

# MIC-770 V3

12<sup>th</sup>/13<sup>th</sup>/14<sup>th</sup> Gen Intel® Core™ i CPU  
(LGA 1700)紧凑型无风扇系统

NEW



## 特性

- Intel 12/13 /14 Gen Core™ i CPU 插槽 (LGA1700) with Intel R680E/H610E芯片组
- 宽温运行 (-20 ~ 60 °C)
- VGA 与 HDMI 输出
- 2 x GigaLAN, 2 x USB 3.2 (Gen2) 与 6 x USB 3.2 (Gen1)
- 2 x RS-232/422/485 与 4 x RS232 串口 (可选)
- 1 x 2.5" HDD/SSD, 1 x mSATA, 与 1 x NVMe M.2
- 9~36V<sub>DC</sub> 输入电压
- IP40 防尘等级
- 支持 FlexIO 与 iDoor 技术, 灵活配置附加 HDMI, DP, DVI, COM port, DIO, 远程开关 IO
- 支持研华 i-Modules
- 支持研华 SUSI API 与 嵌入式软件 APIs
- 支持 Intel vPro™/AMT 与 TPM 技术
- 支持研华 iBMC 1.2 远程带外电源管理方案



## 规格

|                                   |                 |                                                                                                       |             |             |             |                 |                 |              |              |              |           |           |           |         |
|-----------------------------------|-----------------|-------------------------------------------------------------------------------------------------------|-------------|-------------|-------------|-----------------|-----------------|--------------|--------------|--------------|-----------|-----------|-----------|---------|
| 14 <sup>th</sup> 处理器              | CPU             | i9-14900                                                                                              | i7-14700    | i5-14500    | i5-14400    | i5-14400F       | i3-14100        | 300          | i9-14900T    | i7-14700T    | i5-14500T | i5-14400T | i3-14100T | 300T    |
|                                   | P-core 基频       | 2.0 GHz                                                                                               | 2.1 GHz     | 2.6 GHz     | 2.5 GHz     | 2.5 GHz         | 3.5 GHz         | 3.9 GHz      | 1.1 GHz      | 1.3GHz       | 1.7 GHz   | 1.5 GHz   | 2.7 GHz   | 3.4 GHz |
|                                   | L3缓存            | 36 MB                                                                                                 | 33 MB       | 24 MB       | 20 MB       | 20 MB           | 12 MB           | 6 MB         | 36 MB        | 33 MB        | 24 MB     | 20 MB     | 12 MB     | 6 MB    |
|                                   | 核心              | 24                                                                                                    | 20          | 14          | 10          | 10              | 4               | 2            | 24           | 20           | 14        | 10        | 4         | 2       |
|                                   | 处理器基本功率         | 65 W                                                                                                  | 65 W        | 65 W        | 65 W        | 65 W            | 60 W            | 46 W         | 35 W         | 35 W         | 35 W      | 35 W      | 35 W      | 35 W    |
| 13 <sup>th</sup> 处理器              | CPU             | i9-13900(E)                                                                                           | i7-13700(E) | i5-13500(E) | i5-13400(E) | i3-13100(E)     | i9-13900TE      | i7-13700T(E) | i5-13500T(E) | i3-13100T(E) |           |           |           |         |
|                                   | P-core 基频       | 2.0 GHz                                                                                               | 2.10 GHz    | 2.50 GHz    | 2.50 GHz    | 3.40 GHz        | 1.00 GHz        | 1.40 GHz     | 1.60 GHz     | 2.50 GHz     |           |           |           |         |
|                                   | L3 缓存           | 36 MB                                                                                                 | 30 MB       | 24 MB       | 20 MB       | 12 MB           | 36 MB           | 30 MB        | 24 MB        | 12 MB        |           |           |           |         |
|                                   | 核心              | 24                                                                                                    | 16          | 14          | 10          | 4               | 24              | 16           | 14           | 4            |           |           |           |         |
|                                   | 处理器基本功率         | 65W                                                                                                   | 65W         | 65W         | 65W         | 60W             | 35W             | 35W          | 35W          | 35W          |           |           |           |         |
| 12 <sup>th</sup> 处理器<br>(TDP 35W) | CPU             | i9-12900TE                                                                                            | i7-12700TE  | i5-12500TE  | i3-12100TE  | Pentium G7400TE | Celeron G6900TE |              |              |              |           |           |           |         |
|                                   | Core/ 线程        | 16/24                                                                                                 | 12/20       | 6/12        | 4/8         | 2/4             | 2/2             |              |              |              |           |           |           |         |
|                                   | 基频              | 1.10 GHz                                                                                              | 1.40 GHz    | 1.90 GHz    | 2.10 GHz    | 3.00 GHz        | 2.4 GHz         |              |              |              |           |           |           |         |
|                                   | 最大 Turbo 频率     | 4.80 GHz                                                                                              | 4.60 GHz    | 4.30 GHz    | 4.00 GHz    |                 |                 |              |              |              |           |           |           |         |
|                                   | L3 缓存           | 30 MB                                                                                                 | 16 MB       | 12 MB       | 6 MB        | 2.5MB           | 2.5MB           |              |              |              |           |           |           |         |
|                                   | 温度              | -20 ~ 60 °C (w/ 宽温 SSD, 0.7m/s air flow)                                                              |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   | 芯片组             | R680E/H610E                                                                                           |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   | BIOS            | AMI 256Mb SPI Flash                                                                                   |             |             |             |                 |                 |              |              |              |           |           |           |         |
| 12 <sup>th</sup> 处理器<br>(TDP 65W) | CPU             | i9-12900(E)                                                                                           | i7-12700(E) | i5-12500(E) | i3-12100(E) | G7400E (46W)    | G6900E (46W)    |              |              |              |           |           |           |         |
|                                   | Core/线程         | 16/24                                                                                                 | 12/20       | 6/12        | 4/8         | 2/4             | 2/2             |              |              |              |           |           |           |         |
|                                   | 基频              | 2.30 GHz                                                                                              | 2.10 GHz    | 2.90 GHz    | 3.20 GHz    | 3.60 GHz        | 3.00 GHz        |              |              |              |           |           |           |         |
|                                   | 最大 Turbo 频率     | 5.00 GHz                                                                                              | 4.80 GHz    | 4.50 GHz    | 4.20 GHz    |                 |                 |              |              |              |           |           |           |         |
|                                   | L3 缓存           | 30 MB                                                                                                 | 25 MB       | 18 MB       | 5 MB        | 2.5 MB          | 2.5 MB          |              |              |              |           |           |           |         |
|                                   | 温度              | -20 ~ 50 °C (w/ 工业宽温 SSD, 0.7m/s air flow)                                                            |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   | 芯片组             | R680E/H610E                                                                                           |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   | BIOS            | AMI 256Mb SPI Flash                                                                                   |             |             |             |                 |                 |              |              |              |           |           |           |         |
| 内存                                | 技术              | 双通道 DDR5 4800 MHz (R680E SKU 支持 ECC)                                                                  |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   | 插槽              | 2 x 262-pin DDR5 SODIMM (最大 32GB 每个插槽)                                                                |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   | 最大容量            | 64GB                                                                                                  |             |             |             |                 |                 |              |              |              |           |           |           |         |
| 显示                                | 芯片组             | Core i: Intel UHD Graphics 770<br>Pentium/Celeron: Intel HD Graphics 710                              |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   | VGA             | 1 x DB15, 最大 1920 x 1200最大分辨率                                                                         |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   | HDMI            | 1 x HDMI, 最大 4096 x 2160@30Hz                                                                         |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   | 多显              | R680E: 4 x 独立显示 (第三第四个显示需要扩展)<br>H610E: 3 x 独立显示 (第三个显示需要扩展)                                          |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   |                 |                                                                                                       |             |             |             |                 |                 |              |              |              |           |           |           |         |
| 以太网                               | Controller      | R680E LAN1: Intel i219LM, LAN2: Intel i210IT<br>H610E LAN1: Intel i219V, LAN2: Intel i210IT           |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   | Interface       | 2 x RJ45                                                                                              |             |             |             |                 |                 |              |              |              |           |           |           |         |
| 存储                                | HDD             | 1 x 2.5" HDD/SSD (up to 2 x 2.5" SSD by optional kit; 2 x 3.5" HDD by i-Module)                       |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   | mSATA           | 1                                                                                                     |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   | NVMe M.2        | 1 x M Key 2280 with PCIe Gen 4 x 4 (R680E SKU, 运行温度 -20 ~ 50 °C)                                      |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   | RAID            | 0/1/5/10 (R680E SKU only)                                                                             |             |             |             |                 |                 |              |              |              |           |           |           |         |
| I/O                               | USB             | R680E: 2 x USB3.2 (Gen2), 6 x USB3.2 (Gen1), 1 x USB 2.0 (内部)<br>H610E: 4 x USB3.2 (Gen1), 4 x USB2.0 |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   | 串口              | 2 x DB9, RS-232/422/485 支持自动流控制; 4 x RS-232 (可选)                                                      |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   | 音频              | 2 (1 x line out 与 1 x mic in)                                                                         |             |             |             |                 |                 |              |              |              |           |           |           |         |
| 扩展                                | 模块              | 支持研华 i-Modules                                                                                        |             |             |             |                 |                 |              |              |              |           |           |           |         |
|                                   | Mini PCIe/mSATA | R680E: 1 x mini PCIe, 1 x mini PCIe/mSATA<br>H610E: 1 x mini PCIe, 1 x mSATA                          |             |             |             |                 |                 |              |              |              |           |           |           |         |

Note 1: 注 1: 由于 Intel 设计规范, CPU PCIe 插槽只能支持图形卡。其他类型的附加卡将不会在此插槽上安装任何功能。

Note 2: 注 2: 对于 65W CPU, 工作温度可支持高达 50度, 当系统持续满载时可能会导致热节流, 这可能会从 BIOS 调整 CPU 电源配置以提高工作温度。

ADVANTECH

Modular IPCs

所有产品如有变更, 恕不另行通知。

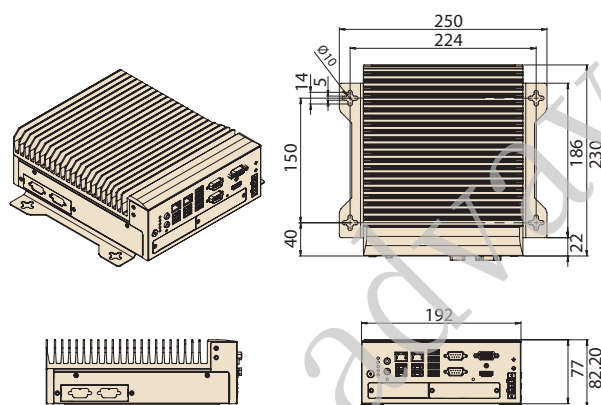
更新日期: 2024-9-24

## 规格 (Cont.)

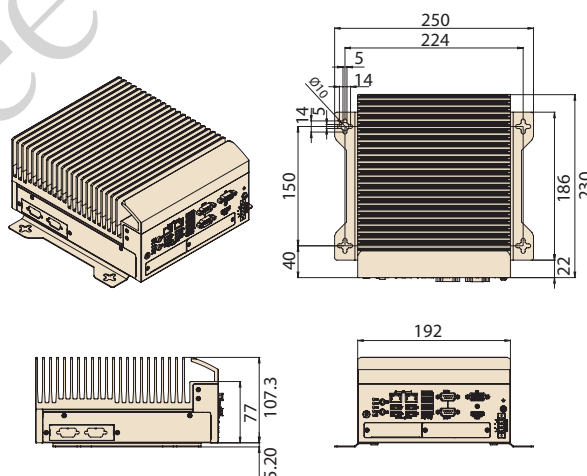
|         |                |                                                                                                           |                                                  |            |
|---------|----------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------|------------|
| LED 与开关 | LED            | 2 (1 x 存储与1 x 电源), 4 for COM1 TX/RX and COM2 TX/RX                                                        |                                                  |            |
|         | 按钮             | 1 x 电源开关                                                                                                  |                                                  |            |
|         | 远程开关           | Yes, 2pin 接线板 (可选)                                                                                        |                                                  |            |
| 电源      | 类型             | ATX/AT                                                                                                    |                                                  |            |
|         | 输入电压           | 9 ~ 36 V <sub>DC</sub>                                                                                    |                                                  |            |
|         | 功率             | Typical: 45.7W<br>Maximum: 108W                                                                           |                                                  |            |
| 看门狗定时器  | 输出             | 系统重置                                                                                                      |                                                  |            |
|         | 间隔             | 可编程 1 ~ 255 sec/min                                                                                       |                                                  |            |
| 环境      | 温度             | 65W CPU w/ 工业宽温 SSD                                                                                       | 35W CPU w/ 工业范围温度 SSD                            | 非运行温度      |
|         |                | 标准: -20 ~ 50°C with 0.7 m/s air flow                                                                      | 标准: -20 ~ 60°C with 0.7 m/s air flow             | -40 ~ 85°C |
|         |                | 加高: -20 ~ 35°C without air flow                                                                           | 加高: -20 ~ 50°C without air flow                  | -40 ~ 85°C |
|         | 湿度             | 95% @ 40 °C (non-condensing)                                                                              |                                                  |            |
|         | 振动             | With SSD: 3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis<br>With 2.5" HDD: 1 Grms @ 5 ~ 500 Hz, random, 1 hr/axis |                                                  |            |
| 物理特性    | 冲击             | With SSD: 20G, IEC-68-2-27, half-sine wave, 11 ms duration                                                |                                                  |            |
|         | 尺寸 (W x H x D) | 标准: 77 x 192 x 230 mm (3.07" x 7.55" x 9.05")                                                             | 加高: 107.3 x 192 x 230 mm (4.22" x 7.55" x 9.05") |            |
|         | 重量             | 标准: 2.8 kg (6.17 lbs)                                                                                     | 加高: 4.5 kg (9.92 lbs)                            |            |
| 认证      | 安装             | 桌上型/壁挂型                                                                                                   |                                                  |            |
|         | EMC            | CE/FCC Class A, CCC, BSMI                                                                                 |                                                  |            |
| OS支持    | 安全             | CB/UL, CCC, BSMI                                                                                          |                                                  |            |
|         |                | Windows 11, Windows 10, Windows 10 IoT, Linux OS                                                          |                                                  |            |

## 尺寸

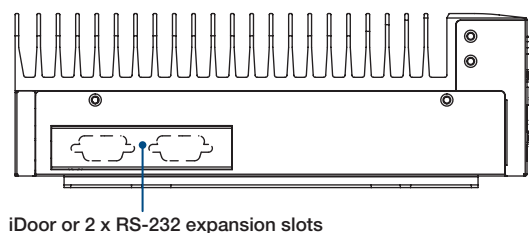
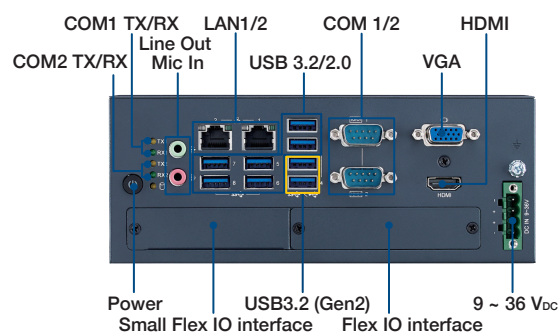
标准版 (MIC-770V3x-00A1)



加高版 (MIC-770V3x-E0A1) Unit mm



## 前视图



## 订购信息

| 料号              | VGA | HDMI | 2.5" HDD/SSD | mSATA | NVMe M.2 | USB3.2 (Gen2) | USB3.2 (Gen1) | USB 2.0 | GbE | COM                   | PCIe                 | Power                 |
|-----------------|-----|------|--------------|-------|----------|---------------|---------------|---------|-----|-----------------------|----------------------|-----------------------|
| MIC-770V3W-00A1 | 1   | 1    | 1            | 1     | 1        | 2             | 6             | 0       | 2   | 2, up to 6 (Optional) | i-Module (optional)* | 9 ~ 36V <sub>DC</sub> |
| MIC-770V3W-E0A1 | 1   | 1    | 1            | 1     | 1        | 2             | 6             | 0       | 2   | 2, up to 6 (Optional) | i-Module (optional)* | 9 ~ 36V <sub>DC</sub> |
| MIC-770V3H-00A1 | 1   | 1    | 1            | 1     | 0        | 0             | 4             | 4       | 2   | 2, up to 6 (Optional) | i-Module (optional)* | 9 ~ 36V <sub>DC</sub> |
| MIC-770V3H-E0A1 | 1   | 1    | 1            | 1     | 0        | 0             | 4             | 4       | 2   | 2, up to 6 (Optional) | i-Module (optional)* | 9 ~ 36V <sub>DC</sub> |

\* MIC-770V3H 不支持 MIC-75M20-01 与 MIC-75G30

\*\* 请使用不带散热器的宽温NVMe模块。

## 包装清单

| 料号             | 描述                                    | 数量 |
|----------------|---------------------------------------|----|
| MIC-770 V3     | MIC-770 V3 bare system                | 1  |
| 2041077050     | MIC-770 V3 startup manual (ENG+TC+SC) | 1  |
| 1652003234     | 4-pin Phoenix power connector         | 1  |
| 1960070543T00A | 2 x Mounting bracket                  | 2  |
| 1700013095-01  | SATA cable                            | 1  |
| 1700024372-01  | SATA power cable                      | 1  |
| 2170000093-01  | CPU thermal grease                    | 1  |
| 1990019498N000 | RAM thermal pad                       | 2  |

## 可选 i-Modules\*

| 料号               | 描述                                                                                                |
|------------------|---------------------------------------------------------------------------------------------------|
| MIC-75M10-00A2   | 1-slot expansion module (1 x PCIe)                                                                |
| MIC-75M11-00B1   | 2-slot expansion module (1 x PCIe and 1 x PCI slots)                                              |
| MIC-75M13-00B1   | 4-slot expansion module (1 x PCIe and 3 x PCI slots)                                              |
| MIC-75M20-00C1   | 2-slot expansion module (2 x PCIe slots)                                                          |
| MIC-75M20-01A2** | 2-slot expansion module (2 x PCIe slots)                                                          |
| MIC-75M40-01A2** | 3-slot expansion module (3 x PCIe slots)                                                          |
| MIC-75G20-10B1   | GPU card expansion module (2 x PCIe and 2 x removable 2.5" storage bay)                           |
| MIC-75G30-00B1** | Dual GPU card expansion module (3 x PCIe and 2 x removable 2.5" storage bay, 1 x HDMI, 1 x DP)    |
| MIC-75GF10-00A1  | MXM GPU expansion module (1 x MXM, 1 x PCIe and 2 x removable 2.5" storage bay, 1 x HDMI, 3 x DP) |
| MIC-75S00-00A1   | 2 x removable 2.5" storage bay                                                                    |
| MIC-75S20-00A2   | 2-slot expansion storage module (2 x PCIe and 2 x removable 2.5" storage bay)                     |
| 98R17520301      | 2 x 3.5" HDD kit                                                                                  |

\*请参考 i-Module 规格书

\*\* R680E SKU only

## 嵌入式 OS

| 料号             | 描述                                   |
|----------------|--------------------------------------|
| 20706WLH1S0038 | img W11 24HL MIC-770V3W 64b 24H2 ENU |
| 20706WLVS0038  | img W11 24VL MIC-770V3W 64b 24H2 ENU |
| 20706WLE1S0038 | img W11 24EL MIC-770V3W 64b 24H2 ENU |
| 20706WLH1S0041 | img W11 24HL MIC-770V3H 64b 24H2 ENU |
| 20706WLVS0041  | img W11 24VL MIC-770V3H 64b 24H2 ENU |
| 20706WLE1S0041 | img W11 24EL MIC-770V3H 64b 24H2 ENU |
| 20706WX1HS0024 | img W10 21HL MIC-770V3W 64b 21H2 ENU |
| 20706WX1VS0024 | img W10 21VL MIC-770V3W 64b 21H2 ENU |
| 20706WX1ES0024 | img W10 21EL MIC-770V3W 64b 21H2 ENU |
| 20706WX1HS0058 | img W10 21HL MIC-770V3H 64b 21H2 ENU |
| 20706WX1VS0058 | img W10 21VL MIC-770V3H 64b 21H2 ENU |
| 20706WX1ES0058 | img W10 21EL MIC-770V3H 64b 21H2 ENU |
| 20706U22DS0021 | img UbuntuD MIC-770V3W 64b 22.04 ENU |

## 可选配件

| 料号                  | 描述                                                        |
|---------------------|-----------------------------------------------------------|
| <b>Adaptor</b>      |                                                           |
| 96PSA-A230W24P4-3   | ADP A/D 100-240V 230W 24V C14 TERMINAL BLOCK 4P           |
| 1702002600          | Power cord (USA) UL/CSA, 3-pin, 10A, 125V, 1.83 M, 180 D  |
| 1700000237-31       | Power Cord PSE 3P 12A 125V 183cm                          |
| 1702002605          | Power Cord (EU), 3-pin, 10A, 250V 1.83M, 90D              |
| <b>Din Rail PSU</b> |                                                           |
| 96PSD-A240W24-MN*   | A/D 100-240V 240W 24V NDR DIN RAIL                        |
| 1700031170-01       | DC-DC power cord, A cable TEM*4/TEM*4 UL2464 18AWG 150cm  |
| 1700029720-01       | AC-DC power cord (US), M cable AC CONN 3P 183cm           |
| 1700030520-01       | AC-DC power cord (CN), M cable conn 3P CCC 10A 250V 150cm |
| 1700034561-01       | AC-DC power cord (EU), M cable Type E 3P/TEMx3 80CM       |

Note:

1. MIC-770 V3 支持研华 iDoor 模块 (MOS 与 PCM 系列), 不包含 PoE 模块。

2. **PCM** 系列模块需要的支架 (P/N: 1960065854N021 ) 需要单独订购

## 可选 Flex I/O\* & Kits

| 料号                          | 描述                                                        |
|-----------------------------|-----------------------------------------------------------|
| <b>Flex I/O</b>             |                                                           |
| AIIS-DIO32-00A1E**          | AIIS GPIO module (32 bit)                                 |
| PCA-TPMSPI-00A1             | TPM 2.0 module (SPI)                                      |
| 98R17500001                 | MIC DVI FIO                                               |
| 98R17500101                 | MIC HDMI/Remote power on/off FIO                          |
| 98R17500301                 | MIC HDMI kit FIO                                          |
| 98R17500401                 | MIC Remote power on/off FIO                               |
| 98R17500601                 | MIC COMport kit FIO (4x COM RS-232 via 2x dual DB9 cable) |
| 98R17500701                 | MIC Remote power on/off kit for SFIO                      |
| 98R17500802                 | MIC Reset/Remote power on/off/5VDC kit FIO (SATA)         |
| 98R17500901                 | MIC GPIO kit FIO                                          |
| 98R17501001                 | MIC DP kit FIO                                            |
| 98R17501101                 | COM and HDMI kit                                          |
| <b>Advanced Flex I/O***</b> |                                                           |
| 98910770301                 | MIC NVMe + 4 LAN Advanced FIO                             |
| 98910770401                 | MIC NVMe Advanced FIO                                     |
| 98910770501****             | MIC 4 PoE Advanced FIO                                    |
| <b>Storage Kit</b>          |                                                           |
| 98R1752010E                 | 2nd 2.5" HDD/SSD kit (used in 2-slot i-Module)            |
| 98R1752020E                 | 2 x 2.5" SSD kit (Thickness: 7mm)                         |
| <b>Mounting Kit</b>         |                                                           |
| 98R17500210                 | MIC Din Rail Mounting kit                                 |
| 98R17500501                 | MIC Wall Mounting kit                                     |
| <b>Fan Kit</b>              |                                                           |
| 98R17501303*****            | MIC Fan Kit                                               |

\* 请参考 Flex I/O 规格书获得更多信息

\*\* 只能放置在小型FIO位置，不能与其他flex IO一起安装。

\*\*\* R680E SKU only.

\*\*\*\* 无法与其他flex IO一起安装

\*\*\*\*\* 仅与不带i-module的MIC-770系列系统兼容。