

KINO-ARL-H810

Mini-ITX Single Board Computer

Quick Installation Guide

Version 1.00

January, 2026

Features

- Mini-ITX SBC supports high-Performance Intel® Core™ Ultra Processors (Series 2)
- Two 262-pin 5600 MHz Dual-Channel DDR5 SDRAM Unbuffered, Clocked Unbuffered SO-DIMM
- Triple independent display via HDMI™, USB4 and DP
- Support dual Intel® I226V 2.5GbE controller
- Support PCIe Gen4 x16, M.2 M key and M.2 E key expansion

Packing List

- 1 x KINO-ARL-H810 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 (A – B)	ATX Power Mode (default)
2-3 (B – C)	AT Power Mode

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

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

CPU12V1: +12V Power Connector	
PIN NO.	Description
1	GND
2	GND
3	GND
4	GND
5	+12V
6	+12V
7	+12V
8	+12V

USB2_CN1, CN2: Internal USB2.0 Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	VCC	5	GND
2	USB_DN	6	USB2_DP

3	USB_DP	7	USB2_DN-
4	GND	8	VCC

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: Serial ATA3.0 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		

SYS_FAN1: System Fan Connector	
PIN NO.	DESCRIPTION
1	GND
2	+12V
3	FANIN
4	PWM(+5V)

CPU_FAN1: CPU Fan Connector	
PIN NO.	DESCRIPTION
1	GND
2	+12V
3	FANIN
4	PWM(+5V)

F_PANEL1: F_PANEL1 Connector	
PIN NO.	DESCRIPTION
1	PWRBTN_N
2	GND

3	EXTRST-
4	GND
5	+V5S
6	GND
7	+V5S
8	SATA_LED#
9	BEEP_PWR
10	PC_BEEP_N

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

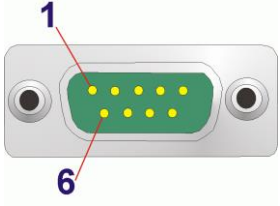
CHASSIS1: Chassis Status Connector	
PIN NO.	DESCRIPTION
1	CASEOPEN_N
2	GND

EC_FLASH1: Flash EC ROM Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	2	EC_FLASH_DAT
3	EC_FLASH_CLK	4	NC

TPM1: Trusted Platform Module Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1		2	N/C
3	+1.8V	4	N/C
5	GND	6	+1.8V
7	SPI_TPM_CLK_SW	8	N/C
9	N/C	10	SPI_TPM_SO_SW
11	N/C	12	SPI_TPM_SI_SW
13	SPI_TPM_CS#_SW	14	GND
15	N/C	16	N/C

17	TPM_PIRQ_L	18	+1.8V
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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	--	--



The diagram shows a 9-pin D-sub connector with a green PCB. Pin 1 is the top-left pin, and pin 6 is the bottom-right pin. Red lines with blue numbers 1 and 6 point to these specific pins.

COM3-6: Internal Serial Port Connector	
PIN NO.	DESCRIPTION
1	DATA CARRIER DETECT (DCD)
2	DATA SET READY (DSR)
3	RECEIVE DATA (RXD)
4	REQUEST TO SEND (RTS)
5	TRANSMIT DATA (TXD)
6	CLEAR TO SEND (CTS)
7	DATA TERMINAL READY (DTR)
8	RING INDICATOR (RI)
9	GND (GND)
10	GND (GND)

USB2_CN1: Internal USB2.0 Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION

1	LMIC2-L	2	GND
3	LMIC2-R	4	PRESENCE#
5	LLINE2-R	6	MIC2-JD
7	FRONT-IO	8	NC
9	LINE2-L	10	LINE2-JD

FRONT-AUDIO1: Audio Source Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	LMIC2-L	2	GND
3	LMIC2-R	4	PRESENCE#
5	LLINE2-R	6	MIC2-JD
7	FRONT-IO	8	NC
9	LINE2-L	10	LINE2-JD

Get more information:

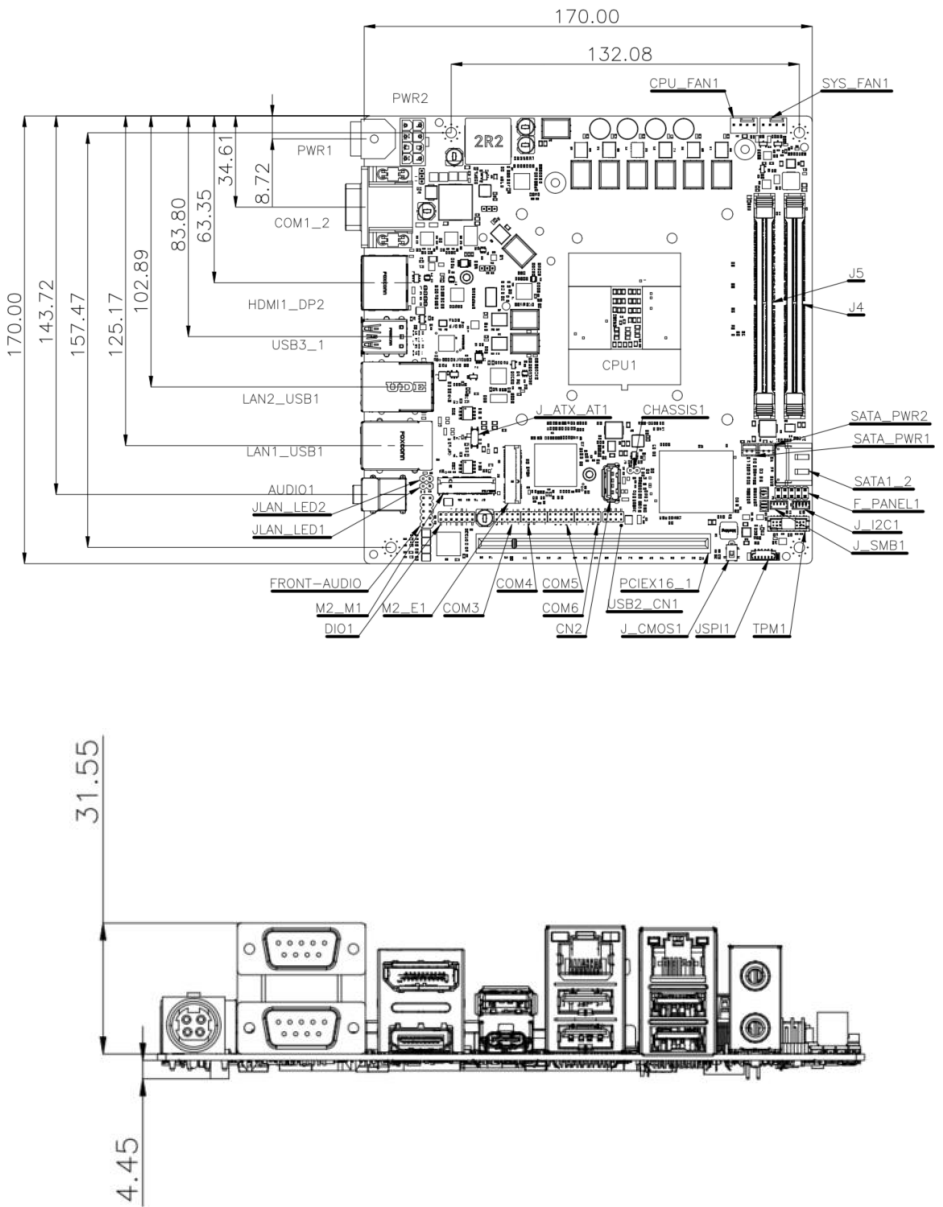


KINO-ARL-H810



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.

Headquarters

IEI Integration Corp.

No. 29, ZhongXing Rd., Xizhi Dist.,
New Taipei City 221, Taiwan
TEL: +886-2-8691-6798/+886-2-2690-2098
FAX: +886-2-6616-0028
sales@ieiworld.com
www.ieiworld.com

America

IEI Technology USA Corp.

138 University Parkway, Pomona,
CA 91768, USA
Tel:+1-909-595-2819
Fax:+1-909-595-2816
sales@usa.ieiworld.com
usa.ieiworld.com

China

IEI Integration (Shanghai) Corp.

No. 515, Shen Fu Rd., Xin Zhuang Industrial Develop Zone,
Shanghai, 201108, China
Tel:+86-21-3116-7799
Fax:+86-21-3462-7797
sales@ieiworld.com.cn
www.ieiworld.com.cn