

KALI-ADL-Q670

IEI Extended-ITX Single Board Computer

Quick Installation Guide

Version 1.00

March, 2025

Features

- LGA1700 socket supports 12th/13th/14th generation Intel® Core™ i9/i7/i5/i3/Pentium®/Celeron® Processor (up to 125W TDP CPU)
- Support DisplayPort 1.4a, HDMI 2.0b
- Support one PCIE X16 Gen4, M.2 A key and M.2 A key expansion

Packing List

- 1 x KALI-ADL-Q670 single board computer
- 1 x SATA cable
- 1 x I/O shielding
- 1 x QIG (Quick Installation Guide)

Jumpers & Connectors

J_ATX_AT1: AT/ATX power mode setting jumper	
Status	Description
1 – 2(Right)	ATX Power Mode (default)
2 – 3(Left)	AT Power Mode

J_CMOS1: Clear CMOS button	
Status	Description
NC	Keep CMOS setup (normal operation)
Press	Clear CMOS setup

USB SW1: USB SW Power	
Status	Description
+5V DUAL	5V DUAL (Default)
+5V	+5V

ME_FLASH1: Flash descriptor security override Connector	
Status	Description
1	+VCCPGPIR_3P3_1P8
2	HDA_SDO

USB2_CN1/2 : Internal USB Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	VCC	5	GND
2	USB_DN	6	USB_DP
3	USB_DP	7	USB_DN-
4	GND	8	VCC

F_PANEL1: External Switches and Indicators panel					
Function	PIN	DESCRIPTION	Function	PIN	DESCRIPTION
PWR_LED	1	+5V	SPKR	2	PC_BEEP_P
	3	NC		4	NC
	5	GND		6	NC-
PWR_BTN	7	PWR_BTN_N	SPKR	8	PC_BEEP_N
	9	GND		10	NC
HDD_LED	11	HD_LED_P	RESET	12	PM_SYSRST_N
	13	HD_LED_N		14	GND

DIO1: Digital Input / Output Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	2	+5V
3	DOUT5	4	DOUT4

5	DOUT3	6	DOUT2
7	DOUT1	8	DOUT0
9	DIN5	10	DIN4
11	DIN3	12	DIN2
13	DIN1	14	DIN0

SATA1/2/3/4: Serial ATA 3.0 Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	2	SATA_RXN
3	SATA_TXP	4	SATA_RXP
5	SATA_TXN	6	GND
7	GND	8	NC
9	NC	10	

AUDIO1: Audio Source Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	LMIC2-L	2	GND_AUDIO
3	LMIC2-R	4	PRESENCE#
5	LLINE2-R	6	MIC2-JD
7	FRONT-IO	8	
9	LLINE2-L	10	LINE2-JD

SYS_FAN1~2: Fan Connector

PIN NO.	DESCRIPTION
1	GND
2	+12V
3	FANIN
4	PWM(+5V)

CPU_FAN1: Fan Connector

PIN NO.	DESCRIPTION
1	GND
2	+12V
3	FANIN
4	PWM(+5V)

CPU12V1: +12V Power Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	5	+12V
2	GND	6	+12V
3	GND	7	+12V
4	GND	8	+12V

J_SMB1: SMBus Connector	
PIN NO.	DESCRIPTION
1	GND
2	SMB_DATA_MAIN
3	SMB_CLK_MAIN
4	+5V

J_I2C1: I2C Connector	
PIN NO.	DESCRIPTION
1	GND
2	SMDAT0_EC
3	SMCLK0_EC
4	+5V

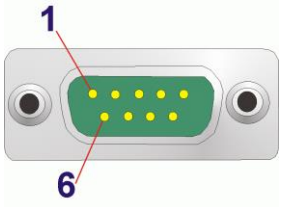
CHASSIS1: Chassis Status Connector	
PIN NO.	DESCRIPTION
1	CASEOPEN_N
2	GND

M2_M1: M.2 M Key Card Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	2	+3.3V
3	GND	4	+3.3V
5	PCIE_8_RX_DN	6	N/C
7	PCIE_8_RX_DP	8	N/C
9	GND	10	NGFF1_ACT_N
11	PCIE_TX_DN8	12	+3.3V
13	PCIE_TX_DP8	14	+3.3V
15	GND	16	+3.3V
17	PCIE_7_RX_DN	18	+3.3V
19	PCIE_7_RX_DP	20	N/C
21	GND	22	N/C
23	PCIE_TX_DN7	24	N/C
25	PCIE_TX_DP7	26	N/C
27	GND	28	N/C
29	PCIE_6_RX_DN	30	N/C
31	PCIE_6_RX_DP	32	N/C
33	GND	34	N/C
35	PCIE_TX_DN6	36	N/C
37	PCIE_TX_DP6	38	M_2_SSD_SLP
39	GND	40	N/C
41	PCIE_5_RX_DN	42	N/C
43	PCIE_5_RX_DP	44	N/C
45	GND	46	N/C
47	PCIE_TX_DN5	48	N/C

49	PCIE_TX_DP5	50	PLT_RST_N
51	GND	52	SRCCLKREQB_3_N
53	PCIE_CLK_DN3	54	NC
55	PCIE_CLK_DP3	56	N/C
57	GND	58	N/C
59	N/C	60	N/C
61	N/C	62	N/C
63	N/C	64	N/C
65	N/C	66	N/C
67	N/C	68	NC
69	PEDET	70	+3.3V
71	GND	72	+3.3V
73	GND	74	+3.3V
75	GND		
N1	NC		
N2	NC		

COM1/COM2: COM Port connector

PIN	RS-232	RS-422	RS-485
1	DCD	TXD422-	TXD485-
2	RXD	TXD422+	TXD485+
3	TXD	RXD422+	--
4	DTR	RXD422-	--
5	GND	--	--
6	DSR	--	--
7	RTS	--	--
8	CTS	--	--
9	RI	--	--



ATX1: ATX Power Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	+3.3V	13	+3.3V
2	+3.3V	14	-12V
3	GND	15	GND
4	+5V	16	PS_ON
5	GND	17	GND
6	+5V	18	GND
7	GND	19	GND
8	Power good	20	-5V
9	5VSB	21	+5V
10	+12V	22	+5V
11	+12V	23	+5V
12	+3.3V	24	GND

HDMI_DP1A: External Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	DPB_0P	11	GND
2	GND	12	DPB_3N
3	DPB_0N	13	AUX_CTRL_DET_C
4	DPB_1P	14	GND
5	GND	15	AUXP
6	DPB_1N	16	GND
7	DPB_2P	17	AUXN
8	GND	18	HPD
9	DPB_2N	19	GND
10	DPB_3P	20	+5V

HDMI_DP1B: HDMI Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
21	HDMI1_L_TX2_P	33	N/C
22	GND	34	N/C
23	HDMI1_L_TX2_N	35	HDMI_SCL
24	HDMI1_L_TX1_P	36	HDMI_SDA
25	GND	37	GND
26	HDMI1_L_TX1_N	38	+5V
27	HDMI1_L_TX0_P	39	HDMI_HPD
28	GND		
29	HDMI1_L_TX0_N		
30	HDMI1_L_CLK_P		
31	GND		
32	HDMI1_L_CLK_N		

LAN1_USB1: LAN1 and USB1 Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	+5V	21	i225_MDI0_N_1
2	USB_D1N	22	i225_MDI1_P_1
3	USB_D1P	23	i225_MDI1_N_1
4	GND	24	i225_MDI2_P_1
5	USB3_RX1_N	25	i225_MDI2_N_1
6	USB3_RX1_P	26	i225_MDI3_P_1
7	GND	27	i225_MDI3_N_1
8	USB3_TX1_N	28	GND
9	USB3_TX1_P	29	+3.3V
10	+5V	30	I225_LINK_ACT_N_1
11	USB_D2N	31	I225_SPEED_2500_N_1
12	USB_D2P	32	I225_SPEED_1000_N_1
13	GND	G1	GND
14	USB3_RX2_N	G2	GND
15	USB3_RX2_P	G3	LAN1_GND
16	GND	G4	LAN1_GND
17	USB3_TX2_N	G5	LAN1_GND
18	USB3_TX2_P	G6	LAN1_GND
19	GND	G7	LAN1_GND
20	i225_MDI0_P_1	G8	LAN1_GND

LAN2_USB2: LAN2 and USB2 Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	+5V	21	i225_MDI0_N_2
2	USB2_3_N	22	i225_MDI1_P_2
3	USB2_3_P	23	i225_MDI1_N_2
4	GND	24	i225_MDI2_P_2

5	USB3_RX3_N	25	i225_MDI2_N_2
6	USB3_RX3_P	26	i225_MDI3_P_2
7	GND	27	i225_MDI3_N_2
8	USB3_TX3_N	28	GND
9	USB3_TX3_P	29	+3.3V
10	+5V	30	I225_LINK_ACT_N_2
11	USB2_4_N	31	I225_SPEED_2500_N_2
12	USB2_4_P	32	I225_SPEED_1000_N_2
13	GND	G1	LAN2_GND
14	USB3_RX4_N	G2	LAN2_GND
15	USB3_RX4_P	G3	LAN2_GND
16	GND	G4	LAN2_GND
17	USB3_TX4_N	G5	LAN2_GND
18	USB3_TX4_P	G6	LAN2_GND
19	GND	G7	LAN2_GND
20	i225_MDI0_P_2	G8	LAN2_GND

USB3_1: USB3_1 Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	+5V	13	GND
2	USB_D1N	14	USB3_RX2_N
3	USB_D1P	15	USB3_RX2_P
4	GND	16	GND
5	USB3_RX1_N	17	USB3_TX2_N
6	USB3_RX1_P	18	USB3_TX2_P
7	GND	G1	GND
8	USB3_TX1_N	G2	GND
9	USB3_TX1_P	G3	GND

10	+5V	G4	GND
11	USB_D2N		
12	USB_D2P		

JLAN_LED1/2: LED Connector	
PIN NO.	DESCRIPTION
1	+3.3V
2	I225_LINK_ACT_N

TPM1: TPM1 Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	NC	2	NC
3	TPM_R_PG1(PCH_RSMRS T_N)	4	NC
5	GND	6	3.3V
7	TPM_CLK_SW	8	NC
9	NC	10	TPM_SO_SW
11	NC	12	TPM_SI_SW
13	SPI_CS2_N	14	GND
15	NC	16	NC
17	SPI_TPM_INT_N	18	3.3V
19	PLT_RST_N	20	NC

Get more information:

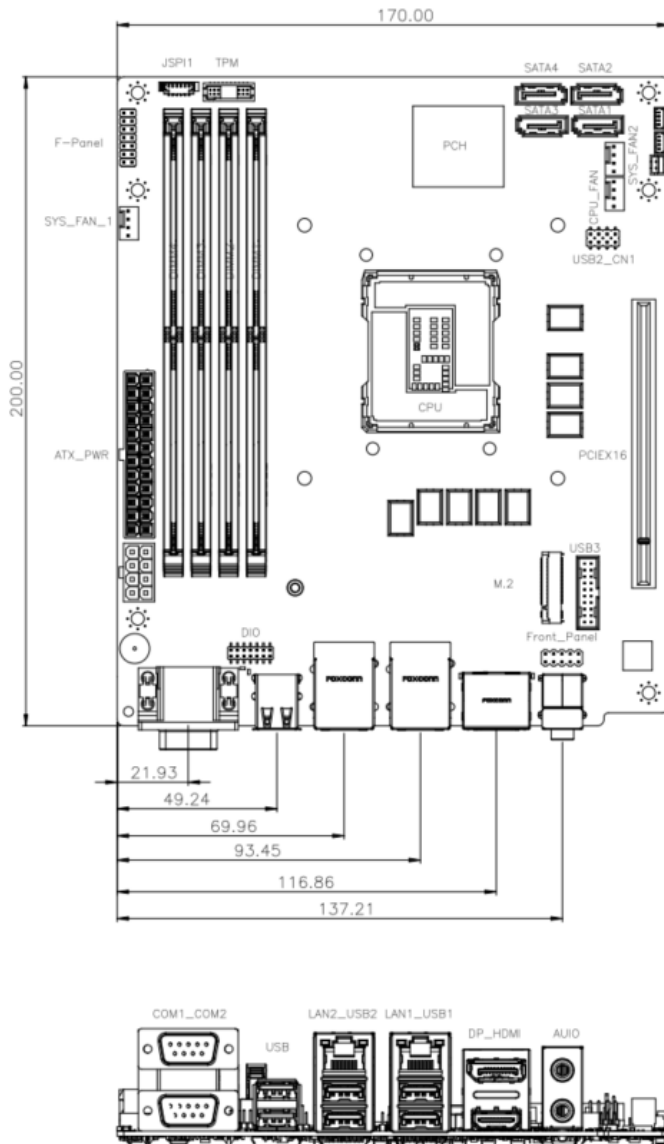


KALI-ADL-Q670



IEI Resource Download Center

Dimensions (Unit: mm)



Safety Instructions



Warning! Read the user manual before connecting the system to the power source.

Warning! To prevent the system from overheating, do not operate it in an area that exceeds the maximum operating temperature described in the user manual.

Warning! Ultimate disposal of this product should be handled according to all national laws and regulations.

Support



IEI Support URL

http://new.ieiworld.com/tw/online_support_form

Compliance



This equipment has been tested and found to comply with specifications for CE marking. If the user modifies and/or installs other devices in the equipment, the CE conformity declaration may no longer apply.



This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



According to the requirement of the WEEE legislation the following user information is provided to customers for all branded IEI Electronics products subject to the WEEE directive.

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop o- your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

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