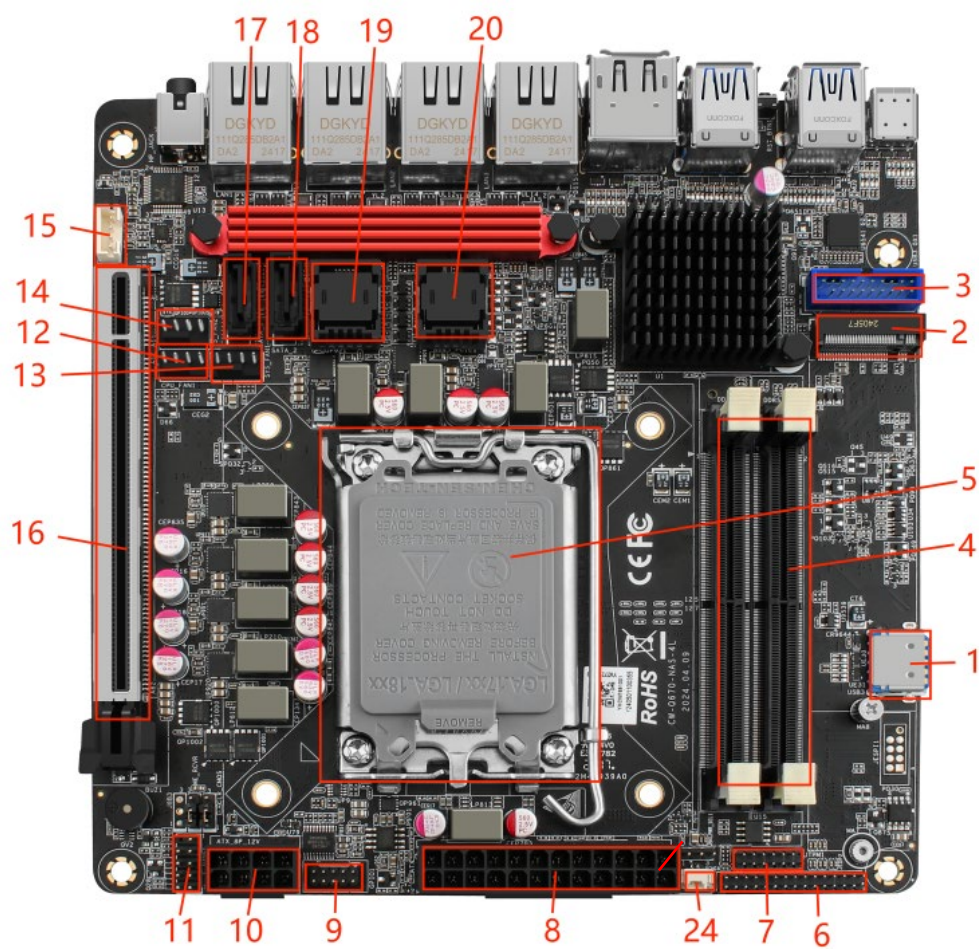
*The above accessories are for reference only; actual accessories may vary.

*Due to continuous updates in motherboard specifications and BIOS software, any changes in this manual will not be notified separately. All information is for reference only; please refer to the actual product or check for updated versions online.

Motherboard Specifications

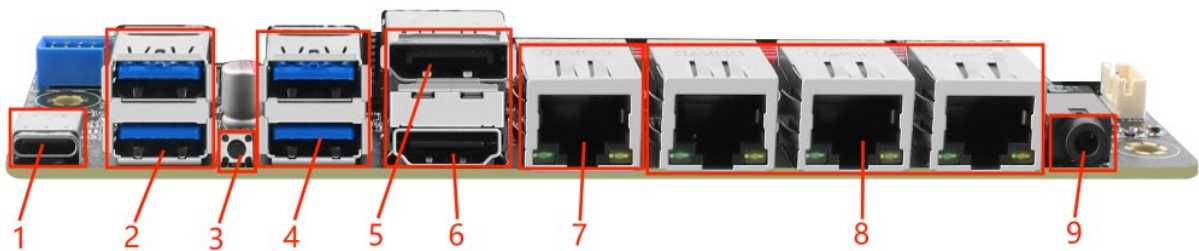
1	Size	itx 170x170 mm
2	Processor	Intel Core 12/13/14 Generation, TDP 65W, Max 6+8 125W
3	Platform	Q670
4	Display	Integrated Graphics from CPU
5	Memory	2 * DDR5 4800 SODIMM, up to 96GB (180-degree insertion)
6	Storage	6*SATA3.0, 2 * nvme M2 (PCIe GEN4) (1*2280+1*22110)
7	PCI-E	1 * PCIe x16 (supports 10Gb NIC expansion, supports PCIe x16 graphics card)
8	Power	ATX Power Connector 24+8P
9	Network	4 * Intel I226 2.5G (Motherboard reserved heatsink mounting holes)
10	Audio	High-fidelity 2-in-1 terminal
11	External Interfaces	2*USB3.0
12		2*USB3.0
13		1*HDMI 2.0
14		1*DP 1.4
15		1*type-c 20Gbps
16		1*Reset Button
17	Internal Interfaces	1*CPU FAN(4PIN)
18		2*SYS FAN(4PIN)
19		1*USB3.0 Header (19P 2.0mm), 1 USB3.0 Connector (TYPE-A 180-degree insertion)
20		Supports 6*SATA 3.0 2*SATA Ports 1*8643 Connector (Native 4 SATA) 1*8643 Connector (Native PCIe 4.0 X4)
21		1*EDP Connector
22		1*Wireless Charging Power Interface (1.25-2P 12V/18W)
23		8*GPIO (2.0mm 2X5P Header, 4*GPI + 4*GPO (5V Level), 5V + GND Power 2P)
24		1*TPM Compatible with ASUS 13-PIN Vertical Connector
25		1*M.2 (KEY E) WiFi Interface (Optional)
26	Operating System	Linux/Windows
27	BIOS	Flash ROM
28	Working Environment	Temperature: 0°C-60°C, Humidity: 10%-85%, Non-condensing
29	ESD	Contact 4K / Air 6K
30	Cooling Method	Fan cooling, 1700 78x78mm cooling holes

1.3 Motherboard Layout Diagram



Item		Description
1	USB3.0	USB3.0 Interface
2	M.2_NVME_1	NVME PCIe 4.0 X4 Slot
3	F_USB3.0X1	Built-in 19PIN USB3.0 Header
4	DDR5_A1, DDR5_B1	Vertical SODIMM DDR5 Slots
5	J1	LGA1700 CPU Socket
6	JEDP2	30PIN External DP Display Interface
7	JTPM1	13PIN External TPM Interface
8	ATX	ATX 24P Power Connector
9	GPIO1	GPIO Header
10	ATX_8P_12V	ATX 8P 12V Power Connector
11	F_PANEL	Front Panel Power Header
12	CPU_FAN1	CPU Fan 1
13	SYS_FAN1	System Fan 1
14	SYS_FAN2	System Fan 2
15	JSPK1	Built-in Speaker Connector
16	PCIE	PCIe GEN5.0 X16
17	SATA_1	Built-in 7Pin SATA3
18	SATA_2	Built-in 7Pin SATA3
19	8643_SATA1	Built-in SATA3 *4
20	8643_PCIE1	Built-in PCIe X4 *1
21	M.2_NVME_2	NGFF M.2 SSD Connector
22	WIFI	NGFF M.2 WiFi Connector
23	BATTERY	RTC Battery Holder
24	BCHG1	Wireless Charging Connector

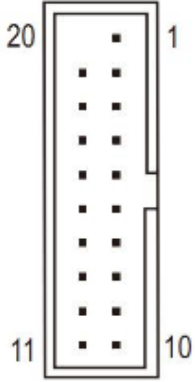
1.3.1 Rear I/O Interface



Item		Description
1	USB30_C1	USB3.1_TYPE_C Connector
2	USB2	USB3.1 Dual Connector
3	RST_BTN1	RST Button
4	USB1	USB3.1 Dual Connector
5	DP	DP Display Connector
6	HDMI	HDMI Display Connector
7	LAN4	2.5G RJ45 Network Connector
8	LAN3, LAN2, LAN1	2.5G RJ45 Network Connectors *3
9	HP_JACK	4-segment Headphone Connector

1.4 PIN Definitions

F_USB3.0X1:

Diagram	PIN	NAME	PIN	NAME
	20	/	1	VBUS
	19	VBUS	2	SSRX1-
	18	SSRX2-	3	SSRX1+
	17	SSRX2+	4	GND
	16	GND	5	SSRX1-
	15	SSRX2-	6	SSRX1+
	14	SSRX2+	7	GND
	13	GND	8	D1-
	12	D2-	9	D1+
	11	D2+	10	NC

JSPK1:

Diagram	PIN	NAME
	1	SPKOUT_L+
	2	SPKOUT_L-
	3	SPKOUT_R+
	4	SPKOUT_R-

CPU_FAN1:

Diagram	PIN	NAME
	1	GND
	2	+12VS
	3	CPU1_FAN_IN
	4	CPU1_FAN_PWM

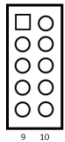
SYS_FAN1:

Diagram	PIN	NAME
	1	GND
	2	+12VS
	3	SYS1_FAN_IN
	4	SYS1_FAN_PWM

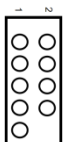
SYS_FAN2:

Diagram	PIN	NAME
	1	GND
	2	+12VS
	3	SYS2_FAN_IN
	4	SYS2_FAN_PWM

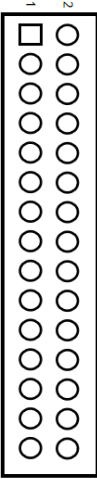
GPIO1:

Diagram	PIN	NAME	PIN	NAME
	1	+V5SIO	2	GND
	3	GPI1	4	GPO1
	5	GPI2	6	GPO2
	7	GPI3	8	GPO3
	9	GPI4	10	GPO4

F_PANEL

Diagram	PIN	NAME	PIN	NAME
	1	HDD_LED+	2	PWR_LED+
	3	HDDLED-	4	PWR_LED-
	5	Groued	6	PWR
	7	HWRST#	8	GND
	9	NC		

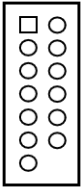
JEDP2:

Diagram	PIN	NAME	PIN	NAME
	1	VDDP	2	VDDP
	3	NC	4	NC
	5	EDP_TX_P0_C	6	EDP_TX_N0_C
	7	GND	8	GND
	9	EDP_TX_P1_C	10	EDP_TX_N1_C
	11	GND	12	GND
	13	EDP_TX_P2_C	14	EDP_TX_N2_C
	15	GND	16	GND
	17	EDP_TX_P3_C	18	EDP_TX_N3_C
	19	GND	20	GND
	21	EDP_AUX_P_C	22	EDP_AUX_N_C
	23	GND	24	HPDET
	25	LED_ADJ	26	LED_EN
	27	GND	28	GND
	29	BKLT_PWR	30	BKLT_PWR

JBKLPWR_SEL1:

Diagram	PIN	NAME
	1	+12VS
	2	BKLT_PWR
	3	+5VS

JTPM1:

Diagram	PIN	NAME	PIN	NAME
	1	+3VSB	2	PCH_TPM_IRQ_N
	3	PLT_RST_N	4	NC
	5	NC	6	SPI_WP-
	7	+3VSB	8	GND
	9	SPI_CS2-	10	SPI_CLK
	11	SPI_MISO	12	SPI_MOSI
	13	SPI_HOLD-		

ME_RCVR:

Diagram	PIN	NAME
1 	1	NC
	2	FM_ME_RCVR_N
	3	+3VSB

CLR_CMOS:

Diagram	PIN	NAME
1 	1	NC
	2	PCH_RTCRST
	3	GND