

H610-OPS

INYUDA Product Specification



Product Model No.: H610 -OPS

PCB_VERSION: V2.1

Statement:

The contents contained in this manual do not represent a commitment on the part of the Company. The Company reserves the right to make changes to this manual without notice, and shall not be liable for any indirect, direct, intentional or unintentional damages and hazards resulting from improper installation or use.

Warning

To avoid the risk of electric shock:

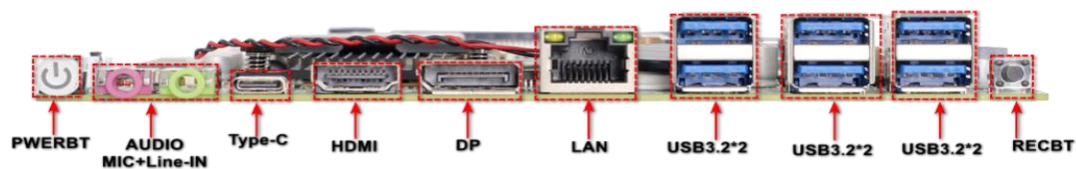
- Do not connect or disconnect any cables, install, maintain or reconfigure this product during a thunderstorm.
- Connect all power cords properly and use a grounded electrical outlet.
- Connect all devices to be connected to this product to properly wired outlets.
- Try to connect or disconnect signal cables with one hand only.

When replacing the system battery, use a comparable battery for replacement. Batteries contain lithium and can explode if used, handled, or disposed of incorrectly.

I. Details Specifications:

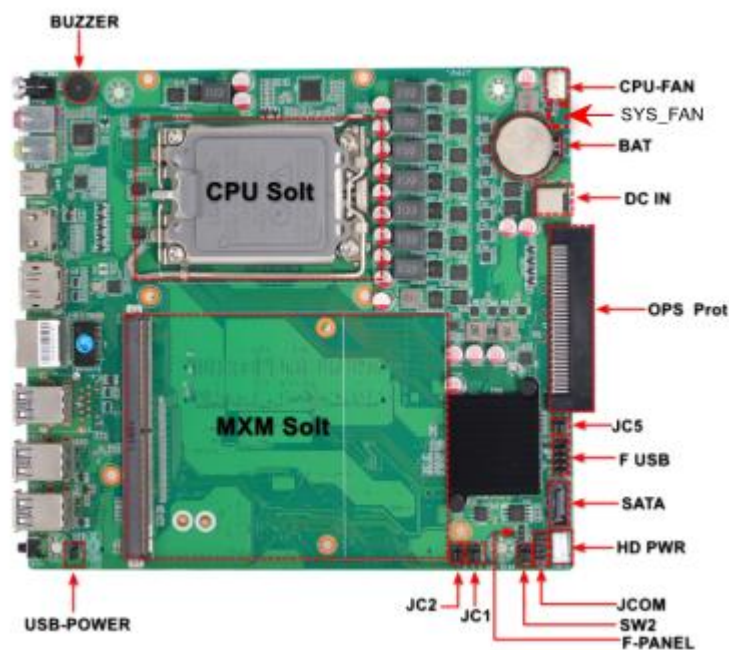
Motherboard No. & Version	● H610-OPS V2.1
Processor	● Support LGA1700, Celeron/Pentium/Core I3/I5/I7/I9, 12-14th Gen CPU
Graphics	● Intel®HD Integrated Graphics ● MXM Solt : Port A: DP/ Port B:HDMI/ Port C:HDMI/ Port D: DP [MXM video card can install optionally]
Display Ports	● IO Port: HDMI+DP+Type-C_ DP ● OPS Port: HDMI+DP ● HDMI Max resolution Support 3840x2160@60hz ● DP Max resolution Support 3840x2160@60hz
Memory	● 2 *SO-DIMM Support DDR4 2133/2400/2666/3200MHz MAX: 64G
Storage	● 1*SATA 3.0 Socket, support 2.5inch Hard Disk ● 1*M.2 M Key 2280 solt Support NVMe/SATA Protocol [via JMP to switch]
Extension	● 1*M.2 E Key 2230 solt
Audio	● 1*Realtek ACL897 High Definition Audio Driver
Internet	● 1*Realtek RLT8111H Gigabit Ethernet card[2*Lan optional with 42MM height case]
USB	● 6*USB3.2 Gen2 X1 [Max support: 10Gbps]
I/O Chip-set	● ITE8613E
BIOS	● AMI BIOS
Power Supply	● DC_JACK 12V /19V
Cooling System	● Built-in CPU cooler[1*CPU_FAN 1x4Pin, 1*SYS_FAN 1x4Pin]
Environment	● Working Temperature: 0~60℃ Storage Temperature: -20℃~75℃ ● Humidity: 0%~95% Relative humidity, non-condensing

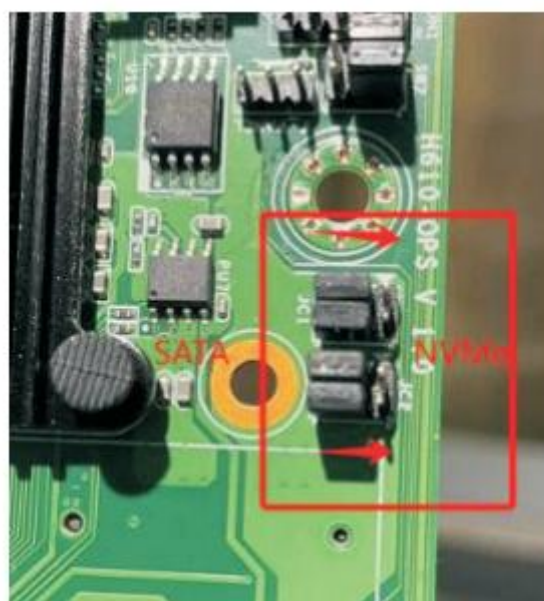
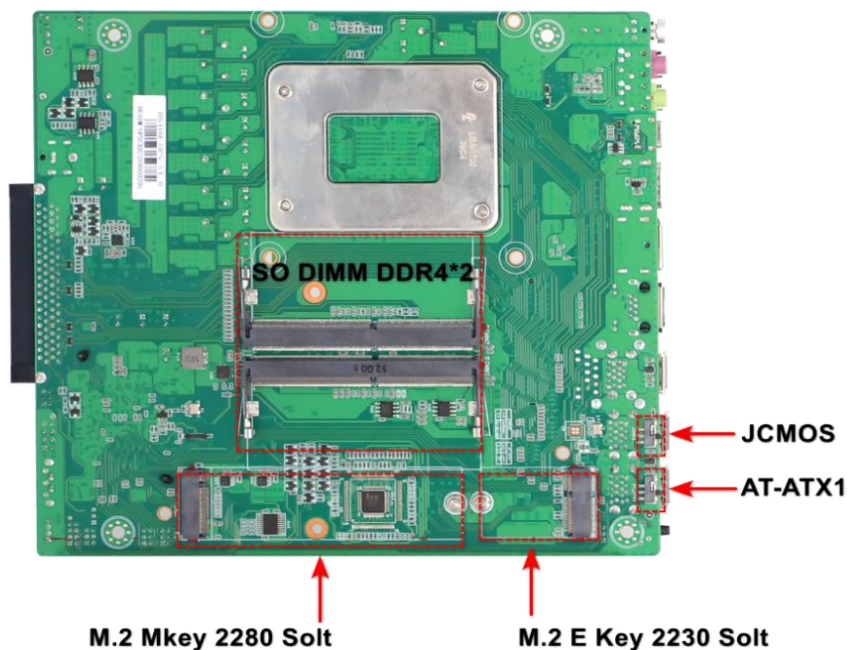
Rear I/O Port:



PWERBT	● Power Button
AUDIO	● Pink: MIC; Green: Line-out
Type-C	● Type-C USB function(Support USB3.2), and display function
HDMI	● Max support 3840x2160@60Hz
DP	● Max support 3840x2160@60Hz
LAN	● RJ45 Ethernet With10/100/1000Mbps LAN RealtekGigabit Ethernet card
USB	● 6*USB3.2 [Gen2*3 MAX: 10Gbps]
REC_BT	● One-Click Restore Used in conjunction with software

II. Inner Interface





***The jumpers (on the left side) defaulted SATA protocol, move them into the right side, the m.2 socket support NVMe protocol.

USB_POWER	● 1x3Pin Header [JMP Default 1-2=VCC5/ Switch 2-3=5VSB]
F_PANEL	● 1x3Pin Header [Short circuit 1-2=Power on/ Short circuit 2-3=Restart]
BUZZER	● Buzzer: indicator for power on/off

AT_ATX1	● 1x3Pin Header [JMP Default 1-2=Shut off Auto-power on / Switch 2-3=Turn on Auto-power on]
JCMOS	● 1x3Pin Header [JMP Default 1-2 / Switch 2-3=CLR_CMOS]
JCOM	● 2x5:9Pin Header RS232
SW2	● 2X3:6Pin Header [Default 1-3、2-4=JCOM1 / Switch 3-5、4-6=OPS Port (RX TX)]
BAT	● Bios Battery
HDD_PWR1	● 1x4Pin Wafer [External SATA Hard Disk Power]
SATA1	● SATA3.0
DC_IN	● DC Power: 12V/19V
CPU_FAN	● 1x4Pin Wafer CPU_FAN Connector
SYS_FAN	● 1x4Pin Wafer CPU_FAN Connector (CPU_FAN1)
M.2 M Key	● M.2 M Key 2280 Slot [Default SATA Protocol / Switch SW4 SW3JMP / Switch NVMe Protocol]
M.2 E Key	● M.2 E Key 2230 Slot Support WiFi+Bluetooth
SO-DIMM	● 2*SO-DIMM DDR4 Slot Support DDR4 2133/2400/2666/3200MHz MAX: 64GB
OPS Port	● JATEX25-80Pin Open Pluggable System Socket

III. OPS Port JATEX25-80Pin Function:

DP	● 1*DP Display Port
HDMI	● 1*HDMI Display Port
USB3.2	● 6*USB3.2 Gen2
CPU_FAN_TACH	● System Fan Control

UART	● UART3.3V output TX RX
PS_ON#	● Pluggable Signal On Input
STATUS	● Power normal Output (oc) detection

IV. OPS Case Size



BIOS Function Introduction

1.1 BIOS explanation

This motherboard uses AMI BIOS, which is called Basic Input Output System (BIOS). It is stored in a ROM (Read-Only Memory) chip on the motherboard of your computer. When you turn on your computer, BIOS is the first program to run, and it has the following main functions:

- a. Initialize your computer and test the hardware, this process is called POST (PowerOn SelfTest)
- b. Load and run your operating system.
- c. Provide the lowest, most basic level of control over your computer's hardware.
- d. Manage your computer through SETUP.

The modified BIOS data is stored in a battery-operated CMOS RAM, which is not lost when power is removed. Normally, the BIOS does not need to be modified when the system is running normally, but if the CMOS data is lost for other reasons, the BIOS values must be reset.

1.2 BIOS Setup

This chapter provides information about the BIOS Setup program, which allows you to configure and optimize your system settings. Some of the items in the BIOS that are not described in detail are non-useful, and it is recommended that you keep the default settings and do not change them until you fully understand their functions, in the following cases you need to run the SETUP program.

- a. An error message appears on the screen during the system self-test and asks to enter the SETUP program:

- a. An error message appears on the screen during the system self-test and asks to enter the SETUP program;
- b. You want to change the factory default settings according to the customer's characteristics.

Note: Since the BIOS version of the motherboard is constantly being upgraded, the description of the BIOS in this manual is for reference only.

The description of BIOS in this manual is for reference only. We do not guarantee the consistency of the information in this manual with the information you have obtained.

1.3 Entering the BIOS Setup Program

Turn on the power or reboot the system, you can see the following message in the self-test screen, press to enter the BIOS setup program F

Keys	Functions
→/←	Move the left and right arrows to select the screen
↑/↓	Move the up and down arrows to select up and down items
+/-	Increase/decrease values or change selection items
<Enter>	Select this option to enter the submenu
<ESC>	Return to the main screen, or end the CMOS SETUP program from the main screen.
<F1>	Display related auxiliary instructions
<F2>	Discard the set value
<F9>	Load the optimized setting
<F10>	Save the changed CMOS settings and reboot.
<F11>	Quick startup items

WARNING: Operating this device in a residential environment may cause radio interference.

The connecting cable for the antenna port is less than or equal to 3m.