

# KMDA-3305

## User's Manual



Ver. A0.2

Date: 2024-9-2

[illegible]

## Copyright

The documentation and the software included with this product are copy- righted 2024 by Shenzhen JHC Technology Co., Ltd. All rights are reserved. Shenzhen JHC Technology Co., Ltd. reserves the right to make improvements in the products described in this manual at any time without notice. No part of this manual may be reproduced, copied, translated or transmitted in any form or by any means without the prior written permission of Shenzhen JHC Technology Co., Ltd. Information provided in this manual is intended to be accurate and reliable. However, Shenzhen JHC Technology Co., Ltd. assumes no responsibility for its use, nor for any infringements of the rights of third parties, which may result from its use.

## Acknowledgements

Award is a trademark of Award Software International, Inc.

IBM, PC/AT, PS/2 and VGA are trademarks of International Business Machines Corporation.

Intel and Pentium are trademarks of Intel Corporation.

Microsoft Windows and MS-DOS are registered trademarks of Microsoft Corp.

RTL is a trademark of Realtek Semi-Conductor Co., Ltd.

All other product names or trademarks are properties of their respective owners.

For more information on this and other JHC products, please visit our websites at:

<http://www.jhctech.com.cn>

## Product Warranty (2 years)

JHC warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for two years from the date of purchase.

This warranty does not apply to any products which have been repaired or altered by persons other than repair personnel authorized by JHC, or which have been subject to misuse, abuse, accident or improper installation.

JHC assumes no liability under the terms of this warranty as a consequence of such events.

Because of JHC's high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If an JHC product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, you will be billed according to the cost of replacement materials, service time and freight. Please consult your dealer for more details.

If you think you have a defective product, follow these steps:

1. Collect all the information about the problem encountered. (For example, CPU speed, JHC products used, other hardware and software used, etc.) Note anything abnormal and list any onscreen messages you get when the problem occurs.
2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.
3. If your product is diagnosed as defective, obtain an RMA (return merchandise authorization) number from your dealer. This allows us to process your return more quickly.
4. Carefully pack the defective product, a fully-completed Repair and Replacement Order Card and a photocopy proof of purchase date (such as your sales receipt) in a shippable container. A product returned without proof of the purchase date is not eligible for warranty service.
5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

## Declaration of Conformity

### CE

This product has passed the CE test for environmental specifications when shielded cables are used for external wiring. We recommend the use of shielded cables. This kind of cable is available from JHC. Please contact your local supplier for ordering information. Test conditions for passing included the equipment being operated within an industrial enclosure. In order to protect the product from being damaged by ESD (Electrostatic Discharge) and EMI leakage, we strongly recommend the use of CE-compliant industrial enclosure products.

### FCC Class A

Note: 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.

## Technical Support and Assistance

- Step 1. Visit the JHC web site at [www.jhctech.com.cn](http://www.jhctech.com.cn) where you can find the latest information about the product.
- Step 2. Contact your distributor, sales representative, or JHC's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:
- Product name and serial number
  - Description of your peripheral attachments
    - Description of your software (operating system, version, application software, etc.)
  - A complete description of the problem
- The exact wording of any error messages

# CONTENTS

<b>General Information .....</b>	<b>1</b>
<b>1.1 Introduction .....</b>	<b>2</b>
<b>1.2 Features .....</b>	<b>2</b>
<b>1.3 Specifications .....</b>	<b>3</b>
1.3.1 General .....	3
1.3.2 Display .....	3
1.3.3 Ethernet .....	3
1.3.4 Audio .....	4
1.3.5 Power Consumption .....	4
<b>1.4 Environmental requirement .....</b>	<b>4</b>
<b>1.5 KMDA-3302 Series CPU Specifications .....</b>	<b>4</b>
<b>1.6 Dimension .....</b>	<b>5</b>
<b>Hardware Installation .....</b>	<b>7</b>
<b>2.1 Introduction .....</b>	<b>8</b>
<b>2.2 Dip SW Settings .....</b>	<b>8</b>
2.2.1 CLEAR/COMS CMOS Data clear switch .....	8
2.2.2 AT/ATX Power supply Select .....	8
<b>2.3 I/O ports/LED Indication .....</b>	<b>9</b>
2.3.1 Ethernet Connector .....	10
2.3.2 Power Input Connector .....	11
2.3.3 CMOS battery interface .....	12
2.3.4 Remote SW Connector .....	12
2.3.5 8-bit DIO .....	12
2.3.6 SM Bus .....	13

2.3.7 USB connector .....	14
2.3.8 HDMI .....	15
2.3.9 CPU FAN .....	错误！未定义书签。
2.3.10 Mini-PCle .....	15
2.3.11 mSATA .....	17
2.3.12 M.2 B-Key 3042/3052 .....	错误！未定义书签。
2.3.13 M.2 E-Key 2230 .....	错误！未定义书签。
2.3.14 COM1/2 (RS232/422/485, RS232) .....	18
2.3.15 Front PANEL .....	20
2.3.16 MXM 3.1 Goldfinger .....	错误！未定义书签。
2.3.17 LED .....	20
<b>2.4 Install .....</b>	<b>22</b>
2.4.1 Install Mini PCIe/mSATA/M.2 B-Key/M.2 E-Key module .....	22

CHAPTER

1



# General Information



## 1.1 Introduction

KMDA-3305 is a small size box computer, using SGCC box structure design, aluminum moment profile without fan heat dissipation, equipped with Intel ® 11th gen Tiger lake U Soc CPU core module, with the new design of PIB-305 carrier board and IO sub-card, support 1\*DDR4 3200MHz memory, up to 32GB. The main IO interface is in the front coastline: 2 \* HDMI display interface, 3\*I210AT Gigabit network port, 6\*gigabit exchange electromechanical port 4 \* USB3.2, 2\* Iso. CAN, 16 bit Iso. DIO, 4\*COM (2 \* RS232 + 2\*RS485), DC 9-36V wide-voltage power supply terminal, with overvoltage reverse overcurrent protection, with LED switch button. On the left side is 2\*COM (RS232 / 485, 1 \* 10 Pin Phoenix terminal, serial mode through 4-bit dial switch), serial port mode selection switch, SIM card slot, remote switch interface, Audio out + Mic, 2\*USB2.0. Built-in 1\*Full size Mini PCIe, with PCIe X1 + USB2.0 signal, support CAN2.0/4G/ Bluetooth and other function extension module; 1\*M.2 2280 M-Key, support Nvme storage; 1\*Full Size mSATA, maximum SATA 6.0 Gbps. Network port, USB and display interface structure adopts anti-stripping design, suitable for AG V/AMR and traffic gate fields.

## 1.2 Features

### Key Features

- 1、 SGCC box, aluminum rectangular profile without fan heat dissipation
- 2、 Intel® Tiger lake U Celeron/Core I3/I5/I7 Soc CPU
- 3、 JHCTECH NODE Modular motherboard + PIB board design specification + IO subcard
- 4、 1\*260-pin SODIMM, DDR4 3200MHz, up to 32GB
- 5、 1\*Full size Mini PCIe, with PCIe X1 + USB2.0 signal, support CAN2.0/4G/ Bluetooth and other function extension module
- 6、 1\*M.2 2280 M-Key, supporting Nvme storage
- 7、 1\*Full Size mSATA, with a maximum SATA of 6.0 Gbps
- 8、 2\*HDMI display
- 9、 9\*Intel I210AT, 10/100/1000Mbps adaptive, supports WOL
- 10、 16 bit Iso. DIO, 6\*COM, 4\*USB3.2, 2\*USB2.0, 2\*Iso. CAN
- 11、 Support horizontal desktop installation, Din-Rail rail installation and wall-mounted installation

12、DC 9-36V wide power input

## 1.3 Specifications

### 1.3.1 General

**CPU:** Intel® Tiger lake-U Soc Celeron/Core I3/I5/I7 Soc CPU

**System Memory:** 1\*DDR4 3200MHz SODIMM, up to 32GB

**Watchdog Timer:** 255-level interval timer, setup by software

**USB:** 4\*USB3.2 + 2\*USB2.0, Type A;

**Serial Ports:** 2\*RS232/485 ( COM5/6 ) + 2\*RS232 ( COM1/2 ) + 2\*RS485 ( COM3/4 ) , COM5/6 sets its operating mode through the serial port mode selector switch

**Expansion Interface:**

1\*Full size Mini PCIe, with PCIe X1 + USB2.0 signal, support CAN2.0/4G/ Bluetooth and other function extension module

1\*M.2 2280 M-Key, supporting Nvme storage

**Storage:**

1\*Full size mSATA, up to SATA6.0 Gbps

### 1.3.2 Display

**Chipset:** Intel® Gen. 11 UHD Graphics

**Display Memory:** Intel UHD Graphics or iRIS® Xe Graphics

**Resolution:** 2\*HDMI max res. 4096x2304@60Hz

### 1.3.3 Ethernet

**Chipset:** 3\*Intel I210AT Ethernet controller, 6\*Gigabit switch network port

**Speed:** 10M/100M/1000M adaptive

**Interface:** 9\*RJ45

### 1.3.4 Audio

**Chipset:** Realtek ALC897

**Interface:** 3.5mm Phone jack

### 1.3.5 Power Consumption

**Input Voltage:** DC 9~36V

**Power Consumption:** Full load power consumption: 26.16W; minimum power consumption: 13.2W

**Power Adapter:** AC/DC adapter, DC 12V/5A 60W

## 1.4 Environmental requirement

**Operating temperature:** -20 ~60° C (wide operating temp. SSD)

**Relative humidity:** 10%-95%@40°C (non-condensing)

**Storage temperature:** -40 ~ 85°C (-40 ~ 185°F)

**Vibration loading during operation:**

With SSD: 5Grms, random, 5 ~ 500 Hz

**Shock during operation:**

With SSD: 50g, peak acceleration (11ms duration)

**EMC:** CE, FCC Class A

## 1.5 KMDA-3305 Series CPU Specifications

Model NO.	KMDA-3305-S001	KMDA-3305-S002	KMDA-3305-S003	KMDA-3305-S004
CPU	Core I3-1115G4	Core I5-1135G7	Core I7-1165G7	Celeron 6305E
Frequency	1.70-4.10 GHz	0.90-4.20 GHz	1.20-4.70 GHz	1.80 GHz
Core	2	4	4	2
Thread	4	8	8	2

## 1.6 Dimension

### KMDA-3305 dimensions:

Unit: mm

Desktop mounting:

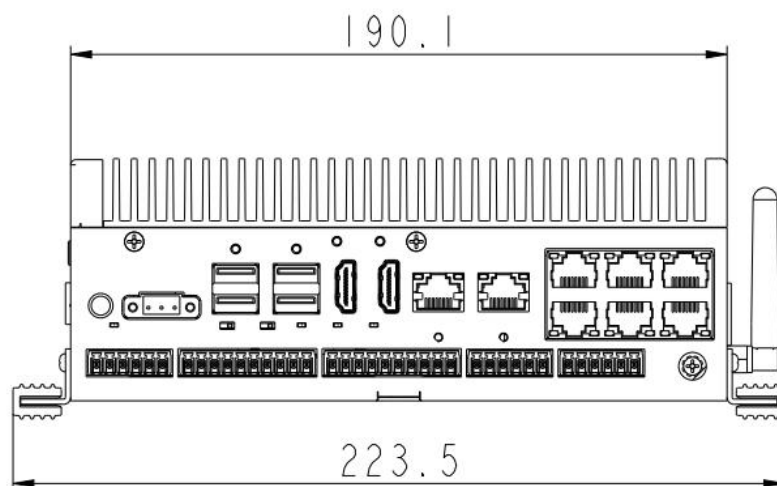


Figure 1.1

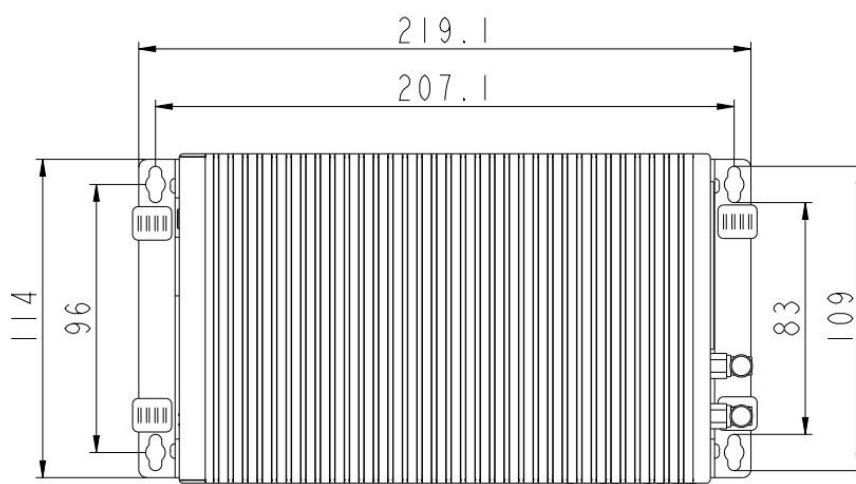


Figure 1.2

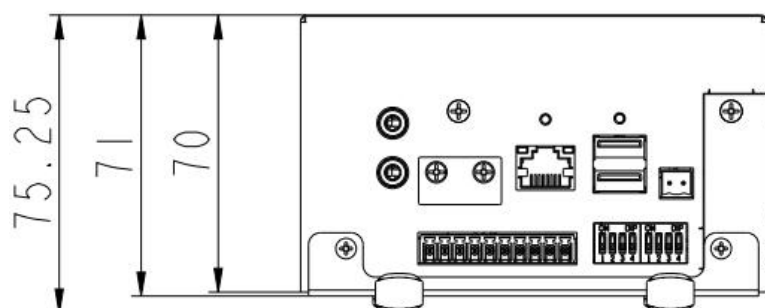


Figure 1.3

Din-Rail mounting: 144.8\*125.22\*50 mm

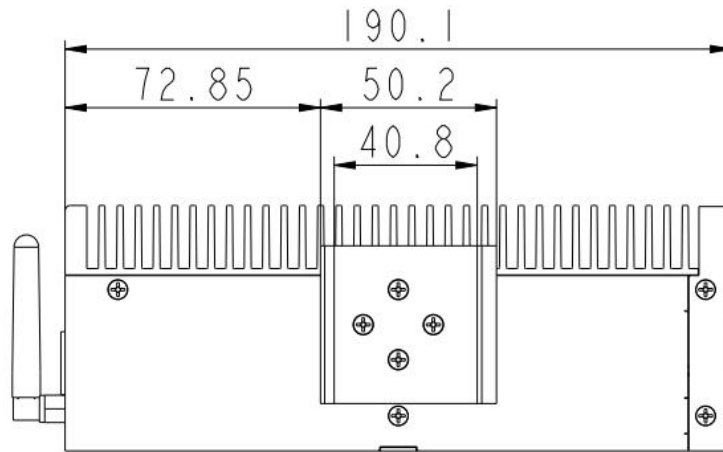


Figure 1.4

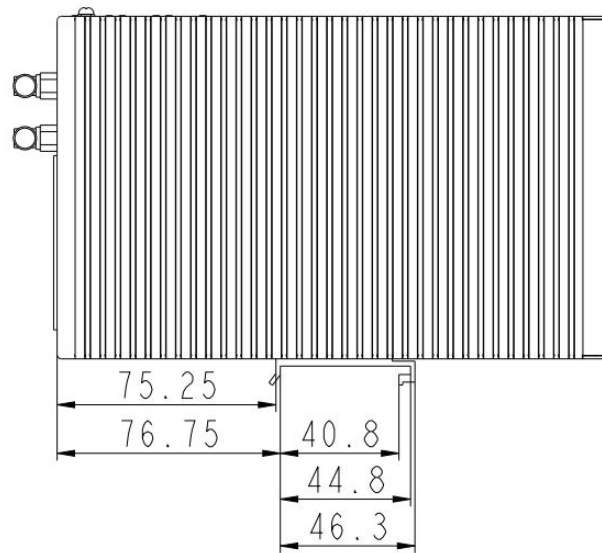


Figure 1.5

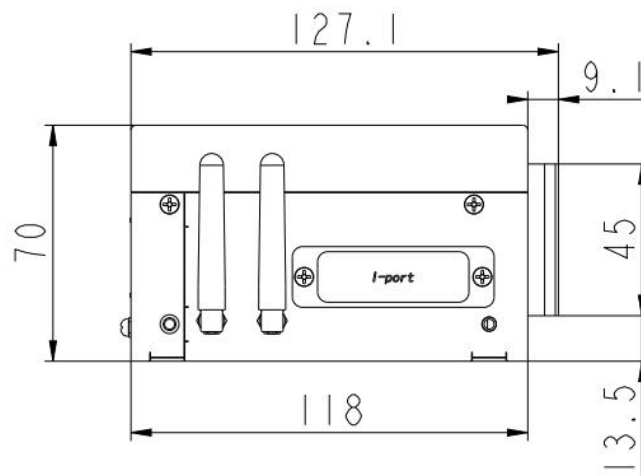


Figure 1.6

CHAPTER

2



# Hardware Installation

## 2.1 Introduction

The following sections describe panel DIP switch Settings and external connectors and pin assignments.

## 2.2 Dip SW Settings

KMDA-3305 box computer is provided with a simple dip switch on the motherboard. This simple DIP switch can be moved with tweezers or card pins, which is convenient for users to set according to different configuration requirements. The following table lists the functions of each dip switch on the motherboard.

Dip SW List:

Model	Description	Specification
CLEAR/CMOS	Clear CMOS Data Setting	3-Pin Block
AT/ATX	Set the power-on mode, AT or ATX	3-Pin Block

### 2.2.1 CLEAR/COMS CMOS Data clear switch

CMOS is powered by socket BAT batteries. Clearing CMOS will cause the previous system settings to be permanently erased and set to the original (factory setting) system Settings.

If you encounter the followings:

- a) CMOS data becomes corrupted.
- b) You forget the supervisor or user password.

you can reconfigure the system with the default values stored in the ROM BIOS.

To load the default values stored in the ROM BIOS, please follow the steps below.

1. Power-off the system and unplug the power cord.
2. Turn the dip switch to CLEAR mode, hold for 5-6 seconds, and then return to CMOS mode.
3. Boot the computer and press the Del key to enter BIOS settings, reloading the optimal default values.
4. Save & Exit Setup.

### 2.2.2 AT/ATX Power supply Select

KMDA-3305 provides an AT/ATX switch, which users can use tweezers to toggle the dial switch to set the machine's startup mode. When you set it to AT mode, it means that you can turn on the machine by connecting to the DC power supply; When dialed to ATX, it means turning on the machine through the power button.

## 2.3 I/O ports/LED Indication

### KMDA-3305 Front view:

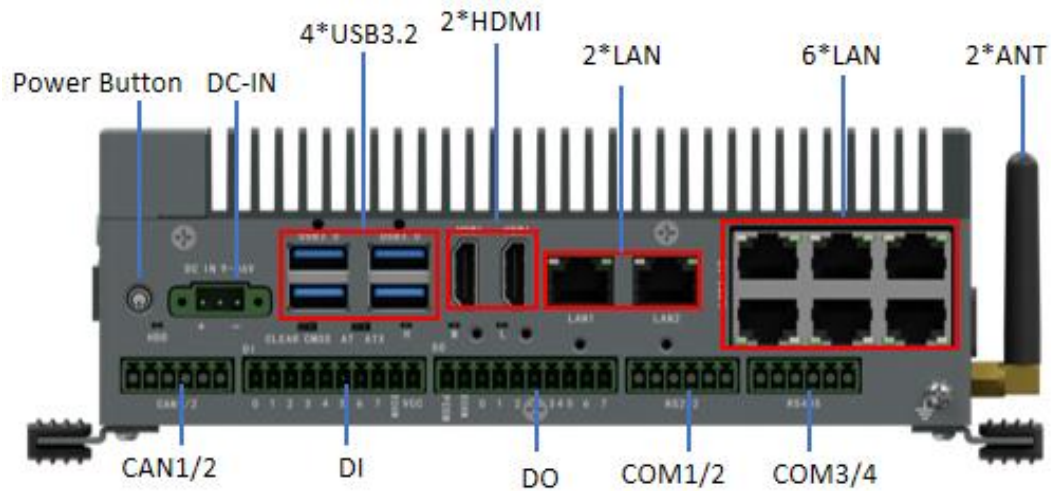


Figure 2.1

#### Front I/O interface:

- 1\*DC 9-36V power input
- 2\*HDMI
- 4\*USB3.2 Type A
- 8\*Gigabit LAN: RJ45
- 2\*Iso. CAN, 1x6pin Phoenix terminal
- 16bit Iso. DIO, 2\*1x10pin Phoenix terminal
- 4\*COM, 2\*1x6pin Phoenix terminal
- 2\*ANT
- Power button
- I-Port
- HDD LED, CPU LEDs
- AT/ATX SW, Clear CMOS SW



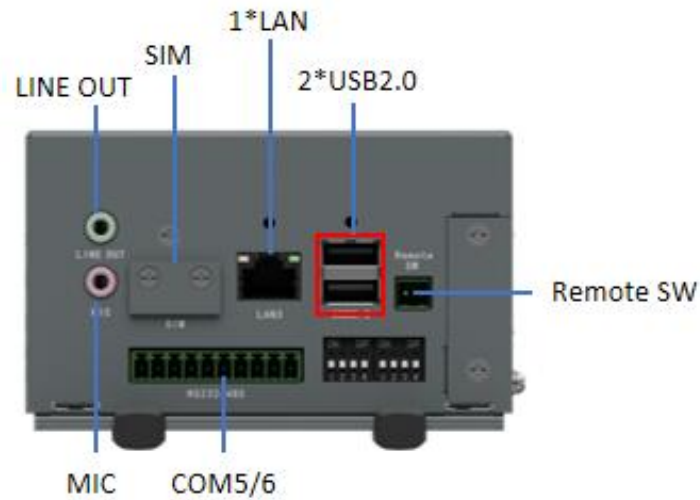
**KMDA-3305 left view:**

Figure 2.2

**Left I/O interface:**

- Audio out + Mic
- Remote SW
- 2\*COM, 1x10pin Phoenix terminal
- Serial port mode selection switch
- 1\*SIM card slot
- 2\*USB2.0
- 1\*LAN

**2.3.1 Ethernet Connector**

KMDA-3305 is equipped with 9 \* Intel ® I210AT + 1 \* Realtek 8111H chip, which provides 9 gigabit network ports, 9 of which are RJ 45 ports, 1 is 2 \* 4pin board pin port, and supports 10M / 100M / 1000M rate adaptation. RJ-45 interface with LED indicator, orange LED to indicate the network port activity, green LED to indicate the network speed. Table 2.1 provides a detailed introduction to the pin assignments.

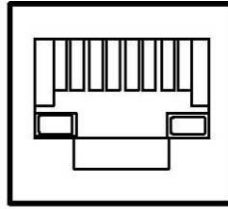


Figure 2.3 Ethernet Connector



Figure 2.4 2\*4pin pins

Table 2.1: RJ-45 Connector pin assignments	
Pin	10/100/1000BaseT信号名
1	TX+(10/100), LAN_DA+(GHz)
2	TX-(10/100), LAN_DA-(GHz)
3	RX+(10/100), LAN_DB+(GHz)
4	LAN_DC+(GHz)
5	LAN_DC-(GHz)
6	RX-(10/100), LAN_DB-(GHz)
7	LAN_DD+(GHz)
8	LAN_DD-(GHz)

Table 2.2 lists the connection rate represented by network port LED.

Table 2.2: RJ-45 Led active state		
Type	Left LED	Right LED
10 M Cable	OFF	Green led flashing
100M Cable	Orange led Lighting	Green led flashing
1000M Cable	Orange led Lighting	Green led flashing

### 2.3.2 Power Input Connector

KMDA-3305 provides wide voltage (9~36V) power input through a 3pin terminal. Table 2.3 describes pin assignments in detail.

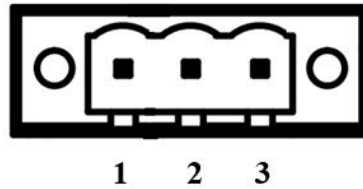


Figure 2.5 DC connector

Table 2.3:DC-IN Pin Assignments			
Pin	Signal	Pin	Signal
1	9~36V	2	NC
3	GND		

### 2.3.3 CMOS battery interface

KMDA-3305 provides one CMOS battery interface, the interface pins are defined as follows.

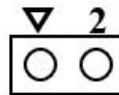


Figure 2.6 CMOS battery interface

Table 2.4: CMOS battery pin assignments			
Pin	Signal	Pin	Signal
1	BAT+	2	GND

### 2.3.4 Remote SW Connector

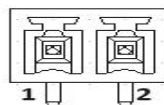


Figure 2.7 Remote SW Connector

Table 2.5: Remote SW pin assignments			
Pine	Signal	Pin	Signal
1	PWR_SW	2	GND

### 2.3.5 16-bit Iso. DIO

KMDA-3305 provides a 16 bit optoelectronic isolation DIO through two 1\*10 pin Phoenix terminals, supporting PNP and NPN mode switching, with 8-bit isolated input and 8-bit isolated output. The pin allocation is as follows:



Figure 2.8 1\*10pin Phoenix terminals

Table 2.6: DI pin assignments

Pin	Signal
1	DI0
2	DI1
3	DI2
4	DI3
5	DI4
6	DI5
7	DI6
8	DI7
9	ECOM1
10	VCC_ISO

Table 2.7: DO pin assignments

Pin	Signal
1	DO0
2	DO1
3	DO2
4	DO3
5	DO4
6	DO5
7	DO6
8	DO7
9	E_GND
10	P_COM1

### 2.3.6 SM Bus

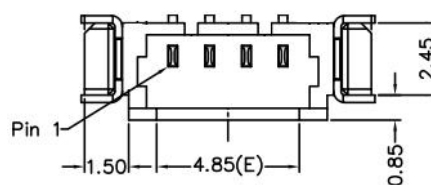


Figure 2.9 SM Bus connector

**Table 2.8: SM BUS pin assignments**

Pin	Signal	Pin	Signal
1	GND	2	DAT
3	CLK	4	+V3.3

### 2.3.7 USB connector

KMDA-3305 offers 4 \* USB3.2 Type A on the front panel and 2 \* USB2.0 Type A on the left side. These USB interface connectors support plug and play and hot swapping capabilities, which comply with the USB UHCI version 3.0 and 2.0 protocols and can be disabled through system BIOS settings. These USB interfaces can connect to any other device with a USB interface and are suitable for many new digital devices. In addition, the plug and play function makes it convenient for users to unplug or plug in USB at any time as needed, without the need to shut down.

Table 2.9 provides a detailed introduction to pin assignments for USB3.2 Type A:

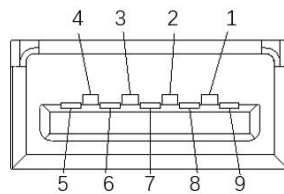


Figure 2.10 USB3.2 Type A

**Table 2.9: USB3.2 Type A Port Pin Assignments**

Pin	Signal	Pin	Signal
1	VBUS	6	RX+
2	D-	7	GND
3	D+	8	TX-
4	GND	9	TX+
5	RX-	Shell	Shield

Table 2.10 shows the detailed pin assignment of USB2.0 Type A:

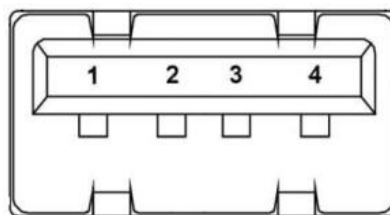


Figure 2.11 USB2.0

**Table 2.10: USB2.0 pin assignments**

Pin	Signal
-----	--------

1	VCC
2	D-
3	D+
4	GND

### 2.3.8 HDMI

KMDA-3305 provides two vertical HDMI display interfaces that supports the highest resolution possible 4096x2304@60Hz. Table 2.11 describes pin assignments in detail.

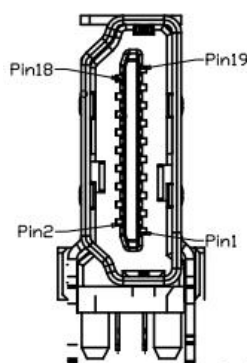


Figure 2.12 HDMI connector

Table 2.11: HDMI Pin Assignments					
Pin	Signal	Pin	Signal	Pin	Signal
1	DATA2_P	8	GND	15	SCL
2	GND	9	DATA0_N	16	SDA
3	DATA2_N	10	CLK_P	17	GND
4	DATA1_P	11	GND	18	VCC
5	GND	12	CLK_N	19	DETECT
6	DATA1_N	13	NC		
7	DATA0_P	14	NC		

Note: NC means no connection.

### 2.3.9 Mini-PCIe

KMDA-3305 provides 1 Mini-PCIe interface, Mini PCIe1 is connected to the SIM card slot, and 4G support. The following table provides a detailed introduction of the pin assignment.

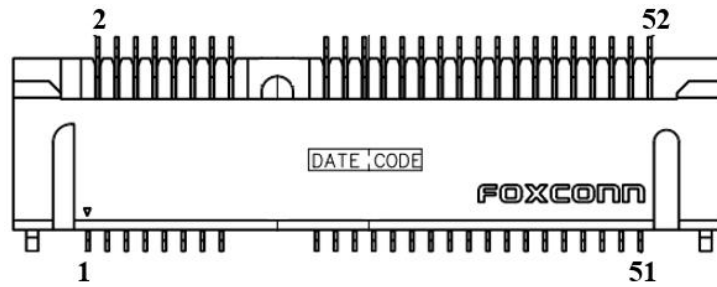


Figure 2.13 Mini-PCie slot

Table 2.12: Mini PCIe1 Pin Assignments			
Pin	Signal	Pin	Signal
1	PCIE_WAKE_N	2	+V3.3_MINICARD2
3	NC	4	GND
5	NC	6	+V1.5
7	CLKREQ#	8	+VUIM_PWR
9	GND	10	UIM_DATA
11	CLK_MIO1_PCIE-	12	UIM_CLK
13	CLK_MIO1_PCIE+	14	UIM_RESET
15	GND	16	+VUIM_VPP
17	NC	18	GND
19	NC	20	WIFI2_DISABLE#
21	GND	22	PLTRST#
23	PCIE_MINI_RX2-	24	+V3.3_MINICARD2
25	PCIE_MINI_RX2+	26	GND
27	GND	28	+V1.5
29	GND	30	SMB_SCL_RSM
31	PCIE_MINI_TX2-	32	SMB_SDA_RSM
33	PCIE_MINI_TX2+	34	GND
35	GND	36	USB_D-
37	GND	38	USB_D+
39	+V3.3_MINICARD2	40	GND
41	+V3.3_MINICARD2	42	NC
43	GND	44	NC
45	NC	46	NC
47	NC	48	+V1.5
49	NC	50	GND
51	NC	52	+V3.3_MINICARD2

### 2.3.10 mSATA

KMDA-3305 provides a full size mSATA slot, pin assignments as follows:

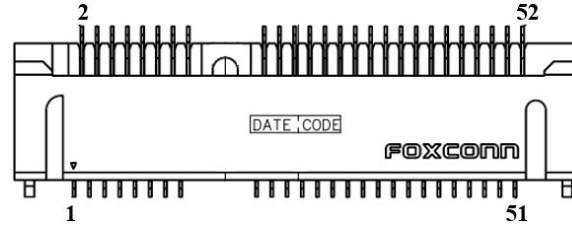


Figure 2.14 mSATA slot

Table 2.13: mSATA Pin Assignments			
Pin	Signal	Pin	Signal
1	NC	2	+V3.3
3	NC	4	GND
5	NC	6	+V1.5
7	NC	8	LPC_FRAME#
9	GND	10	LPC_AD3
11	NC	12	LPC_AD2
13	NC	14	LPC_AD1
15	GND	16	LPC_AD0
17	PLTRST#	18	GND
19	LPC_CLK1	20	NC
21	GND	22	PLTRST#
23	SATA1_mSATA_z_RX+	24	+V3.3
25	SATA1_mSATA_z_RX-	26	GND
27	GND	28	+V1.5
29	GND	30	SMB_SCL
31	SATA1_mSATA_z_TX-	32	SMB_SDA
33	SATA1_mSATA_z_TX+	34	GND
35	GND	36	NC
37	GND	38	NC
39	+V3.3	40	GND
41	+V3.3	42	NC
43	GND	44	NC
45	NC	46	NC



47	NC	48	+V1.5
49	NC	50	GND
51	NC	52	+V3.3

### 2.3.11 COM1/2/3/4/5/6

KMDA-3305 provides six COMs through two 1\*6pin Phoenix terminals (COM1/2/3/4) and one 1\*10pin Phoenix terminal (COM5/6), two in RS232 mode (COM1/2), two in RS485 mode (COM3/4), and two in RS232/485 optional mode (COM5/6). Mode selection is controlled through a four digit dial switch. Among them, COM5/6 is led out by the pin serial port colay inside the board. The introduction of pin allocation is as follows:

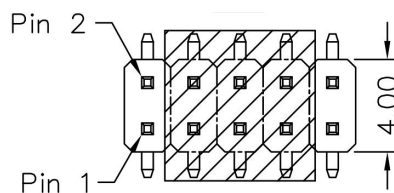


Figure 2.15 Serial port pin



Figure 2.16 COM5/6

Tabel 2.14: COM5/6 Pin Assignments		
Pin	RS-232 Signal	RS-485 Signal
1	RxD _1	NC
2	TxD _1	NC
3	GND	GND
4	NC	DATA_1-
5	NC	DATA_1+
6	RxD _2	NC
7	TxD _2	NC
8	GND	GND
9	NC	DATA_2-
10	NC	DATA_2+

Note: NC means no connection.

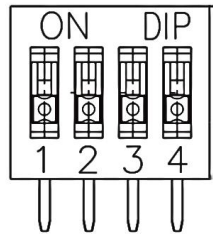


Figure 2.17 4-digit dial switch

		Switch							
		1	2	3	4				
COM5	RS232	ON	ON	OFF	OFF				
	RS485 (DEF)	OFF	OFF	ON	ON				
COM6	RS232					ON	ON	OFF	OFF
	RS485 (DEF)					OFF	OFF	ON	ON

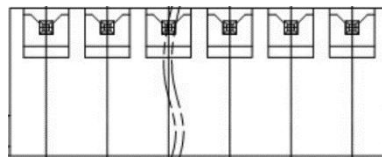


Figure 2.18 1\*6pin Phoenix terminal

Tabel 2.15: COM1/2 Pin Assignments

Pin	RS-232 Signal
1	RxD _1
2	TxD _1
3	GND
4	RxD _2
5	TxD _2
6	GND

Tabel 2.16: COM3/4 Pin Assignments

Pin	RS-485 Signal
1	DATA_1-
2	DATA_1+
3	GND
4	DATA_2-
5	DATA_2+
6	GND

### 2.3.12 Front PANEL

KMDA-3305 provides a F\_PANEL interface. Table 2.18 provides a detailed description of pin assignments.

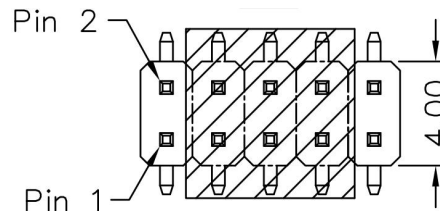


Figure 2.19 F-Panel

Table 2.17: F_PANEL Pin Assignments			
Pin	Signal	Pin	Signal
1	HDD_LED+	6	PWR_SW#_C
2	PWR_LED+	7	RST_SW#
3	HDDLED-	8	GND
4	PWR_LED-	9	NC
5	GND	10	NC

### 2.3.13 LED

The KMDA-3305 panel has one power indicator LED (green, on the switch button), one hard disk indicator LED (red), and three CPU operating temperature indicators. The user can monitor the working condition of the machine by the status of the CPU indicator. When the working temperature of the CPU is less than 85°C, the green light is on. When the CPU temperature is between 86°C and 95°C, the yellow indicator is on, and when the CPU operating temperature is greater than or equal to 96°C, the red indicator is on. If you keep the CPU running at red light, it will affect the service life of the machine.



Figure 2.20 CPU temperature indicator light

Table 2.18: LEDs Status indicates the CPU temperature level	
LEDs	工作状态
Red	Warning
Yellow	High
Green	Normal

### 2.3.14 DC OUT

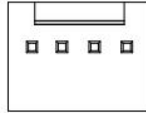


Figure 2.21 DC OUT

Tabel 2.19: 12V DC OUT Power Pin Assignments			
引脚	信号	Pin	Signal
1	GND	2	GND
3	+24V	4	+24V

### 2.3.15 CAN1/2

KMDA-3305 provides two isolated CAN through a 1\*6 pin Phoenix terminal, with pin assignments as follows:

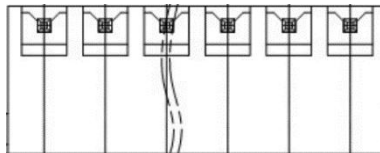


Figure 2.22 CAN1/2

Tabel 2.20: CAN1/2 Pin Assignments	
Pin	Signal
1	CANH1
2	CANL1
3	GND
4	CANH2
5	CANL2
6	GND

## 2.4 Install

### 2.4.1 Install Mini PCIe/mSATA/M.2 B-Key module

Step 1: Unscrew the 4 screws on the bottom cover and remove the bottom cover;

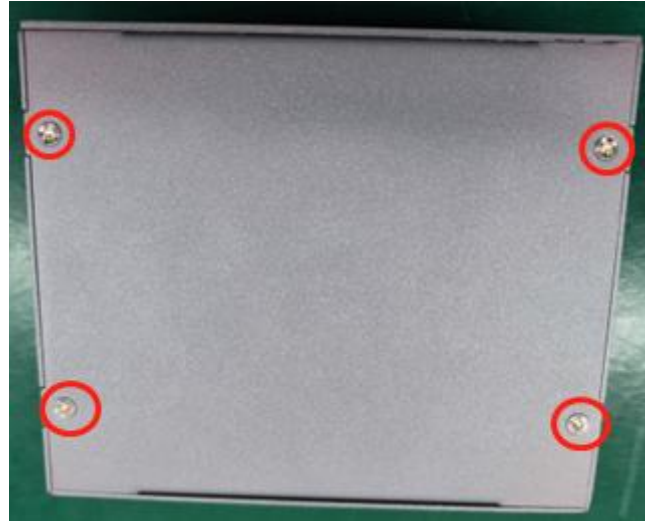


Figure 2.23

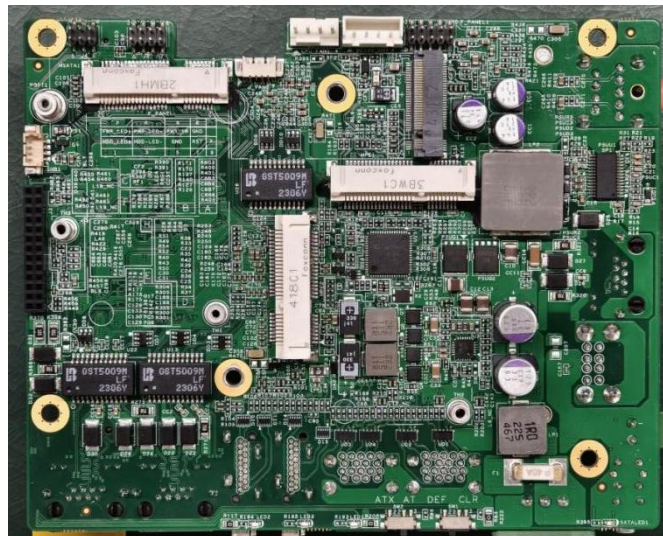


Figure 2.24

Step 2: Hold the Mini PCIe/mSATA/M.2 B-Key module so that its slot is aligned with the Mini PCIe/mSATA/M.2 B-Key slot on the board, insert it into the socket at a 30 degree Angle, and tighten one screw to secure the installed module;

Step 3: Complete the product installation by following the steps for removing and installing the product.