IB301

3.5" Single Board Computer with AMD Ryzen™ Embedded 8000 Series Processor

User Manual

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(January 2026)

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Compliance

This product has passed CE tests for environmental specifications and limits and complies with applicable EU directives. In a domestic environment, it may cause radio interference, requiring users to take appropriate measures.

This product complies with Class B limits under Part 15 of the FCC Rules, providing reasonable protection against harmful interference in residential installations. It generates, uses, and can radiate radio frequency energy. If not installed and used according to the manufacturer's instructions, it may cause harmful interference to radio communications.

WEEE

This product must not be disposed of as normal household waste, in accordance with the EU directive on Waste Electrical and Electronic Equipment (WEEE - 2012/19/EU). Instead, it should be disposed of by returning it to a municipal recycling collection point. Check local regulations for disposal of electronic products.

Green IBASE

This product complies with RoHS 2 restrictions, which prohibit the use of certain hazardous substances in electrical and electronic equipment. The following substances must not exceed the specified concentrations:

- Hexavalent chromium: 1,000 ppm
- Polybrominated biphenyls (PBBs): 1,000 ppm
- Polybrominated diphenyl ethers (PBDEs): 1,000 ppm
- Cadmium: 100 ppm
- Mercury: 1,000 ppm
- Lead: 1,000 ppm
- Bis(2-ethylhexyl) phthalate (DEHP): 1,000 ppm
- Butyl benzyl phthalate (BBP): 1,000 ppm
- Dibutyl phthalate (DBP): 1,000 ppm
- Diisobutyl phthalate (DIBP): 1,000 ppm

Important Safety Information

Carefully read the precautions before using the board.

Care for your industrial products:

- Before cleaning the PCB, ensure the device is unplugged and powered off
- Use circuit board cleaner or alcohol carefully to avoid damage to sensitive components.
- Vacuum the dust with a computer vacuum cleaner to prevent the fan from being clogged.

WARNING

Attention during use:

- Do not use this product near water.
- Do not spill water or any other liquids on this product.
- Do not place heavy objects on the product, as it may damage internal components or affect performance.

Anti-static precautions

- Wear an anti-static wrist strap to avoid electrostatic discharge.
- Place the PCB on an anti-static mat.
- Hold the edges of the PCB when handling.
- When handling, avoid touching the surface of the PCB and hold it by its edges or non-metallic components.
- Ground yourself by touching a grounded metal object, such as a metal pipe or grounded equipment, to discharge static.

Caution:

Danger of explosion if the internal lithium-ion battery is replaced by an incorrect type. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions or recycle them at a local recycling facility or battery collection point.

CAUTION

Danger of explosion if internal lithium-ion battery is replaced by an incorrect type. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Warranty Policy

- **Industrial standard products:**

  24-month (2-year) warranty from the date of shipment. If the date of shipment cannot be ascertained, the product serial numbers can be used to determine the approximate shipping date.

- **3rd-party parts:**

  12-month (1-year) warranty from delivery for the 3rd-party parts that are not manufactured by us, such as CPU, memory, storage device, power adapter, panel and touchscreen.

* PRODUCTS, HOWEVER, THAT FAIL DUE TO MISUSE, ACCIDENT, IMPROPER INSTALLATION OR UNAUTHORIZED REPAIR SHALL BE TREATED AS OUT OF WARRANTY AND CUSTOMERS SHALL BE BILLED FOR REPAIR AND SHIPPING CHARGES.

Technical Support, Services & Documentions

1. Visit IBT website at www.ibt.ca to find the latest information about the product, including drivers, faq, user manual and documentation, or contact your local dealer.

2. If you encounter any technical problems and require assistance from your local dealer or distributor or sales representative, please prepare and send the following information (you may fill-up the form on the website):

   - Product model name
   - Product serial number
   - Detailed description of the problem
   - The error messages in text or in screenshots if there is any
   - The arrangement of the peripherals
   - Software in use (such as OS and application software, including the version numbers)

   and send this or send to support@ibt.ca with your question

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Chapter 1
General Information

The information provided in this chapter includes:

- Features
- Packing List
- Optional Accessories
- Specifications
- Block Diagram
- Board Pictures
- Board Dimensions

1.1 Introduction

Powered by the advanced AMD Ryzen™ Embedded 8000 Series APU, the IB301 delivers powerful computing performance with up to 8 cores and 16 threads while maintaining excellent efficiency for embedded and industrial applications. Featuring dual-channel DDR5 5600 SO-DIMM support with up to 128GB per DIMM and a total capacity of 256GB, the board ensures smooth multitasking and high system responsiveness. Rich display capabilities include eDP, LVDS, DisplayPort 2.1, and HDMI 2.1, enabling flexible multi-display configurations. Dual Intel® I226-V 2.5GbE LAN ports provide reliable high-speed networking. With 2x USB 3.2, 4x USB 2.0, and support for 4x COM ports (RS232/422/485 and RS232), the IB301 offers robust I/O connectivity, while M.2 B-Key and E-Key slots enable expansion for 5G/LTE, Wi-Fi, Bluetooth, or capture card applications.

1.2 Features

- AMD Ryzen™ Embedded 8000 series APU on board, up to 8 cores/16 threads
- Dual Channel SO-DIMM, DDR5 5600, Max. 128GB (per DIMM) Total capacity: 256GB
- 1x eDP, 1x LVDS, 1x DP 2.1, 1x HDMI 2.1
- 2x Intel® I226-V 2.5 Gigabit LAN, 2x USB3.2, 4x USB 2.0
- 1x M.2 B-Key for 5G or LTE options
- 1x M.2 E-Key for Wi-Fi, Bluetooth or capture card options
- Supports 2x RS232/422/485 COM port, 2x RS232 COM port

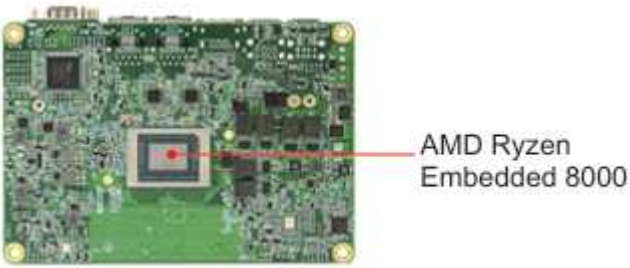
1.3 Packing List

Your IB301 package should include the items listed below. If any of the items below is missing, contact the distributor or dealer from whom you purchased the product.

- IB301 SBC

1.4 Optional Accessories

- HSIB301-B cooler (H052HSIB301B0000AP)
- Power cable; PW595 2-HD 4C Length 22cm (C501PW59504222000P)



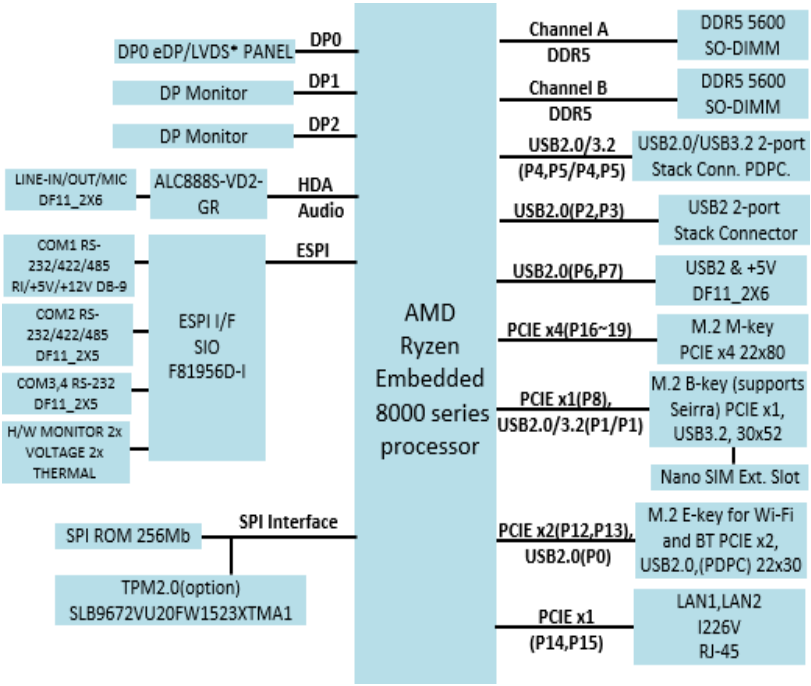
1.5 Specifications

Model	
IB301-8845	3.5" AMD Ryzen™ Embedded 8000 series (Hawk Point 8845HS, CPU Freq. 3.8 GHz up to 5.1 GHz, 8 Cores, 16 Threads, TDP 35-54W) /3.5” SBC, 2x I226-V, 2x USB 3.2, 4x USB 2.0, 4x COM, 12V – 24V DC-in, w/ LVDS
IB301-E-8845	3.5" AMD Ryzen™ Embedded 8000 series (Hawk Point 8845HS, CPU Freq. 3.8 GHz up to 5.1 GHz, 8 Cores, 16 Threads, TDP 35-54W) /3.5” SBC, 2x I226-V, 2x USB 3.2, 4x USB 2.0, 4x COM, 12V – 24V DC-in, w/ eDP
IB301-8840	3.5" AMD Ryzen™ Embedded 8000 series (Hawk Point 8840U, CPU Freq. 3.3 GHz up to 5.1 GHz, 8 Cores, 16 Threads, TDP 15-30W) /3.5” SBC, 2x I226-V, 2x USB 3.2, 4x USB 2.0, 4x COM, 12V – 24V DC-in, w/ LVDS
IB301-E-8840	3.5" AMD Ryzen™ Embedded 8000 series (Hawk Point 8840U, CPU Freq. 3.3 GHz up to 5.1 GHz, 8 Cores, 16 Threads, TDP 15-30W) /3.5” SBC, 2x I226-V, 2x USB 3.2, 4x USB 2.0, 4x COM, 12V – 24V DC-in, w/ eDP
IB301-8645	3.5" AMD Ryzen™ Embedded 8000 series (Hawk Point 8645HS, CPU Freq. 4.3 GHz up to 5.0 GHz, 6 Cores, 12 Threads, TDP 35-54W) /3.5” SBC, 2x I226-V, 2x USB 3.2, 4x USB 2.0, 4x COM, 12V – 24V DC-in, w/ LVDS
IB301-E-8645	3.5" AMD Ryzen™ Embedded 8000 series (Hawk Point 8645HS, CPU Freq. 4.3 GHz up to 5.0 GHz, 6 Cores, 12 Threads, TDP 35-54W) /3.5” SBC, 2x I226-V, 2x USB 3.2, 4x USB 2.0, 4x COM, 12V – 24V DC-in, w/ eDP
IB301-8640	3.5" AMD Ryzen™ Embedded 8000 series (Hawk Point 8640U, CPU Freq. 3.5 GHz up to 4.9 GHz, 6 Cores, 12 Threads, TDP 15-30W) /3.5” SBC, 2x I226-V, 2x USB 3.2, 4x USB 2.0, 4x COM, 12V – 24V DC-in, w/ LVDS
IB301-E-8640	3.5" AMD Ryzen™ Embedded 8000 series (Hawk Point 8640U, CPU Freq. 3.5 GHz up to 4.9 GHz, 6 Cores, 12 Threads, TDP 15-30W) /3.5” SBC, 2x I226-V, 2x USB 3.2, 4x USB 2.0, 4x COM, 12V – 24V DC-in, w/ eDP

Specifications	
CPU	AMD Ryzen™ Embedded 8000 series APU
Memory	Dual-Channel SO-DIMM, DDR5 5600, Max. 128GB (per DIMM), Total capacity: 256GB
BIOS	AMI
Watchdog Timer	256 levels
H/W Monitor	Yes
Storage Device Interface	1x PCIe Gen4 x4 (M.2 NVMe) M-Key Type 2280
Mini Type Slots	1x M.2 (E-Key, Type:2230) 1x M.2 (B-Key, Type:3052, supports 5G/LTE) 1x SIM socket (Nano SIM)
Graphics Controller	RDNA3 graphics with up to 6 WGPs (Work Group processors)
Video Output	**1x DP 2.1**, max resolution: 8K@60Hz (Up to DP 2.1 / UHBR10 (10Gbps)) **1x HDMI 2.1**, max resolution: 4K@120Hz 10bpc, 8K60A 10bpc (4:2:0) (Up to HDMI 2.1 FRL and 10G with Re-driver (Windows) / 2.0b (Linux)) **1x eDP** 1.5 [original eDP, DP0], max resolution: 4K@60Hz **1x LVDS** [original DP, DP1] max resolution: Dual-Channel 18/24bit, up to 1920x1080 @ 60Hz
Ethernet	2x Intel® I226-V 2.5 Gigabit LAN
I/O Chipset	Fintek F81956D-I
Serial Port	2x RS232/422/485 COM port (configurable) 2x RS232 COM port
Serial ATA	N/A
Audio	Realtek audio codec ALC888S-VD2-GR audio header x1 (for Line-in/Line-out/MIC)
TPM	fTPM as default (dTPM option: SLB9672)
Others	Digital I/O(4-in/ 4-out)
Dimensions	(L x W) 102 mm x 147 mm (4" x 5.7")
Environmental	
Operating Temperature	0°C~60°C (32°F~140°F)
Storage Temperature	**-20°C~80°C (-4°F~176°F)**
Relative Humidity	90% (non-condensing@60°C)

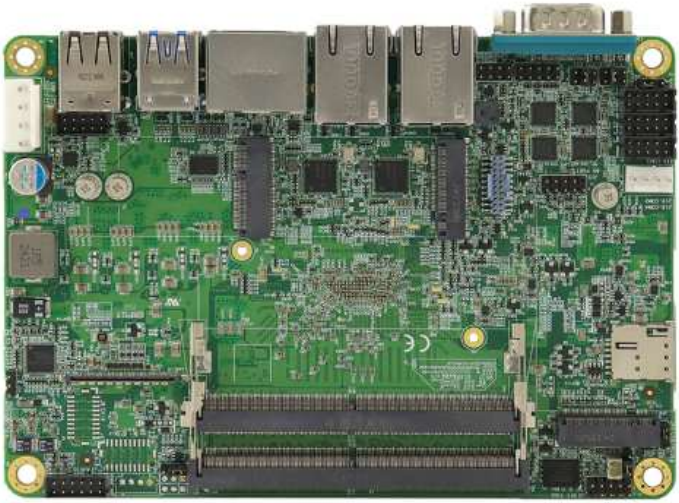
All specifications are subject to change without prior notice.

1.6 Block Diagram



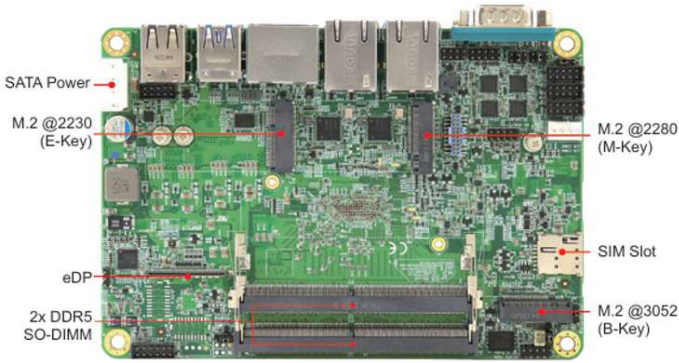
1.7 Board Pictures

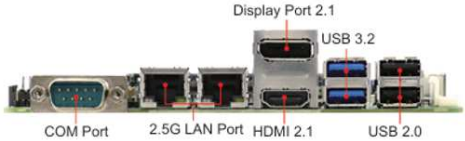
Top View



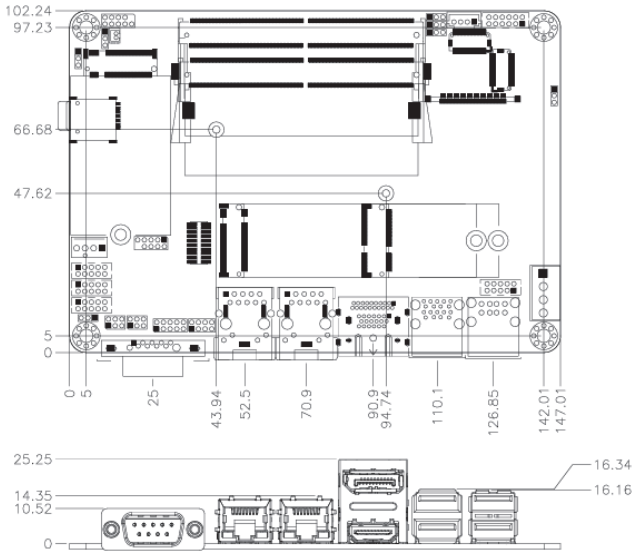
Bottom View

Connector View





1.8 Dimensions



Chapter 2
Hardware Configuration

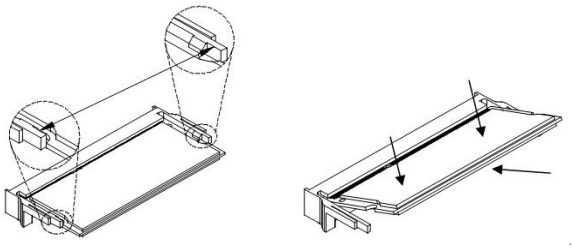
This section provides information on jumper settings and connectors on the IB301 in order to set up a workable system. On top of that, you will also need to install crucial components before using the product. The topics covered are:

- Installations
- Jumpers and connectors

2.1 Installations

2.1.1 Installing the Memory

The IB301 supports memory sockets for DDR5 modules. To install a module, locate the memory slot on the board and perform the following steps:



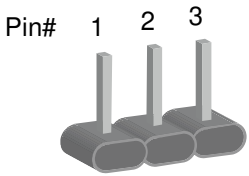
1. Align the key of the memory module with that on the memory slot and insert the module slantwise.
2. Gently push the module in an upright position until the clips of the slot close to hold the module in place when the module touches the bottom of the slot.

To remove the module, press the clips outwards with both hands, and the module will pop-up.

2.2 Setting the Jumpers

Set up and configure your IB301 by using jumpers for various settings and features according to your needs and applications. Contact your supplier if you have doubts about the best configuration for your use.

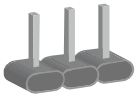
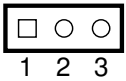
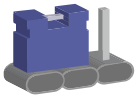
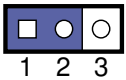
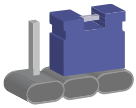
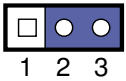
Jumpers are short-length conductors consisting of several metal pins with a non-conductive base mounted on the circuit board. Jumper caps are used to have the functions and features enabled or disabled. If a jumper has 3 pins, you can connect either PIN1 to PIN2 or PIN2 to PIN3 by shorting the respective pins.



A 3-pin jumper

A jumper cap

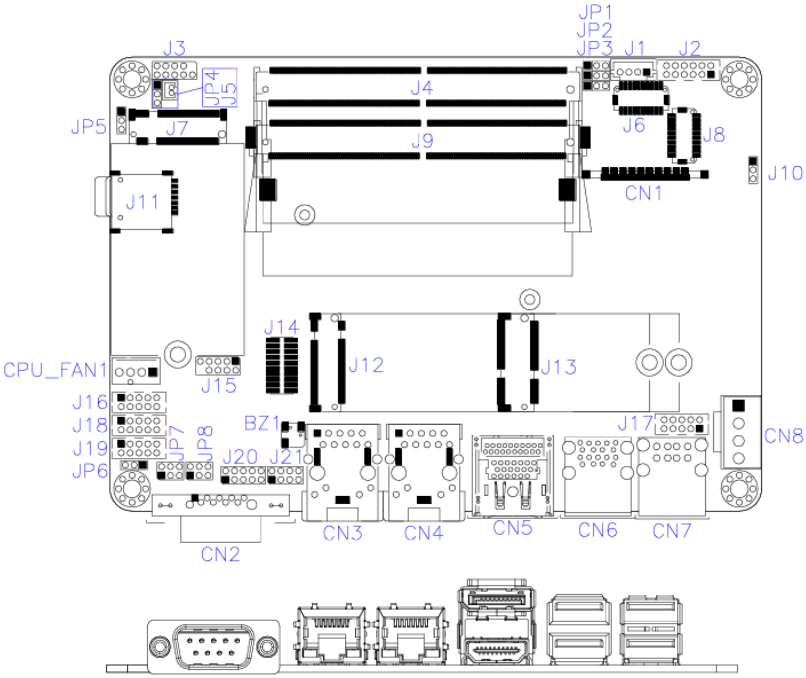
Refer to the illustration below to set jumpers.

Pin closed	Jumper	Setting
Open		
1-2		
2-3		

When two pins of a jumper are encased in a jumper cap, this jumper is **closed**, i.e. turned **On**.

When a jumper cap is removed from two jumper pins, this jumper is **open**, i.e. turned **Off**.

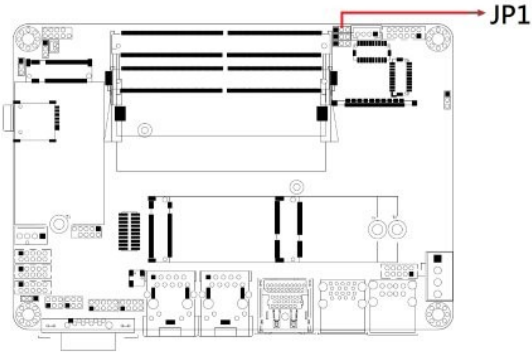
2.3 Jumper & Connector Locations



2.4 Jumpers Quick Reference

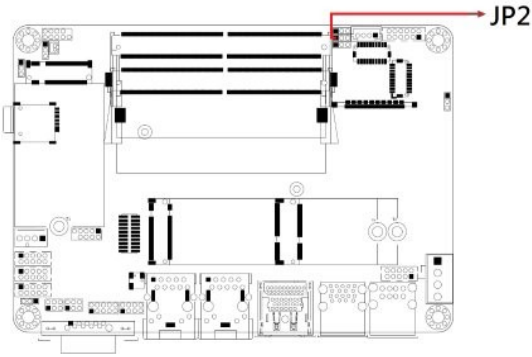
Jumper	Function
JP1	LVDS Panel Brightness Selection
JP2	LVDS Panel Power Selection
JP3	eDP Panel Power Selection
JP4	Clear CMOS Data
JP5	Sierra Module Interface Selection
JP6	AT / ATX Selection
JP7	COM1/2 Pin9 RI/5V/12V Selection

2.4.1 JP1: LVDS Panel Brightness Selection



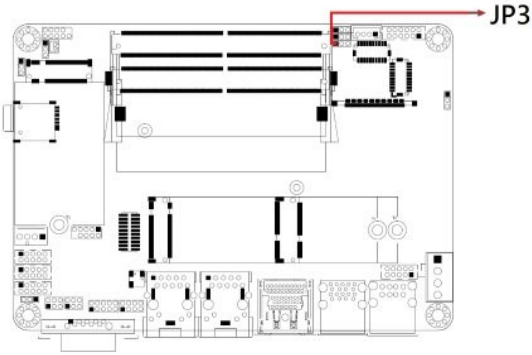
Function	Pin closed	Setting
3.3V (default)	1-2	1
5V	2-3	1

2.4.2 JP2: LVDS Panel Power Selection



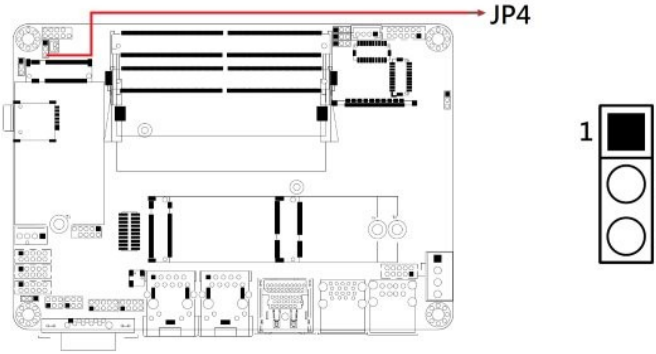
Function	Pin closed	Setting
3.3V (default)	1-2	1
5V	2-3	1

2.4.3 JP3: eDP Power Selection



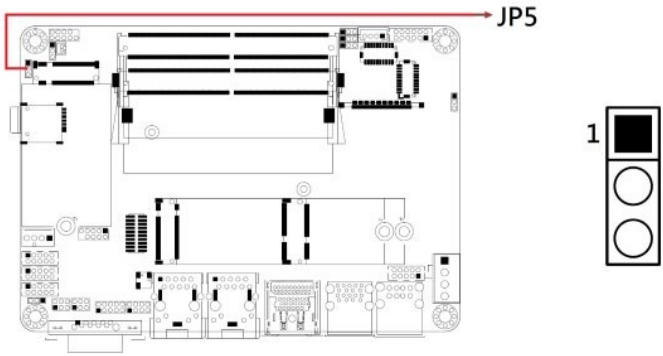
Function	Pin closed	Setting
3.3V (default)	1-2	1
5V	2-3	1

2.4.4 JP4: Clear CMOS Data



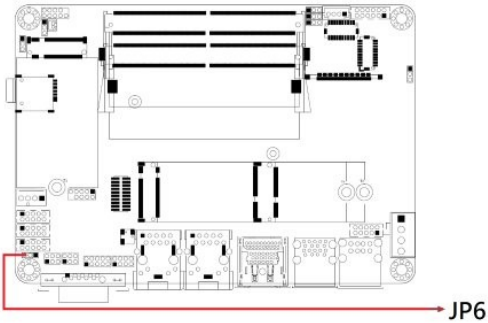
Function	Pin closed	Setting
Normal (default)	1-2	1
Clear CMOS	2-3	1

2.4.5 JP5: Sierra Module Interface Selection



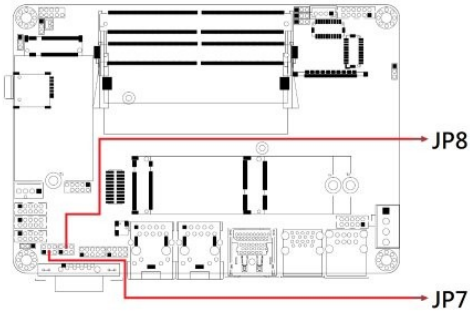
Function	Pin closed	Setting
USB	1-2	1
PCIe (default)	2-3	1

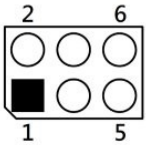
2.4.6 JP6: AT/ATX Selection



Function	Pin closed	Setting
ATX(default)	1-2	1
AT	2-3	1

2.4.7 JP7, JP8: COM1/2 Pin9 RI/5V/12V Selection





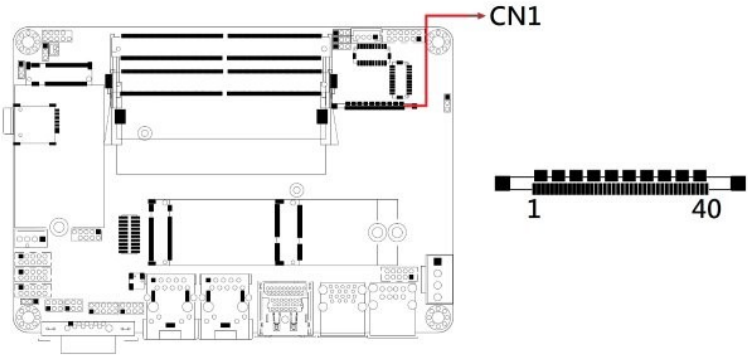
Function	Pin closed
+12V	2-4
RI (default)	3-4
+5V	4-6

Note: The setting is via CN2,J19.

2.5 Connectors Quick Reference

Connector	Function
CN1	eDP Connector
CN2	COM1 RS-232/422/485 Serial Ports
CN3, CN4	LAN Connectors
CN6	USB 3.2 Stack Connector
CN5	DP + HDMI Ports
CN7	USB 2.0 Stack Connector
CN8	DC Power Input Connector
J1	LVDS Backlight Connector
J2	Audio Connector
J4, J9	DDR5 SO-DIMM Socket
J5	RTC Battery Connector
J6, J8	LVDS Connectors
J7	M.2 B-Key 3052 Connector
J11	Nano SIM Card Slot
J12	M.2 M-Key 2280 Connector
J13	M.2 E-Key 2230 Connector
J16, J18	COM3, COM4 RS-232 Serial Ports
J17	USB 2.0 Connector
J19	COM2, RS-232/422/485 Ports
J20	Digital I/O Connector
J21	Front Panel Setting Connector
CPU_FAN1	Fan Power Connector

2.5.1 CN1: eDP Connector



* KEL_SSL00-40S

Pin	Assignment	Pin	Assignment
1	eDP Vcc	21	TXN0
2	eDP Vcc	22	TXP0
3	eDP Vcc	23	Ground
4	eDP Vcc	24	AUXP
5	eDP Vcc	25	AUXN
6	Ground	26	NC
7	Ground	27	+3.3V
8	Ground	28	EDP BKLT (+12V)
9	Ground	29	NC
10	Hot Plug detect	30	Ground
11	Ground	31	+5V
12	TXN3	32	NC
13	TXP3	33	Back Light Control
14	Ground	34	Back Light Enable
15	TXN2	35	EDP BKLT (+12V)
16	TXP2	36	+3.3V
17	Ground	37	Ground
18	TXN1	38	NC
19	TXP1	39	NC
20	Ground	40	NC

Remarks: KEL_SSL00-40S

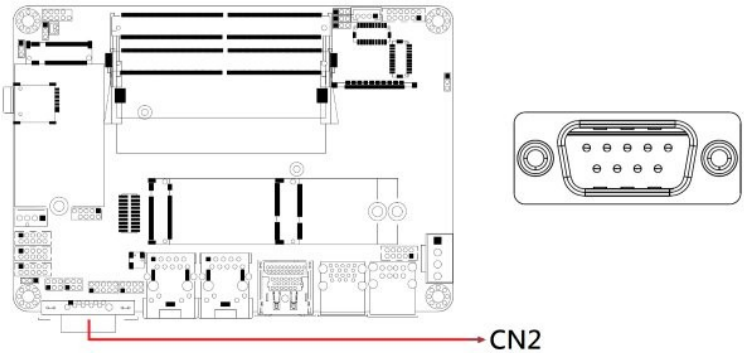
Note: Use JP3 to set Pin1~ Pin5 voltage; Total current: 1A

Pin27, Pin36 Total current: 1A

Pin28, Pin35 Total current: 1A

Pin31 Total current: 0.5A

2.5.2 CN2: COM1 RS-232/422/485 Serial Port



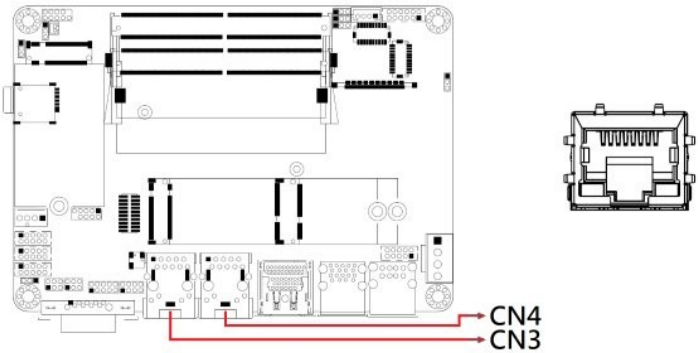
Pin	Assignment	Pin	Assignment
1	DCD, Data carrier detect	6	DSR, Data set ready
2	RX, Receive	7	RTS, Request to send
3	TX, Transmit	8	CTS, Clear to send
4	DTR, Data terminal ready	9	RI, Ring Indicator/+5V/+12V
5	Ground		

**COM1 port is jumper-less and configurable in BIOS.*

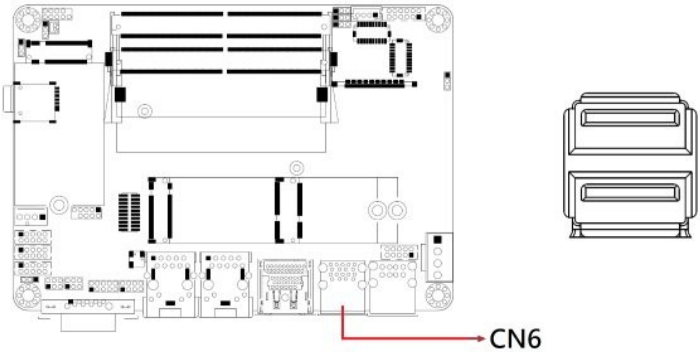
Pin	Assignment		
	RS-232 (default)	RS-422	RS-485
1	DCD	TX-	Data+
2	RX	TX+	Data-
3	TX	RX+	NC
4	DTR	RX-	NC
5	Ground	Ground	Ground
6	DSR	NC	NC
7	RTS	NC	NC
8	CTS	NC	NC
9	RI/+5V/+12V	NC/+5V/+12V	NC/+5V/+12V

Note: Use JP8 to set Pin9 function.
RI, +5V/0.5A, +12V/0.5A

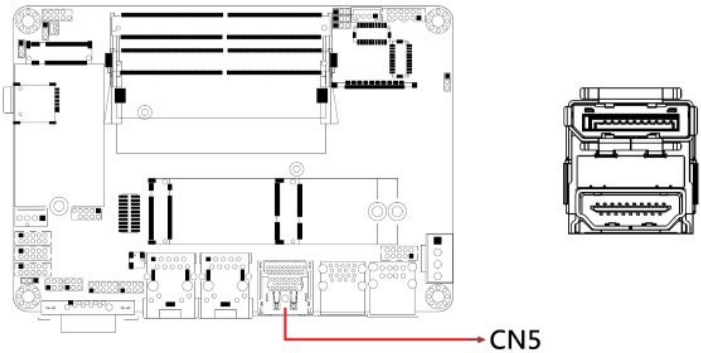
2.5.3 CN3, CN4: LAN Ports



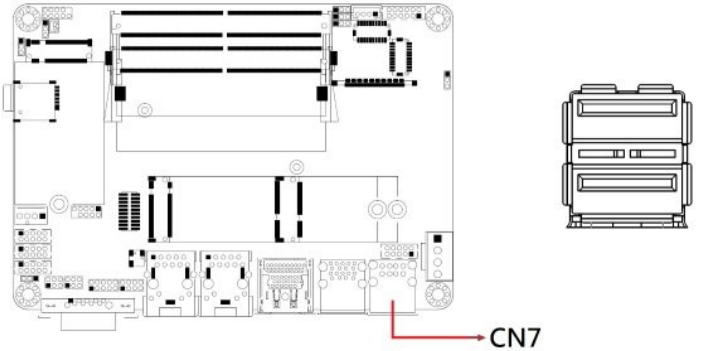
2.5.4 CN6: USB 3.2 Stack Connector



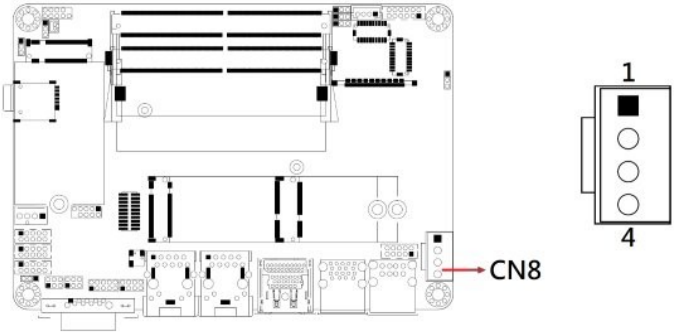
2.5.5 CN5: DP + HDMI Ports



2.5.6 CN7: USB 2.0 Stack Connector



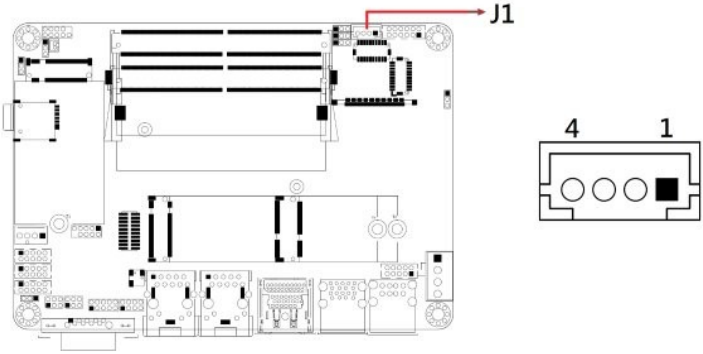
2.5.7 CN8: DC Power Input Connector



Pin	Assignment
1	+12V ~ +24V
	+12V ~ +24V
2	Ground
	Ground

Remarks: YIMTEX_532VW4STR

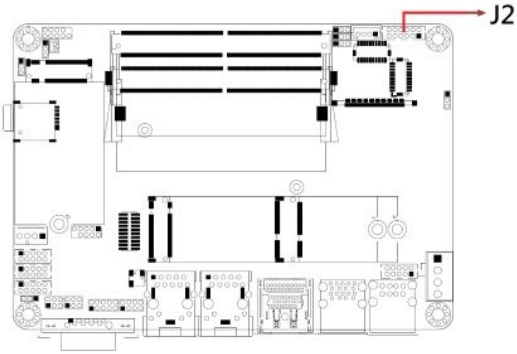
2.5.8 J1: LVDS Backlight Connector

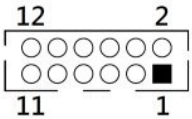


Pin	Assignment	Pin	Assignment
1	+12V/1.5A	3	Brightness Control
2	Backlight Enable	4	Ground

Remarks: E-CALL_0110-161-040
Note: Use JP1 to set Pin3 voltage.

2.5.9 J2: Audio Connector

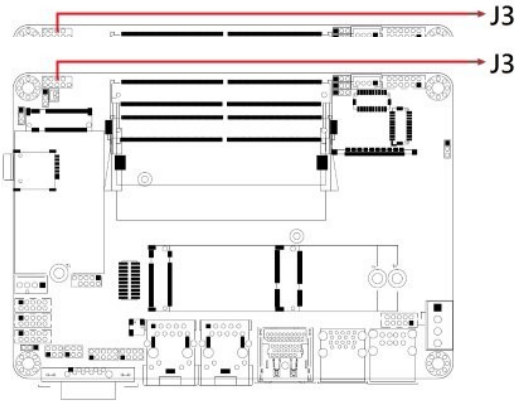


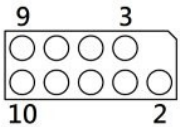


Pin	Assignment	Pin	Assignment
1	Lineout_L	2	Lineout_R
3	JD_FRONT	4	Ground
5	LINEIN_L	6	Linein_R
7	JD_LINEIN	8	Ground
9	MIC_L	10	MIC-R
11	JD_MIC1	12	Ground

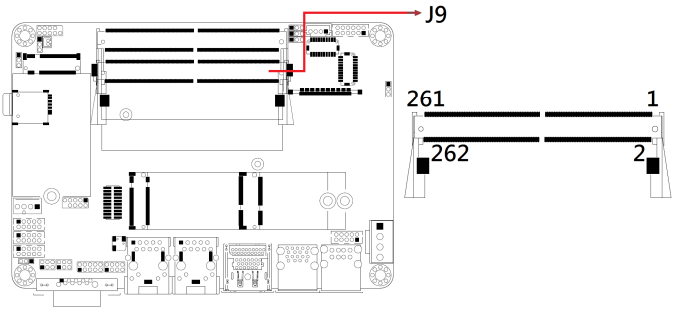
Remarks: HK_DF11-12S-PA66H

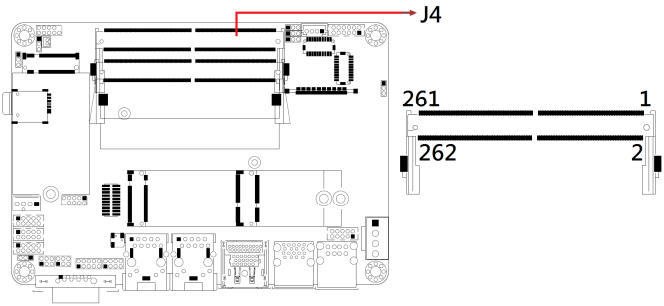
2.5.10 J3: SPI Flash Connector



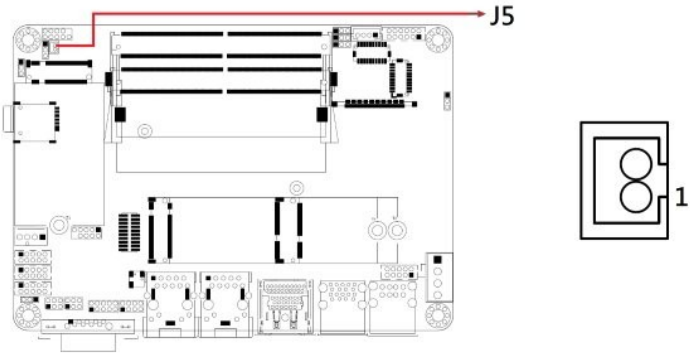


2.5.11 J4, J9: DDR5 SO-DIMM Sockets





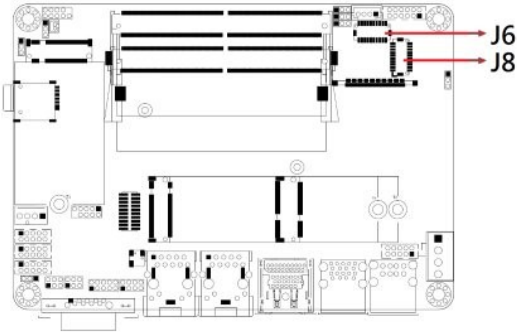
2.5.12 J5: RTC Battery Connector

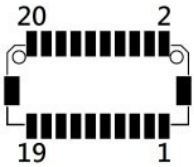


Pin	Assignment
1	+3V
2	Ground

Note: Coin battery with cable.

2.5.13 J6, J8: LVDS Connectors





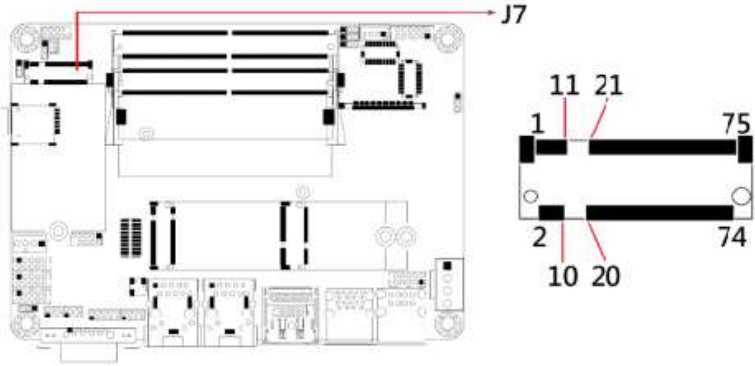
** J8:Channel-A, J6:Channel-B

Pin	Assignment	Pin	Assignment
1	TX0P	2	TX0N
3	Ground	4	Ground
5	TX1P	6	TX1N
7	Ground	8	Ground
9	TX2P	10	TX2N
11	Ground	12	Ground
13	CLKP	14	CLKN
15	Ground	16	Ground
17	TX3P	18	TX3N
19	Power	20	Power

Remarks: HIROSE_DF20G-20DP-1V(52)

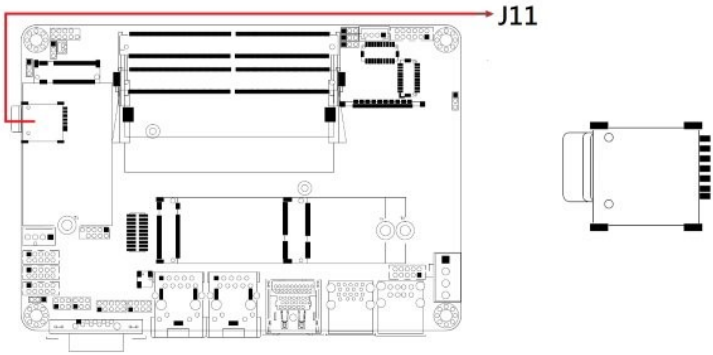
Note: Use JP2 to set Pin19~Pin20 voltage.Total current: 1A

2.5.14 J7: M.2 B-Key 3052 Connector

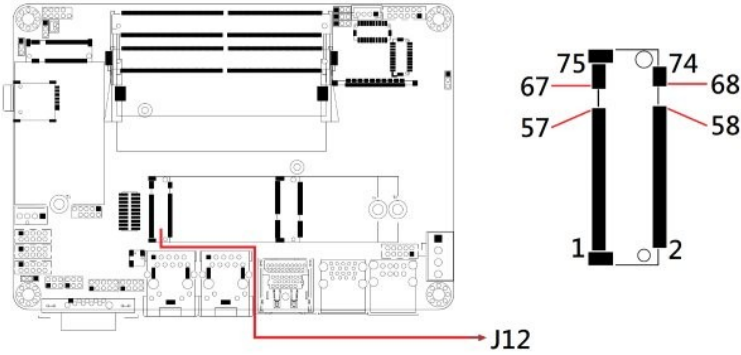


*** With Sierra LTE card, USB/PCIe I/F is configurable by JP5.*
*** Does not support SATA I/F*

2.5.15 J11: Nano SIM Card Slot

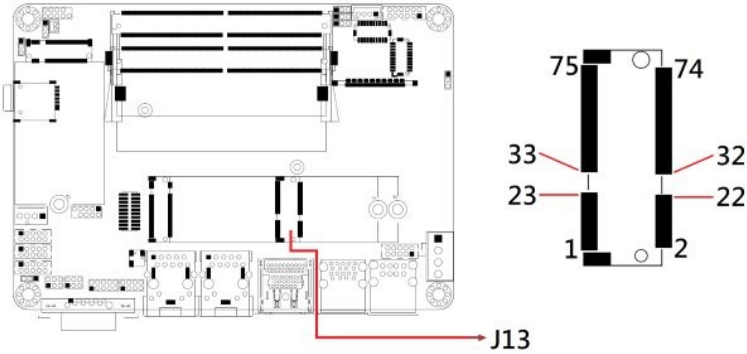


2.5.16 J12: M.2 M-Key 2280 Connector

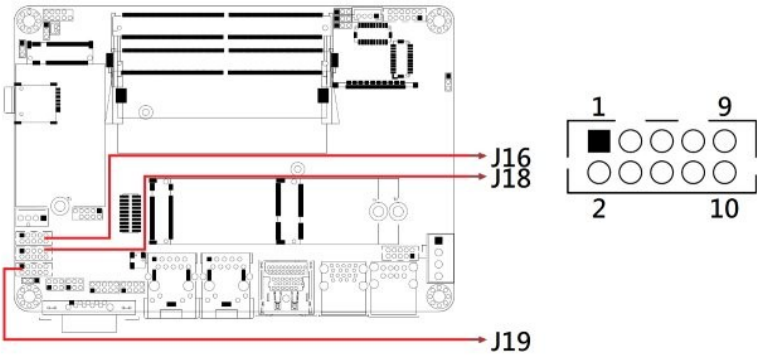


PCIe I/F only

2.5.17 J13: M.2 E-Key 2230 Connector



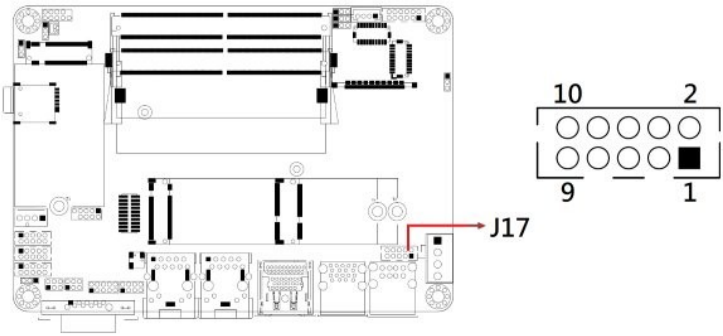
2.5.18 J16, J18: COM3, COM4 RS-232 Serial Ports



Pin	Assignment	Pin	Assignment
1	DCD, Data carrier detect	2	RXD, Receive data
3	TXD, Transmit data	4	DTR, Data terminal ready
5	Ground	6	DSR, Data set ready
7	RTS, Request to send	8	CTS, Clear to send
9	RI, Ring indicator	10	Not Used

Remarks: HK_DF11-10S-PA66H

2.5.19 J17: USB 2.0 Connector

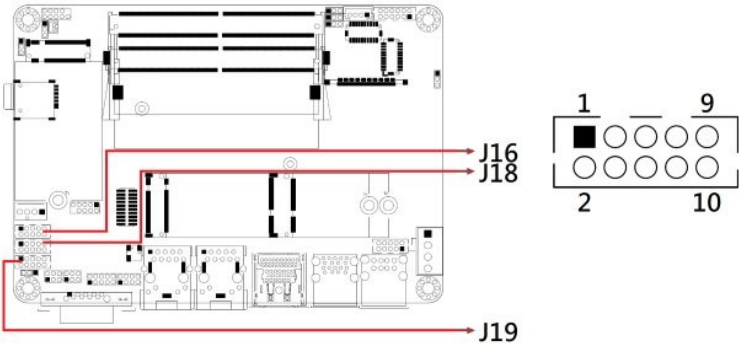


Pin	Assignment	Pin	Assignment
1	+5V/0.5A	2	Ground
3	Data-	4	Data+
5	Data+	6	Data-
7	Ground	8	+5V/0.5A
9	+5V/1A	10	Ground

** Pin 9 is system power*

Remarks: HK_DF11-8S-PA66H

2.5.20 J19: COM2, RS-232/422/485 Ports



Pin	Assignment	Pin	Assignment
1	DCD, Data carrier detect	2	RXD, Receive data
3	TXD, Transmit data	4	DTR, Data terminal ready
5	Ground	6	DSR, Data set ready
7	RTS, Request to send	8	CTS, Clear to send
9	RI, Ring indicator	10	Not Used

**COM2 port is jumper-less and configurable in BIOS.*

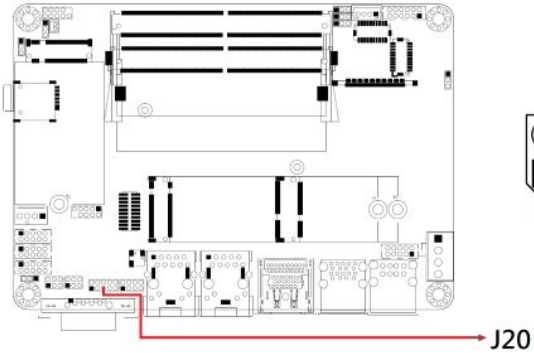
Remarks: HK_DF11-10S-PA66H

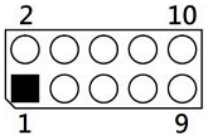
Pin	Assignment		
	RS-232 (default)	RS-422	RS-485
1	DCD	TX-	Data+
2	RX	TX+	Data-
3	TX	RX+	NC
4	DTR	RX-	NC
5	Ground	Ground	Ground
6	DSR	NC	NC
7	RTS	NC	NC
8	CTS	NC	NC
9	RI/+5V/+12V	NC/+5V/+12V	NC/+5V/+12V
10	Not Used	Not Used	Not Used

Note: Use JP7 to set Pin9 function.

RI, +5V/0.5A, +12V/0.5A

2.5.21 J20: Digital I/O Connector

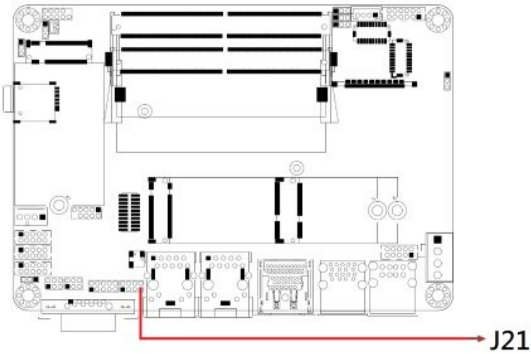


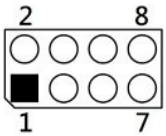


Pin	Assignment	Pin	Assignment
1	Ground	2	+5V/0.5A
3	OUT3	4	OUT1
5	OUT2	6	OUT0
7	IN3	8	IN1
9	IN2	10	IN0

Remarks: E-CALL_0196-01-200-100

2.5.22 J21: Front Panel Setting Connector





Pin	Assignment	Pin	Assignment
1	PWR_BTN-	2	PWR_BTN+
3	HDD_LED+, 3.3V	4	HDD Active
5	Ground	6	Reset
7	POWER_LED+, 5V	8	Ground

Remarks: E-CALL_0126-01-203-080

J21 is utilized for system indicators to provide light indication of the computer activities and switches to change the computer status. It provides interfaces for the following functions:

- **ATX Power ON Switch (Pins 1 and 2)**

  The 2 pins makes an “ATX Power Supply On/Off Switch” for the system that connects to the power switch on the case. When pressed, the power switch will force the system to power on. When pressed again, it will power off the system.

- **Hard Disk Drive LED Connector (Pins 3 and 4)**

  This connector connects to the hard drive activity LED on control panel. This LED will flash when the HDD is being accessed.

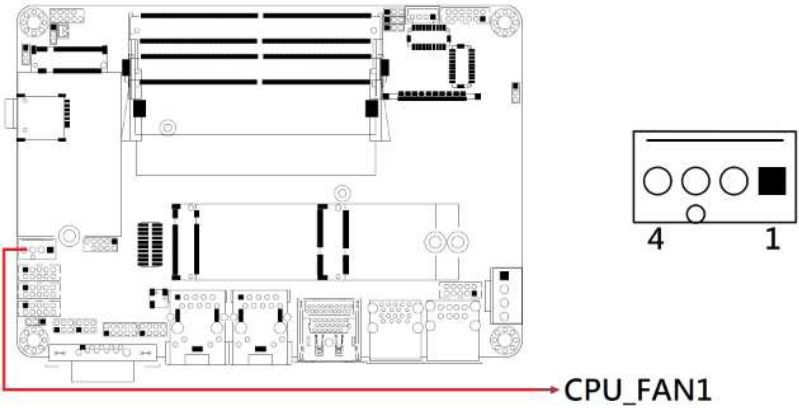
- **Reset Switch (Pins 5 and 6)**

  The reset switch allows you to reset the system without turning the main power switch off and then on again. Orientation is not required when making a connection to this header.

- **Power LED (Pins 7 and 8)**

  This connector connects to the system power LED on control panel. This LED will light when the system turns on.

2.5.23 CPU_FAN1: Fan Power Connector



Pin	Assignment	Pin	Assignment
1	Ground	3	RPM detection
2	+12V/1A	4	PWM control

Chapter 3
Drivers Installation

This chapter introduces installation of the following drivers:

- AMD Chipset Driver
- AMD Ryzen 8000 Series Graphics Driver
- Realtek HD Audio Driver
- Intel® 2.5G Network Driver

3.1 Introduction

This section describes the installation procedures for the required software drivers. If you need special drivers they are available on our website on the product's page. ibt.ca/ib301. Download the driver package to your computer and extract the compressed file. Then run the corresponding installer for each driver.

Note: After installing the Windows operating system, install the AMD chipset driver first before installing any other device drivers.

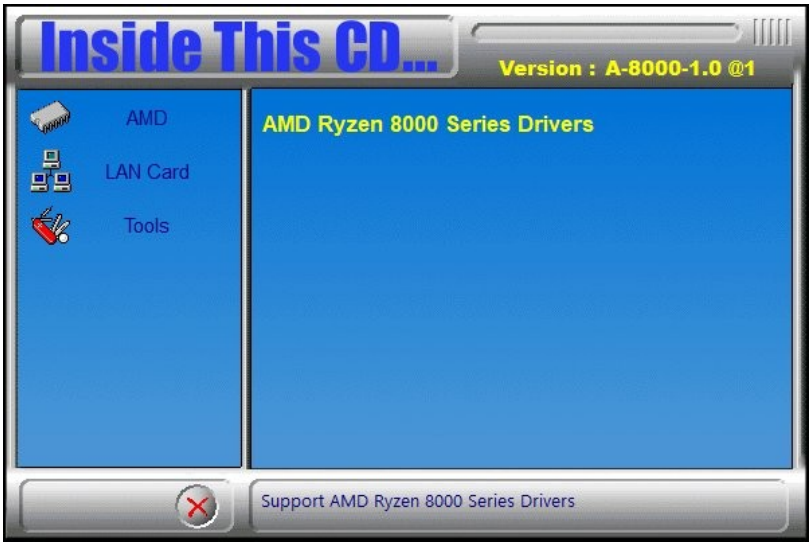
3.2 AMD Chipset Driver Installation Procedure

Step 1 — Select AMD

Extract the downloaded driver package. Open the driver package interface (the menu that lists AMD, LAN Card, and Tools). In the left pane, click **AMD**.

Step 2 — Select AMD Ryzen 8000 Series Drivers

In the main window, click **AMD Ryzen 8000 Series Drivers**.



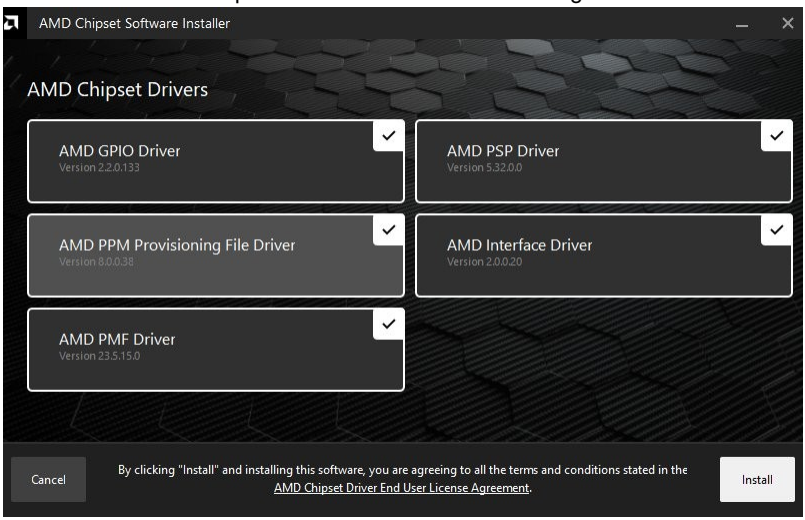
Step 3 — Select Chipset Drivers

Click **AMD Ryzen 8000 Series Chipset Drivers**.

Step 4 — Start chipset installation

The **AMD Chipset Software Installer** window appears.

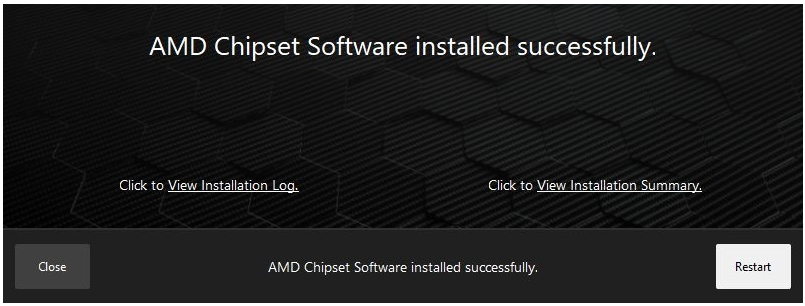
- Leave all driver components selected.
- Click **Install**.
- By clicking **Install**, you agree to the terms and conditions stated in the AMD Chipset Driver End User License Agreement.



Step 5 — Wait for installation

Allow the installation process to complete.
Do not close the installer during this process.

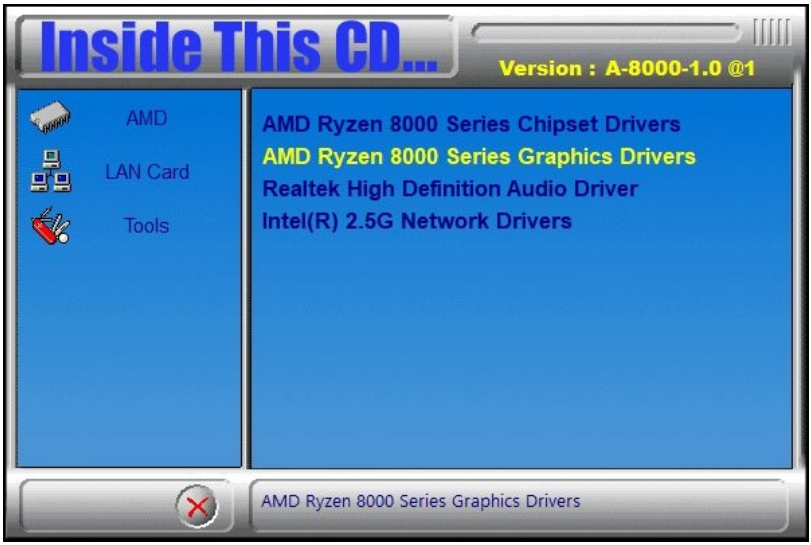
When the message **"AMD Chipset Software installed successfully."** appears, the installation is complete. Click **Restart** to reboot the system and complete the installation.



3.3 AMD Ryzen 8000 Series Graphics Driver Installation

Step 1 — Select Graphics Drivers

From the driver selection screen, click **AMD Ryzen 8000 Series Graphics Drivers**.

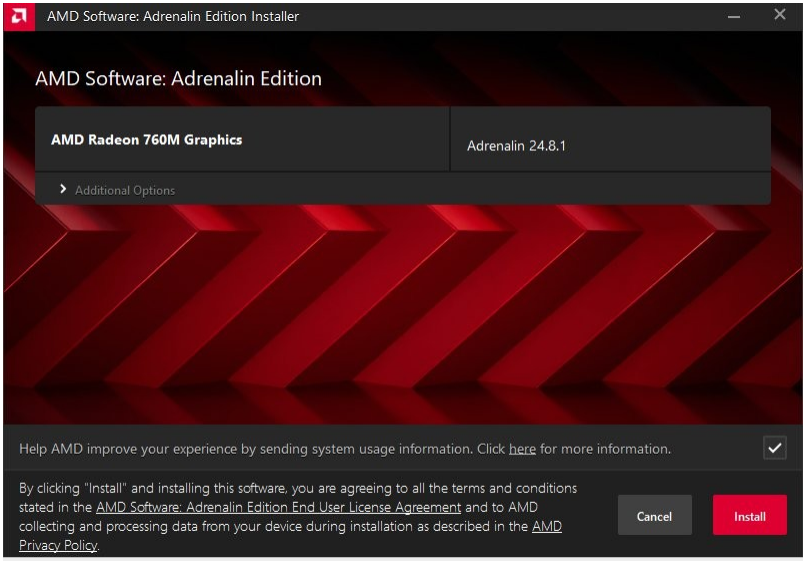


Step 2 — Start the graphics driver installer

The **AMD Software: Adrenalin Edition Installer** window opens.

This screen shows:

- Target device: **AMD Radeon 760M Graphics**
- Driver package version (e.g. **Adrenalin 24.8.1**)



Step 3 — Begin installation

By clicking **Install**, you agree to the terms and conditions stated in the AMD Software: Adrenalin Edition End User License Agreement and the AMD Privacy Policy, as displayed in the installer window.

Clicking **Install** starts the graphics driver installation process.

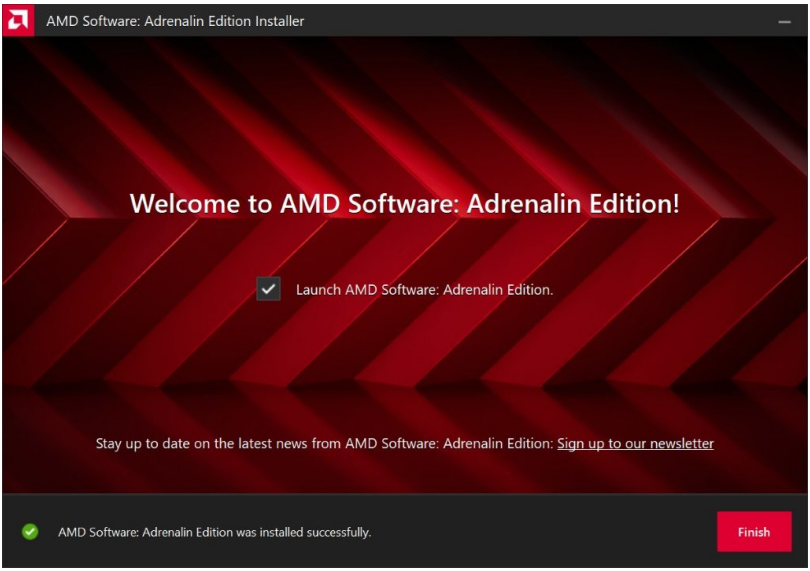
Step 4 — Wait for installation

Allow the installation process to complete.

- The display may flicker or temporarily go black during installation.
- Do not close the installer.

Step 5 — Installation completed

When the message **"AMD Software: Adrenalin Edition was installed successfully."** appears, the graphics driver installation is complete.



Step 6 — Finish installation

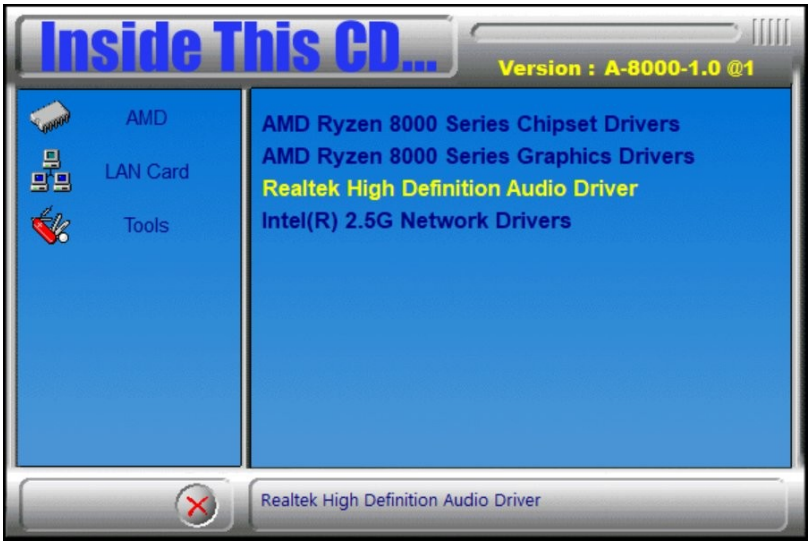
Click **Finish**.

Clicking **Finish** completes the installation process.

3.4 Realtek HD Audio Driver Installation

Step 1 — Select Audio Driver

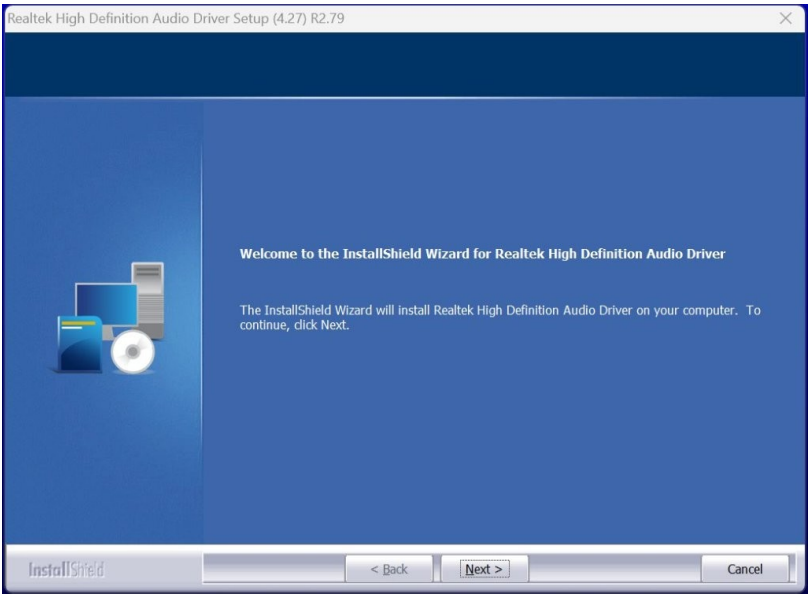
From the driver selection screen, click **Realtek High Definition Audio Driver**.



Step 2 — Start the audio driver installer

The **Realtek High Definition Audio Driver Setup** window opens.

This screen indicates that the InstallShield Wizard will install the Realtek High Definition Audio Driver. Click **Next** to continue.



Step 3 — Install the audio driver

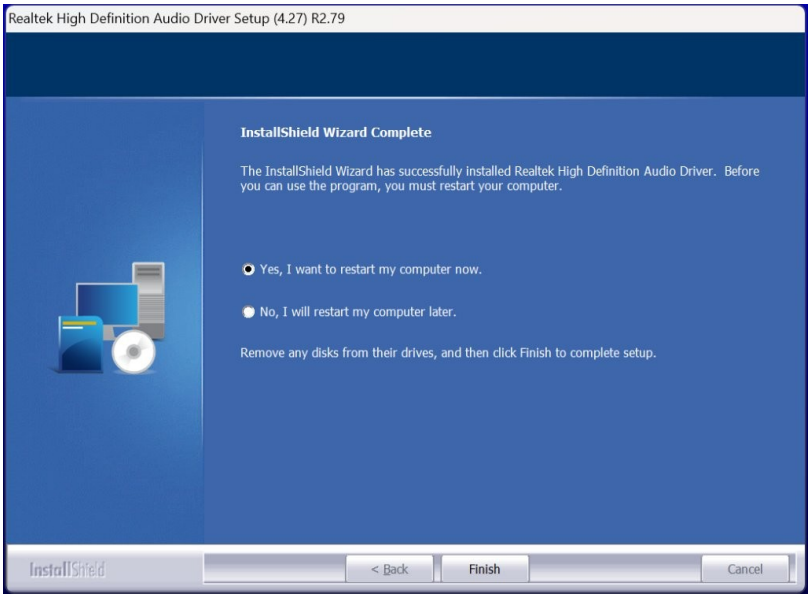
Follow the on-screen instructions to proceed with the installation.

The installer copies the required audio driver files and configures the audio device.

Step 4 — Installation completed

When the **InstallShield Wizard Complete** screen appears, the audio driver installation is finished.

This screen indicates that a system restart is required before the driver can be used.



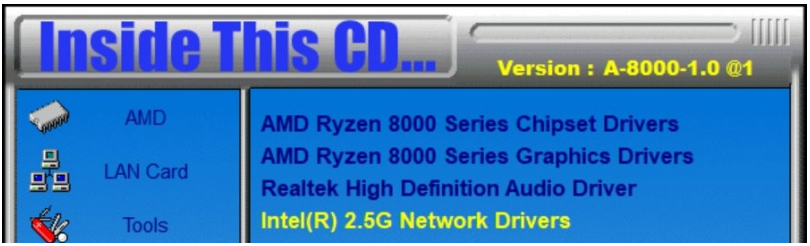
Step 5 — Restart the system

Select **Yes, I want to restart my computer now**, then click **Finish** to restart and complete the installation.

3.5 Intel(R) 2.5 Network Driver Installation

Step 1 — Select Network Driver

From the driver selection screen, click **Intel® 2.5G Network Drivers**.

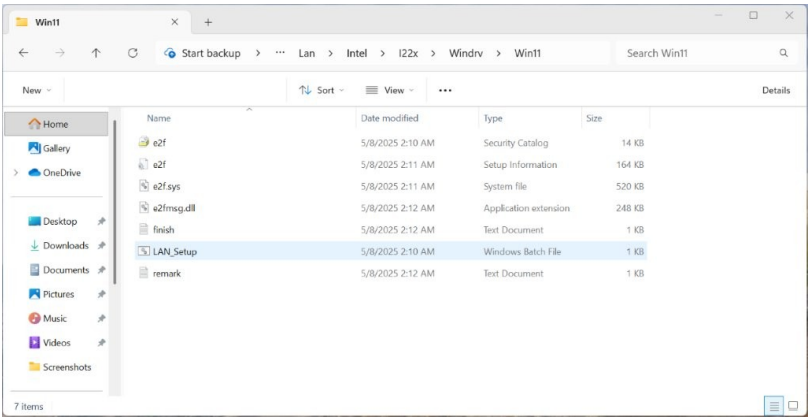


Step 2 — Locate the driver directory

Within the extracted driver package, navigate to the following directory:

Lan\Intel\I22x\Windrv\Win11

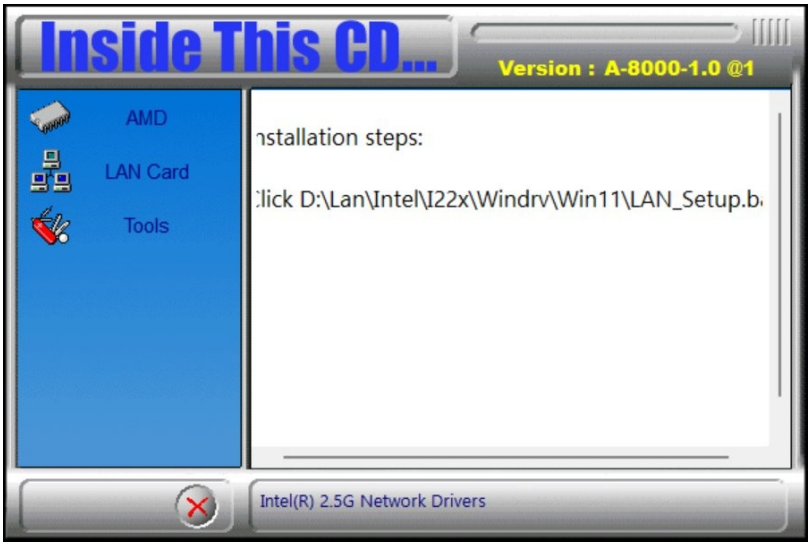
This directory contains the Intel® 2.5G network driver installation files for Windows 11.



Step 3 — Start driver installation

In the **Win11** directory, double-click **LAN_Setup.bat**.

This batch file starts the network driver installation process.



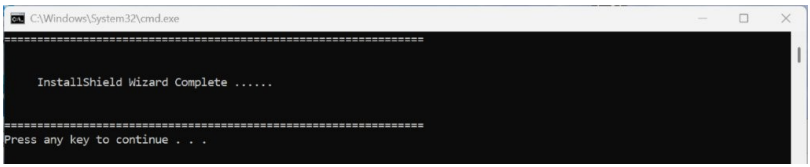
Step 4 — Wait for installation to complete

A **Command Prompt** window opens and runs the InstallShield process automatically. Do not close the window. No user input is required during installation.

Step 5 — Installation completed

When the message **"InstallShield Wizard Complete"** appears, the network driver installation has finished. The system displays the prompt:

Press any key to continue . . .



Step 6 — Exit installer

Press any key to close the Command Prompt window.
The **Intel® 2.5G Network Driver installation is complete**.

Chapter 4
BIOS Setup

This chapter describes the different settings available in the AMI BIOS that comes with the board. The topics covered in this chapter are as follows:

- Main Settings
- Advanced Settings
- Security Settings
- Boot Settings
- Save & Exit

4.1 Introduction

The BIOS (Basic Input/Output System) installed in the ROM of your computer system provides critical low-level support for standard devices such as disk drives, and serial ports. It also provides password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

4.2 BIOS Setup

The BIOS provides a Setup utility program for specifying the system configurations and settings. The BIOS ROM of the system stores the Setup utility. When you turn on the computer, the BIOS is immediately activated. Pressing the <Del> key immediately allows you to enter the Setup utility. If you are a little bit late pressing the <Del> key, POST (Power On Self Test) will continue with its test routines, thus preventing you from invoking the Setup.

If you still need to enter Setup, restart the system by pressing the ”Reset” button or simultaneously pressing the <Ctrl>, <Alt> and <Delete> keys. You can also restart by turning the system Off and back On again.

The following message will appear on the screen:

```
Press <DEL> to Enter Setup
```

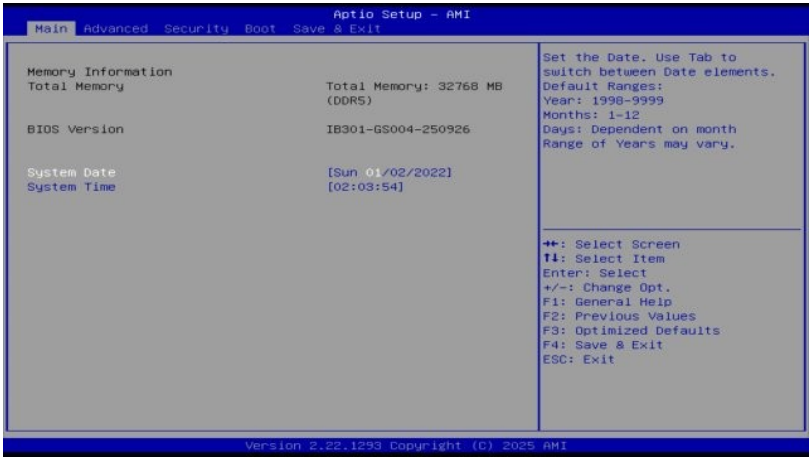
In general, press the arrow keys to highlight items, <Enter> to select, the <PgUp> and <PgDn> keys to change entries, <F1> for help, and <Esc> to quit.

When you enter the BIOS Setup utility, the *Main Menu* screen will appear on the screen. The Main Menu allows you to select from various setup functions and exit choices.

Warning: It is strongly recommended that you avoid making any changes to the chipset defaults.

These defaults have been carefully chosen by both AMI and your system manufacturer to provide the absolute maximum performance and reliability. Changing the defaults could make the system unstable and crash in some cases.

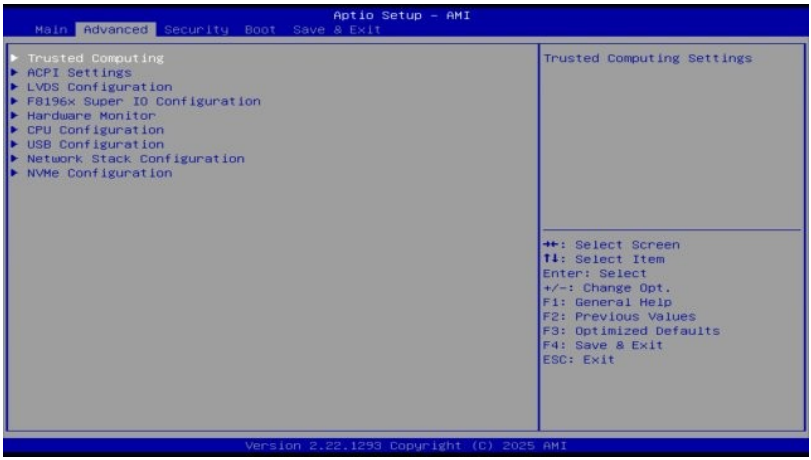
4.3 Main Settings



BIOS Setting	Description
System Date	Sets the date. Use the <Tab> key to switch between the Date elements.
System Time	Set the time. Use the <Tab> key to switch between the Time elements.

4.4 Advanced Settings

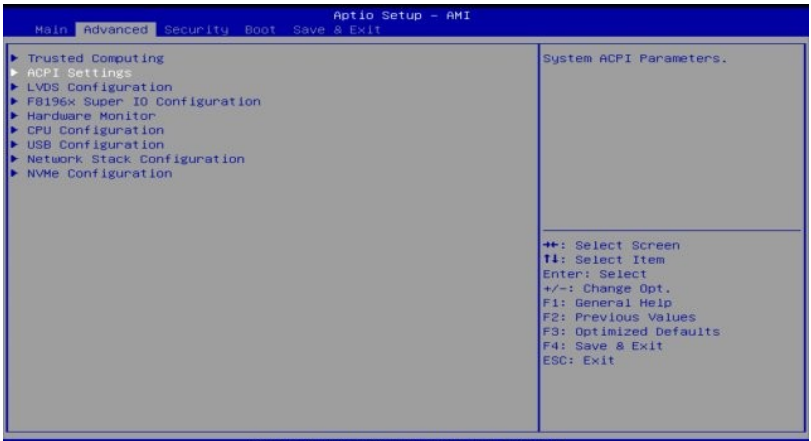
This section allows you to configure system features according to your preference.



4.4.1 Trusted Computing

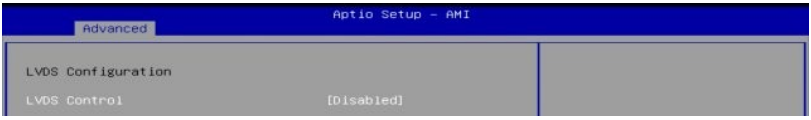
BIOS Setting	Description
Security Device Support	Enables or Disables BIOS support for security device. O.S. will not show security Device. TCG EFI protocol and INT1A interface will not be available.
SHA256/384, SM3_256 PCR Bank	Enables / Disables PCR Bank.
Pending operation	Schedule an operation for the security device. Note: Your computer will reboot during restart in order to change state of security device.
Platform Hierarchy	Enables / Disables platform hierarchy.
Storage Hierarchy	Enables / Disables storage hierarchy.
Endorsement Hierarchy	Enables / Disables endorsement hierarchy.
Physical Presence Spec Version	Select to tell O.S. to support PPI Spec Version 1.2 or 1.3. Note some HCK tests might not support 1.3.
Device Select	TPM 1.2 will restrict support to TPM 1.2 devices. TPM 2.0 will restrict support to TPM 2.0 devices. Auto will support both with the default set to TPM 2.0 devices if not found, TPM 1.2 devices will be enumerated.

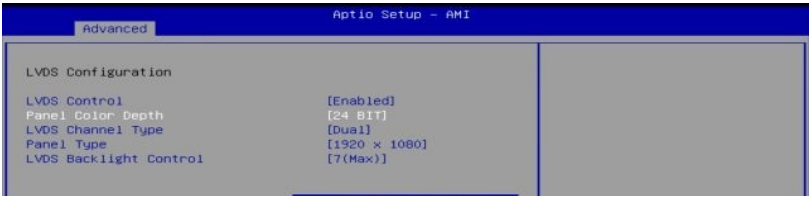
4.4.2 ACPI Settings



BIOS Setting	Description
Enable Hibernation	Enables / Disables the system ability to hibernate (OS/S4 Sleep State). This option may be not effective with some OS.

4.4.3 LVDS Configuration





BIOS Setting	Description
LVDS Control	When enabled, the options below appear.
Panel Color Depth	Selects the panel color depth. Options: 18 bit, 24bit
LVDS Channel Type	Chooses the LVDS as single or dual channel.
Panel Type	Panel Type (Resolution) Options: 800 x 480, 800 x 600, 1024 x 768, 1280 x 768, 1280 x 800, 1280 x 960, 1280 x 1024, 1366 x 768, 1440 x 900, 1600 x 900, 1600 x 1200, 1680 x 1050, 1920 x 1080, 1920 x 1200
LVDS Brightness Level Control	Options: Level-1 to Level-8 0(Min) – 7(Max)

4.4.4 F8196x Super IO Configuration

BIOS Setting	Description
Serial Ports Configuration	Sets parameters of serial ports (COMA/B/C/D). Enables / Disables the serial port and select an optimal setting for the Super IO device.
Power Failure	Power Failure options: Always on, Always off

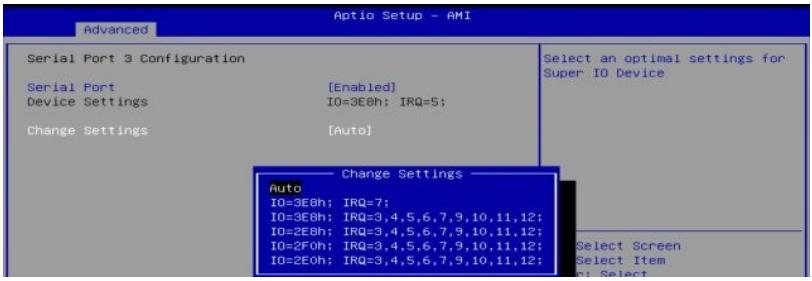
Serial Port 1 Configuration

BIOS Setting	Description
Serial Port	Enable or Disable serial Port (COM)
Change Settings (selections)	Auto IO=3F8h, IRQ=4; IO=3F8h, IRQ=3,4,5,6,7,9,10,11,12; IO=2F8h, IRQ=3,4,5,6,7,9,10,11,12; IO=3E8h, IRQ=3,4,5,6,7,9,10,11,12; IO=2E8h, IRQ=3,4,5,6,7,9,10,11,12;
SERIAL PORT MODE SELECT (selections)	RS232 Mode RS485 Mode RS422 Mode

Serial Port 2 Configuration

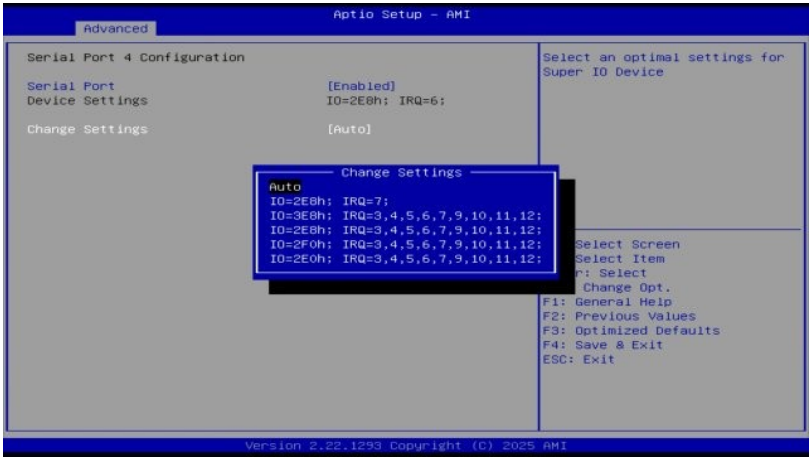
BIOS Setting	Description
Serial Port	Enable or Disable serial Port (COM)
Change Settings (selections)	Auto IO=2F8h, IRQ=3; IO=3F8h, IRQ=3,4,5,6,7,9,10,11,12; IO=3E8h, IRQ=3,4,5,6,7,9,10,11,12; IO=2E8h, IRQ=3,4,5,6,7,9,10,11,12;
SERIAL PORT MODE SELECT (selections)	RS232 Mode RS485 Mode RS422 Mode

Serial Port 3 Configuration



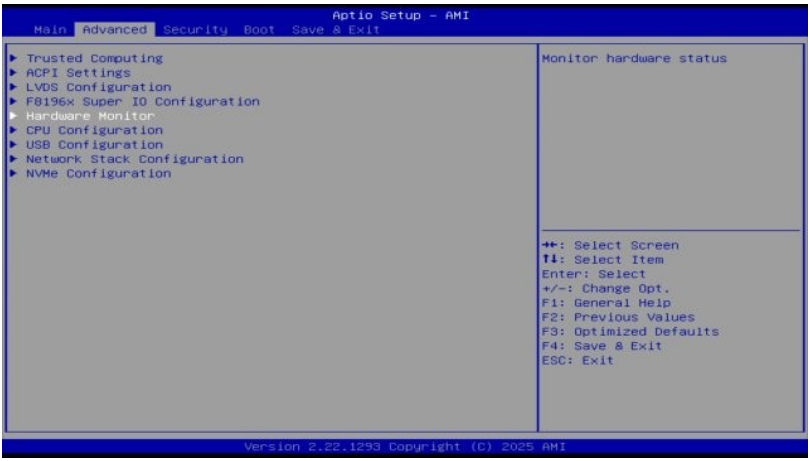
BIOS Setting	Description
Serial Port	Enable or Disable serial Port (COM)
Change Settings (selections)	Auto IO=3E8h, IRQ=7; IO=3E8h, IRQ=3,4,5,6,7,9,10,11,12; IO=2E8h, IRQ=3,4,5,6,7,9,10,11,12; IO=2F8h, IRQ=3,4,5,6,7,9,10,11,12; IO=2E8h, IRQ=3,4,5,6,7,9,10,11,12;

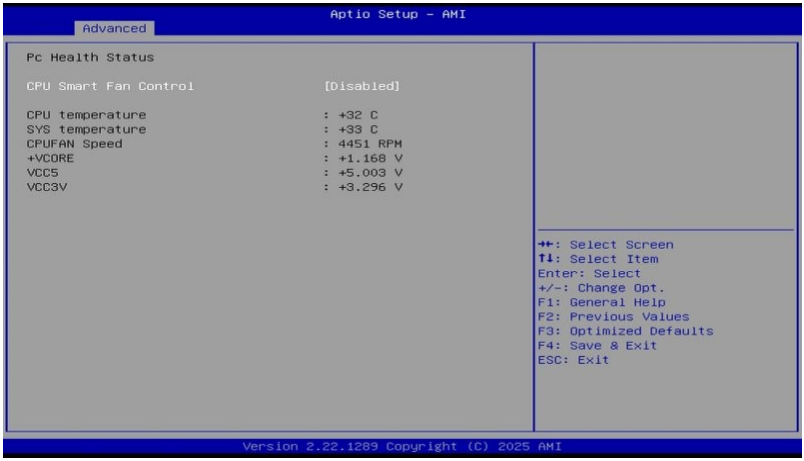
Serial Port 4 Configuration



BIOS Setting	Description
Serial Port	Enable or Disable serial Port (COM)
Change Settings (selections)	Auto IO=2F8h, IRQ=3; IO=3F8h, IRQ=3,4,5,6,7,9,10,11,12; IO=3E8h, IRQ=3,4,5,6,7,9,10,11,12; IO=2E8h, IRQ=3,4,5,6,7,9,10,11,12;

4.4.5 Hardware Monitor

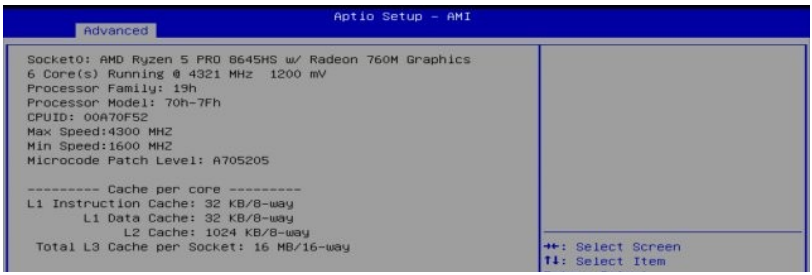




BIOS Setting	Description
CPU Smart Fan Control	Enables / Disables smart fan control.
Temperatures / Voltages	These fields are the parameters of the hardware monitoring function feature of the motherboard. The values are read-only values as monitored by the system and show the PC health status.

4.4.6 CPU Configuration

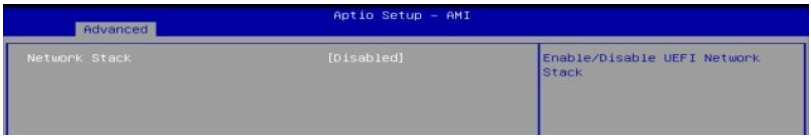
BIOS Setting	Description
PSS Support	Enable/disable the generation of ACPI _PPC, _PSS, and _PCT objects.
PPC Adjustment	Provide to adjust _PPC object. PPC Adjustment selections: PState 0 PState 1 PState 2
NX Mode	Enable/disable No-execute page protection Function
Node 0 Information	View Memory Information related to Node 0

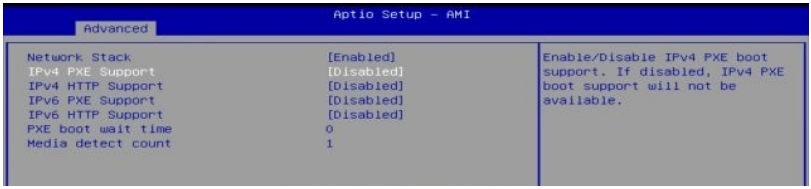


4.4.7 USB Configuration

BIOS Setting	Description
Legacy USB Support	• **Enabled** enables Legacy USB support. • **Auto** disables legacy support if there is no USB device connected. • **Disabled** keeps USB devices available only for EFI applications.
XHCI Hand-off	This is a workaround for OSes without XHCI hand-off support. The XHCI ownership change should be claimed by XHCI driver.
USB Mass Storage Driver Support	Enables / Disables the support for USB mass storage driver.
USB Transfer time-out	The time-out value (1 / 5 10 / 20 secs) for Control, Bulk, and Interrupt transfers.
Device reset time-out	Gives seconds (10 / 20 / 30 / 40 secs) to delay execution of Start Unit command to USB mass storage device.
Device power-up delay	Max.time the device will take before it properly reports itself to the Host Controller. '**Auto**' uses default value: for a Root port it is 100ms, for a Hub port the delay is taken from Hub descriptor.

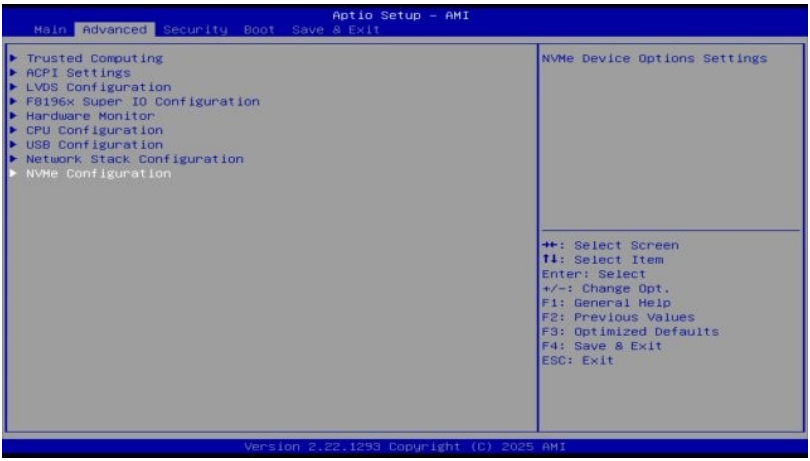
4.4.8 Network Stack Configuration



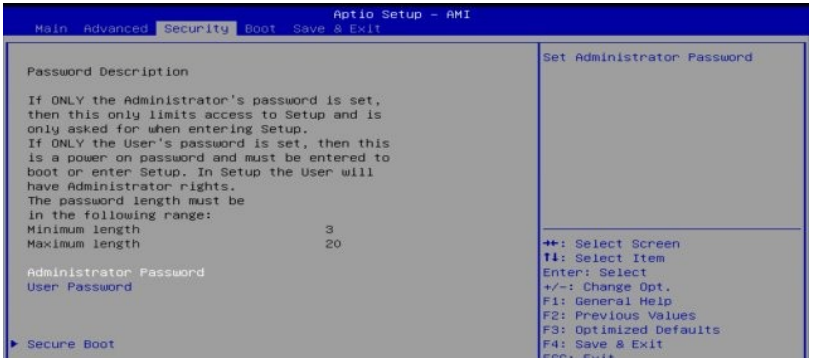


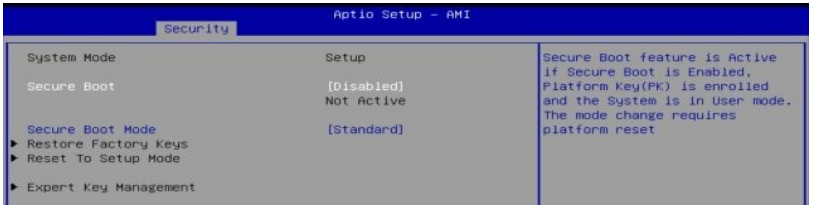
BIOS Setting	Description
Network Stack	Enable/Disable UEFI Network Stack
IPv4 PXE Support	If disabled, IPv4 PXE boot support will not be available.
IPv4 HTTP Support	If disabled, IPv4 HTTP boot support will not be available.
Ipv6 PXE Support	If disabled, IPv6 PXE boot support will not be available.
Ipv6 HTTP Support	If disabled, IPv6 HTTP boot support will not be available.
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
Media detect count	Number of times the presence of media will be checked. Use either +/- numeric keys to set the value.

4.4.9 NVMe Configuration



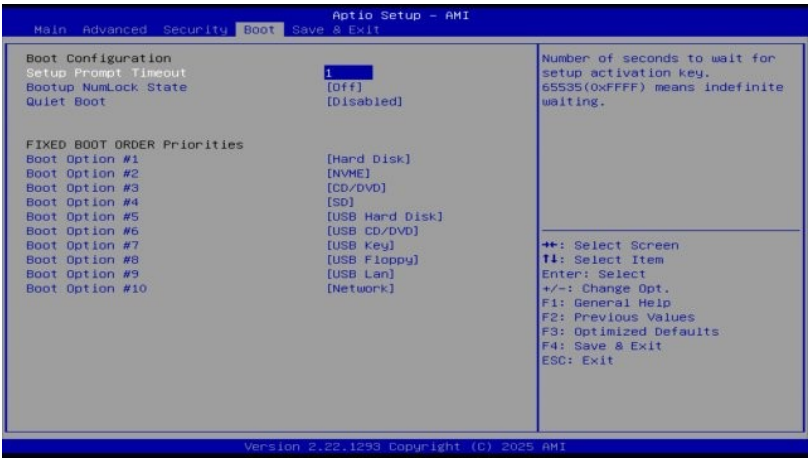
4.5 Security Settings





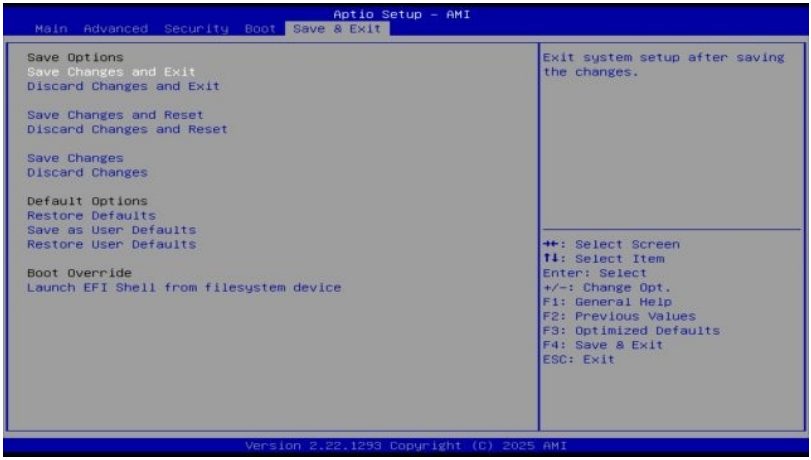
BIOS Setting	Description
Administrator Password	Sets an administrator password.
User Password	Sets User password.
Secure Boot	Secure Boot feature is Active if Secure Boot is Enabled, Platform Key (PK) is enrolled and the System is in User mode. The mode change requires platform reset
Secure Boot Mode	Secure Boot mode options: Standard or Custom. In Custom mode, Secure Boot Policy variables can be configured by a physically present user without full authentication.
Restore Factory Keys	Forces system to user mode. Install factory default Secure Boot key databases.
Reset to Setup Mode	Delete all Secure Boot key databases from NVRAM
Key Management	Enables expert users to modify Secure Boot Policy variables without full authentication.

4.6 Boot Settings



BIOS Setting	Description
Setup Prompt Timeout	Number of seconds to wait for setup activation key. 65535 (0xFFFF) means indefinite waiting.
Bootup NumLock State	Selects the keyboard NumLock state.
Quiet Boot	Enables / Disables Quiet Boot option.
FIXED BOOT ORDER Priorities	Sets the system boot order.

4.7 Save & Exit Settings



BIOS Setting	Description
Save Changes and Exit	Exits system setup after saving the changes.
Discard Changes and Exit	Exits system setup without saving any changes.
Save Changes and Reset	Resets the system after saving the changes.
Discard Changes and Reset	Resets system setup without saving any changes.
Save Changes	Saves changes done so far to any of the setup options.
Discard Changes	Discards changes done so far to any of the setup options.
Restore Defaults	Restores / Loads defaults values for all the setup options.
Save as User Defaults	Saves the changes done so far as User Defaults.
Restore User Defaults	Restores the user defaults to all the setup options.
Launch EFI Shell from filesystem device	Attempts to launch EFI shell application (Shell.efi) from one of the available filesystem devices.

Appendix

This section provides the mapping addresses of peripheral devices and the sample code of watchdog timer configuration.

A. I/O Port Address Map

Each peripheral device in the system is assigned a set of I/O port addresses which also becomes the identity of the device. The following table lists the I/O port addresses used.

Address	Device Description
0x00000A00-0x00000A0F	Motherboard resources
0x00000A10-0x00000A1F	Motherboard resources
0x00000070-0x00000071	System CMOS/real time clock
0x0000F000-0x0000FFFF	PCI Express Root Port
0x0000B000-0x0000EFFF	PCI Express Root Port
0x000003F8-0x000003FF	Communications Port (COM1)
0x000002F8-0x000002FF	Communications Port (COM2)
0x000003E8-0x000003EF	Communications Port (COM3)
0x000002E8-0x000002EF	Communications Port (COM4)
0x00000020-0x00000021	Programmable interrupt controller
0x000000A0-0x000000A1	Programmable interrupt controller
0x00000000-0x000003AF	PCI Express Root Complex
0x00000000-0x000003AF	Direct memory access controller
0x000003E0-0x00000CF7	PCI Express Root Complex
0x000003B0-0x000003DF	PCI Express Root Complex
0x00000D00-0x0000FFFF	PCI Express Root Complex
0x00000040-0x00000043	System timer
0x0000FF00-0x0000FFFF	AMD Radeon 760M Graphics
0x00000010-0x0000001F	Motherboard resources
0x00000022-0x0000003F	Motherboard resources
0x00000063-0x00000063	Motherboard resources
0x00000065-0x00000065	Motherboard resources
0x00000067-0x0000006F	Motherboard resources
0x00000072-0x0000007F	Motherboard resources
0x00000080-0x00000080	Motherboard resources
0x00000084-0x00000086	Motherboard resources
0x00000088-0x00000088	Motherboard resources
0x0000008C-0x0000008E	Motherboard resources
0x00000090-0x0000009F	Motherboard resources
0x000000A2-0x000000BF	Motherboard resources
0x000000B1-0x000000B1	Motherboard resources
0x000000E0-0x000000EF	Motherboard resources
0x000004D0-0x000004D1	Motherboard resources
0x0000040B-0x0000040B	Motherboard resources
0x000004D6-0x000004D6	Motherboard resources
0x00000C00-0x00000C01	Motherboard resources
0x00000C14-0x00000C14	Motherboard resources

0x00000C50-0x00000C51	Motherboard resources
0x00000C52-0x00000C52	Motherboard resources
0x00000C6C-0x00000C6C	Motherboard resources
0x00000C6F-0x00000C6F	Motherboard resources
0x00000CD0-0x00000CD1	Motherboard resources
0x00000CD2-0x00000CD3	Motherboard resources
0x00000CD4-0x00000CD5	Motherboard resources
0x00000CD6-0x00000CD7	Motherboard resources
0x00000CD8-0x00000CDF	Motherboard resources
0x00000800-0x0000089F	Motherboard resources
0x00000B00-0x00000B0F	Motherboard resources
0x00000B20-0x00000B3F	Motherboard resources
0x00000900-0x0000090F	Motherboard resources
0x00000910-0x0000091F	Motherboard resources
0x00000061-0x00000061	System speaker
0x00000081-0x00000083	Direct memory access controller
0x00000087-0x00000087	Direct memory access controller
0x00000089-0x0000008B	Direct memory access controller
0x0000008F-0x0000008F	Direct memory access controller
0x000000C0-0x000000DF	Direct memory access controller

B. Interrupt Request Lines (IRQ)

Peripheral devices use interrupt request lines to notify CPU for the service required. The following table shows the IRQ used by the devices on board.

Level	Function
IRQ 0	High precision event timer
IRQ 0	System timer
IRQ 8	High precision event timer
IRQ 7	AMD GPIO Controller
IRQ 39	High Definition Audio Controller
IRQ 39	AMD Audio CoProcessor
IRQ 4294967290	PCI Express Root Port
IRQ 4294967289	PCI Express Root Port
IRQ 4294967288	PCI Express Root Port
IRQ 4294967291	PCI Express Root Port
IRQ 4	Communications Port (COM1)
IRQ 3	Communications Port (COM2)
IRQ 5	Communications Port (COM3)
IRQ 6	Communications Port (COM4)
IRQ 4294967257-58	AMD PSP 11.0 Device
IRQ 4294967230-36	Intel(R) Ethernet Controller I226-V
IRQ 4294967223-29	Intel(R) Ethernet Controller I226-V #2
IRQ 55-204	Microsoft ACPI-Compliant System
IRQ 256-511	Microsoft ACPI-Compliant System
IRQ 4294967292-94	PCI Express Root Port
IRQ 36	High Definition Audio Controller
IRQ 4294967259-62	AMD USB 3.10 eXtensible Host Controller - 1.20 (Microsoft)
IRQ 4294967253-56	AMD Radeon 760M Graphics
IRQ 4294967237-52	NPU Compute Accelerator Device
IRQ 4294967263-78	USB4(TM) Host Router (Microsoft)
IRQ 4294967279-87	Standard NVM Express Controller

C. Watchdog Timer Configuration

The Watchdog Timer (WDT) is used to generate a variety of output signals after a user programmable count. The WDT is suitable for use in the prevention of system lock-up, such as when software becomes trapped in a deadlock. Under these sorts of circumstances, the timer will count to zero and the selected outputs will be driven.

Under normal circumstance, you will need to restart the WDT at regular intervals before the timer counts to zero.

Sample Code:

```
//-----------------------------------------------------------------------
//
// THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY
// KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE
// IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR
// PURPOSE.
//
//-----------------------------------------------------------------------
#include <dos.h>
#include <conio.h>
#include <stdio.h>
#include <stdlib.h>
#include "F81956.H"
//-----------------------------------------------------------------------
int main (int argc, char *argv[]);
void EnableWDT(int);
void DisableWDT(void);
//-----------------------------------------------------------------------
int main (int argc, char *argv[])
{
        unsigned char bBuf;
        unsigned char bTime;
        char **endptr;

        char SIO;

        printf("Fintek 81966 watch dog program\n");
        SIO = Init_F81956();
        if (SIO == 0)
        {
                printf("Can not detect Fintek 81966, program abort.\n");
                return(1);
        }//if (SIO == 0)

        if (argc != 2)
        {
                printf(" Parameter incorrect!!\n");
                return (1);
        }
```

```
        bTime = strtol (argv[1], endptr, 10);
        printf("System will reset after %d seconds\n", bTime);

        if (bTime)
        {           EnableWDT(bTime); }
        else
        {           DisableWDT();}
        return 0;
}
//-----------------------------------------------------------------------
void EnableWDT(int interval)
{
        unsigned char bBuf;

        bBuf = Get_F81956_Reg(0x2B);
        bBuf &= (~0x20);
        Set_F81956_Reg(0x2B,  bBuf);          //Enable WDTO

        Set_F81956_LD(0x07);                  //switch to logic device 7
        Set_F81956_Reg(0x30,  0x01);          //enable timer

        bBuf = Get_F81956_Reg(0xF5);
        bBuf &= (~0x0F);
        bBuf |= 0x52;
        Set_F81956_Reg(0xF5,  bBuf);          //count mode is second

        Set_F81956_Reg(0xF6,  interval);      //set timer

        bBuf = Get_F81956_Reg(0xFA);
        bBuf |= 0x01;
        Set_F81956_Reg(0xFA,  bBuf);          //enable WDTO output

        bBuf = Get_F81956_Reg(0xF5);
        bBuf |= 0x20;
        Set_F81956_Reg(0xF5,  bBuf);          //start counting
}
//-----------------------------------------------------------------------
void DisableWDT(void)
{
        unsigned char bBuf;

        Set_F81956_LD(0x07);                  //switch to logic device 7

        bBuf = Get_F81956_Reg(0xFA);
        bBuf &= ~0x01;
        Set_F81956_Reg(0xFA,  bBuf);          //disable WDTO output

        bBuf = Get_F81956_Reg(0xF5);
        bBuf &= ~0x20;
        bBuf |= 0x40;
        Set_F81956_Reg(0xF5,  bBuf);          //disable WDT
}
//-----------------------------------------------------------------------
```

```
//-----------------------------------------------------------------------
//
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// KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE
// IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR
// PURPOSE.
//
//-----------------------------------------------------------------------
#include "F81956.H"
#include <dos.h>
//-----------------------------------------------------------------------
unsigned int F81956_BASE;
void Unlock_F81956 (void);
void Lock_F81956 (void);
//-----------------------------------------------------------------------
unsigned int Init_F81956(void)
{
        unsigned int result;
        unsigned char ucDid;

        F81956_BASE = 0x4E;
        result = F81956_BASE;

        ucDid = Get_F81956_Reg(0x20);
        if (ucDid == 0x07)                      //Fintek 81966
        {       goto    Init_Finish;            }

        F81956_BASE = 0x2E;
        result = F81956_BASE;

        ucDid = Get_F81956_Reg(0x20);
        if (ucDid == 0x07)                      //Fintek 81966
        {       goto    Init_Finish;            }

        F81956_BASE = 0x00;
        result = F81956_BASE;

Init_Finish:
        return (result);
}
//-----------------------------------------------------------------------
void Unlock_F81956 (void)
{
        outportb(F81956_INDEX_PORT, F81956_UNLOCK);
        outportb(F81956_INDEX_PORT, F81956_UNLOCK);
}
//-----------------------------------------------------------------------
void Lock_F81956 (void)
{
        outportb(F81956_INDEX_PORT, F81956_LOCK);
}
//-----------------------------------------------------------------------
void Set_F81956_LD( unsigned char LD)
{
        Unlock_F81956();
        outportb(F81956_INDEX_PORT, F81956_REG_LD);
        outportb(F81956_DATA_PORT, LD);
```

```
                Lock_F81956();
}
//-----------------------------------------------------------------------
void Set_F81956_Reg( unsigned char REG, unsigned char DATA)
{
                Unlock_F81956();
                outportb(F81956_INDEX_PORT, REG);
                outportb(F81956_DATA_PORT, DATA);
                Lock_F81956();
}
//-----------------------------------------------------------------------
unsigned char Get_F81956_Reg(unsigned char REG)
{
                unsigned char Result;
                Unlock_F81956();
                outportb(F81956_INDEX_PORT, REG);
                Result = inportb(F81956_DATA_PORT);
                Lock_F81956();
                return Result;
}
//-----------------------------------------------------------------------



//-----------------------------------------------------------------------
//
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// KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE
// IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR
// PURPOSE.
//
//-----------------------------------------------------------------------
#ifndef   F81956_H
#define   F81956_H                    1
//-----------------------------------------------------------------------
#define       F81956_INDEX_PORT       (F81956_BASE)
#define       F81956_DATA_PORT        (F81956_BASE+1)
//-----------------------------------------------------------------------
#define       F81956_REG_LD           0x07
//-----------------------------------------------------------------------
#define       F81956_UNLOCK           0x87
#define       F81956_LOCK             0xAA
//-----------------------------------------------------------------------
unsigned int Init_F81956(void);
void Set_F81956_LD( unsigned char);
void Set_F81956_Reg( unsigned char,
unsigned char); unsigned char
Get_F81956_Reg( unsigned char);
//-----------------------------------------------------------------------
#endif  //   F81956_H
```

D. Onboard Connector Reference Types

Function	Connector	Onboard Type	Compatible Mating Type
LVDS Backlight	J1	E-CALL 0110-161-040	JST PHR-4
Audio	J2	Hao Guo Xing Ye DF11-12S-PA66H	HRS DF11-12DS-2C
LVDS	J6,J8	HIROSE DF20EG-20DP-1V(52)	HRS DF20A-20DS-1C
USB 2.0	J17	Hao Guo Xing Ye DF11-10S-PA66H	HRS DF11-10DS-2C
COM Serial Port	J16,J18,J19	Hao Guo Xing Ye DF11-10S-PA66H	HRS DF11-10DS-2C
Front Panel Setting	J21	E-CALL 2.0 mm-pitch pin header (Male)	Dupont 8P 2.0mm-pitch(female)
DC Power Input	CN8	YIMTEX 532VW4STR	JST VHR-4N

E. USB Power Control Mapping

PDPC (Peripheral Device Power Control) allows users to turn off the external power and restart it via software, enabling the external device to recover and ensuring the system remains operational. Here are the bit-mapping for software SDK.

Function	Connector	Software Mapping
USB 3.2 Gen2	CN6 (A, B)	Bit_0