

innodisk

APEX-P200

User Manual



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Preface

Thank you for your purchase of Innodisk's APEX-P200 system. This accompanying manual provides a detailed guide for engineers and technicians, and aims to assist in the setup and deployment of the board into industrial settings and solutions.

Introduction

This innovative new system with Intel® Core™ i7-13800HE Processor, supports up to 32GB of DDR5 5200MHz memory, and comes with rich expansion options.

Notices

Innodisk reserves the right to change the contents of this document without notice. Information contained inside is for reference only and does not represent any kind of commitment or guarantee from the manufacturer. In addition, Innodisk is not responsible for any damages caused from the use, or misuse of the information inside.

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Safety Warnings

- Always unplug mains power before installation of components
- Ensure the correct AC input voltage is used to power the device

RTC Battery Warnings

Incorrect Replacement: Avoid replacing the battery with an incorrect type, as this can bypass safety mechanisms. This is particularly crucial for certain types of lithium batteries.

Unsafe Disposal: Never dispose of a battery in fire or a hot oven, nor should you mechanically crush or cut a battery. These actions can lead to explosions.

Exposure to High Temperatures: Leaving a battery in an environment with extremely high temperatures can cause explosions or result in the leakage of flammable liquids or gases.

Low Air Pressure Conditions: Subjecting a battery to extremely low air pressure may lead to explosions or leakage of flammable substances.

Warranty

Innodisk Corporation guarantees that all Innodisk manufactured products undergo strenuous quality control testing before delivery. In the event that any product defect (nonconformity) occurred with respect to the product, Innodisk will provide product repair and replacement service within the warranty period of this product (2 years).

CE & FCC Conformity

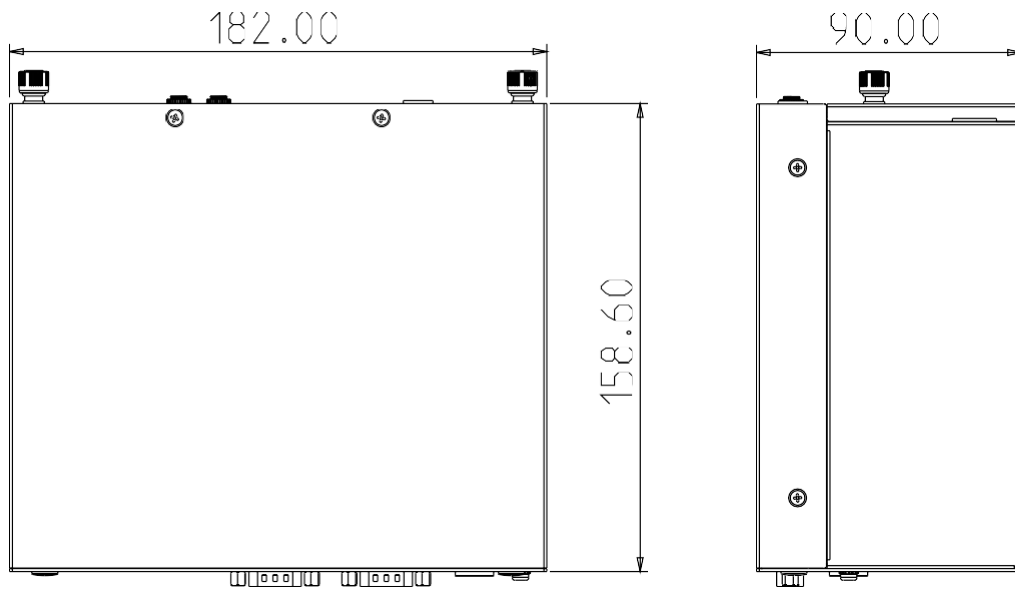
This product conforms to FCC (class B for digital devices), and CE requirements.

Specifications

Platform	CPU	Intel® Core™ i7-13800HE Processor
	Max. Frequency	Up to 5.00 GHz
	CPU TDP	45W
	BIOS	AMI SPI 256Mbit
GPU	MXM Type-A	NVIDIA RTX 2000 Ada
	Cores	3072 x NVIDIA Ada Lovelace architecture-based CUDA Cores 96 x NVIDIA fourth-generation Tensor Cores 24 x NVIDIA third-generation RT Cores
	System Interface	PCIe Gen.4 x8 via MXM Type A
	Graphics Memory	8GB GDDR6
Memory	Technology	Dual channel DDR5, up to 5200MHz
	Max. Capacity	32GB (up to 16GB per SO-DIMM); 16GB SO-DIMM is pre-installed
	Socket	2 x 262pin
Graphics	Controller	Intel® Iris X ^e Graphics architecture
	Graphic Engine	OpenGL 4.6, DirectX 12, Vulkan 1.2
		8K30 or 5K60 8b/10b 4:2:0 HEVC/VP9/SCC 8K60 12b 4:2:0 HEVC/VP9/SCC; 8K30 10b 4:2:0 AV1
Audio	Controller	Realtek ALC888, High Definition Audio
Expansions Slots	MXM	1 x MXM Type A (PCIe x8 Gen.5) (1 x RTX 2000 Ada is pre-installed)
	Interface	1 x 2230 E Key (PCIe x1 Gen.3/USB 2.0) 1 x 2280 M Key (PCIe x4 Gen.4, 1 x M.2 2280 512GB NVMe SSD is pre-installed)
Front I/O	Button	1 x Power button
	USB 2.0	2
	Audio	1 x Line-Out, 1 x Mic-In
	Out-of-band (OOB)	1 x InnoAgent (RJ45)
Rear I/O	USB 2.0 (Type A)	2

	USB 3.2 Gen.2 x1 (Type A)	2
	Display	1 x HDMI 2.1, Up to 8K@60Hz
	Ethernet	3 x RJ45 LAN Connector (LAN2, LAN3 support 802.at with 30W PoE)
	Serial Ports	2 x RS232/422/485 (COM1 support 5V/12V selection)
Power Supply	Power Input Voltage / Type	DC-in 19V / 4-pin connector
	Power Consumption	19V @ 10.5A (w/ MXM GPU, Intel® Core™i7-13800HE, 512G SSD, 32G memory)
Environment	Operating Temperature	-20°C~60°C with 0.5m/s air flow
	Storage Temperature	-20°C~80°C
	Relative Humidity	5 to 95% @ 40°C, non-condensing
	Operating vibration	1Grms, IEC 60068-2-64, random vibration, 5~500Hz, 1hr/axis (w/ SSD, w/o PCIe Card)
	Operating shock	10G, IEC-60068-2-27, half sine, 11ms duration (w/ SSD, w/o PCIe Card)
Watchdog Timer	Interval	255-level timer interval
Security	TPM 2.0	Default: dTPM 2.0
Physical Characteristics	Dimension	182mm x 156.6mm x 90 mm
	Net Weight / Gross Weight	2.96kg/3.66kg
	Mount	Wall mount
	Antenna Holes	2
Operating System		Microsoft Windows/Linux®
Regulation	Safety	CE/FCC Class B/RoHS/UKCA

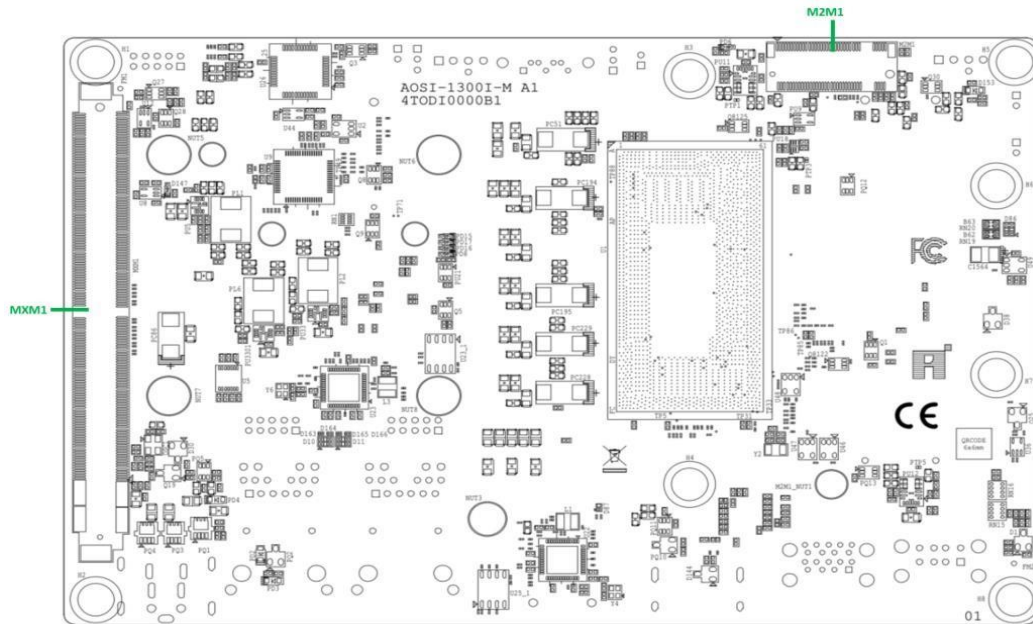
System Dimensions



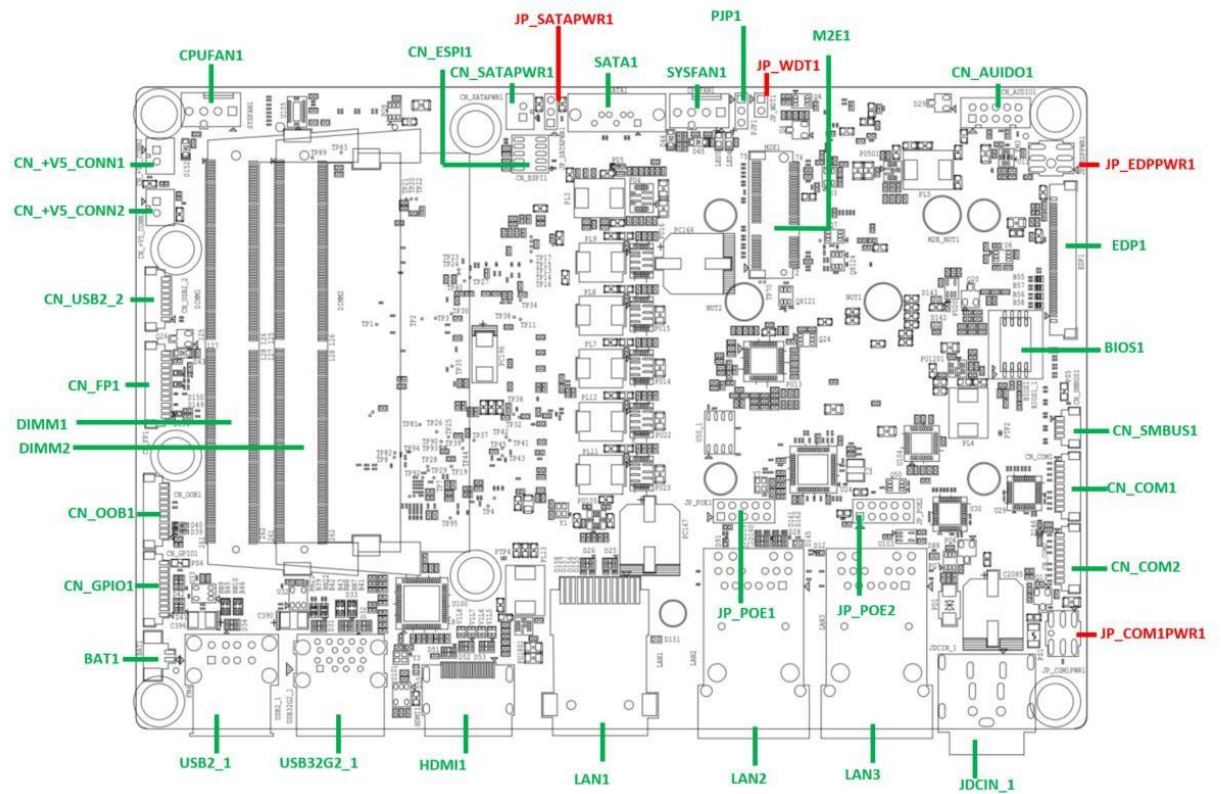
Jumpers & Connectors

Connector and Header Location:

1.01.1 Top Side:



1.01.2 Bottom Side:



1.02 Connector and Header List:

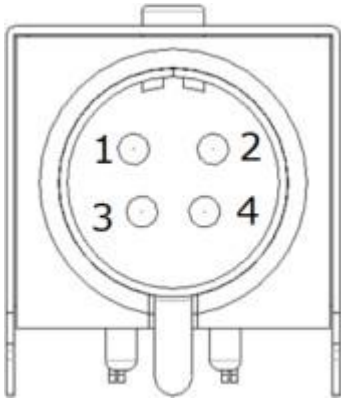
Port Name	Description
JDCIN_1	19V Power Jack Quick Lock Connector
JP_POE1	POE brd to brd Connector
JP_POE2	POE brd to brd Connector
LAN3	RJ45 2.5Gbps port(POE)
LAN2	RJ45 2.5Gbps port(POE)
LAN1	RJ45 2.5Gbps port
HDMI1	High Definition Multimedia Interface
USB32G2_1	USB 3.2 Gen2 Type-A Connector x2
USB2_1	Dual USB 2.0 Type-A Connector
BAT1	RTC battery connector
CN_GPIO1	8-bits General Purpose I/O Pin Connector
CN_OOB1	InnoAgent Connector
CN_FP1	Front Panel Connector
DIMM1	DDR5 SODIMM 9.2H Socket
DIMM2	DDR5 SODIMM 5.2H Socket
CN_USB2_1	USB 2.0 Internal Connector
CN_+V5_CONN1	+V5 Power Connector
CN_+V5_CONN2	+V5 Power Connector
SYSFAN1	SYSTEM FAN Connector
CPUFAN1	CPU FAN Connector
CN_SATAPWR1	SATA Power Connector
SATA1	SATA Signal Connector with support SATA DOM
CN_AUDIO1	HD Audio Interface (Analog)
EDP1	eDP Panel Connector
M2E1	NGFF M.2 E-Key connector for 2230 module
M2M1	NGFF M.2 M-Key connector for 2280 module
BIOS1	SPI BIOS Flash Socket
CN_SMBUS1	SMBUS Connector
CN_COM1	COM 1 Port Connector
CN_COM2	COM 2 Port Connector
CN_ESPI1	ESPI Pin Header

1.03 Jumper and Header List:

Location	Description
JP_EDPPWR1	eDP Voltage Selection Jumper
JP_SATAPWR1	SATA Power: 5V/5VSB Selection
JP_WDT	Watchdog Timer: with/without System Reset
JP_COM1PWR1	COM1 RI# pin RI#/5V/12V Select Jumper

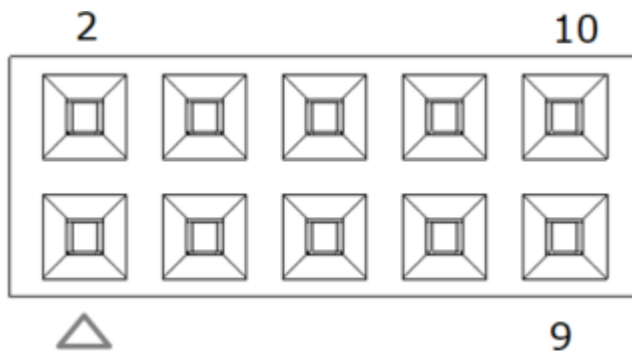
1.04 Connector and Header List Description:

(1) 19V Power Jack Quick Lock Connector (JDCIN_1)



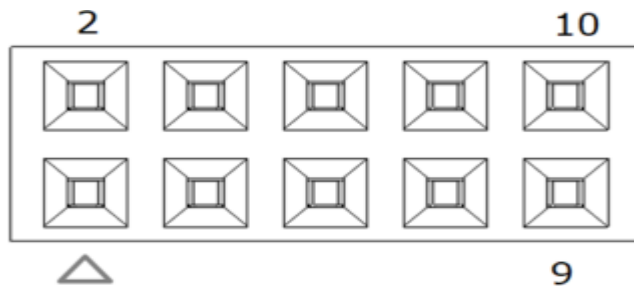
Pin	Signal Pin	Pin	Signal Pin Definition
1	+19V	3	GND
2	+19V	4	GND

(2) POE brd to brd Connector (JP_POE1)



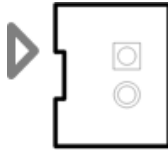
Pin	Signal Pin	Pin	Signal Pin Definition
1	+V19SB	2	+V19SB
3	GND	4	GND
5	PMC_SLP_S3#	6	NC
7	GND	8	GND
9	+V_PSE_N1	10	+V_PSE_P1

(3) POE brd to brd Connector (JP_POE2)



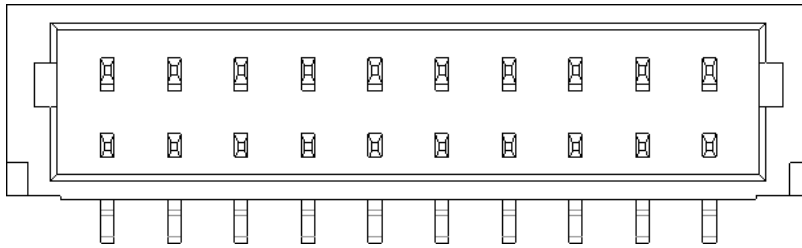
Pin	Signal Pin	Pin	Signal Pin Definition
1	+V19SB	2	+V19SB
3	GND	4	GND
5	PMC_SLP_S3#	6	NC
7	GND	8	GND
9	+V_PSE_N2	10	+V_PSE_P2

(4) RTC battery connector (BAT1)



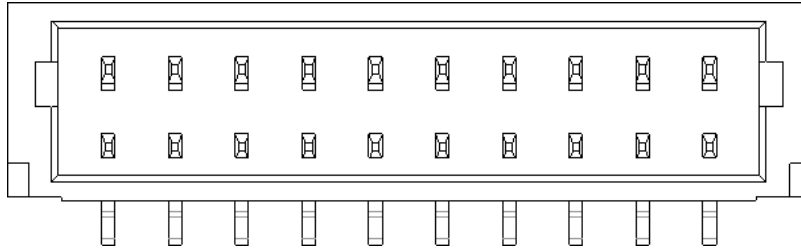
Pin	Signal Pin Definition
1	GND
2	VBAT

(5) 8-bits General Purpose I/O Pin Connector (CN_GPIO1)



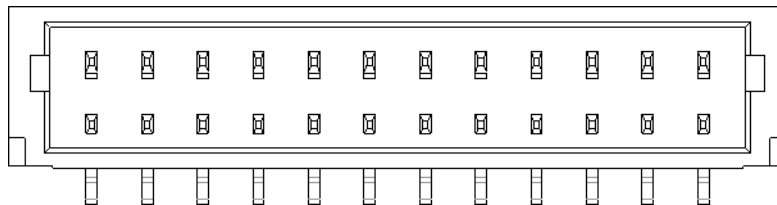
Pin	Signal Pin	Pin	Signal Pin Definition
1	SIO_GPIO0	2	SIO_GPIO1
3	SIO_GPIO2	4	SIO_GPIO3
5	SIO_GPIO4	6	SIO_GPIO5
7	SIO_GPIO6	8	SIO_GPIO7
9	+V3.3SB_GPIO	10	GND

(6) InnoAgent Connector (CN_OOB1)



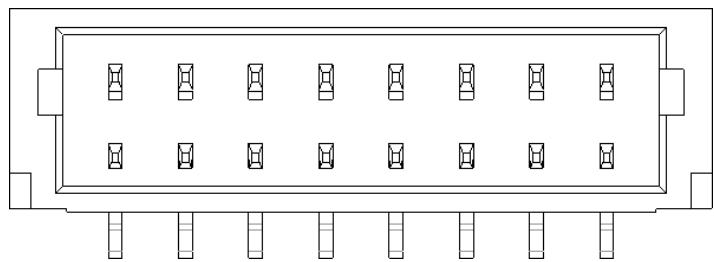
Pin	Signal Pin	Pin	Signal Pin Definition
1	+V5_DUAL_OOB	2	FP_PANSWIN#
3	FP_SYS_RESET#	4	OOB_UART_TX
5	OOB_UART_RX	6	SMB_CLK_RESUME
7	SMB_DAT_RESUME	8	OOB_Recovery#
9	SYS_EVENT#	10	GND

(7) Front Panel Connector (CN_FP1)



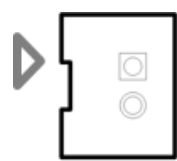
Pin	Signal Pin	Pin	Signal Pin Definition
1	SIO_SUSLED+	2	SIO_SUSLED-
3	+V3.3	4	GND
5	+V3.3	6	ACCESS_LED#
7	FP_PANSWIN#	8	FP_SYS_RESET#
9	HWM_CASEOP#	10	BUZZER+
11	BUZZER-	12	GND

(8) USB 2.0 Internal Connector (CN_USB2_1)



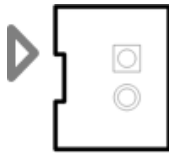
Pin	Signal Pin	Pin	Signal Pin Definition
1	+USBV4	2	+USBV4
3	USB2_D9-	4	USB2_D9+
5	GND	6	USB2_D10-
7	USB2_D10+	8	GND

(9) +V5 Power Connector (CN_+V5_CONN1)



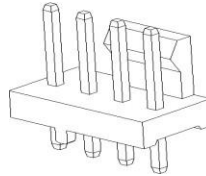
Pin	Signal Pin Definition
1	GND
2	+V5_CONN1

(10) +V5 Power Connector (CN_+V5_CONN2)



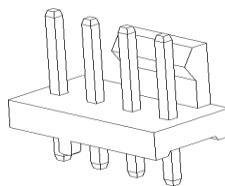
Pin	Signal Pin Definition
1	GND
2	+V5_CONN2

(11) SYSTEM FAN Connector (**SYSFAN1**)



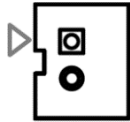
Pin	Signal Pin Definition
1	GND
2	+V12
3	SYS_FAN_TACH
4	SYS_FAN_PWM

(12) CPU FAN Connector (**CPUFAN1**)



Pin	Signal Pin Definition
1	GND
2	+V12
3	CPUFANIN
4	CPUFANOUT

(13) SATA Power Connector (**CN_SATAPWR1**)



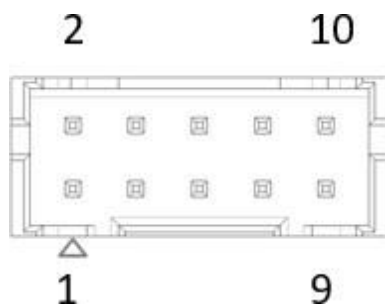
Pin	Signal Pin Definition
1	GND
2	+5V

(14) SATA Signal Connector with support SATA DOM (SATA1**)**



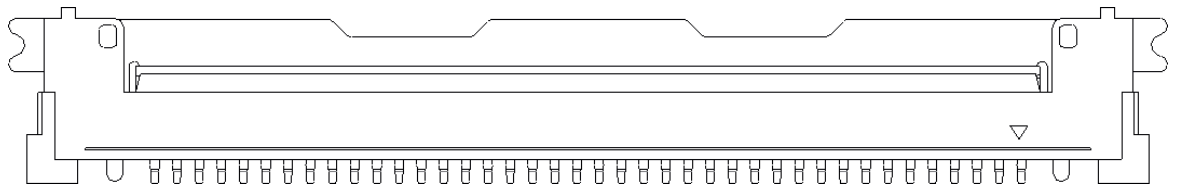
Pin	Signal Pin Definition
1	GND
2	SATA1_C_TX+
3	SATA1_C_TX-
4	GND
5	SATA1_C_RX-
6	SATA1_C_RX+
7	GND
8	+5V

(15) HD Audio Interface (Analog) (CN_AUDIO1**)**



Pin	Signal Pin	Pin	Signal Pin Definition
1	A_z_MIC1-L	2	GND_A
3	A_z_MIC1-R	4	AUD_Presence#
5	A_z_LINEO-R	6	MIC1_JD
7	A_FIO_SENSE	8	NC
9	A_z_LINEO-L	10	LINEO_JD

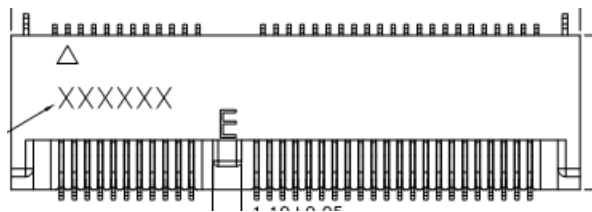
(16) eDP Panel Connector (**EDP1**)



Pin	Signal Pin	Pin	Signal Pin Definition
1		2	GND
3	eDP_LANE3_N	4	eDP_LANE3_P
5	GND	6	eDP_LANE2_N
7	eDP_LANE2_P	8	GND
9	eDP_LANE1_N	10	eDP_LANE1_P
11	GND	12	eDP_LANE0_N
13	eDP_LANE0_P	14	GND
15	eDP_AUX+	16	eDP_AUX-
17	GND	18	+VDD_eDP
19	+VDD_eDP	20	+VDD_eDP
21	+VDD_eDP	22	GND
23	GND	24	GND
25	GND	26	GND
27	DDIA_HPD	28	GND
29	GND	30	GND

Pin	Signal Pin	Pin	Signal Pin Definition
31	GND	32	BLONOFF
33	DIMMING	34	GND
35	GND	36	eDP_Inverter_Power
37	eDP_Inverter_Power	38	eDP_Inverter_Power
39	eDP_Inverter_Power	40	GND

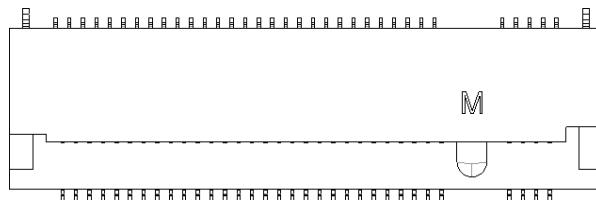
(17) NGFF M.2 E-Key connector for 2230 module (M2E1)



Pin	Signal Pin Definition	Pin	Signal Pin Definition
1	GND	2	+V3.3_M2E1
3	USB2_DP3	4	+V3.3_M2E1
5	USB2_DN3	6	M.2_WLAN_LED1#
7	GND	8	NC
9	NC	10	NC
11	NC	12	NC
13	GND	14	NC
15	NC	16	M.2_BT_LED2
17	NC	18	GND
19	GND	20	WIFI_BT_WAKE_N
21	NC	22	NC
23	NC	24	Connector KEY
25	Connector KEY	26	Connector KEY
27	Connector KEY	28	Connector KEY
29	Connector KEY	30	Connector KEY

Pin	Signal Pin Definition	Pin	Signal Pin Definition
31	Connector KEY	32	NC
33	GND	34	NC
35	M2E1_PCIE_TX+	36	NC
37	M2E1_PCIE_TX-	38	M.2_WLAN_CL_RST
39	GND	40	M.2_WLAN_CL_DATA
41	PCIE_PRX_P5	42	M.2_WLAN_CL_CLK
43	PCIE_PRX_N5	44	M2E1_COEX3
45	GND	46	M2E1_COEX2
47	CLKOUT_PCIE_1_P	48	M2E1_COEX1
49	CLKOUT_PCIE_1_N	50	SUSCLK
51	GND	52	PLTRST_M.2#
53	SRCCLKREQ1#_E_KEY	54	GPP_A13_BT_RF_KILL
55	PCIE_WAKE#	56	GPP_E3_WIFI_RF_KILL
57	GND	58	NC
59	NC	60	NC
61	NC	62	NC
63	GND	64	GND
65	NC	66	PLTRST_M.2#
67	NC	68	NC
69	GND	70	PCIE_WAKE#
71	NC	72	+V3.3_M2E1
73	NC	74	+V3.3_M2E1
75	GND		

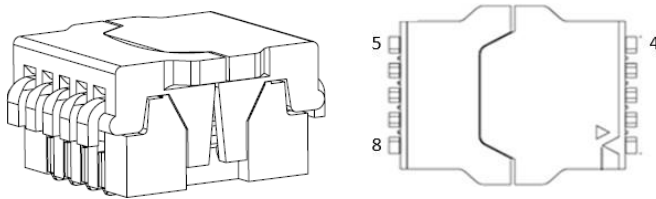
(18) NGFF M.2 M-Key connector for 2280 module (M2M1)



Pin	Signal Pin Definition	Pin	Signal Pin Definition
1	GND	2	+V3.3_M2M1
3	GND	4	+V3.3_M2M1
5	PCIE4_PRX_N3	6	NC
7	PCIE4_PRX_P3	8	+V3.3_M2M1
9	GND	10	+V3.3_M2M1
11	PCIE4_PTX_N3	12	+V3.3_M2M1
13	PCIE4_PTX_P3	14	+V3.3_M2M1
15	GND	16	+V3.3_M2M1
17	PCIE4_PRX_N2	18	+V3.3_M2M1
19	PCIE4_PRX_P2	20	NC
21	GND	22	NC
23	PCIE4_PTX_N2	24	NC
25	PCIE4_PTX_P2	26	NC
27	GND	28	NC
29	PCIE4_PRX_N1	30	NC
31	PCIE4_PRX_P1	32	NC
33	GND	34	NC
35	M2M1_PCIE_C_TX_1-	36	NC
37	M2M1_PCIE_C_TX_1+	38	TP83
39	GND	40	SMB1_CLK_RESUME_1.8V
41	SATA0_PCIE4_MUX_RXN	42	SMB1_DAT_RESUME_1.8V
43	SATA0_PCIE4_MUX_RXP	44	NC
45	GND	46	NC
47	SATA0_PCIE4_MUX_TXN	48	NC
49	SATA0_PCIE4_MUX_TXP	50	PLTRST_M.2_M#
51	GND	52	SRCCLKREQ3#_M_KEY
53	CLKOUT_PCIE_3_N	54	PCIE_WAKE#
55	CLKOUT_PCIE_3_P	56	NC
57	GND	58	NC
59	Connector KEY	60	Connector KEY
61	Connector KEY	62	Connector KEY
63	Connector KEY	64	Connector KEY
65	Connector KEY	66	Connector KEY
67	GND	68	M2M1_SUSCLK

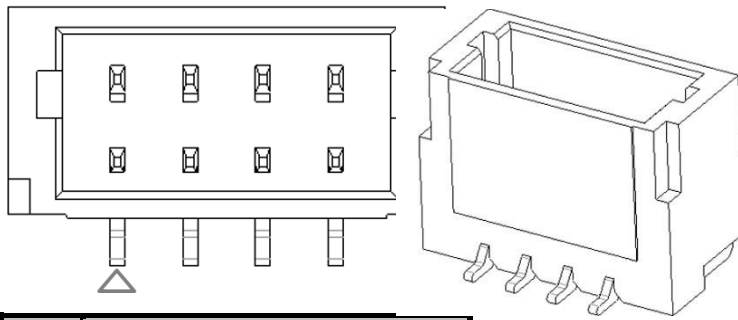
Pin	Signal Pin Definition	Pin	Signal Pin Definition
69	+V3.3_M2M1	70	+V3.3_M2M1
71	GND	72	+V3.3_M2M1
73	GND	74	+V3.3_M2M1
75	GND		

(19) SPI BIOS Flash Socket (BIOS1)



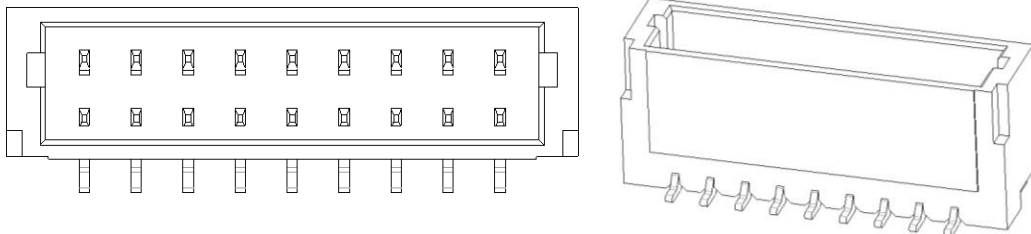
Pin	Signal Pin	Pin	Signal Pin Definition
1	SPI0_BIOS_CS0#	5	SPI0_BIOS_MOSI
2	SPI0_BIOS_MISO	6	SPI0_BIOS_CLK
3	SPI0_BIOS_WP#	7	SPI_BIOS_HOLD#
4	GND	8	+V3.3_SPI

(20) SMBUS Connector (CN_SMBUS1)



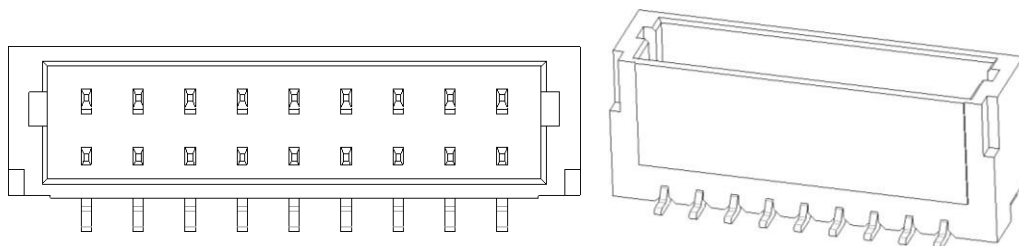
Pin	Signal Pin Definition
1	+V3.3_SMB
2	SMB_CLK_RESUME
3	SMB_DAT_RESUME
4	GND

(21) COM 1 Port Connector (CN_COM1)



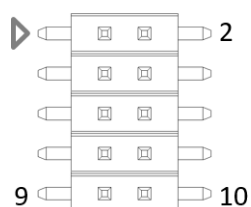
SCOM 1	Signal Pin	Pin	Signal Pin
1	COM1_DCD#	2	COM1_SIN
3	COM1_SOUT	4	COM1_DTR#
5	GND	6	COM1_DSR#
7	COM1_RTS#	8	COM1_CTS#
9	COM1_RI_V#		

(22) COM2 Port Connector (CN_COM2)



SCOM 1	Signal Pin	Pin	Signal Pin
1	COM2_DCD#	2	COM2_SIN
3	COM2_SOUT	4	COM2_DTR#
5	GND	6	COM2_DSR#
7	COM2_RTS#	8	COM2_CTS#
9	COM2_RI#		

(23) ESPI Pin Header (CN_ESPI1)

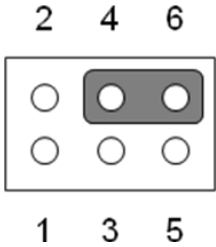
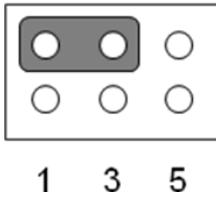
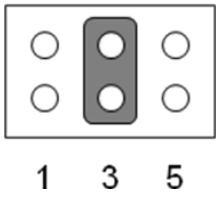


Pin	Signal Pin	Pin	Signal Pin Definition
1	ESPI1_IO1	2	ESPI1_CLK
3	ESPI1_IO0	4	ESPI1_RST#

Pin	Signal Pin	Pin	Signal Pin Definition
5	+V3.3	6	ESPI1_CS#
7	GND	8	ESPI1_IO3
9	+V3.3SB	10	ESPI1_IO2

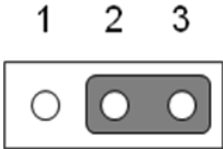
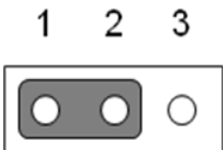
1.05 Jumper and Header List Description:

(1) eDP/LVDS Panel Voltage Selection (JP_EDPPWR1)

Function	Jumper Setting
Jumper position for +3.3V (Default)	
Jumper position for +5V	
Jumper position for +12V	

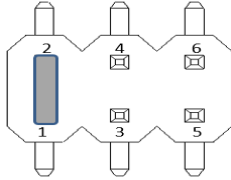
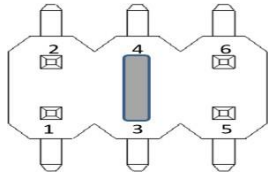
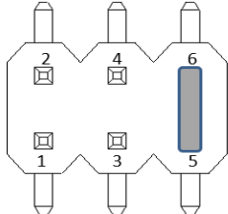
Pin	Signal Pin	Pin	Signal Pin Definition
1	N/C	2	+V5
3	+V12	4	+VDD_eDP
5	N/C	6	+V3.3

(2) SATA Power: 5V/5VSB Selection (JP_SATAPWR1)

Function	Jumper Setting
+5V (Default)	
+V5SB	

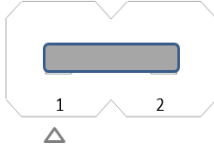
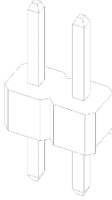
Pin	Signal Pin Definition
1	+V5SB
2	+V5_SATA
3	+V5

(3) COM1 RI# pin RI#/5V/12V Select (JP_COM1PWR1)

Function	Jumper Setting
Jumper position for RI# (Default)	
Jumper position for +5V	
Jumper position for +12V	

Pin	Signal Pin	Pin	Signal Pin Definition
1	COM1_RI#	2	COM1_RI_VA#
3	COM1_RI_VA#	4	+V5
5	+V12	6	COM1_RI_VA#

(4) Watchdog Timer: with/without System Reset (JP_WDT)

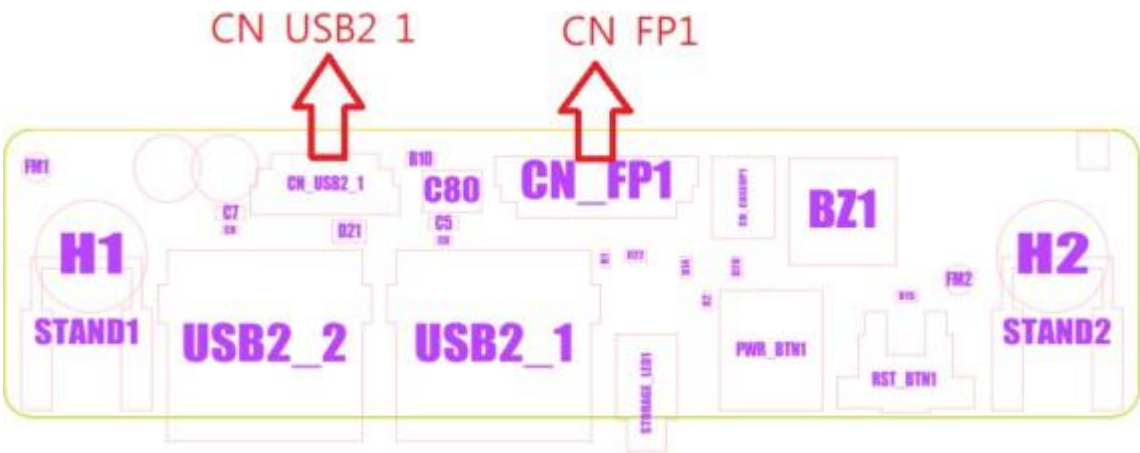
Function	Jumper Setting
Watchdog Timer: with/without System Reset (1-2) (Default)	 

Pin	Signal Pin Definition
1	SIO_WG#
2	FP_SYS_RESET#

Front IO Jumpers & Connectors

Connector and Header Location:

1.05.1 Top Side:



Connector and Header List:

Port Name	Description
CN_FP1	Front Panel connector
CN_USB2_1	USB 2.0 wafer connector

Connector and Header List Description:

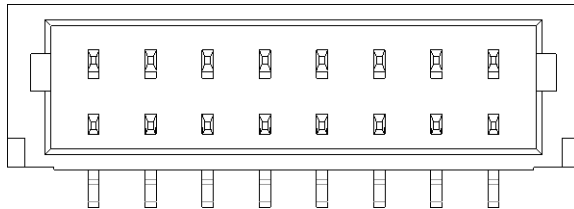
(4) Front Panel connector (CN_FP1)



Pin	Signal Pin	Pin	Signal Pin Definition
1	SIO_SUSLED+	2	SIO_SUSLED-

Pin	Signal Pin	Pin	Signal Pin Definition
3	NC	4	GND
5	STORAGE_LED	6	STORAGE_LED#
7	FP_PANSWIN#	8	FP_SYS_RESET#
9	HWM_CASEOP#	10	BUZZER+
11	BUZZER-	12	GND

(5) USB 2.0 Internal Header (CN_USB2_1)



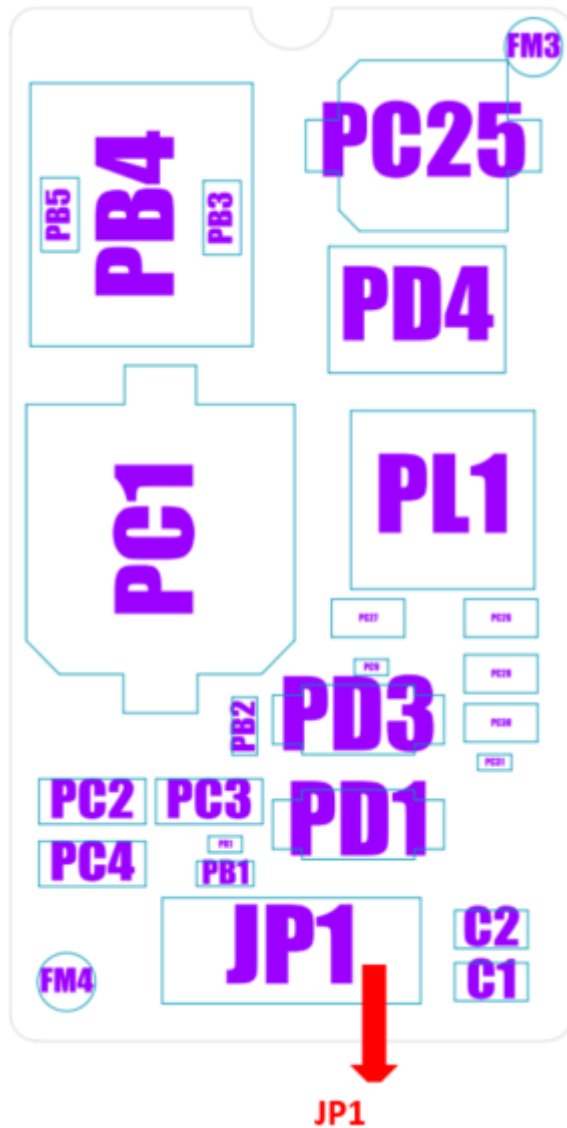
△

Pin	Signal Pin Definition
1	+USBV5
2	+USBV5
3	USB2_D7-
4	USB2_D7+
5	GND
6	USB2_D9-
7	USB2_D9+
8	GND

POE4 Jumpers & Connectors

Connector and Header Location:

1.05.1 Top Side:

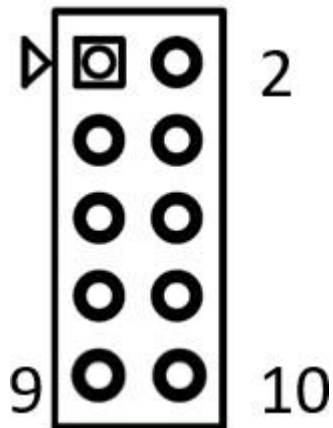


Connector and Header List:

Port Name	Description
JP1	POE BRD CONN

Connector and Header List Description:

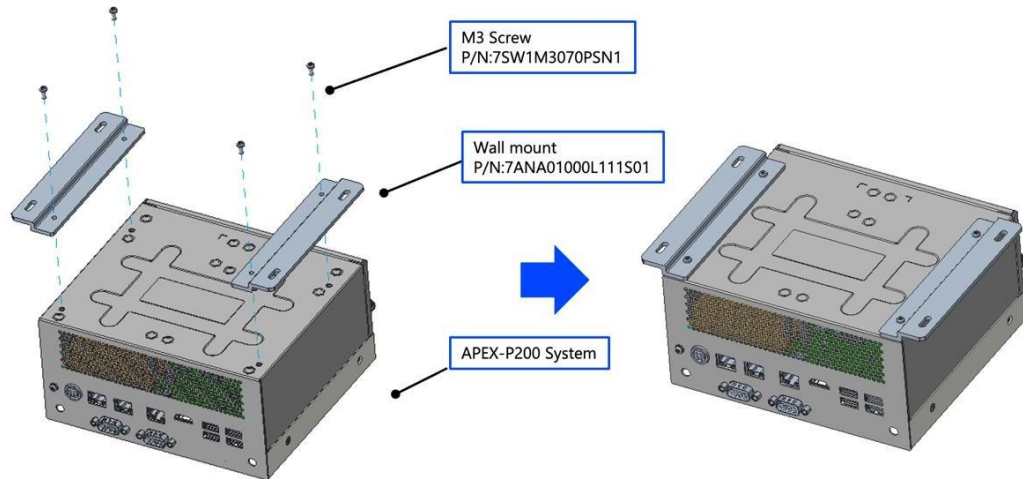
(1)POE BRD CONN(JP1)



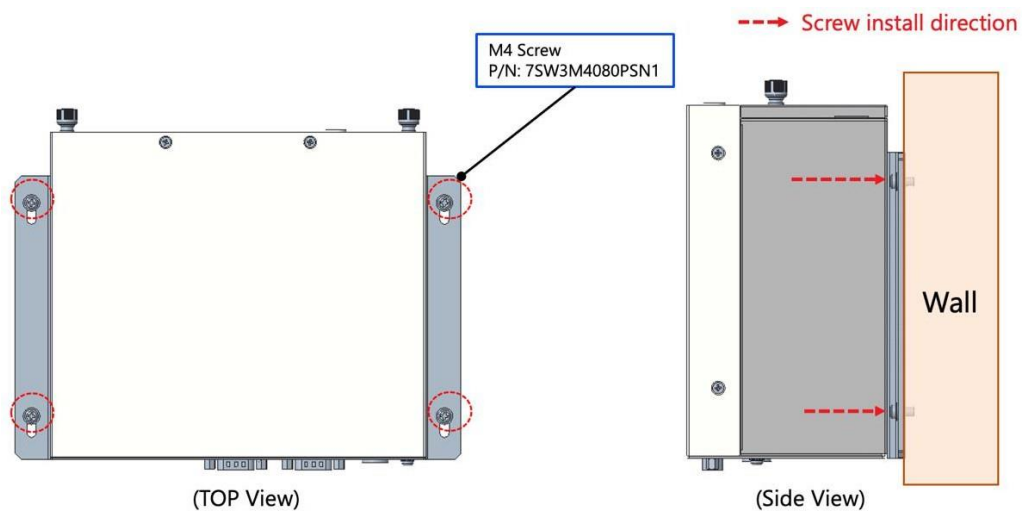
Pin	Signal Pin	Pin	Signal Pin Definition
1	+VIN_DC	2	+VIN_DC
3	GND	4	GND
5	NC	6	PMC_SLP_S3#
7	GND	8	GND
9	+V_PSE_P	1-	+V_PSE_N

Wall Mount Installation

1. Use 4x M3 screws to install the wall mount to the APEX-P200 system.



2. Use the 4x M4 screws to install the system to the wall.



Beep Codes

PEI Beep Codes	Description
1	Memory not Installed
1	InstallPeiMemory routine in PEI Core was called twice
2	Recovery started
3	DXE IPL was not found
3	DXE Core firmware volume was not found
4	Recovery failed
4	S3 resume failed
7	Reset PPI is not available

DXE Beep Codes	Description
1	Invalid password
3	Some of the architectural protocols are not available
4	No console input devices found
5	No console output devices found
6	Flash update failed
7	Reset protocol is not available
8	Platform PCI resource requirements cannot be met

Entering BIOS Setup

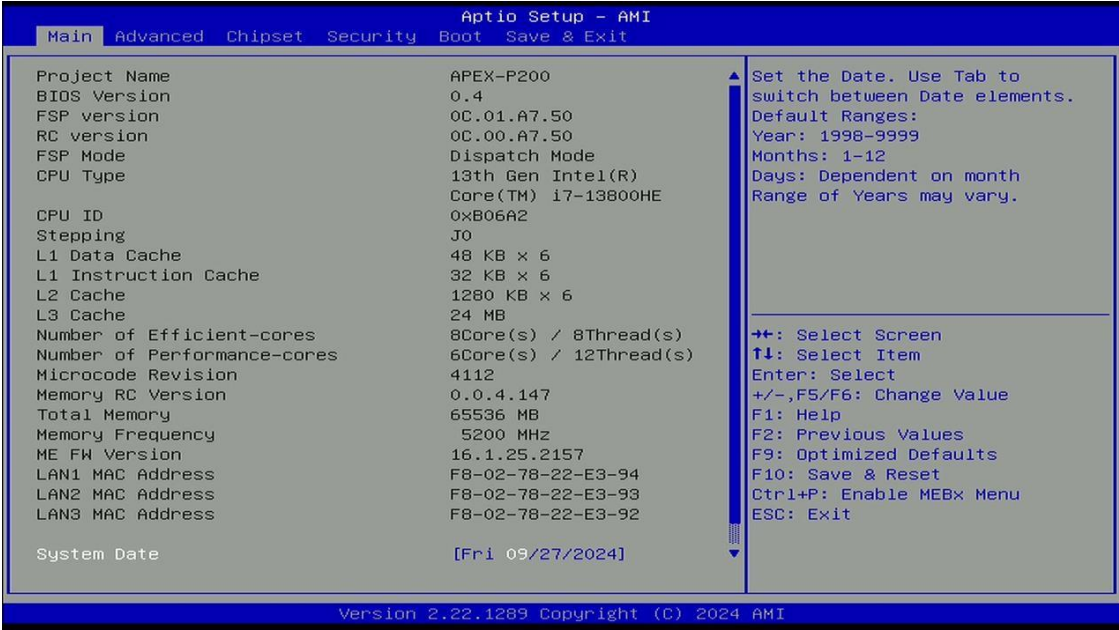
To enter the BIOS setup, press the DELETE key during system boot.

BIOS Controls

The BIOS is entirely controlled by the keyboard, using the following keys:

Hot Key	Description
Left/right	Switch selected menu
Up/down	Select item
Enter	Confirm selection or open sub menu
Plus/minus or F5/F6	Change the value of a setting
F1	Display help screen
F2	Restore previous value
F9	Load optimized default
F10	Save the selected setting
ESC	Discard changes and exit BIOS

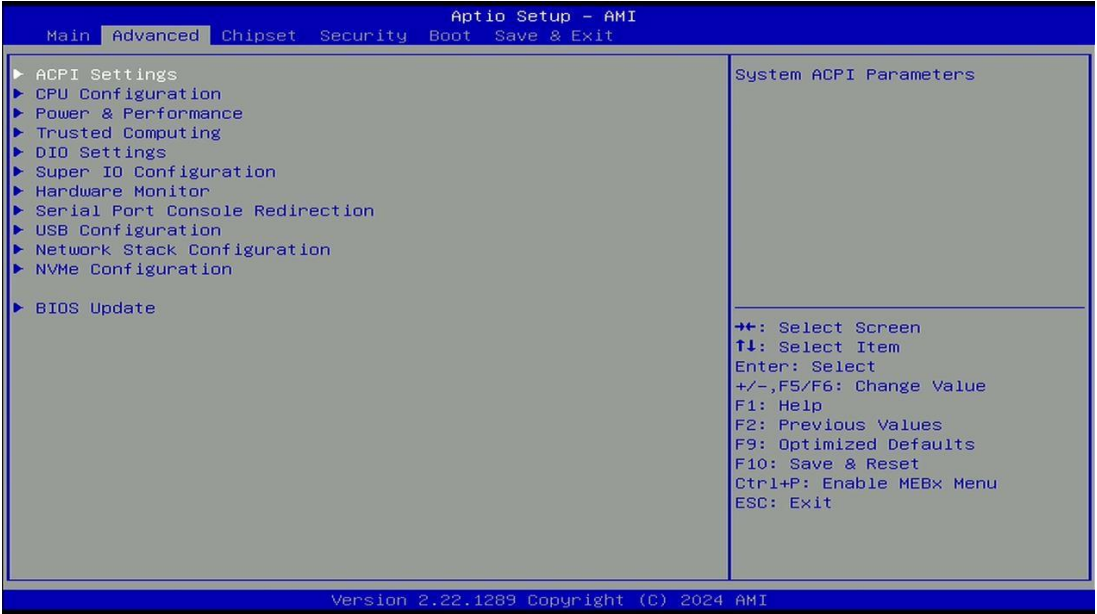
BIOS Main Tab



Location: Main

Setting Name	Available Options
System Date	01/01/1998 – 31/12/9999 (MM/DD/YYYY)
System Time	00:00:00 – 23:59:59 (HH/MM/SS)

BIOS Advanced Tab



Location: Advanced > ACPI Settings

Setting Name	Available Options
Wake System from S5 via RTC	Enabled, Disabled
Wake up hour	0 – 23
Wake up minute	0 – 59
Wake up second	0 – 59
State After G3	S0 State, S5 State, Last State
Wake on PME	Enabled, Disabled
USB Wake from S3/S4	S3, S4

Location: Advanced > CPU Configuration

Setting Name	Available Options
Intel (VMX) Virtualization Technology	Enabled, Disabled
Active Performance-cores	All, 1, 2, 3
Active Efficient-cores	All, 0, 1, 2, 3, 4, 5, 6, 7
Hyper-threading	Enabled, Disabled

Location:

Advanced > Power & Performance > CPU – Power Management Control

Setting Name	Available Options
Intel® SpeedStep™	Enabled, Disabled
Turbo Mode	Enabled, Disabled
C states	Enabled, Disabled
Package C State Limit	C0/C1, C2, C3, C6, C7, C7S, C8, C9, C10, CPU Default, Auto

Location: Advanced > Trusted Computing

Setting Name	Available Options
Security Device Support	Enabled, Disabled
Pending Operation	None, TPM Clear

Location: Advanced > DIO Settings

Setting Name	Available Options
DIO PIN Type 1	Output Low, Output High, Input
DIO PIN Type 2	Output Low, Output High, Input
DIO PIN Type 3	Output Low, Output High, Input

DIO PIN Type 4	Output Low, Output High, Input
DIO PIN Type 5	Output Low, Output High, Input
DIO PIN Type 6	Output Low, Output High, Input
DIO PIN Type 7	Output Low, Output High, Input
DIO PIN Type 8	Output Low, Output High, Input

Location: Advanced > Super IO Configuration

Setting Name	Available Options
WatchDog Timer Unit	Second, Minute
Super IO WatchDog Timer	0 – 255
COM1	Enabled, Disabled
Electrical Interface Mode	RS232, RS485, RS422
COM2	Enabled, Disabled
Electrical Interface Mode	RS232, RS485, RS422
COM11	Enabled, Disabled

Location: Advanced > Hardware Monitor

Setting Name	Available Options
CPUFAN1 Mode	Manual Mode, SMART FAN
GPUFAN1 Mode	Manual Mode, SMART FAN

Location: Advanced > Serial Port Console Redirection

Setting Name	Available Options
COM1 Console Redirection	Enabled, Disabled
COM2 Console Redirection	Enabled, Disabled

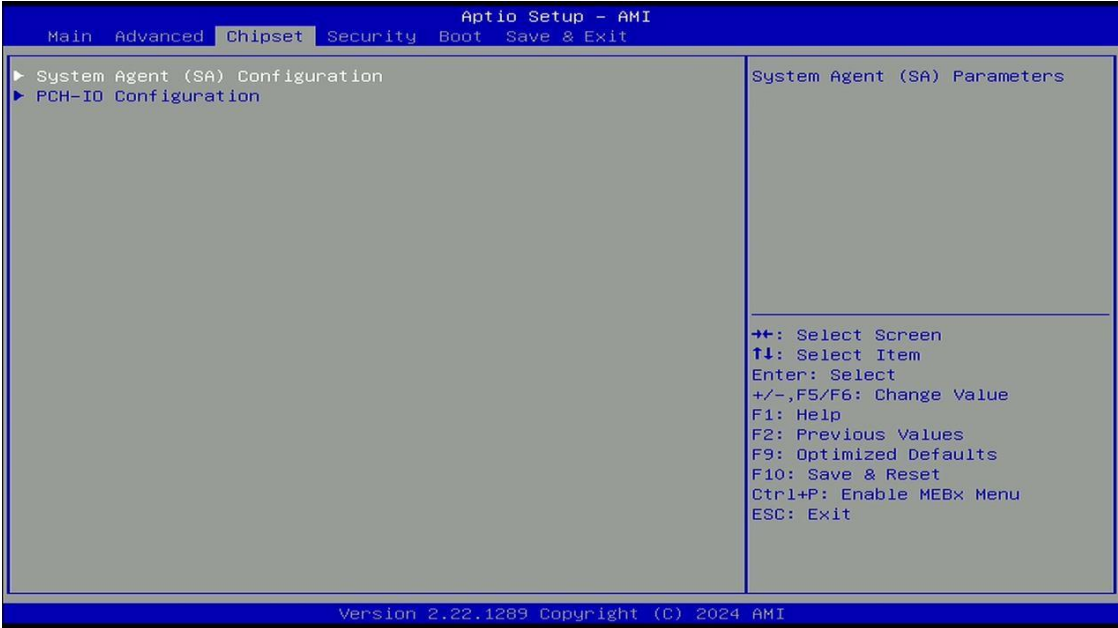
Location: Advanced > USB Configuration

Setting Name	Available Options
USB Mass Storage Driver Support	Enabled, Disabled

Location: Advanced > Network Stack

Setting Name	Available Options
Network Stack	Enabled, Disabled

BIOS Chipset Tab



Location: Chipset > System Agent (SA) Configuration

Setting Name	Available Options
VT-d	Enabled, Disabled

Location:

Chipset > PCH-IO Configuration > VMD Setup Menu

Setting Name	Available Options
Enable VMD Controller	Enabled, Disabled

Location:

Chipset > PCH-IO Configuration > PCI Express Configuration > M2M1

Setting Name	Available Options
M2M1	Enabled, Disabled
PCIe Speed	Auto, Gen1, Gen2, Gen3, Gen4

Location:

Chipset > PCH-IO Configuration > PCI Express Configuration > MXM1

Setting Name	Available Options
MXM1	Enabled, Disabled
PCIe Speed	Auto, Gen1, Gen2, Gen3, Gen4, Gen5

Location:

Chipset > PCH-IO Configuration > PCI Express Configuration > M2E1

Setting Name	Available Options
M2E1	Enabled, Disabled
PCIe Speed	Auto, Gen1, Gen2, Gen3

Location:

Chipset > PCH-IO Configuration > PCI Express Configuration > LAN1

Setting Name	Available Options
LAN1	Enabled, Disabled

Location:

Chipset > PCH-IO Configuration > PCI Express Configuration > LAN2

Setting Name	Available Options
LAN2	Enabled, Disabled

Location:

Chipset > PCH-IO Configuration > PCI Express Configuration > LAN3

Setting Name	Available Options
LAN3	Enabled, Disabled

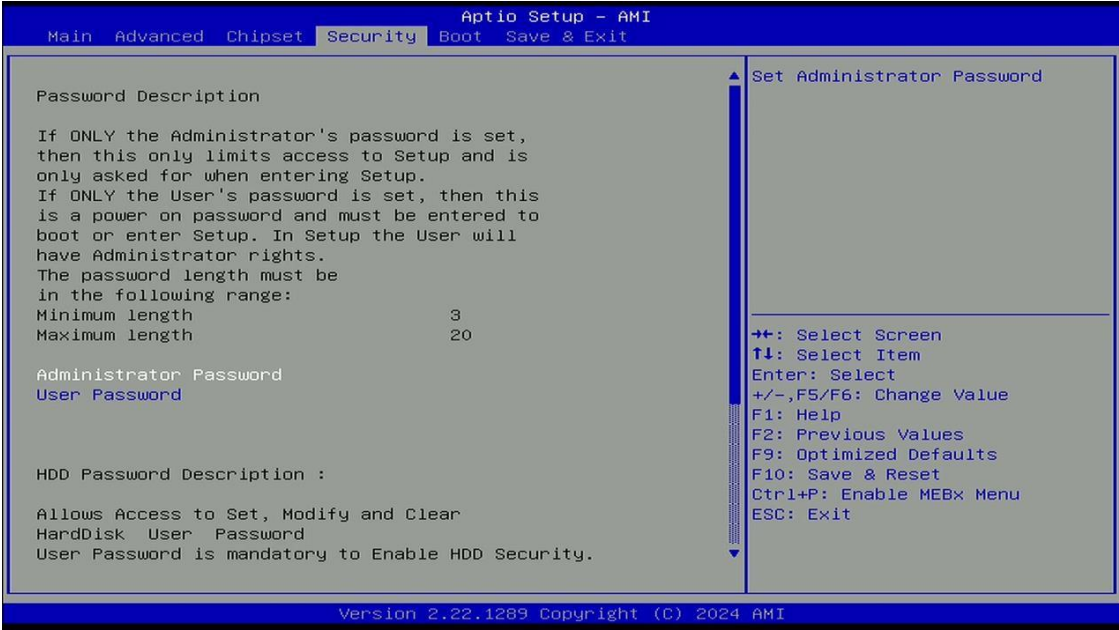
Location: Chipset > PCH-IO Configuration > SATA Configuration

Setting Name	Available Options
SATA Controller(s)	Enabled, Disabled
SATA Mode Selection	AHCI
Port 0 (M2M1)	Enabled, Disabled
Port 1 (SATA1)	Enabled, Disabled

Location: Chipset > PCH-IO Configuration > HD Audio Configuration

Setting Name	Available Options
HD Audio	Enabled, Disabled

BIOS Security Tab



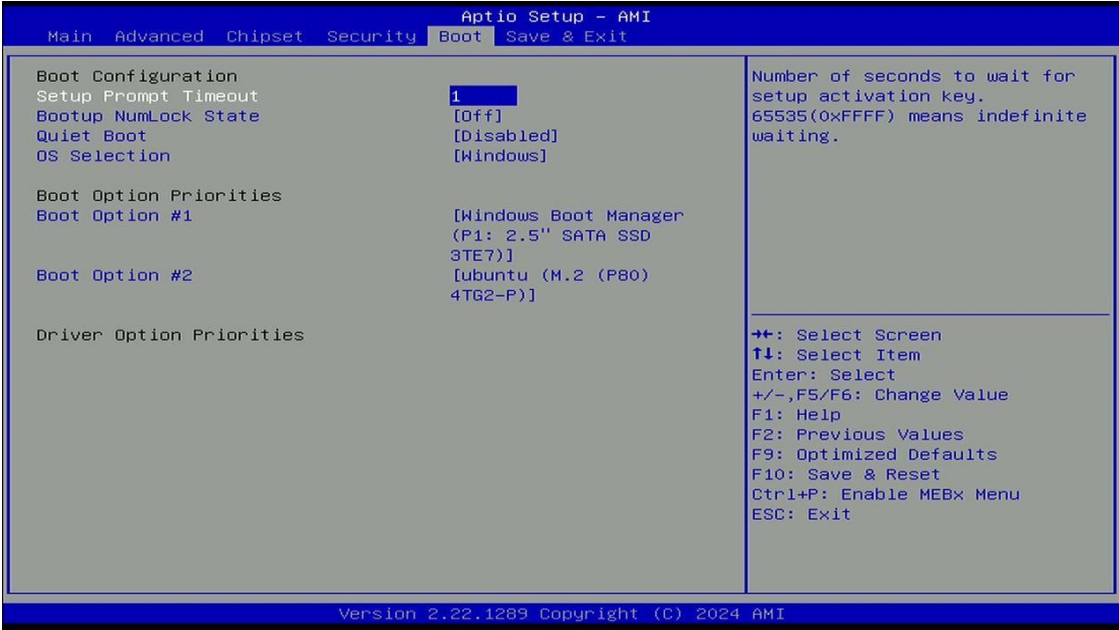
Location: Security

Setting Name	Available Options
Administrator Password	3 to 20 characters
User Password	3 to 20 characters

Location: Security > Secure Boot

Setting Name	Available Options
Secure Boot	Enabled, Disabled
Secure Boot Mode	Standard, Custom
Restore Factory Keys	Yes, No

BIOS Boot Tab



Location: Boot

Setting Name	Available Options
Setup Prompt Timeout	1 - 65535
Bootup NumLock State	On, Off
Quiet Boot	Enabled, Disabled
OS Selection	Windows, Linux, RealTime OS
Boot Option #1	UEFI: Built-in EFI Shell, Disabled

Appendix

Accelerator Compatible List:

	APEX-X100	APEX-P100 (MXM Type B)	APEX-P200 (MXM Type A)	APEX-E100
NVIDIA RTX	NVIDIA RTX 4000 SFF Ada NVIDIA RTX 4000 Ada NVIDIA RTX 4500 Ada NVIDIA RTX 5000 Ada NVIDIA RTX 6000 Ada NVIDIA L4 (support up to dual L4) NVIDIA A2 NVIDIA A10 NVIDIA A30	NVIDIA Quadro RTX 3000 NVIDIA Quadro RTX 5000 NVIDIA RTX A4500 NVIDIA RTX 5000 Ada NVIDIA RTX 3500 Ada	NVIDIA Quadro T1000 NVIDIA RTX A500 NVIDIA RTX A1000 NVIDIA RTX A2000 NVIDIA RTX 2000 Ada	N/A

Note: The above product may reach End of Life (EOL) in accordance with the supplier's Life Cycle Management policy

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