

**AIMB-286**



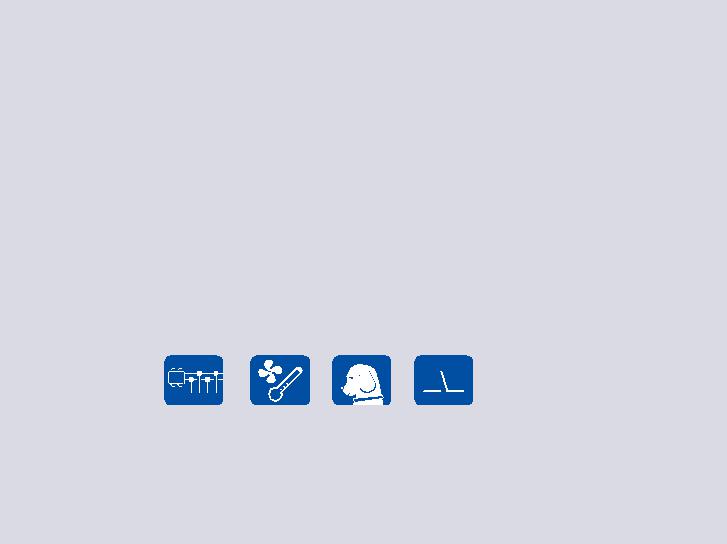
**NEW**

**RoHS**

**COMPLIANT**

**2002/95/EC**

**第八代Intel® Core™ i7/i5/i3 LGA 1151 Mini-ITX 与 DP++/HDMI/LVDS(eDP), 6 COM, Dual LAN, PCIe x4, M.2, DDR4, DC 输入**



**特性**

****支持英特尔®第8代核心™i处理器(LGA1151)与英特尔H310芯片组****两个260引脚SO-DIMM高达32GB DDR4 2666兆赫兹存储

****支持PCIe x 4(第3代)，1 M.2 B键，1 M.2 E键，4 USB 3.0和

3 SATA III

****支持DP/HDMI/LVDS(或eDP)双显示器

****支持12V直流输入

****支持TPM 1.2 / 2.0(可选)

****6.12V电压输入超薄Mini-ITX

**软件 APIs:**

SMBus H/W Monitor Watchdog GPIO

**公用设施:**

BIOS flash Monitoring

**规格列表**



|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | CPU | i7-8700/i7-8700T | | i5-8500/i5-8500T | i3-8100/i3-8100T | Pentium G5400/G5400T | Celeron G4900/G4900T |  |
|  | 芯片数 | 6/6 | | 6/6 | 4/4 | 2/2 | 2/2 |  |
|  | 最大主频 | 3.2/2.4 GHz | | 3.0/2.1 GHz | 3.6/3.1 GHz | 3.7/3.1 GHz | 3.1/2.9 GHz |  |
| 处理器 | 智能缓存 | 12/12 MB | | 9/9 MB | 6/6 MB | 4/4 MB | 2/2 MB |  |
|  | TDP | 65/35 W | | 65/35 W | 65/35 W | 54/35 W | 54/35 W |  |
|  | 芯片组. | H310 | |  |  |  |  |  |
|  | BIOS | AMI EFI 128 Mbit SPI | |  |  |  |  |  |
|  | M.2 | 2, 1 x B key for SSD and 3G/4G (Type: 2242, 3042mm); with SIM card holder | | | |  |  |  |
| 扩展槽 | 1 x E key for wireless (Type: 2230mm) | | |  |  |  |  |
|  |  |  |  |  |
|  | PCIe x4 (Gen3) | 4 | GB/s per direction, 1 slot |  |  |  |  |  |
|  | 规范 | 双通道DDR4 2666 MHz SDRAM 32GB | | |  |  |  |  |
| 内存 | 最大可支持容量 | (up to 16GB per SO-DIMM) | | |  |  |  |  |
|  | 插槽 | 2 x 260 PIN DDR4 SO-DIMM (Non-ECC) | | |  |  |  |  |
|  | 控制器 | Intel HD Graphics | |  |  |  |  |  |
|  | LVDS | 支持双通道24-bit 高达 1920 x 1200 (colay with eDP) | | | |  |  |  |
| 显示芯片 | HDMI 1.4 | Yes, 支持最大分辨率 4096 x 2160 @ 24 Hz | | |  |  |  |  |
| eDP | Yes, 带Internal pin header,支持最大分辨率4096 x 2304 @ 60 Hz (BOM optional) Yes, | | | | |  |  |
|  |  |  |
|  | 显示端口 1.2 | 支持1 x DP++ 最大分辨率4096 x 2304 @ 60 Hz | | |  |  |  |  |
|  | 双显 | DP+HDMI, DP+LVDS (or eDP), HDMI + LVDS (or eDP) | | | |  |  |  |
|  | 接口 | 10/100/1000 Mbps | |  |  |  |  |  |
| 以太网 | 控制器 | GbE LAN1/2: Realtek 8111G | | |  |  |  |  |
| GbE LAN3: Intel i211AT | |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  | 连接器 | RJ-45 x 3 | |  |  |  |  |  |
| SATA | 最大数据传输速率 | 600 MB/s (SATA 3.0) | |  |  |  |  |  |
| 通道 | 3 | (SATA III) |  |  |  |  |  |
|  |  |  |  |  |  |
|  | HDMI | 1 | (HDMI 1.4) |  |  |  |  |  |
|  | 显示端口 1.2 | 1 |  |  |  |  |  |  |
| 后置/O | 以太网 | 3 |  |  |  |  |  |  |
| USB | 4 | USB 3.0 (USB04 colay with M.2 B key for USB 3.0) | |  |  |  |  |
|  |  |  |  |  |
|  | Audio | 2 | (Mic-in, Line-out) |  |  |  |  |  |
|  | DC Jack | 1 |  |  |  |  |  |  |
|  | USB | 4 | (USB 2.0) |  |  |  |  |  |
|  | LVDS/inverter | 1 |  |  |  |  |  |  |
|  | Serial | 6 x RS-232 (COM1: RS-232, 支持 5V/12V跳线选择; COM2/3: RS-232/422/485 w/auto 自动流量控制, 默认支持 | | | | | |  |
|  | RS-232 , RS-422/485 按OM选项支持; COM4/5/6: RS-232) | | | |  |  |  |
|  |  |  |  |  |
| 内置连接器 | SATA | 3 | (SATA 3.0) |  |  |  |  |  |
|  | M.2 | 2, 1 x B key for SSD and 3G/4G (M.2 B key USB 3.0 colay with USB04), Type: 2242, 3042mm; | | | | |  |  |
|  | 1 x E key for wireless, Type: 2230mm | | |  |  |  |  |
|  |  |  |  |  |  |
|  | IrDA | - |  |  |  |  |  |  |
|  | GPIO | 16-bit | |  |  |  |  |  |
| 看门狗计时器 | 输出 | 系统复位 | |  |  |  |  |  |
| 间隔 | 可编程的1 ~ 255 sec/min | | |  |  |  |  |
|  |  |  |  |  |
| 电源需求 | 输入功率 | 12V DC Input | |  |  |  |  |  |
|  | Intel Core i7-8700 3.2GHz, 2pcs 16GB DDR4 2666MHz SDRAM, +12V @ 11.095A | | | | |  |  |
|  |  |  |  |
| 环境 |  | 工作 | |  |  | 非工作 |  |  |
| 温度 | 0 | ~ 60° C (32 ~ 140° F), 取决于CUP运行速度和冷却器 | | | -40 ~ 85° C (-40 ~ 185° F) | |  |
|  |  |
| 物理特性 | 尺寸 | 170 mm x 170 mm (6.69" x 6.69") | | |  |  |  |  |



**Industrial Motherboards & Systems**

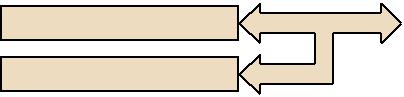
All product specifications are subject to change without notice. Last updated: 9-Jan-2019

**AIMB-286**

**框架图**



Display Port 1.2



LVDS 24/48 bits

eDP (optional)



HDMI 1.4



3 SATA III Ports



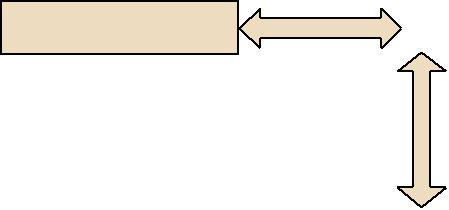
4 USB 3.0 ports

(USB04 3.0 colay with

M.2 B key)



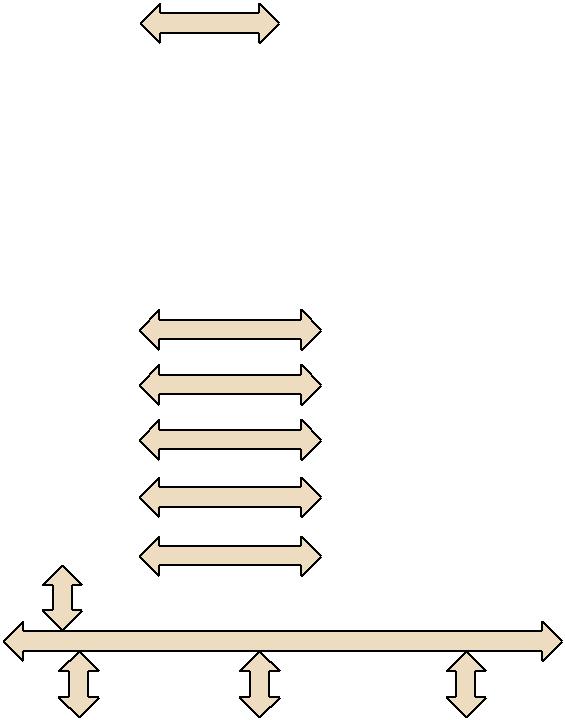
4 USB 2.0 ports



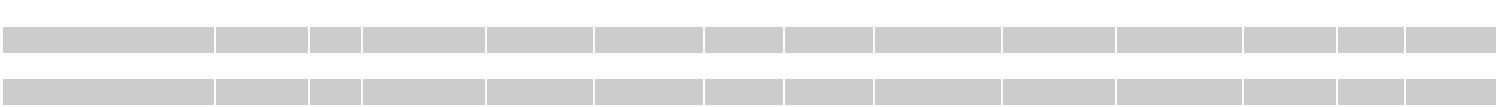
Audio Codec

Realtek ALC892

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |
| Display port |  |  | PCIe x 4 |  | PCIe x 4 (Gen 3) |  |  |
| Display port |  | Intel 8th Gen |  |  |  |  |  |
|  | Channel A | DDR4 2666 MHz SO-DIMM | |  |  |
|  |  | Core i7/i5/i3/Pentium/ |  |  |
|  |  | Celeron processor |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Display port |  |  | Channel B | DDR4 2666 MHz SO-DIMM | |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  | DMI x 4 |  |  |  |  |  |
| SATA 3 |  |  | PCIe x1 |  | GbE LAN1: Realtek 8111G |  |  |
|  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  | PCIe x1 |  | GbE LAN2: Realtek 8111G |  |  |
| USB 3.0 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  | H310 | PCIe x1 |  | GbE LAN3: Intel I211AT |  |  |
| USB 2.0 |  |  | PCIex1 |  |  |  |  |
|  |  |  | M.2 (E key) |  |  |
|  |  |  |  |  |  |  |
|  |  |  | USB 2.0 |  |  |  |  |
|  |  |  |  |  |  |  |
| HD Audio |  |  | SATA/ PCIex2 |  |  |  |  |
|  |  |  | M.2 (B key, USB 3.0 colay |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  | USB 3.0/2.0 |  | with USB04) |  |  |
|  | SPI | | LPC BUS | | |  |  |
|  |  |  |  |  |  |



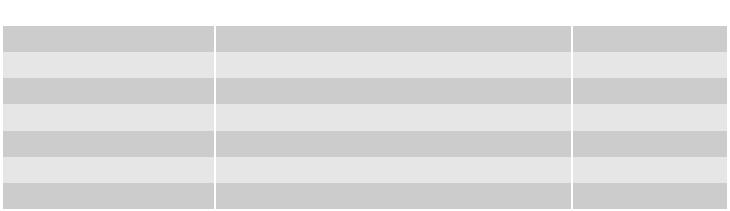
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  | BIOS |  |  | Super I/O |  |  |  |  |  |  | Infineon |  |  |  |  |  |
|  |  |  |  |  |  |  |  | Nuvuton |  |  | NCT5114D | |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | TPM 1.2/2.0 (Option) | |  |  |  |  |
|  |  |  |  |  |  |  |  |  | NCT6776 |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  | |  |  |  | |  |  | |  |  |  |  |  |
|  |  |  |  |  |  | 1 RS-232, 1 x RS-232/422/485, | | | |  |  | 3 x RS-232, 1 x RS-232/422/485 | | | | |  |  |  |  |  |
|  |  |  |  |  |  | PS/2, WDT, 16-bit GPIO | | | |  | (RS-422/485 support by BOM optional) | | | | | |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **订购信息** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **P/N** | **Chipset** | **DP** | **LVDS/eDP** | **HDMI 1.4** | | **GbE LAN** | **COM** | | **SATAIII** | **USB3.0/2.0** | | | **M.2 B key** | | | **M.2 E key** | **PCIex4** | | **TPM** | **AMP** |  |
| AIMB-286F-00A1E | H310 | 1 | 1 / (1) | 1 |  | 3 | 6 |  | 3 | 4/4 | |  | 1 |  |  | 1 | 1 |  | (1) | (1) |  |
| AIMB-286G2-00A1E | H310 | 1 | 1 / (1) | 1 |  | 2 | 2 |  | 3 | 4/4 | |  | 1 |  |  | 1 | 1 |  | (1) | (1) |  |
| AIMB-286L-00A1E | H310 | 1 | 0 | 1 |  | 1 | 2 |  | 2 | 4/0 | |  | 1 |  |  | 1 | 0 |  | 0 | 0 |  |



\*() BOM options available on MP version.

**包装列表**

|  |  |  |
| --- | --- | --- |
| **料号** | **说明** | **数量** |
| 1700003194 | SATA HDD cable | 1 |
| 1700018785 | SATA power cable (1 port, 25cm) | 1 |
| 1701200220 | 1-to-2 serial port cable, 22cm | 1 |
| 1960090424T001 | I/O port bracket | 1 |
| 1700029538-01 | 1-to-4 serial port cable, 35cm | 1 |
| 2046028600 | Startup manual | 1 |
| 1700023082-11 | ATX 2\*10P to 1\*3P-2.0 25cm cable | 1 |



**可选附件**

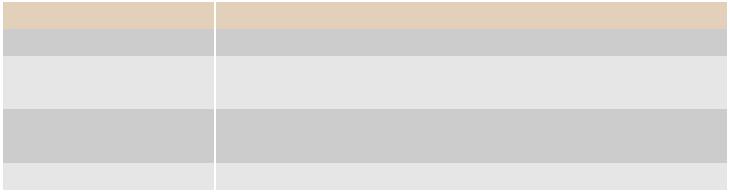
**料号**

1700029428-01

1960053207N001

1960060732N001 96PSA-A120W12V1

**说明**



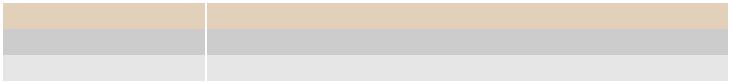
M cable USB-A 4P(F)\*2/2\*4P-2.0 25cm

LGA1150 CPU cooler for CPU TDP  65W, 92.9 (W) x 92.9 (L) x 46 (H) mm

LGA1150 CPU cooler for CPU TDP  45W, 80 (W) x 80 (L) x 32.2 (H) mm

ADP A/D 100-240V 120W 12V C14 DC Plug 180ŁX

**可选底盘**



|  |  |
| --- | --- |
| **料号** | **说明** |
| AIMB-B2000-15ZE | Mini-ITX chassis with 150W ATX power supply |
| AIMB-B2000-00YE | Mini-ITX chassis (Optional external AC-DC 60W/84W Adaptor) |

**嵌入式OS/API**

|  |  |  |  |
| --- | --- | --- | --- |
| **OS/API** | **Part No.** | **968 P/N** | **说明** |

Windows 10

**I/O 视图**



**Online Download** www.advantech.com/products