

产 品 规 格 说 明 书

INYUDA for Product Specification Manual

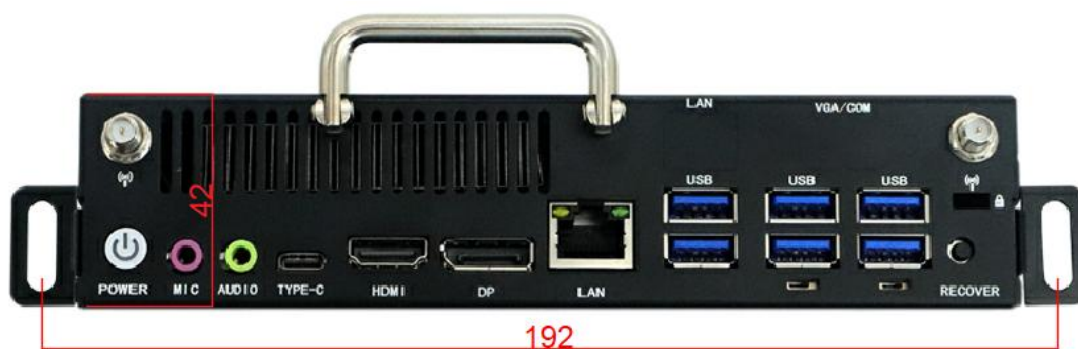
产品名称 DESCRIPTION: H470-OPS

PCB 版本 PCB_VERSION: V1.0

主板图 Motherboard Photos



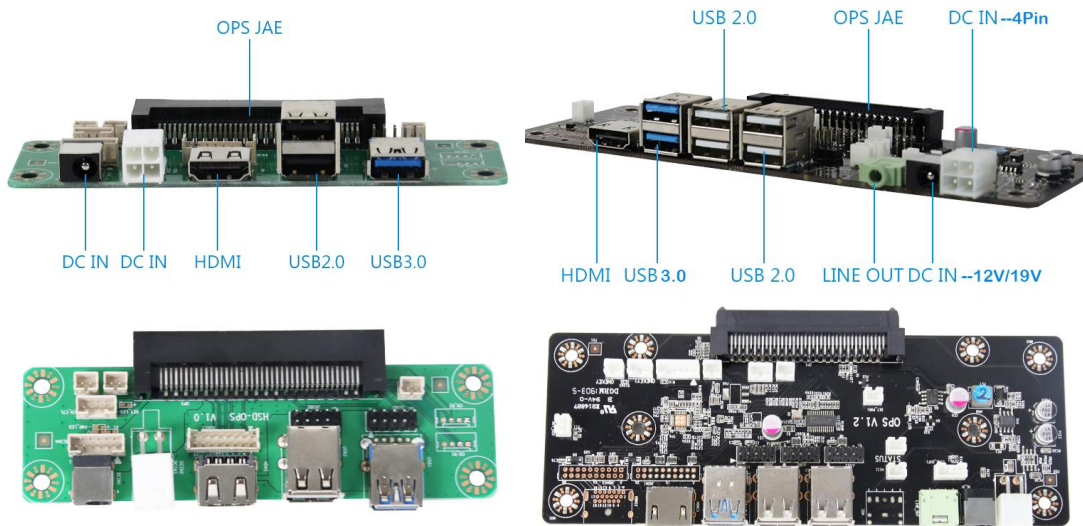
整机图 Unit Photos



主板参数 Motherboard Specifications		
类型 Type	内容 Content	参数 Specs
型号 Model		H470-OPS V1.0
结构 Structure	尺寸 Size	170MM*190MM 六层-6 layer PCBA
CPU	CPU	LGA1200, Support Intel® Celeron™/ Pentium™/Core™ I3/I5/I7 10/11 th Generation Processor
	芯片组 Chipset	INTEL® H470/Q470/Z490
内存 Memory	规格 Type	2 XDDR4 2133/2400/2666
	最大容量 Max Capacity	64GB
供电 Power	DC&JAE	12V7A~19V4.7A
显示输出接口 Display Port	HDMI	2X
	DP	1X 3840x2160@60hz
	JVGA	1X 1920x1080@60hz
音频 Audio	芯片 Chip-set	ACL 897 高清音频芯片 HD Audio chip-set
网络 Internet	芯片 Chip-set	With 10/100/1000Mbps LAN Realtek 千兆网卡 Gigabit Ethernet card
	WIFI	1×M.2 2230 slot (support WIFI/BT/CNVI)
存储 Storage	Sata3.0	1
	M.2 Sata	1x M.2 2280 slot (support SATA/NVME protocol)
IO 面板 I/O Ports	开关 Power (LED)	1
	麦克风 MIC	1
	音频输出 Audio	1
	TYPE-C	1
	HDMI	1
	DP	1
	LAN	1
	USB2.0	4
	USB3.0	2
一键还原 Recover	1	
80Pin 端口 80Pin OPS Socket	HDMI	1 3840x2160@60hz
	USB2.0	2
	USB3.0	1
	TTL&232 (可选 optional)	1
	音频输出 Audio	1
内部接口	COM	1 Default no COM, if need, please contact our sales
	HDD PWR	1 2.5inch HDD power
	SATA3.0	1
	PCIE 16X	1

Inner Sockets	JVGA	1 Default no VGA PIN, if need, please contact our sales
	CPU FAN	1
内部跳冒说明 Jumper	USB PWR	前置 IO 面板 USB 带电 5V Front IO panel USB powered 5V
	F-PANEL	三针开关插针 Three-pin switch pin
	SW2	TTL&232 切换 Switch
	JS1	SATA/ NVMe 协议切换 Protocol Switch
	JME	ME 更新 Update

Subcard photo



BIOS 设定 BIOS Setting

请注意由于 BIOS 不断更新，可能我们说明的部分或许与现有板上 BIOS 有些不同，一切仅供参考，以实际为主。BIOS 中一些未做过多说明的项目，属于非常用项目请保持缺省值，建议不要随意更改。欲进入 BIOS 设定程序画面，请依下列步骤：

Please note that due to the continuous updating of the BIOS, some parts of our description may be different from the existing BIOS, everything is for reference only, subject to the actual situation. some items in the BIOS that are not explained too much are non-useful items, please keep the default value, and it is recommended that you don't change them arbitrarily. To enter the BIOS setup screen, please follow the steps below:

- a. 打开电源或重新启动系统，在自检画面可看到“PRESS DEL TO RUN SETUP”

Turn on the power or reboot the system, you can see from the self-test screen says: “PRESS DEL TO RUN SETUP”

b. 按下 DELETE 键后, 即可进入 BIOS 设定程序。

Hold on the DELETE key to enter the BIOS setup programme.

BIOS 功能键说明 BIOS function introduction	
按键 Keys	功能说明 Function Introduction
↑ 键 key	选择设置项目(上下移动) Choose to move up or down
← → 键 key	选择设置项目 (左右移动) Choose to move left or right
+ - 键 key	改变设置状态或者变更键位之数值 Changing the setting status or the value of a key
< Tab > 键 key	改变设置状态 Changing the setting status
< ESC > 键 key	退出设置程序并不存储设置 Exiting the setup programme does not store the settings
< F1 > 功能键 function key	显示目前设定项目的相关辅助说明 Displays auxiliary instructions related to the currently set item
< F2 > 功能键 function key	放弃程序的修改 Abandon the programme change
< F8 > 功能键 function key	载入安全模式的默认值 Load safe mode defaults
< F9 > 功能键 function key	载入出厂预设优化值 Load factory preset optimisation values
< F10 > 功能键 function key	退出设置程序并存储设置 Exiting the setup programme and storing the settings
< F11 > 功能键 function key	快捷启动盘 Quick start disc

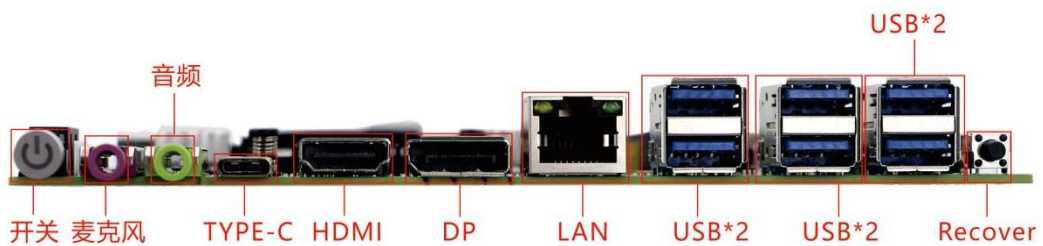
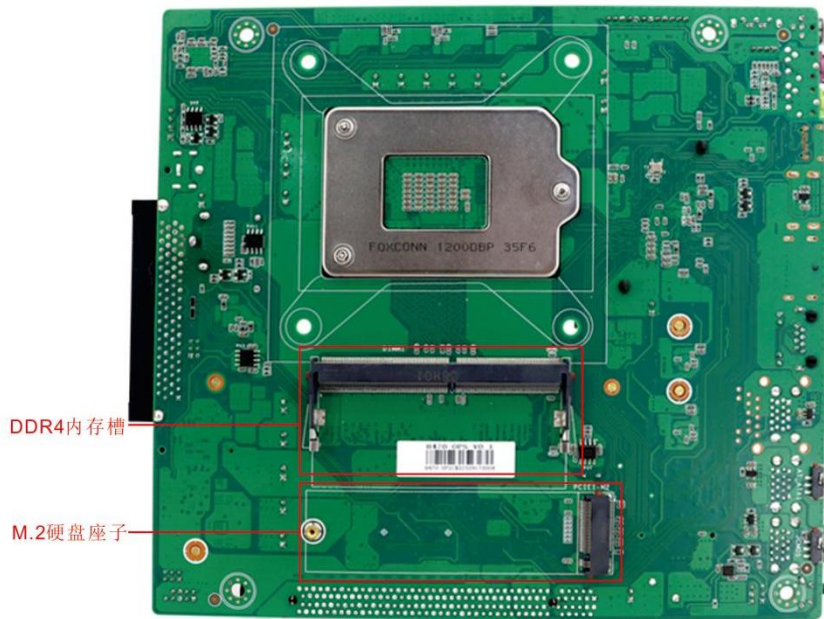
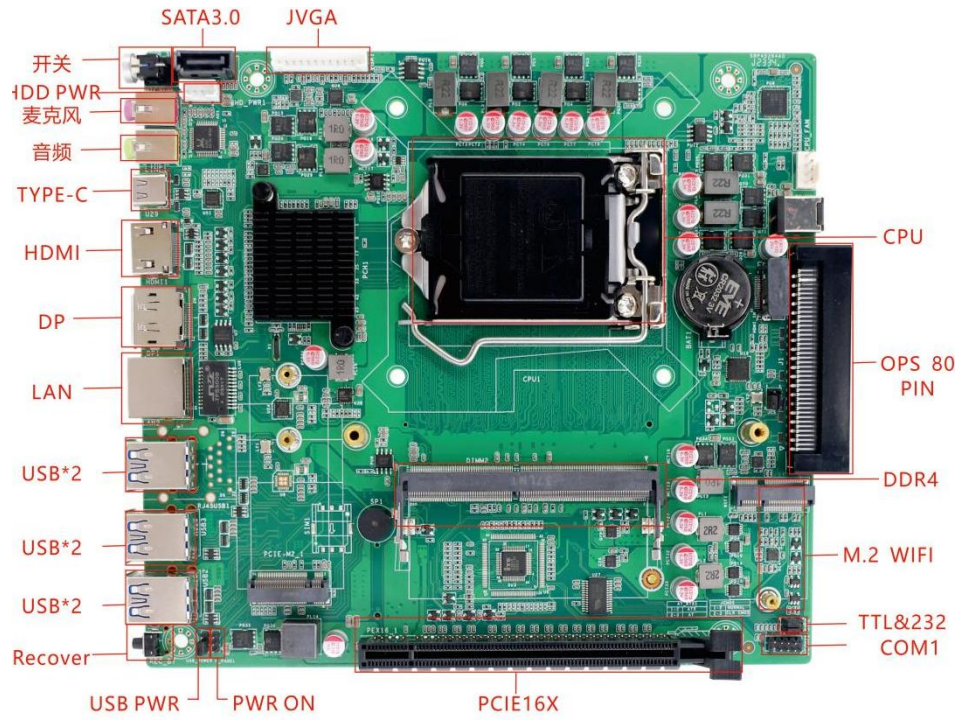
警告: 在居住环境中, 运行此设备可能会造成无线电干扰。

天线端口的连接线缆小于等于 3m。

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.

主板标识 Motherboard Introduction



特殊端口功能说明 Special Socket Introduction

OPS 端口实物截图及定义 OPS Socket Photo and definition



80 PIN OPS 端子，内部包含 HDMI 信号，音频信号，串口信号，开关机信号，状态检测信号等。

具体定义如下：

80Pin OPS terminal, which contains HDMI signal, audio signal, serial port signal, switching signal, status detection signal and so on internally.

Specific definitions are as follows:

PIN	定义	PIN	定义	PIN	定义	PIN	定义
1	DP_3N	21	HDMI_TX0_DP	41		61	USB_DP1
2	DP_3P	22	GND	42		62	GND
3	GND	23	HDMI_TX1_DN	43		63	USB_DN2
4	DP_2N	24	HDMI_TX1_DP	44		64	USB_DP2
5	DP_2P	25	GND	45		65	GND
6	GND	26	HDMI_TX2_DN	46		66	USB_DN3
7	DP_1N	27	HDMI_TX2_DP	47		67	USB_DP3
8	DP_1P	28	GND	48		68	GND
9	GND	29	HDMI_SDA	49		69	AUDIO_L
10	DP_ON	30	HDMI_SCL	50	SYS_FAN	70	AUDIO_R
11	DP_OP	31	HDMI_HPD	51	UART_RX	71	CEC
12	GND	32	GND	52	UART_TX	72	PB_DET
13	DP_AUXN	33	VDD	53	GND	73	PS_ON
14	DP_AUXP	34	VDD	54	USB3_RXN	74	STATUS
15	DP_HPD	35	VDD	55	USB3_RXP	75	GND
16	GND	36	VDD	56	GND	76	GND
17	HDMI_CLK_DN	37	VDD	57	USB3_TXN	77	GND
18	HDMI_CLK_DP	38	VDD	58	USB3_TXP	78	GND
19	GND	39	VDD	59	GND	79	GND
20	HDMI_TX0_DN	40	VDD	60	USB_DN1	80	GND

定义：definition