B377FTWL1
User's Manual

Revision: 1.0
Release Date: July 27, 2026

Trademark:

*** Specifications and Information contained in this documentation are furnished for information use only, and are subject to change at any time without notice, and should not be construed as a commitment by manufacturer.**

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Environmental Protection and Safety Announcement

- Do not dispose this electronic device into the trash while discarding. To minimize pollution and ensure environment protection of mother earth, please recycle.

- Avoid the dusty, humidity and temperature extremes. Do not place the product in any area where it may become wet.

- Generally speaking, dramatic changes in temperature may lead to contact malfunction and crackles due to constant thermal expansion and contraction from the welding spots' that connect components and PCB. Computer should go through an adaptive phase before it boots when it is moved from a cold environment to a warmer one to avoid condensation phenomenon. These water drops attached on PCB or the surface of the components can bring about phenomena as minor as computer instability resulted from corrosion and oxidation from components and PCB or as major as short circuit that can burn the components. Suggest starting the computer until the temperature goes up.

- The increasing temperature of the capacitor may decrease the life of computer. Using the close case may decrease the life of other device because the higher temperature in the inner of the case.

China RoHS Requirements (EN)

Poisonous or Hazardous Substances or Elements in Products

Main Board/ Daughter Board/ Backplane

Name and content of hazardous substances in productPart Name						
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯(PBB)	多溴二苯醚(PBDE)
PCB Assemblies	X	○	○	○	○	○
Connector and Cable	X	○	○	○	○	○
Chassis	○	○	○	○	○	○
Hard Disk	X	○	○	○	○	○
CPU and Memory	X	○	○	○	○	○
Power	X	○	○	○	○	○
Battery	X	○	○	○	○	○

The table is prepared in accordance with the provisions of SJ/T 11364.

○：Indicates that said hazardous substance contained in all of the homogenous materials for this product is below the limit requirement of GB/T 26572.

×：Indicates that said hazardous substance contained in at least one of the homogenous materials used for this part is above the limit requirement of GB/T 26572.

But this product still be compliance with 2011/65/EU Directive(allowed with 2011/65/EU Annex III of RoHS exemption with number 6(c),7(a),7(c)-1)

Notes：

1. This product defined period of use is under normal condition.
2. In above part, CPU/Memory/ Hard Disk/ Power are optional.

User's Notice

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Manual Revision Information

Reversion	Revision History	Date
1.0	First Edition	July 27, 2026

Packing List

Part Number	Description	QTY per System
B377FTWL1	B377FTWL1 Barebone	1
HCSFBMWM01B-F	Wallmount Kit	2
L01AS053-F	Adapter 12V/5A 60W	1
LCSCHBJC3XX-F	Screw Pack	1
Change according to shipping area	Power Cord (Region Specific)	1

Chapter 1 Introduction of the Motherboard

1-1 Specifications

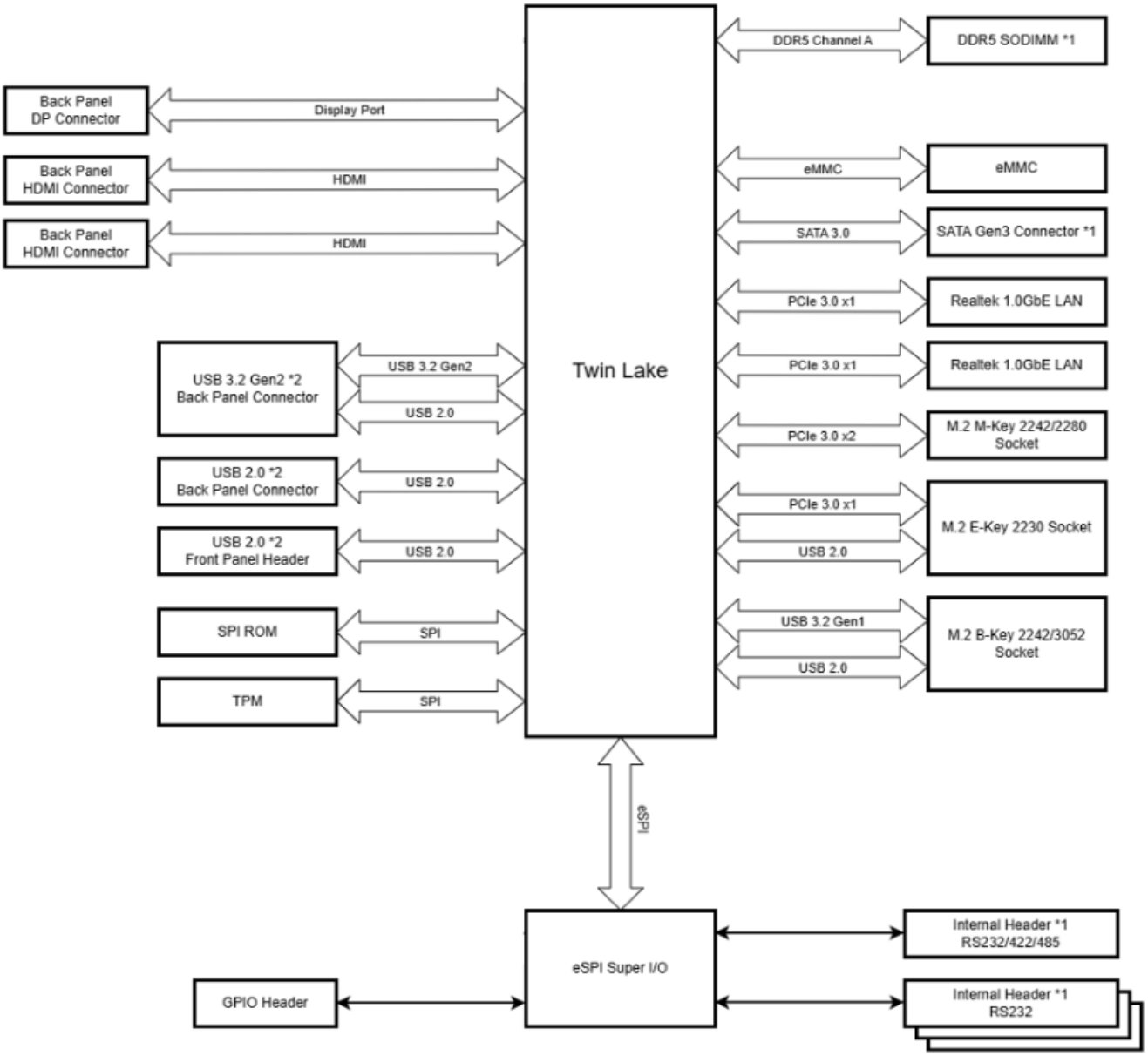
SYSTEM	
FORM FACTOR	Compact
CPU	Onboard Intel® Processor N150 (Formerly Twin Lake, TDP 6W) For additional compatible CPUs, please contact regional sales
CHIPSET	Intel® SoC
MEMORY	1 x DDR5 4800MT/s, Single Channel SO-DIMM, up to 32GB
BIOS	UEFI
WAKE ON LAN	Yes
WATCHDOG TIMER	255 Levels
SECURITY	TPM2.0 (dTPM, Optional)
RTC BATTERY	Lithium Battery
OS SUPPORT	Windows® 11 (64bit) Windows® 10 (64bit) Linux
POWER	
POWER REQUIREMENT	DC-in 12V
POWER ON MODE	AT / ATX (Default) Mode
DISPLAY	
GPU	Intel® Graphics
DP	1 x DP1.4a (Max Resolution: 4096 x 2160@60Hz)
HDMI	2 x HDMI® 2.1 TMDS (Max Resolution: 4096 x 2160@60Hz)
MULTIPLE DISPLAY	Support 3 Displays
AUDIO	
CODEC	Realtek ALC897
LAN	
ETHERNET	2 x RJ45 for Realtek® RTL8111H GbE
SYSTEM I/O	
REAR PANEL I/O	2 x USB 3.2 Gen 2x1 (10Gbps, Formerly USB 3.1 Gen 2) 2 x USB 2.0 2 x RJ45 1 x DP

	2 x HDMI® 1 x DC Jack
FRONT PANEL I/O	1 x Power Button 1 x Reset Button 1 x Power LED 1 x HDD LED 2 x USB 2.0 1 x Line-out 1 x MIC-in 1 x RS-232/422/485 3 x RS-232
STORAGE	
SATA	1 x 2.5" SATA 6Gb/s internal drive bay (only Support 2.5" HDD with a height ≤ 10mm)
EM.2 & MINI CARD	
M.2	1 x B-Key 3042/3052 (USB 3.2) for 4G/5G/LTE 1 x E-Key 2230 (USB 2.0/PCIe x1) for WIFI/BT Module 1 x M-Key 2280 (PCIe 3.0 x2) Support NVMe
SIM	1 x Nano SIM Card Slot
OTHERS	
OTHER	1 x GPIO (8 Bit)
ENVIRONMENT & CERTIFICATION	
OPERATING TEMPERATURE	-20°C ~ 60°C (-4°F ~ 140°F)
STORAGE TEMPERATURE	-20°C ~ 85°C (-4°F ~ 185°F)
OPERATING HUMIDITY	10 ~ 90% Relative Humidity, Non-condensing
CERTIFICATION	CE/FCC Class A

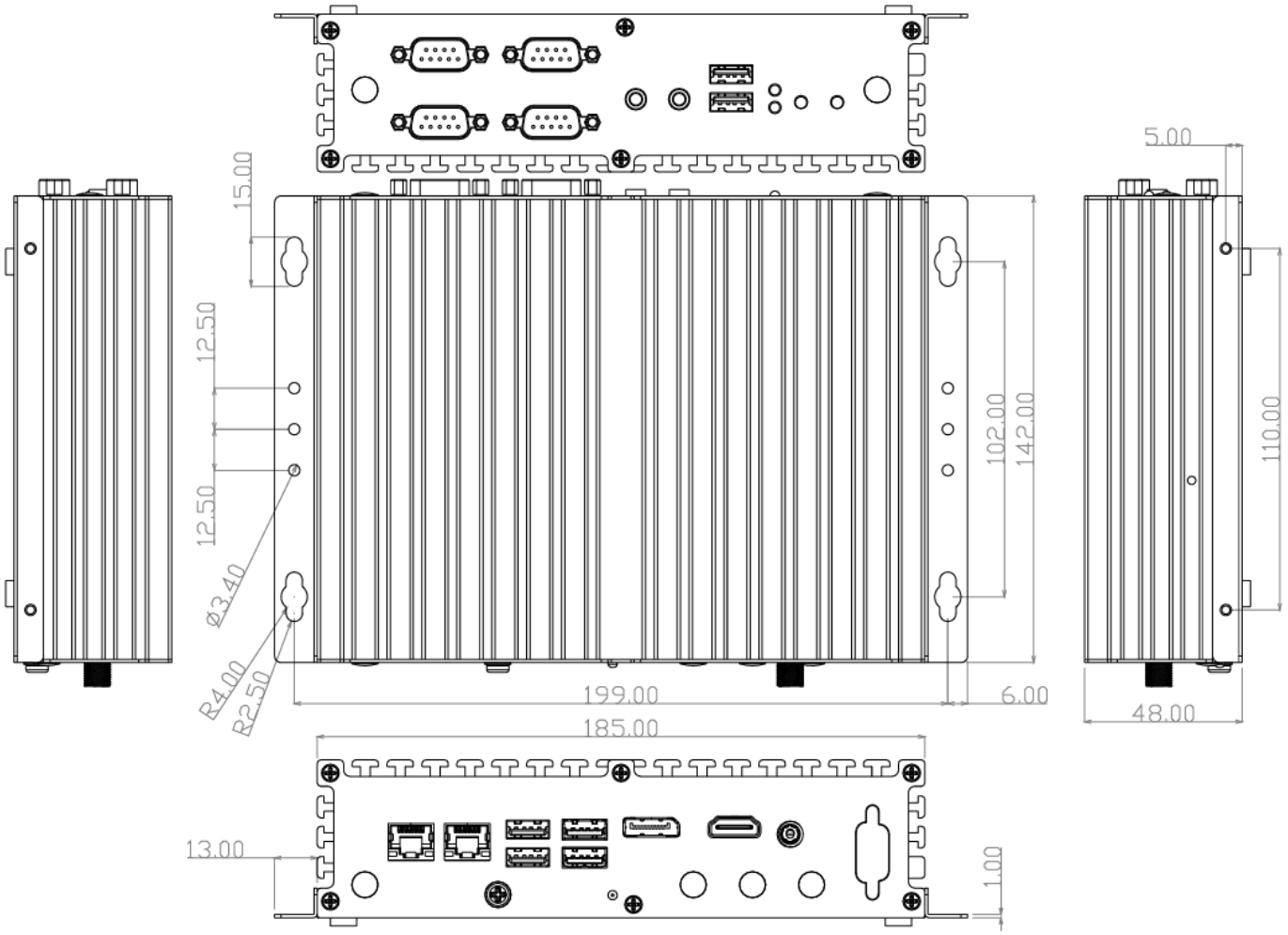
Ordering Information

PART NUMBER	B377FTWL1-A111	B377FTWL1-A211
SECURITY	Intel® PTT (fTPM)	TPM2.0

1-2 Block Diagram

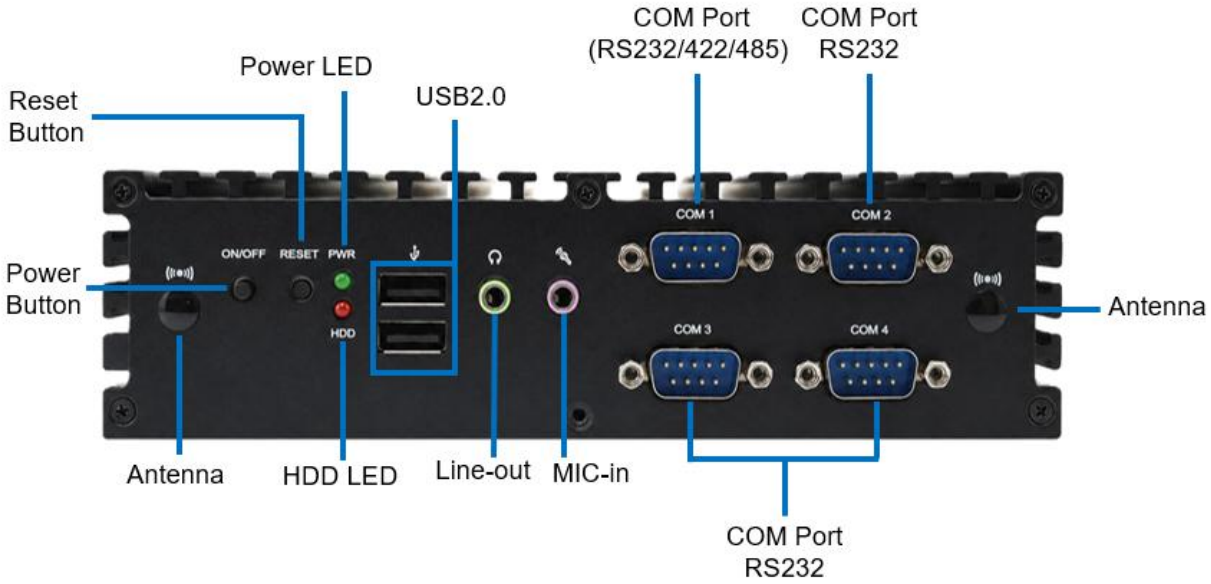


1-3 Dimension

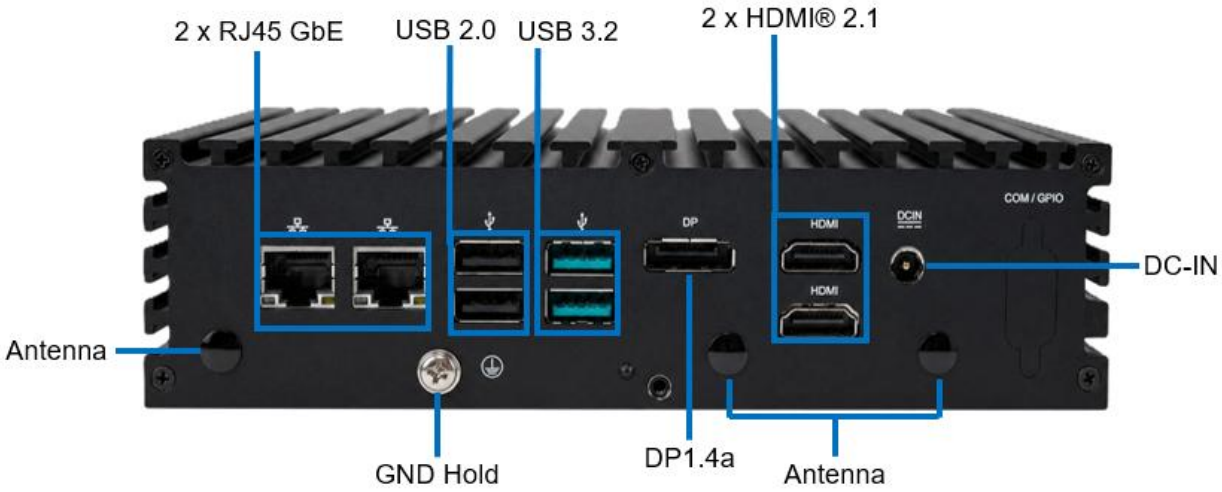


1-4 I/O Placement

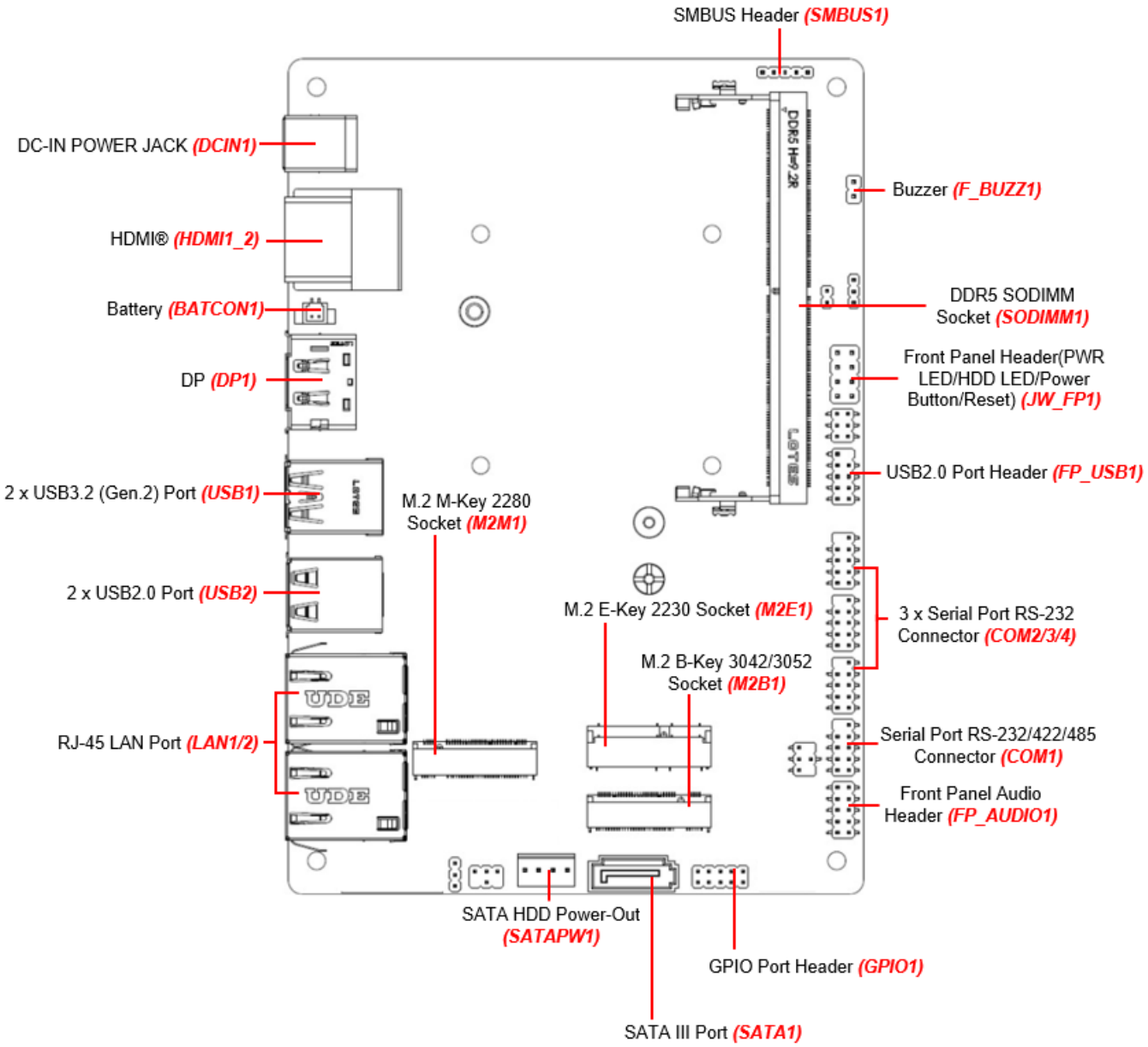
Front I/O

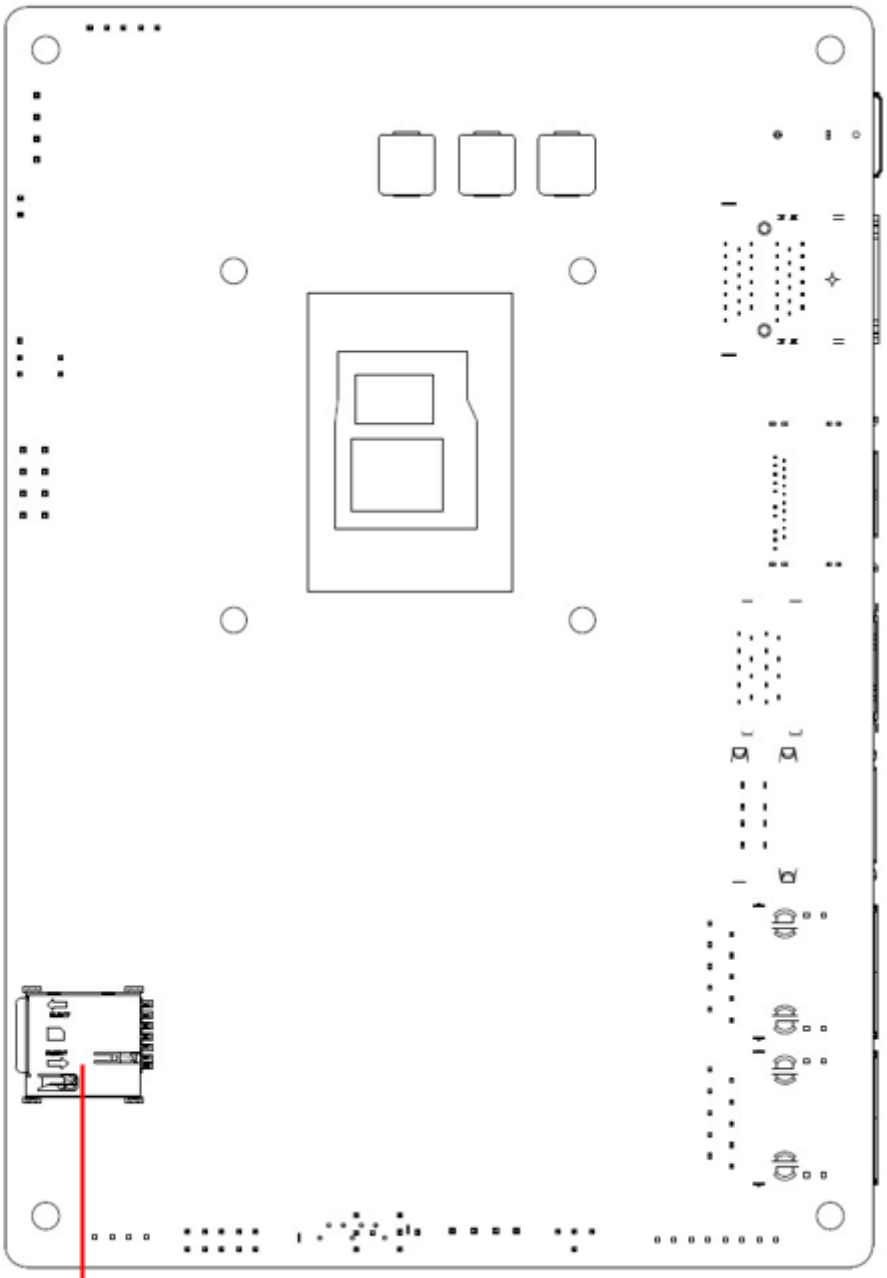


Rear I/O



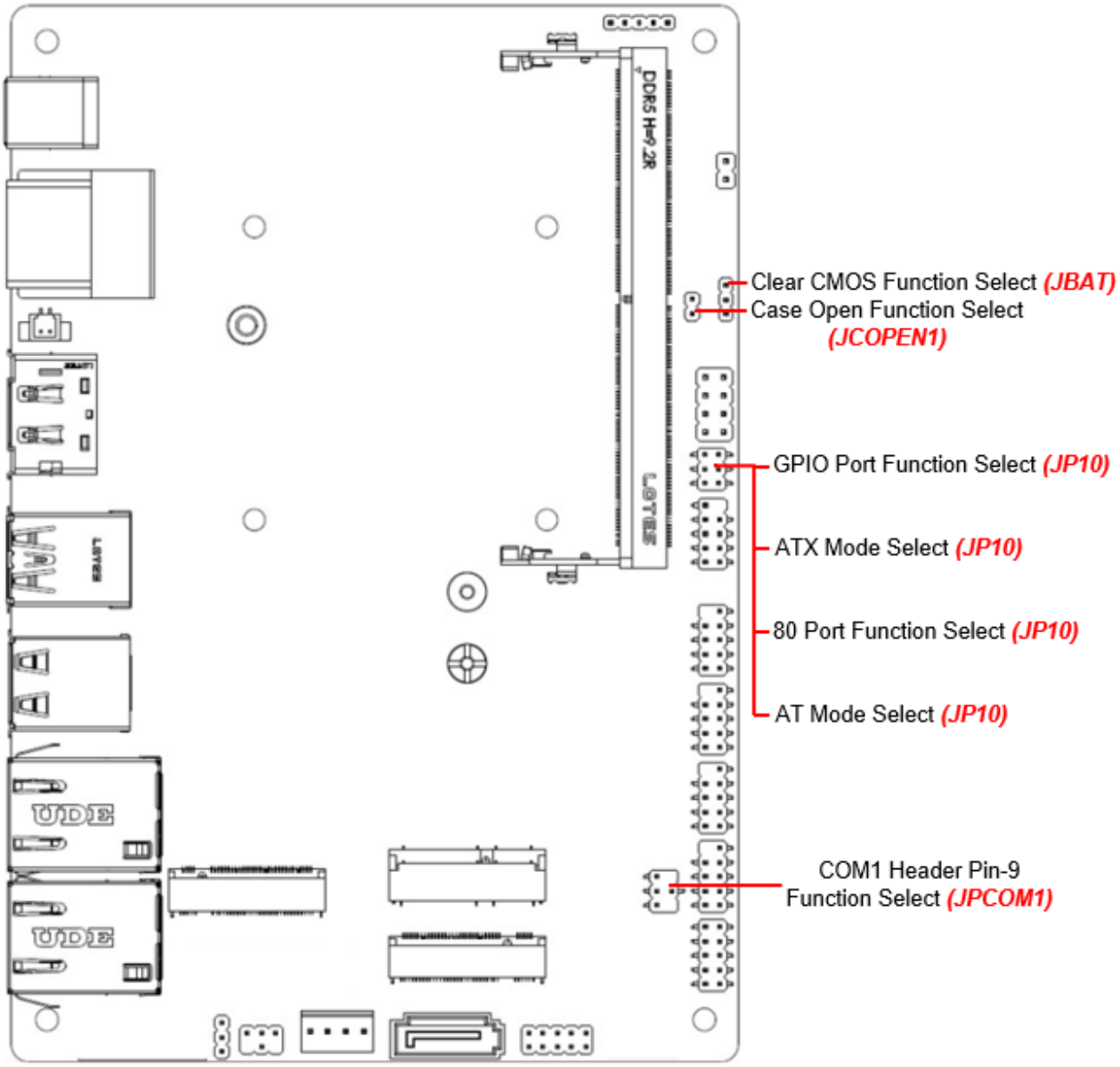
1-5 Motherboard Placement





Nano-SIM Card Socket ***(SIMCARD1)***

1-6 Jumper Positions



Chapter 2 Hardware Information

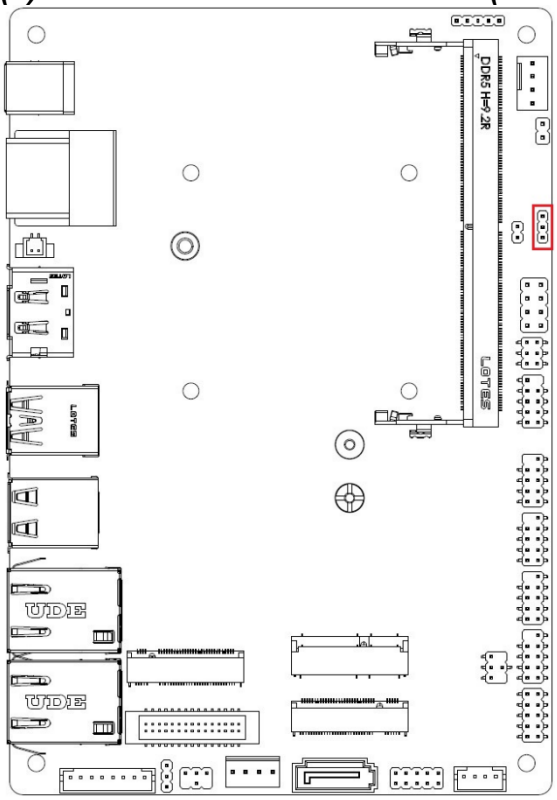
2-1 List of Jumpers

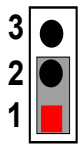
Please refer to the table below for all of the board's jumpers that you can configure for your application.

Location Printing	Function
JBAT	Clear CMOS Function Select
JCOPEN1	Case Open Function Select
JP10 1-3	GPIO Port Function Select
JP10 2-4	ATX Mode Select
JP10 3-5	80 Port Function Select
JP10 4-6	AT Mode Select
JP11	Inverter VCC 5V / 12V Function Select
JPCOM1	COM1 Header Pin-9 Function Select

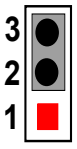
2-2 Jumper Settings

(1) Clear CMOS Function Select (JBAT)



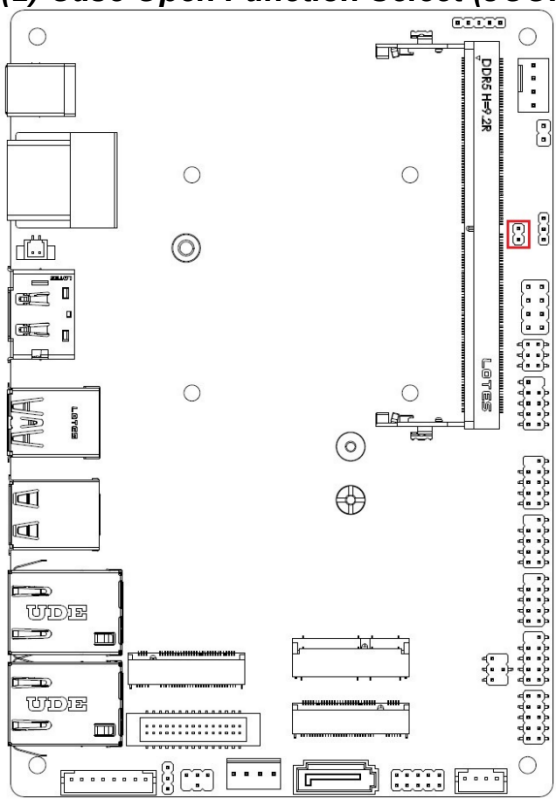


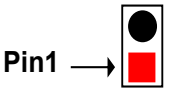
1-2 Closed: Normal



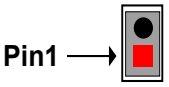
2-3 Closed: Clear CMOS

(2) Case Open Function Select (JCOPEN1)



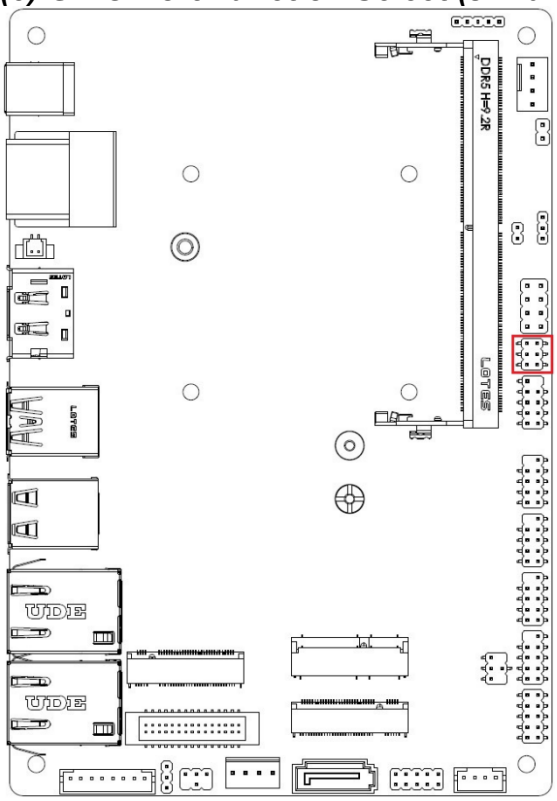


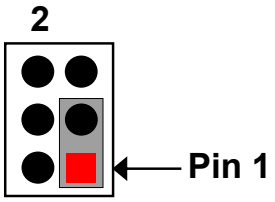
1- 2 Open: Normal



1-2 Closed: CASE Open

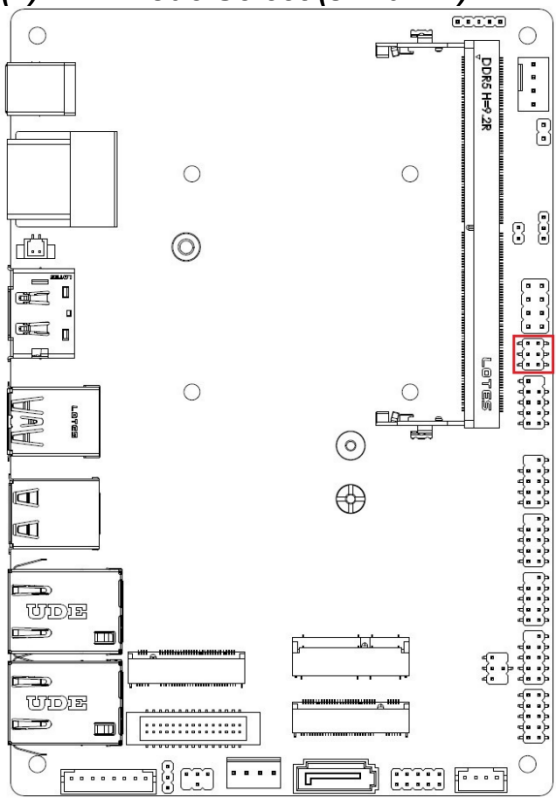
(3) GPIO Port Function Select (JP10 1-3)

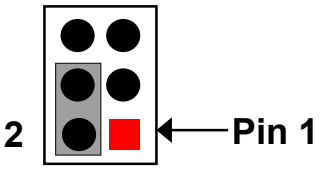




1-3 Close: GPIO

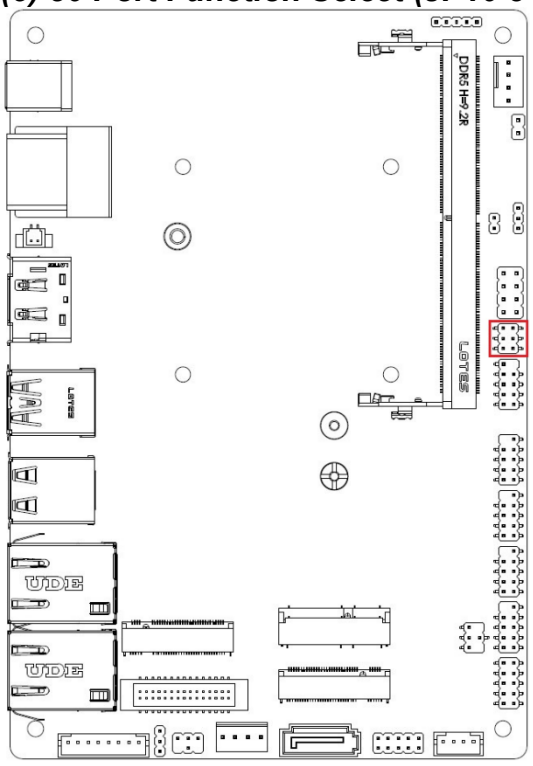
(4) ATX Mode Select (JP10 2-4)

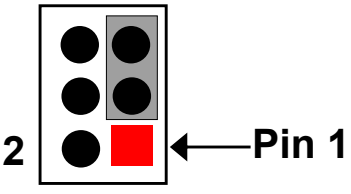




2-4 Close: ATX Mode

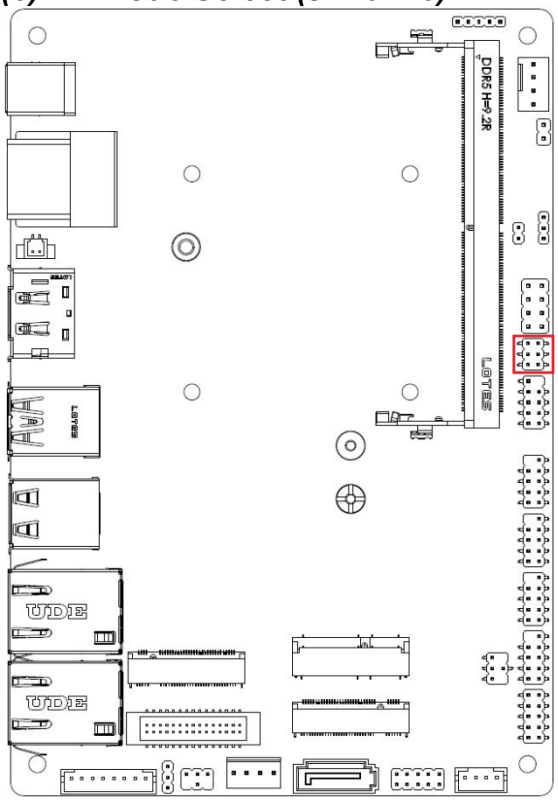
(5) 80 Port Function Select (JP10 3-5)

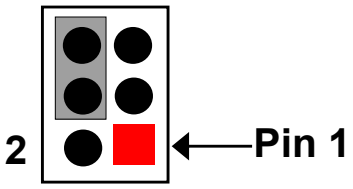




3-5 Closed: 80 Port

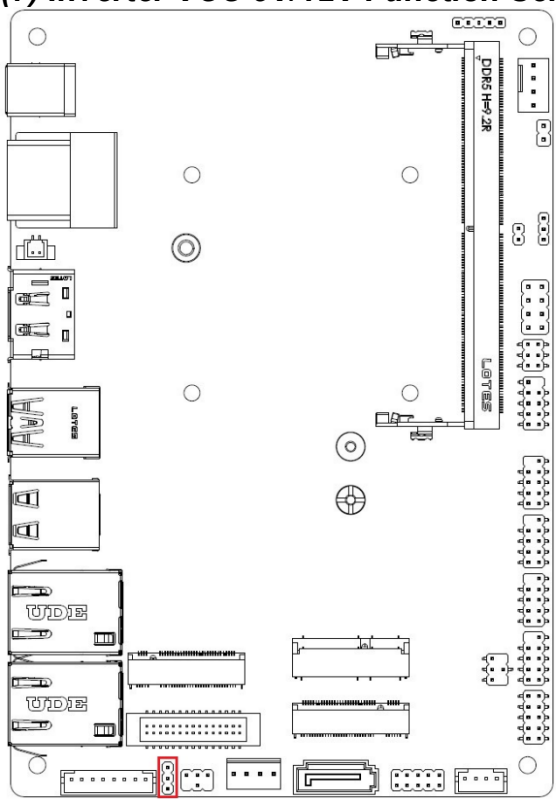
(6) AT Mode Select (JP10 4-6)

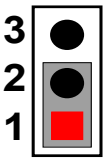




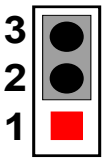
4-6 Closed: AT Mode

(7) Inverter VCC 5V/12V Function Select (JP11)



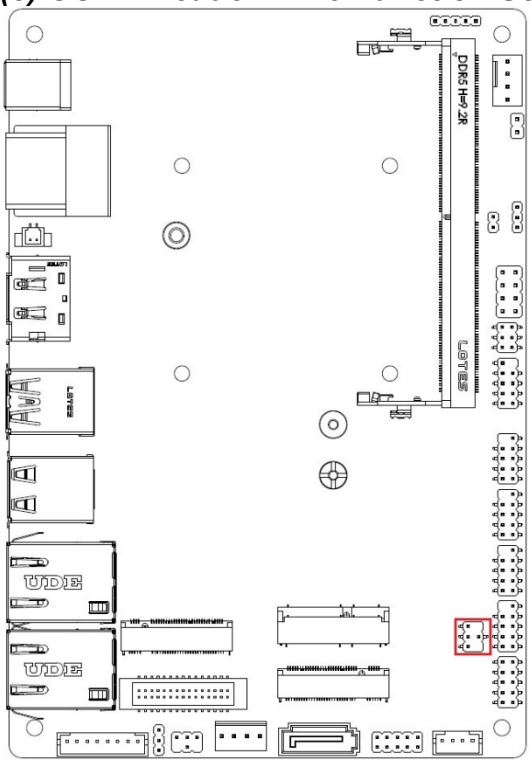


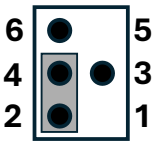
1-2 Closed
= +5V



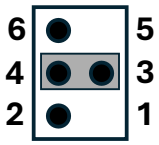
2-3 Closed
= +12V

(8) COM1 Header Pin-9 Function Select (JPCOM1)

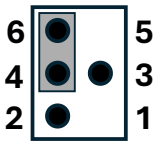




2-4 Closed
DB9= RI



3-4 Closed
DB9= +5V



4-6 Closed
DB9= +12V

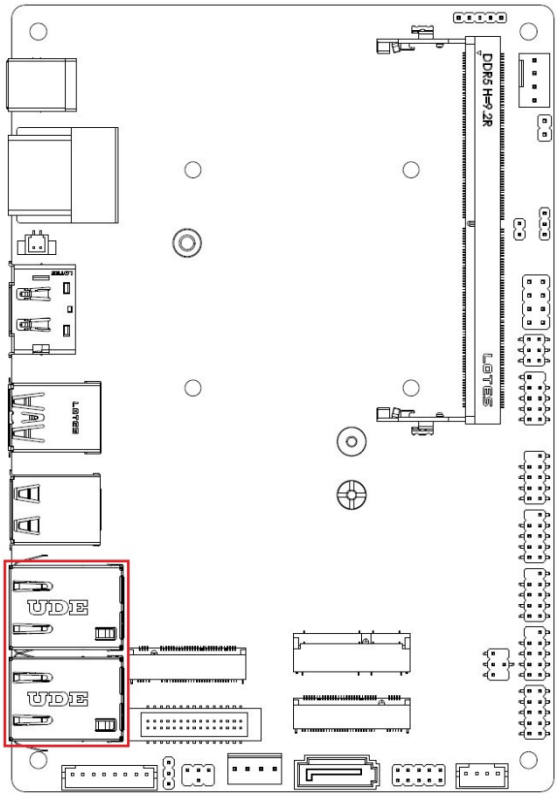
2-3 List of Connectors

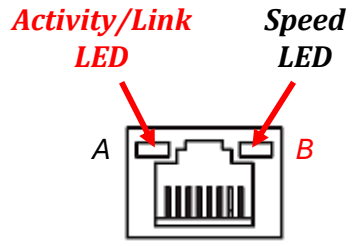
Please refer to the table below for all of the board's jumpers that you can configure for your application.

Location Printing	Function
LAN1	RJ-45 LAN Port Connector
LAN2	RJ-45 LAN Port Connector
USB1	USB3.2 (Gen2) Port Connector
USB2	USB2.0 Port Connector
DP1	DP1.4a Port Connector
HDMI1_2	HDIM2.0b Port Connector
DCIN1	DC JACK 12V DC-in Power Connector
F_AUDIO1	Front Panel Audio Header Line-In/Line-Out/Mic
BATCON1	Battery Connector
FP_USB1	Dual USB2.0 Port Header
M2B1	M.2 2242/3052 Key B Socket
M2E1	M.2 2230 Key E Socket
M2M1	M.2 2280 Key M Socket
SATA1	SATAIII Port Connector
SATAPW1	SATA HDD Power-out Connector
COM1	Serial Port (RS232/422/485) Connector
COM2/3/4	Serial Port RS232 Connector
SIMCARD1	Nano-SIM Card Socket
GPIO1	GPIO Port Header
SODIMM1	DDR5 SODIMM Socket
F_BUZZ1	Buzzer Header
JW_FP1	Front Panel Header (PWR LED/HDD LED/Power Button/Reset)

2-4 Connector Settings

(1) RJ-45 LAN Port Connector (LAN1/2)

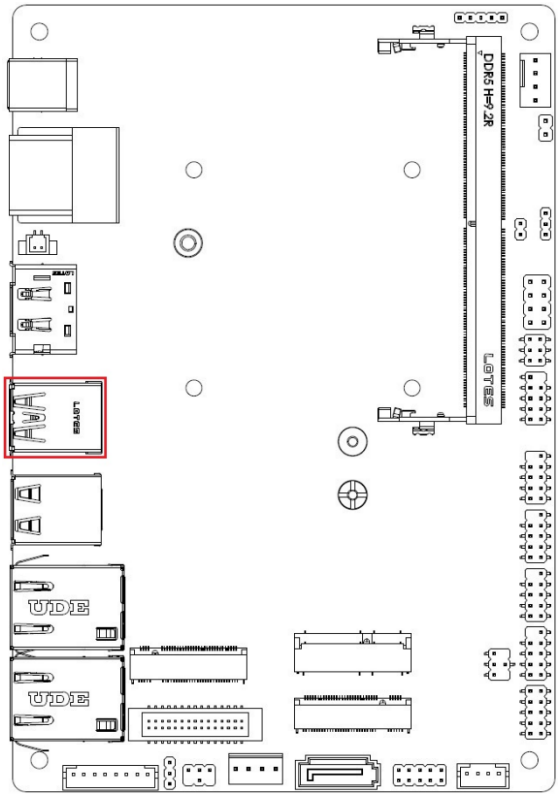




A：Activity/Link LED		B：Speed LED	
Status	Description	**Status**	Description
Off	No Link	**Off**	10Mbps connection
Blinking	Data Activity	**Orange**	1000Mbps connection
On	Link	**Green**	100Mbps connection

Note: Standard specifications.

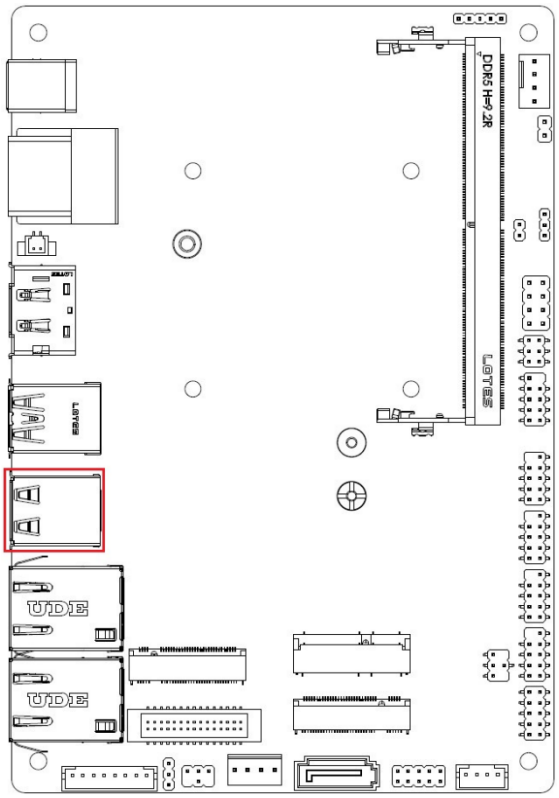
(2) USB3.2 (Gen2) Port Connector (USB1)





Note: Standard specifications.

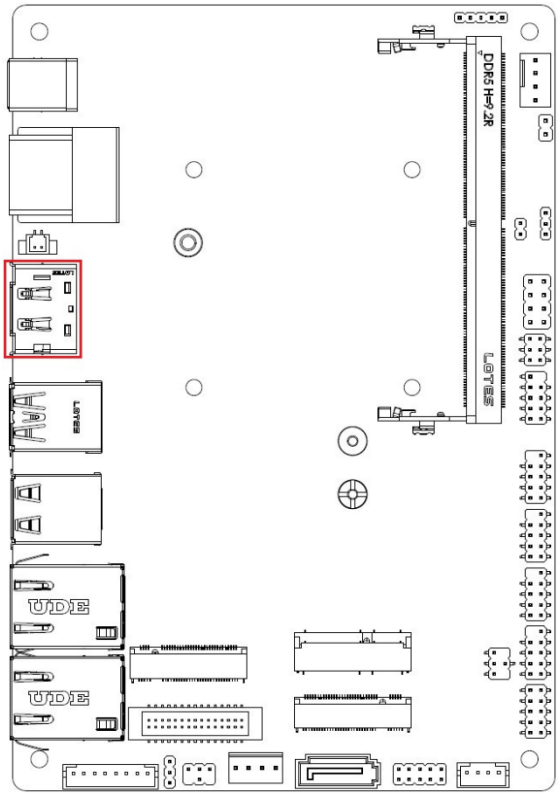
(3) USB2.0 Port Connector (USB2)

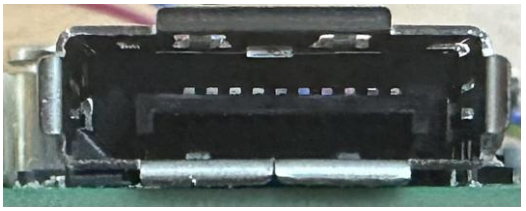




Note: Standard specifications.

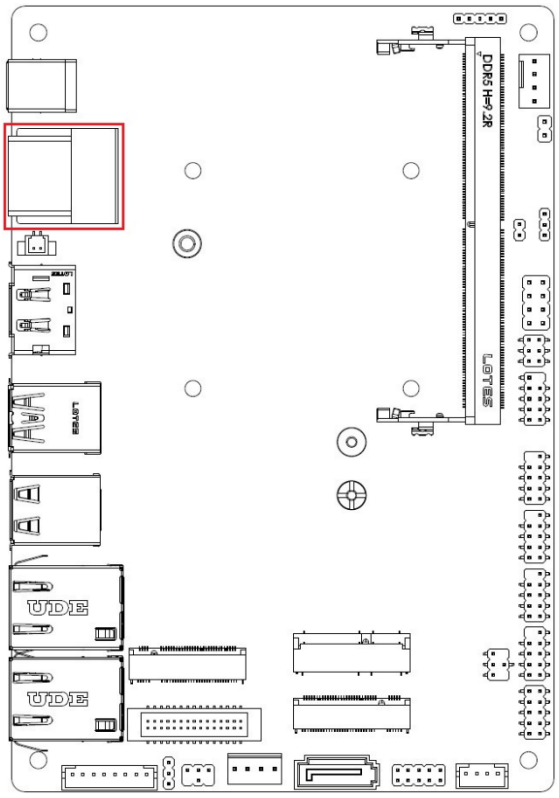
(4) DP1.4a Port Connector (DP1)





Note: Standard specifications.

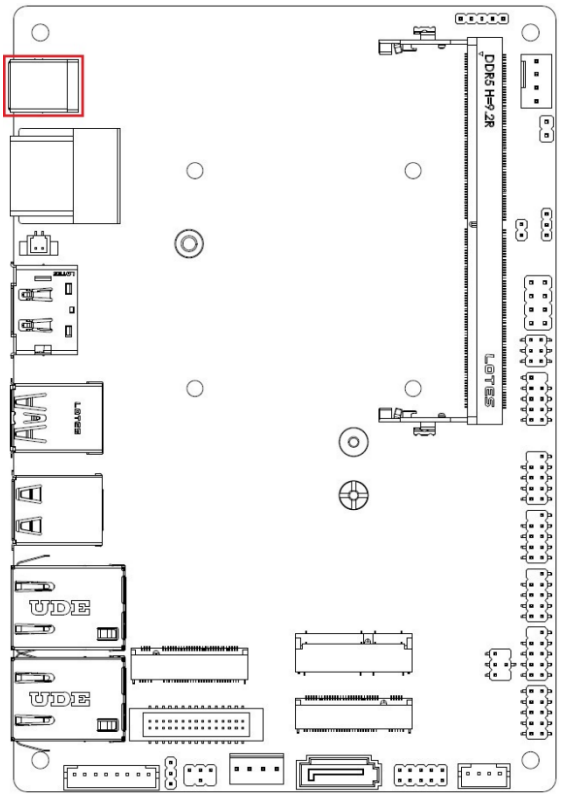
(5) HDIM2.0b Port Connector (HDMI1_2)





Note: Standard specifications.

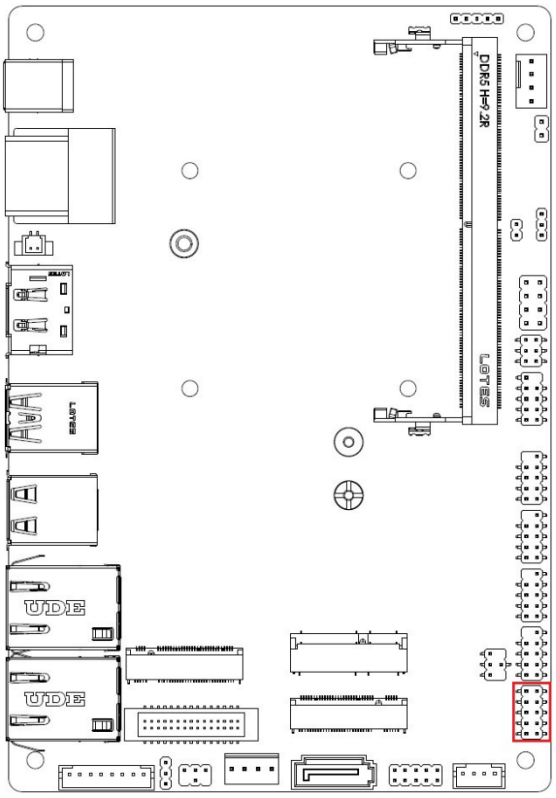
(6) DC JACK 12V DC-in Power Connector (DCIN1)

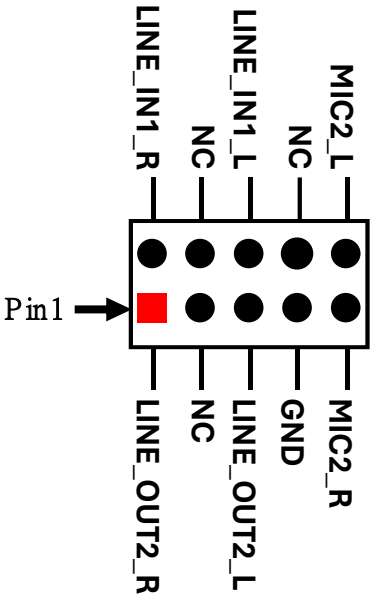




Note: Standard specifications.

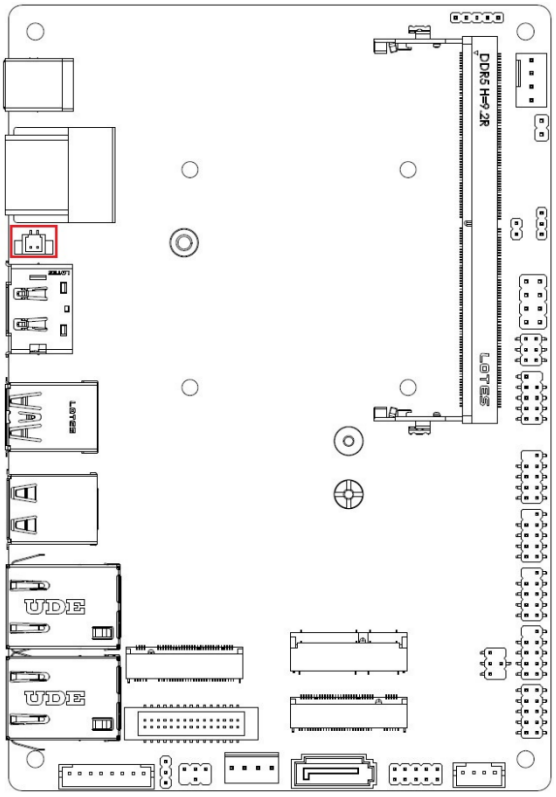
(7) Front Panel Audio Header LineIn/LineOut/Mic (FP_AUDIO1)

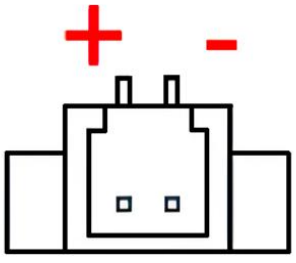




Note: Standard specifications.

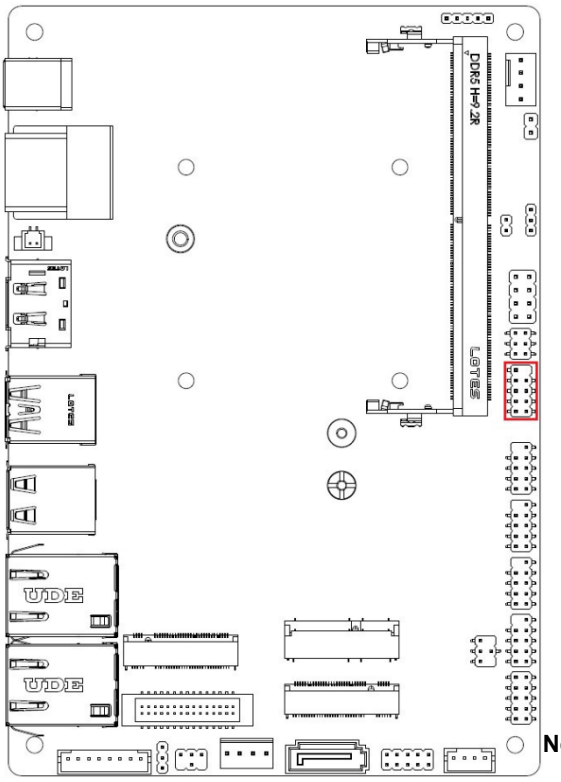
(8) Battery Connector (BATCON1)

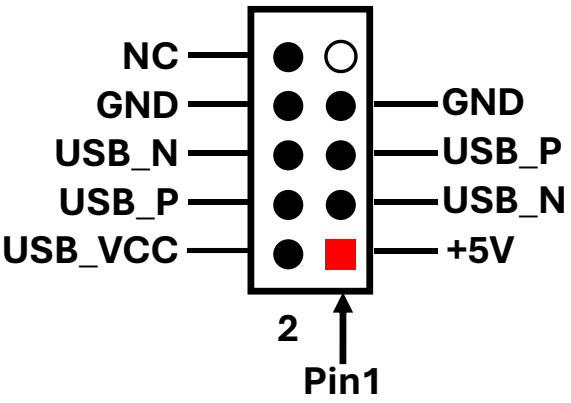




Note: Standard specifications.

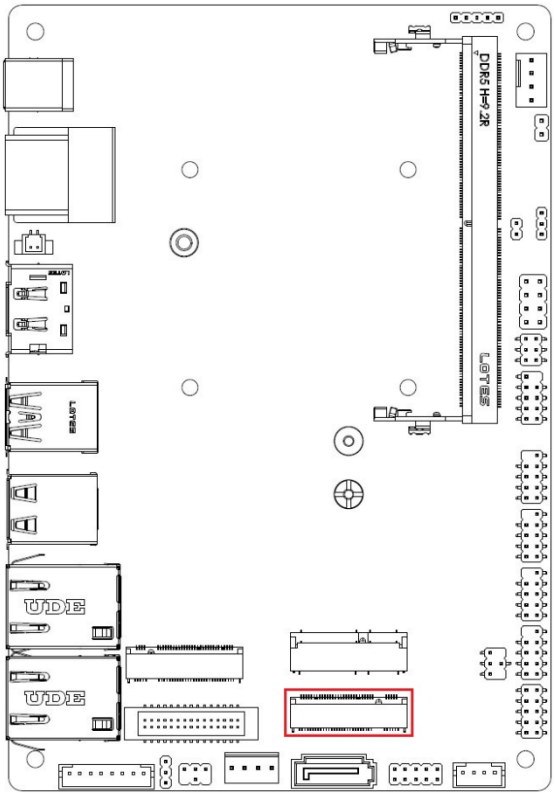
(9) Dual USB2.0 Port Header (FP_USB1)





Note: Standard specifications.

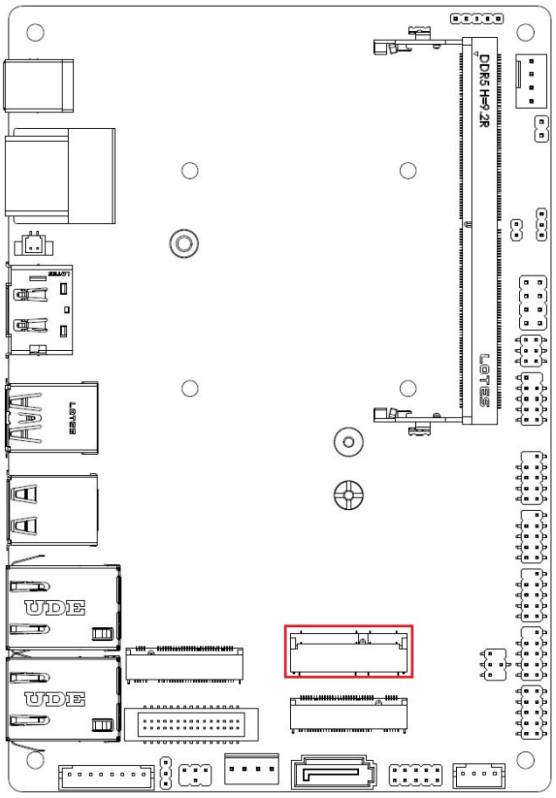
(10) M.2 2242/3052 Key B Socket (M2B1)





Note: Standard specifications.

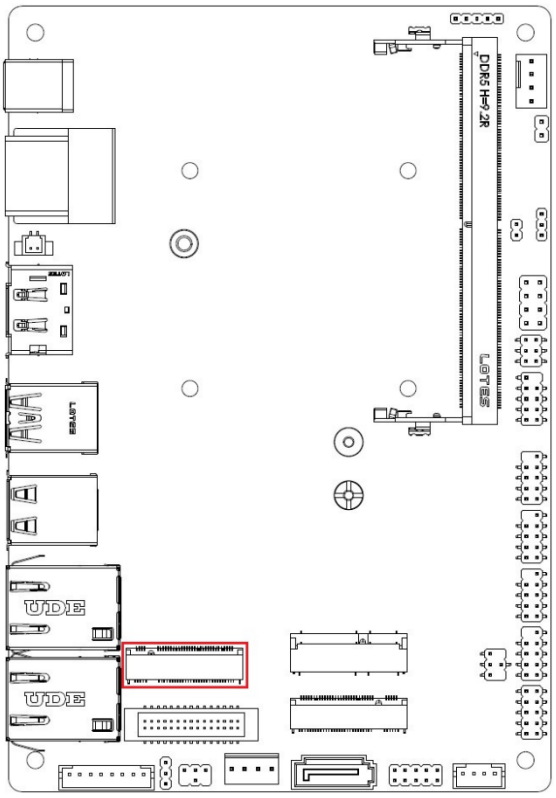
(11) M.2 2230 Key E Socket (M2E1)





Note: Standard specifications.

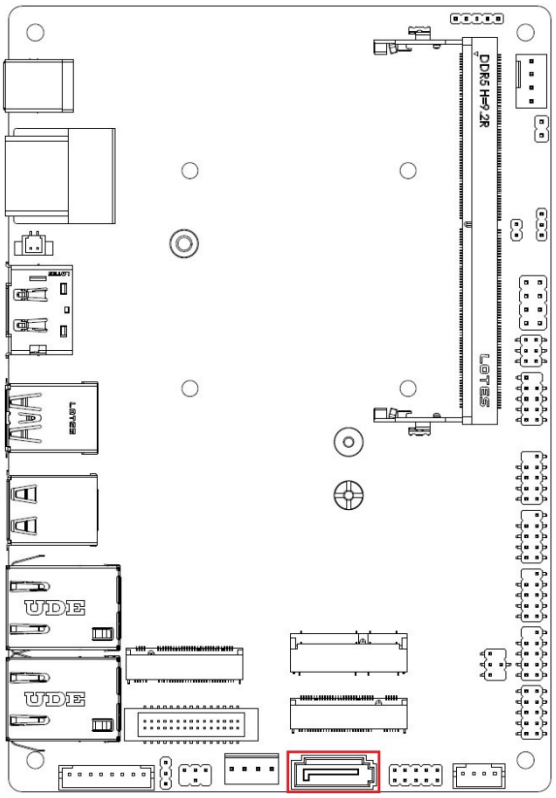
(12) M.2 2280 Key M Socket (M2M1)





Note: Standard specifications.

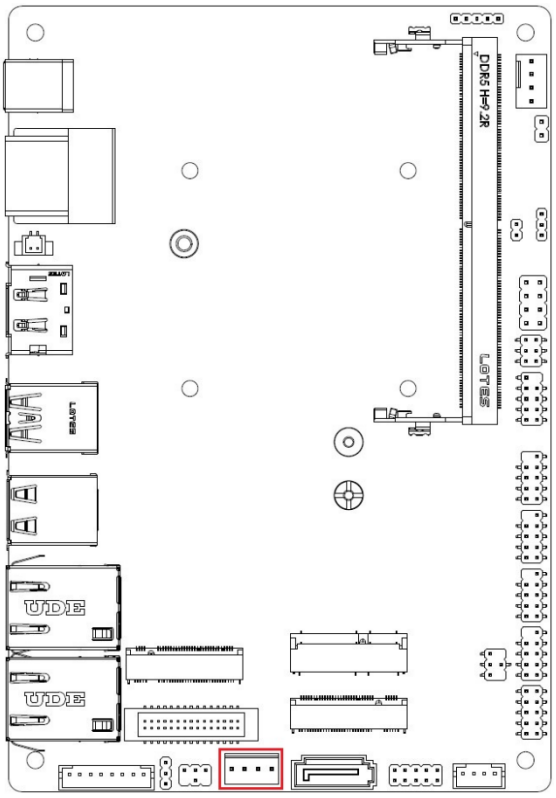
(13) SATAIII Port Connector (SATA1)

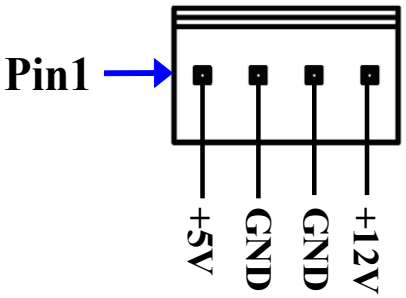


Pin No.	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

Note: Standard specifications.

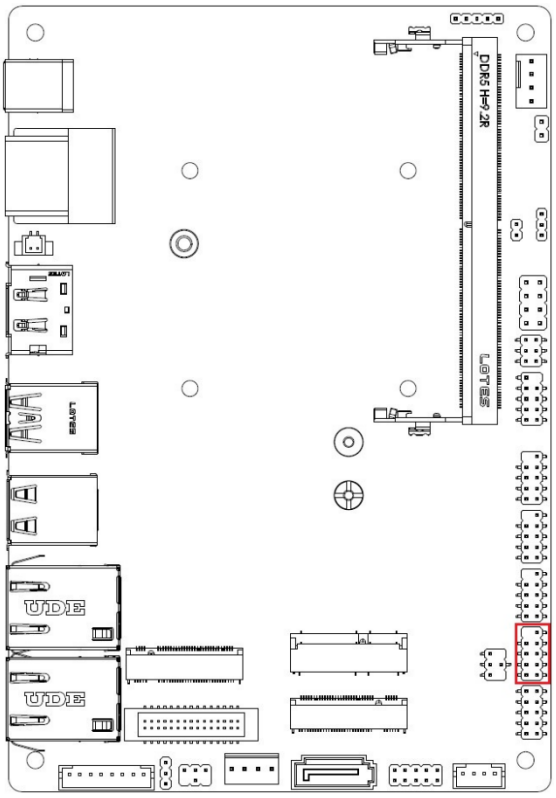
(14) SATA HDD Power-out Connector (SATAPW1)

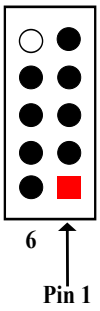




Note: Standard specifications.

(15) Serial Port (RS232/422/485) Connector (COM1)

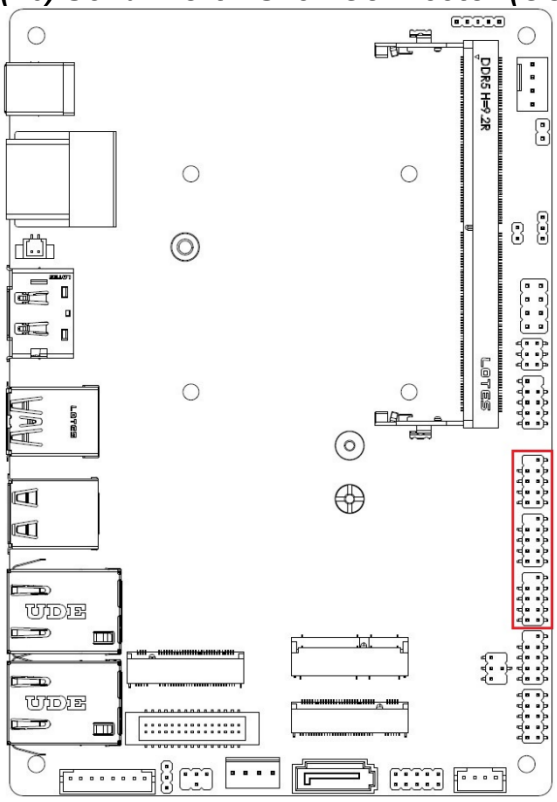


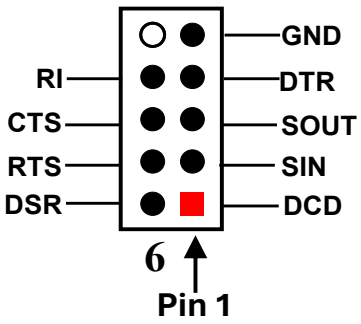


Pin NO.	RS232	*RS422 (optional)	*RS485 (optional)
Pin 1	DCD	TX-	DATA-
Pin 2	RXD	TX+	DATA+
Pin 3	TXD	RX+	NC
Pin 4	DTR	RX-	NC
Pin 5	GND	GND	GND
Pin 6	DSR	NC	NC
Pin 7	RTS	NC	NC
Pin 8	CTS	NC	NC
Pin 9	RI	NC	NC

Note: Standard specifications.

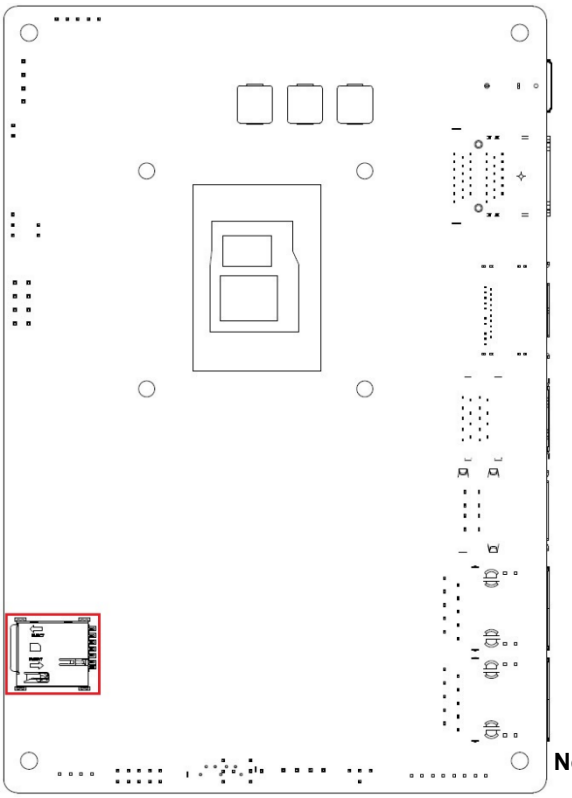
(16) Serial Port RS232 Connector (COM2/3/4)

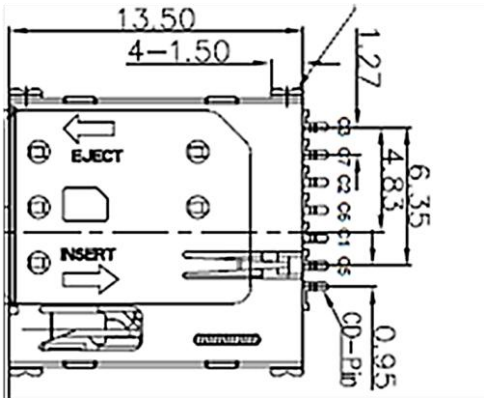




Note: Standard specifications.

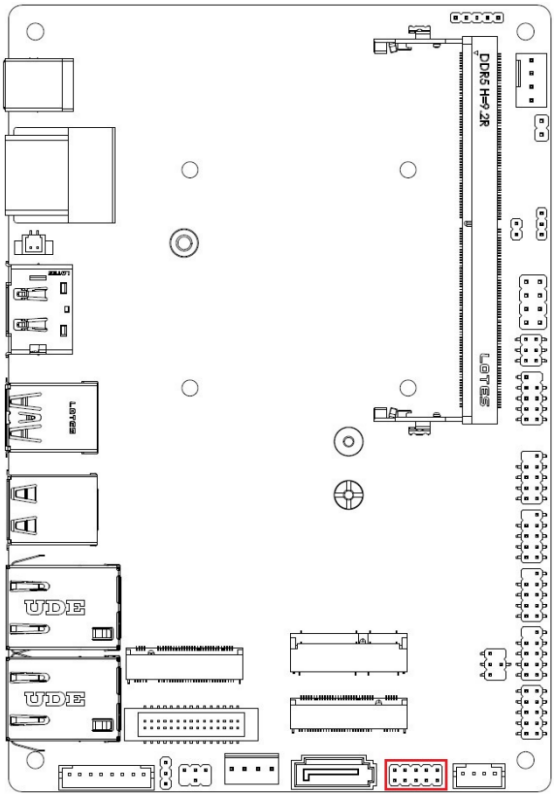
(17) Nano-SIM Card Socket (SIMCARD1)

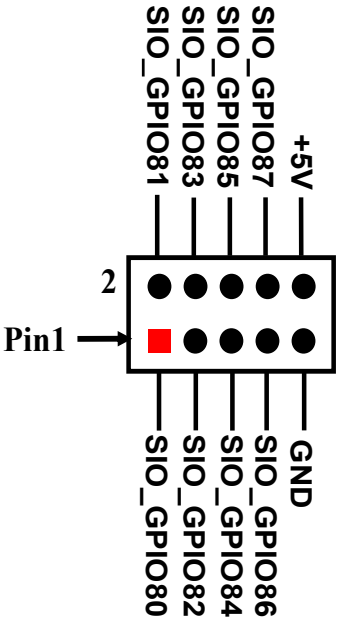




Note: Standard specifications.

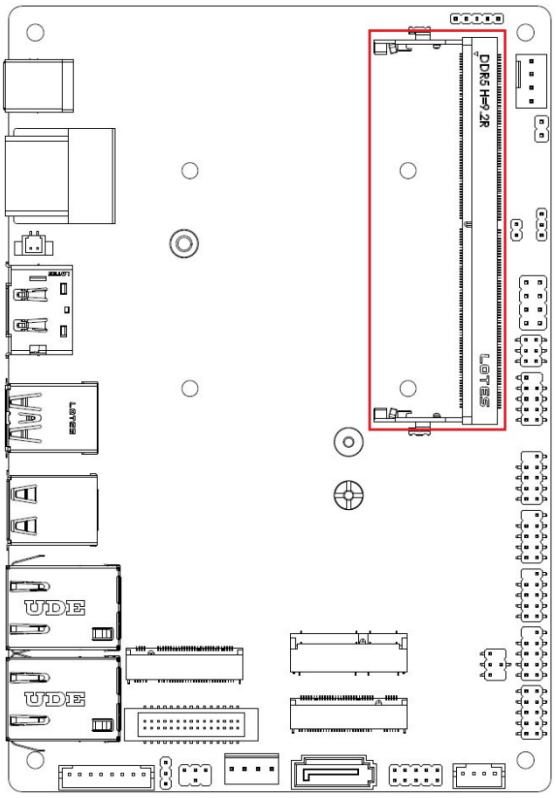
(18) GPIO Port Header (GPIO1)





Note: Standard specifications.

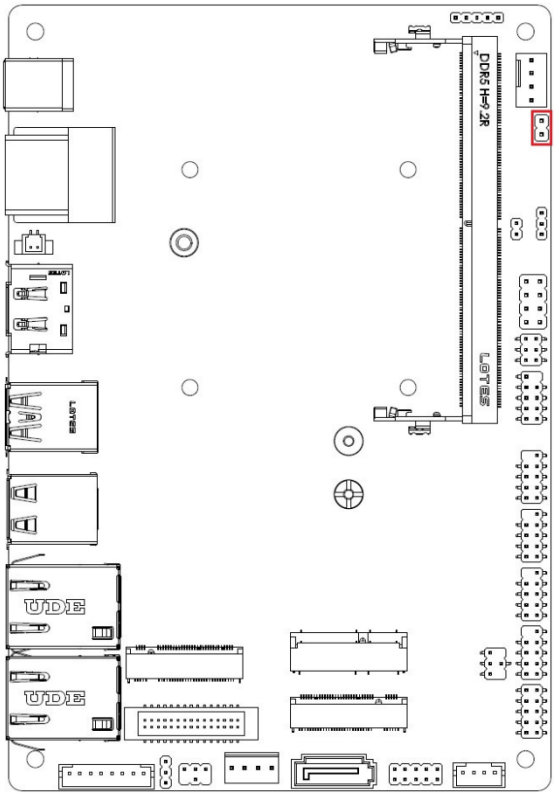
(19) DDR5 SODIMM Socket (SODIMM1)

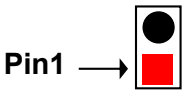




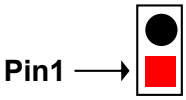
Note: Standard specifications.

(20) Buzzer Header (F_BUZZ1)





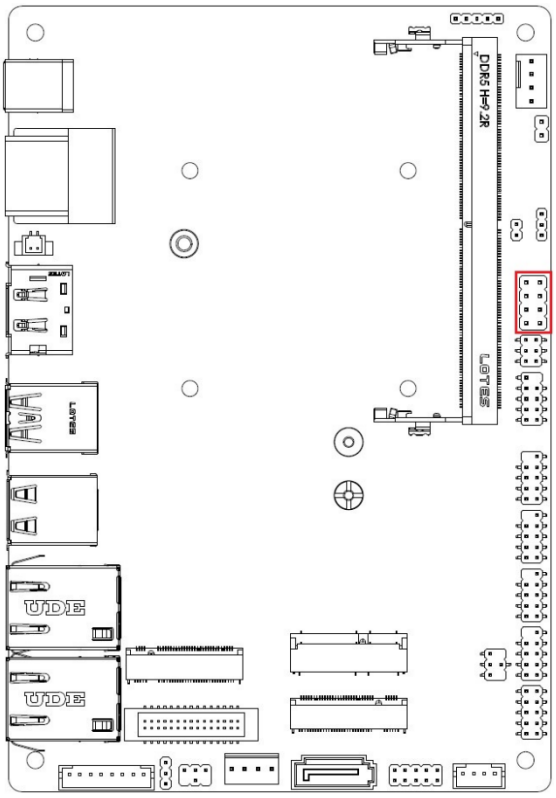
Pin1= BUZZER ＋

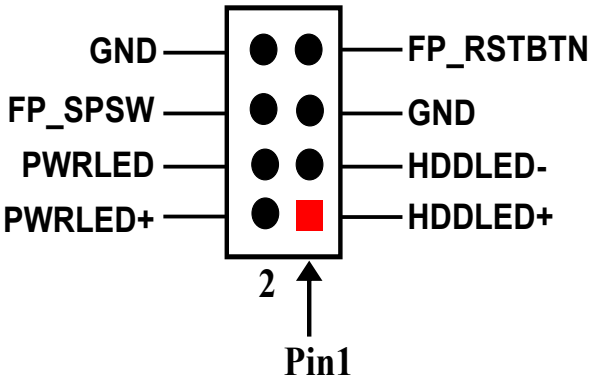


Pin2= BUZZER －

Note: Standard specifications.

(21) Front Panel Header (PWR LED/HDD LED/Power Button/Reset) (JW_FP1)





Note: Standard specifications.

2-5 Maximum Voltage & Current Limit

Below is a list of maximum voltage & Current Limit specification for motherboard interface (including but not limited to slots, connectors and headers) for setup reference:

Parts		Working Voltage	Current Support
USB Port	USB1	+5V	900mA x2
	USB2	+5V	500mA x2
	FP_USB1	+5V	500mA x2
LVDS_EDP		+3.3V/+5V/+12V (via jumper setting)	2A
INVERTER1		+5V/+12V/Adapter VCC (via jumper setting)	2A
CPUFAN1		+12V	1A
SATAPW1		+5V/+12V	1A
GPIO1		+5V	500mA
SMBUS1		+3.3V	500mA
JPCOM1		+5V/+12V	500mA

Chapter 3 Quick Installation Manual

Notice:
The photos in this file are for illustration purpose only. The model may not be the latest version. Please refer to the product you purchased for actual specification.

3-1 Safety Instructions

1. Read these safety instructions carefully.
2. Retain this user manual for future reference.
3. Disconnect the equipment from all AC outlets before cleaning.
   use only a damp cloth for cleaning. Do not use liquid or spray detergents.
4. For pluggable equipment, the power outlet socket must be located near the equipment and easily accessible.
5. Protect the equipment from humidity.
6. Place the equipment on a reliable surface during installation. Dropping or letting the equipment fall may cause damage.
7. Ensure that the voltage is correct before connecting the equipment to a power outlet.
8. Position the power cord away from high-traffic areas. Do not place anything over the power cord.
9. All cautions and warnings on the equipment should be noted.
10. If unused for a long time, disconnect the equipment from the power source to avoid damage from transient overvoltage.
11. Never pour liquid into an opening. This may cause fire or electrical shock.
12. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
13. If one of the following occurs, have the equipment checked by authorized service personnel:

●The power cord or plug is damaged.

●Liquid has penetrated the equipment.

●The equipment has been exposed to moisture.

●The equipment is malfunctioning or does not operate according to the user manual.

●The equipment has been dropped and damaged.

●The equipment shows obvious signs of breakage.

16. Any unverified components may cause unexpected damage. To ensure Correct installation, always use the components (e.g., screws) provided in the accessory box.

17. Batteries are at risk of exploding if incorrectly installed.

Replace only with the same or equivalent type as recommended by the manufacturer.

Discard used batteries according to the manufacturer's instructions.

18. Always disconnect the power cord from the chassis before manually handling the hardware.

Do not implement connections or configuration changes while the device is powered on.

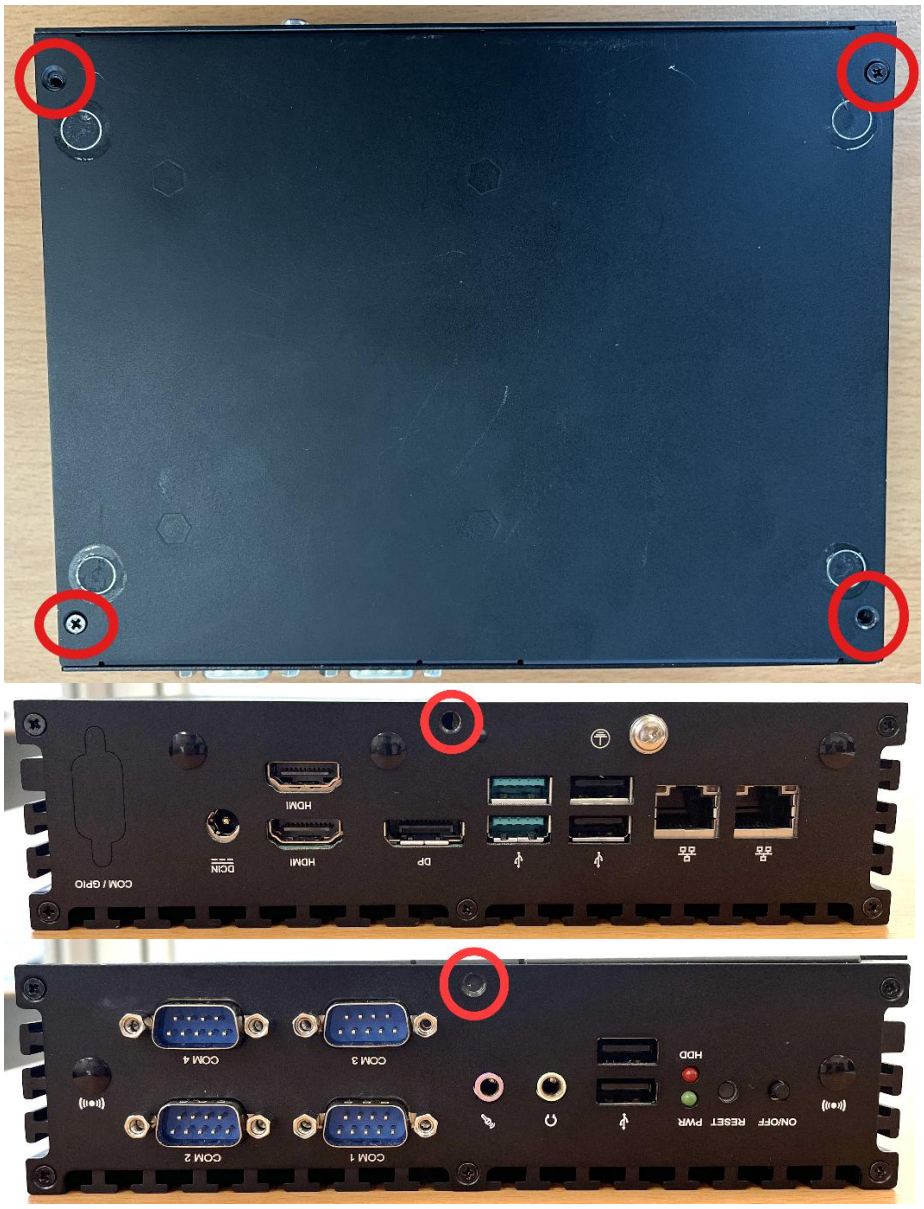
Sudden power surges may damage sensitive electronic components.

19. CAUTION OF HIGH HEAT FROM TOP COVER!!!

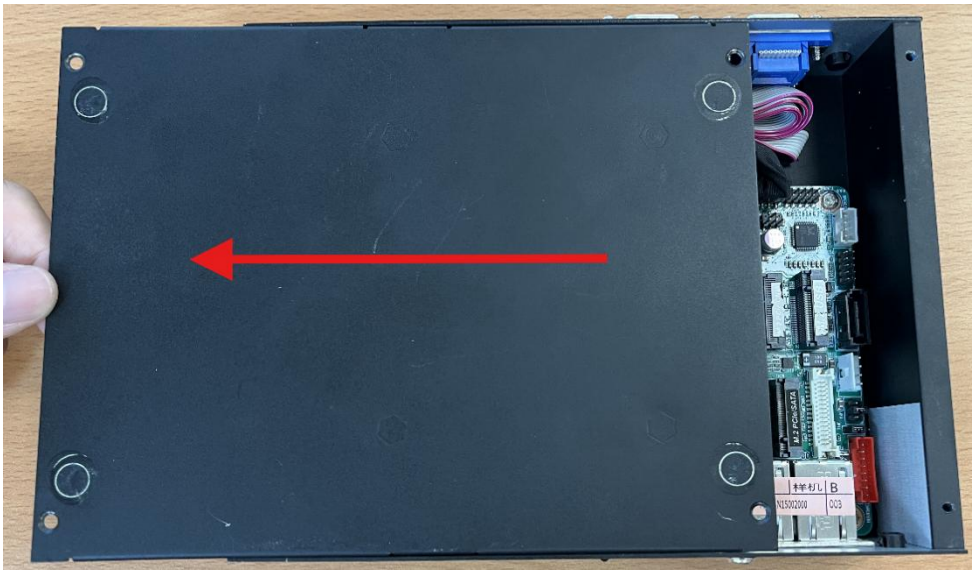


In working mode, the **B377FTWL1** is capable of operating at an ambient temperature of up to **60 °C**. In such cases, the temperature of the top cover may reach a high value. Under such a condition, accidental contact with the B377FTWL1 needs to be avoided. External surfaces do not need to be touched to operate the equipment. If touching cannot be avoided, please wear protective gloves.

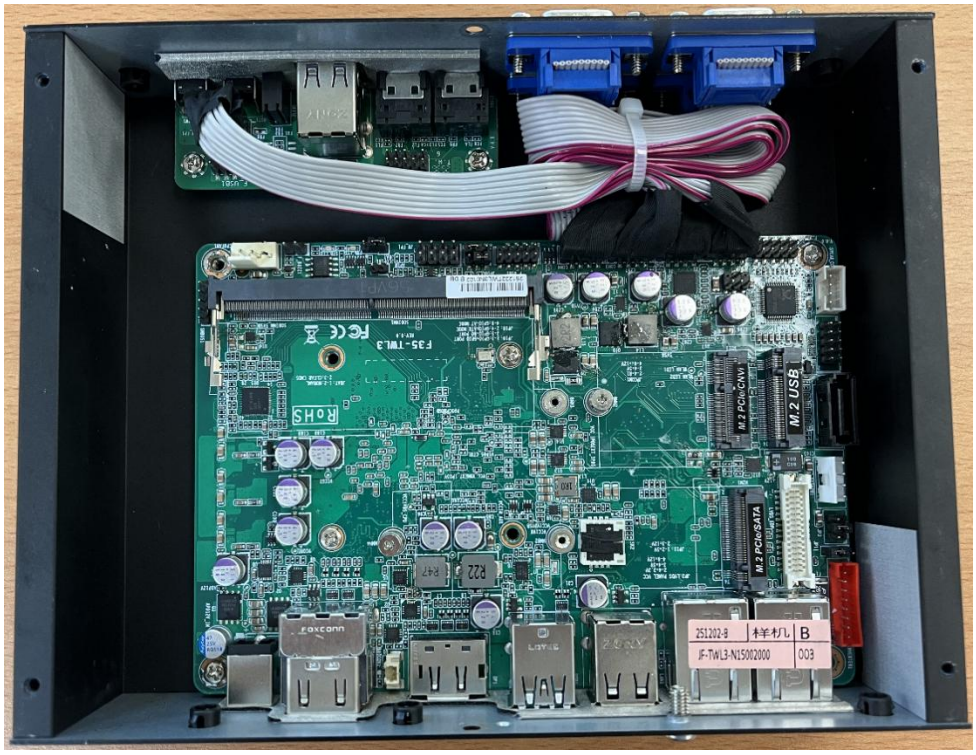
3-2 Disassemble the Chassis



1. Locate the screws at the spots marked on this side of the system and unscrew them one by one.

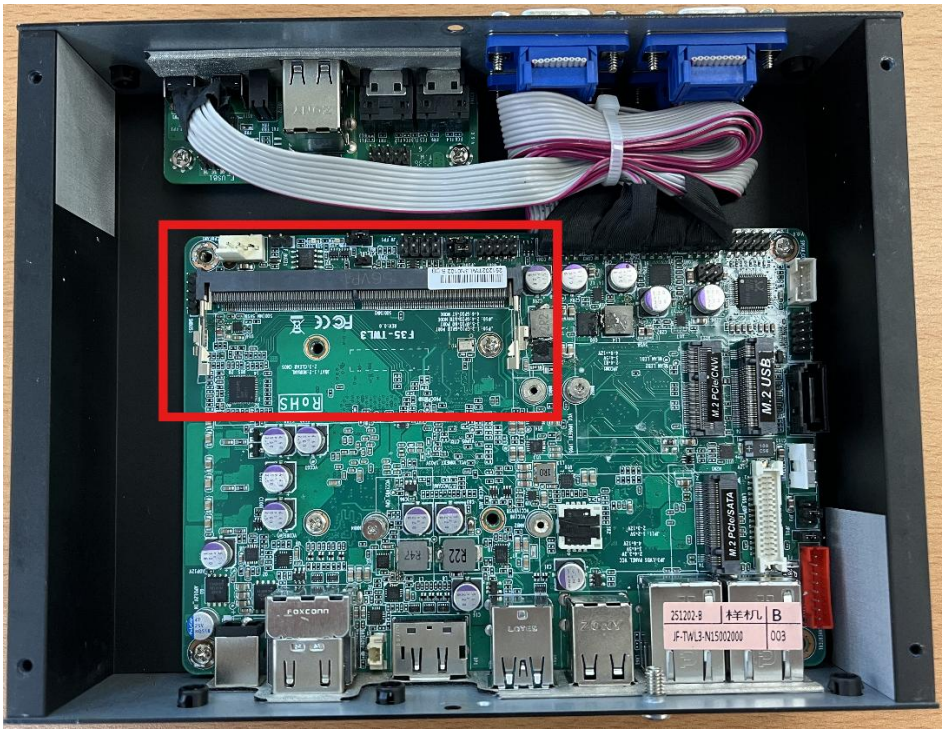


2. Lift the cover up to open the chassis.

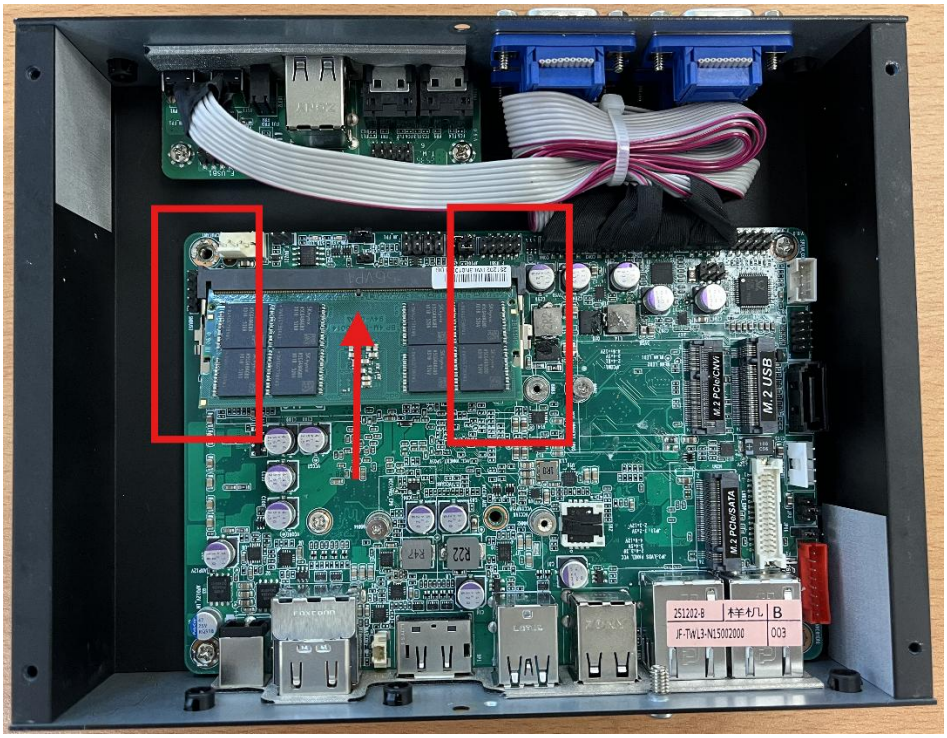


3. The overview of the internal structure of the system.

3-3 To Install SO-DIMM to the board

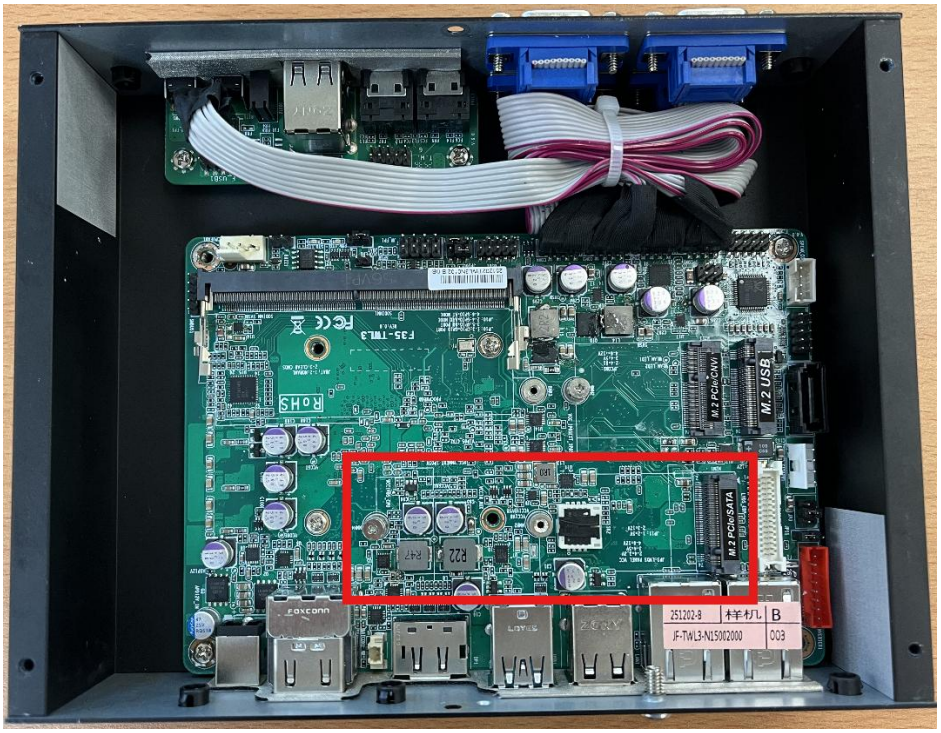


1. Locate the SO-DIMM memory slot on the board.

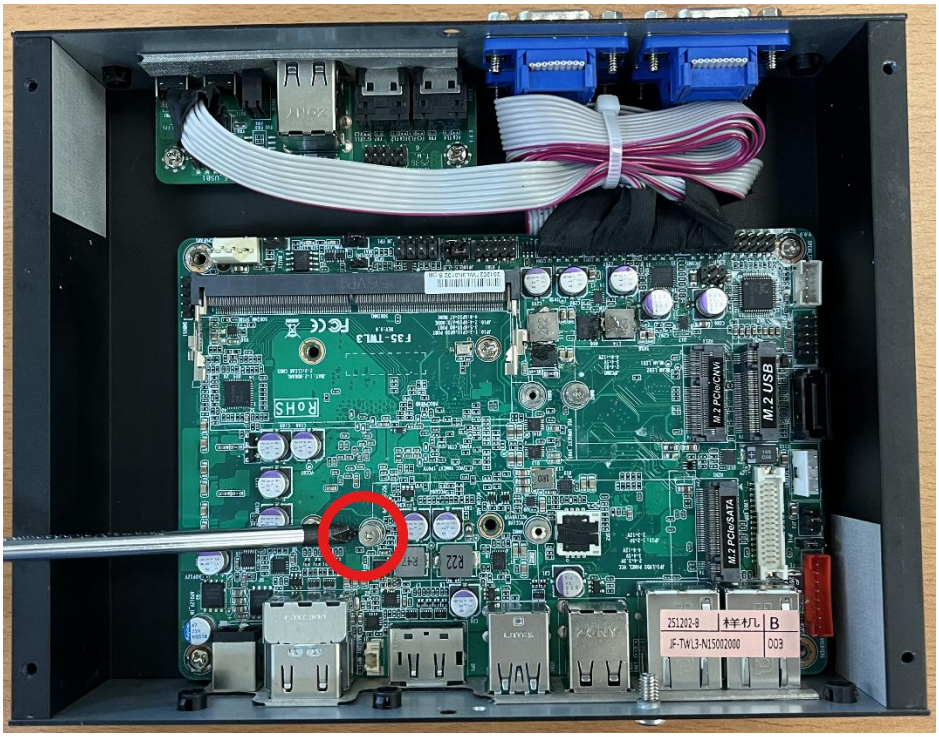


2. Insert the gold-figure side of the slot on the board compatible SO-DIMM into the slot at 30 degrees and press down. The eject tab will lock it if installed correctly. Press down to secure the SO-DIMM to the slot. The eject tabs will lock automatically if installing direction is correct.

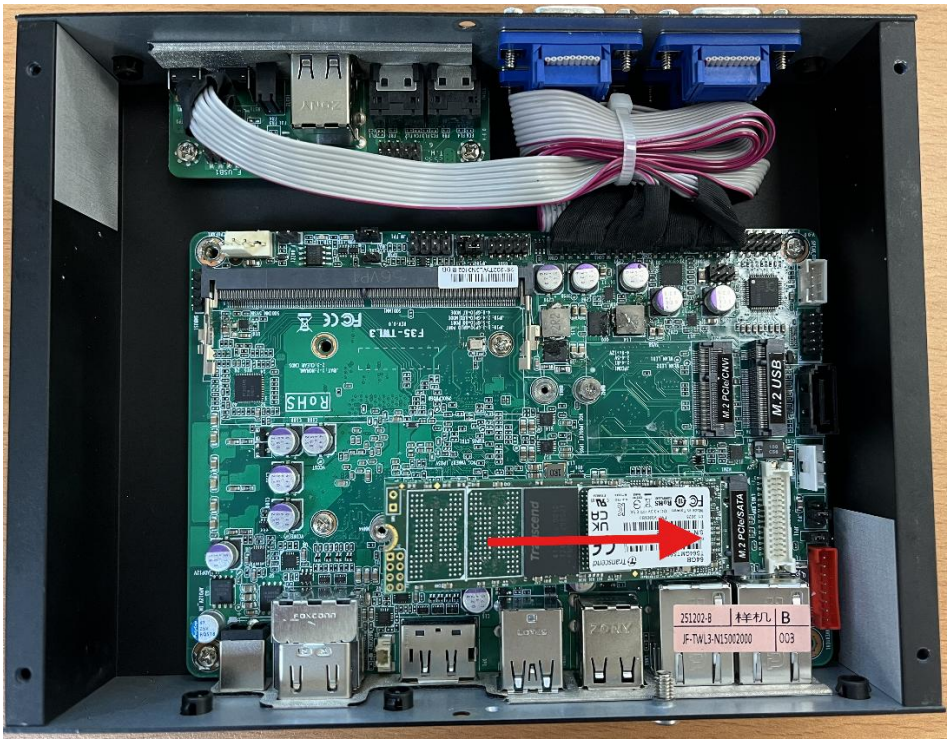
3-4 To Install M.2 M-Key (2280) Card



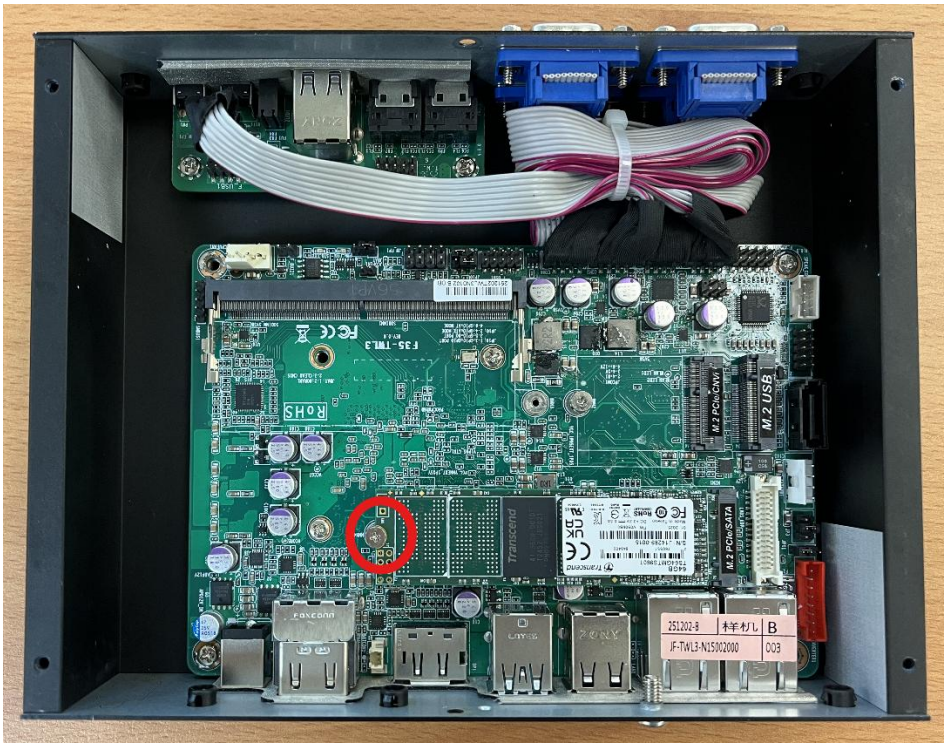
1. Locate the M.2 M-Key (2280) slot on the board. Prepare compatible M.2 M-Key (2280) card.



2. To install compatible card, please remove the screw in the marked spot at first.



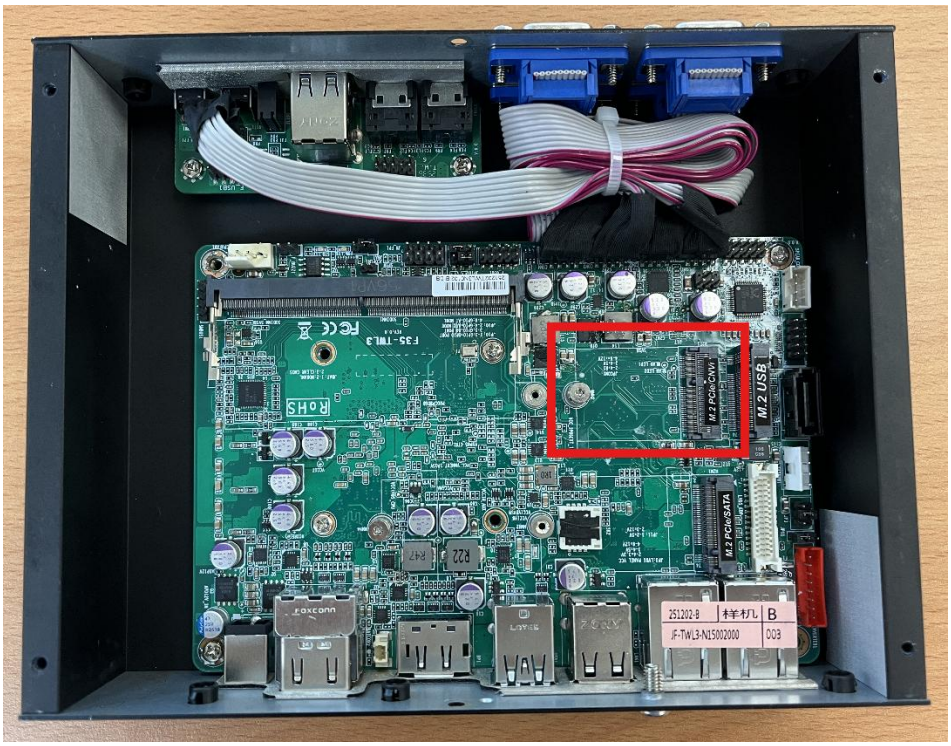
3. Insert compatible M.2 M-Key (2280) card into the slot. See to it that the golden-finger side should be fully plugged into the slot.



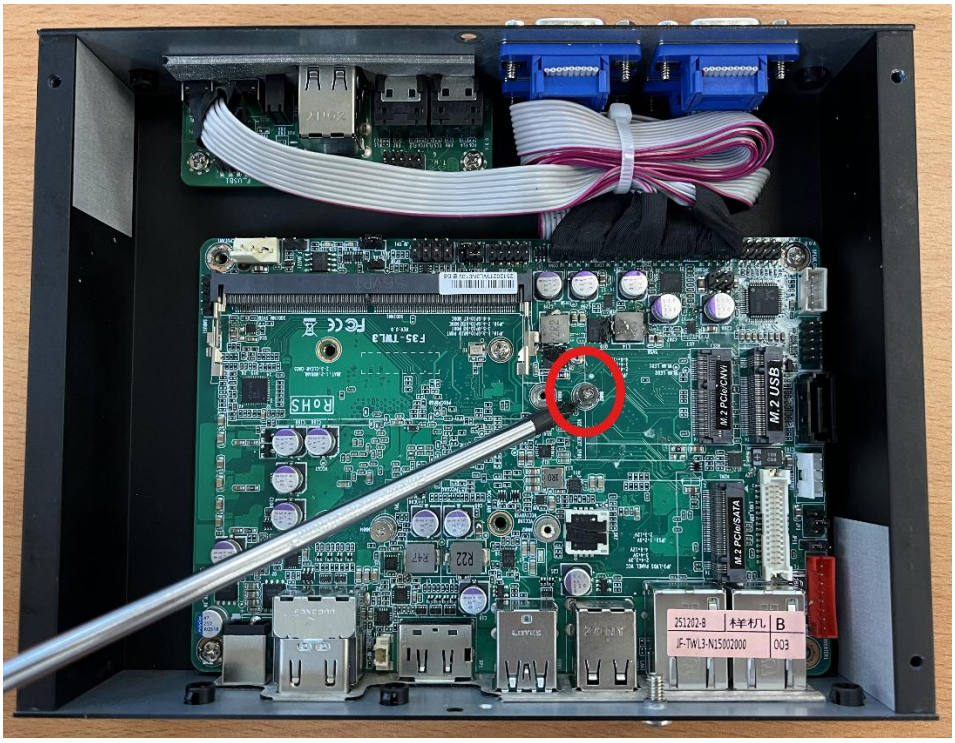
4. Tighten up the screw removed before to the marked spot to secure the card.

Note: *The screw post and nut fixed at location MH4 by default for 8cm type-2280 card installation*

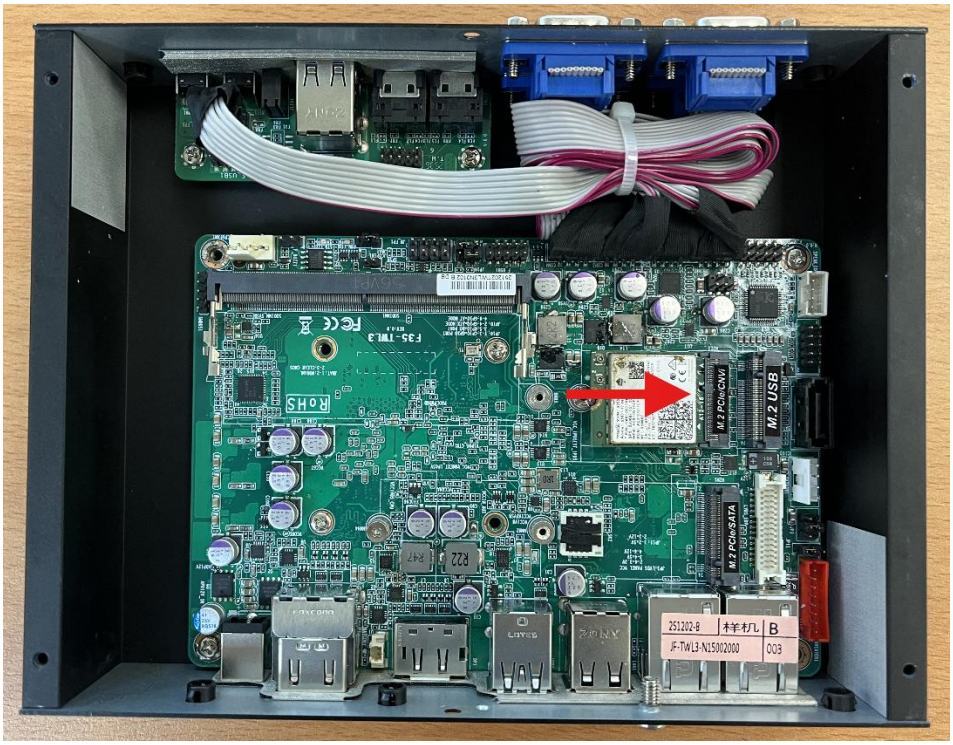
3-5 To Install M.2 E-Key (2230) Card



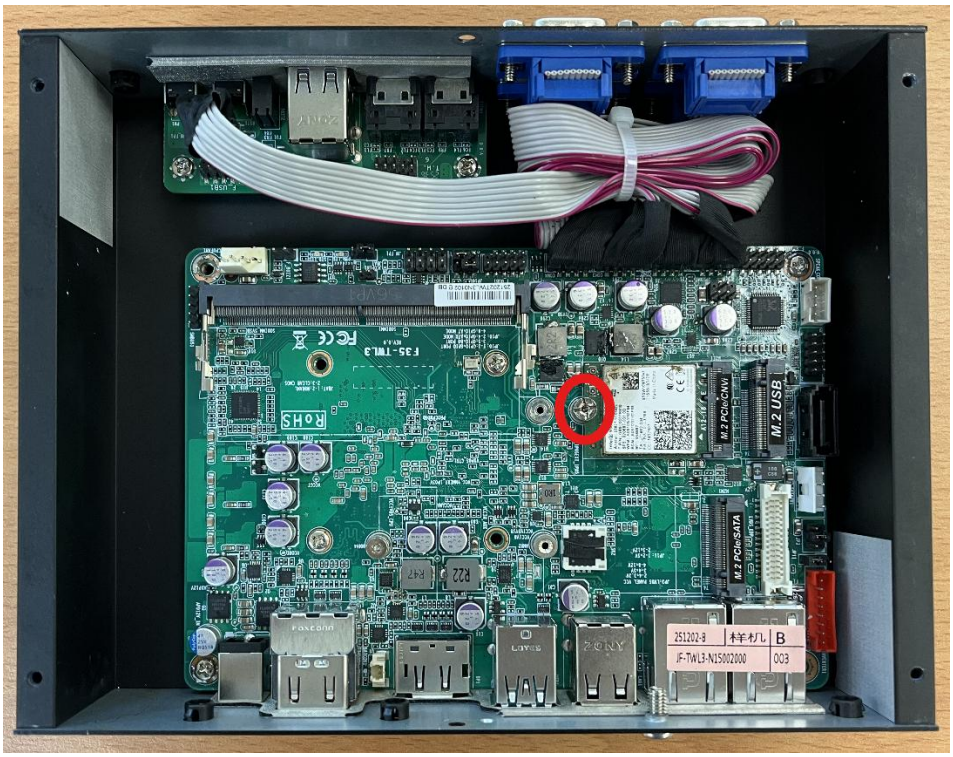
1. Locate the M.2 E-Key (2230) slot on the board. Prepare compatible M.2 E-Key (2230) card.



2. Remove the marked screw (MH2) and use it to lock compatible card to the slot in later installation.

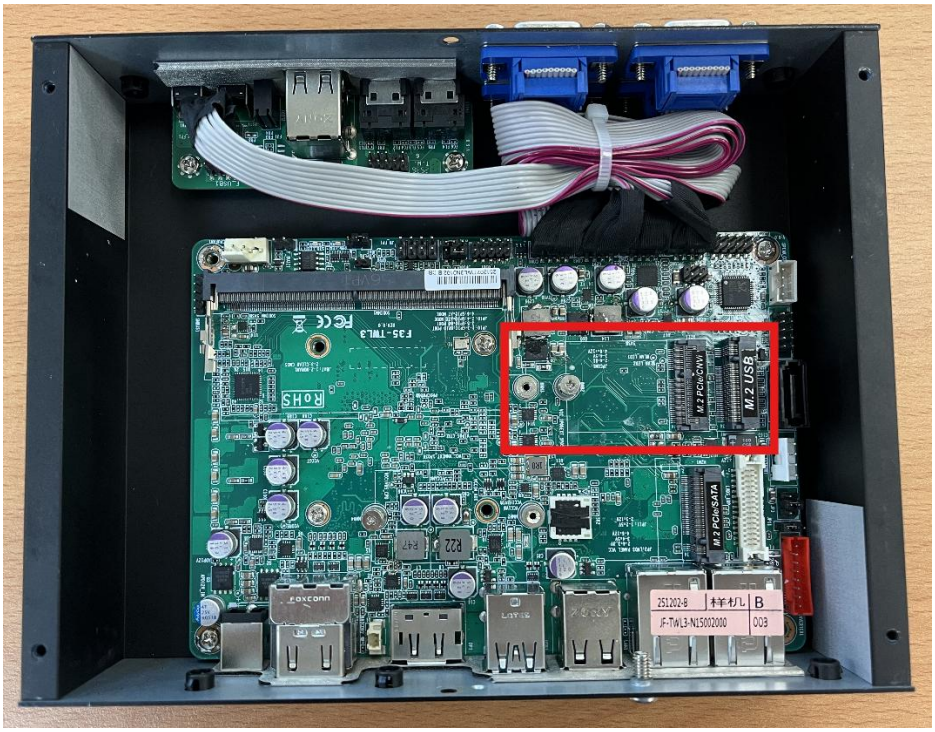


3. Insert the gold-figure side of the compatible card into the slot and press down. See to it that the golden-finger side should be fully plugged into the slot.

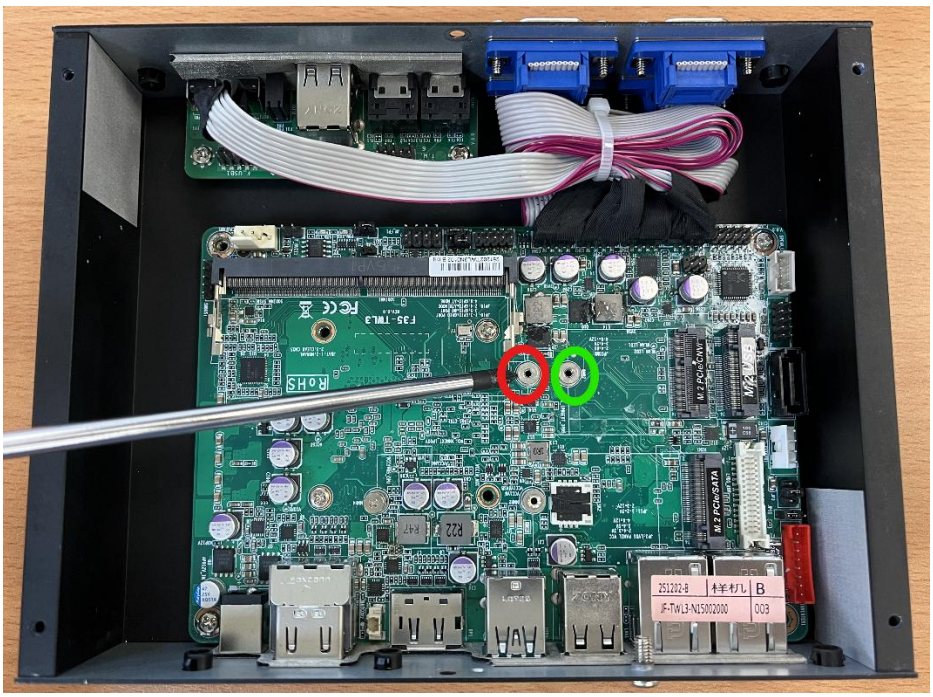


4. Secure the card to the board by tightening up the screw to the marked spot.

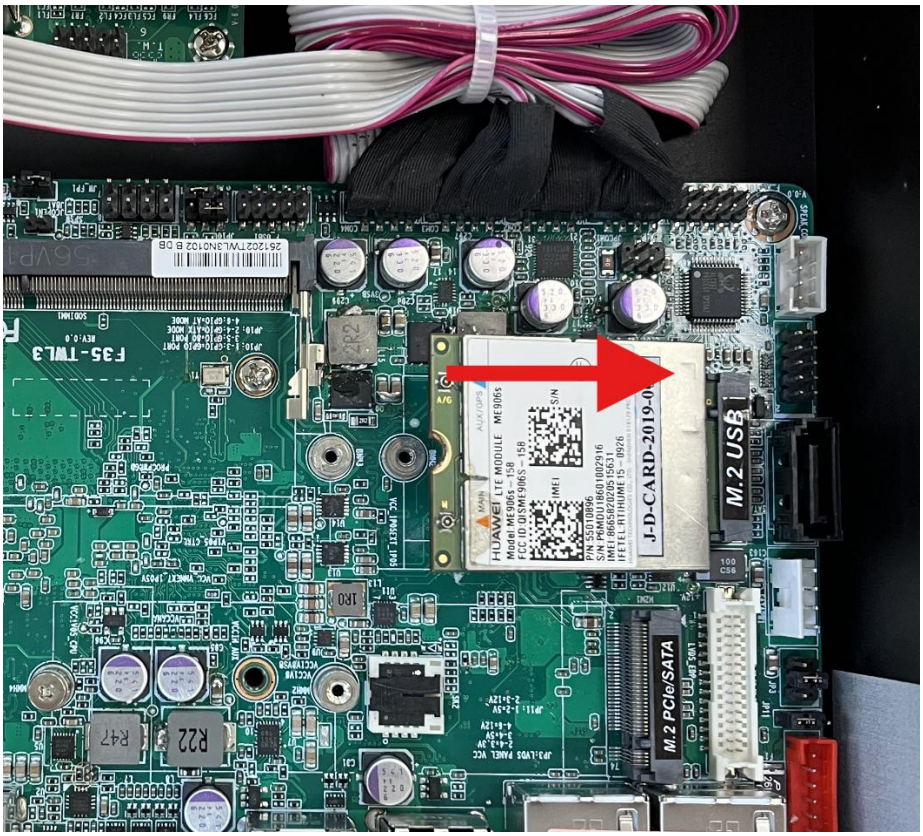
3-6 To Install M.2 B-Key (3042/3052) Card



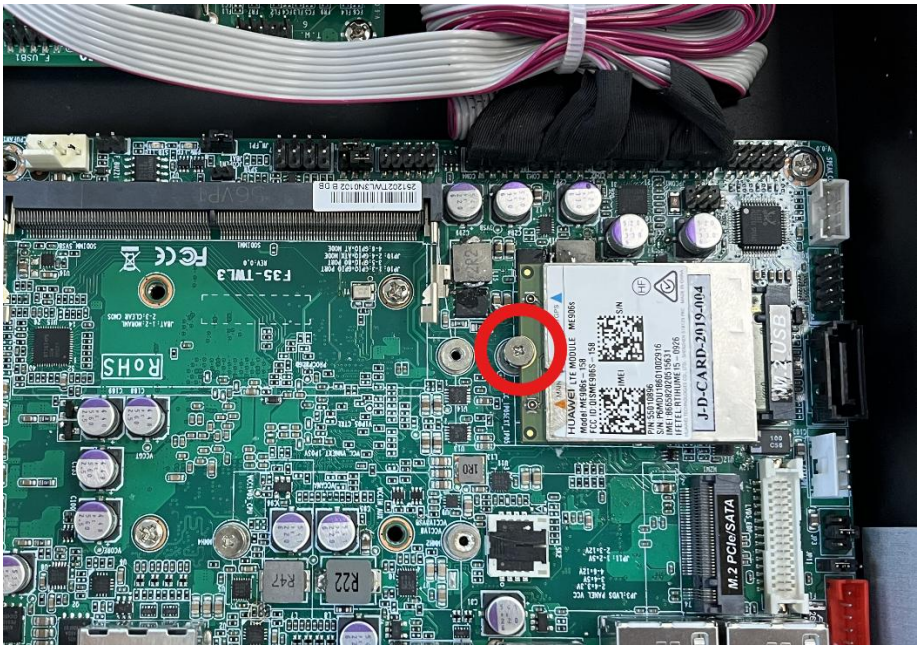
1. Locate the M.2 B-Key (3042/3052) slot on the board. Prepare compatible M.2 B-Key (3042/3052) card.



2. To install a compatible card, first remove the screw at the red-marked spot. (When using an M.2 B-Key (3042) card, secure the pillar screw at the green-marked spot)



3. Insert compatible M.2 B-Key (3042/3052) card into the slot. See to it that the golden-finger side should be fully plugged into the slot.



4. Tighten up the screw removed before to the marked spot to secure the card.





5. Locate the reserved antenna holes on the front and rear panels. Remove the dust-proof plugs at the marked locations on the panels to install the antennas.



6. Push this antenna screw head into antenna hole of the rear panel from the backside of the panel

6-1 **6-2**

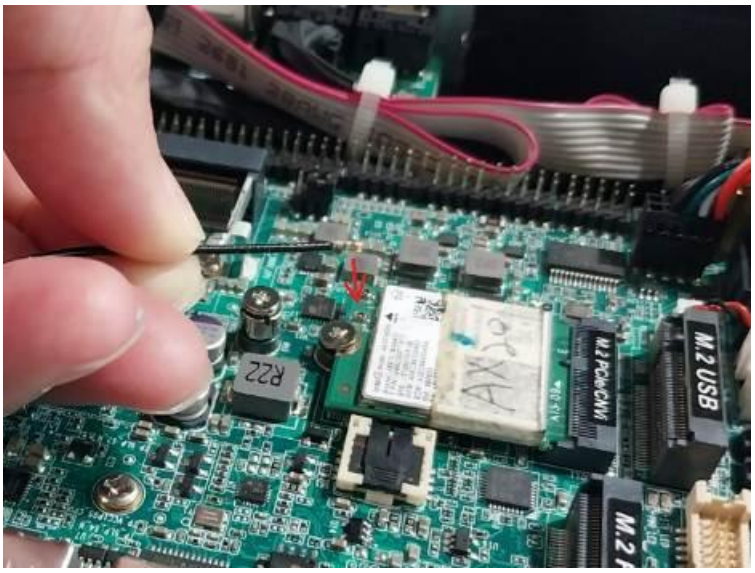




The washer ① & the hexagonal screw nut ②. Push the washer ① through the antenna head.



7. And then lock the antenna screw head to the front side of the rear panel with the hexagonal screw nut② and tighten it up.

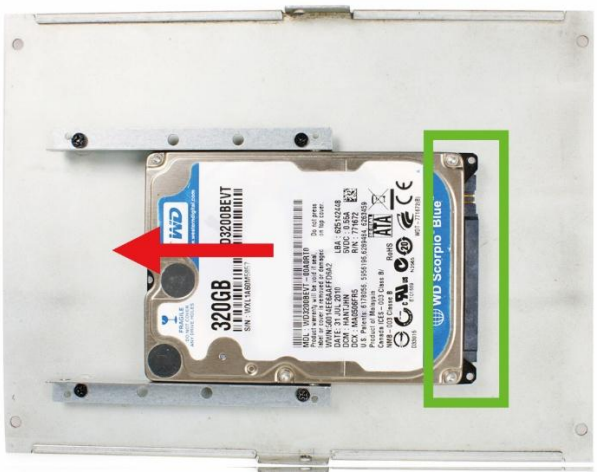


8. Press the metal hat on the end of the antenna string to corresponding antenna slot on the card as shown.

9. Repeat step 6 to 8, to finish installation of the other antenna.

> ***Notice:*** *When all necessary installations are finished, please make sure that all cables unplugged before installations are connected to their original locations before restoring the back cover to the chassis and screws on the front panel/back panel/top cover locked to its original locations* ***(Refer to Part I)****. See to it that the cables inside are not blocked or pressed.*

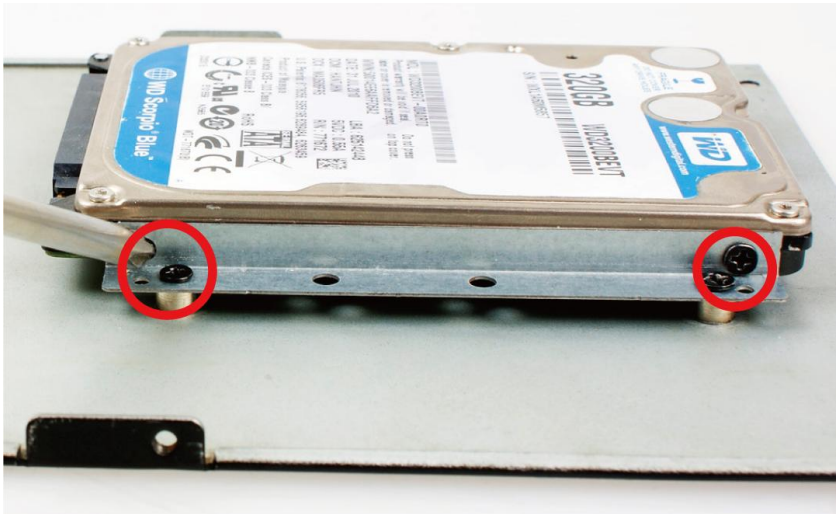
3-7 To Install Hard Disk



1. Find the top cover removed from the chassis (the cover already has HDD racks installed). Push the HDD between the racks with the side up as the photo shows. Pay attention to the direction of the golden figure. Then Adjust the HDD till the screw holes on both side of HDD matched with those in the HDD rack.



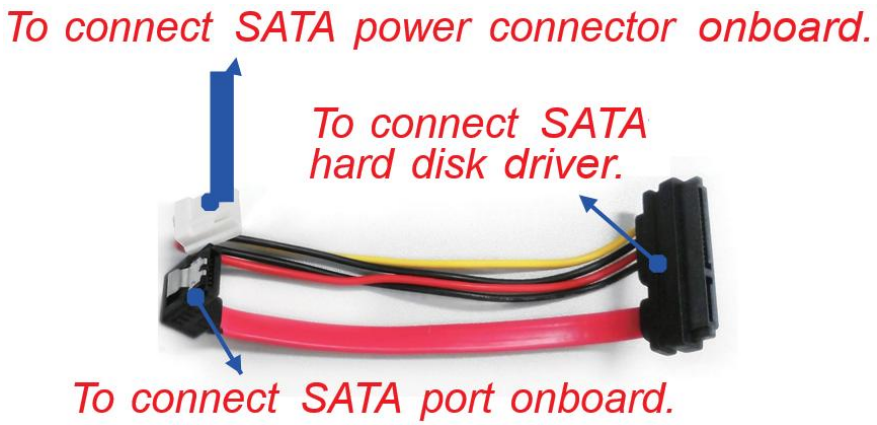
2. There should be a space between the HDD and the cover for successful installation, as the photo shows.



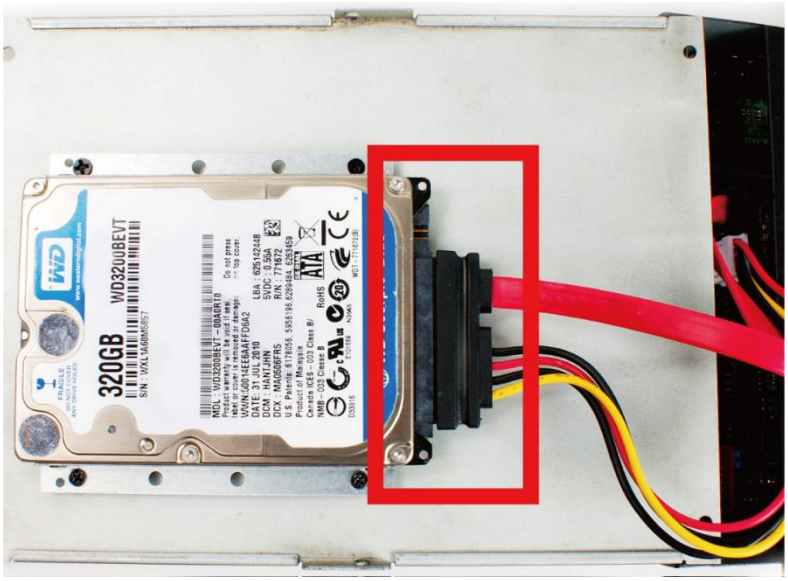
3. Lock the SATA hard disk to one of the racks by tightening the screws in the marked position.



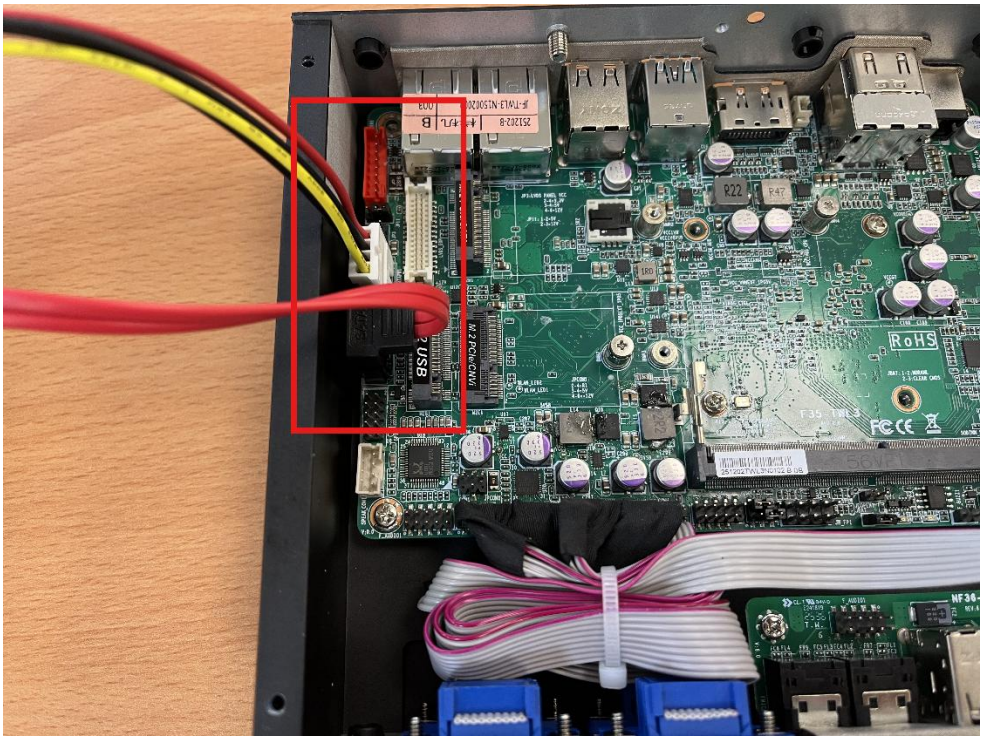
4. Lock the SATA hard disk to the other rack by tightening the screws in the marked position.



5. Compatible SATA cable for the system.



6. Plug this side of the cable to SATA power-in connector and SATA connector of the hard disk



7. Plug the other side cable to the power connector and SATA port connector on the board.



8. Put the cover to the original SATA place and tighten up the screws previously removed(refer to part I).

3-8 Wall- Mounting the system



1. Install wall mount rack to the system by tightening two screws in the marked position. Then lock the other two screws on the other side in the same way..



2. Wall mount the system by tightening 4 screws in the marked positions on both sides of the wall racks. See to it that the three smaller screw hole on one installed rack should be parallel to those on the other racks; otherwise please readjust the racks for correct installation.

Chapter 4 Introducing BIOS

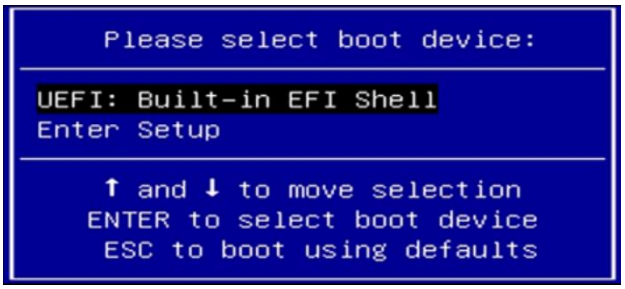
Notice!	The BIOS options in this manual are for reference only. Different configurations may lead to difference in BIOS screen and BIOS screens in manuals are usually the first BIOS version when the board is released and may be different from your purchased motherboard. Users are welcome to download the latest BIOS version from our official website.

The BIOS is a program located on a Flash Memory on the motherboard. This program is a bridge between motherboard and operating system. When you start the computer, the BIOS program will gain control. The BIOS first operates an auto-diagnostic test called POST (power on self test) for all the necessary hardware, it detects the entire hardware device and configures the parameters of the hardware synchronization. Only when these tasks are completed done it gives up control of the computer to operating system (OS). Since the BIOS is the only channel for hardware and software to communicate, it is the key factor for system stability, and in ensuring that your system performance as its best.

4-1 Entering Setup

Power on the computer and by pressing <Del> immediately allows you to enter Setup.
If the message disappears before your respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt> and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to

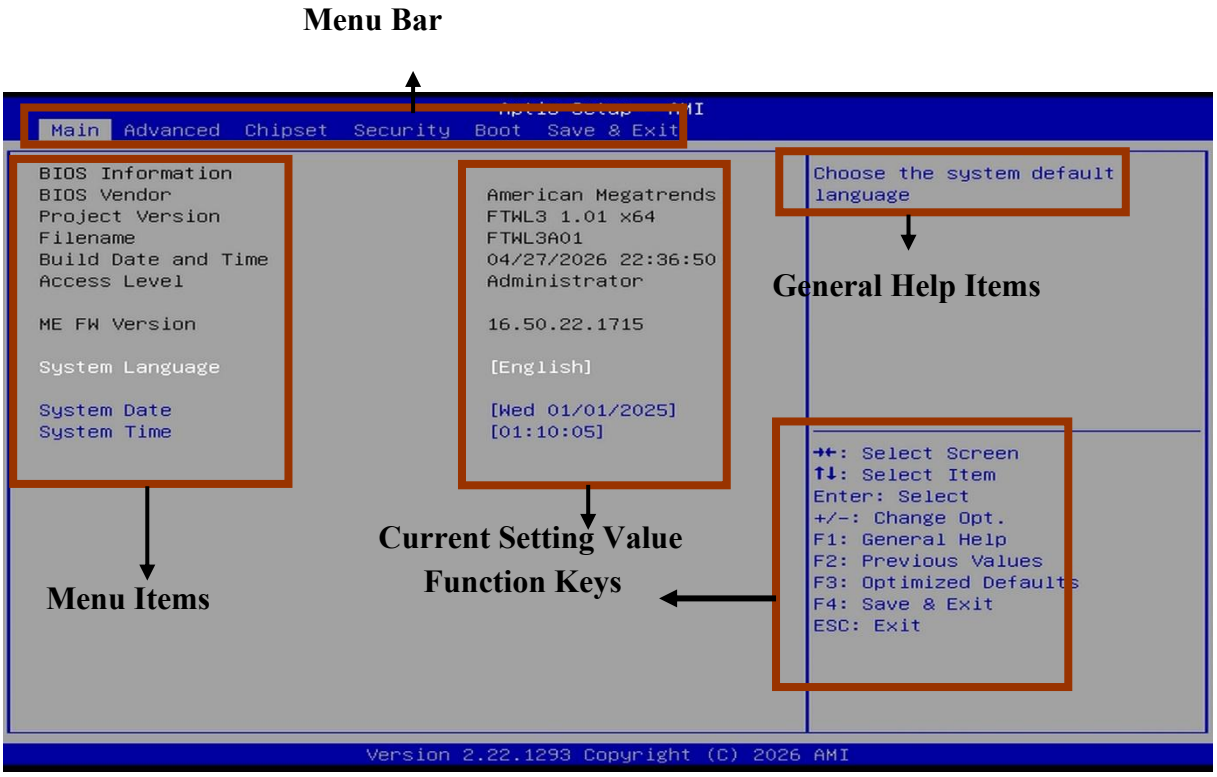
Press **<Del>** to enter Setup; press < **F7**> to enter pop-up Boot menu.



BIOS Boot Menu Screen (boot device options please refer to actual configuration)

4-2 BIOS Menu Screen

The following diagram show a general BIOS menu screen:



4-3 Function Keys

In the above BIOS Setup main menu of, you can see several options. We will explain these options step by step in the following pages of this chapter, but let us first see a short description of the function keys you may use here:

- Press←→ (left, right) to select screen.
- Press ↑↓ (up, down) to choose, in the main menu, the option you want to confirm or to modify.
- Press <Enter> to select.
- Press <+>/<–> keys when you want to modify the BIOS parameters for the active option.
- [F1]: General help.
- [F2]: Previous values.
- [F3]: Optimized defaults.
- [F4]: Save & Exit.
- Press <Esc> to exit from BIOS Setup.

4-4 Getting Help

Main Menu

The on-line description of the highlighted setup function is displayed at the top right corner the screen.

Status Page Setup Menu/Option Page Setup Menu

Press 【F1】 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window, press <**Esc**>.

4-5 Menu Bars

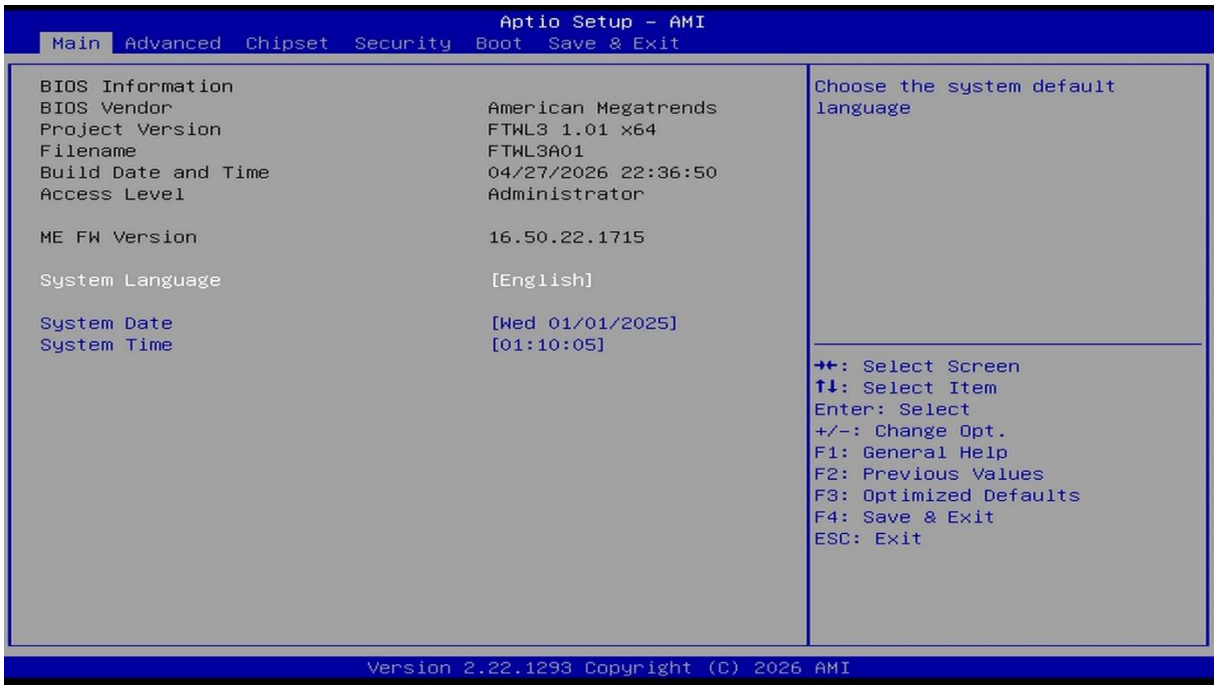
There are six menu bars on top of BIOS screen:

Main	To change system basic configuration
Advanced	To change system advanced configuration
Chipset	To change chipset configuration
Security	Password settings
Boot	To change boot settings
Save & Exit	Save setting, loading and exit options.

User can press the right or left arrow key on the keyboard to switch from menu bar. The selected one is highlighted.

4-6 Main Menu

Main menu screen includes some basic system information. Highlight the item and then use the <+> or <-> and numerical keyboard keys to select the value you want in each item.



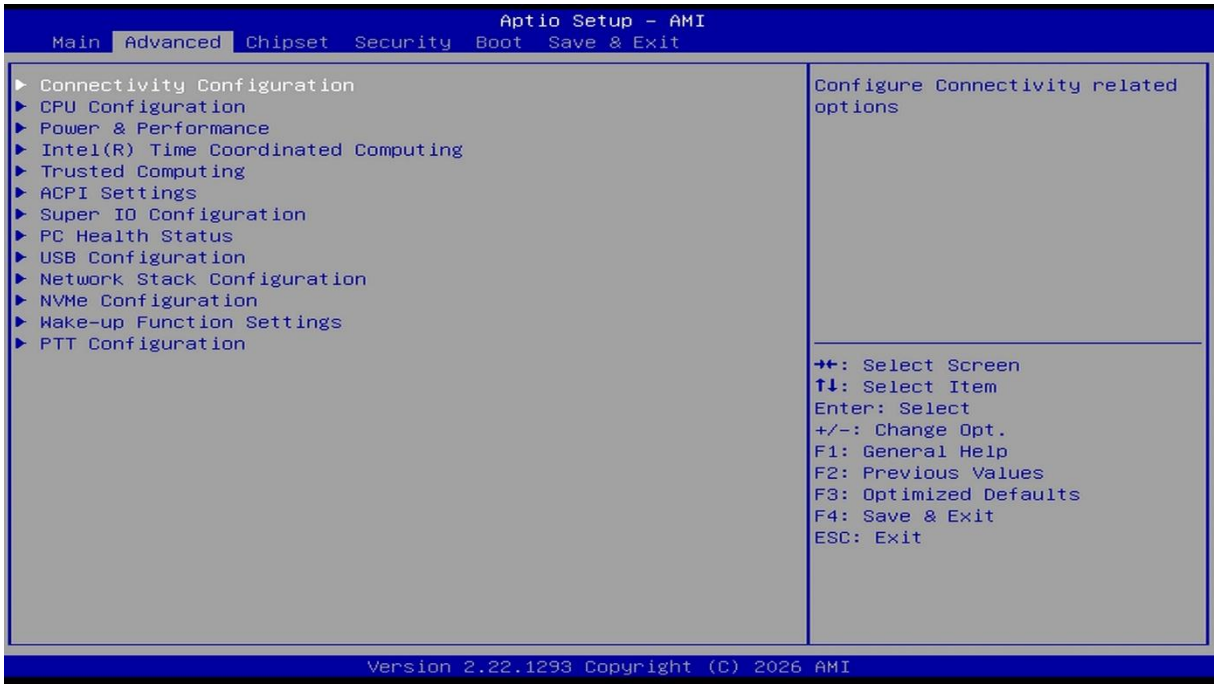
System Date

Set the date. Please use [Tab] to switch between date elements.

System Time

Set the time. Please use [Tab] to switch between time elements.

4-7 Advanced Menu



- **Connectivity Configuration**
  Use this item to configure Connectivity related options. Press [Enter] to make settings for the following sub-items:
  CNVi Mode
  Use this item to This option configures Connectivity.
  [Auto Detection] means that if Discrete solutions is discovered it will be enabled by default. Otherwise Integrated solution (CNVi) will be enabled; [Disabled Integrated] disableds Integrated Solution.
  The optional settings: [Disabled Integrated]; [Auto Detection].
  CNVi Mode Set the default value to: [Auto Detection]
  Note: When CNVi is present, the GPIO pins that are used for radio interface cannot be assigned to the other native function.

- **CPU Configuration**
  Press [Enter] to view current CPU configuration and make settings for the following sub-items:
- **Efficient-Core Information**
  Use this item to displays the E-Core information.
  Press [Enter] to make settings for the following sub-items:
  L1 Date Cache/L1 Instruction Cache/L2 Cache/L3 Cache
- **Performance-Core Information**
  Boot Performance Mode

Use this item to select the performance state that the BIOS will set starting from reset vector.
Boot Performance Mode Set the default value to: [Turbo Performance]
The optional settings: [Max Battery]; [Max Non-Turbo Performance]; [Turbo Performance].

Intel(R) SpeedStep(tm)

This item allows more than two frequency ranges to be supported.
Intel(R) SpeedStep(tm) Set the default value to: [Enabled]
The optional settings: [Disabled]; [Enabled].

Turbo Mode

Use this item to enable or disable processor Turbo Mode (requires Intel Speed Step or Intel Speed Shift to be available and enabled).
Turbo Mode Set the default value to: [Enabled]
The optional settings: [Disabled]; [Enabled]; [Customized]

C states

Use this item to enable or disable CPU Power Management. When set as [Enabled], it allows CPU to go to C states when it's not 100% utilized.
C states Set the default value to: [Enabled]
The optional settings: [Disabled]; [Enabled].

Enhanced C-states

Use this item to Enable/Disable C1E. When enabled, CPU will switch to minimum speed when all cores enter C-State.
Enhanced C-states Set the default value to: [Enabled]
The optional settings: [Disabled]; [Enabled].

Package C State Limit

Use this item to maximum package C State Limit setting. CPU default: leaves to factory default value. Auto: initializes to deepest available package C State Limit.
Package C State Limit Set the default value to: [Auto]
The optional settings: [C0/C1]; [C2]; [C3]; [C6]; [C7]; [C7S]; [C8]; [C9]; [C10]; [CPU Default]; [Auto].

- **Power & Performance**

Press [Enter] to make settings for the following sub-items:

- **CPU – Power Management Control**

CPU-Power Management Control Options.
Press [Enter] to make settings for the following sub-items:

Power Limit 1

Use this item to set Power Limit 1 in Milli Watts. BIOS will round to the nearest 1/8W when programming.

0 = no custom override. For 12.50W, enter 12500.

Overclocking SKU: Value must be between Max and Min Power Limits (specified by PACKAGE_POWER_SKU_MSR).

Other SKUs: This value must be between Min Power Limit and Processor Base Power (TDP) Limit. If value is 0, BIOS will program Processor Base Power (TDP) value.

Power Limit 1 Set the default value to: [0]

Power Limit 1 Time Window

Use this item to set Power Limit 1 Time Window value in seconds. The value may vary from 0 to 128. 0 = default value (28 sec for Mobile and 8 sec for Desktop). Defines time window which Processor Base Power (TDP) value should be maintained.

Power Limit 1 Time Window Set the default value to: [0]

The optional settings are: [0]; [1]; [2]; [3]; [4]; [5]; [6]; [7]; [8]; [10]; [12]; [14]; [16]; [20]; [24]; [28]; [32]; [40]; [48]; [56]; [64]; [80]; [96]; [112]; [128].

Power Limit 2

Use this item to set Power Limit 2 Value in Milli Watts. BIOS will round to the nearest 1/8W when programming.

0=no custom override. For 12.50w, enter 12500. Processor applies control policies such that the package power does not exceed this limit.

Power Limit 2 Set the default value to: [0]

Power Limit 4 Override

If this option is disabled, BIOS will leave the default values for Power Limit.

Power Limit 4 Override Set the default value to:[Disabled].

The optional settings: [Disabled]; [Enabled].

Power Limit 4

Power Limit 4 in Milli Watts.BIOS will round to the nearest1/8W when programming. For 12.50W, enter 12500. If the value is 0, BIOS leaves default value.

Power Limit 4 Set the default value to: [0]

- **GT/Media - Power Management Control**

Press [Enter] to make settings for the following sub-items:

RC6(Render Standby)

Use this item to check to enable render standby support.

RC6(Render Standby) Set the default value to: [Enabled]

The optional settings: [Disabled]; [Enabled].

Maximum GT frequency

Use this item to Maximum GT frequency limited by the user. Choose between 200MHZ (RPN) and 1200MHZ (RP0). Value beyond the range will be clipped to min/max supported by SKU.

Maximum GT frequency Set the default value to: [Default Max Frequency]

The optional settings: [Default Max Frequency]; [100Mhz] ; [150Mhz] ; [200Mhz] ; [250Mhz] ; [300Mhz] ; [350Mhz] ; [400Mhz] ; [450Mhz] ; [500Mhz] ; [550Mhz] ; [600Mhz] ; [650Mhz] ; [700Mhz] ; [750Mhz] ; [800Mhz] ; [850Mhz] ; [900Mhz] ; [950Mhz] ; [1000Mhz] ; [1050Mhz] ; [1100Mhz] ; [1150Mhz] ; [1200Mhz].

Disable Turbo GT frequency

Use this item to enabled: disables turbo GT frequency. Disabled: GT frequency is not limited.

Disable Turbo GT frequency Set the default value to: [Disabled]

The optional settings: [Disabled]; [Enabled].

- **Intel® Time Coordinated Computing**

Press [Enter] to make settings in the following sub-items:

Intel® TCC Mode

Use this item to Enabled or Disabled Intel® TCC Mode. When enabled, this will modify system settings to improve real-time performance. The full list of settings and their current state are displayed below when Intel® TCC mode is enabled.

Intel® TCC Mode Set the default value to: [Disabled]

The optional settings: [Disabled]; [Enabled].

IO Fabric Low Latency

Use this item to Enabled or Disabled IO Fabric Low Latency. This will turn off some power management in the PCH IO fabrics. This option provides the most aggressive IO Fabric performance setting. S3 state is NOT supported.

IO Fabric Low Latency Set the default value to: [Disabled]

The optional settings: [Disabled]; [Enabled].

GT CLOS

Use this item to Enabled or Disabled Graphics Technology(GT) Class of Service. Enabled will reduce Gfx LLC allocation to minimize impact of Gfx wordload on LLC.

GT CLOS Set the default value to: [Disabled]

The optional settings: [Disabled]; [Enabled].

- **Trusted Computing**

Press [Enter] to make settings in the following sub-items:

Security Device Support

Use this item to Enables or Disables BIOS support for security device. O.S will not show security device. TCG EFI protocol and INT1A interface will not be available.

The optional settings: [Disabled]; [Enabled].

Security Device Support Set the default value to: [Enabled]

When set as [Enabled], user can make setting in the following items that appear:

SHA256 PCR Bank

Use this item to enable or disable SHA256 PCR Bank.

The optional settings: [Disabled]; [Enabled].

SHA256 PCR Bank Set the default value to: [Enabled]

SHA384 PCR Bank

Use this item to enable or disable SHA384 PCR Bank.

The optional settings: [Disabled]; [Enabled].

SHA384 PCR Bank Set the default value to: [Disabled]

SM3_256 PCR Bank

Use this item to enable or disable SM3_256 PCR Bank.

The optional settings: [Disabled]; [Enabled].

SM3_256 PCR Bank Set the default value to: [Disabled]

Pending Operation

Use this item to schedule an operation for security device.

The optional settings: [None]; [TPM Clear].

Pending Operation Set the default value to: [None]

***Note:** Your computer will reboot during restart in order to change State of Security Device.*

- **ACPI Settings**

Press [Enter] to make settings in the following sub-items:

ACPI Sleep State

Use this item to Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.

The optional settings: [Suspend Disabled]; [S3 (Suspend to RAM)].

ACPI Sleep State Set the default value to: [S3 (Suspend to RAM)]

- **Super IO Configuration**

Press [Enter] to make settings for the following sub-items:

Super IO Configuration

Serial Port 1 Configuration

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

The optional settings: [Disabled]; [Enabled].

Serial Port Set the default value to: [Enabled]

When set as [Enabled], user can make settings in the following items that appear:

Change Settings

Use this item to select an optimal settings for super IO device.

The optional settings are: [IO=3F8h; IRQ=4]; [IO=3F8h; IRQ=3,4,5,7,10,11]; [IO=2F8h; IRQ=3,4,5,7,10,11]; [IO=3E8h; IRQ=3,4,5,7,10,11]]; [IO=2E8h; IRQ=3,4,5,7,10,11].

Change Settings Set the default value to: [IO=3F8h; IRQ=4]

Transmission Mode Select

The optional settings are: [RS422]; [RS232]; [RS485].

Transmission Mode Select Set the default value to: [RS232]

Mode Speed Select

Use this item to RS232/RS422/RS485 Speed Select.

The optional settings are: [RS232/RS422/RS485=250Kbps]; [RS232=1Mbps, RS422/RS485=10Mbps].

Mode Speed Select Set the default value to: [RS232=1Mbps, RS422/RS485=10Mbps]

- **Serial Port 2 Configuration**

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

The optional settings: [Disabled]; [Enabled].

Serial Port Select Set the default value to: [Enabled]

When set as [Enabled], user can make settings in the following items that appear:

Change Settings

Use this item to select an optimal setting for super IO device.

The optional settings are: [IO=2F8h; IRQ=3]; [IO=3F8h; IRQ=3,4,5,7,10,11]; [IO=2F8h; IRQ=3,4,5,7,10,11]; [IO=3E8h; IRQ=3,4,5,7,10,11]]; [IO=2E8h; IRQ=3,4,5,7,10,11].

Change Settings Set the default value to: [IO=2F8h; IRQ=3]

Transmission Mode Select

The optional settings are: [RS422]; [RS232]; [RS485]. Transmission Mode Select Set the default value to: [RS232]

Mode Speed Select

Use this item to RS232/RS422/RS485 Speed Select.

The optional settings are: [RS232/RS422/RS485=250Kbps]; [RS232=1Mbps, RS422/RS485=10Mbps].

Mode Speed Select Set the default value to: [RS232=1Mbps, RS422/RS485=10Mbps]

- **Serial Port 3 Configuration**

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

The optional settings: [Disabled]; [Enabled].

Serial Port Select Set the default value to: [Enabled]

When set as [Enabled], user can make settings in the following items that appear:

- **Change Settings**

Use this item to select an optimal setting for super IO device.

The optional settings are: [IO=3E8h; IRQ=10]; [IO=3F8h; IRQ=3,4,5,7,10,11]; [IO=2F8h; IRQ=3,4,5,7,10,11]; [IO=3E8h; IRQ=3,4,5,7,10,11]; [IO=2E8h; IRQ=3,4,5,7,10,11] ; [IO=3E0h; IRQ=3,4,5,7,10,11] ;[IO=2E0h; IRQ=3,4,5,7,10,11].

Change Settings Set the default value to: [IO=3E8h; IRQ=10]

- Transmission Mode Select

The optional settings are: [RS422]; [RS232]; [RS485]. Transmission Mode Select Set the default value to: [RS232]

- Mode Speed Select

Use this item to RS232/RS422/RS485 Speed Select.

The optional settings are: [RS232/RS422/RS485=250Kbps]; [RS232=1Mbps, RS422/RS485=10Mbps].

Mode Speed Select Set the default value to: [RS232=1Mbps, RS422/RS485=10Mbps]

- **Serial Port 4 Configuration**

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

The optional settings: [Disabled]; [Enabled].

Serial Port Select Set the default value to: [Enabled]

When set as [Enabled], user can make settings in the following items that appear:

- **Change Settings**

Use this item to select an optimal setting for super IO device.

The optional settings are: [IO=2E8h; IRQ=10]; [IO=3F8h; IRQ=3,4,5,7,10,11]; [IO=2F8h; IRQ=3,4,5,7,10,11]; [IO=3E8h; IRQ=3,4,5,7,10,11] ; [IO=2E8h; IRQ=3,4,5,7,10,11] ; [IO=3E0h; IRQ=3,4,5,7,10,11] ; [IO=2E0h; IRQ=3,4,5,7,10,11].

Change Settings Set the default value to: [IO=2E8H; IRQ=10]

Transmission Mode Select

The optional settings are: [RS422]; [RS232]; [RS485]. Transmission Mode Select Set the default value to: [RS232]

Mode Speed Select

Use this item to RS232/RS422/RS485 Speed Select.

The optional settings are: [RS232/RS422/RS485=250Kbps]; [RS232=1Mbps, RS422/RS485=10Mbps].

Mode Speed Select Set the default value to: [RS232=1Mbps, RS422/RS485=10Mbps]

ERP Support

Use this item to make setting for energy-related products function. Disable ERP to active all wake-up function.

The optional settings: [Disabled]; [Enabled]. ERP Support Set the default value to: [Disabled]

Case Open Detect

Use this item to detect if case have ever been opened. Show message in POST.

The optional settings: [Disabled]; [Enabled].

Case Open Detect Set the default value to: [Disabled]

When set as [Enabled], system will detect if COPEN has been short or not (*refer to* **JCLAR** *jumper setting for Case Open Detection*); if Pin 7&8 of **JCLAR** are short, system will show Case Open Message during POST.

System State after Power Failure

Specify what state to go to when power is re-applied after a power failure (G3 state).

The optional settings: [Always On]; [Always Off]; [Former State].

System State after Power Failure Set the default value to: [Always Off]

WatchDog Reset Timer

Use this item to support WDT reset function.

The optional settings: [Disabled]; [Enabled].

WatchDog Reset Timer Set the default value to: [Disabled]

When set as [Enabled], user can make settings in the following items that appear:

WatchDog Reset Timer Value

User can set a value in the range of [10] to [255] seconds or [1] to [255] minutes.

WatchDog Reset Timer Value Set the default value to: [10]

WatchDog Reset Timer Unit

The optional settings are: [Sec.]; [Min.].

WatchDog Reset Timer Unit Set the default value to: [Sec]

ATX Power Emulate AT Power

This item support Emulate AT power function, MB power On/Off control by power supply. Use needs to select 'AT or ATX Mode' on MB jumper at first (refer to **ATX_Mode** jumper setting Pin 1&2 of for **ATX Mode** & Pin 2&3 of **AT Mode** Select).

- **PC Health Status**

  Press [Enter] to view current hardware health status, make further settings in '**SmartFAN Configuration**'.

- **SmartFAN Configuration**

  Press [Enter] to make settings for SmartFAN Configuration:

SmartFAN Configuration

CPUFAN Smart Mode

The optional settings: [Disabled]; [Enabled].

CPUFAN Smart Mode Set the default value to: [Enabled]

When set as [Enabled], the following sub-items shall appear:

CPUFAN Full-Speed Temperature

Use this item to set CPUFAN full speed temperature. Fan will run at full speed when above this pre-set temperature.

CPUFAN Full-Speed Temperature Set the default value to: [75]

CPUFAN Full-Speed Duty

Use this item to set CPUFAN full-speed duty. Fan will run at full speed when above this pre-set duty.

CPUFAN Full-Speed Duty Set the default value to: [100]

CPUFAN Idle-Speed Temperature

Use this item to set CPUFAN idle speed temperature. Fan will run at idle speed when below this pre-set temperature.

CPUFAN Idle-Speed Temperature Set the default value to: [40]

CPUFAN Idle-Speed Duty

Use this item to set CPUFAN idle speed duty. Fan will run at idle speed when below this pre-set duty.

CPUFAN Idle-Speed Duty Set the default value to: [40]

- **USB Configuration**

  Press [Enter] to make settings for the following sub-items:

  USB Configuration

  XHCI Hand-off

  This is a workaround for OSes without XHCI hand-off support. The XHCI ownership change should be claimed by XHCI driver.

  The optional settings: [Enabled]; [Disabled].

  XHCI Hand-off Set the default value to: [Enabled].

  USB Mass Storage Driver Support

  Use this item to enable or disable USB Mass storage driver support.

  The optional settings: [Disabled]; [Enabled].

  USB Mass Storage Driver Support Set the default value to: [Enabled].

  USB hardware delay and time-out

  USB Transfer time-out

  Use this item to set the time-out value for control, bulk, and interrupt transfers.

  The optional settings: [1 sec]; [5 sec]; [10 sec]; [20 sec].

  USB Transfer time-out Set the default value to: [20 sec]

  Device reset time-out

  Use this item to set USB mass storage device start unit command time-out.

  The optional settings: [10 sec]; [20 sec]; [30 sec]; [40 sec].

  Device reset time-out Set the default value to: [20 sec]

  Device power-up delay

  Use this item to set maximum time the device will take before it properly reports itself to the host controller. 'Auto' uses default value: for a root port it is 100 ms, for a hub port the delay is taken from hub descriptor.

  The optional settings: [Auto]; [Manual].

  Device power-up delay Set the default value to: [Auto]

Select **[Manual]** you can set value for the following sub-item: '**Device power-up delay in seconds**', the delay range is 1 .. 40 seconds, in one second increments.

- **Network Stack Configuration**

  Press [Enter] to go to '**Network Stack**' screen to make further settings.

  Network Stack

  Use this item to enable or disable UEFI Network Stack.

  The optional settings: [Disabled]; [Enabled].

  Network Stack Set the default value to: [Disabled]

  When set as **[Enabled]**, the following sub-items shall appear:

  IPv4 PXE Support

  Use this item to enable/disable IPv4 PXE Boot Support. When set as [Disabled], IPv4 PXE boot support will not be available.

  The optional settings: [Disabled]; [Enabled].

  IPv4 PXE Support Set the default value to: [Enabled]

  IPv6 PXE Support

Use this item to enable/disable IPv6 PXE Boot Support. When set as [Disabled], IPv6 PXE boot support will not be available.
The optional settings: [Disabled]; [Enabled].
IPv6 PXE Support Set the default value to: [Disabled]
PXE boot wait time
Wait time in seconds to press [ESC] key to abort the PXE boot.
Use either [+]/[-] or numeric keys to set the value.
PXE boot wait time Set the default value to: [5]
Media detect count
Use this item to set number of times presence of media will be checked.
Use either [+]/[-] or numeric keys to set the value.
Media detect count Set the default value to: [5]

- **NVMe Configuration**

Use this item to set NVMe Device options settings.

NVMe Configuration

- **Wake-up Function Settings**

Wake-up System With Fixed Time

*This item will only show when 'Wake-up System with Dynamic Time' is set as [Disabled]. Use this item to enable or disable system wake-up by RTC alarm. When this function is enabled, system will wake on the time (hr::min::sec) specified.

The optional settings: [Disabled]; [Enabled].

Wake-up System With Fixed Time Set the default value to: [Disabled]

When set as [Enabled], user can make settings in the following items that appear:

Wake-up Hour

Use this item to select 0-23 for example enter 3 for 3am and 15 for 3pm.

Wake-up Hour Set the default value to: [0]

Wake-up Minute

Use this item to select 0-59.

Wake-up Minute Set the default value to: [0]

Wake-up Second

Use this item to select 0-59.

Wake-up Second Set the default value to: [0]

Wake-up System with Dynamic Time

*This item will only show when '**Wake-up System with Fixed Time**' is set as [Disabled].

Use this item to enable or disable system wake-up by RTC alarm. When enabled, system will wake on the current time + Increase minute(s).

Wake-up System with Dynamic Time Set the default value to: [Disabled]

When set as [Enabled], user can make settings in the following items that appear:

Wake-up Minute Increase

Use this item to select 1-60 minute(s).

Wake-up Minute Increase Set the default value to: [1]

USB Power Gating S4-S5

Use this item to USB Wake-up is affected by ERP Function in S4. Please disable ERP before activating this function in S4.

The optional settings: [Disabled]; [Enabled].

USB Power Gating S4-S5 Set the default value to: [Enabled]

PCIE Wake-up from S4-S5

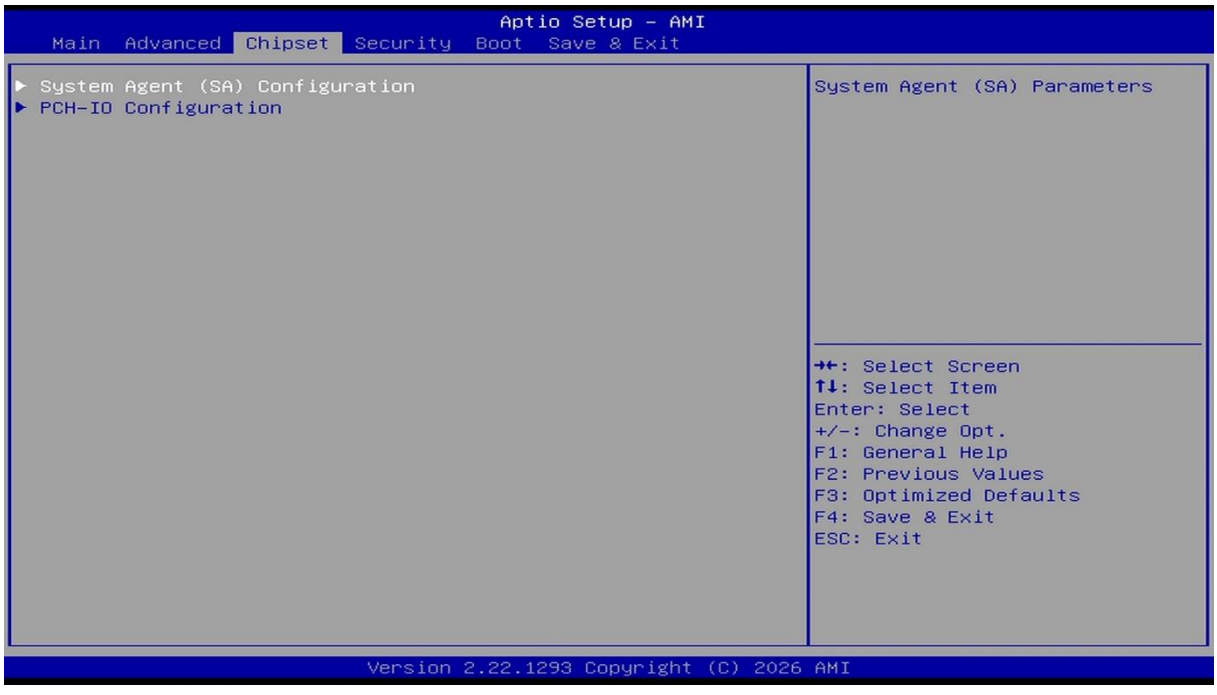
The optional settings: [Disabled]; [Enabled].

PCIE Wake-up from S4-S5 Set the default value to: [Disabled]

- **PTT Configuration**
  Press [Enter] to make settings in the following sub-items:
  TPM Device Selection
  The optional settings: [dTPM]; [PTT].

TPM Device Selection Set the default value to: [PTT]

4-8 Chipset Menu



- **System Agent (SA) Configuration**
  Press [Enter] to make settings for the following sub-items:
  System Agent (SA) Configuration
  GTT Size
  Select the GTT Size Selections in MB.

The optional settings: [2MB]; [4MB] ; [8MB]

GTT Size Set the default value to: [8MB]

DVMT Pre-Allocated

Use this item to Select DVMT 5.0 Pre-Allocated(Fixed) Graphics Memory size used ny the Internal Graphics Device.
Select DVMT 5.0 Pre-Allocated Selections in MB.

The optional settings: [32MB]; [64MB] ; [96MB] ; [128MB] ; [160MB]

DVMT 5.0 Pre-Allocated Set the default value to: [128MB]

Active LFP

Use this item to select the Active LFP Configuration.

The optional settings: [Disabled]; [Enabled].

Active LFP Set the default value to: [Disabled]

When set as [Enabled], the following sub-item shall appear:

Panel Type

The optional settings are: [800x480 1ch 18-bit]; [800x600 1ch 18-bit]; [800x600 1ch 24-bit]; [1024x600 1ch 18-bit]; [1024x768 1ch 18-bit]; [1024x768 1ch 24-bit]; [1280x800 1ch 18-bit]; [1280x800 1ch 24-bit]; [1366x768 1ch 18-bit]; [1366x768 1ch 24-bit]; [1440x900 2ch 18-bit]; [1440x900 2ch 24-bit]; [1280x1024 2ch 24-bit]; [1680x1050 2ch 24-bit]; [1920x1080 2ch 24-bit]; [eDP].

Panel Type Set the default value to: [eDP]

Backlight Control

Use this item to make back light control setting.

The optional settings are: [PWM Inverted]; [PWM Normal].
Backlight Control Set the default value to: [PWM Normal]

- **PCH-IO Configuration**

  Press [Enter] to make settings for the following sub-items:

  PCH-IO Configuration

- **SATA Configuration**

  SATA Device Options Settings.

  SATA Configuration

  SATA Controller(s)

  Use this item to enable/disable SATA Device.

  The optional settings are: [Enabled]; [Disabled].

  SATA Controller(s) Set the default value to: [Enabled]

  When set as [Enabled], the following sub-items shall appear:

  M.2

  Port

  Use this item to enable or disable SATA Port.

The optional settings are: [Disabled]; [Enabled].

Port Set the default value to: [Enabled]

HD Audio

Use this item to control detection of the HD-Audio device.

Disabled= HDA will be unconditionally disabled.

Enabled= HDA will be unconditionally enabled.

The optional settings: [Disabled]; [Enabled].

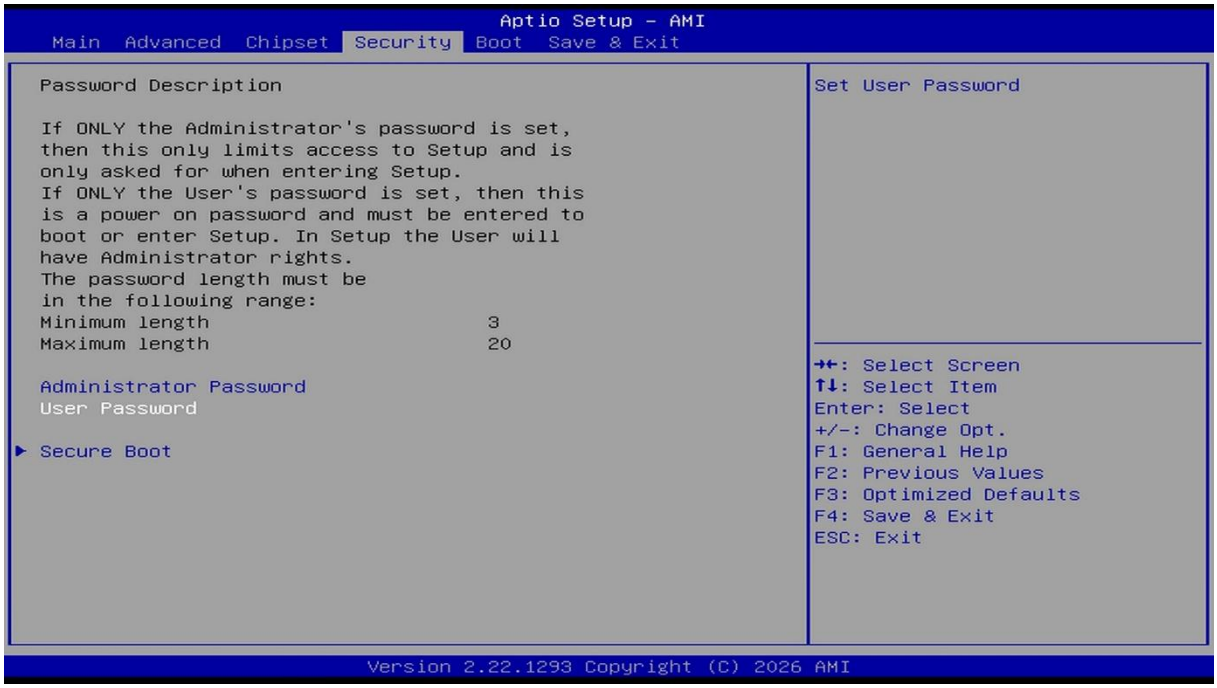
HD Audio Set the default value to: [Enabled]

eMMC 5.1 Controller

The optional settings: [Disabled]; [Enabled].

eMMC Controller Set the default value to: [Enabled]

4-9 Security Menu



Security menu allow users to change administrator password and user password settings.

Administrator Password

If there is no password present on system, please press [Enter] to create new administrator password. If password is present on system, please press [Enter] to verify old password then to clear/change password. Press again to confirm the new administrator password.

User Password

If there is no password present on system, please press [Enter] to create new administrator password. If password is present on system, please press [Enter] to verify old password then to clear/change password. Press again to confirm the new administrator password.

- **Secure Boot**

  Press [Enter] to make customized secure settings:

  System Mode

  Secure Boot

Secure Boot feature is Active if Secure Boot is Enabled, Platform Key(PK) is enrolled and the System is in User mode. The mode change requires platform reset.
The optional settings: [Disabled]; [Enabled].
Secure Boot Set the default value to: [Enabled]

Secure Boot Mode

Set UEFI Secure Boot Mode to Standard mode or Custom mode. This change is effective after save. After reset, this mode will return to Standard mode.
In Custom mode, Secure Boot Policy variables can be configured by a physically present user without full authentication.
The optional settings: [Standard]; [Custom].
Secure Boot Mode Set the default value to: [Standard]
When set as [**Custom**], user can make further settings in the following items that show up:

- **Restore Factory Keys**

Use this item to force system to User Mode, to install factory default Secure Boot key databases.

- **Reset To Setup Mode**

Use this item to Delete all secure boot key databases from NVRAM.

- **Key Management**

This item enables expert users to modify Secure Boot Policy variables without full authentication, which includes the following items:

Vendor Keys

Factory Key Provision

This item is for user to install factory default Secure Boot keys after the platform reset and while the System is in Setup mode.
The optional settings: [Disabled]; [Enabled].
Factory Key Provision Set the default value to: [Disabled]

- **Restore Factory Keys**

Use this item to force system into User Mode. Install factory default Secure Boot key databases.

- **Reset To Setup Mode**

Use this item to Delete all Secure Boot key databases from NVRAM.

- **Enroll Efi Image**

This item allows the image to run in Secure Boot mode.
Enroll SHA256 Hash certificate of a PE image into Authorized Signature Database (db).

- **Export Secure Boot variables**

Use this item to save NVRAM content of Secure Boot variables to a file.

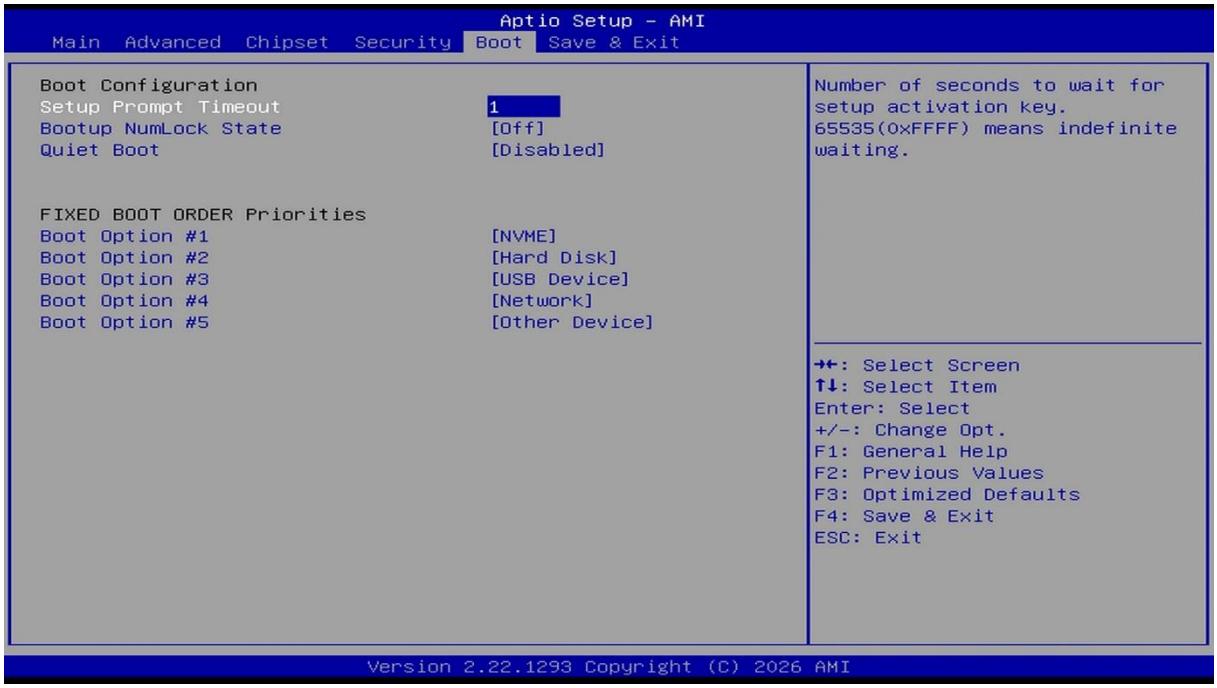
- **Export Secure Boot variables**

- **Platform Key(PK)**
- **Key Exchange Keys(KEK)**
- **Signatures(db)**
- **Forbidden Signatures(dbx)**
- **Authorized TimeStamps(dbt)**
- **OsRecovery Signatures(dbr)**

Use this item to enroll Factory Defaults or load certificates from a file:
1. Public Key Certificate:
   a) EFI_SIGNATURE_LIST
   b) EFI_ CERT_X509 (DER)
   c) EFI_ CERT_RSA2048 (bin)
   d) EFI_ CERT_SHAXXX
2. Authenticated UEFI Variable

3. EFI PE/COFF Image (SHA256)
Key Source: Factory, Modified, Mixed

4-10 Boot Menu



Boot Configuration

Setup Prompt Timeout

Use this item to set number of seconds to wait for setup activation key. 65535 (0xFFFF) means indefinite waiting.

Setup Prompt Timeout Set the default value to: [1]

Bootup NumLock State

Use this item to select keyboard NumLock state.

The optional settings: [On]; [Off].

Bootup NumLock State Set the default value to: [Off]

Quiet Boot

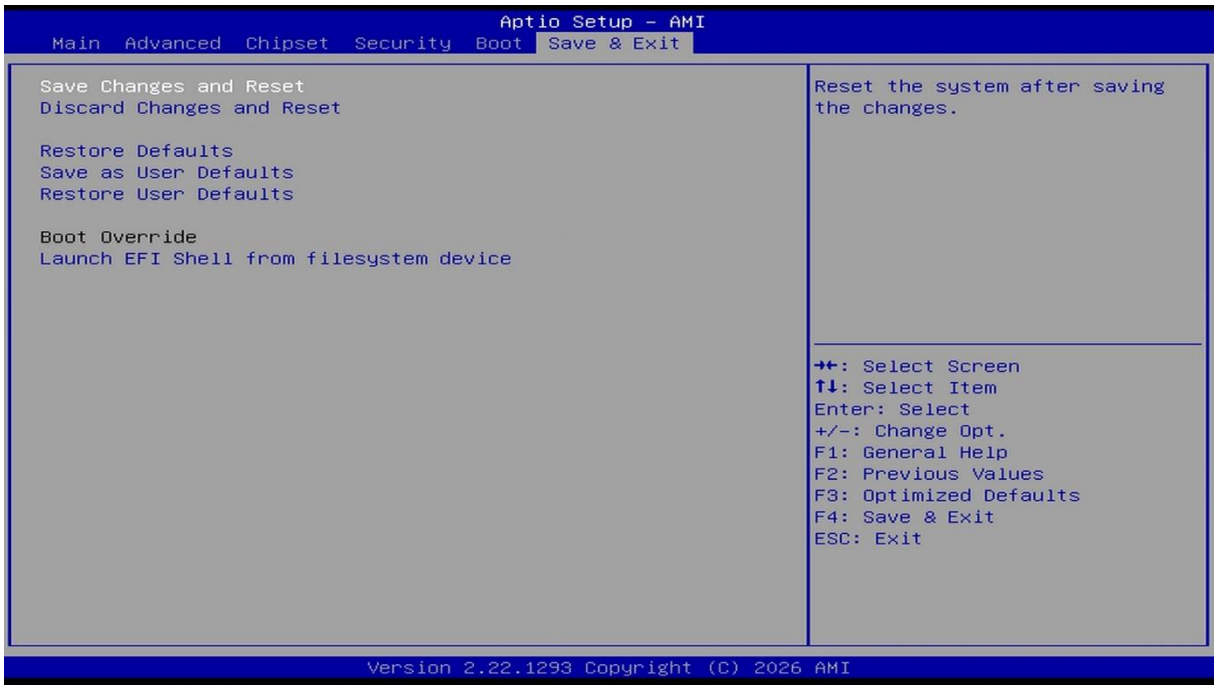
The optional settings: [Disabled]; [Enabled].

Quiet Boot Set the default value to: [Disabled]

Boot Option Priorities

Boot Option #1~#5 This item allows you to set the system boot order. Configuration options: [NVME]; [Hard Disk]; [USB Device]; [Network] ; [Other Device:UEFI:Built-in EFI-Shell]

4-11 Save & Exit Menu



Save Changes and Reset

This item allows user to reset the system after saving the changes.

Discard Changes and Reset

This item allows user to reset the system setup without saving any changes.

Restore Defaults

Use this item to restore /load default values for all the setup options.

Save as User Defaults

Use this item to save the changes done so far as user defaults.

Restore User Defaults

Use this item to restore the user defaults to all the setup options.

Boot Override

Appendix A

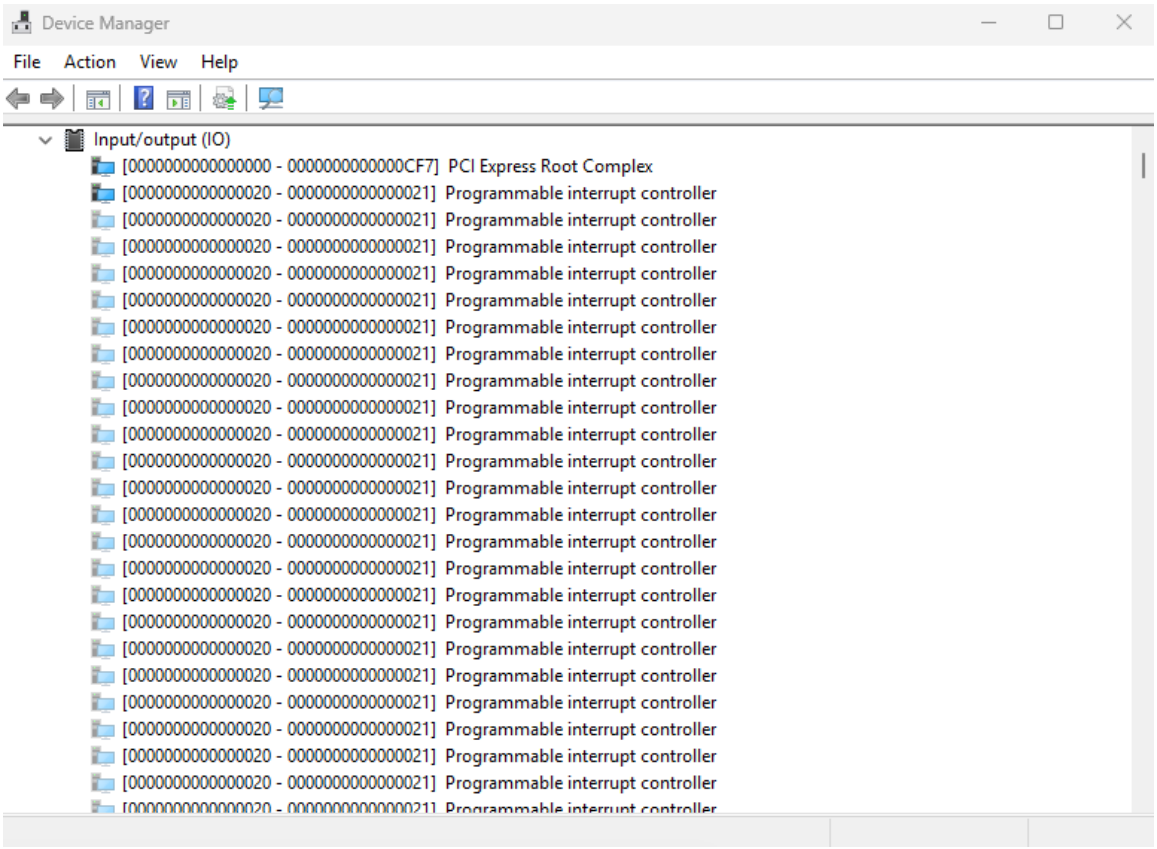
Mating Connectors

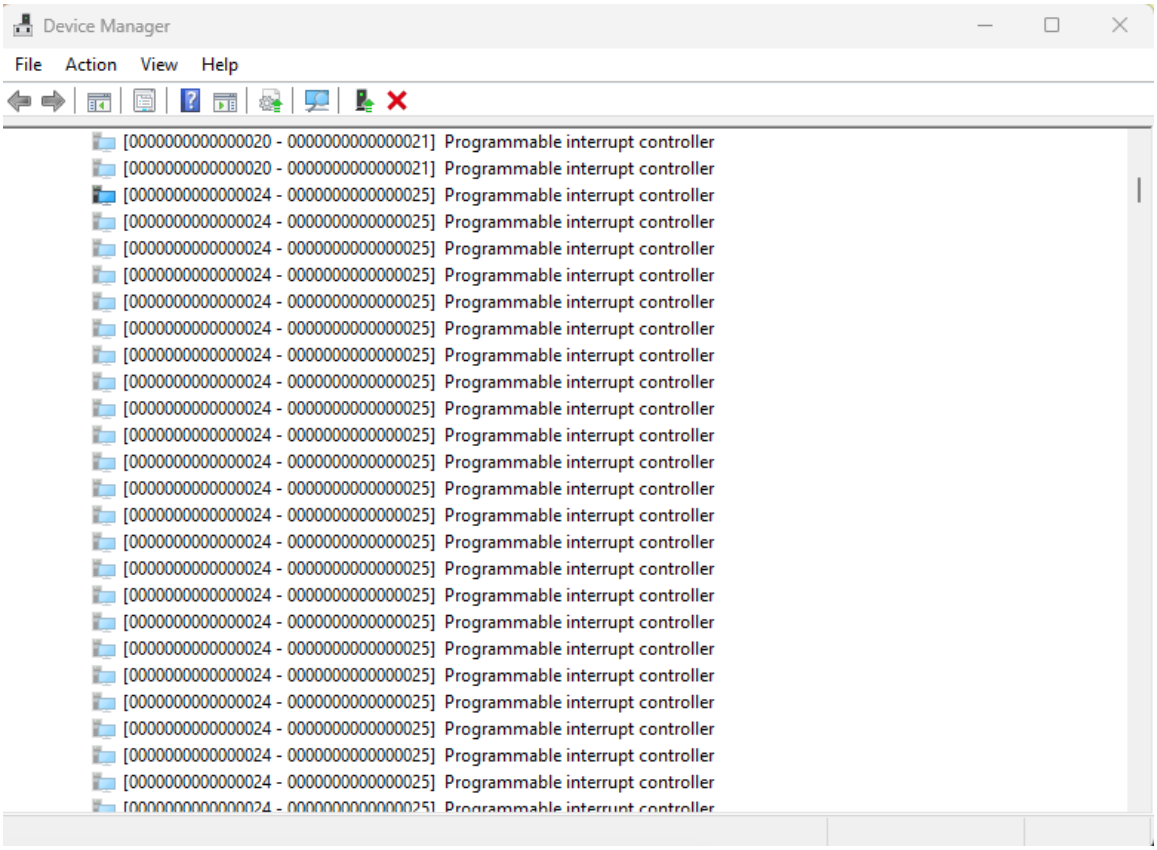
(Model：B377FTWL1)

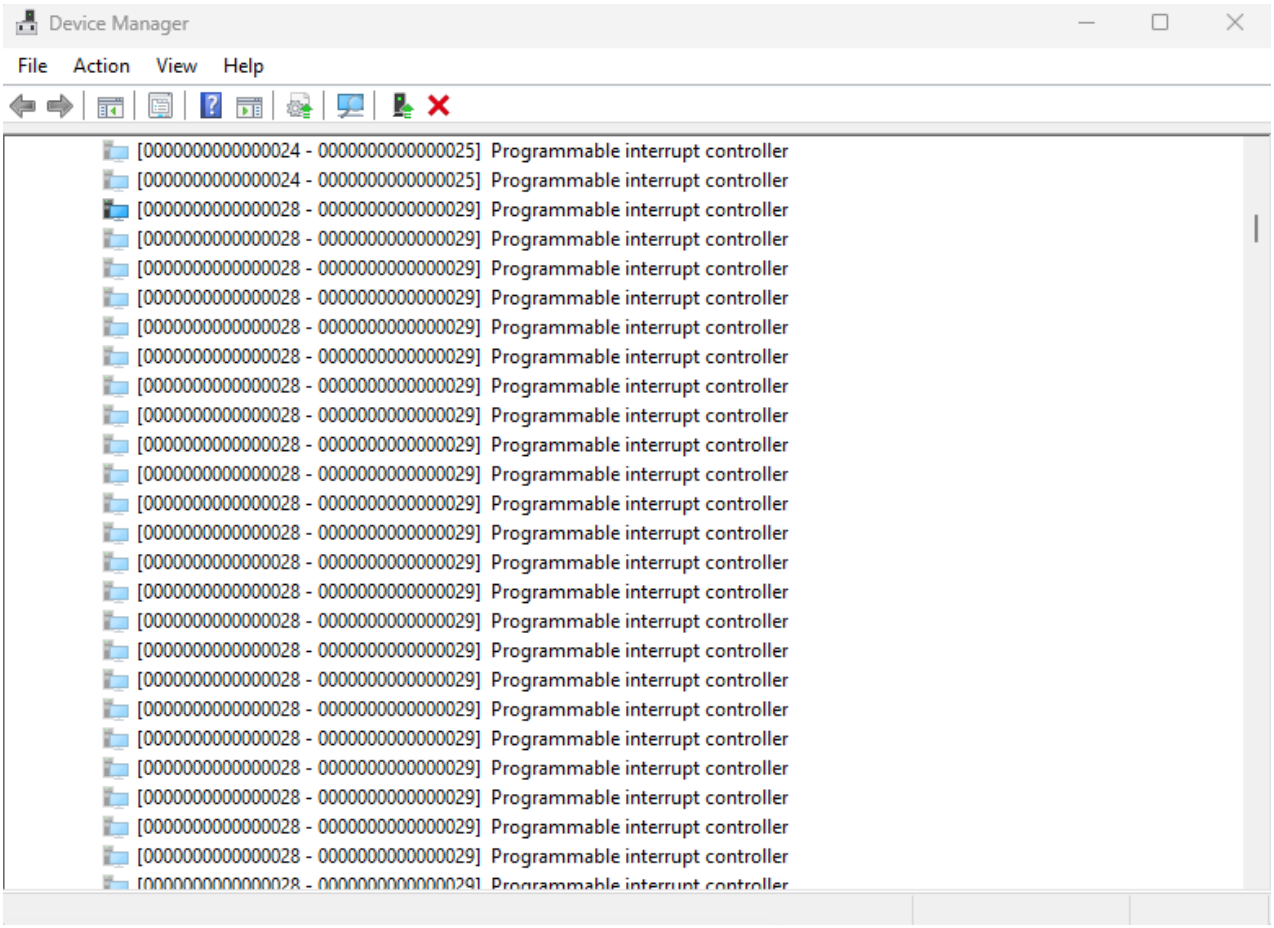
Location Printing	Function	Vendor	Vendor P/N
COM1	RS232 / RS422 / RS485 Serial Port Header (onboard)	Topt (鑫冠輝電子)	PH200-205M-GBB00010D
COM2	RS232 Serial Port Header (onboard)	Topt (鑫冠輝電子)	PH200-205M-GBB00010D
COM3	RS232 Serial Port Header (onboard)	Topt (鑫冠輝電子)	PH200-205M-GBB00010D
COM4	RS232 Serial Port Header (onboard)	Topt (鑫冠輝電子)	PH200-205M-GBB00010D
FHP1	Front Panel Line-Out Phone Jack (綠)	SHENG CONG (盛聰電子)	PJ-D3086B
FMIC1	Front Panel MIC-In Phone Jack (紫)	SHENG CONG (盛聰電子)	PJ-D3086B
FUSB1	Front Panel Dual USB 2.0 Type-A connector	ZONY (宗義科技)	A052010018
DCIN1	External 12V input DC Jack connector	SHENG CONG (盛聰電子)	DJ-D020AE
HDMI1_2	Dual HDMI 2.1 Port Connector	FOXCONN	QJ11191-DFB1-4F
DP1	DP1.4a Connector	LOTES	ABA-DIS-001-K01
USB1	Dual USB3.2 Gen.2 Type-A Port Connector	LOTES	AUSB0108-K015C10
USB2	Dual USB 2.0 Type-A connector	ZONY (宗義科技)	A052010018
LAN1 & LAN2	RJ45 2.5GbE Lan Connector	UDE (湧德電子)	RT7-JT-0004

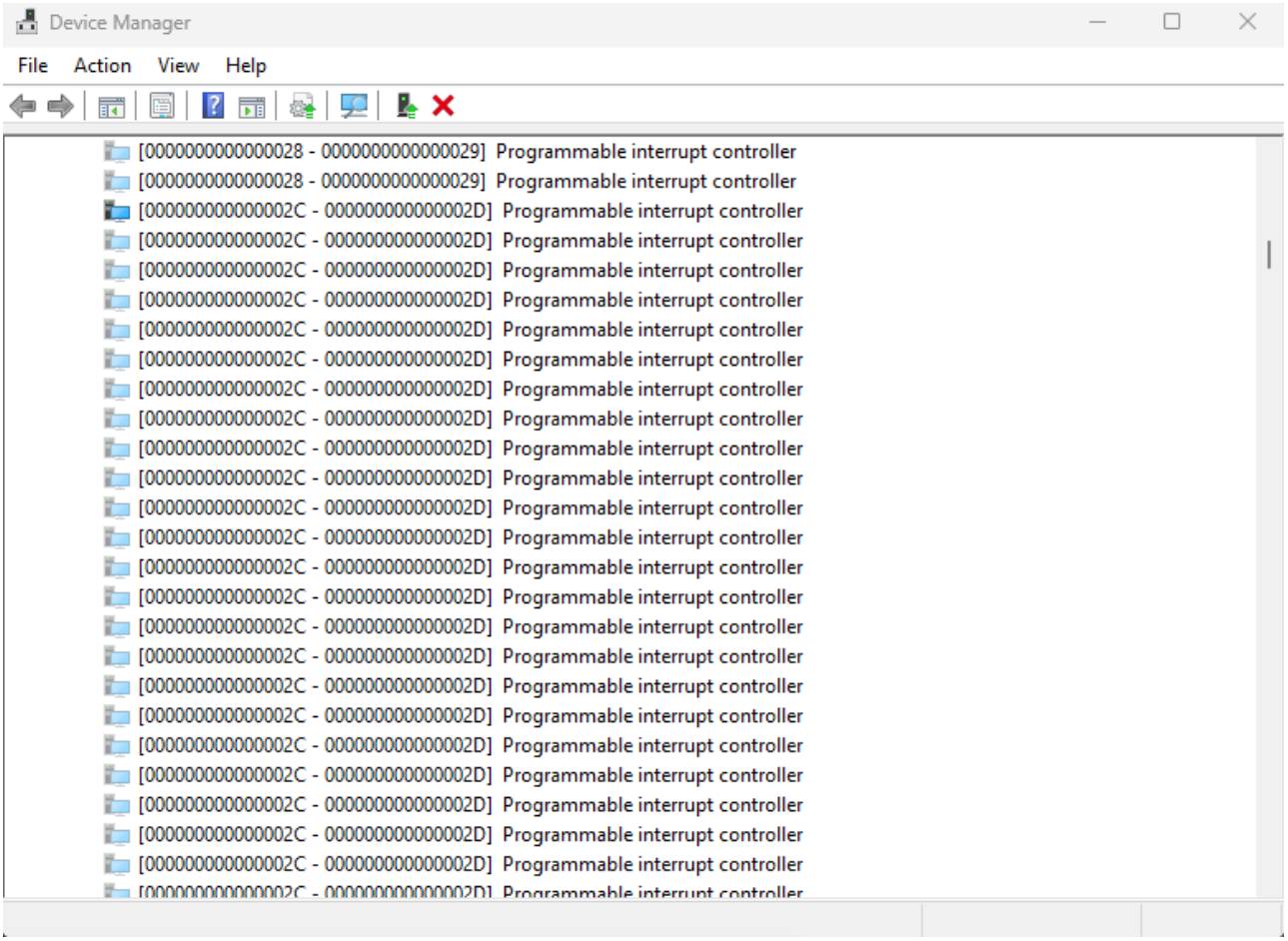
Appendix B

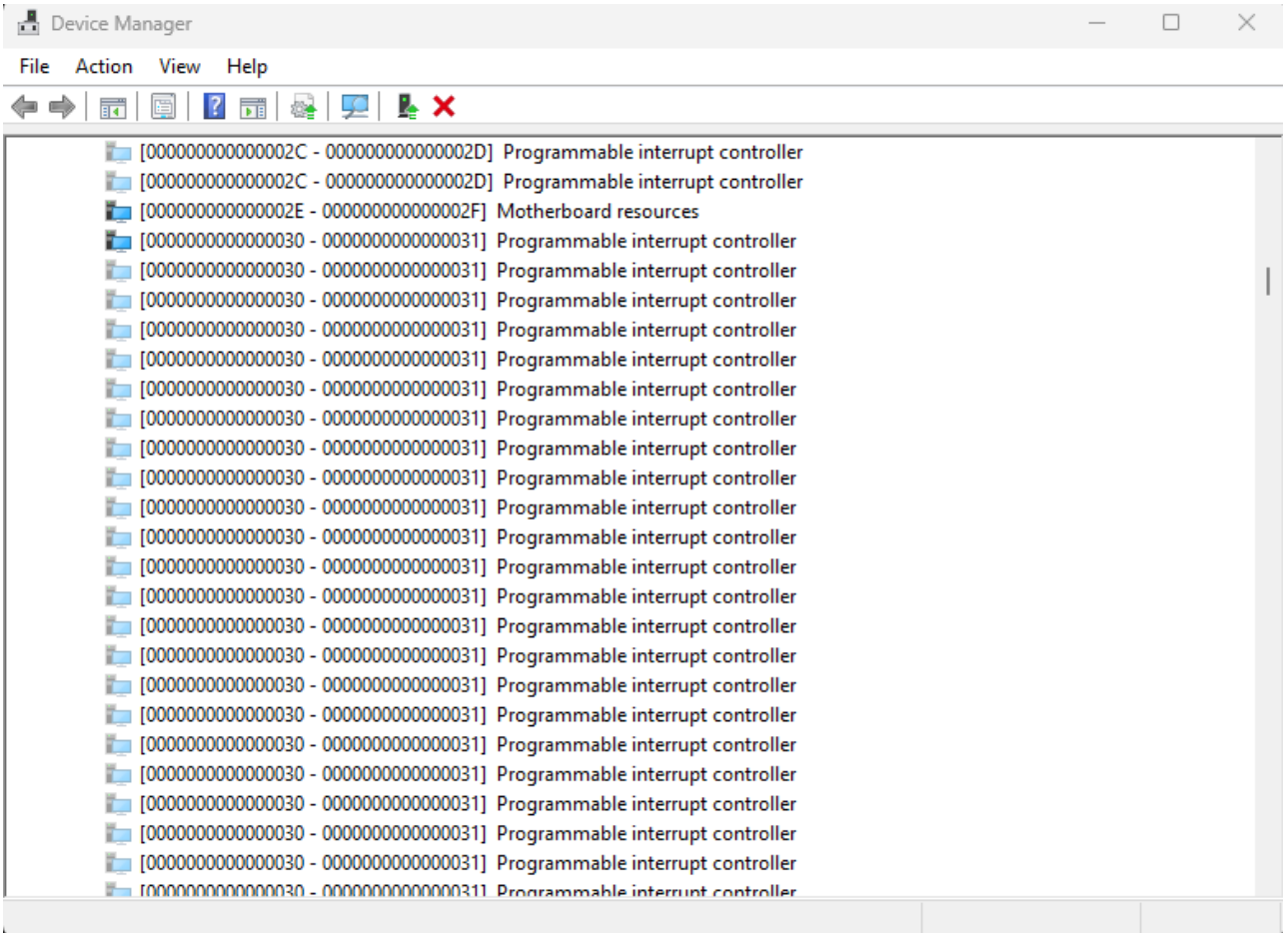
I/O Address Map

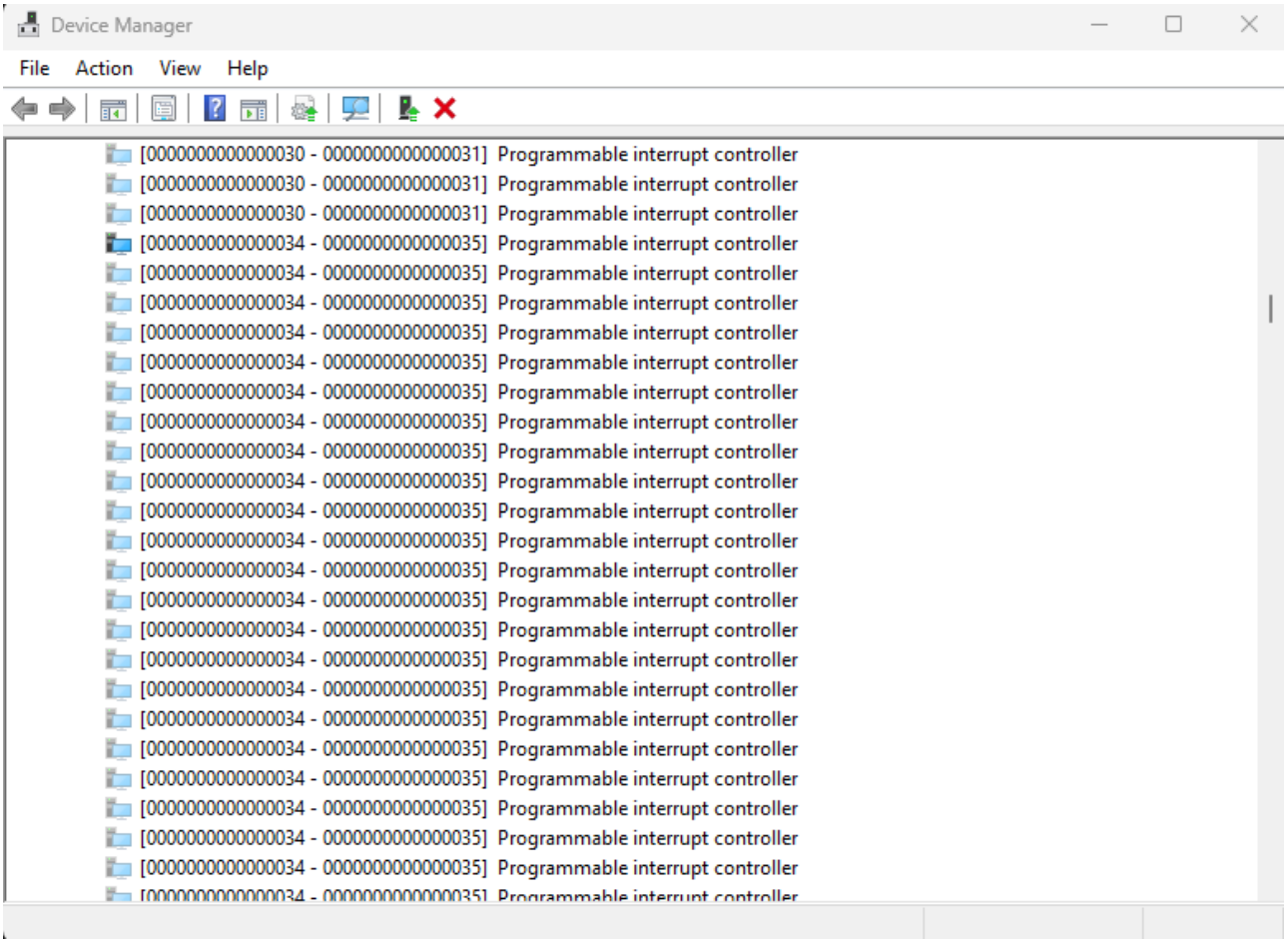


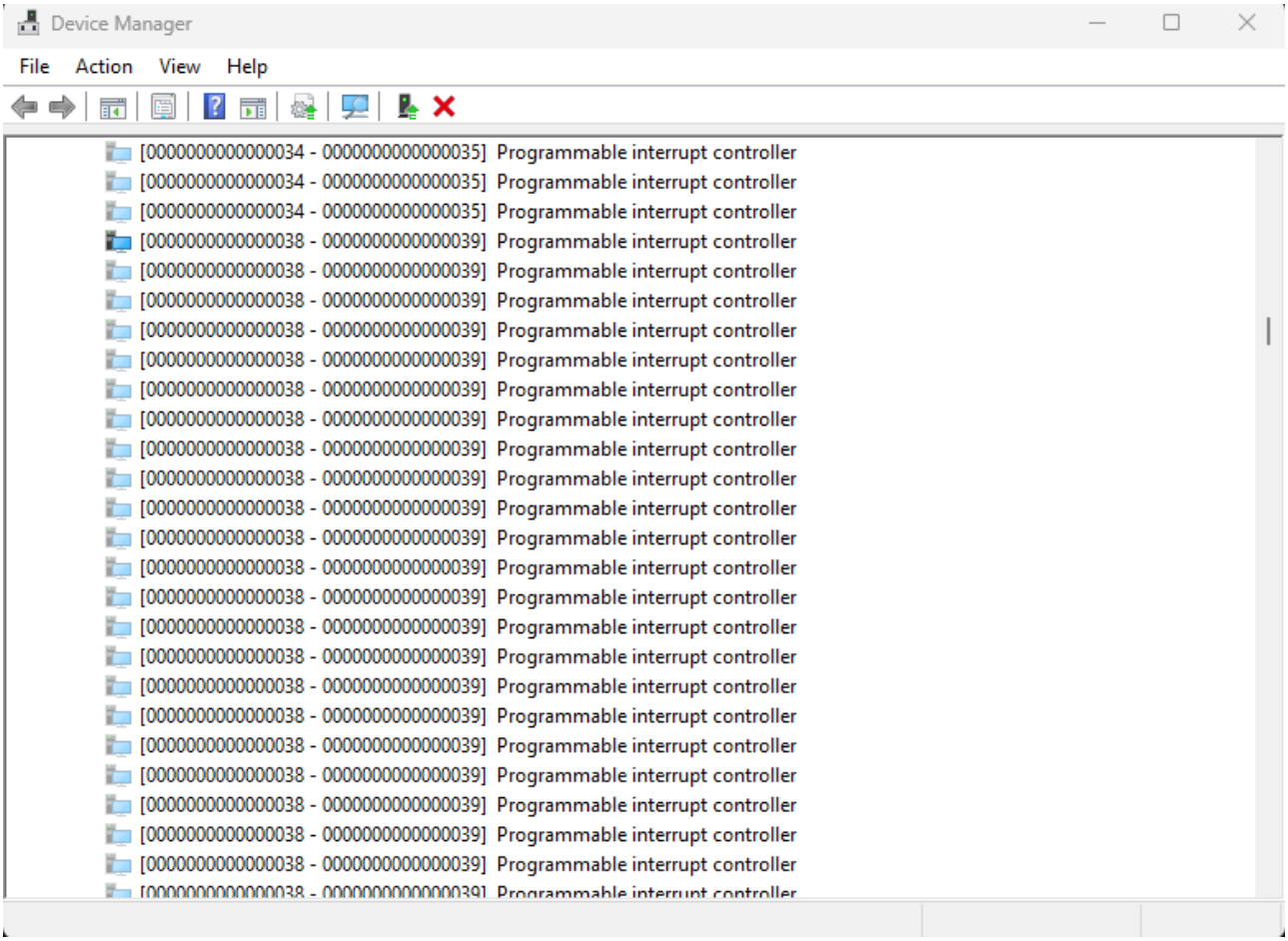


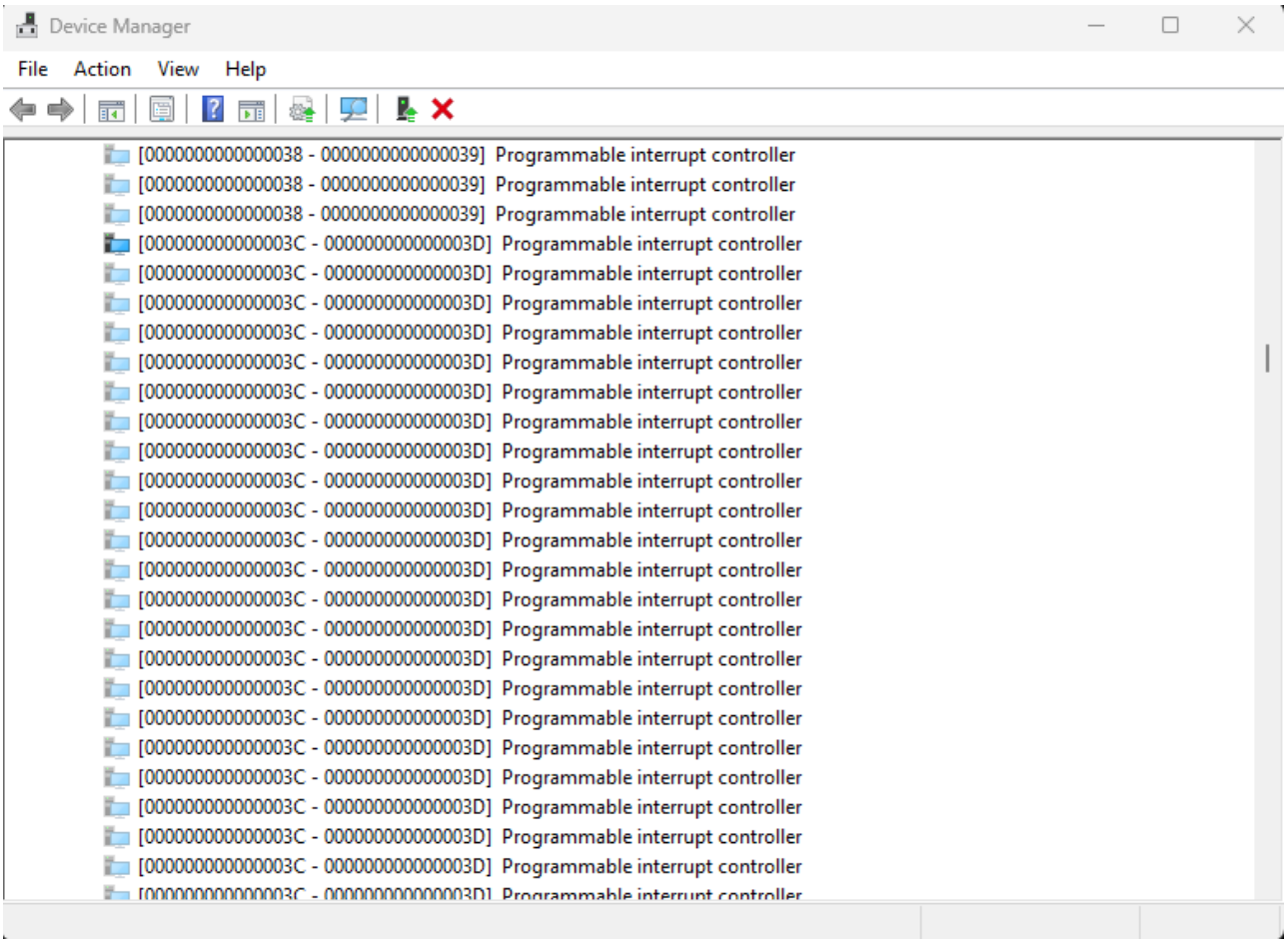

Device Manager
File Action View Help
[0000000000000024 - 0000000000000025] Programmable interrupt controller
[0000000000000024 - 0000000000000025] Programmable interrupt controller
[0000000000000028 - 0000000000000029] Programmable interrupt controller
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[0000000000000028 - 0000000000000029] Programmable interrupt controller
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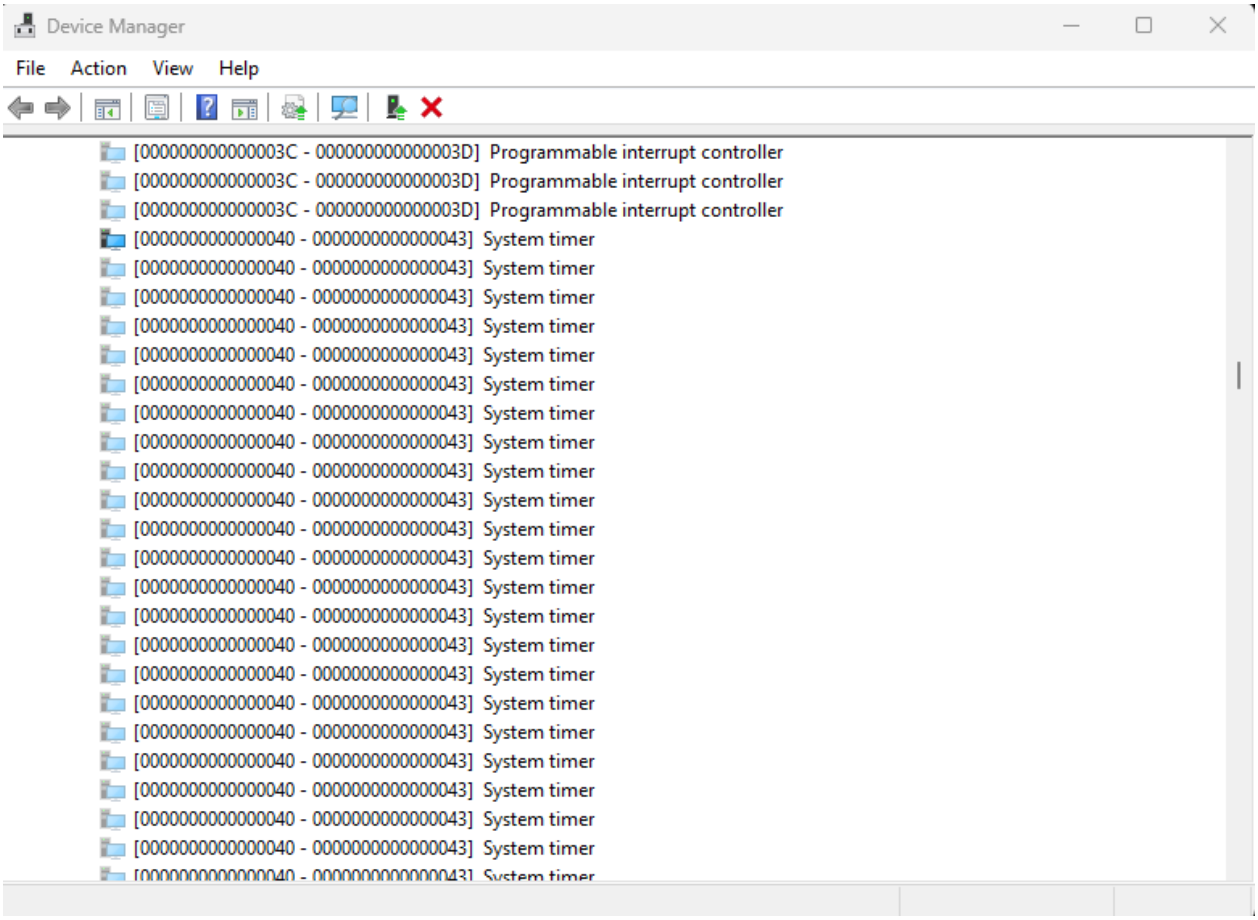

Device Manager
File Action View Help
[0000000000000028 - 0000000000000029] Programmable interrupt controller
[0000000000000028 - 0000000000000029] Programmable interrupt controller
[000000000000002C - 000000000000002D] Programmable interrupt controller
[000000000000002C - 000000000000002D] Programmable interrupt controller
[000000000000002C - 000000000000002D] Programmable interrupt controller
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[000000000000002C - 000000000000002D] Programmable interrupt controller

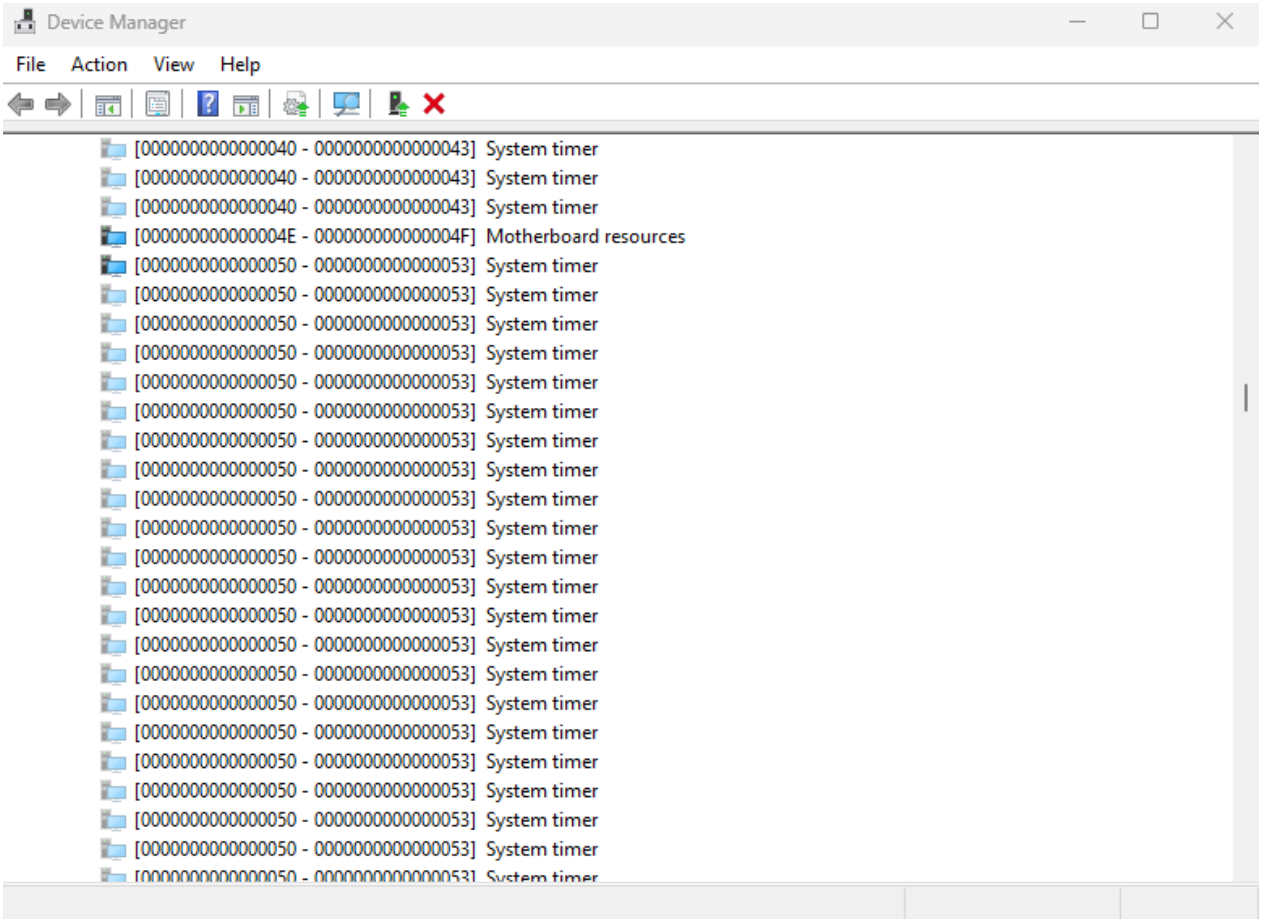

Device Manager
File Action View Help
[000000000000002C - 000000000000002D] Programmable interrupt controller
[000000000000002C - 000000000000002D] Programmable interrupt controller
[000000000000002E - 000000000000002F] Motherboard resources
[0000000000000030 - 0000000000000031] Programmable interrupt controller

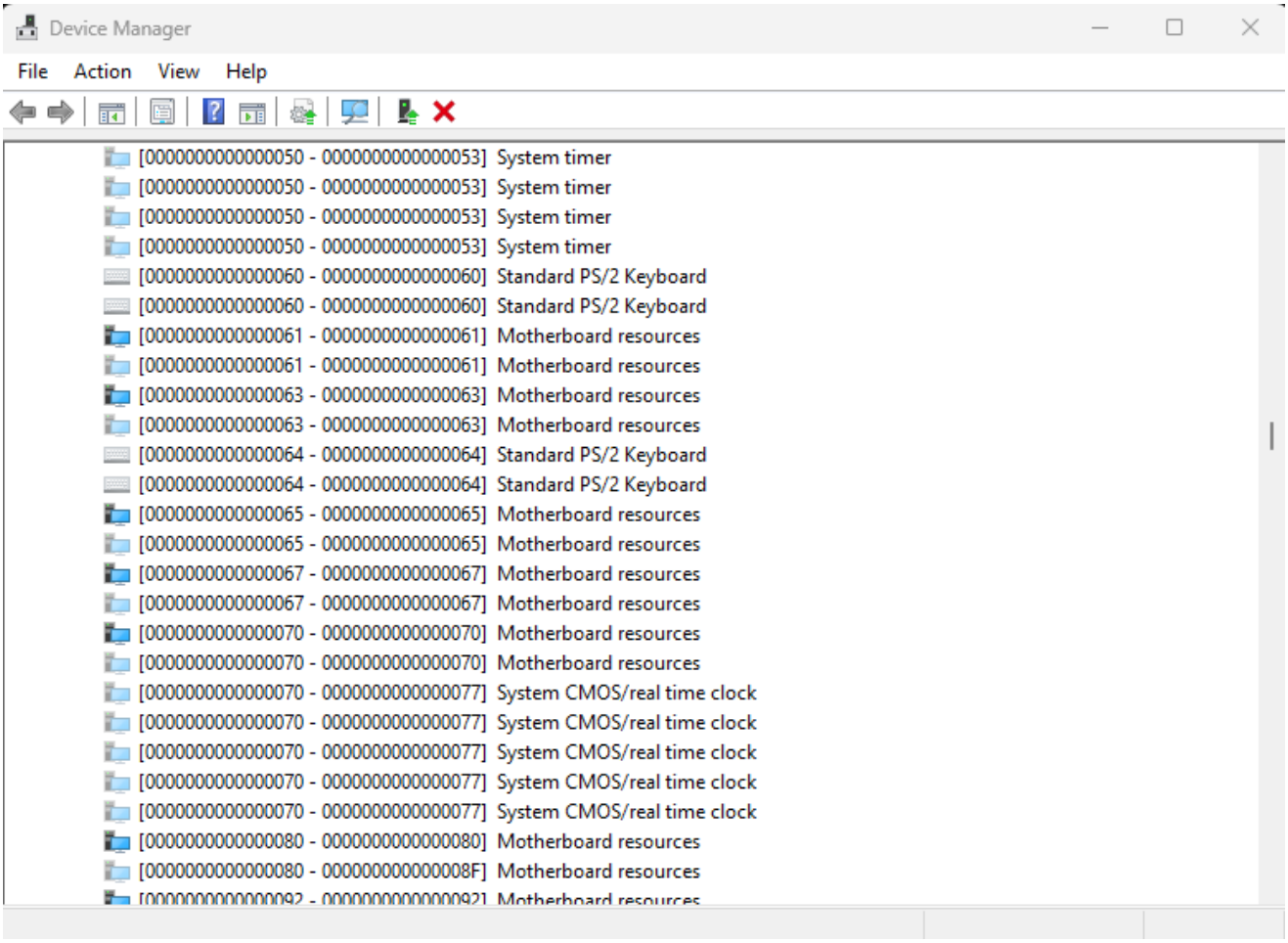

Device Manager
File Action View Help
[0000000000000030 - 0000000000000031] Programmable interrupt controller
[0000000000000034 - 0000000000000035] Programmable interrupt controller

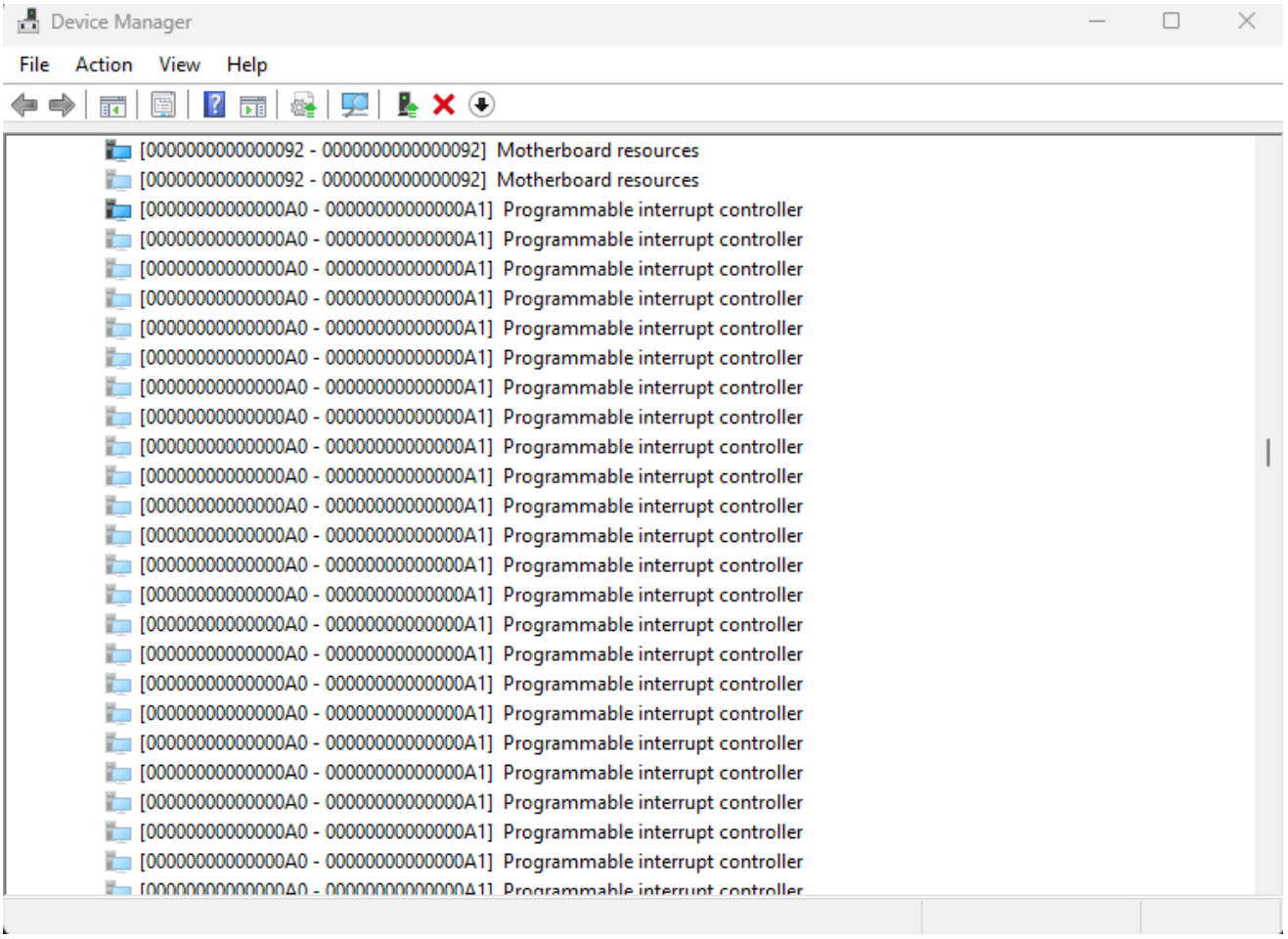

Device Manager
File Action View Help
[0000000000000034 - 0000000000000035] Programmable interrupt controller
[0000000000000034 - 0000000000000035] Programmable interrupt controller
[0000000000000034 - 0000000000000035] Programmable interrupt controller
[0000000000000038 - 0000000000000039] Programmable interrupt controller
[0000000000000038 - 0000000000000039] Programmable interrupt controller
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[0000000000000038 - 0000000000000039] Programmable interrupt controller

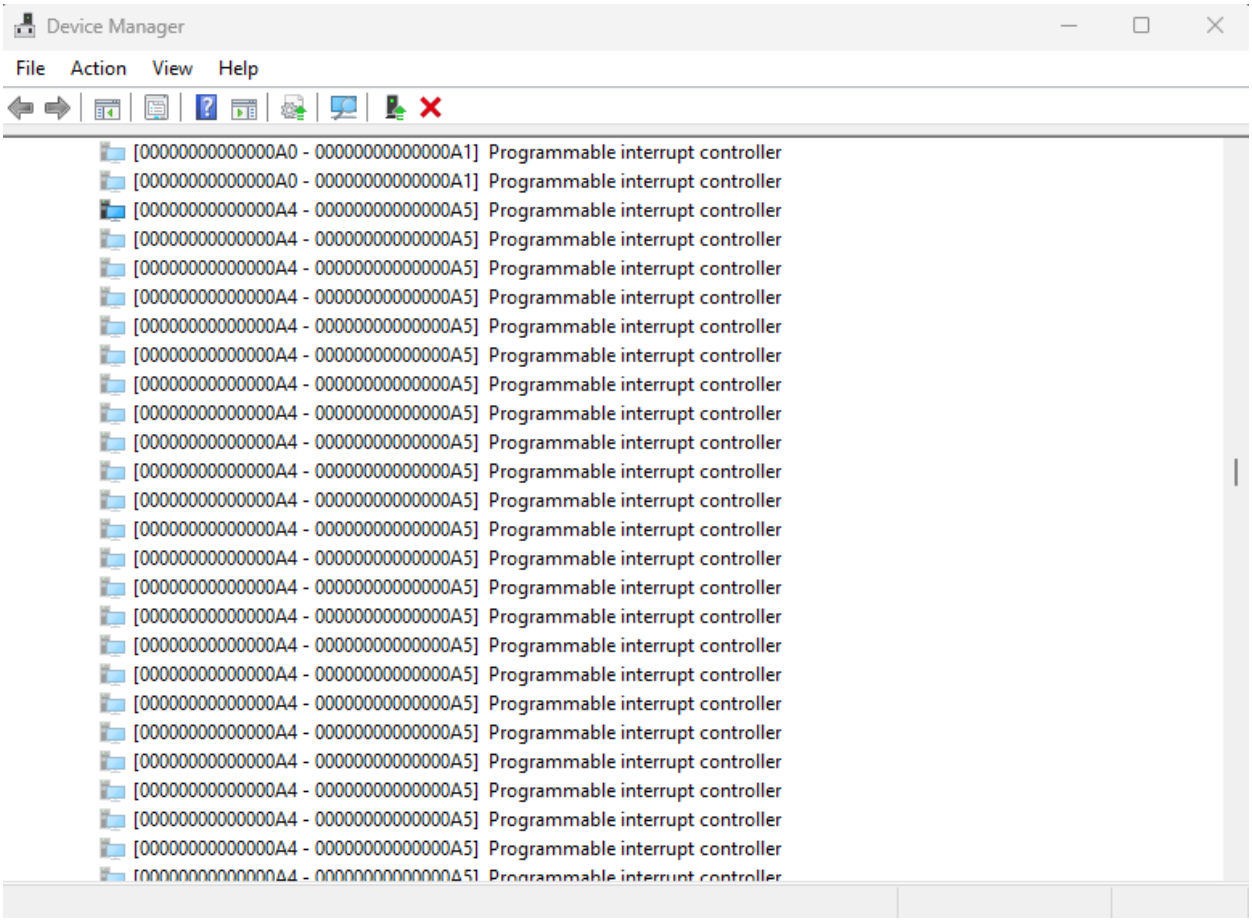

Device Manager
File Action View Help
[0000000000000038 - 0000000000000039] Programmable interrupt controller
[0000000000000038 - 0000000000000039] Programmable interrupt controller
[0000000000000038 - 0000000000000039] Programmable interrupt controller
[000000000000003C - 000000000000003D] Programmable interrupt controller
[000000000000003C - 000000000000003D] Programmable interrupt controller
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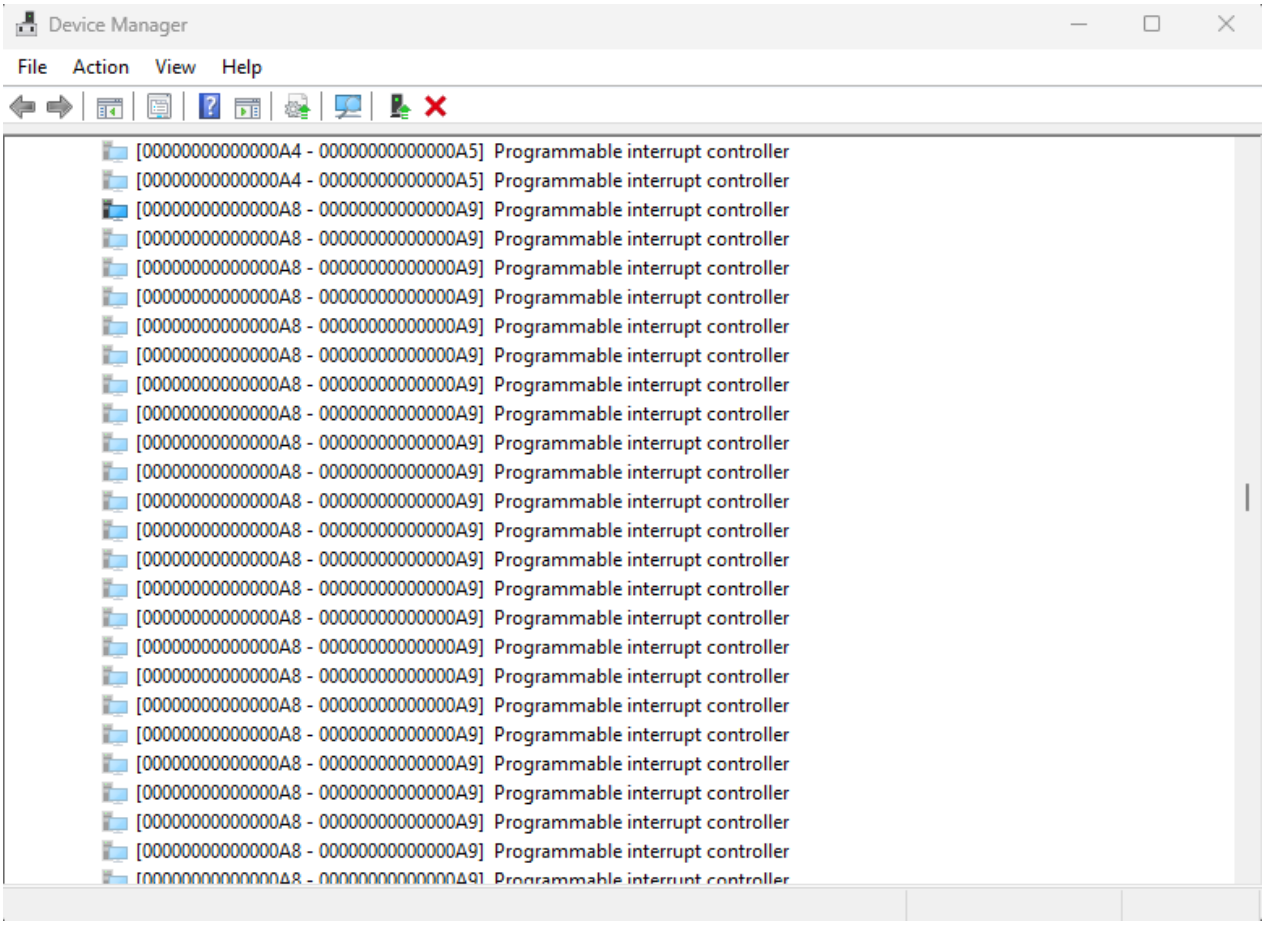

Device Manager
File Action View Help
[000000000000003C - 000000000000003D] Programmable interrupt controller
[000000000000003C - 000000000000003D] Programmable interrupt controller
[000000000000003C - 000000000000003D] Programmable interrupt controller
[0000000000000040 - 0000000000000043] System timer
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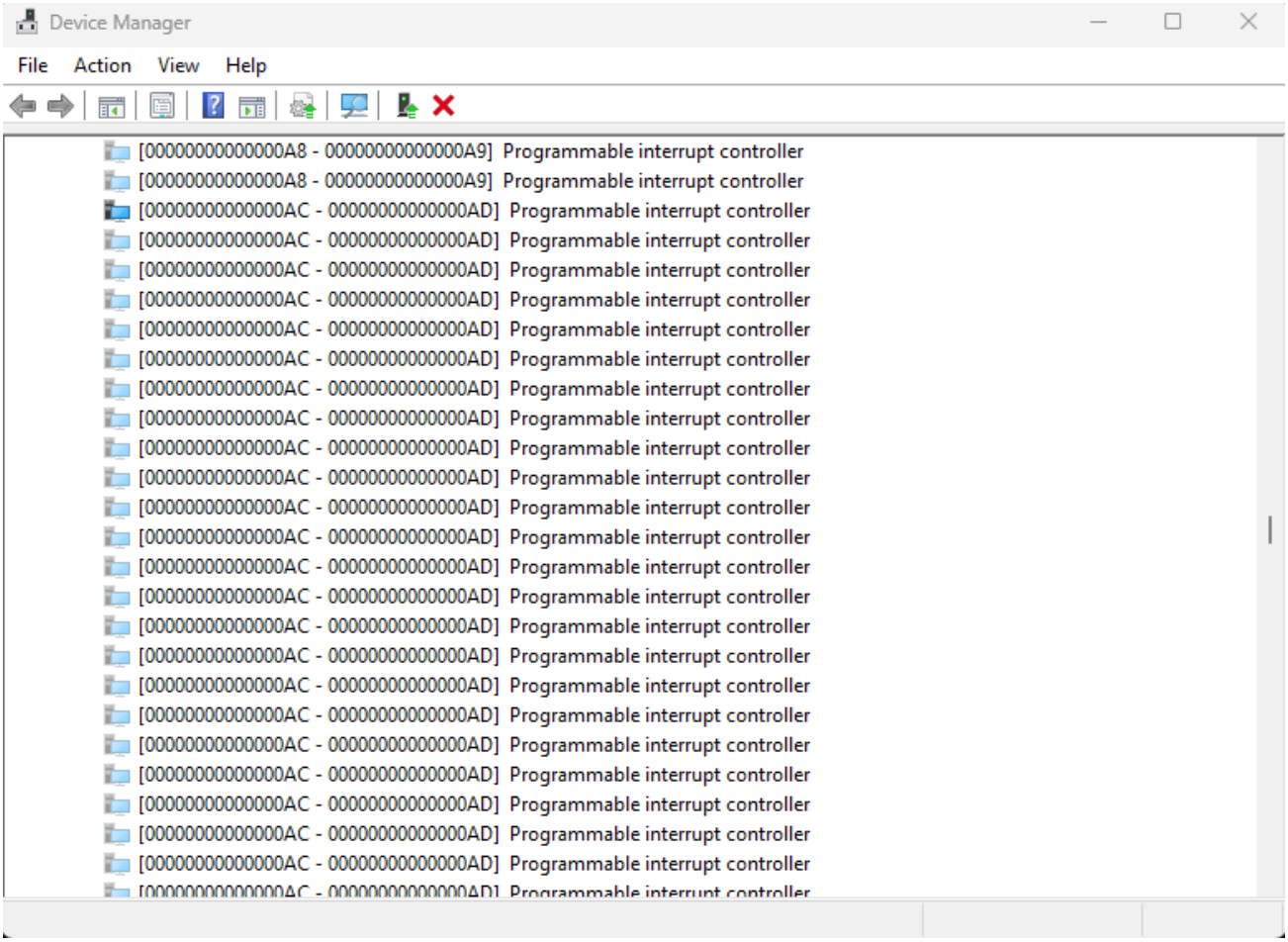

Device Manager
File Action View Help
[0000000000000040 - 0000000000000043] System timer
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[0000000000000040 - 0000000000000043] System timer
[000000000000004E - 000000000000004F] Motherboard resources
[0000000000000050 - 0000000000000053] System timer
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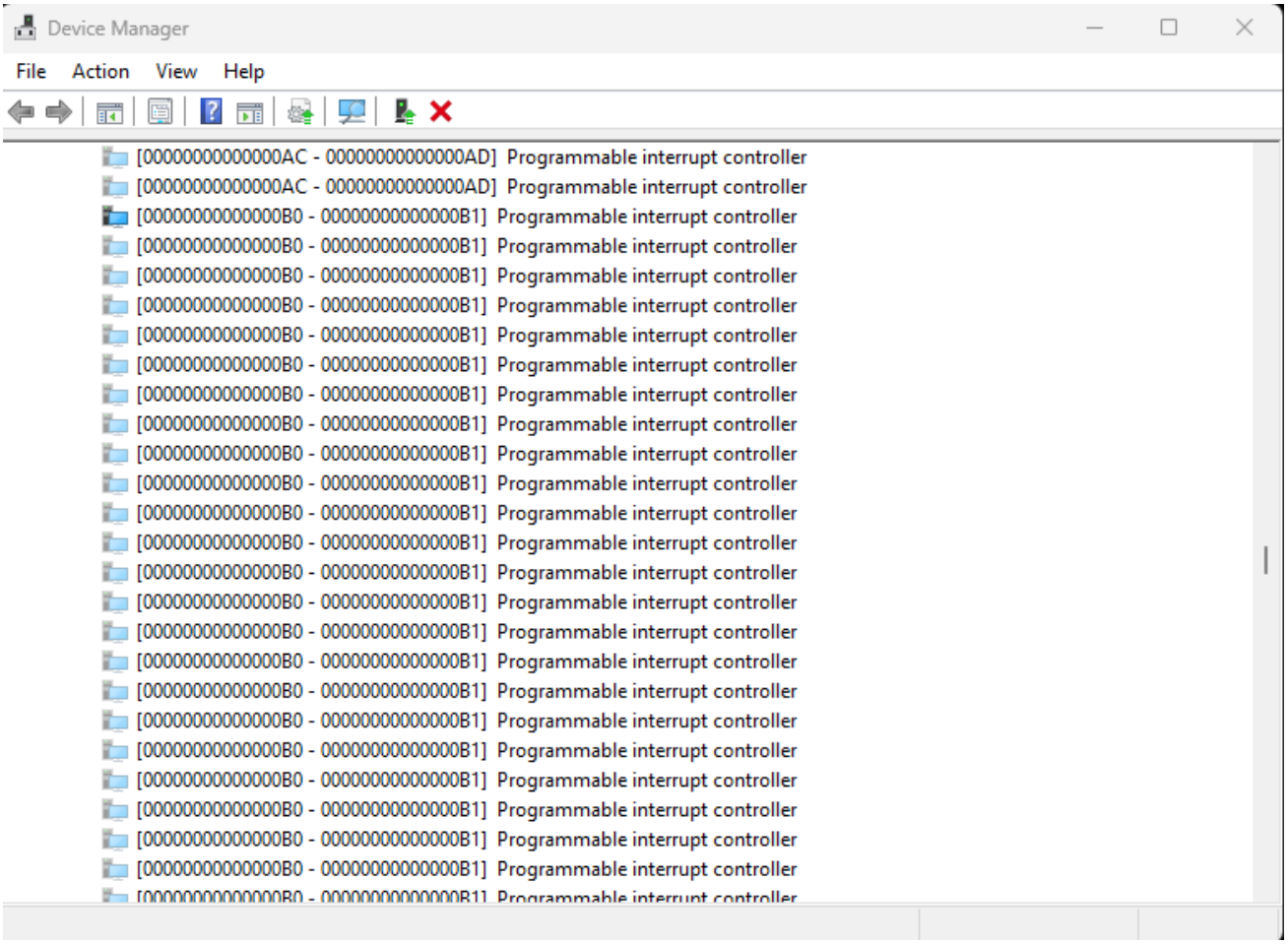

Device Manager
File Action View Help
[0000000000000050 - 0000000000000053] System timer
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[0000000000000050 - 0000000000000053] System timer
[0000000000000050 - 0000000000000053] System timer
[0000000000000060 - 0000000000000060] Standard PS/2 Keyboard
[0000000000000060 - 0000000000000060] Standard PS/2 Keyboard
[0000000000000061 - 0000000000000061] Motherboard resources
[0000000000000061 - 0000000000000061] Motherboard resources
[0000000000000063 - 0000000000000063] Motherboard resources
[0000000000000063 - 0000000000000063] Motherboard resources
[0000000000000064 - 0000000000000064] Standard PS/2 Keyboard
[0000000000000064 - 0000000000000064] Standard PS/2 Keyboard
[0000000000000065 - 0000000000000065] Motherboard resources
[0000000000000065 - 0000000000000065] Motherboard resources
[0000000000000067 - 0000000000000067] Motherboard resources
[0000000000000067 - 0000000000000067] Motherboard resources
[0000000000000070 - 0000000000000070] Motherboard resources
[0000000000000070 - 0000000000000070] Motherboard resources
[0000000000000070 - 0000000000000077] System CMOS/real time clock
[0000000000000070 - 0000000000000077] System CMOS/real time clock
[0000000000000070 - 0000000000000077] System CMOS/real time clock
[0000000000000070 - 0000000000000077] System CMOS/real time clock
[0000000000000070 - 0000000000000077] System CMOS/real time clock
[0000000000000080 - 0000000000000080] Motherboard resources
[0000000000000080 - 000000000000008F] Motherboard resources

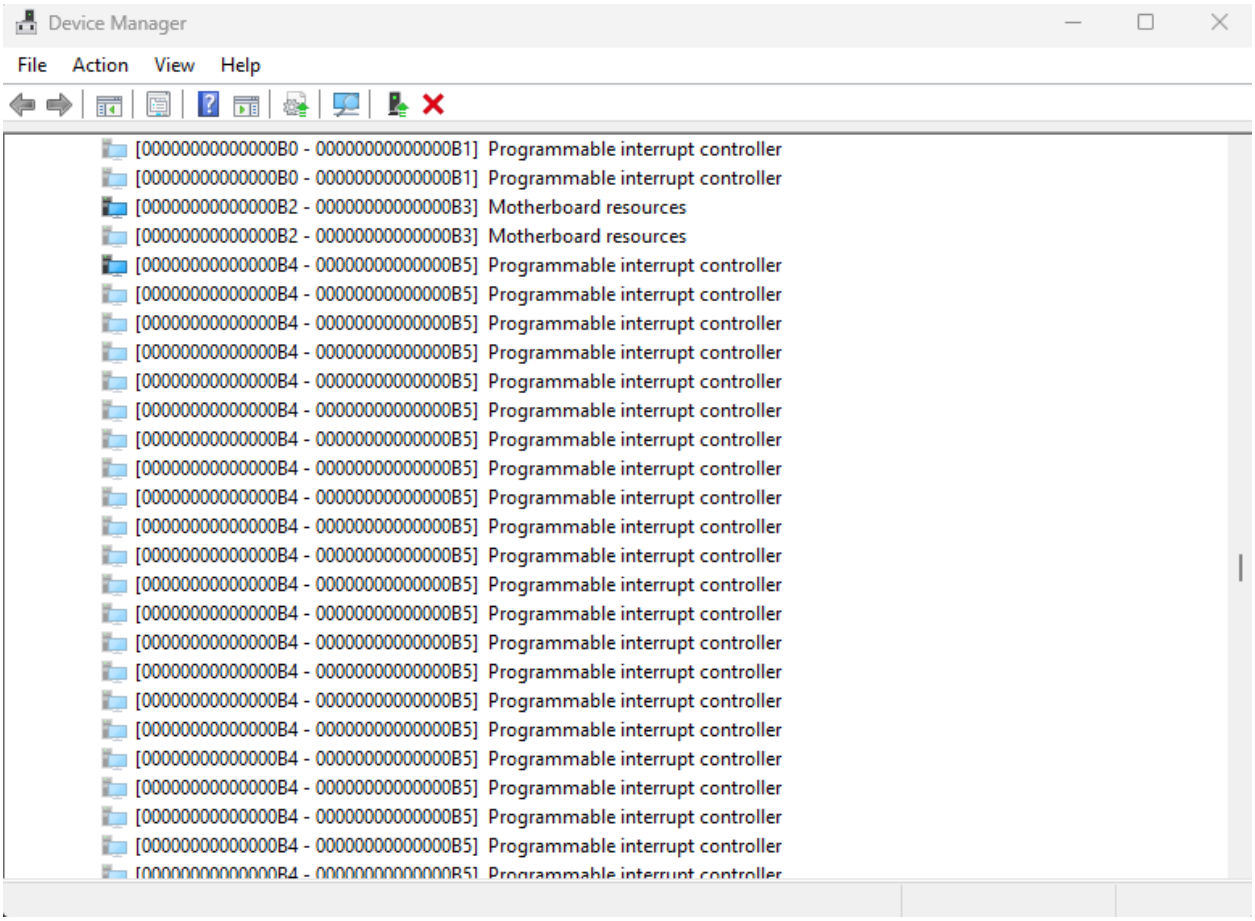

Device Manager
File Action View Help
[0000000000000092 - 0000000000000092] Motherboard resources
[0000000000000092 - 0000000000000092] Motherboard resources
[00000000000000A0 - 00000000000000A1] Programmable interrupt controller
[00000000000000A0 - 00000000000000A1] Programmable interrupt controller
[00000000000000A0 - 00000000000000A1] Programmable interrupt controller
[00000000000000A0 - 00000000000000A1] Programmable interrupt controller
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[00000000000000A0 - 00000000000000A1] Programmable interrupt controller

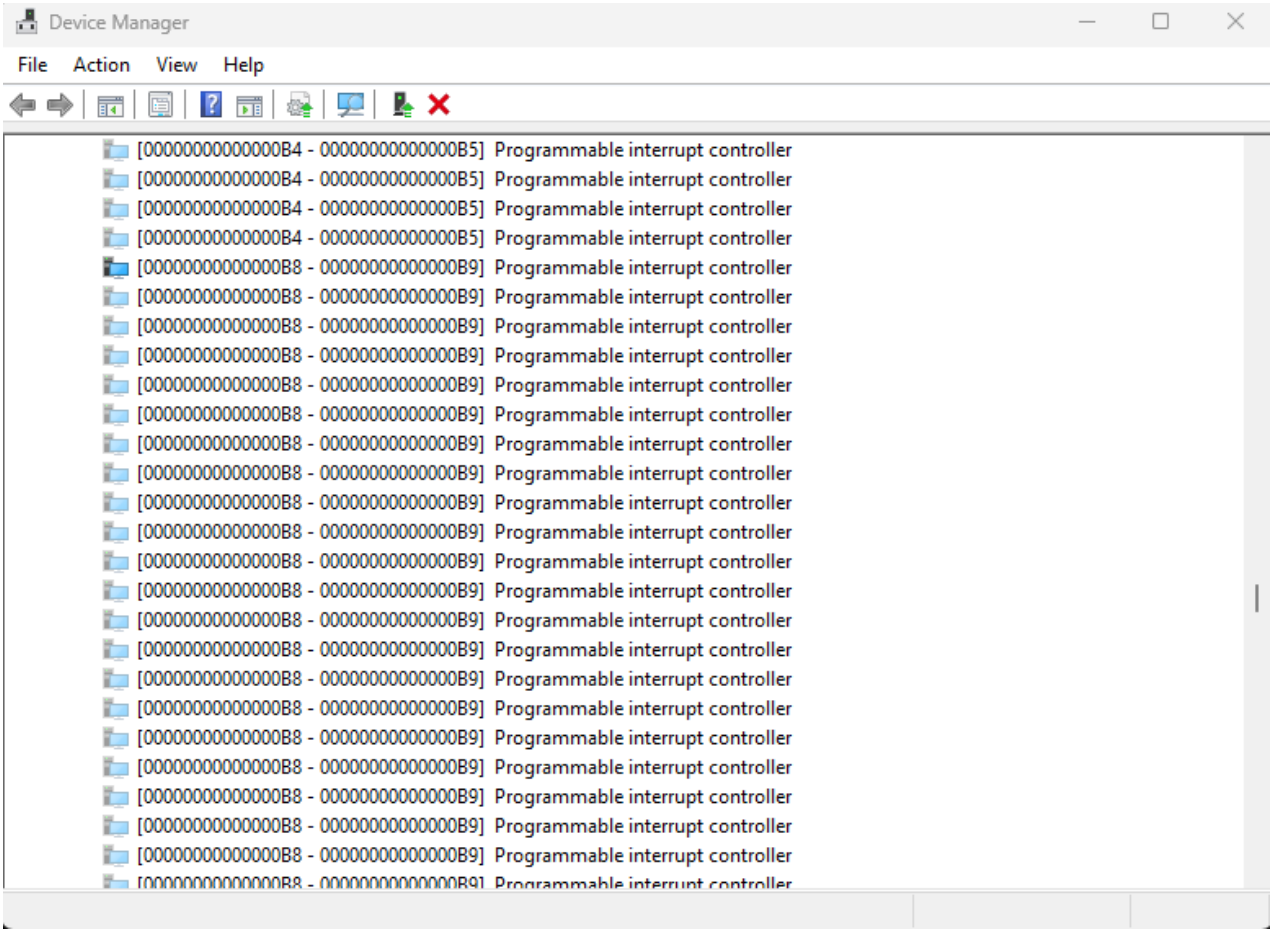

Device Manager
File Action View Help
[00000000000000A0 - 00000000000000A1] Programmable interrupt controller
[00000000000000A0 - 00000000000000A1] Programmable interrupt controller
[00000000000000A4 - 00000000000000A5] Programmable interrupt controller
[00000000000000A4 - 00000000000000A5] Programmable interrupt controller
[00000000000000A4 - 00000000000000A5] Programmable interrupt controller
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[00000000000000A4 - 00000000000000A5] Programmable interrupt controller
[00000000000000A4 - 00000000000000A5] Programmable interrupt controller
[00000000000000A4 - 00000000000000A5] Programmable interrupt controller
[00000000000000A4 - 00000000000000A5] Programmable interrupt controller

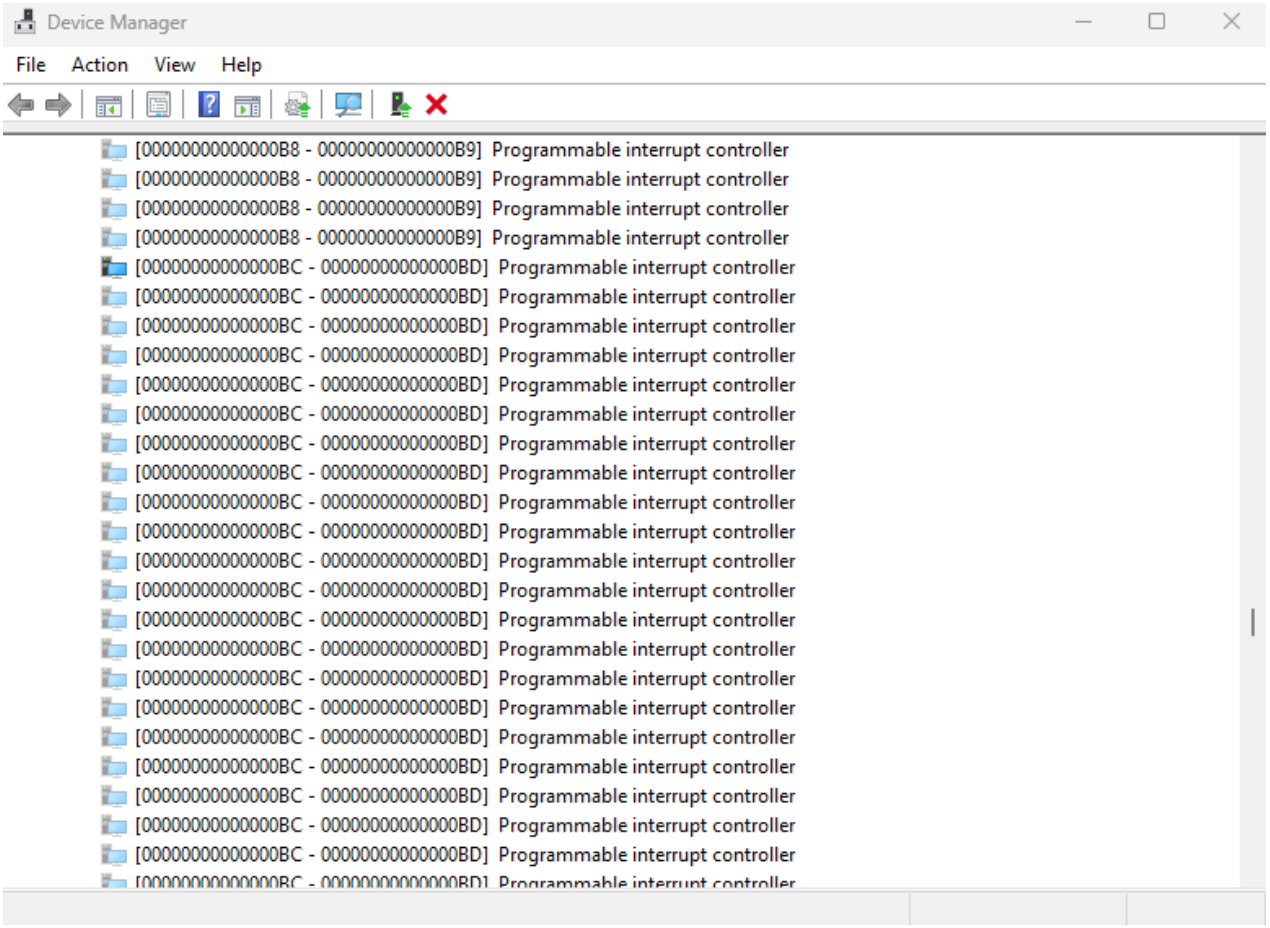

Device Manager
File Action View Help
[00000000000000A4 - 00000000000000A5] Programmable interrupt controller
[00000000000000A4 - 00000000000000A5] Programmable interrupt controller
[00000000000000A8 - 00000000000000A9] Programmable interrupt controller
[00000000000000A8 - 00000000000000A9] Programmable interrupt controller
[00000000000000A8 - 00000000000000A9] Programmable interrupt controller
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[00000000000000A8 - 00000000000000A9] Programmable interrupt controller
[00000000000000A8 - 00000000000000A9] Programmable interrupt controller
[00000000000000A8 - 00000000000000A9] Programmable interrupt controller

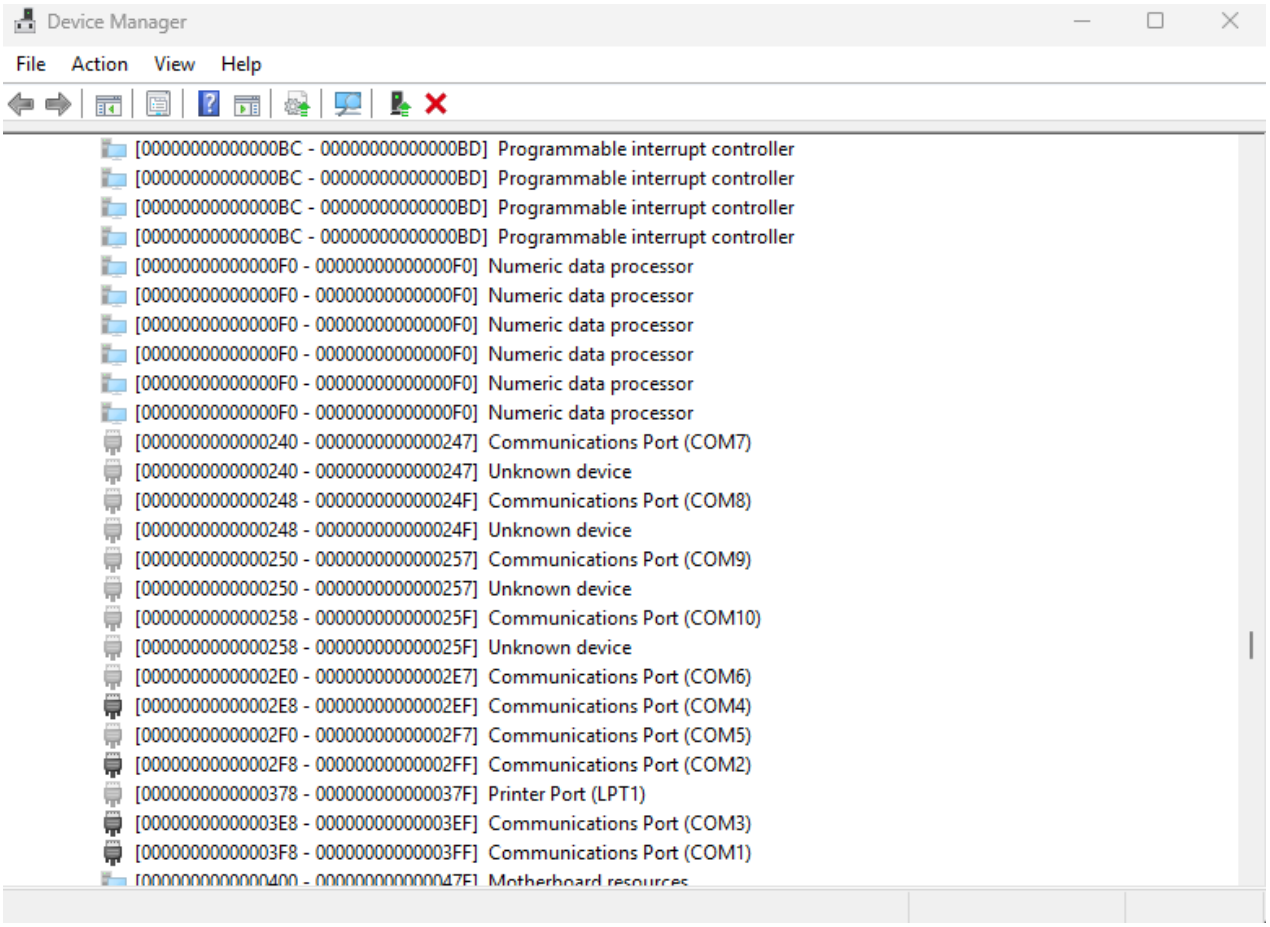

Device Manager
File Action View Help
[00000000000000A8 - 00000000000000A9] Programmable interrupt controller
[00000000000000A8 - 00000000000000A9] Programmable interrupt controller
[00000000000000AC - 00000000000000AD] Programmable interrupt controller
[00000000000000AC - 00000000000000AD] Programmable interrupt controller
[00000000000000AC - 00000000000000AD] Programmable interrupt controller
[00000000000000AC - 00000000000000AD] Programmable interrupt controller
[00000000000000AC - 00000000000000AD] Programmable interrupt controller
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[00000000000000AC - 00000000000000AD] Programmable interrupt controller
[00000000000000AC - 00000000000000AD] Programmable interrupt controller
[00000000000000AC - 00000000000000AD] Programmable interrupt controller

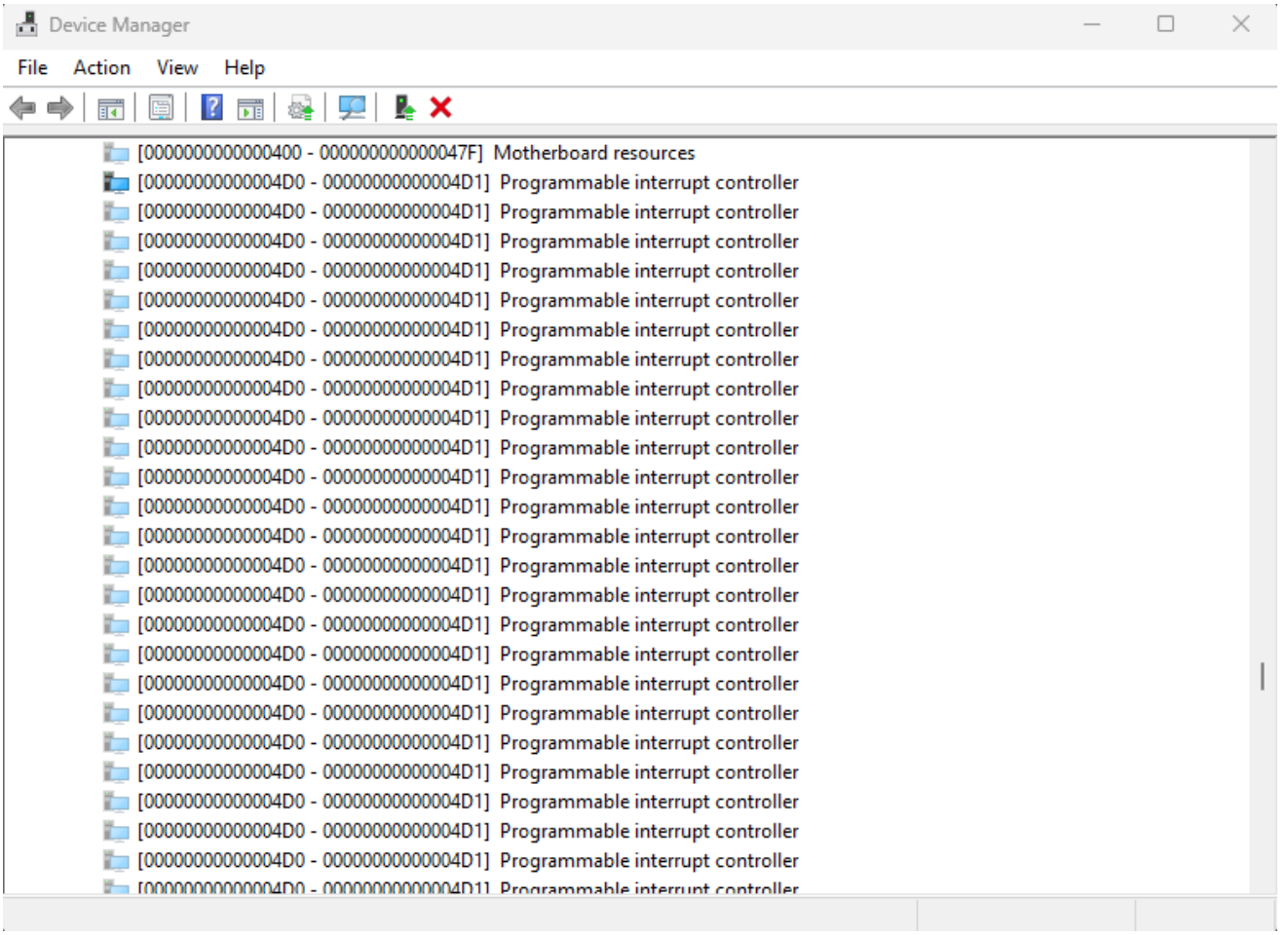

Device Manager
File Action View Help
[00000000000000AC - 00000000000000AD] Programmable interrupt controller
[00000000000000AC - 00000000000000AD] Programmable interrupt controller
[00000000000000B0 - 00000000000000B1] Programmable interrupt controller
[00000000000000B0 - 00000000000000B1] Programmable interrupt controller
[00000000000000B0 - 00000000000000B1] Programmable interrupt controller
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[00000000000000B0 - 00000000000000B1] Programmable interrupt controller

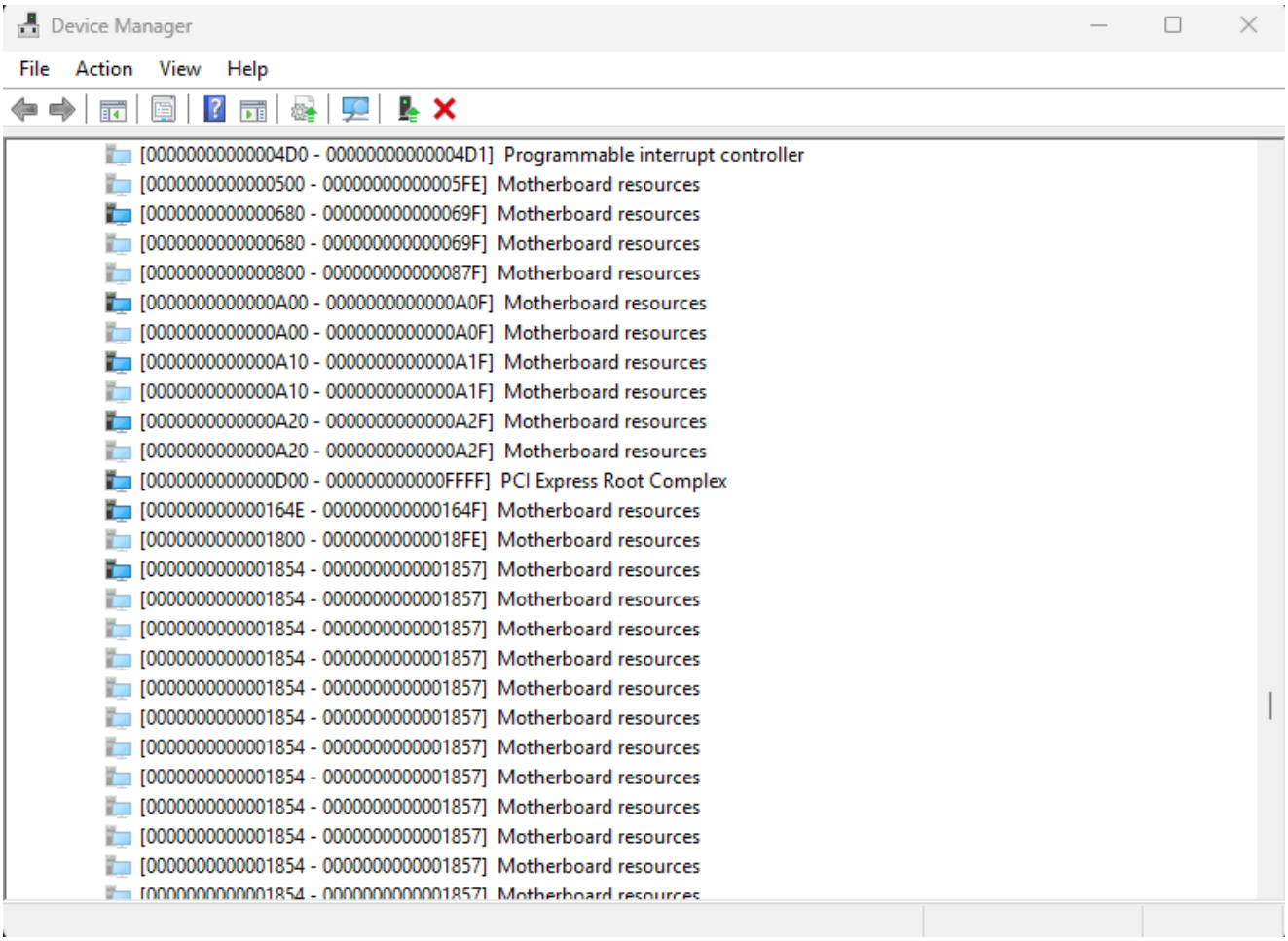

Device Manager
File Action View Help
[00000000000000B0 - 00000000000000B1] Programmable interrupt controller
[00000000000000B0 - 00000000000000B1] Programmable interrupt controller
[00000000000000B2 - 00000000000000B3] Motherboard resources
[00000000000000B2 - 00000000000000B3] Motherboard resources
[00000000000000B4 - 00000000000000B5] Programmable interrupt controller
[00000000000000B4 - 00000000000000B5] Programmable interrupt controller
[00000000000000B4 - 00000000000000B5] Programmable interrupt controller
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[00000000000000B4 - 00000000000000B5] Programmable interrupt controller
[00000000000000B4 - 00000000000000B5] Programmable interrupt controller
[00000000000000B4 - 00000000000000B5] Programmable interrupt controller

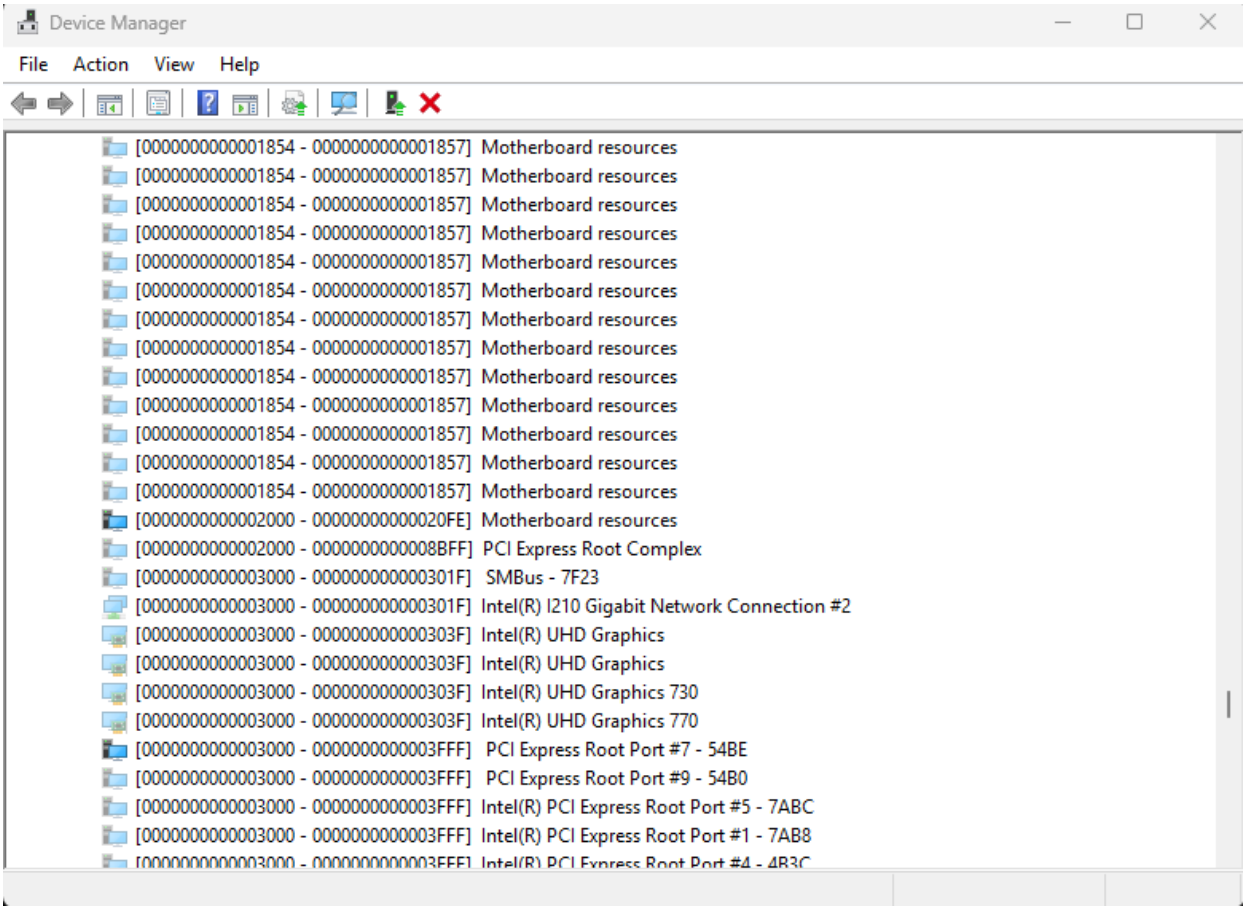

Device Manager
File Action View Help
[00000000000000B4 - 00000000000000B5] Programmable interrupt controller
[00000000000000B4 - 00000000000000B5] Programmable interrupt controller
[00000000000000B4 - 00000000000000B5] Programmable interrupt controller
[00000000000000B4 - 00000000000000B5] Programmable interrupt controller
[00000000000000B8 - 00000000000000B9] Programmable interrupt controller
[00000000000000B8 - 00000000000000B9] Programmable interrupt controller
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[00000000000000B8 - 00000000000000B9] Programmable interrupt controller
[00000000000000B8 - 00000000000000B9] Programmable interrupt controller
[00000000000000B8 - 00000000000000B9] Programmable interrupt controller

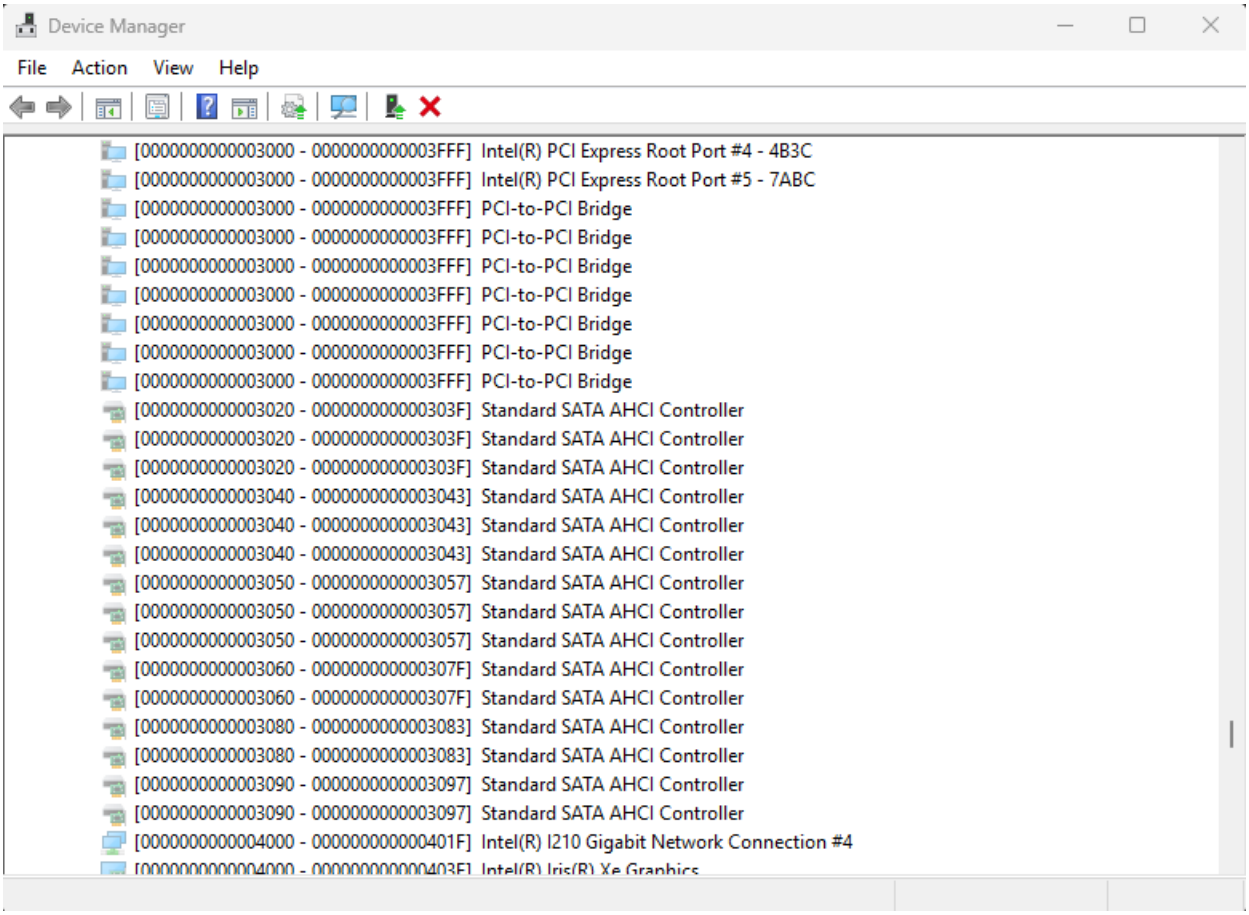

Device Manager
File Action View Help
[00000000000000B8 - 00000000000000B9] Programmable interrupt controller
[00000000000000B8 - 00000000000000B9] Programmable interrupt controller
[00000000000000B8 - 00000000000000B9] Programmable interrupt controller
[00000000000000B8 - 00000000000000B9] Programmable interrupt controller
[00000000000000BC - 00000000000000BD] Programmable interrupt controller
[00000000000000BC - 00000000000000BD] Programmable interrupt controller
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[00000000000000BC - 00000000000000BD] Programmable interrupt controller
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[00000000000000BC - 00000000000000BD] Programmable interrupt controller

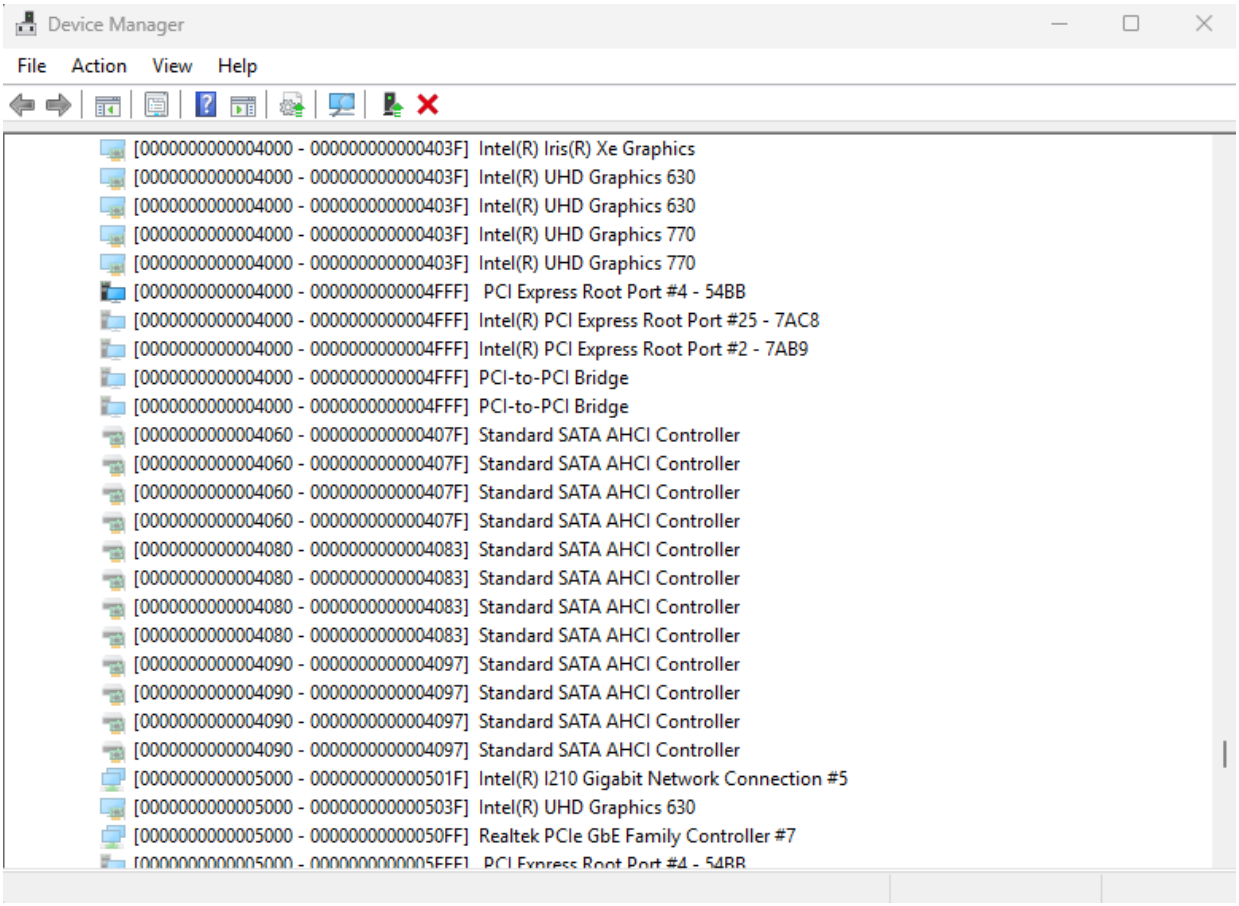

Device Manager
File Action View Help
[00000000000000BC - 00000000000000BD] Programmable interrupt controller
[00000000000000BC - 00000000000000BD] Programmable interrupt controller
[00000000000000BC - 00000000000000BD] Programmable interrupt controller
[00000000000000BC - 00000000000000BD] Programmable interrupt controller
[00000000000000F0 - 00000000000000F0] Numeric data processor
[00000000000000F0 - 00000000000000F0] Numeric data processor
[00000000000000F0 - 00000000000000F0] Numeric data processor
[00000000000000F0 - 00000000000000F0] Numeric data processor
[00000000000000F0 - 00000000000000F0] Numeric data processor
[00000000000000F0 - 00000000000000F0] Numeric data processor
[0000000000000240 - 0000000000000247] Communications Port (COM7)
[0000000000000240 - 0000000000000247] Unknown device
[0000000000000248 - 000000000000024F] Communications Port (COM8)
[0000000000000248 - 000000000000024F] Unknown device
[0000000000000250 - 0000000000000257] Communications Port (COM9)
[0000000000000250 - 0000000000000257] Unknown device
[0000000000000258 - 000000000000025F] Communications Port (COM10)
[0000000000000258 - 000000000000025F] Unknown device
[00000000000002E0 - 00000000000002E7] Communications Port (COM6)
[00000000000002E8 - 00000000000002EF] Communications Port (COM4)
[00000000000002F0 - 00000000000002F7] Communications Port (COM5)
[00000000000002F8 - 00000000000002FF] Communications Port (COM2)
[0000000000000378 - 000000000000037F] Printer Port (LPT1)
[00000000000003E8 - 00000000000003EF] Communications Port (COM3)
[00000000000003F8 - 00000000000003FF] Communications Port (COM1)

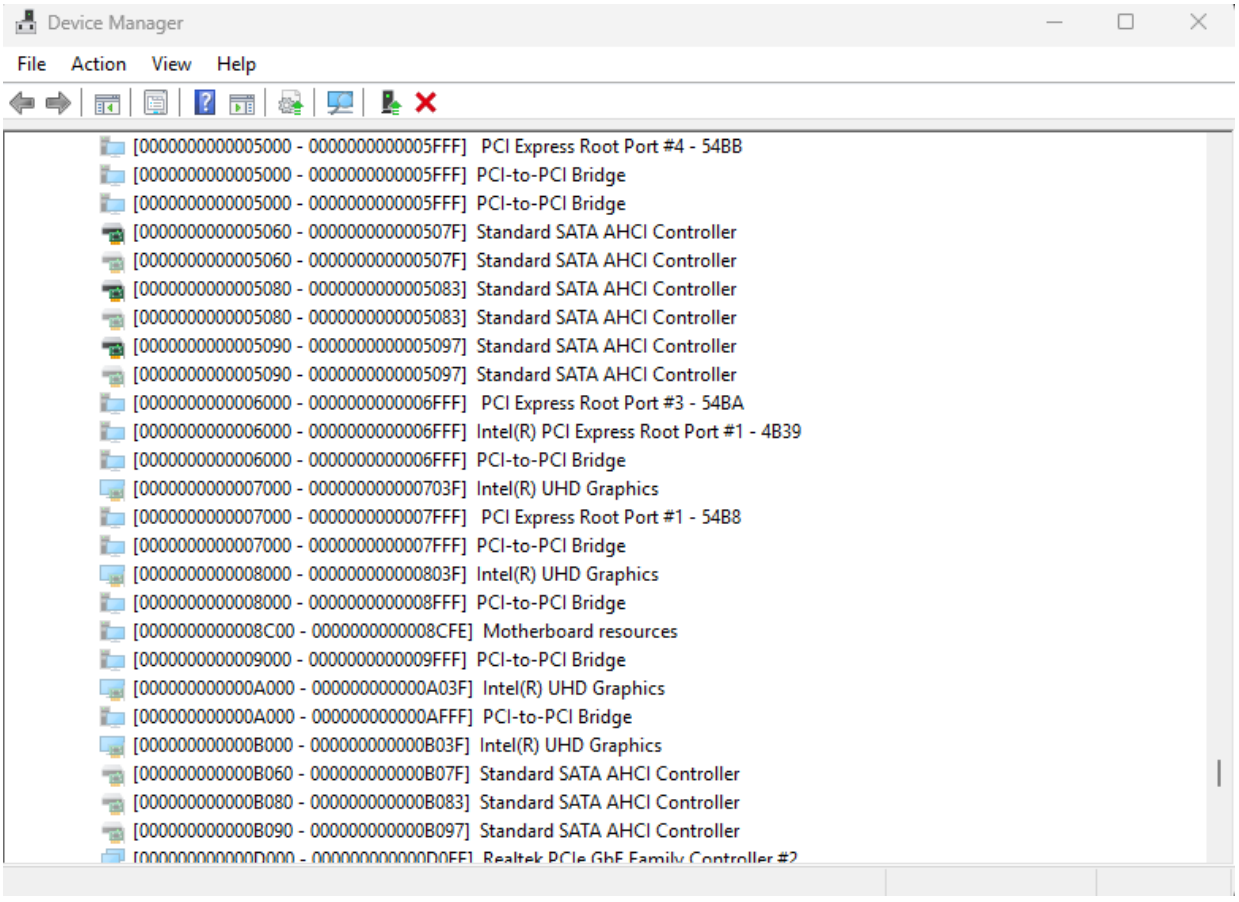

Device Manager
File Action View Help
[0000000000000400 - 000000000000047F] Motherboard resources
[00000000000004D0 - 00000000000004D1] Programmable interrupt controller

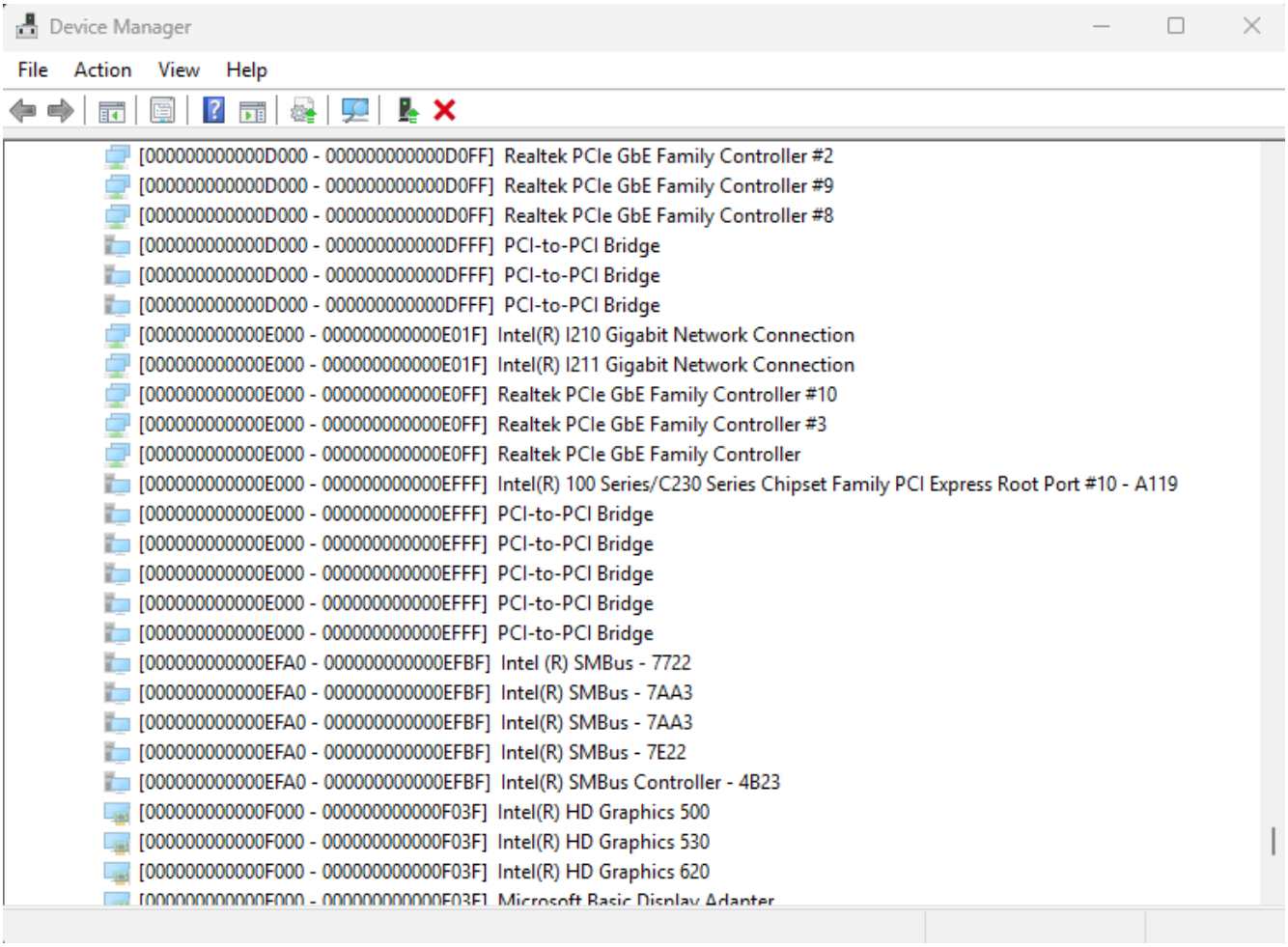

Device Manager
File Action View Help
[00000000000004D0 - 00000000000004D1] Programmable interrupt controller
[0000000000000500 - 00000000000005FE] Motherboard resources
[0000000000000680 - 000000000000069F] Motherboard resources
[0000000000000800 - 000000000000087F] Motherboard resources
[0000000000000A00 - 0000000000000A0F] Motherboard resources
[0000000000000A10 - 0000000000000A1F] Motherboard resources
[0000000000000A20 - 0000000000000A2F] Motherboard resources
[0000000000000D00 - 0000000000FFFF] PCI Express Root Complex
[000000000000164E - 000000000000164F] Motherboard resources
[0000000000001800 - 00000000000018FE] Motherboard resources
[0000000000001854 - 0000000000001857] Motherboard resources

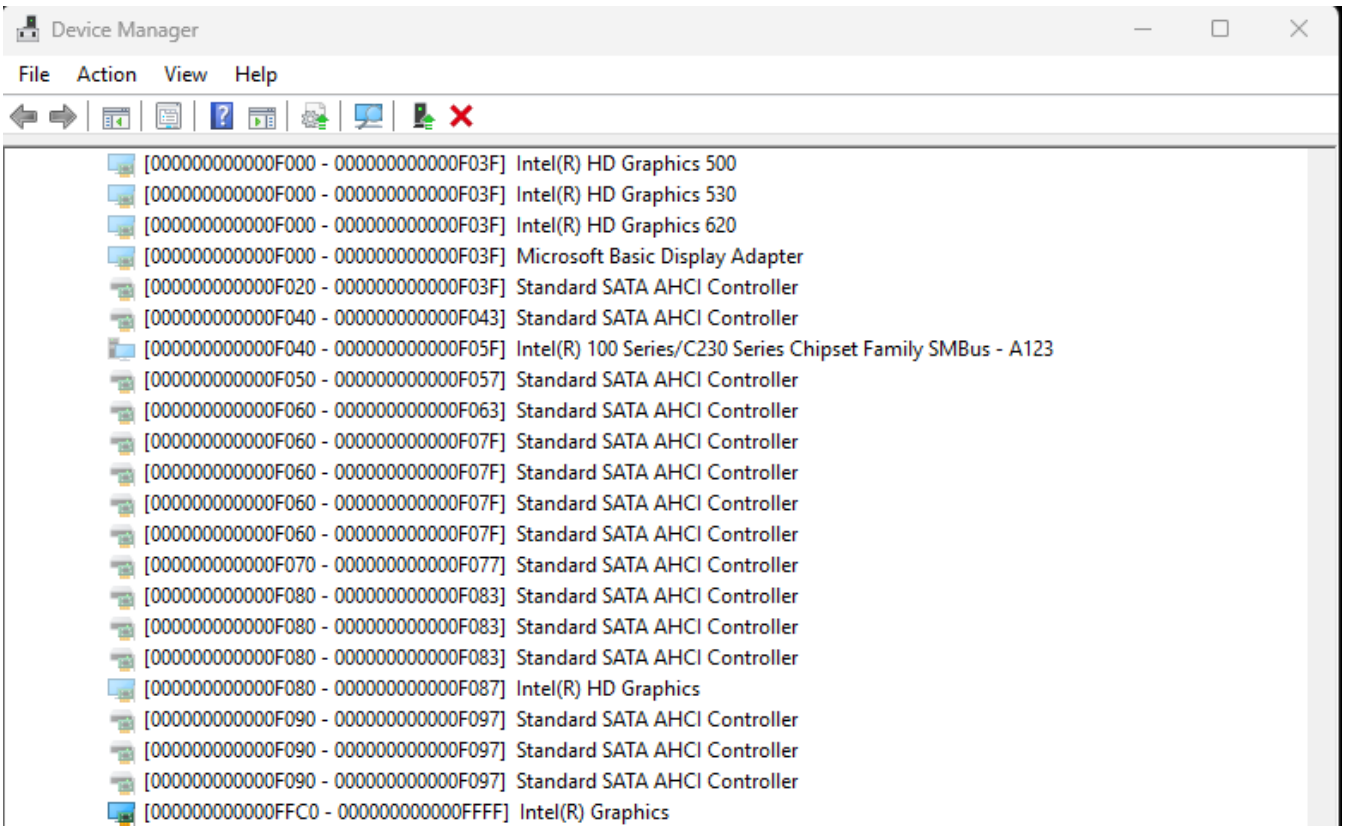

Device Manager
File Action View Help
[0000000000001854 - 0000000000001857] Motherboard resources
[0000000000001854 - 0000000000001857] Motherboard resources
[0000000000001854 - 0000000000001857] Motherboard resources
[0000000000001854 - 0000000000001857] Motherboard resources
[0000000000001854 - 0000000000001857] Motherboard resources
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[0000000000001854 - 0000000000001857] Motherboard resources
[0000000000001854 - 0000000000001857] Motherboard resources
[0000000000002000 - 00000000000020FE] Motherboard resources
[0000000000002000 - 0000000000008BFF] PCI Express Root Complex
[0000000000003000 - 000000000000301F] SMBus - 7F23
[0000000000003000 - 000000000000301F] Intel(R) I210 Gigabit Network Connection #2
[0000000000003000 - 000000000000303F] Intel(R) UHD Graphics
[0000000000003000 - 000000000000303F] Intel(R) UHD Graphics
[0000000000003000 - 000000000000303F] Intel(R) UHD Graphics 730
[0000000000003000 - 000000000000303F] Intel(R) UHD Graphics 770
[0000000000003000 - 0000000000003FFF] PCI Express Root Port #7 - 54BE
[0000000000003000 - 0000000000003FFF] PCI Express Root Port #9 - 54B0
[0000000000003000 - 0000000000003FFF] Intel(R) PCI Express Root Port #5 - 7ABC
[0000000000003000 - 0000000000003FFF] Intel(R) PCI Express Root Port #1 - 7AB8


Device Manager
File Action View Help
[0000000000003000 - 0000000000003FFF] Intel(R) PCI Express Root Port #4 - 4B3C
[0000000000003000 - 0000000000003FFF] Intel(R) PCI Express Root Port #5 - 7ABC
[0000000000003000 - 0000000000003FFF] PCI-to-PCI Bridge
[0000000000003000 - 0000000000003FFF] PCI-to-PCI Bridge
[0000000000003000 - 0000000000003FFF] PCI-to-PCI Bridge
[0000000000003000 - 0000000000003FFF] PCI-to-PCI Bridge
[0000000000003000 - 0000000000003FFF] PCI-to-PCI Bridge
[0000000000003000 - 0000000000003FFF] PCI-to-PCI Bridge
[0000000000003000 - 0000000000003FFF] PCI-to-PCI Bridge
[0000000000003020 - 000000000000303F] Standard SATA AHCI Controller
[0000000000003020 - 000000000000303F] Standard SATA AHCI Controller
[0000000000003020 - 000000000000303F] Standard SATA AHCI Controller
[0000000000003040 - 0000000000003043] Standard SATA AHCI Controller
[0000000000003040 - 0000000000003043] Standard SATA AHCI Controller
[0000000000003040 - 0000000000003043] Standard SATA AHCI Controller
[0000000000003050 - 0000000000003057] Standard SATA AHCI Controller
[0000000000003050 - 0000000000003057] Standard SATA AHCI Controller
[0000000000003050 - 0000000000003057] Standard SATA AHCI Controller
[0000000000003060 - 000000000000307F] Standard SATA AHCI Controller
[0000000000003060 - 000000000000307F] Standard SATA AHCI Controller
[0000000000003080 - 0000000000003083] Standard SATA AHCI Controller
[0000000000003080 - 0000000000003083] Standard SATA AHCI Controller
[0000000000003090 - 0000000000003097] Standard SATA AHCI Controller
[0000000000003090 - 0000000000003097] Standard SATA AHCI Controller
[0000000000004000 - 000000000000401F] Intel(R) I210 Gigabit Network Connection #4

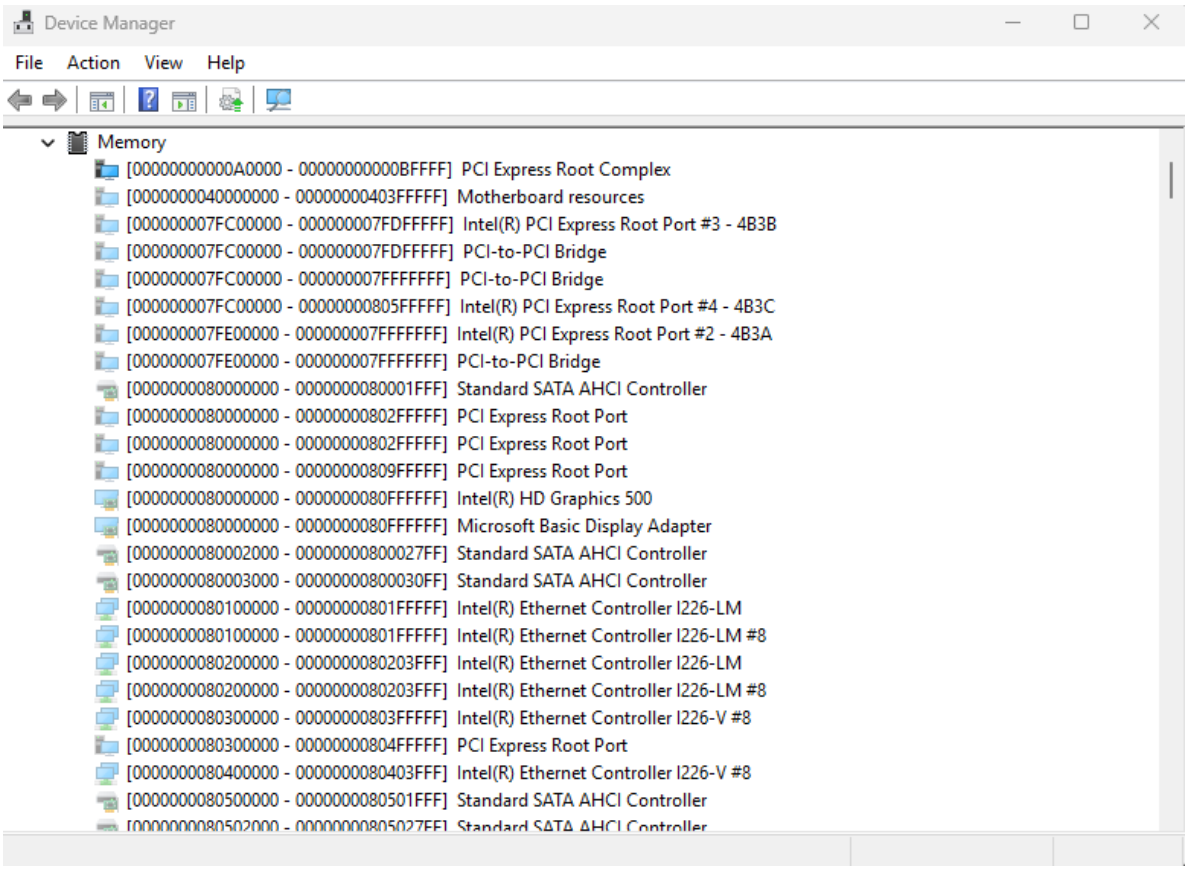

Device Manager
File Action View Help
[0000000000004000 - 000000000000403F] Intel(R) Iris(R) Xe Graphics
[0000000000004000 - 000000000000403F] Intel(R) UHD Graphics 630
[0000000000004000 - 000000000000403F] Intel(R) UHD Graphics 630
[0000000000004000 - 000000000000403F] Intel(R) UHD Graphics 770
[0000000000004000 - 000000000000403F] Intel(R) UHD Graphics 770
[0000000000004000 - 0000000000004FFF] PCI Express Root Port #4 - 54BB
[0000000000004000 - 0000000000004FFF] Intel(R) PCI Express Root Port #25 - 7AC8
[0000000000004000 - 0000000000004FFF] Intel(R) PCI Express Root Port #2 - 7AB9
[0000000000004000 - 0000000000004FFF] PCI-to-PCI Bridge
[0000000000004000 - 0000000000004FFF] PCI-to-PCI Bridge
[0000000000004060 - 000000000000407F] Standard SATA AHCI Controller
[0000000000004060 - 000000000000407F] Standard SATA AHCI Controller
[0000000000004060 - 000000000000407F] Standard SATA AHCI Controller
[0000000000004060 - 000000000000407F] Standard SATA AHCI Controller
[0000000000004080 - 0000000000004083] Standard SATA AHCI Controller
[0000000000004080 - 0000000000004083] Standard SATA AHCI Controller
[0000000000004080 - 0000000000004083] Standard SATA AHCI Controller
[0000000000004080 - 0000000000004083] Standard SATA AHCI Controller
[0000000000004090 - 0000000000004097] Standard SATA AHCI Controller
[0000000000004090 - 0000000000004097] Standard SATA AHCI Controller
[0000000000004090 - 0000000000004097] Standard SATA AHCI Controller
[0000000000004090 - 0000000000004097] Standard SATA AHCI Controller
[0000000000005000 - 000000000000501F] Intel(R) I210 Gigabit Network Connection #5
[0000000000005000 - 000000000000503F] Intel(R) UHD Graphics 630
[0000000000005000 - 000000000000050FF] Realtek PCIe GbE Family Controller #7

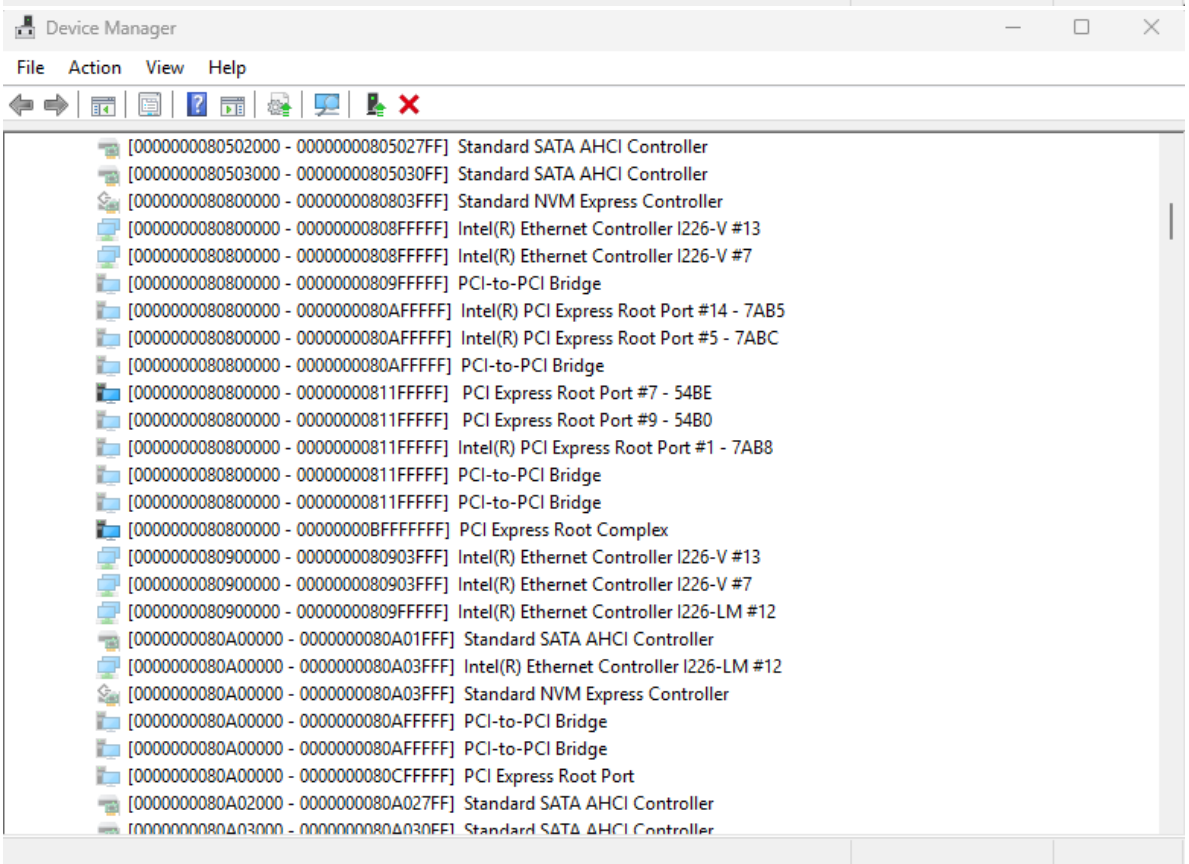

Device Manager
File Action View Help
[0000000000005000 - 0000000000005FFF] PCI Express Root Port #4 - 54BB
[0000000000005000 - 0000000000005FFF] PCI-to-PCI Bridge
[0000000000005000 - 0000000000005FFF] PCI-to-PCI Bridge
[0000000000005060 - 000000000000507F] Standard SATA AHCI Controller
[0000000000005060 - 000000000000507F] Standard SATA AHCI Controller
[0000000000005080 - 0000000000005083] Standard SATA AHCI Controller
[0000000000005080 - 0000000000005083] Standard SATA AHCI Controller
[0000000000005090 - 0000000000005097] Standard SATA AHCI Controller
[0000000000005090 - 0000000000005097] Standard SATA AHCI Controller
[0000000000006000 - 0000000000006FFF] PCI Express Root Port #3 - 54BA
[0000000000006000 - 0000000000006FFF] Intel(R) PCI Express Root Port #1 - 4B39
[0000000000006000 - 0000000000006FFF] PCI-to-PCI Bridge
[0000000000007000 - 000000000000703F] Intel(R) UHD Graphics
[0000000000007000 - 0000000000007FFF] PCI Express Root Port #1 - 54B8
[0000000000007000 - 0000000000007FFF] PCI-to-PCI Bridge
[0000000000008000 - 000000000000803F] Intel(R) UHD Graphics
[0000000000008000 - 0000000000008FFF] PCI-to-PCI Bridge
[0000000000008C00 - 0000000000008CFE] Motherboard resources
[0000000000009000 - 0000000000009FFF] PCI-to-PCI Bridge
[000000000000A000 - 000000000000A03F] Intel(R) UHD Graphics
[000000000000A000 - 000000000000AFFF] PCI-to-PCI Bridge
[000000000000B000 - 000000000000B03F] Intel(R) UHD Graphics
[000000000000B060 - 000000000000B07F] Standard SATA AHCI Controller
[000000000000B080 - 000000000000B083] Standard SATA AHCI Controller
[000000000000B090 - 000000000000B097] Standard SATA AHCI Controller

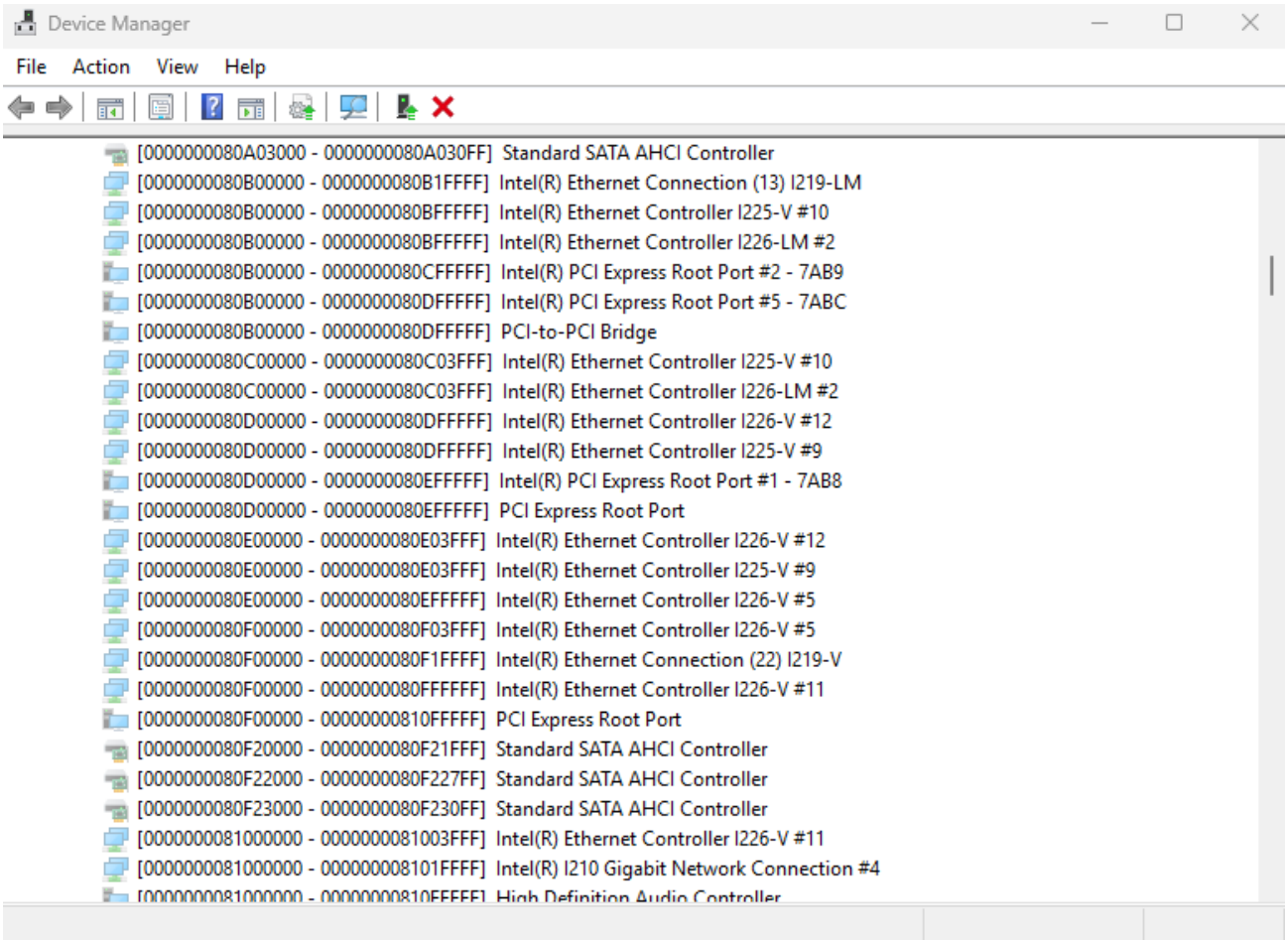

Device Manager
File Action View Help
[000000000000D000 - 000000000000D0FF] Realtek PCIe GbE Family Controller #2
[000000000000D000 - 000000000000D0FF] Realtek PCIe GbE Family Controller #9
[000000000000D000 - 000000000000D0FF] Realtek PCIe GbE Family Controller #8
[000000000000D000 - 000000000000DFFF] PCI-to-PCI Bridge
[000000000000D000 - 000000000000DFFF] PCI-to-PCI Bridge
[000000000000D000 - 000000000000DFFF] PCI-to-PCI Bridge
[000000000000E000 - 000000000000E01F] Intel(R) I210 Gigabit Network Connection
[000000000000E000 - 000000000000E01F] Intel(R) I211 Gigabit Network Connection
[000000000000E000 - 000000000000E0FF] Realtek PCIe GbE Family Controller #10
[000000000000E000 - 000000000000E0FF] Realtek PCIe GbE Family Controller #3
[000000000000E000 - 000000000000E0FF] Realtek PCIe GbE Family Controller
[000000000000E000 - 000000000000EFFF] Intel(R) 100 Series/C230 Series Chipset Family PCI Express Root Port #10 - A119
[000000000000E000 - 000000000000EFFF] PCI-to-PCI Bridge
[000000000000E000 - 000000000000EFFF] PCI-to-PCI Bridge
[000000000000E000 - 000000000000EFFF] PCI-to-PCI Bridge
[000000000000E000 - 000000000000EFFF] PCI-to-PCI Bridge
[000000000000E000 - 000000000000EFFF] PCI-to-PCI Bridge
[000000000000EFA0 - 000000000000EFBF] Intel (R) SMBus - 7722
[000000000000EFA0 - 000000000000EFBF] Intel(R) SMBus - 7AA3
[000000000000EFA0 - 000000000000EFBF] Intel(R) SMBus - 7AA3
[000000000000EFA0 - 000000000000EFBF] Intel(R) SMBus - 7E22
[000000000000EFA0 - 000000000000EFBF] Intel(R) SMBus Controller - 4B23
[000000000000F000 - 000000000000F03F] Intel(R) HD Graphics 500
[000000000000F000 - 000000000000F03F] Intel(R) HD Graphics 530
[000000000000F000 - 000000000000F03F] Intel(R) HD Graphics 620

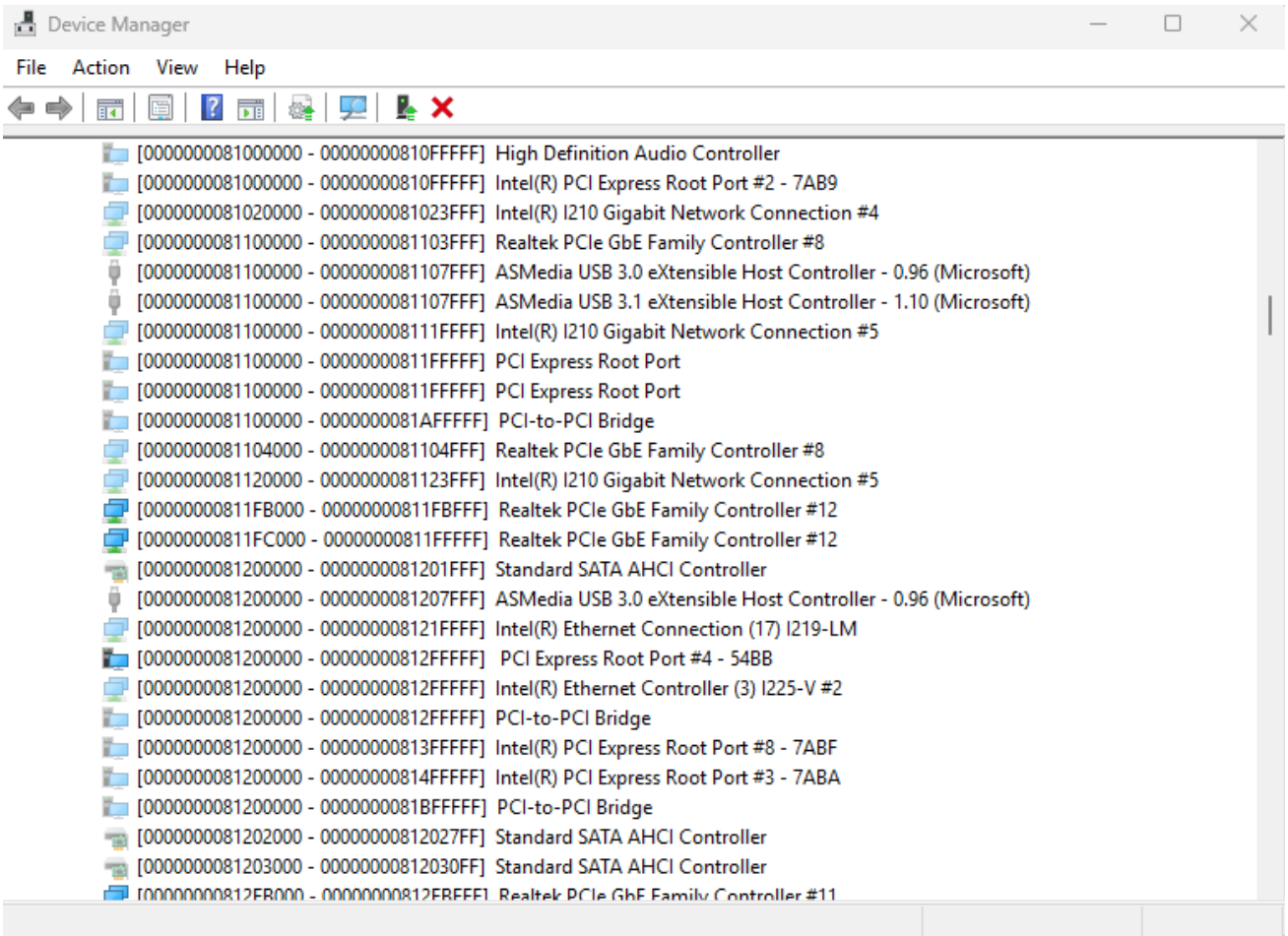

Device Manager
File Action View Help
[000000000000F000 - 000000000000F03F] Intel(R) HD Graphics 500
[000000000000F000 - 000000000000F03F] Intel(R) HD Graphics 530
[000000000000F000 - 000000000000F03F] Intel(R) HD Graphics 620
[000000000000F000 - 000000000000F03F] Microsoft Basic Display Adapter
[000000000000F020 - 000000000000F03F] Standard SATA AHCI Controller
[000000000000F040 - 000000000000F043] Standard SATA AHCI Controller
[000000000000F040 - 000000000000F05F] Intel(R) 100 Series/C230 Series Chipset Family SMBus - A123
[000000000000F050 - 000000000000F057] Standard SATA AHCI Controller
[000000000000F060 - 000000000000F063] Standard SATA AHCI Controller
[000000000000F060 - 000000000000F07F] Standard SATA AHCI Controller
[000000000000F060 - 000000000000F07F] Standard SATA AHCI Controller
[000000000000F060 - 000000000000F07F] Standard SATA AHCI Controller
[000000000000F060 - 000000000000F07F] Standard SATA AHCI Controller
[000000000000F070 - 000000000000F077] Standard SATA AHCI Controller
[000000000000F080 - 000000000000F083] Standard SATA AHCI Controller
[000000000000F080 - 000000000000F083] Standard SATA AHCI Controller
[000000000000F080 - 000000000000F083] Standard SATA AHCI Controller
[000000000000F080 - 000000000000F087] Intel(R) HD Graphics
[000000000000F090 - 000000000000F097] Standard SATA AHCI Controller
[000000000000F090 - 000000000000F097] Standard SATA AHCI Controller
[000000000000F090 - 000000000000F097] Standard SATA AHCI Controller
[000000000000FFC0 - 000000000000FFFF] Intel(R) Graphics

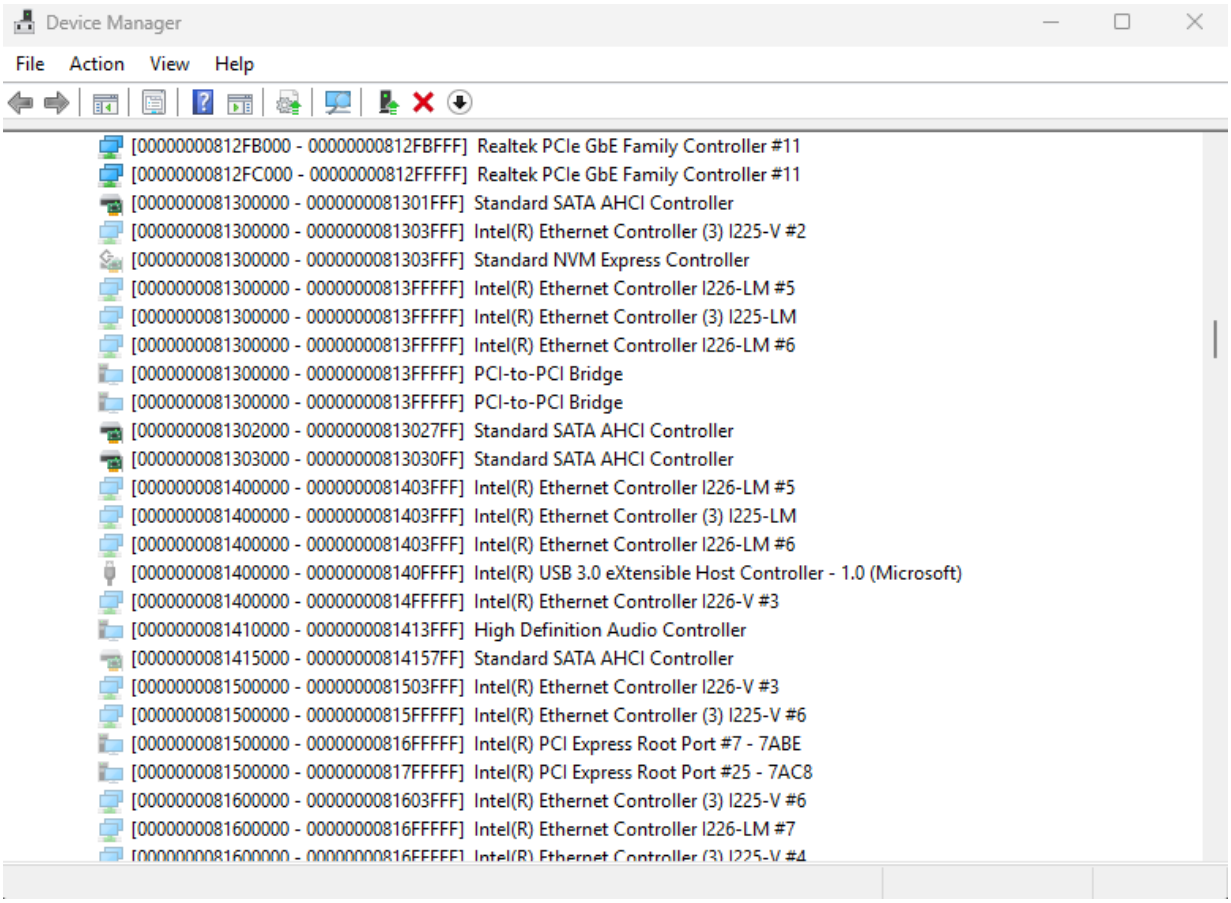
Memory Address Map

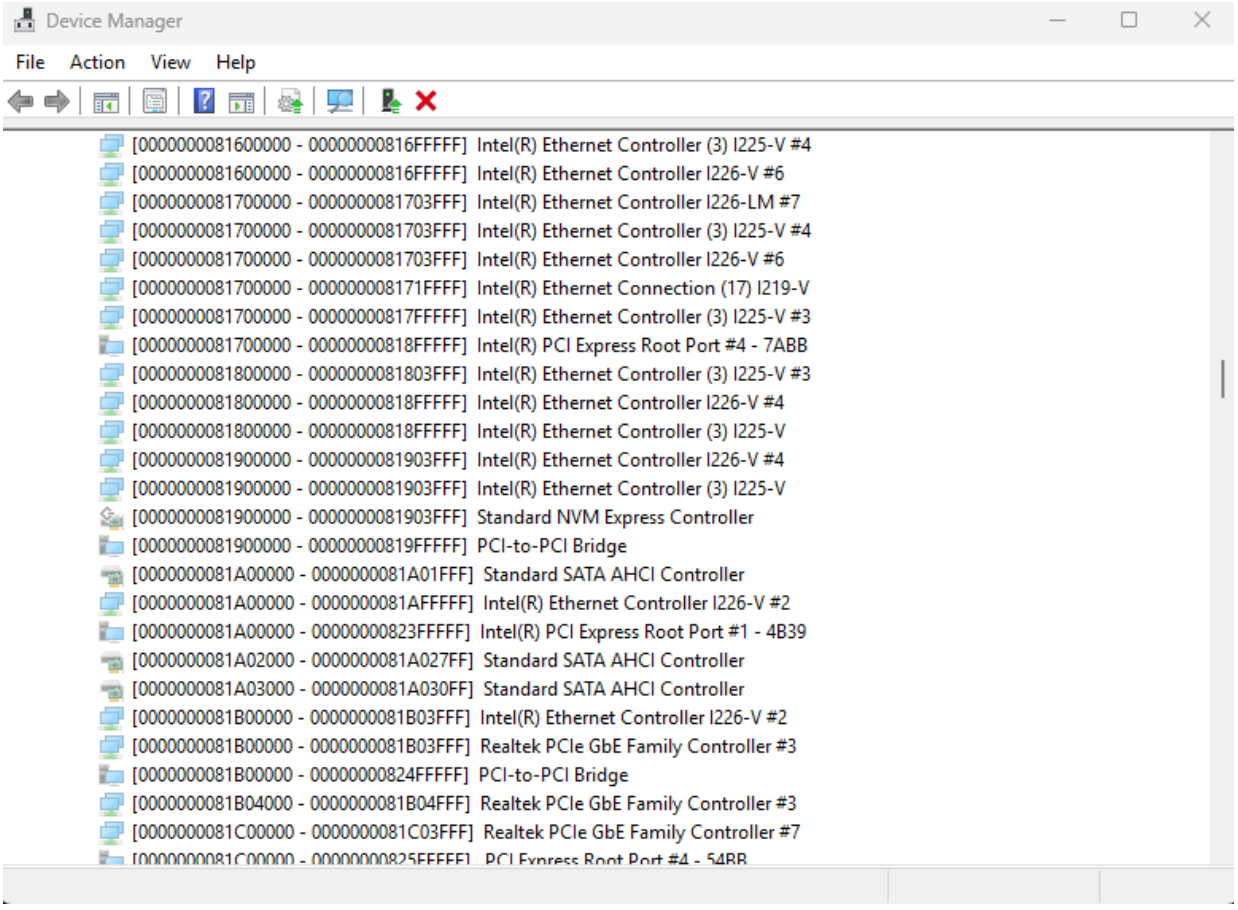


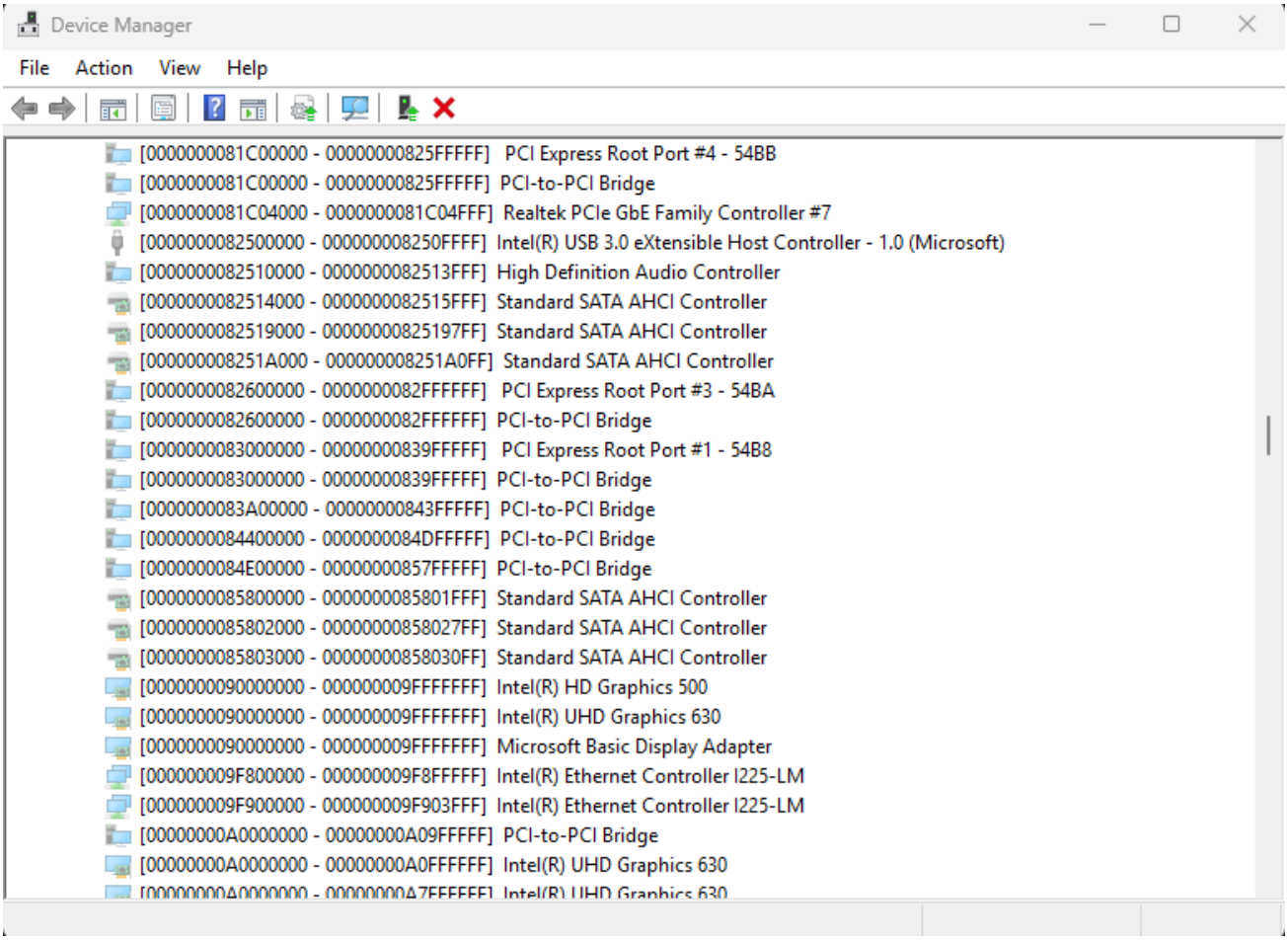


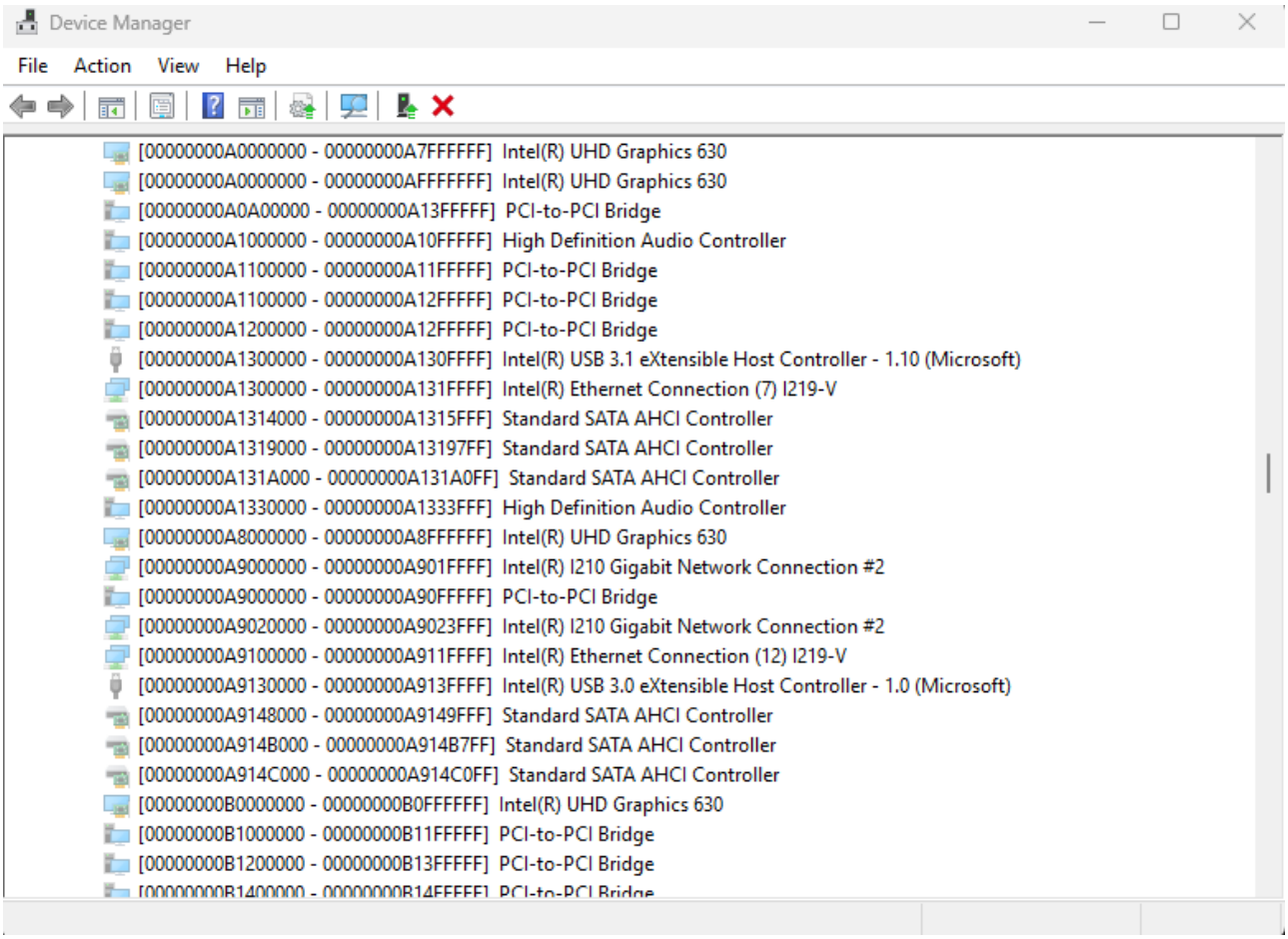

Device Manager
File Action View Help
[0000000080A03000 - 0000000080A030FF] Standard SATA AHCI Controller
[0000000080B00000 - 0000000080B1FFFF] Intel(R) Ethernet Connection (13) I219-LM
[0000000080B00000 - 0000000080BFFFFF] Intel(R) Ethernet Controller I225-V #10
[0000000080B00000 - 0000000080BFFFFF] Intel(R) Ethernet Controller I226-LM #2
[0000000080B00000 - 0000000080CFFFFF] Intel(R) PCI Express Root Port #2 - 7AB9
[0000000080B00000 - 0000000080DFFFFF] Intel(R) PCI Express Root Port #5 - 7ABC
[0000000080B00000 - 0000000080DFFFFF] PCI-to-PCI Bridge
[0000000080C00000 - 0000000080C03FFF] Intel(R) Ethernet Controller I225-V #10
[0000000080C00000 - 0000000080C03FFF] Intel(R) Ethernet Controller I226-LM #2
[0000000080D00000 - 0000000080DFFFFF] Intel(R) Ethernet Controller I226-V #12
[0000000080D00000 - 0000000080DFFFFF] Intel(R) Ethernet Controller I225-V #9
[0000000080D00000 - 0000000080EFFFFF] Intel(R) PCI Express Root Port #1 - 7AB8
[0000000080D00000 - 0000000080EFFFFF] PCI Express Root Port
[0000000080E00000 - 0000000080E03FFF] Intel(R) Ethernet Controller I226-V #12
[0000000080E00000 - 0000000080E03FFF] Intel(R) Ethernet Controller I225-V #9
[0000000080E00000 - 0000000080EFFFFF] Intel(R) Ethernet Controller I226-V #5
[0000000080F00000 - 0000000080F03FFF] Intel(R) Ethernet Controller I226-V #5
[0000000080F00000 - 0000000080F1FFFF] Intel(R) Ethernet Connection (22) I219-V
[0000000080F00000 - 0000000080FFFFFF] Intel(R) Ethernet Controller I226-V #11
[0000000080F00000 - 00000000810FFFFF] PCI Express Root Port
[0000000080F20000 - 0000000080F21FFF] Standard SATA AHCI Controller
[0000000080F22000 - 0000000080F227FF] Standard SATA AHCI Controller
[0000000080F23000 - 0000000080F230FF] Standard SATA AHCI Controller
[0000000081000000 - 0000000081003FFF] Intel(R) Ethernet Controller I226-V #11
[0000000081000000 - 00000000810FFFFF] Intel(R) I210 Gigabit Network Connection #4

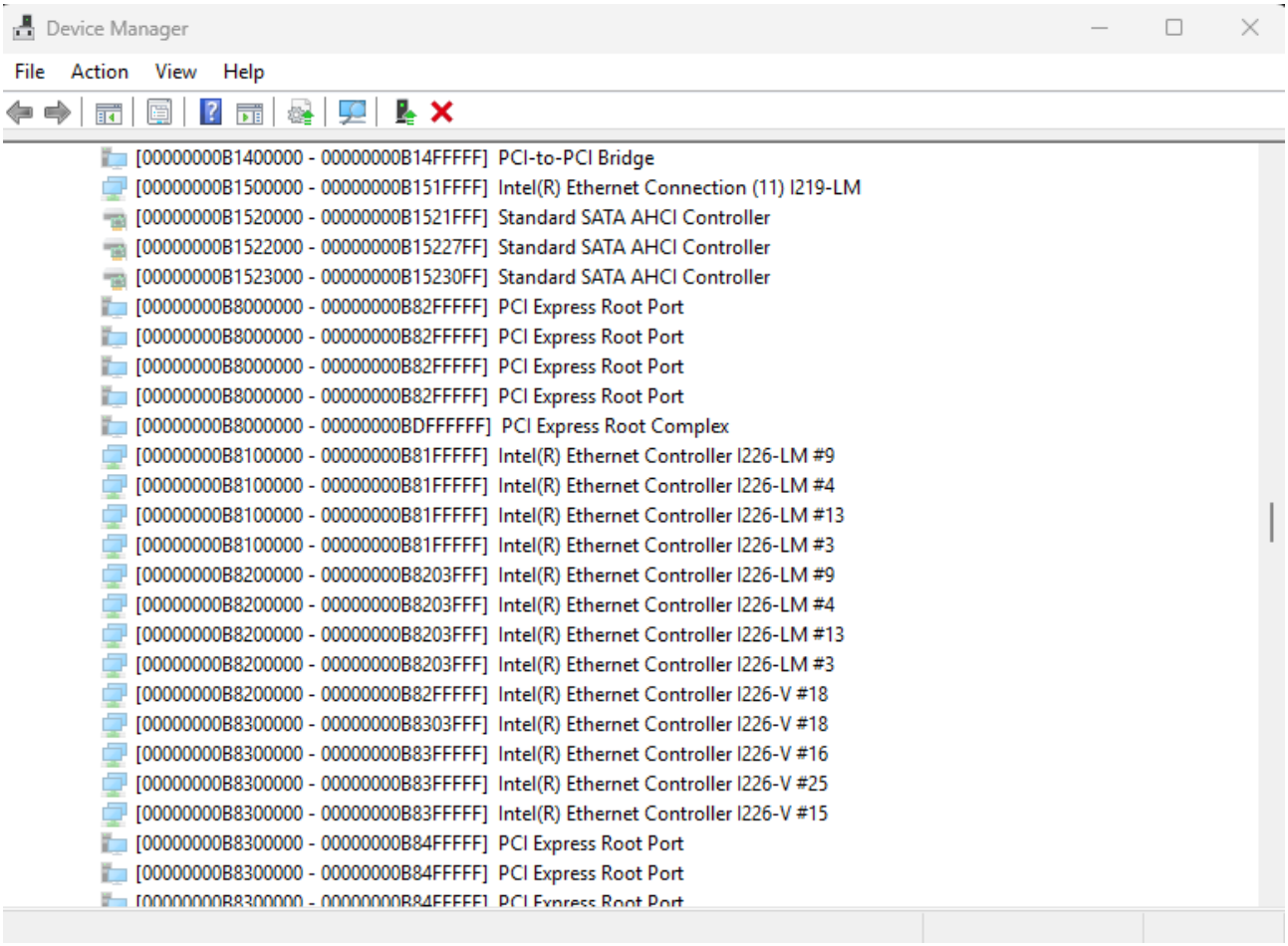

Device Manager
File Action View Help
[0000000081000000 - 00000000810FFFFF] High Definition Audio Controller
[0000000081000000 - 00000000810FFFFF] Intel(R) PCI Express Root Port #2 - 7AB9
[0000000081020000 - 0000000081023FFF] Intel(R) I210 Gigabit Network Connection #4
[0000000081100000 - 0000000081103FFF] Realtek PCIe GbE Family Controller #8
[0000000081100000 - 0000000081107FFF] ASMedia USB 3.0 eXtensible Host Controller - 0.96 (Microsoft)
[0000000081100000 - 0000000081107FFF] ASMedia USB 3.1 eXtensible Host Controller - 1.10 (Microsoft)
[0000000081100000 - 00000000811FFFFF] Intel(R) I210 Gigabit Network Connection #5
[0000000081100000 - 00000000811FFFFF] PCI Express Root Port
[0000000081100000 - 00000000811FFFFF] PCI Express Root Port
[0000000081100000 - 0000000081AFFFFF] PCI-to-PCI Bridge
[0000000081104000 - 0000000081104FFF] Realtek PCIe GbE Family Controller #8
[0000000081120000 - 0000000081123FFF] Intel(R) I210 Gigabit Network Connection #5
[00000000811FB000 - 00000000811FBFFF] Realtek PCIe GbE Family Controller #12
[00000000811FC000 - 00000000811FFFFF] Realtek PCIe GbE Family Controller #12
[0000000081200000 - 0000000081201FFF] Standard SATA AHCI Controller
[0000000081200000 - 0000000081207FFF] ASMedia USB 3.0 eXtensible Host Controller - 0.96 (Microsoft)
[0000000081200000 - 00000000812FFFFF] Intel(R) Ethernet Connection (17) I219-LM
[0000000081200000 - 00000000812FFFFF] PCI Express Root Port #4 - 54BB
[0000000081200000 - 00000000812FFFFF] Intel(R) Ethernet Controller (3) I225-V #2
[0000000081200000 - 00000000812FFFFF] PCI-to-PCI Bridge
[0000000081200000 - 00000000813FFFFF] Intel(R) PCI Express Root Port #8 - 7ABF
[0000000081200000 - 00000000814FFFFF] Intel(R) PCI Express Root Port #3 - 7ABA
[0000000081200000 - 0000000081BFFFFF] PCI-to-PCI Bridge
[0000000081202000 - 00000000812027FF] Standard SATA AHCI Controller
[0000000081203000 - 00000000812030FF] Standard SATA AHCI Controller

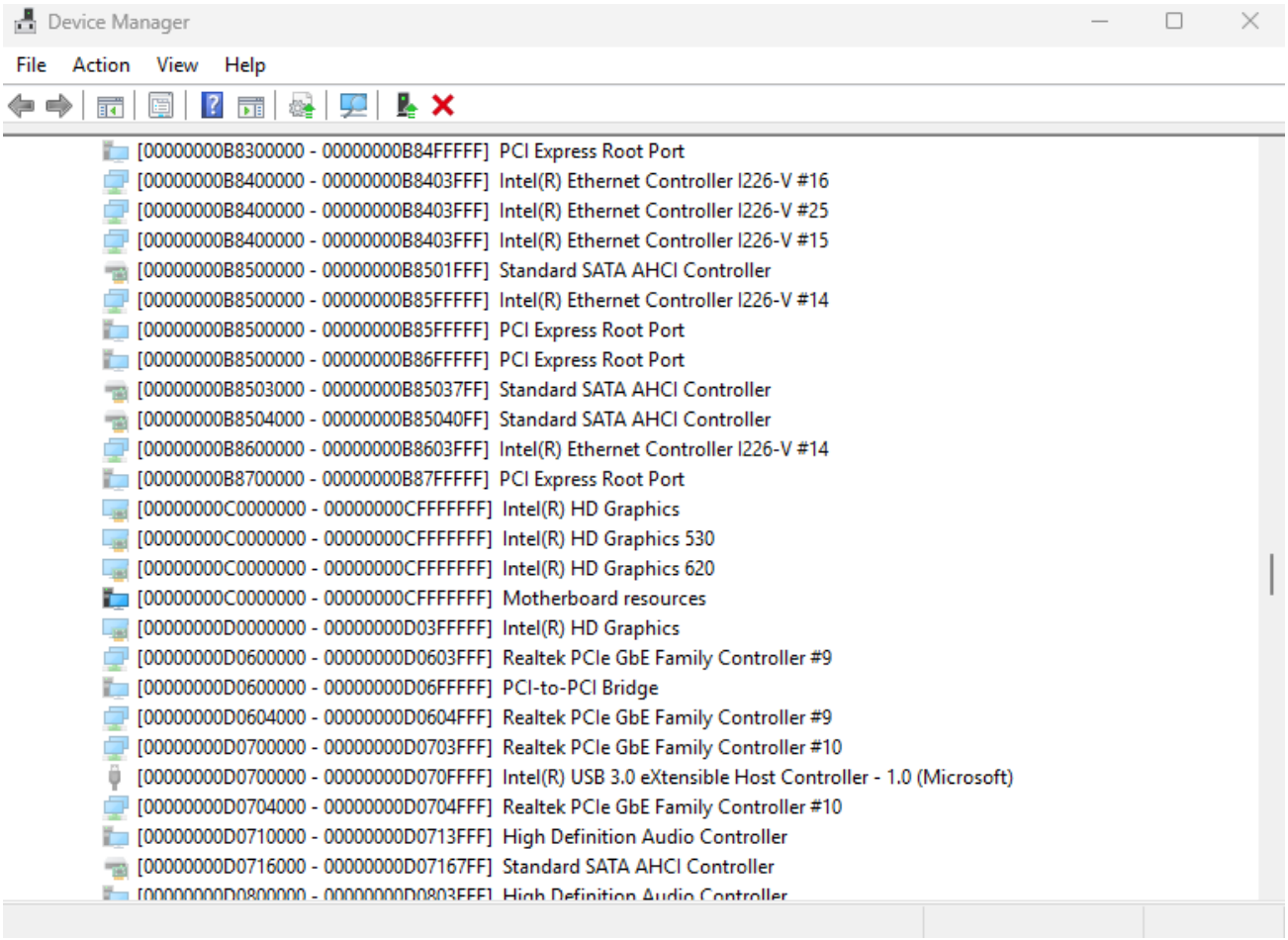

Device Manager
File Action View Help
[00000000812FB000 - 00000000812FBFFF] Realtek PCIe GbE Family Controller #11
[00000000812FC000 - 00000000812FFFFF] Realtek PCIe GbE Family Controller #11
[0000000081300000 - 0000000081301FFF] Standard SATA AHCI Controller
[0000000081300000 - 0000000081303FFF] Intel(R) Ethernet Controller (3) I225-V #2
[0000000081300000 - 0000000081303FFF] Standard NVM Express Controller
[0000000081300000 - 00000000813FFFFF] Intel(R) Ethernet Controller I226-LM #5
[0000000081300000 - 00000000813FFFFF] Intel(R) Ethernet Controller (3) I225-LM
[0000000081300000 - 00000000813FFFFF] Intel(R) Ethernet Controller I226-LM #6
[0000000081300000 - 00000000813FFFFF] PCI-to-PCI Bridge
[0000000081300000 - 00000000813FFFFF] PCI-to-PCI Bridge
[0000000081302000 - 00000000813027FF] Standard SATA AHCI Controller
[0000000081303000 - 00000000813030FF] Standard SATA AHCI Controller
[0000000081400000 - 0000000081403FFF] Intel(R) Ethernet Controller I226-LM #5
[0000000081400000 - 0000000081403FFF] Intel(R) Ethernet Controller (3) I225-LM
[0000000081400000 - 0000000081403FFF] Intel(R) Ethernet Controller I226-LM #6
[0000000081400000 - 000000008140FFFF] Intel(R) USB 3.0 eXtensible Host Controller - 1.0 (Microsoft)
[0000000081400000 - 00000000814FFFFF] Intel(R) Ethernet Controller I226-V #3
[0000000081410000 - 0000000081413FFF] High Definition Audio Controller
[0000000081415000 - 00000000814157FF] Standard SATA AHCI Controller
[0000000081500000 - 0000000081503FFF] Intel(R) Ethernet Controller I226-V #3
[0000000081500000 - 00000000815FFFFF] Intel(R) Ethernet Controller (3) I225-V #6
[0000000081500000 - 00000000816FFFFF] Intel(R) PCI Express Root Port #7 - 7ABE
[0000000081500000 - 00000000817FFFFF] Intel(R) PCI Express Root Port #25 - 7AC8
[0000000081600000 - 0000000081603FFF] Intel(R) Ethernet Controller (3) I225-V #6
[0000000081600000 - 00000000816FFFFF] Intel(R) Ethernet Controller I226-LM #7

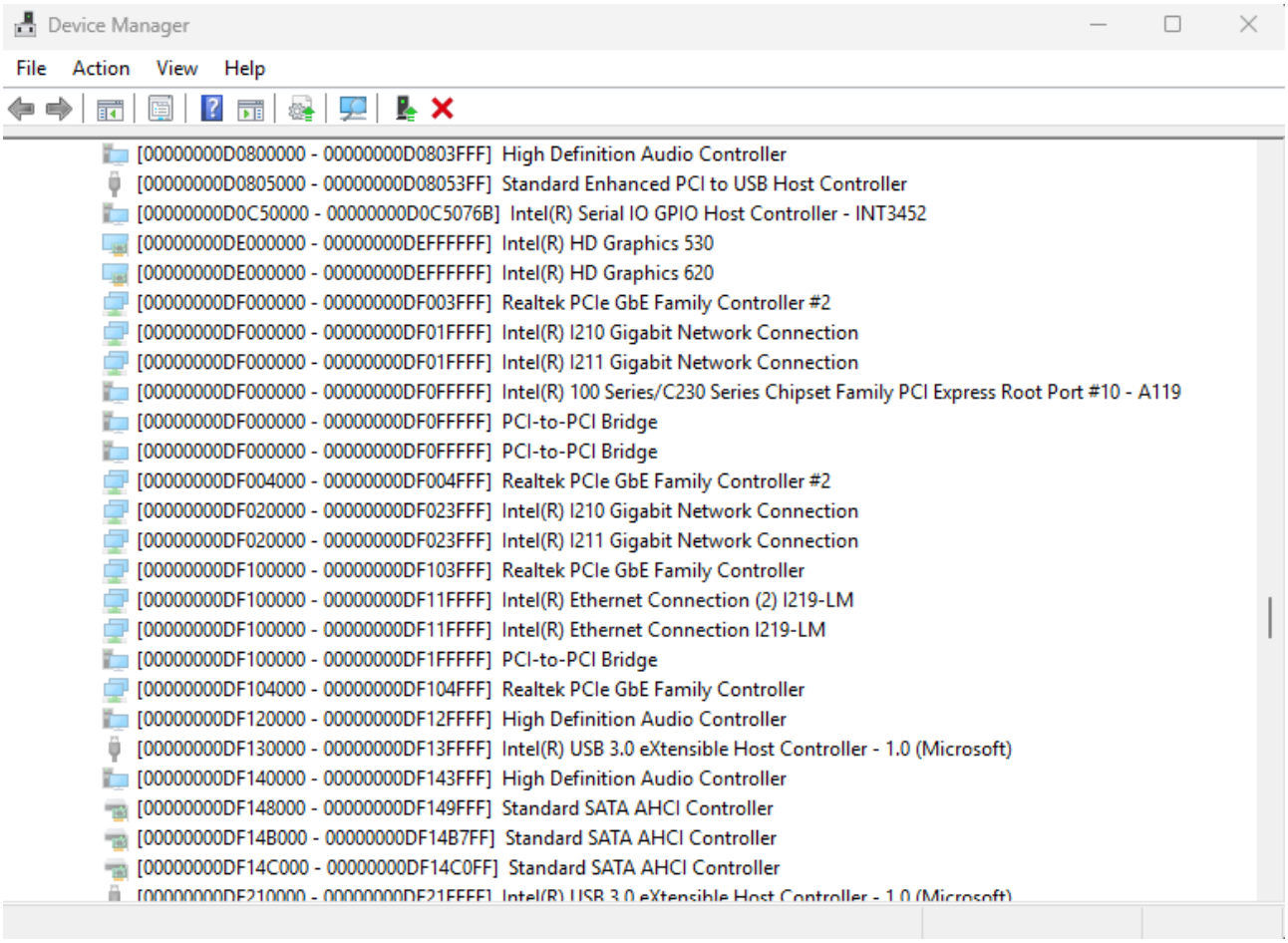

Device Manager
File Action View Help
[0000000081600000 - 00000000816FFFFF] Intel(R) Ethernet Controller (3) I225-V #4
[0000000081600000 - 00000000816FFFFF] Intel(R) Ethernet Controller I226-V #6
[0000000081700000 - 0000000081703FFF] Intel(R) Ethernet Controller I226-LM #7
[0000000081700000 - 0000000081703FFF] Intel(R) Ethernet Controller (3) I225-V #4
[0000000081700000 - 0000000081703FFF] Intel(R) Ethernet Controller I226-V #6
[0000000081700000 - 000000008171FFFF] Intel(R) Ethernet Connection (17) I219-V
[0000000081700000 - 00000000817FFFFF] Intel(R) Ethernet Controller (3) I225-V #3
[0000000081700000 - 00000000818FFFFF] Intel(R) PCI Express Root Port #4 - 7ABB
[0000000081800000 - 0000000081803FFF] Intel(R) Ethernet Controller (3) I225-V #3
[0000000081800000 - 00000000818FFFFF] Intel(R) Ethernet Controller I226-V #4
[0000000081800000 - 00000000818FFFFF] Intel(R) Ethernet Controller (3) I225-V
[0000000081900000 - 0000000081903FFF] Intel(R) Ethernet Controller I226-V #4
[0000000081900000 - 0000000081903FFF] Intel(R) Ethernet Controller (3) I225-V
[0000000081900000 - 0000000081903FFF] Standard NVM Express Controller
[0000000081900000 - 00000000819FFFFF] PCI-to-PCI Bridge
[000000081A00000 - 000000081A01FFF] Standard SATA AHCI Controller
[000000081A00000 - 000000081AFFFFF] Intel(R) Ethernet Controller I226-V #2
[000000081A00000 - 00000000823FFFFF] Intel(R) PCI Express Root Port #1 - 4B39
[000000081A02000 - 000000081A027FF] Standard SATA AHCI Controller
[000000081A03000 - 000000081A030FF] Standard SATA AHCI Controller
[000000081B00000 - 000000081B03FFF] Intel(R) Ethernet Controller I226-V #2
[000000081B00000 - 000000081B03FFF] Realtek PCIe GbE Family Controller #3
[000000081B00000 - 00000000824FFFFF] PCI-to-PCI Bridge
[000000081B04000 - 000000081B04FFF] Realtek PCIe GbE Family Controller #3
[000000081C00000 - 000000081C03FFF] Realtek PCIe GbE Family Controller #7

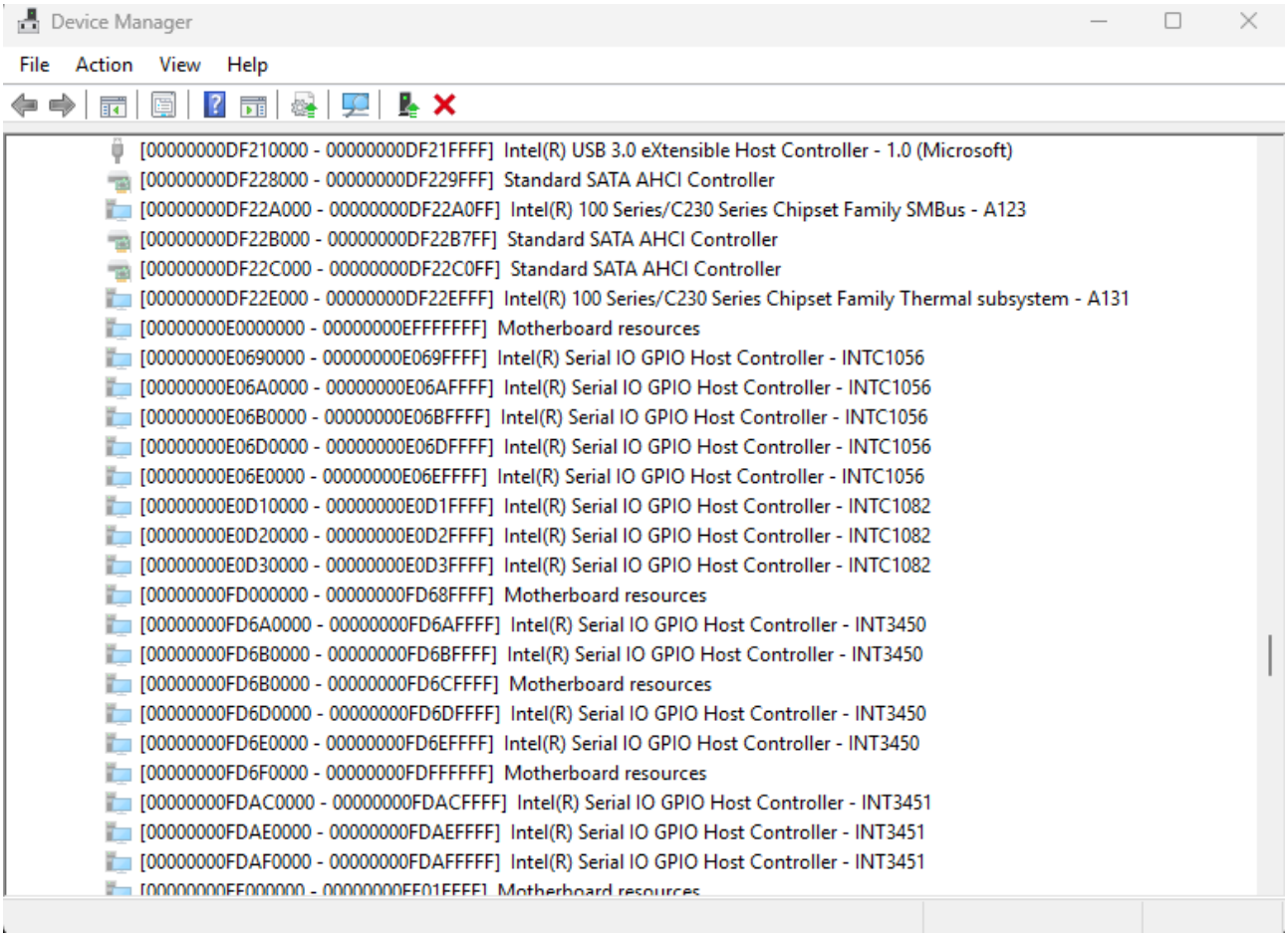

Device Manager
File Action View Help
[0000000081C00000 - 00000000825FFFFF] PCI Express Root Port #4 - 54BB
[0000000081C00000 - 00000000825FFFFF] PCI-to-PCI Bridge
[0000000081C04000 - 0000000081C04FFF] Realtek PCIe GbE Family Controller #7
[0000000082500000 - 000000008250FFFF] Intel(R) USB 3.0 eXtensible Host Controller - 1.0 (Microsoft)
[0000000082510000 - 0000000082513FFF] High Definition Audio Controller
[0000000082514000 - 0000000082515FFF] Standard SATA AHCI Controller
[0000000082519000 - 00000000825197FF] Standard SATA AHCI Controller
[000000008251A000 - 000000008251A0FF] Standard SATA AHCI Controller
[0000000082600000 - 0000000082FFFFFF] PCI Express Root Port #3 - 54BA
[0000000082600000 - 0000000082FFFFFF] PCI-to-PCI Bridge
[0000000083000000 - 00000000839FFFFF] PCI Express Root Port #1 - 54B8
[0000000083000000 - 00000000839FFFFF] PCI-to-PCI Bridge
[0000000083A00000 - 00000000843FFFFF] PCI-to-PCI Bridge
[0000000084400000 - 0000000084DFFFFF] PCI-to-PCI Bridge
[0000000084E00000 - 00000000857FFFFF] PCI-to-PCI Bridge
[0000000085800000 - 0000000085801FFF] Standard SATA AHCI Controller
[0000000085802000 - 00000000858027FF] Standard SATA AHCI Controller
[0000000085803000 - 00000000858030FF] Standard SATA AHCI Controller
[0000000090000000 - 000000009FFFFFFF] Intel(R) HD Graphics 500
[0000000090000000 - 000000009FFFFFFF] Intel(R) UHD Graphics 630
[0000000090000000 - 000000009FFFFFFF] Microsoft Basic Display Adapter
[000000009F800000 - 000000009F8FFFFF] Intel(R) Ethernet Controller I225-LM
[000000009F900000 - 000000009F903FFF] Intel(R) Ethernet Controller I225-LM
[00000000A0000000 - 00000000A09FFFFF] PCI-to-PCI Bridge
[00000000A0000000 - 00000000A0FFFFFF] Intel(R) UHD Graphics 630

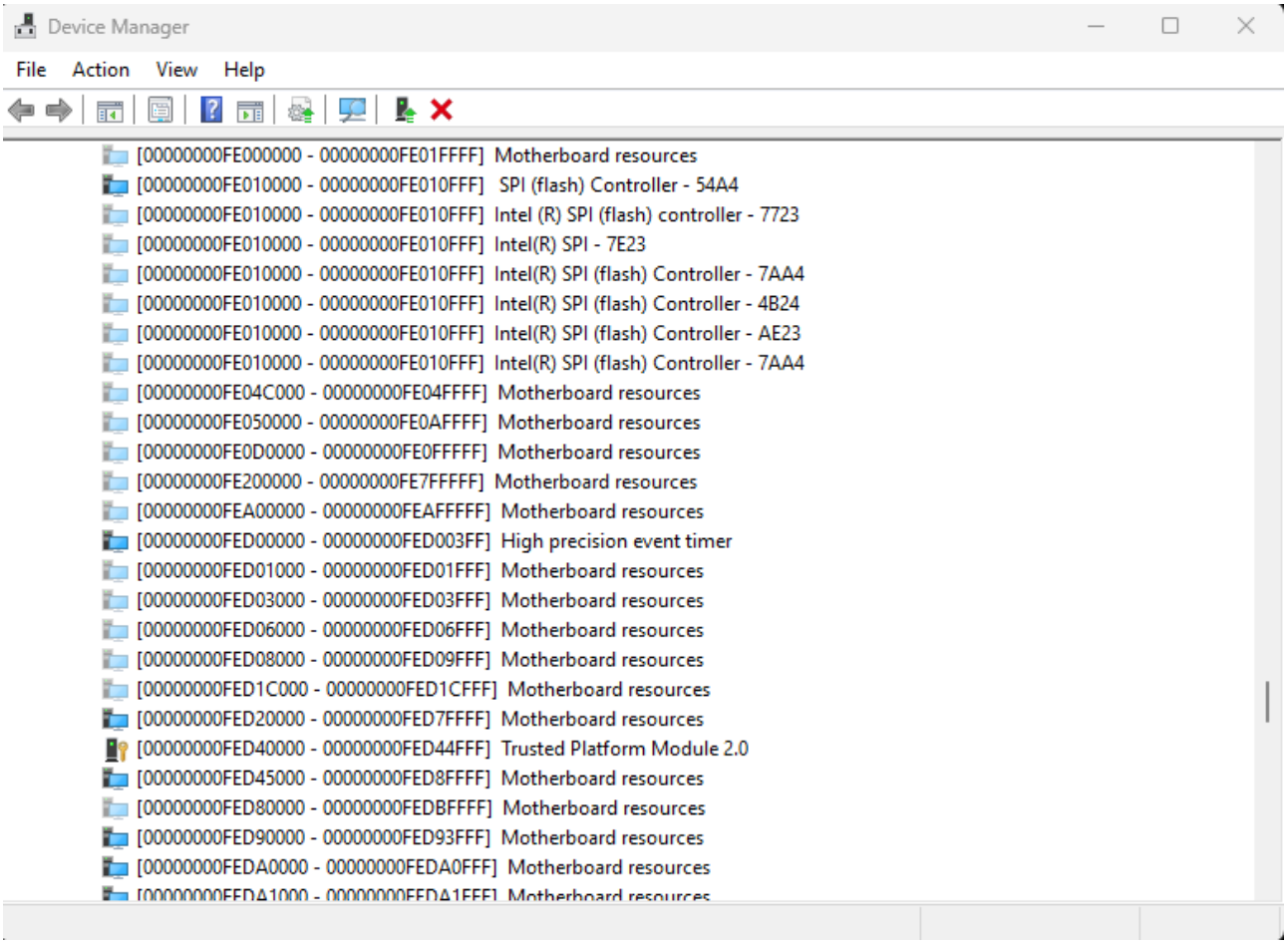

Device Manager
File Action View Help
[00000000A0000000 - 00000000A7FFFFFF] Intel(R) UHD Graphics 630
[00000000A0000000 - 00000000AFFFFFFF] Intel(R) UHD Graphics 630
[00000000A0A00000 - 00000000A13FFFFF] PCI-to-PCI Bridge
[00000000A1000000 - 00000000A10FFFFF] High Definition Audio Controller
[00000000A1100000 - 00000000A11FFFFF] PCI-to-PCI Bridge
[00000000A1100000 - 00000000A12FFFFF] PCI-to-PCI Bridge
[00000000A1200000 - 00000000A12FFFFF] PCI-to-PCI Bridge
[00000000A1300000 - 00000000A130FFFF] Intel(R) USB 3.1 eXtensible Host Controller - 1.10 (Microsoft)
[00000000A1300000 - 00000000A131FFFF] Intel(R) Ethernet Connection (7) I219-V
[00000000A1314000 - 00000000A1315FFF] Standard SATA AHCI Controller
[00000000A1319000 - 00000000A13197FF] Standard SATA AHCI Controller
[00000000A131A000 - 00000000A131A0FF] Standard SATA AHCI Controller
[00000000A1330000 - 00000000A1333FFF] High Definition Audio Controller
[00000000A8000000 - 00000000A8FFFFFF] Intel(R) UHD Graphics 630
[00000000A9000000 - 00000000A901FFFF] Intel(R) I210 Gigabit Network Connection #2
[00000000A9000000 - 00000000A90FFFFF] PCI-to-PCI Bridge
[00000000A9020000 - 00000000A9023FFF] Intel(R) I210 Gigabit Network Connection #2
[00000000A9100000 - 00000000A911FFFF] Intel(R) Ethernet Connection (12) I219-V
[00000000A9130000 - 00000000A913FFFF] Intel(R) USB 3.0 eXtensible Host Controller - 1.0 (Microsoft)
[00000000A9148000 - 00000000A9149FFF] Standard SATA AHCI Controller
[00000000A914B000 - 00000000A914B7FF] Standard SATA AHCI Controller
[00000000A914C000 - 00000000A914C0FF] Standard SATA AHCI Controller
[00000000B0000000 - 00000000B0FFFFFF] Intel(R) UHD Graphics 630
[00000000B1000000 - 00000000B11FFFFF] PCI-to-PCI Bridge
[00000000B1200000 - 00000000B13FFFFF] PCI-to-PCI Bridge

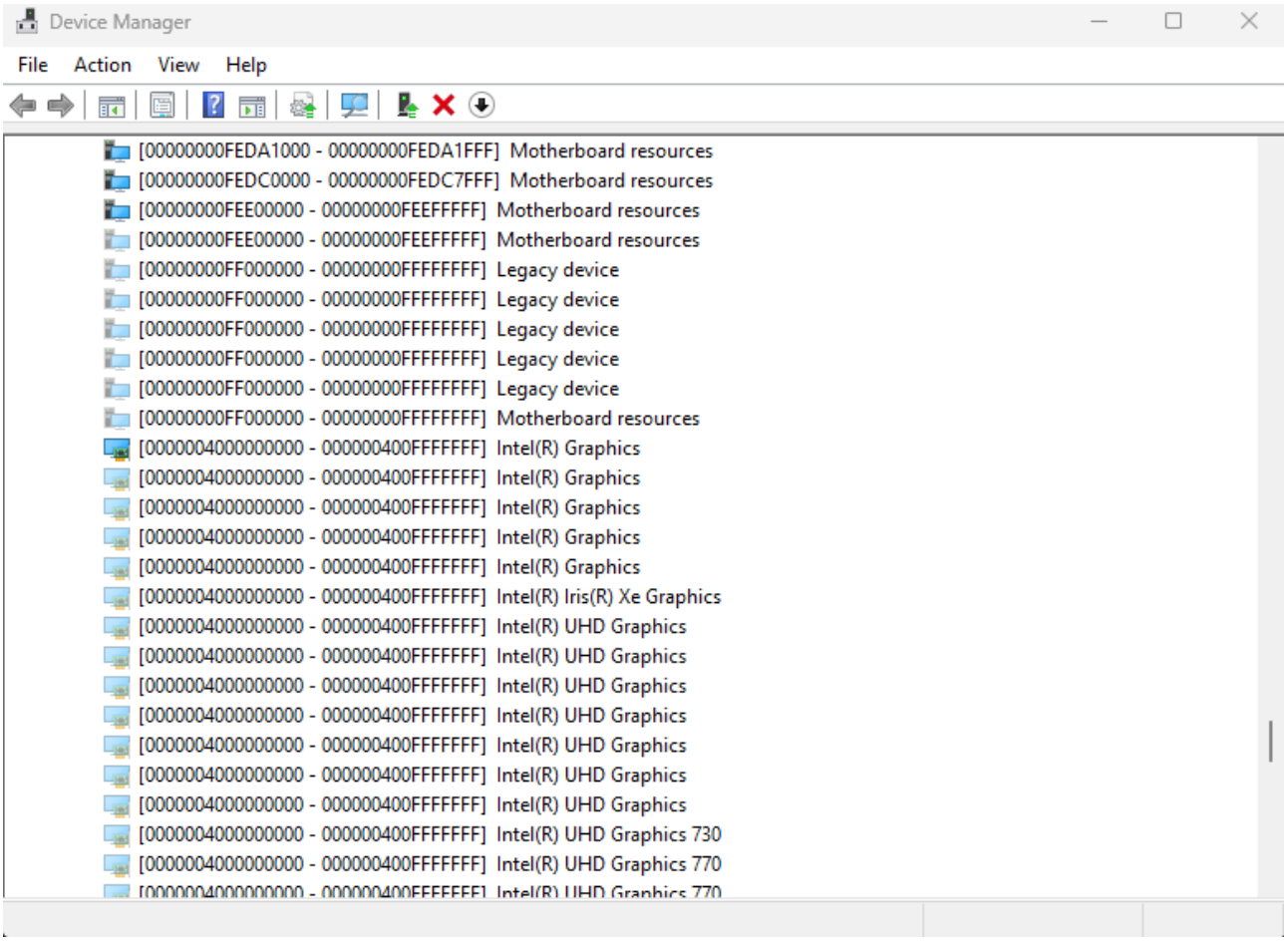

Device Manager
File Action View Help
[00000000B1400000 - 00000000B14FFFFF] PCI-to-PCI Bridge
[00000000B1500000 - 00000000B151FFFF] Intel(R) Ethernet Connection (11) I219-LM
[00000000B1520000 - 00000000B1521FFF] Standard SATA AHCI Controller
[00000000B1522000 - 00000000B15227FF] Standard SATA AHCI Controller
[00000000B1523000 - 00000000B15230FF] Standard SATA AHCI Controller
[00000000B8000000 - 00000000B82FFFFF] PCI Express Root Port
[00000000B8000000 - 00000000B82FFFFF] PCI Express Root Port
[00000000B8000000 - 00000000B82FFFFF] PCI Express Root Port
[00000000B8000000 - 00000000B82FFFFF] PCI Express Root Port
[00000000B8000000 - 00000000BDFFFFFF] PCI Express Root Complex
[00000000B8100000 - 00000000B81FFFFF] Intel(R) Ethernet Controller I226-LM #9
[00000000B8100000 - 00000000B81FFFFF] Intel(R) Ethernet Controller I226-LM #4
[00000000B8100000 - 00000000B81FFFFF] Intel(R) Ethernet Controller I226-LM #13
[00000000B8100000 - 00000000B81FFFFF] Intel(R) Ethernet Controller I226-LM #3
[00000000B8200000 - 00000000B8203FFF] Intel(R) Ethernet Controller I226-LM #9
[00000000B8200000 - 00000000B8203FFF] Intel(R) Ethernet Controller I226-LM #4
[00000000B8200000 - 00000000B8203FFF] Intel(R) Ethernet Controller I226-LM #13
[00000000B8200000 - 00000000B8203FFF] Intel(R) Ethernet Controller I226-LM #3
[00000000B8200000 - 00000000B82FFFFF] Intel(R) Ethernet Controller I226-V #18
[00000000B8300000 - 00000000B8303FFF] Intel(R) Ethernet Controller I226-V #18
[00000000B8300000 - 00000000B83FFFFF] Intel(R) Ethernet Controller I226-V #16
[00000000B8300000 - 00000000B83FFFFF] Intel(R) Ethernet Controller I226-V #25
[00000000B8300000 - 00000000B83FFFFF] Intel(R) Ethernet Controller I226-V #15
[00000000B8300000 - 00000000B84FFFFF] PCI Express Root Port
[00000000B8300000 - 00000000B84FFFFF] PCI Express Root Port

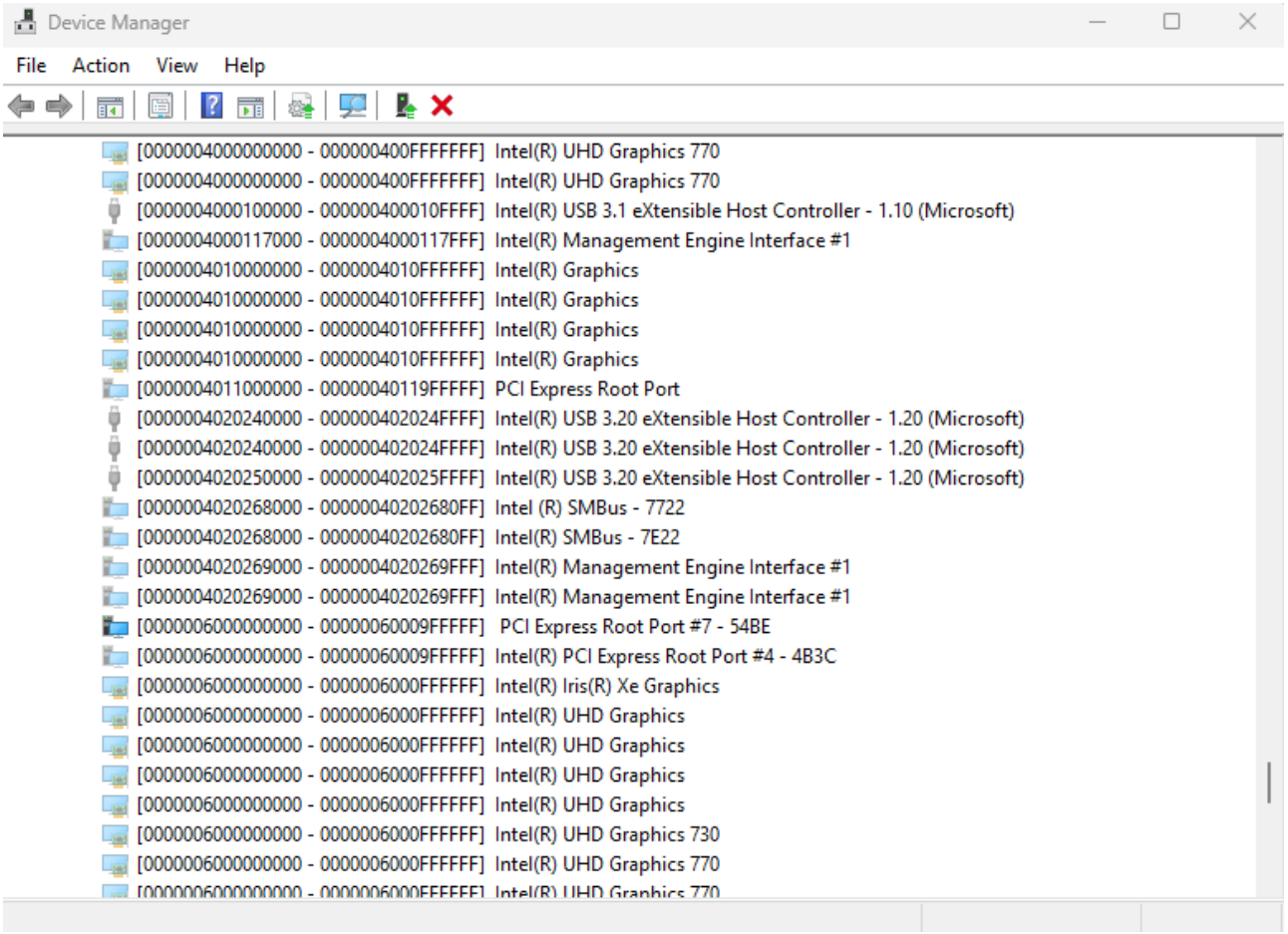

Device Manager
File Action View Help
[00000000B8300000 - 00000000B84FFFFF] PCI Express Root Port
[00000000B8400000 - 00000000B8403FFF] Intel(R) Ethernet Controller I226-V #16
[00000000B8400000 - 00000000B8403FFF] Intel(R) Ethernet Controller I226-V #25
[00000000B8400000 - 00000000B8403FFF] Intel(R) Ethernet Controller I226-V #15
[00000000B8500000 - 00000000B8501FFF] Standard SATA AHCI Controller
[00000000B8500000 - 00000000B85FFFFF] Intel(R) Ethernet Controller I226-V #14
[00000000B8500000 - 00000000B85FFFFF] PCI Express Root Port
[00000000B8500000 - 00000000B86FFFFF] PCI Express Root Port
[00000000B8503000 - 00000000B85037FF] Standard SATA AHCI Controller
[00000000B8504000 - 00000000B85040FF] Standard SATA AHCI Controller
[00000000B8600000 - 00000000B8603FFF] Intel(R) Ethernet Controller I226-V #14
[00000000B8700000 - 00000000B87FFFFF] PCI Express Root Port
[00000000C0000000 - 00000000CFFFFFFF] Intel(R) HD Graphics
[00000000C0000000 - 00000000CFFFFFFF] Intel(R) HD Graphics 530
[00000000C0000000 - 00000000CFFFFFFF] Intel(R) HD Graphics 620
[00000000C0000000 - 00000000CFFFFFFF] Motherboard resources
[00000000D0000000 - 00000000D03FFFFF] Intel(R) HD Graphics
[00000000D0600000 - 00000000D0603FFF] Realtek PCIe GbE Family Controller #9
[00000000D0600000 - 00000000D06FFFFF] PCI-to-PCI Bridge
[00000000D0604000 - 00000000D0604FFF] Realtek PCIe GbE Family Controller #9
[00000000D0700000 - 00000000D0703FFF] Realtek PCIe GbE Family Controller #10
[00000000D0700000 - 00000000D070FFFF] Intel(R) USB 3.0 eXtensible Host Controller - 1.0 (Microsoft)
[00000000D0704000 - 00000000D0704FFF] Realtek PCIe GbE Family Controller #10
[00000000D0710000 - 00000000D0713FFF] High Definition Audio Controller
[00000000D0716000 - 00000000D07167FF] Standard SATA AHCI Controller

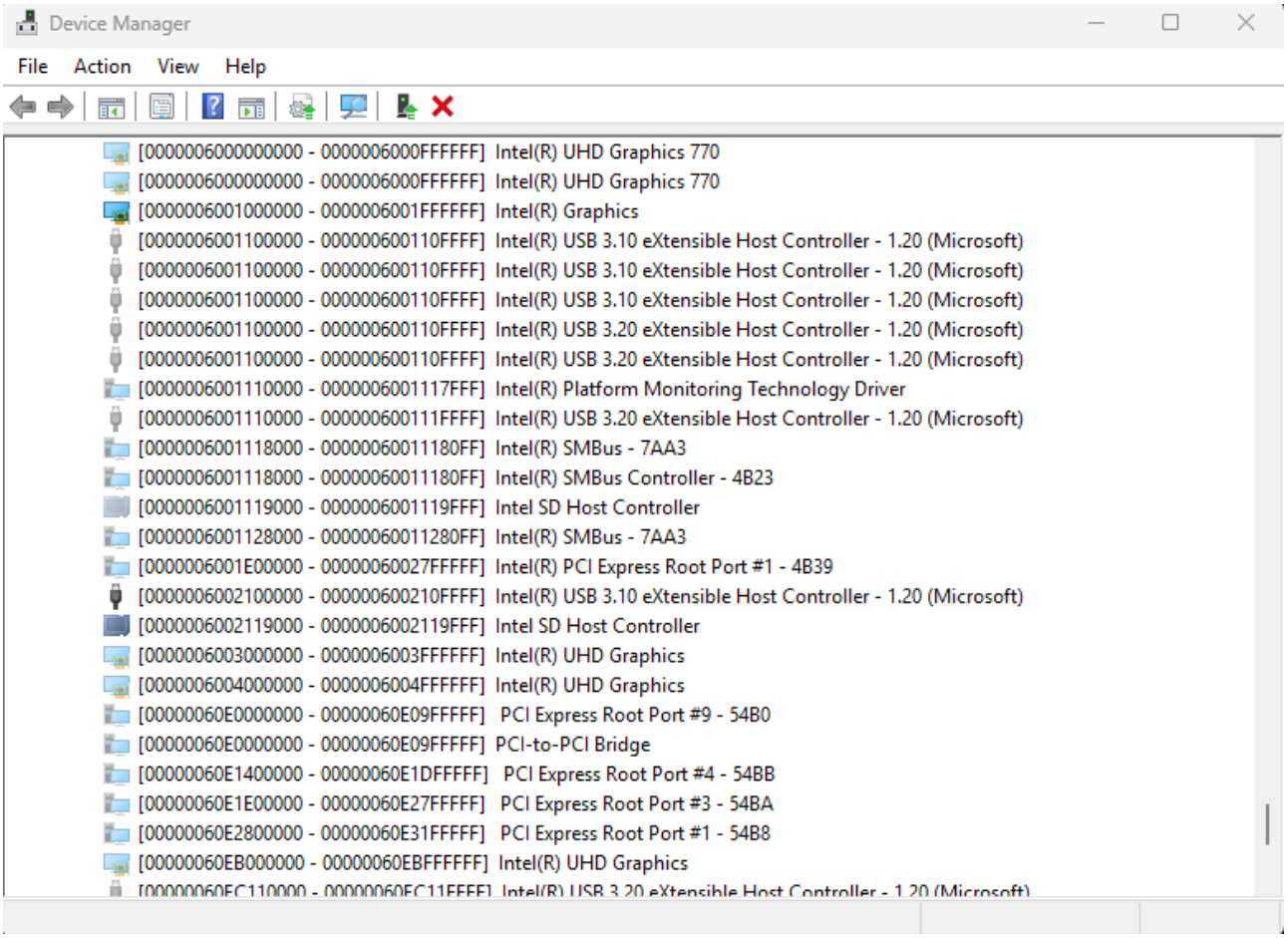

Device Manager
File Action View Help
[00000000D0800000 - 00000000D0803FFF] High Definition Audio Controller
[00000000D0805000 - 00000000D08053FF] Standard Enhanced PCI to USB Host Controller
[00000000D0C50000 - 00000000D0C5076B] Intel(R) Serial IO GPIO Host Controller - INT3452
[00000000DE000000 - 00000000DEFFFFFF] Intel(R) HD Graphics 530
[00000000DE000000 - 00000000DEFFFFFF] Intel(R) HD Graphics 620
[00000000DF000000 - 00000000DF003FFF] Realtek PCIe GbE Family Controller #2
[00000000DF000000 - 00000000DF01FFFF] Intel(R) I210 Gigabit Network Connection
[00000000DF000000 - 00000000DF01FFFF] Intel(R) I211 Gigabit Network Connection
[00000000DF000000 - 00000000DF0FFFFF] Intel(R) 100 Series/C230 Series Chipset Family PCI Express Root Port #10 - A119
[00000000DF000000 - 00000000DF0FFFFF] PCI-to-PCI Bridge
[00000000DF000000 - 00000000DF0FFFFF] PCI-to-PCI Bridge
[00000000DF004000 - 00000000DF004FFF] Realtek PCIe GbE Family Controller #2
[00000000DF020000 - 00000000DF023FFF] Intel(R) I210 Gigabit Network Connection
[00000000DF020000 - 00000000DF023FFF] Intel(R) I211 Gigabit Network Connection
[00000000DF100000 - 00000000DF103FFF] Realtek PCIe GbE Family Controller
[00000000DF100000 - 00000000DF11FFFF] Intel(R) Ethernet Connection (2) I219-LM
[00000000DF100000 - 00000000DF11FFFF] Intel(R) Ethernet Connection I219-LM
[00000000DF100000 - 00000000DF1FFFFF] PCI-to-PCI Bridge
[00000000DF104000 - 00000000DF104FFF] Realtek PCIe GbE Family Controller
[00000000DF120000 - 00000000DF12FFFF] High Definition Audio Controller
[00000000DF130000 - 00000000DF13FFFF] Intel(R) USB 3.0 eXtensible Host Controller - 1.0 (Microsoft)
[00000000DF140000 - 00000000DF143FFF] High Definition Audio Controller
[00000000DF148000 - 00000000DF149FFF] Standard SATA AHCI Controller
[00000000DF14B000 - 00000000DF14B7FF] Standard SATA AHCI Controller
[00000000DF14C000 - 00000000DF14C0FF] Standard SATA AHCI Controller

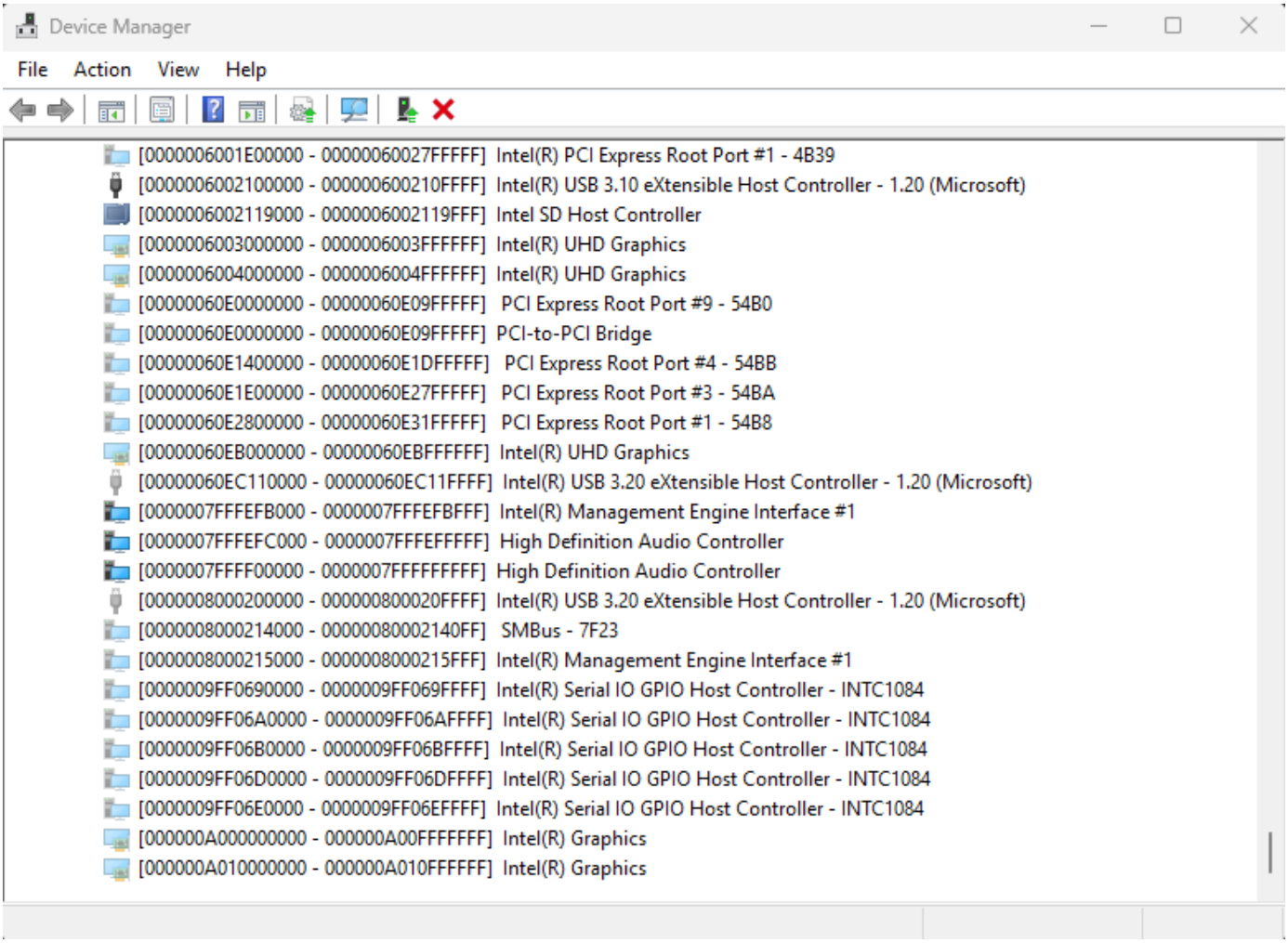

Device Manager
File Action View Help
[00000000DF210000 - 00000000DF21FFFF] Intel(R) USB 3.0 eXtensible Host Controller - 1.0 (Microsoft)
[00000000DF228000 - 00000000DF229FFF] Standard SATA AHCI Controller
[00000000DF22A000 - 00000000DF22A0FF] Intel(R) 100 Series/C230 Series Chipset Family SMBus - A123
[00000000DF22B000 - 00000000DF22B7FF] Standard SATA AHCI Controller
[00000000DF22C000 - 00000000DF22C0FF] Standard SATA AHCI Controller
[00000000DF22E000 - 00000000DF22EFFF] Intel(R) 100 Series/C230 Series Chipset Family Thermal subsystem - A131
[00000000E0000000 - 00000000EFFFFFFF] Motherboard resources
[00000000E0690000 - 00000000E069FFFF] Intel(R) Serial IO GPIO Host Controller - INTC1056
[00000000E06A0000 - 00000000E06AFFFF] Intel(R) Serial IO GPIO Host Controller - INTC1056
[00000000E06B0000 - 00000000E06BFFFF] Intel(R) Serial IO GPIO Host Controller - INTC1056
[00000000E06D0000 - 00000000E06DFFFF] Intel(R) Serial IO GPIO Host Controller - INTC1056
[00000000E06E0000 - 00000000E06EFFFF] Intel(R) Serial IO GPIO Host Controller - INTC1056
[00000000E0D10000 - 00000000E0D1FFFF] Intel(R) Serial IO GPIO Host Controller - INTC1082
[00000000E0D20000 - 00000000E0D2FFFF] Intel(R) Serial IO GPIO Host Controller - INTC1082
[00000000E0D30000 - 00000000E0D3FFFF] Intel(R) Serial IO GPIO Host Controller - INTC1082
[00000000FD000000 - 00000000FD68FFFF] Motherboard resources
[00000000FD6A0000 - 00000000FD6AFFFF] Intel(R) Serial IO GPIO Host Controller - INT3450
[00000000FD6B0000 - 00000000FD6BFFFF] Intel(R) Serial IO GPIO Host Controller - INT3450
[00000000FD6B0000 - 00000000FD6CFFFF] Motherboard resources
[00000000FD6D0000 - 00000000FD6DFFFF] Intel(R) Serial IO GPIO Host Controller - INT3450
[00000000FD6E0000 - 00000000FD6EFFFF] Intel(R) Serial IO GPIO Host Controller - INT3450
[00000000FD6F0000 - 00000000FDFFFFFF] Motherboard resources
[00000000FDAC0000 - 00000000FDACFFFF] Intel(R) Serial IO GPIO Host Controller - INT3451
[00000000FDAE0000 - 00000000FDAEFFFF] Intel(R) Serial IO GPIO Host Controller - INT3451
[00000000FDAF0000 - 00000000FDAFFFFF] Intel(R) Serial IO GPIO Host Controller - INT3451


Device Manager
File Action View Help
[00000000FE000000 - 00000000FE01FFFF] Motherboard resources
[00000000FE010000 - 00000000FE010FFF] SPI (flash) Controller - 54A4
[00000000FE010000 - 00000000FE010FFF] Intel (R) SPI (flash) controller - 7723
[00000000FE010000 - 00000000FE010FFF] Intel(R) SPI - 7E23
[00000000FE010000 - 00000000FE010FFF] Intel(R) SPI (flash) Controller - 7AA4
[00000000FE010000 - 00000000FE010FFF] Intel(R) SPI (flash) Controller - 4B24
[00000000FE010000 - 00000000FE010FFF] Intel(R) SPI (flash) Controller - AE23
[00000000FE010000 - 00000000FE010FFF] Intel(R) SPI (flash) Controller - 7AA4
[00000000FE04C000 - 00000000FE04FFFF] Motherboard resources
[00000000FE050000 - 00000000FE0AFFFF] Motherboard resources
[00000000FE0D0000 - 00000000FE0FFFFF] Motherboard resources
[00000000FE200000 - 00000000FE7FFFFF] Motherboard resources
[00000000FEA00000 - 00000000FEAFFFFF] Motherboard resources
[00000000FED00000 - 00000000FED003FF] High precision event timer
[00000000FED01000 - 00000000FED01FFF] Motherboard resources
[00000000FED03000 - 00000000FED03FFF] Motherboard resources
[00000000FED06000 - 00000000FED06FFF] Motherboard resources
[00000000FED08000 - 00000000FED09FFF] Motherboard resources
[00000000FED1C000 - 00000000FED1CFFF] Motherboard resources
[00000000FED20000 - 00000000FED7FFFF] Motherboard resources
[00000000FED40000 - 00000000FED44FFF] Trusted Platform Module 2.0
[00000000FED45000 - 00000000FED8FFFF] Motherboard resources
[00000000FED80000 - 00000000FEDBFFFF] Motherboard resources
[00000000FED90000 - 00000000FED93FFF] Motherboard resources
[00000000FEDA0000 - 00000000FEDA0FFF] Motherboard resources

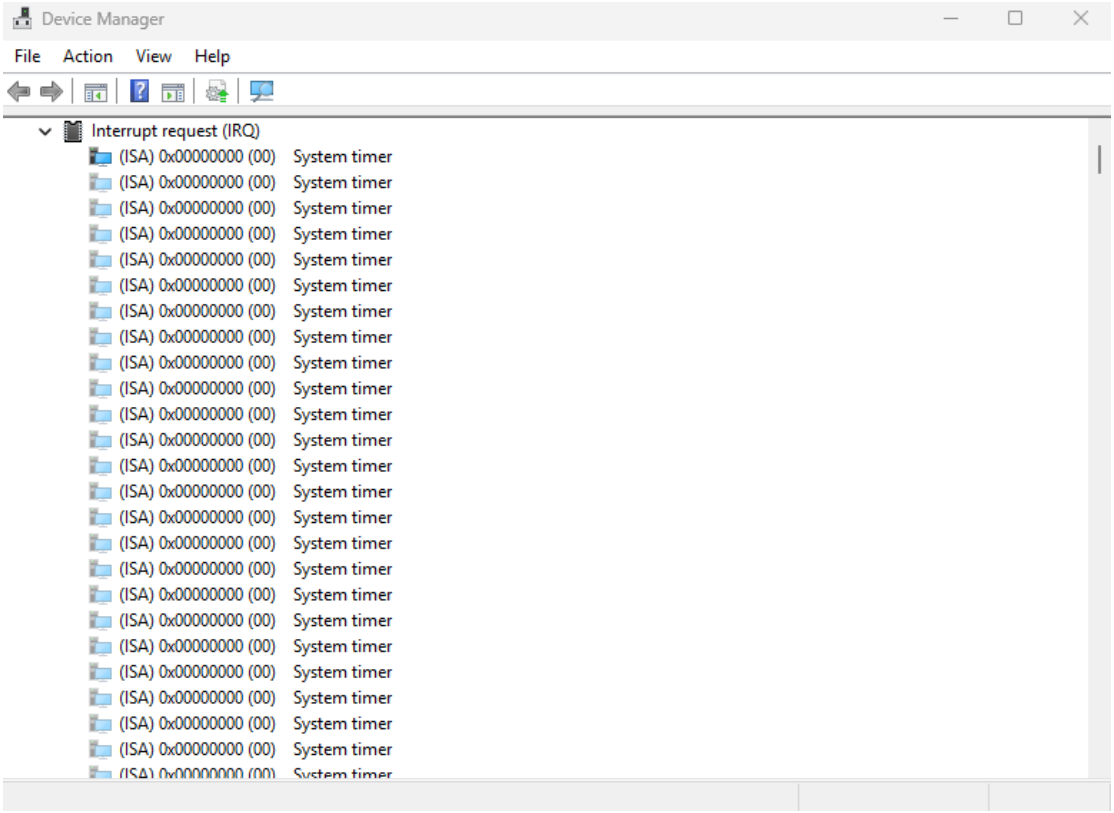

Device Manager
File Action View Help
[00000000FEDA1000 - 00000000FEDA1FFF] Motherboard resources
[00000000FEDC0000 - 00000000FEDC7FFF] Motherboard resources
[00000000FEE00000 - 00000000FEEFFFFF] Motherboard resources
[00000000FEE00000 - 00000000FEEFFFFF] Motherboard resources
[00000000FF000000 - 00000000FFFFFFFF] Legacy device
[00000000FF000000 - 00000000FFFFFFFF] Legacy device
[00000000FF000000 - 00000000FFFFFFFF] Legacy device
[00000000FF000000 - 00000000FFFFFFFF] Legacy device
[00000000FF000000 - 00000000FFFFFFFF] Legacy device
[00000000FF000000 - 00000000FFFFFFFF] Motherboard resources
[0000004000000000 - 000000400FFFFFFF] Intel(R) Graphics
[0000004000000000 - 000000400FFFFFFF] Intel(R) Graphics
[0000004000000000 - 000000400FFFFFFF] Intel(R) Graphics
[0000004000000000 - 000000400FFFFFFF] Intel(R) Graphics
[0000004000000000 - 000000400FFFFFFF] Intel(R) Graphics
[0000004000000000 - 000000400FFFFFFF] Intel(R) Iris(R) Xe Graphics
[0000004000000000 - 000000400FFFFFFF] Intel(R) UHD Graphics
[0000004000000000 - 000000400FFFFFFF] Intel(R) UHD Graphics
[0000004000000000 - 000000400FFFFFFF] Intel(R) UHD Graphics
[0000004000000000 - 000000400FFFFFFF] Intel(R) UHD Graphics
[0000004000000000 - 000000400FFFFFFF] Intel(R) UHD Graphics
[0000004000000000 - 000000400FFFFFFF] Intel(R) UHD Graphics
[0000004000000000 - 000000400FFFFFFF] Intel(R) UHD Graphics
[0000004000000000 - 000000400FFFFFFF] Intel(R) UHD Graphics 730
[0000004000000000 - 000000400FFFFFFF] Intel(R) UHD Graphics 770

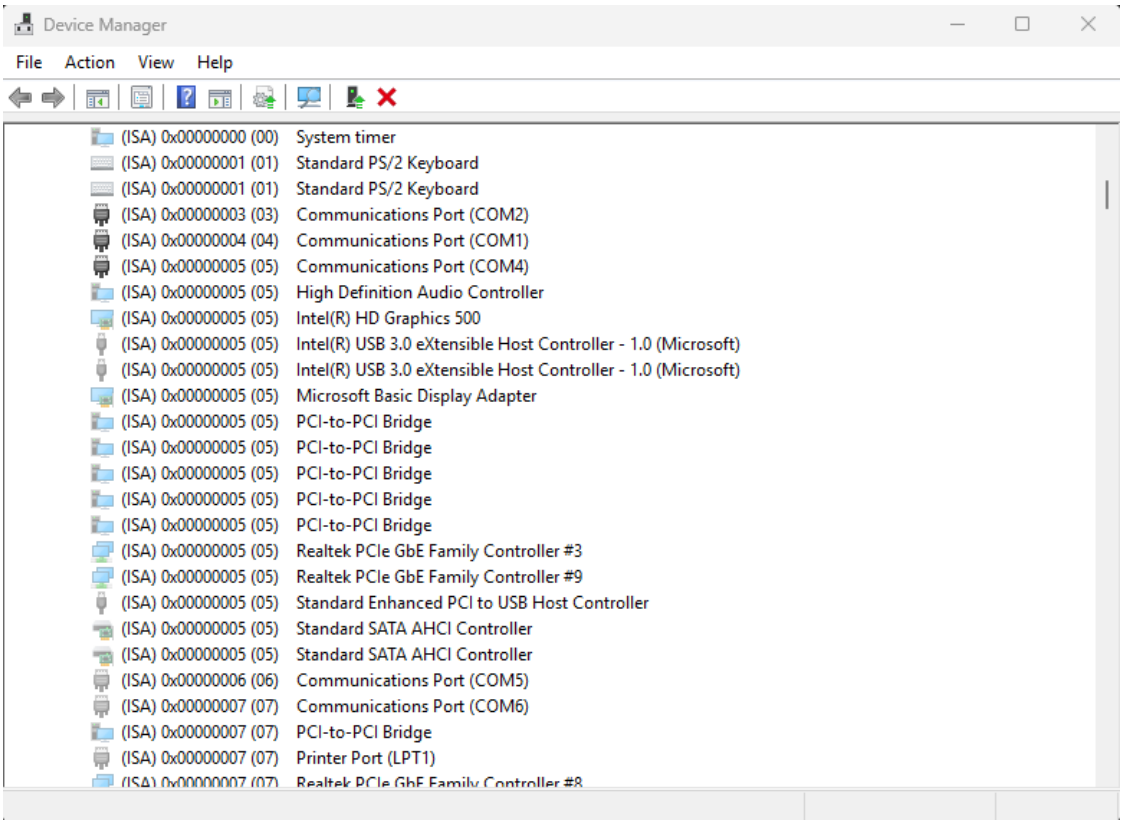

Device Manager
File Action View Help
[0000004000000000 - 000000400FFFFFFF] Intel(R) UHD Graphics 770
[0000004000000000 - 000000400FFFFFFF] Intel(R) UHD Graphics 770
[0000004000100000 - 000000400010FFFF] Intel(R) USB 3.1 eXtensible Host Controller - 1.10 (Microsoft)
[0000004000117000 - 0000004000117FFF] Intel(R) Management Engine Interface #1
[0000004010000000 - 0000004010FFFFFF] Intel(R) Graphics
[0000004010000000 - 0000004010FFFFFF] Intel(R) Graphics
[0000004010000000 - 0000004010FFFFFF] Intel(R) Graphics
[0000004010000000 - 0000004010FFFFFF] Intel(R) Graphics
[0000004011000000 - 00000040119FFFFF] PCI Express Root Port
[0000004020240000 - 000000402024FFFF] Intel(R) USB 3.20 eXtensible Host Controller - 1.20 (Microsoft)
[0000004020240000 - 000000402024FFFF] Intel(R) USB 3.20 eXtensible Host Controller - 1.20 (Microsoft)
[0000004020250000 - 000000402025FFFF] Intel(R) USB 3.20 eXtensible Host Controller - 1.20 (Microsoft)
[0000004020268000 - 00000040202680FF] Intel (R) SMBus - 7722
[0000004020268000 - 00000040202680FF] Intel(R) SMBus - 7E22
[0000004020269000 - 0000004020269FFF] Intel(R) Management Engine Interface #1
[0000004020269000 - 0000004020269FFF] Intel(R) Management Engine Interface #1
[0000006000000000 - 00000060009FFFFF] PCI Express Root Port #7 - 54BE
[0000006000000000 - 00000060009FFFFF] Intel(R) PCI Express Root Port #4 - 4B3C
[0000006000000000 - 0000006000FFFFFF] Intel(R) Iris(R) Xe Graphics
[0000006000000000 - 0000006000FFFFFF] Intel(R) UHD Graphics
[0000006000000000 - 0000006000FFFFFF] Intel(R) UHD Graphics
[0000006000000000 - 0000006000FFFFFF] Intel(R) UHD Graphics
[0000006000000000 - 0000006000FFFFFF] Intel(R) UHD Graphics
[0000006000000000 - 0000006000FFFFFF] Intel(R) UHD Graphics 730
[0000006000000000 - 0000006000FFFFFF] Intel(R) UHD Graphics 770

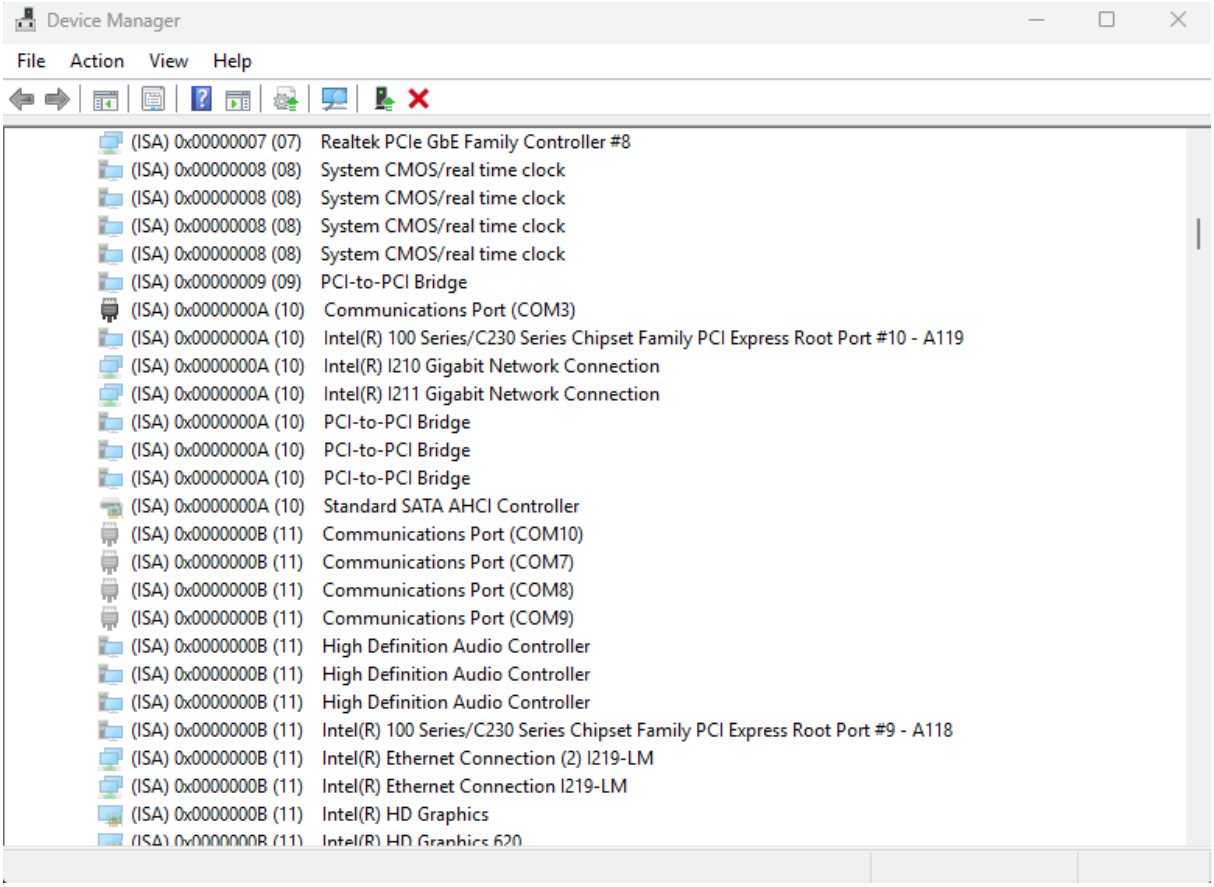

Device Manager
File Action View Help
[0000006000000000 - 0000006000FFFFFF] Intel(R) UHD Graphics 770
[0000006000000000 - 0000006000FFFFFF] Intel(R) UHD Graphics 770
[0000006001000000 - 0000006001FFFFFF] Intel(R) Graphics
[0000006001100000 - 000000600110FFFF] Intel(R) USB 3.10 eXtensible Host Controller - 1.20 (Microsoft)
[0000006001100000 - 000000600110FFFF] Intel(R) USB 3.10 eXtensible Host Controller - 1.20 (Microsoft)
[0000006001100000 - 000000600110FFFF] Intel(R) USB 3.10 eXtensible Host Controller - 1.20 (Microsoft)
[0000006001100000 - 000000600110FFFF] Intel(R) USB 3.20 eXtensible Host Controller - 1.20 (Microsoft)
[0000006001100000 - 000000600110FFFF] Intel(R) USB 3.20 eXtensible Host Controller - 1.20 (Microsoft)
[0000006001110000 - 0000006001117FFF] Intel(R) Platform Monitoring Technology Driver
[0000006001110000 - 000000600111FFFF] Intel(R) USB 3.20 eXtensible Host Controller - 1.20 (Microsoft)
[0000006001118000 - 00000060011180FF] Intel(R) SMBus - 7AA3
[0000006001118000 - 00000060011180FF] Intel(R) SMBus Controller - 4B23
[0000006001119000 - 0000006001119FFF] Intel SD Host Controller
[0000006001128000 - 00000060011280FF] Intel(R) SMBus - 7AA3
[0000006001E00000 - 00000060027FFFFF] Intel(R) PCI Express Root Port #1 - 4B39
[0000006002100000 - 000000600210FFFF] Intel(R) USB 3.10 eXtensible Host Controller - 1.20 (Microsoft)
[0000006002119000 - 0000006002119FFF] Intel SD Host Controller
[0000006003000000 - 0000006003FFFFFF] Intel(R) UHD Graphics
[0000006004000000 - 0000006004FFFFFF] Intel(R) UHD Graphics
[00000060E0000000 - 00000060E09FFFFF] PCI Express Root Port #9 - 54B0
[00000060E0000000 - 00000060E09FFFFF] PCI-to-PCI Bridge
[00000060E1400000 - 00000060E1DFFFFF] PCI Express Root Port #4 - 54BB
[00000060E1E00000 - 00000060E27FFFFF] PCI Express Root Port #3 - 54BA
[00000060E2800000 - 00000060E31FFFFF] PCI Express Root Port #1 - 54B8
[00000060EB000000 - 00000060EBFFFFFF] Intel(R) UHD Graphics

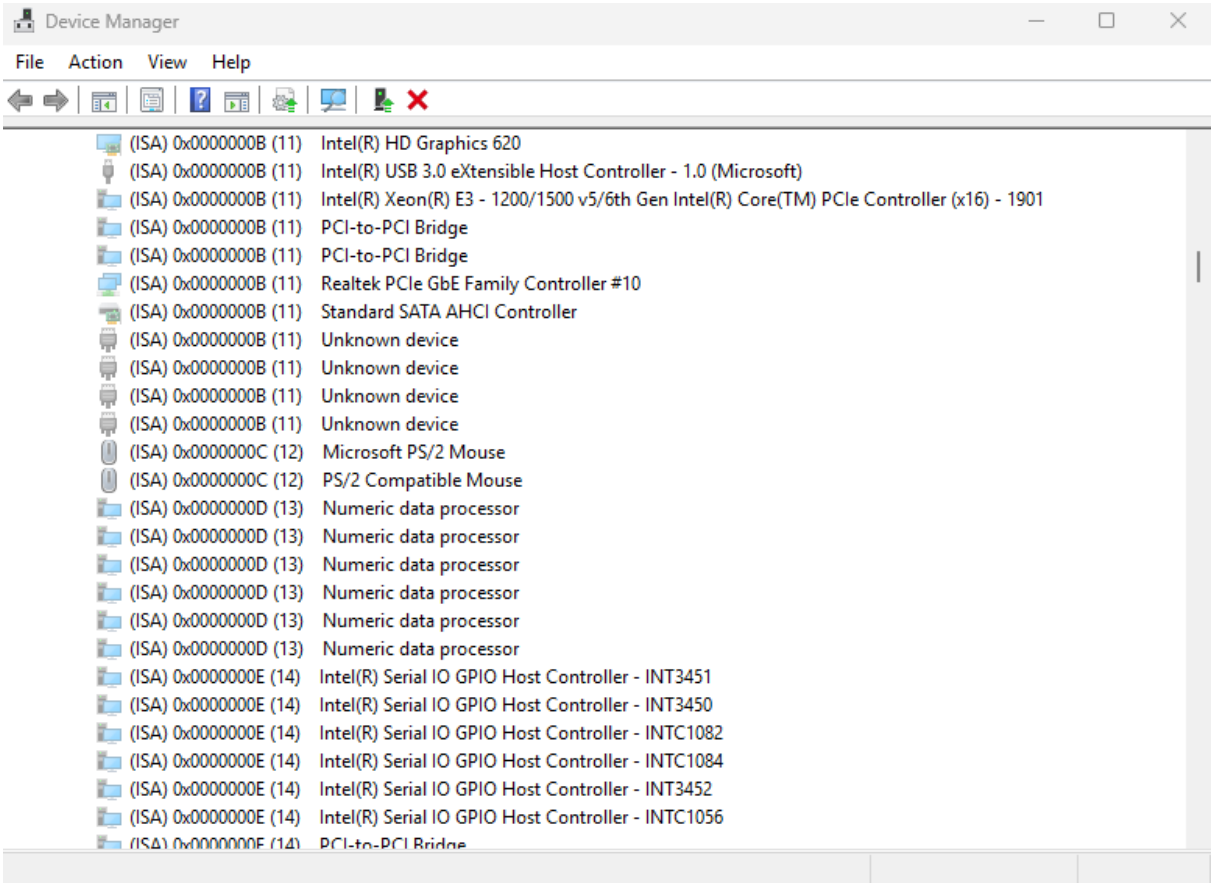

Device Manager
File Action View Help
[0000006001E00000 - 00000060027FFFFF] Intel(R) PCI Express Root Port #1 - 4B39
[0000006002100000 - 000000600210FFFF] Intel(R) USB 3.10 eXtensible Host Controller - 1.20 (Microsoft)
[0000006002119000 - 0000006002119FFF] Intel SD Host Controller
[0000006003000000 - 0000006003FFFFFF] Intel(R) UHD Graphics
[0000006004000000 - 0000006004FFFFFF] Intel(R) UHD Graphics
[00000060E0000000 - 00000060E09FFFFF] PCI Express Root Port #9 - 54B0
[00000060E0000000 - 00000060E09FFFFF] PCI-to-PCI Bridge
[00000060E1400000 - 00000060E1DFFFFF] PCI Express Root Port #4 - 54BB
[00000060E1E00000 - 00000060E27FFFFF] PCI Express Root Port #3 - 54BA
[00000060E2800000 - 00000060E31FFFFF] PCI Express Root Port #1 - 54B8
[00000060EB000000 - 00000060EBFFFFFF] Intel(R) UHD Graphics
[00000060EC110000 - 00000060EC11FFFF] Intel(R) USB 3.20 eXtensible Host Controller - 1.20 (Microsoft)
[0000007FFFEFB000 - 0000007FFFEFBFFF] Intel(R) Management Engine Interface #1
[0000007FFFEFC000 - 0000007FFFEFFFFF] High Definition Audio Controller
[0000007FFFF00000 - 0000007FFFFFFFFF] High Definition Audio Controller
[0000008000200000 - 000000800020FFFF] Intel(R) USB 3.20 eXtensible Host Controller - 1.20 (Microsoft)
[0000008000214000 - 00000080002140FF] SMBus - 7F23
[0000008000215000 - 0000008000215FFF] Intel(R) Management Engine Interface #1
[0000009FF0690000 - 0000009FF069FFFF] Intel(R) Serial IO GPIO Host Controller - INTC1084
[0000009FF06A0000 - 0000009FF06AFFFF] Intel(R) Serial IO GPIO Host Controller - INTC1084
[0000009FF06B0000 - 0000009FF06BFFFF] Intel(R) Serial IO GPIO Host Controller - INTC1084
[0000009FF06D0000 - 0000009FF06DFFFF] Intel(R) Serial IO GPIO Host Controller - INTC1084
[0000009FF06E0000 - 0000009FF06EFFFF] Intel(R) Serial IO GPIO Host Controller - INTC1084
[000000A000000000 - 000000A00FFFFFFF] Intel(R) Graphics
[000000A010000000 - 000000A010FFFFFF] Intel(R) Graphics

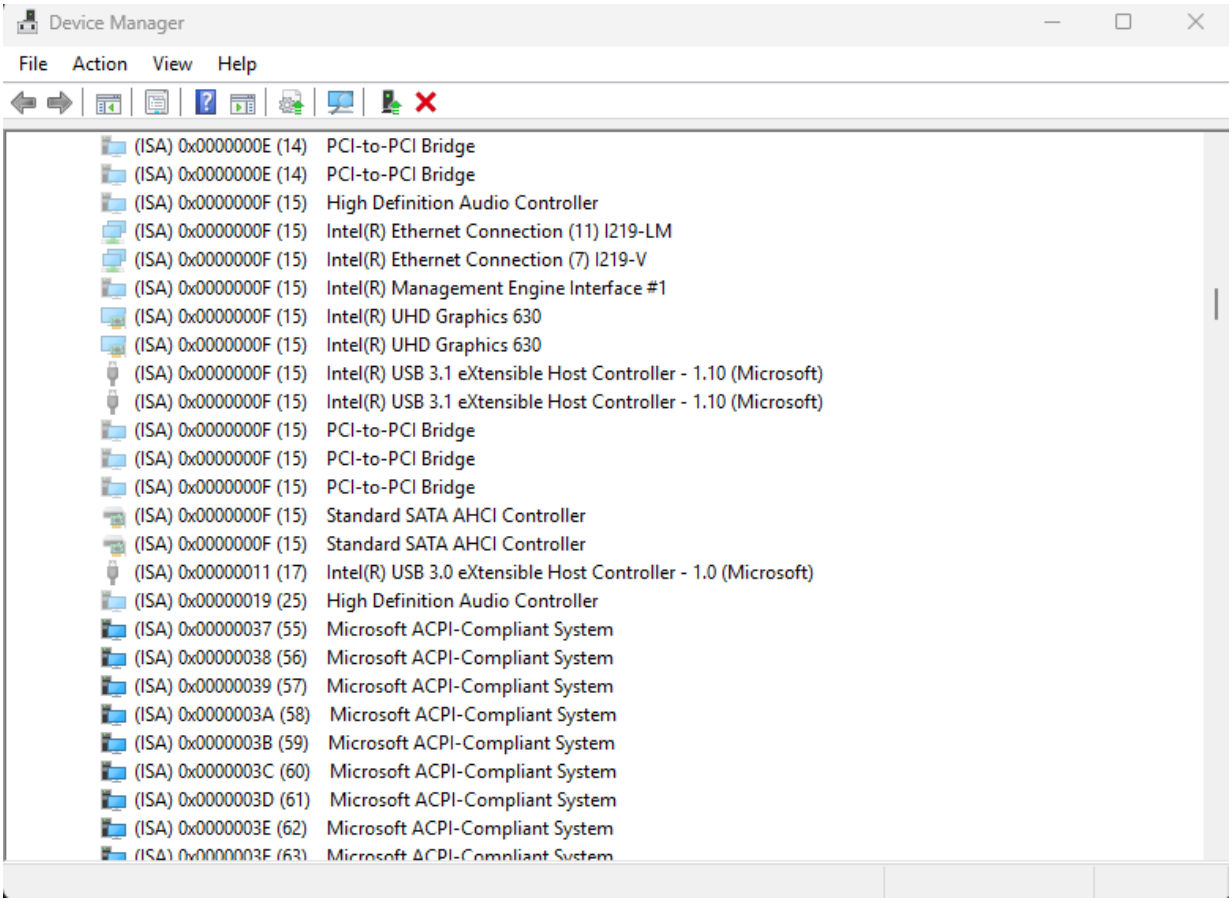
IRQ Mapping Chart

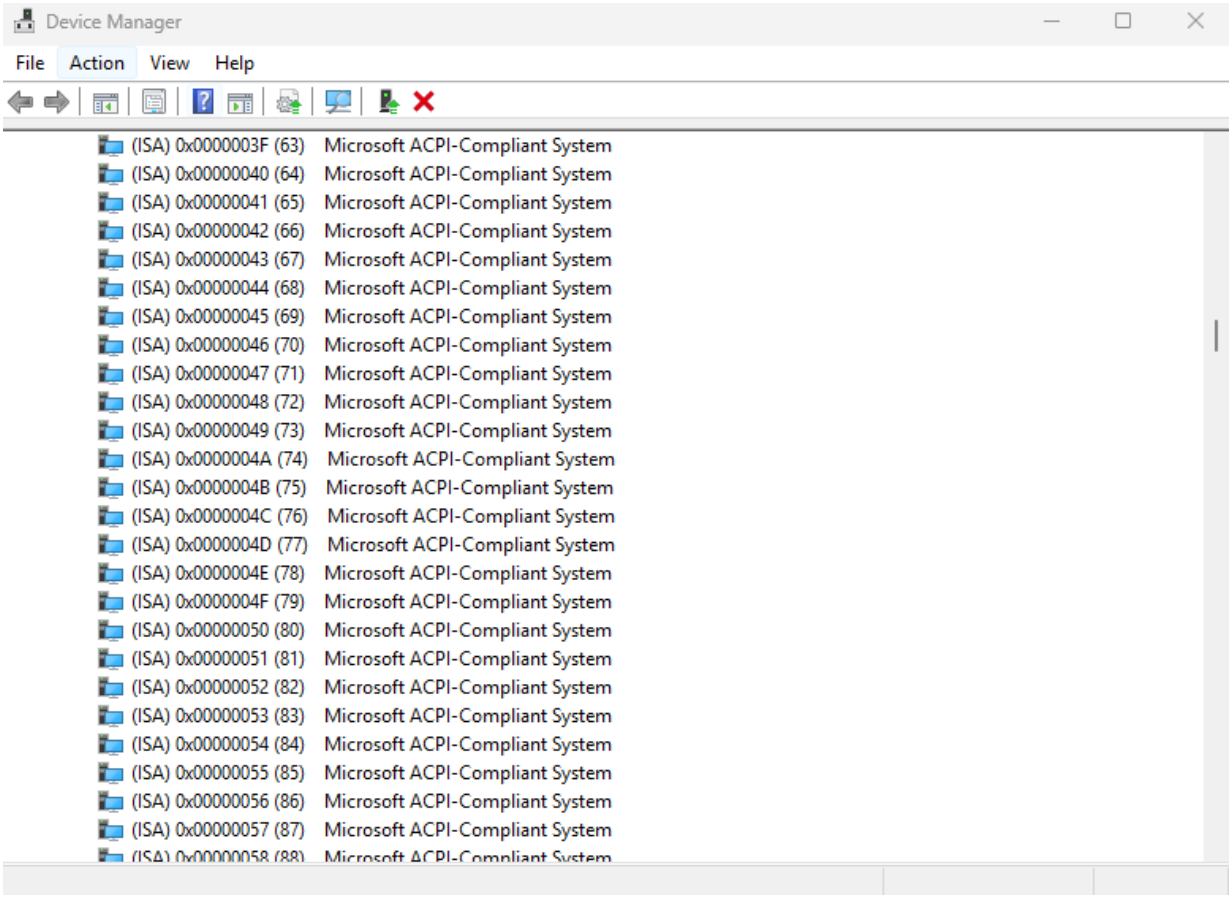


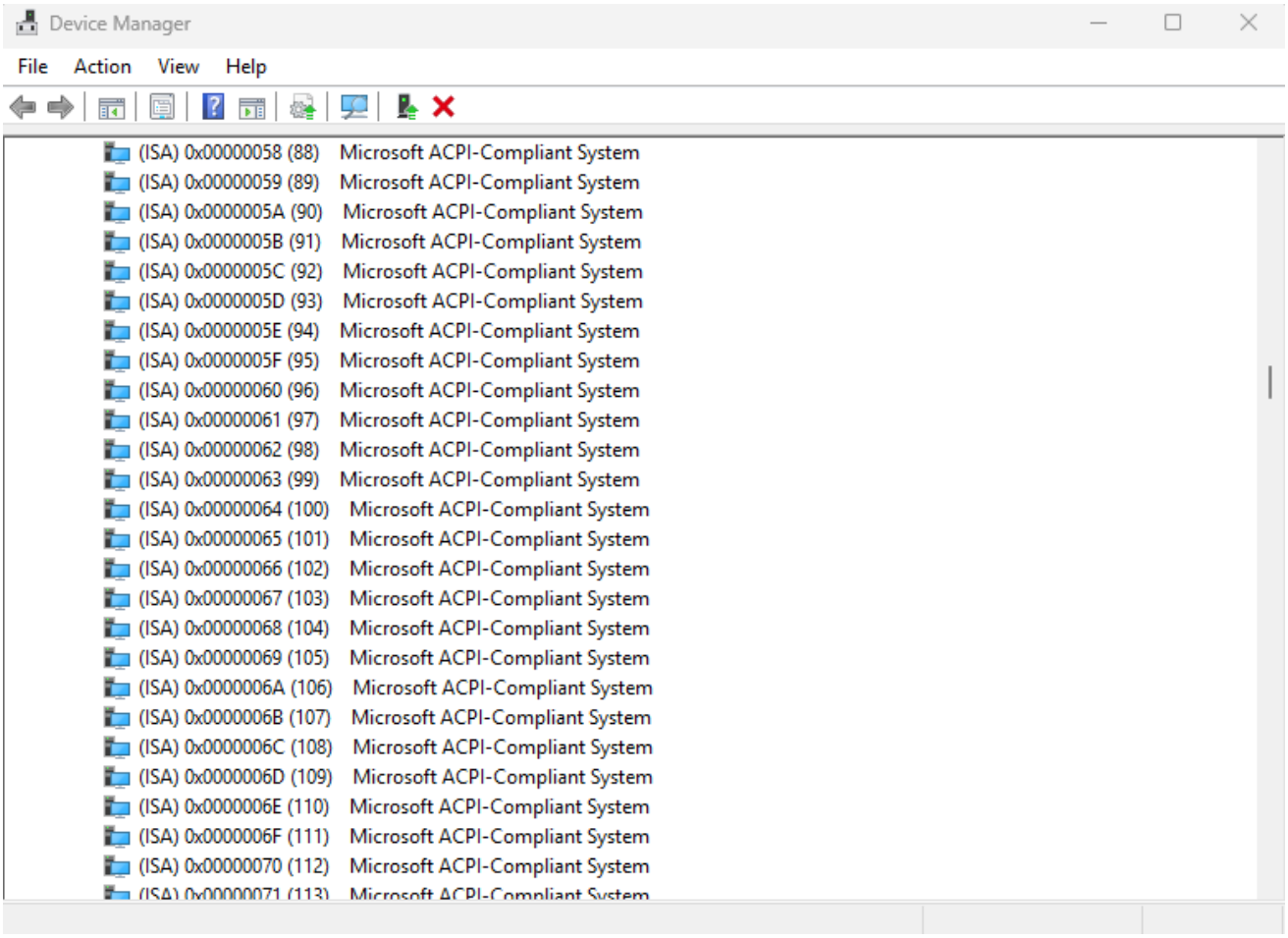


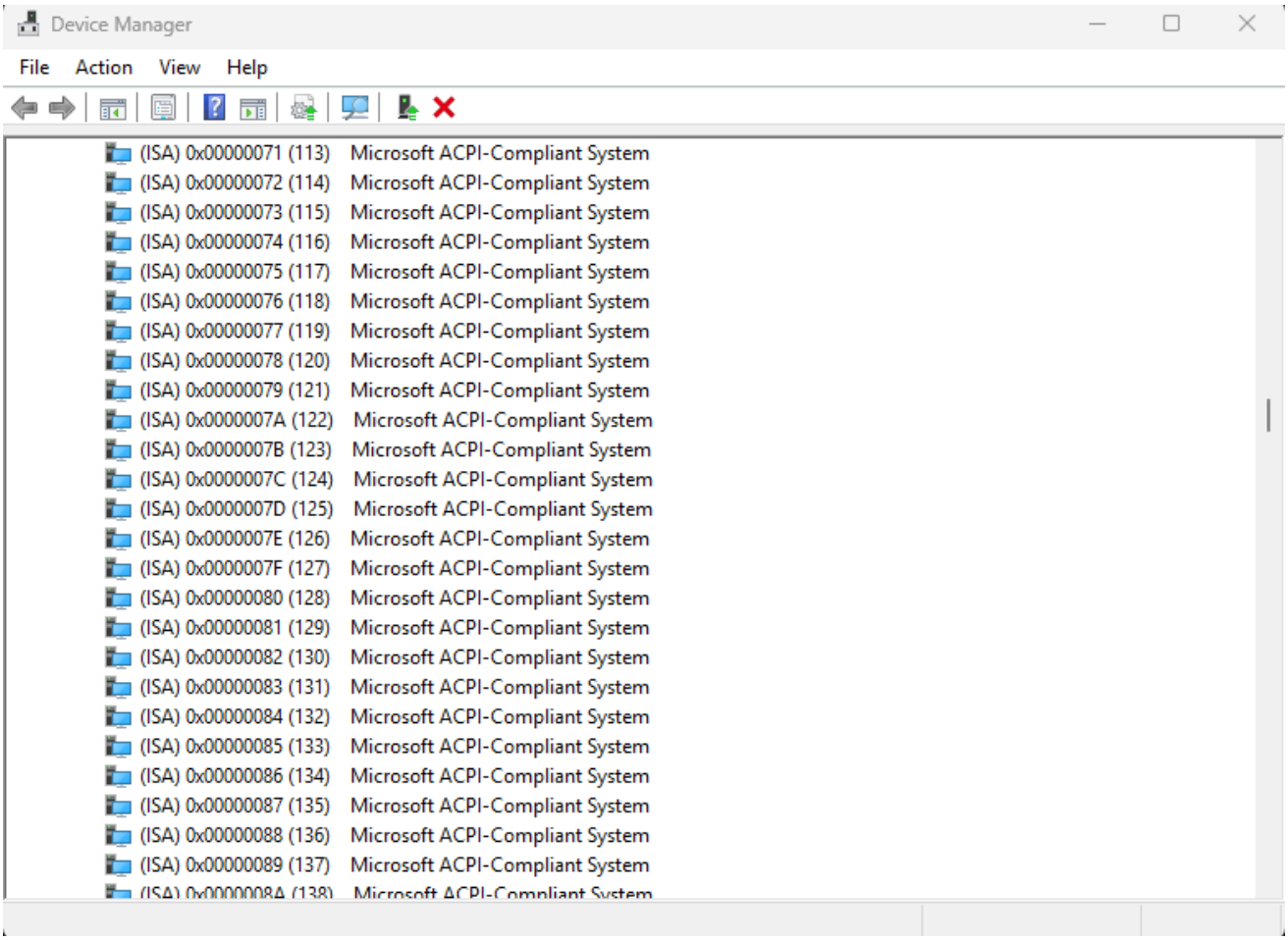

Device Manager
File Action View Help
(ISA) 0x00000007 (07) Realtek PCIe GbE Family Controller #8
(ISA) 0x00000008 (08) System CMOS/real time clock
(ISA) 0x00000008 (08) System CMOS/real time clock
(ISA) 0x00000008 (08) System CMOS/real time clock
(ISA) 0x00000008 (08) System CMOS/real time clock
(ISA) 0x00000009 (09) PCI-to-PCI Bridge
(ISA) 0x0000000A (10) Communications Port (COM3)
(ISA) 0x0000000A (10) Intel(R) 100 Series/C230 Series Chipset Family PCI Express Root Port #10 - A119
(ISA) 0x0000000A (10) Intel(R) I210 Gigabit Network Connection
(ISA) 0x0000000A (10) Intel(R) I211 Gigabit Network Connection
(ISA) 0x0000000A (10) PCI-to-PCI Bridge
(ISA) 0x0000000A (10) PCI-to-PCI Bridge
(ISA) 0x0000000A (10) PCI-to-PCI Bridge
(ISA) 0x0000000A (10) Standard SATA AHCI Controller
(ISA) 0x0000000B (11) Communications Port (COM10)
(ISA) 0x0000000B (11) Communications Port (COM7)
(ISA) 0x0000000B (11) Communications Port (COM8)
(ISA) 0x0000000B (11) Communications Port (COM9)
(ISA) 0x0000000B (11) High Definition Audio Controller
(ISA) 0x0000000B (11) High Definition Audio Controller
(ISA) 0x0000000B (11) High Definition Audio Controller
(ISA) 0x0000000B (11) Intel(R) 100 Series/C230 Series Chipset Family PCI Express Root Port #9 - A118
(ISA) 0x0000000B (11) Intel(R) Ethernet Connection (2) I219-LM
(ISA) 0x0000000B (11) Intel(R) Ethernet Connection I219-LM
(ISA) 0x0000000B (11) Intel(R) HD Graphics

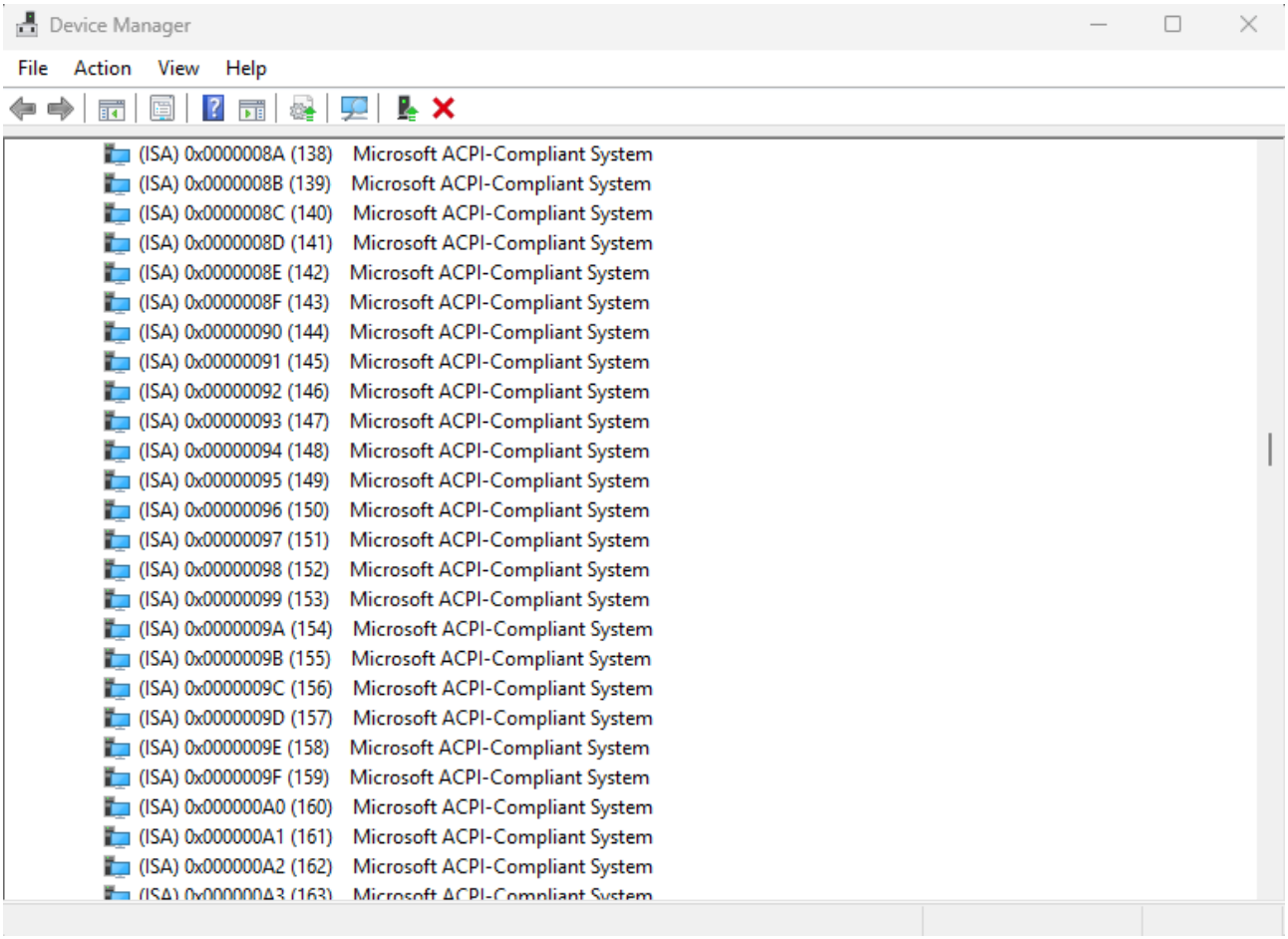

Device Manager
File Action View Help
(ISA) 0x0000000B (11) Intel(R) HD Graphics 620
(ISA) 0x0000000B (11) Intel(R) USB 3.0 eXtensible Host Controller - 1.0 (Microsoft)
(ISA) 0x0000000B (11) Intel(R) Xeon(R) E3 - 1200/1500 v5/6th Gen Intel(R) Core(TM) PCIe Controller (x16) - 1901
(ISA) 0x0000000B (11) PCI-to-PCI Bridge
(ISA) 0x0000000B (11) PCI-to-PCI Bridge
(ISA) 0x0000000B (11) Realtek PCIe GbE Family Controller #10
(ISA) 0x0000000B (11) Standard SATA AHCI Controller
(ISA) 0x0000000B (11) Unknown device
(ISA) 0x0000000B (11) Unknown device
(ISA) 0x0000000B (11) Unknown device
(ISA) 0x0000000B (11) Unknown device
(ISA) 0x0000000C (12) Microsoft PS/2 Mouse
(ISA) 0x0000000C (12) PS/2 Compatible Mouse
(ISA) 0x0000000D (13) Numeric data processor
(ISA) 0x0000000D (13) Numeric data processor
(ISA) 0x0000000D (13) Numeric data processor
(ISA) 0x0000000D (13) Numeric data processor
(ISA) 0x0000000D (13) Numeric data processor
(ISA) 0x0000000D (13) Numeric data processor
(ISA) 0x0000000E (14) Intel(R) Serial IO GPIO Host Controller - INT3451
(ISA) 0x0000000E (14) Intel(R) Serial IO GPIO Host Controller - INT3450
(ISA) 0x0000000E (14) Intel(R) Serial IO GPIO Host Controller - INTC1082
(ISA) 0x0000000E (14) Intel(R) Serial IO GPIO Host Controller - INTC1084
(ISA) 0x0000000E (14) Intel(R) Serial IO GPIO Host Controller - INT3452
(ISA) 0x0000000E (14) Intel(R) Serial IO GPIO Host Controller - INTC1056

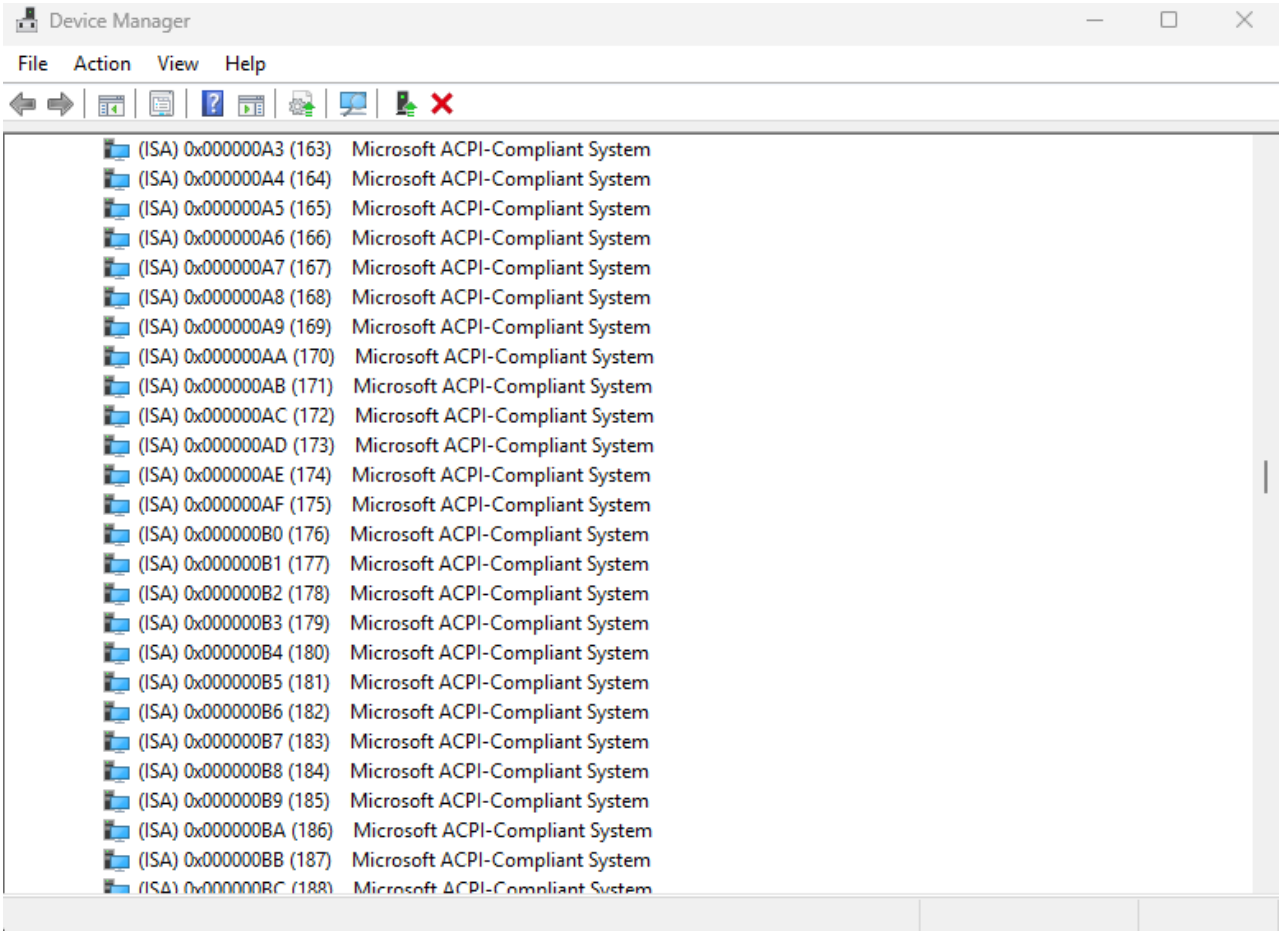

Device Manager
File Action View Help
(ISA) 0x0000000E (14) PCI-to-PCI Bridge
(ISA) 0x0000000E (14) PCI-to-PCI Bridge
(ISA) 0x0000000F (15) High Definition Audio Controller
(ISA) 0x0000000F (15) Intel(R) Ethernet Connection (11) I219-LM
(ISA) 0x0000000F (15) Intel(R) Ethernet Connection (7) I219-V
(ISA) 0x0000000F (15) Intel(R) Management Engine Interface #1
(ISA) 0x0000000F (15) Intel(R) UHD Graphics 630
(ISA) 0x0000000F (15) Intel(R) UHD Graphics 630
(ISA) 0x0000000F (15) Intel(R) USB 3.1 eXtensible Host Controller - 1.10 (Microsoft)
(ISA) 0x0000000F (15) Intel(R) USB 3.1 eXtensible Host Controller - 1.10 (Microsoft)
(ISA) 0x0000000F (15) PCI-to-PCI Bridge
(ISA) 0x0000000F (15) PCI-to-PCI Bridge
(ISA) 0x0000000F (15) PCI-to-PCI Bridge
(ISA) 0x0000000F (15) Standard SATA AHCI Controller
(ISA) 0x0000000F (15) Standard SATA AHCI Controller
(ISA) 0x00000011 (17) Intel(R) USB 3.0 eXtensible Host Controller - 1.0 (Microsoft)
(ISA) 0x00000019 (25) High Definition Audio Controller
(ISA) 0x00000037 (55) Microsoft ACPI-Compliant System
(ISA) 0x00000038 (56) Microsoft ACPI-Compliant System
(ISA) 0x00000039 (57) Microsoft ACPI-Compliant System
(ISA) 0x0000003A (58) Microsoft ACPI-Compliant System
(ISA) 0x0000003B (59) Microsoft ACPI-Compliant System
(ISA) 0x0000003C (60) Microsoft ACPI-Compliant System
(ISA) 0x0000003D (61) Microsoft ACPI-Compliant System
(ISA) 0x0000003E (62) Microsoft ACPI-Compliant System

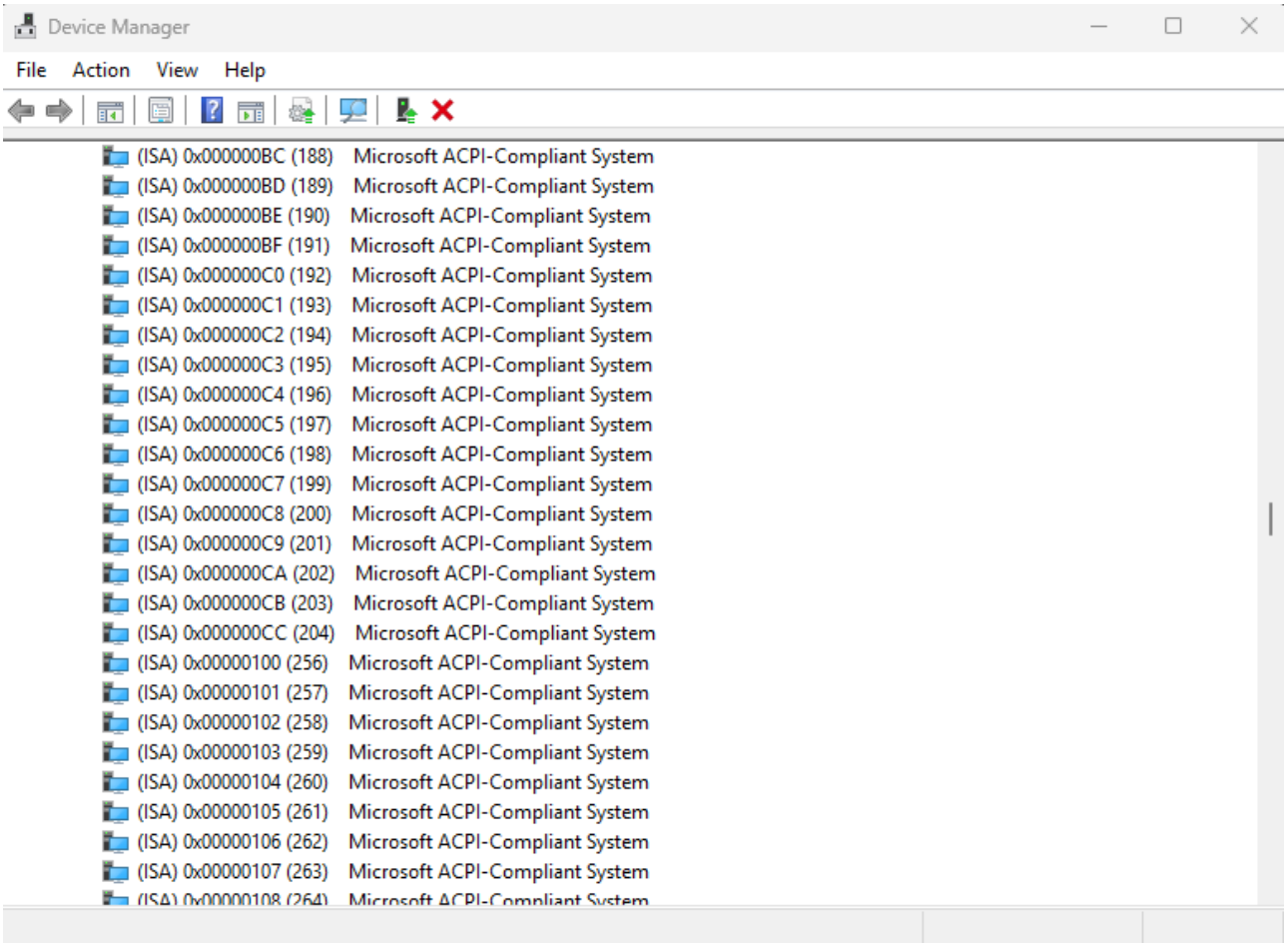

Device Manager
File Action View Help
(ISA) 0x0000003F (63) Microsoft ACPI-Compliant System
(ISA) 0x00000040 (64) Microsoft ACPI-Compliant System
(ISA) 0x00000041 (65) Microsoft ACPI-Compliant System
(ISA) 0x00000042 (66) Microsoft ACPI-Compliant System
(ISA) 0x00000043 (67) Microsoft ACPI-Compliant System
(ISA) 0x00000044 (68) Microsoft ACPI-Compliant System
(ISA) 0x00000045 (69) Microsoft ACPI-Compliant System
(ISA) 0x00000046 (70) Microsoft ACPI-Compliant System
(ISA) 0x00000047 (71) Microsoft ACPI-Compliant System
(ISA) 0x00000048 (72) Microsoft ACPI-Compliant System
(ISA) 0x00000049 (73) Microsoft ACPI-Compliant System
(ISA) 0x0000004A (74) Microsoft ACPI-Compliant System
(ISA) 0x0000004B (75) Microsoft ACPI-Compliant System
(ISA) 0x0000004C (76) Microsoft ACPI-Compliant System
(ISA) 0x0000004D (77) Microsoft ACPI-Compliant System
(ISA) 0x0000004E (78) Microsoft ACPI-Compliant System
(ISA) 0x0000004F (79) Microsoft ACPI-Compliant System
(ISA) 0x00000050 (80) Microsoft ACPI-Compliant System
(ISA) 0x00000051 (81) Microsoft ACPI-Compliant System
(ISA) 0x00000052 (82) Microsoft ACPI-Compliant System
(ISA) 0x00000053 (83) Microsoft ACPI-Compliant System
(ISA) 0x00000054 (84) Microsoft ACPI-Compliant System
(ISA) 0x00000055 (85) Microsoft ACPI-Compliant System
(ISA) 0x00000056 (86) Microsoft ACPI-Compliant System
(ISA) 0x00000057 (87) Microsoft ACPI-Compliant System

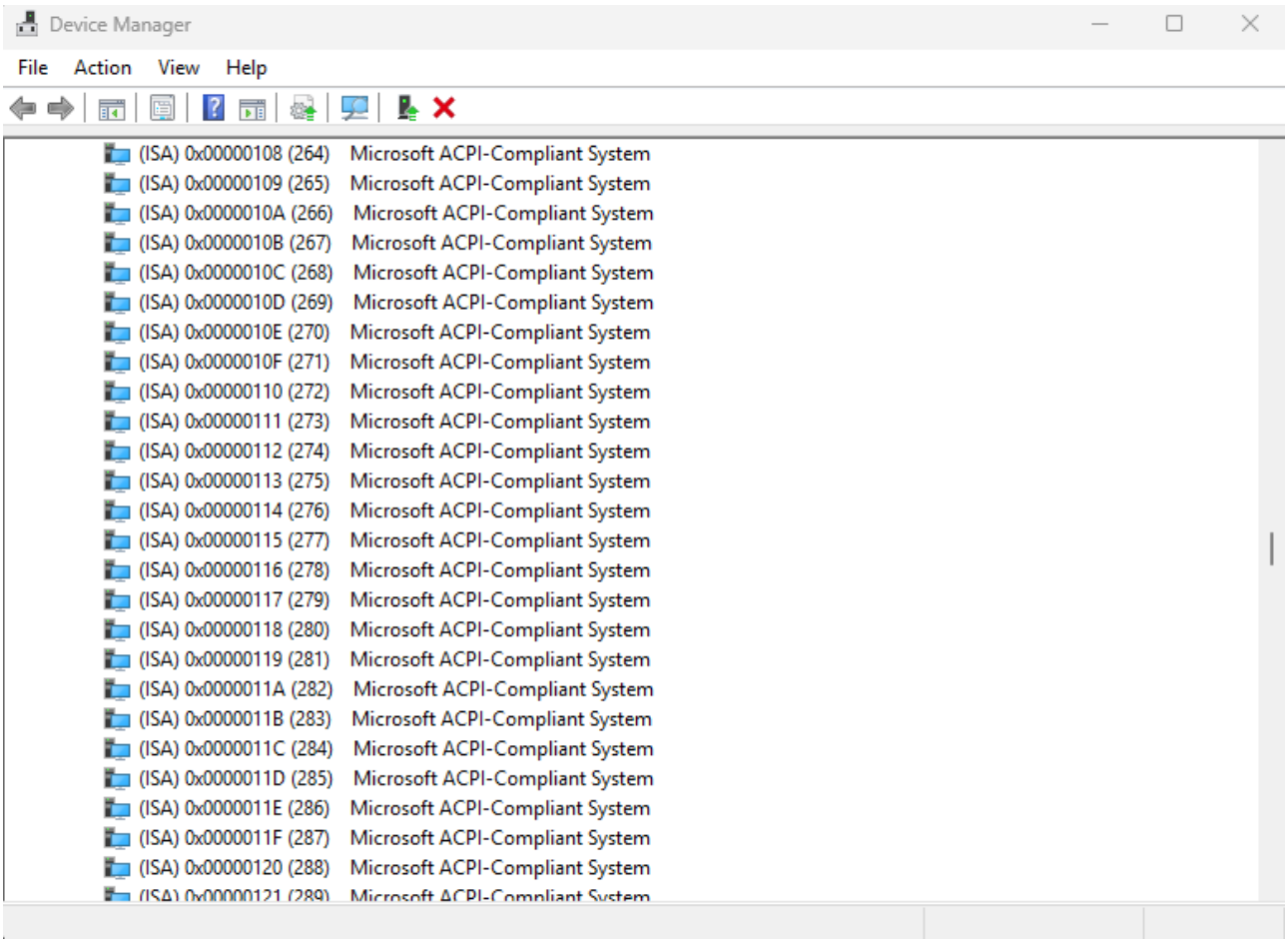

Device Manager
File Action View Help
(ISA) 0x00000058 (88) Microsoft ACPI-Compliant System
(ISA) 0x00000059 (89) Microsoft ACPI-Compliant System
(ISA) 0x0000005A (90) Microsoft ACPI-Compliant System
(ISA) 0x0000005B (91) Microsoft ACPI-Compliant System
(ISA) 0x0000005C (92) Microsoft ACPI-Compliant System
(ISA) 0x0000005D (93) Microsoft ACPI-Compliant System
(ISA) 0x0000005E (94) Microsoft ACPI-Compliant System
(ISA) 0x0000005F (95) Microsoft ACPI-Compliant System
(ISA) 0x00000060 (96) Microsoft ACPI-Compliant System
(ISA) 0x00000061 (97) Microsoft ACPI-Compliant System
(ISA) 0x00000062 (98) Microsoft ACPI-Compliant System
(ISA) 0x00000063 (99) Microsoft ACPI-Compliant System
(ISA) 0x00000064 (100) Microsoft ACPI-Compliant System
(ISA) 0x00000065 (101) Microsoft ACPI-Compliant System
(ISA) 0x00000066 (102) Microsoft ACPI-Compliant System
(ISA) 0x00000067 (103) Microsoft ACPI-Compliant System
(ISA) 0x00000068 (104) Microsoft ACPI-Compliant System
(ISA) 0x00000069 (105) Microsoft ACPI-Compliant System
(ISA) 0x0000006A (106) Microsoft ACPI-Compliant System
(ISA) 0x0000006B (107) Microsoft ACPI-Compliant System
(ISA) 0x0000006C (108) Microsoft ACPI-Compliant System
(ISA) 0x0000006D (109) Microsoft ACPI-Compliant System
(ISA) 0x0000006E (110) Microsoft ACPI-Compliant System
(ISA) 0x0000006F (111) Microsoft ACPI-Compliant System
(ISA) 0x00000070 (112) Microsoft ACPI-Compliant System

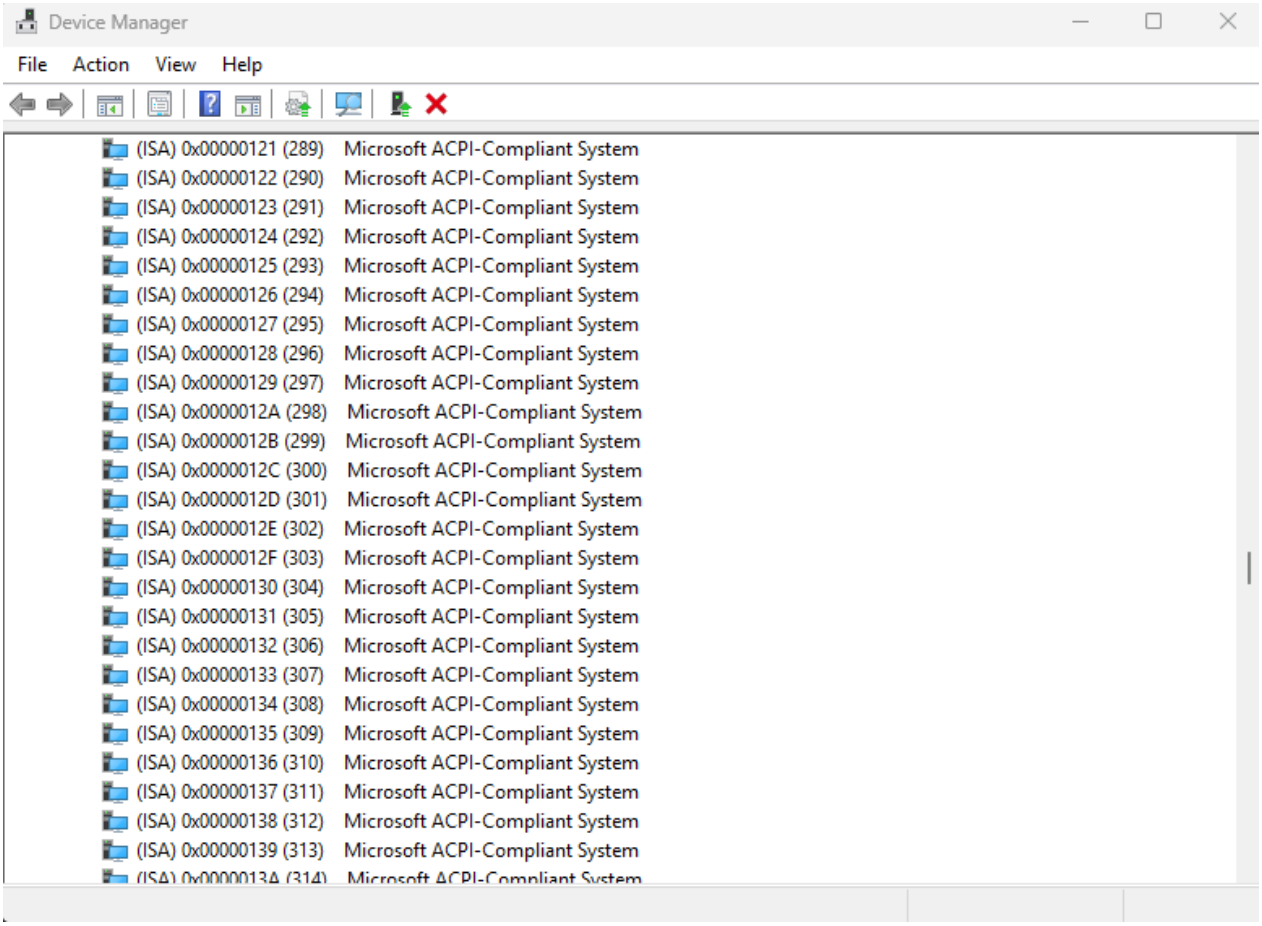

Device Manager
File Action View Help
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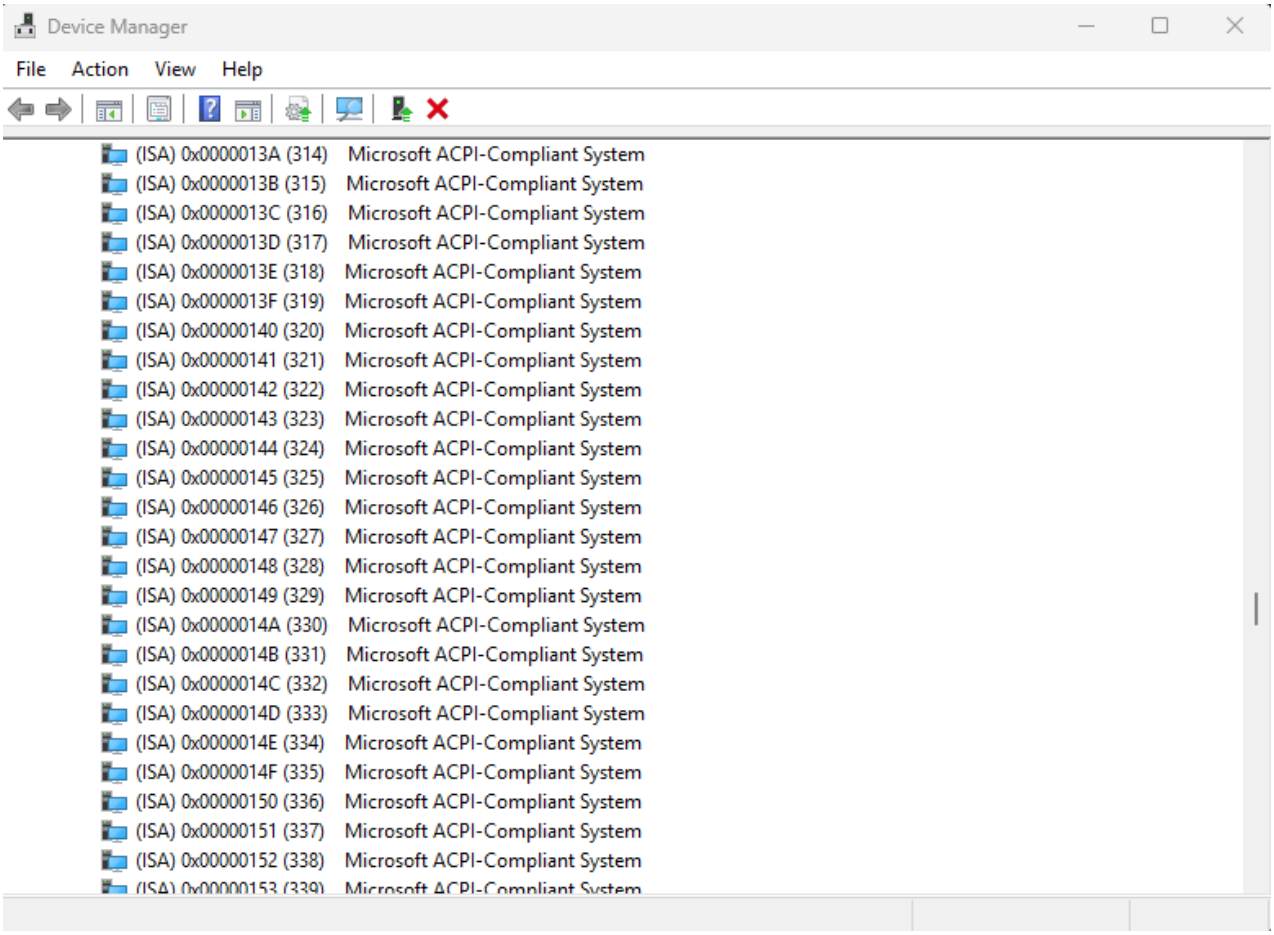

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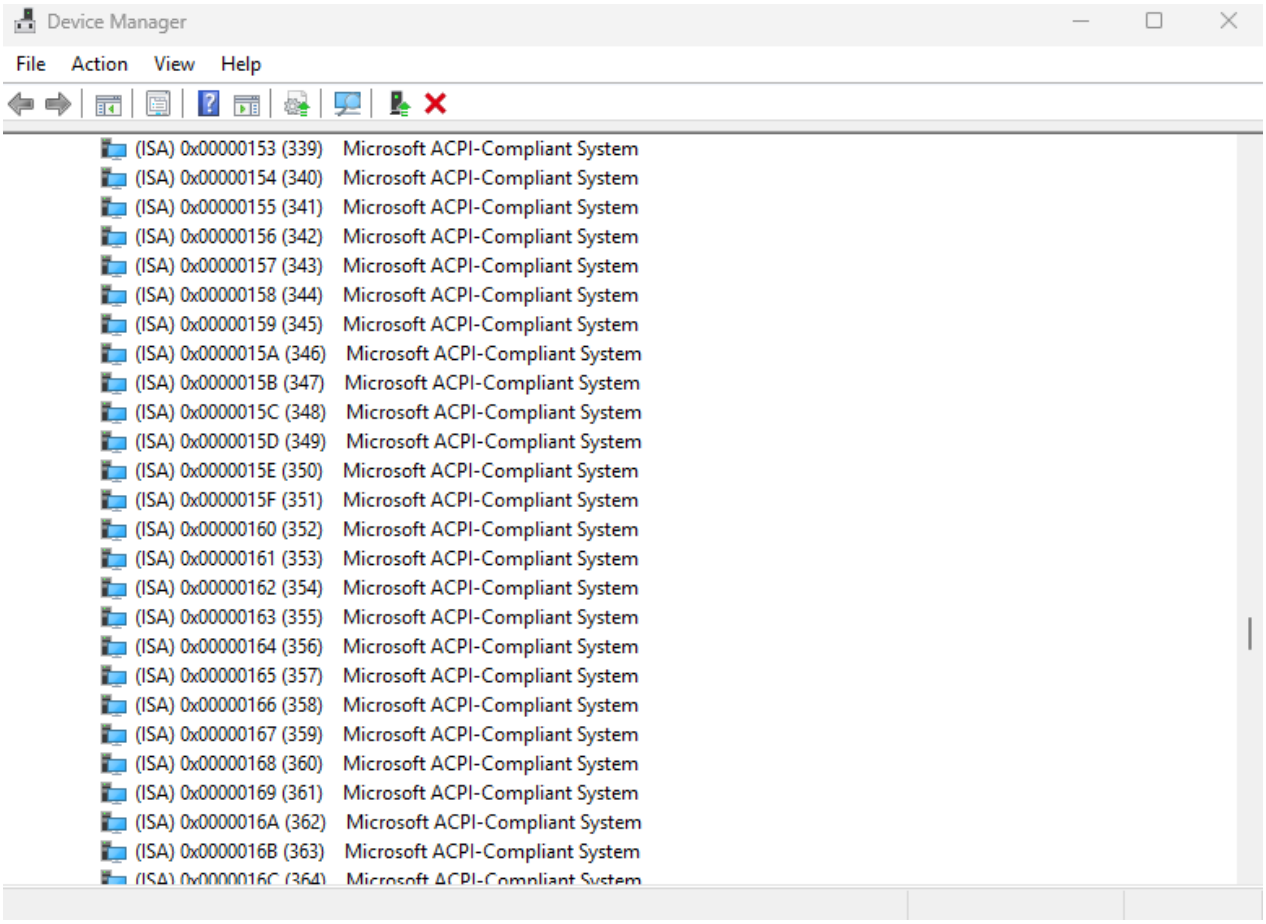

Device Manager
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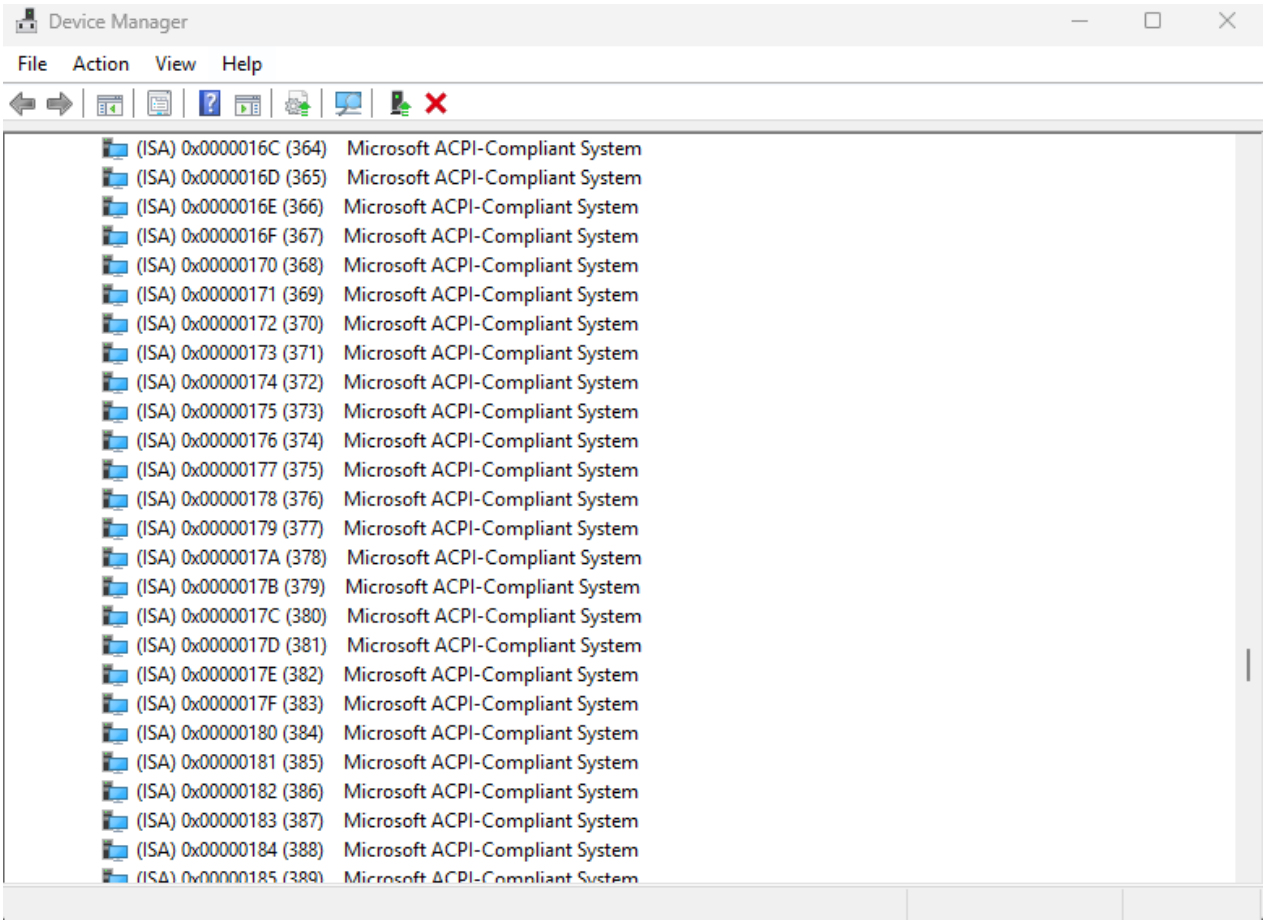

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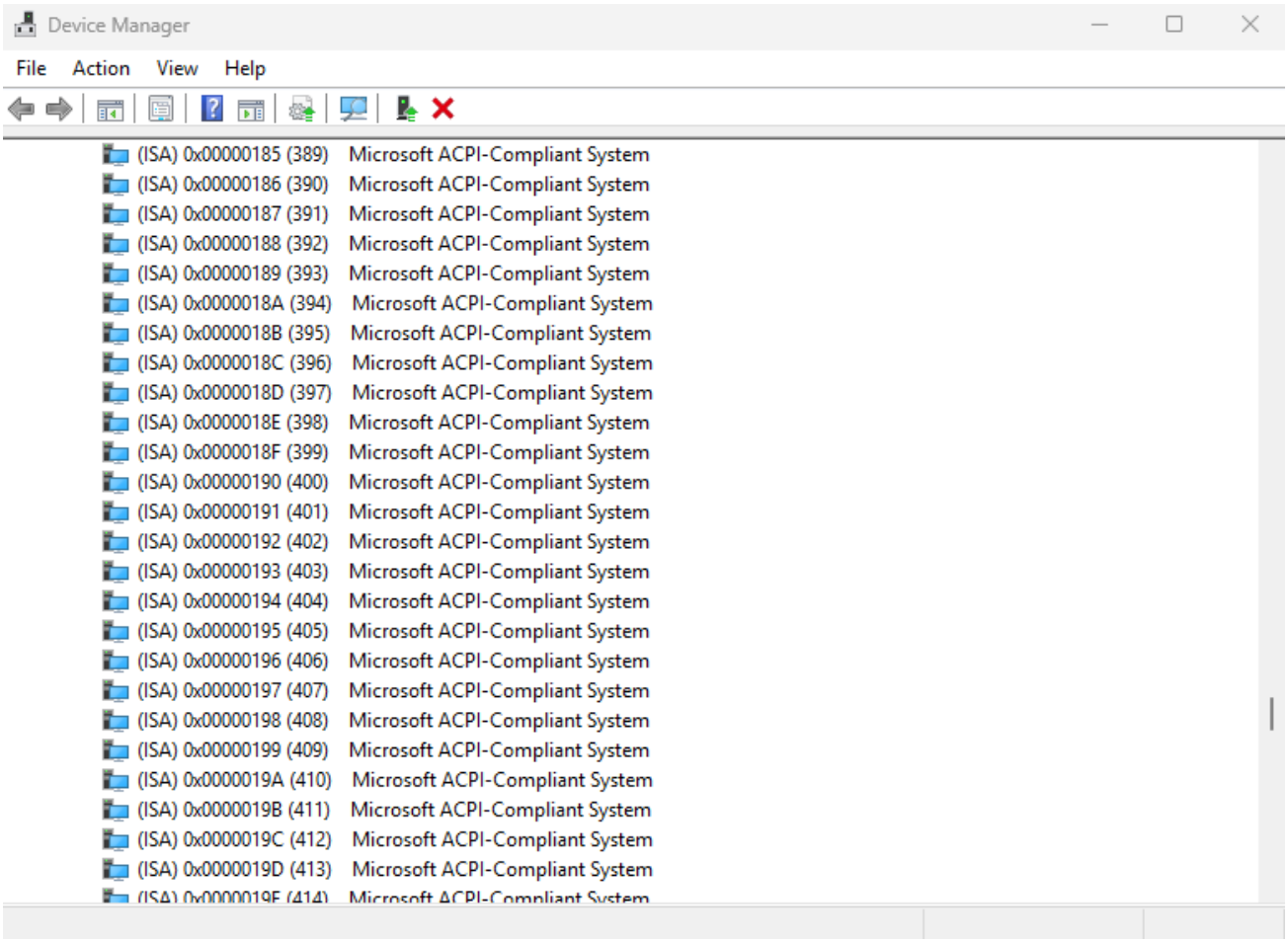

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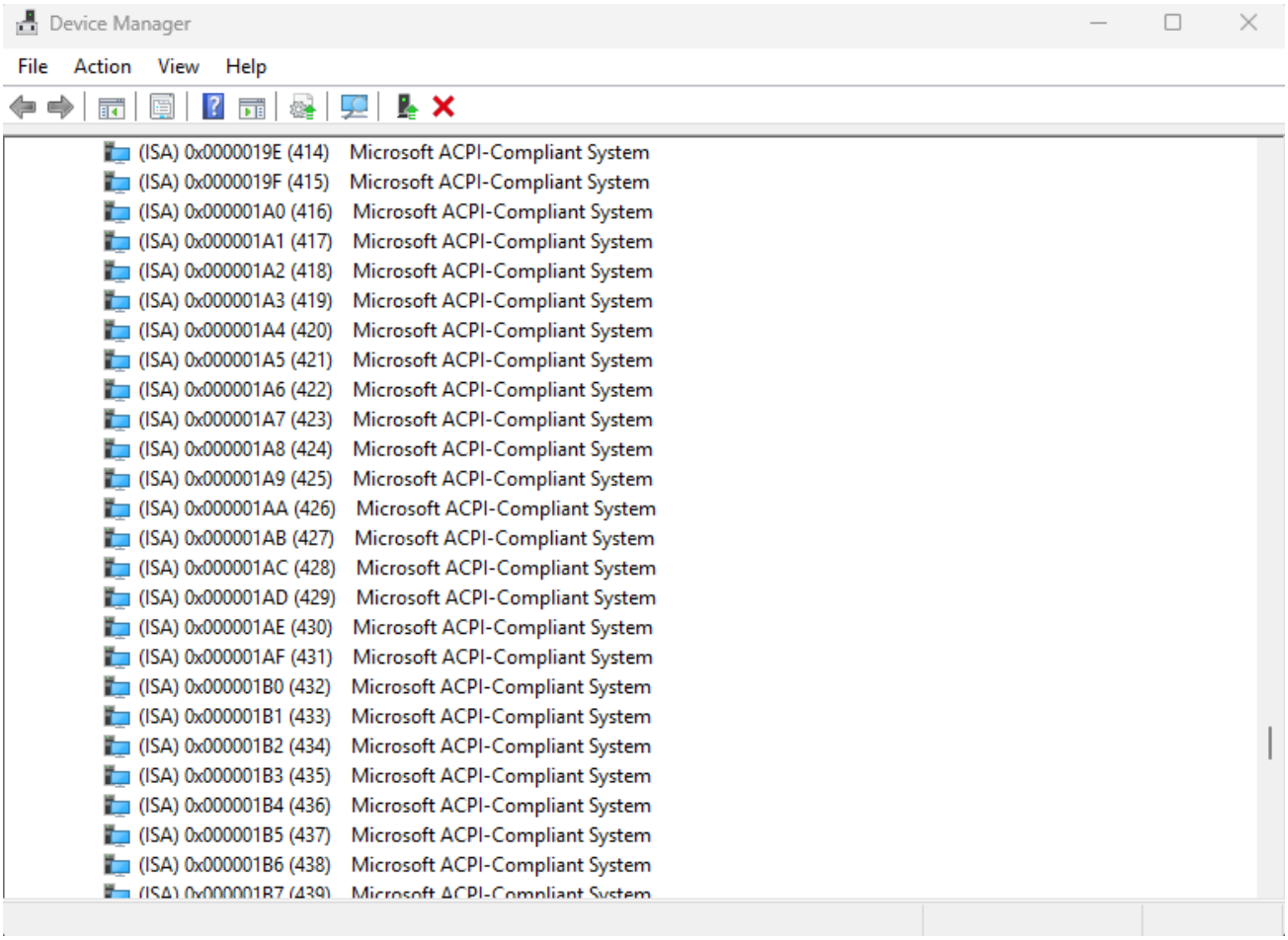

Device Manager
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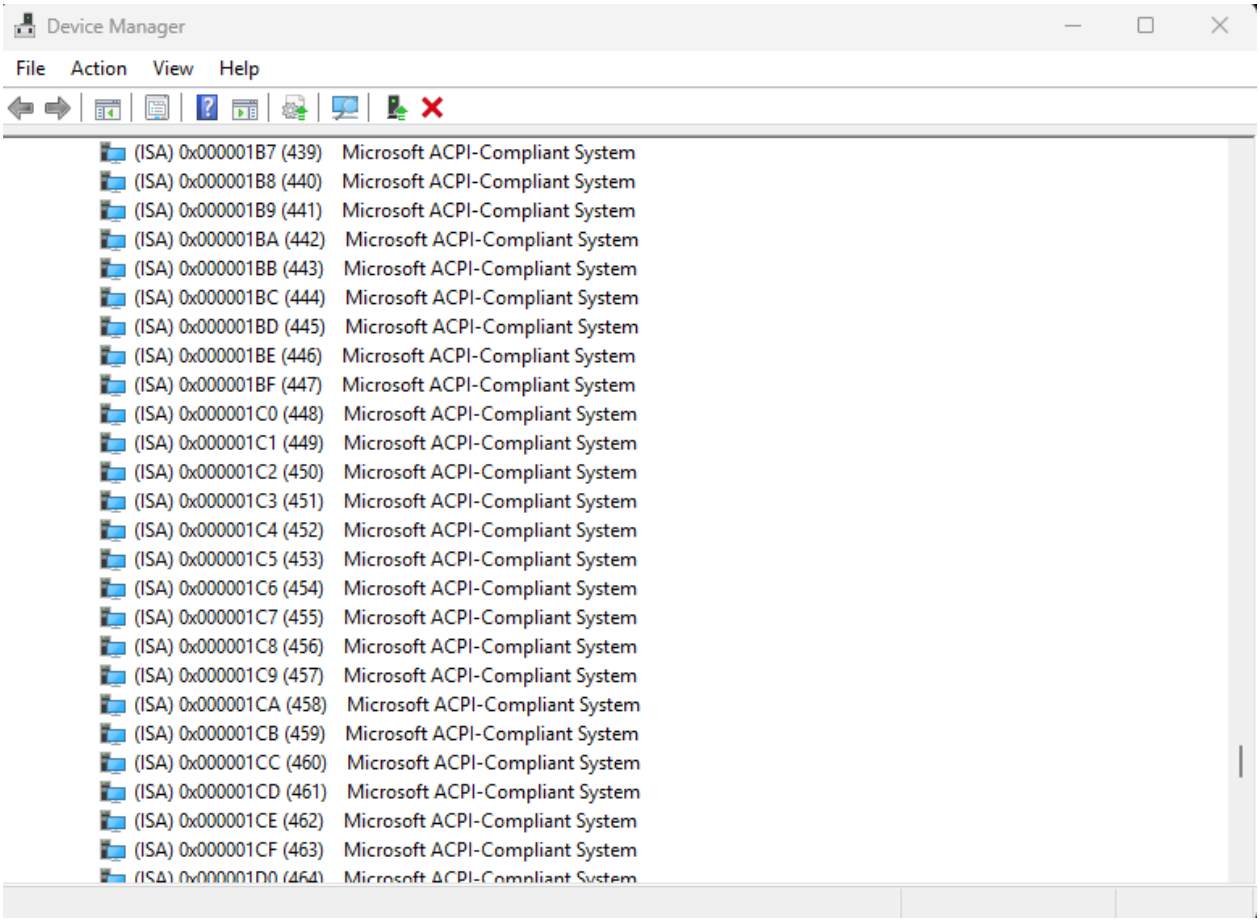

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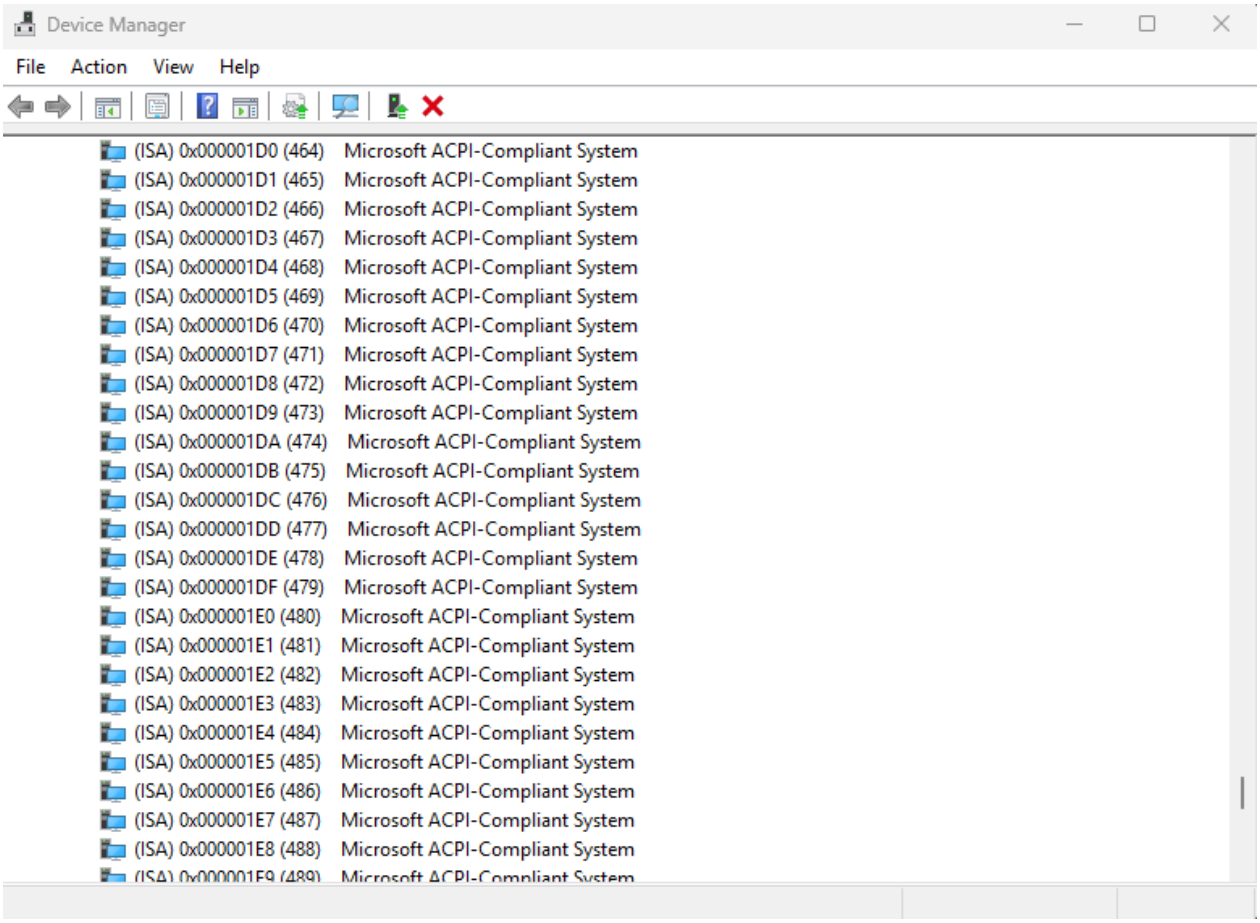

Device Manager
File Action View Help
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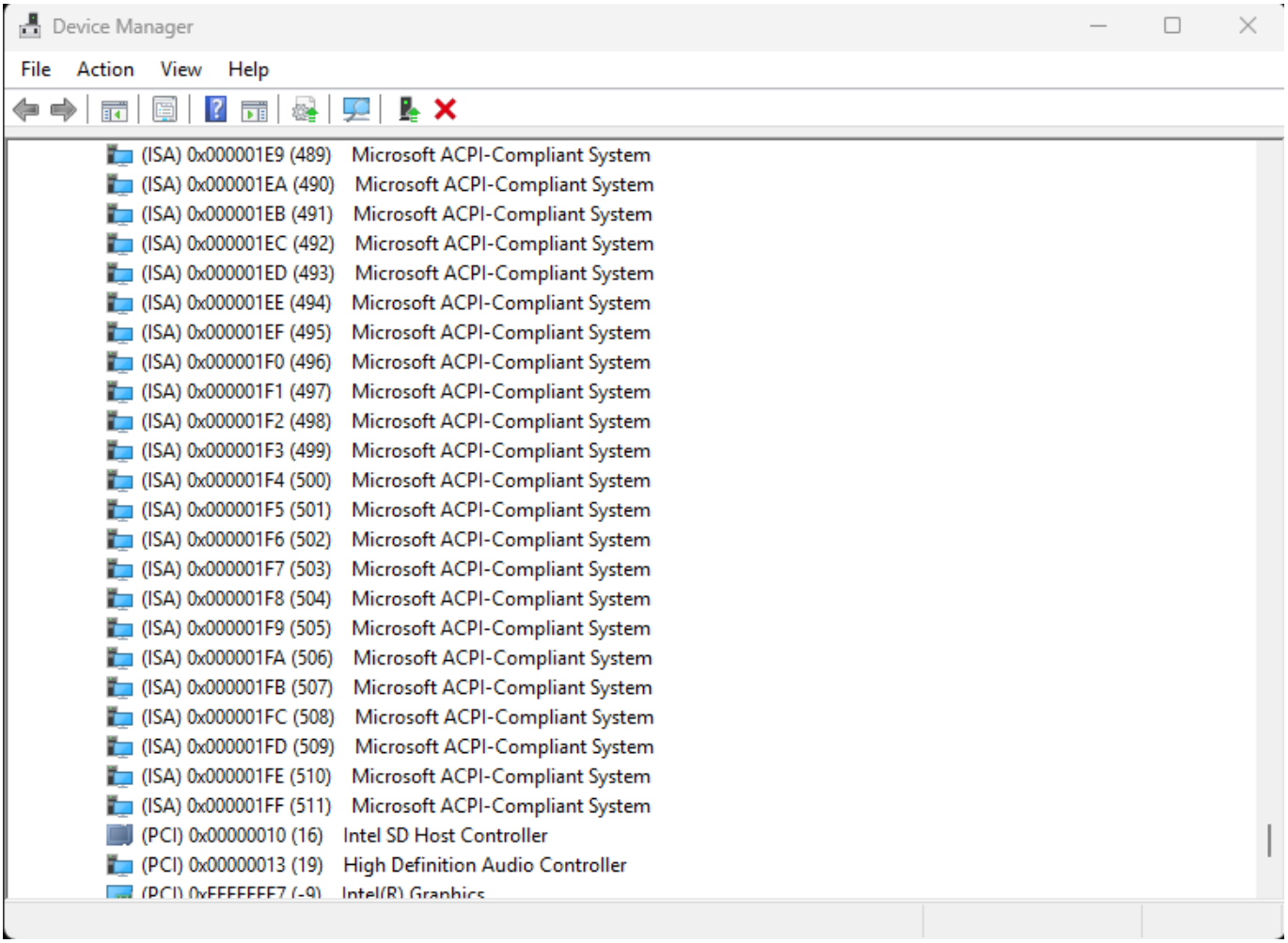

Device Manager
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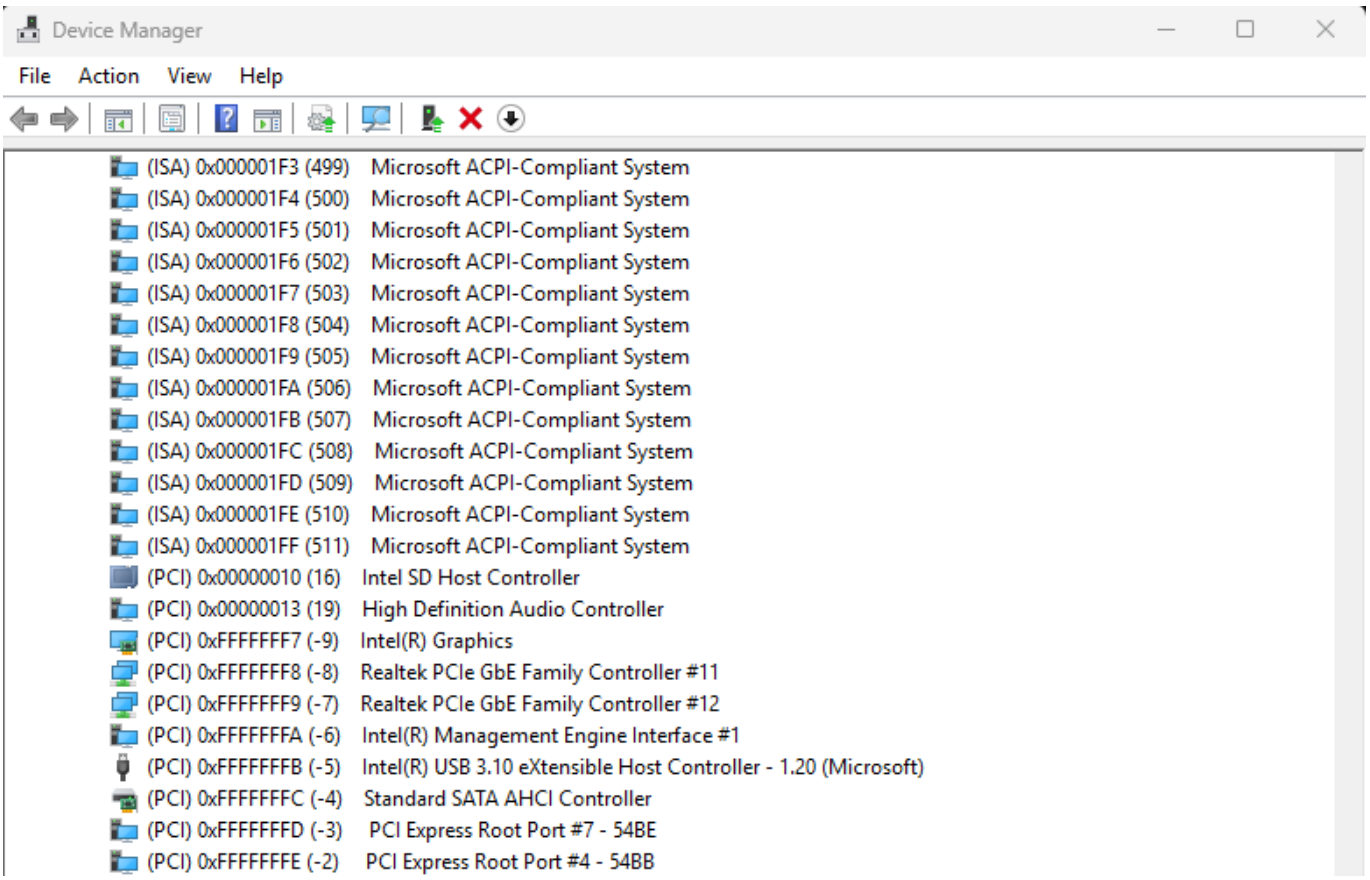

Device Manager
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Device Manager
File Action View Help
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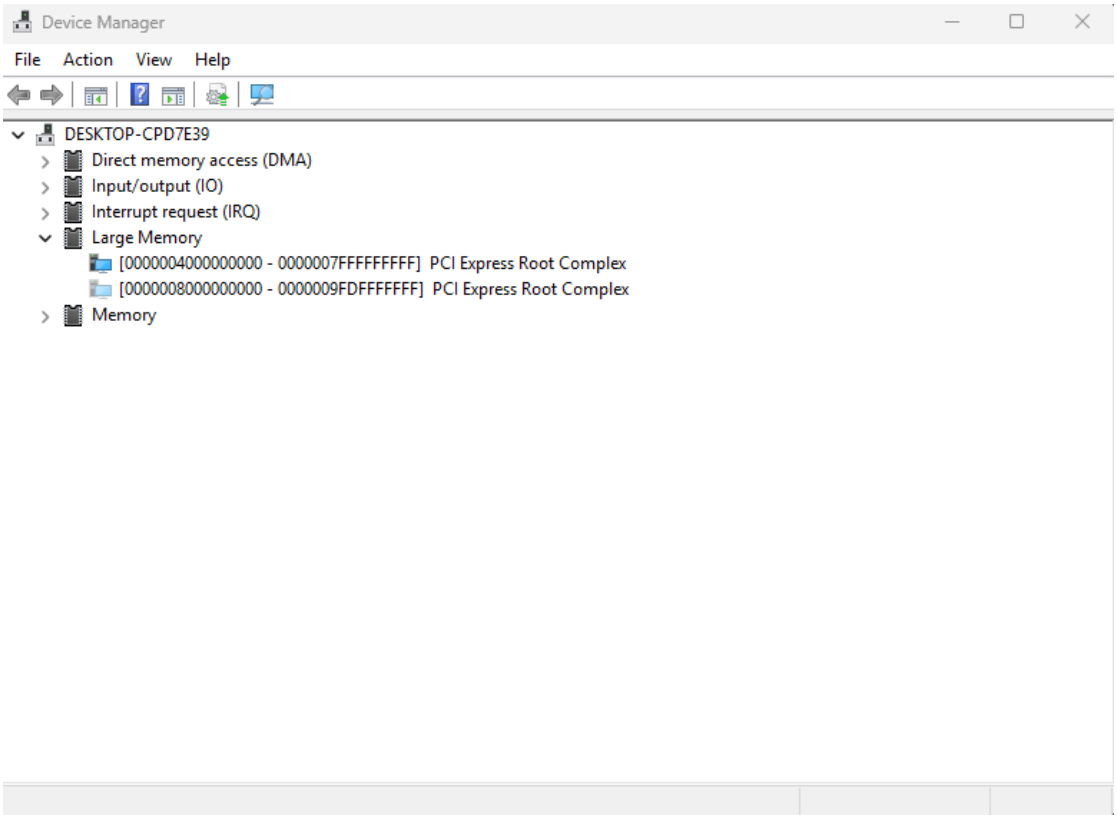

Device Manager
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Device Manager
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Device Manager
File Action View Help
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(ISA) 0x000001F3 (499) Microsoft ACPI-Compliant System
(ISA) 0x000001F4 (500) Microsoft ACPI-Compliant System
(ISA) 0x000001F5 (501) Microsoft ACPI-Compliant System
(ISA) 0x000001F6 (502) Microsoft ACPI-Compliant System
(ISA) 0x000001F7 (503) Microsoft ACPI-Compliant System
(ISA) 0x000001F8 (504) Microsoft ACPI-Compliant System
(ISA) 0x000001F9 (505) Microsoft ACPI-Compliant System
(ISA) 0x000001FA (506) Microsoft ACPI-Compliant System
(ISA) 0x000001FB (507) Microsoft ACPI-Compliant System
(ISA) 0x000001FC (508) Microsoft ACPI-Compliant System
(ISA) 0x000001FD (509) Microsoft ACPI-Compliant System
(ISA) 0x000001FE (510) Microsoft ACPI-Compliant System
(ISA) 0x000001FF (511) Microsoft ACPI-Compliant System
(PCI) 0x00000010 (16) Intel SD Host Controller
(PCI) 0x00000013 (19) High Definition Audio Controller


Device Manager
File Action View Help
(ISA) 0x000001F3 (499) Microsoft ACPI-Compliant System
(ISA) 0x000001F4 (500) Microsoft ACPI-Compliant System
(ISA) 0x000001F5 (501) Microsoft ACPI-Compliant System
(ISA) 0x000001F6 (502) Microsoft ACPI-Compliant System
(ISA) 0x000001F7 (503) Microsoft ACPI-Compliant System
(ISA) 0x000001F8 (504) Microsoft ACPI-Compliant System
(ISA) 0x000001F9 (505) Microsoft ACPI-Compliant System
(ISA) 0x000001FA (506) Microsoft ACPI-Compliant System
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(ISA) 0x000001FC (508) Microsoft ACPI-Compliant System
(ISA) 0x000001FD (509) Microsoft ACPI-Compliant System
(ISA) 0x000001FE (510) Microsoft ACPI-Compliant System
(ISA) 0x000001FF (511) Microsoft ACPI-Compliant System
(PCI) 0x00000010 (16) Intel SD Host Controller
(PCI) 0x00000013 (19) High Definition Audio Controller
(PCI) 0xFFFFFFF7 (-9) Intel(R) Graphics
(PCI) 0xFFFFFFF8 (-8) Realtek PCIe GbE Family Controller #11
(PCI) 0xFFFFFFF9 (-7) Realtek PCIe GbE Family Controller #12
(PCI) 0xFFFFFFFA (-6) Intel(R) Management Engine Interface #1
(PCI) 0xFFFFFFFB (-5) Intel(R) USB 3.10 eXtensible Host Controller - 1.20 (Microsoft)
(PCI) 0xFFFFFFFC (-4) Standard SATA AHCI Controller
(PCI) 0xFFFFFFFD (-3) PCI Express Root Port #7 - 54BE
(PCI) 0xFFFFFFFE (-2) PCI Express Root Port #4 - 54BB

Large Memory Address Map



DMA Address Map

