

TILTA

ELECTRONIC SUCTION CUP [4.5"]

<4.5寸电动吸盘>

(HVIN:HDA-ESC-45/HDA-ESC-MMB-45/HDA-ESC-NMB-45/HDA-ESC-HMB-45)

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02 [注意事项与警告]

吸盘主体内置**3.7V 2000MAH**锂电池。使用本产品前,请严格遵守以下说明,如因失误操作或者不正当使用等造成相关后果,我司不负任何责任。

配件要求

- 充电环境温度高于 40 °C 或低于 5 °C 可能导致电池性能下降、膨胀、漏液、过热等损坏。
- 切勿将电池存储在超过 60 °C 的环境下。理想的存储环境温度为 22 °C 至 28 °C。

操作环境

- 本设备内含强磁,为避免产生磁化影响,请远离磁卡、IC卡、植入性医疗设备(如心脏起搏器)、硬盘、RAM 芯片等易受干扰设备。
- 请在温度为 -20 °C 至 45 °C 之间的环境中使用电池。温度过高将会引起电池异常膨胀、着火,甚至爆炸。在低温环境下使用之前,建议先在常温环境中将电池充满电量,以延长电池使用寿命。
- 请勿将设备放置在易燃、可燃物(如地毯和木制品)附近充电。请时刻留意充电过程,谨防发生意外。
- 请在干燥的环境下存储设备,理想的设备存放环境湿度不高于 40%。

电池安全

⚠【警告】本设备配有不可拆卸的内置电池,请勿自行更换电池,以免损坏电池或设备。

- 禁止在强静电或者磁场环境中使用电池,以免引起设备内部电路故障。
- 请勿将电池暴露在高温处或发热设备的周围,如日照、取暖器、微波炉、烤箱或热水器等。电池过热可能引起爆炸。
- 请勿拆解或改装电池、插入异物、或浸入水或其它液体中,以免引起电池漏液、过热、起火或爆炸。

电池安全

- 电池内部电解液具有强腐蚀性,如果不小心接触到皮肤或眼睛,请立即用清水冲洗至少15分钟并马上就医。
- 请勿把电池扔到火里,否则会导致电池起火和爆炸。
- 请勿跌落、挤压或穿刺电池。避免让电池遭受外部大的压力,从而导致电池内部短路和过热。
- 请勿使用已经损坏的电池。
- 切勿将电池彻底放完电后长时间存储,以避免电池进入过放状态而造成电芯损坏,将无法恢复使用。
- 务必将电池彻底放电后,再将电池废置于指定的电池回收箱。电池是危险化学品,严禁弃置于普通垃圾箱。相关细节,请遵循当地电池回收和废置的法律法规。如电池无法彻底放电,请勿将电池直接弃置于电池回收箱,应联系专业电池回收公司做进一步的处理。

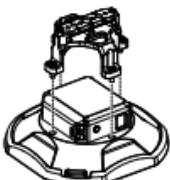
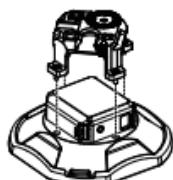
维护和保养

- 请保持设备清洁,无沙尘等异物。使用干净、干燥的布料及时清理产品上的异物。
- 请勿使设备及其配件受到强烈的冲击或震动,以免损坏设备及其配件,导致设备故障。
- 如果设备碰撞硬物或设备受到外界的强烈撞击造成屏幕部分破碎,切勿触摸或试图移除破碎的部分,请立即停止使用并及时联系TILTA售后服务。

03 [产品参数]

产品名称	物品清单	尺寸	重量	材质
 4.5寸电动吸盘主体 (HDA-ESC-45)	4.5寸电动吸盘主体 ×1 吸盘保护罩 ×1 说明书 ×1	146*146*54.2mm	350g	ABS+橡胶 +硅胶
 4.5寸电动吸盘- 通用多接口拓展模块 (HDA-MMB)	通用多接口拓展模块 ×1 M4螺丝 ×4 L型3mm内六角扳手 ×1	75*75*38mm	110g	铝合金
 4.5寸电动吸盘- NATO拓展模块(HDA-NMB)	NATO拓展模块 ×1 M4螺丝 ×4 L型3mm内六角扳手 ×1	75*75*44.5mm	55.5g	铝合金
 4.5寸电动吸盘- 迷你米歇尔拓展模块 (HDA-HMB)	迷你米歇尔拓展模块 ×1 M4螺丝 ×4 L型3mm内六角扳手 ×1	75*75*84.7mm	153.5g	铝合金

产品套装名称



4.5寸电动吸盘-通用多接口套装
(HDA-ESC-MMB-45)

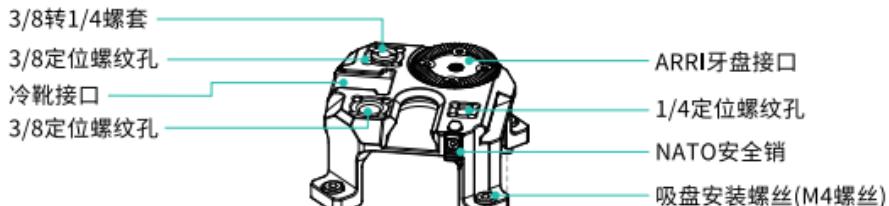
4.5寸电动吸盘-NATO接口套装
(HDA-ESC-NMB-45)

4.5寸电动吸盘-迷你米歇尔接口套装
(HDA-ESC-HMB-45)

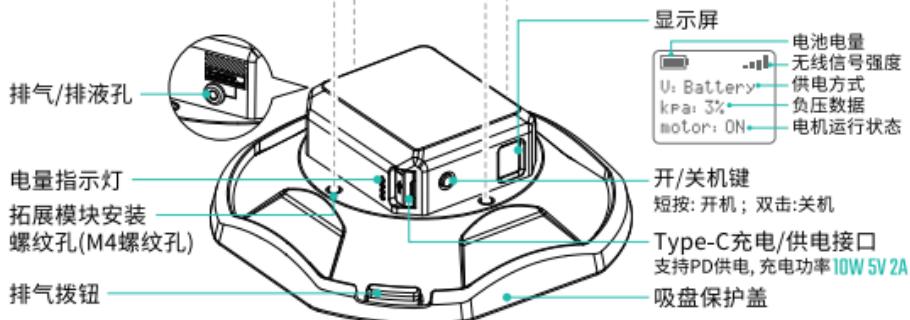
💡 用户购买三款套装中任一款，将会收到吸盘主体和拓展模块两个包装，需自行组合后才能使用。

04 [功能介绍]

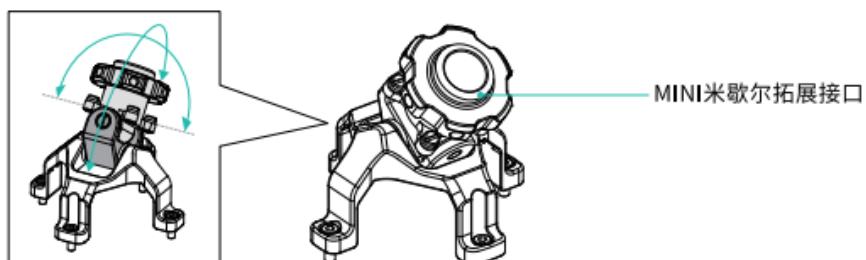
通用多接口拓展模块 >>



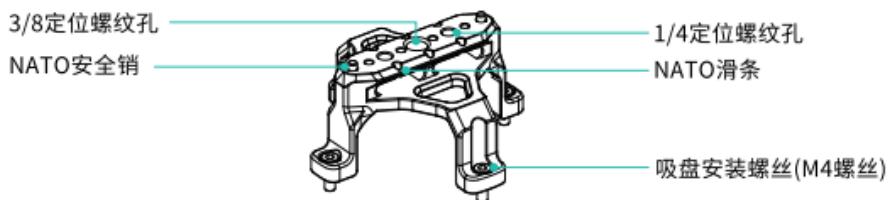
4.5寸电动吸盘主体 >>



迷你米歇尔拓展模块 >>



NATO拓展模块 >>

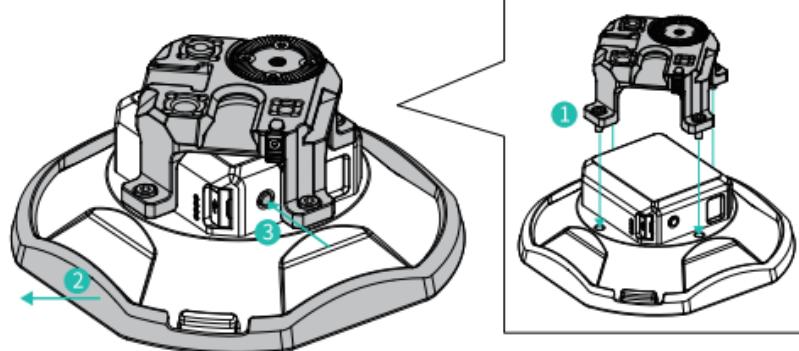


05 ■ [使用介绍]

以通用多接口拓展模块为例，安装如下：

1. 通过M4螺丝将拓展模块安装到吸盘主体的M4螺纹孔①上，拧紧螺丝完成装配。
2. 移除吸盘保护盖②，将吸盘放在平整光洁的表面上。
3. 开机③，启动吸盘；手动按压吸盘顶部，保证吸盘贴合吸附面。

待电机将吸盘完全吸附后停止运行，即吸附完成。



- 吸盘主体内置**3.7V 2000MAH**锂电池，支持Type-C接口外接供电。
- 出厂时吸盘已带**75%**左右电量，可放心使用。
- 每秒**1000**次气压检测，自动识别设备状态，漏气自动抽真空，确保吸盘时刻处于安全状态。
- 当吸盘在有液体的表面使用时，排气/排液孔会排出液体，此为正常现象。

06 [DISCLAIMER]

Thank you for purchasing TILTA products.

Before using this product, please carefully read this document to ensure that the product has been set up correctly. The final interpretation of this document and all related documents for this product belongs to TILTA. For updates, please visit the official website at www.tilta.com for the latest product information. TILTA reserves the right to modify any information in this manual at any time without prior notice and without assuming any responsibility.

By using this product, you are deemed to have carefully read the disclaimer and warnings, understood, agreed, and accepted all the terms and content of this statement. You promise to take full responsibility for the use of this product and any consequences that may arise. You commit to using this product only for legitimate purposes and agree to this term as well as any related regulations, policies, and guidelines set by TILTA.

TILTA is not responsible for any damages, injuries, or legal liabilities caused directly or indirectly by the use of this product. Users should follow all safety guidelines mentioned in this document, including but not limited to those mentioned.

Despite the above provisions, consumer rights are still protected by local laws and regulations and are not affected by this disclaimer.

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07 [CAUTIONS & WARNINGS]

The suction cup body has a built-in **3.7V 2000MAH** lithium battery. Before using this product, please strictly comply with the following instructions. Tiltta will not be responsible for any consequences caused by incorrect operation or improper use.

Accessory Requirements

- Charging environment temperature higher than 40°C or lower than 5°C may lead to battery performance degradation, expansion, leakage, overheating and other damages.
- Do not store the battery in an environment that exceeds 60°C. The ideal ambient temperature for storage is 22°C to 28°C.

Operating Environment

- This device contains strong magnetism. To avoid magnetization effects, keep it away from magnetic cards, IC cards, implantable medical devices (e.g. pacemakers), hard disks, RAM chips, and other devices that are susceptible to interference.
- Use the battery in an environment where the temperature is between -20 °C and 45 °C. Higher temperatures may cause abnormalities in the battery. Excessive temperatures may cause abnormal expansion, fire, or even explosion of the battery. It is recommended to fully charge the battery at room temperature before using it in a low-temperature environment to extend the battery life.
- Do not place the device near flammable or combustible materials (e.g. carpets and wood products) for charging. Keep an eye on the charging process to prevent accident.

Operating Environment

- Store the device in a dry environment. Ideally, the device should be stored in an environment with a humidity of no more than 40%.

Battery Safety

⚠ [Warning] This device is equipped with a non-removable internal battery, do not replace the battery yourself as this may damage the battery or the device.

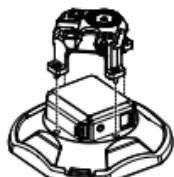
- Do not use the battery in an environment with strong static electricity or magnetic fields, as this may cause malfunctions in the internal circuits of the device.
- Do not expose the battery to high temperatures or around heat generating devices such as sunlight, heaters, microwaves, ovens or water heaters. Overheating of the battery may cause an explosion.
- Do not disassemble or modify the battery, insert foreign objects, or immerse it in water or other liquids, as this may cause the battery to leak, overheat, catch fire, or explode.
- The electrolyte inside the battery is highly corrosive. If it accidentally comes into contact with your skin or eyes, rinse immediately with water for at least 15 minutes and seek immediate medical attention.
- Do not throw the battery into a fire as this may cause the battery to catch fire and explode.
- Do not drop, crush or puncture the battery. Avoid subjecting the battery to large external pressures, which could result in internal short-circuiting and overheating.
- Do not use a battery that has been damaged.
- Do not store the battery for a long period of time after it has been completely discharged to avoid over-discharging the battery and causing damage to the battery cells, which will make it impossible to resume use.
- Be sure to discharge the battery completely before placing it in the designated battery recycling bin. Batteries are hazardous chemicals and should not be disposed of in the trash. For details, please follow the local laws and regulations on battery recycling and disposal. If the battery cannot be completely discharged, please do not dispose of the battery directly in the battery recycling bin, but contact a professional battery recycling company for further processing.

Maintenance and Care

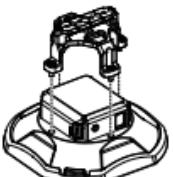
- Please keep the equipment clean and free of sand, dust and other foreign matter. Use clean and dry cloth to clean the foreign matter on the product in time.
- Please do not subject the equipment and its accessories to strong impact or vibration, so as not to damage the equipment and its accessories, resulting in equipment failure.
- If the device collides with hard objects or the device is subjected to strong impact from outside causing the screen part to be broken, do not touch or try to remove the broken part, stop using it immediately and contact TILTA support service in time.

Product Name	Packing list	Size	Weights	Materials
Electronic Suction Cup (4.5") (HDA-ESC-45)	Electronic Suction Cup (4.5) ×1 Protective Cover ×1 User Guide ×1	146*146*54.2mm	350g	ABS, Rubber, Silicone
Multi-Functional Mounting Bracket for Electronic Suction Cup (4.5") (HDA-MMB)	Multi-Functional Mounting Bracket ×1 M4 Screw ×4 3mm Allen Key ×1	75*75*38mm	110g	Aluminum
NATO Mounting Bracket for Electronic Suction Cup (4.5") (HDA-NMB)	NATO Mounting Bracket ×1 M4 Screw ×4 3mm Allen Key ×1	75*75*44.5mm	55.5g	Aluminum
Hydra M25 Mounting Bracket for Electronic Suction Cup (4.5") (HDA-HMB)	Hydra M25 Mounting Bracket ×1 M4 Screw ×4 3mm Allen Key ×1	75*75*84.7mm	153.5g	Aluminum

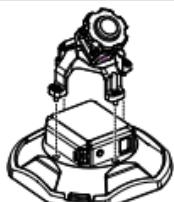
Product Configurations



Electronic Suction Cup (4.5") with Multi-Functional Mounting Bracket (HDA-ESC-MMB-45)



Electronic Suction Cup (4.5") with NATO Mounting Bracket (HDA-ESC-NMB-45)

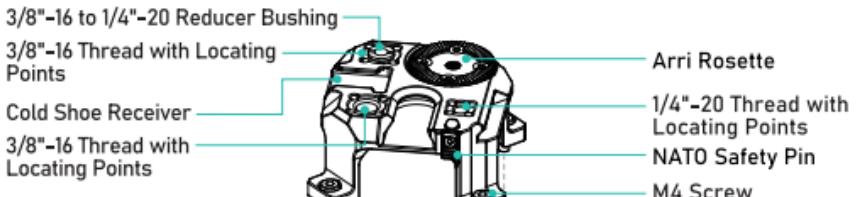


4Electronic Suction Cup (4.5") with Hydra M25 Mounting Bracket (HDA-ESC-HMB-45)

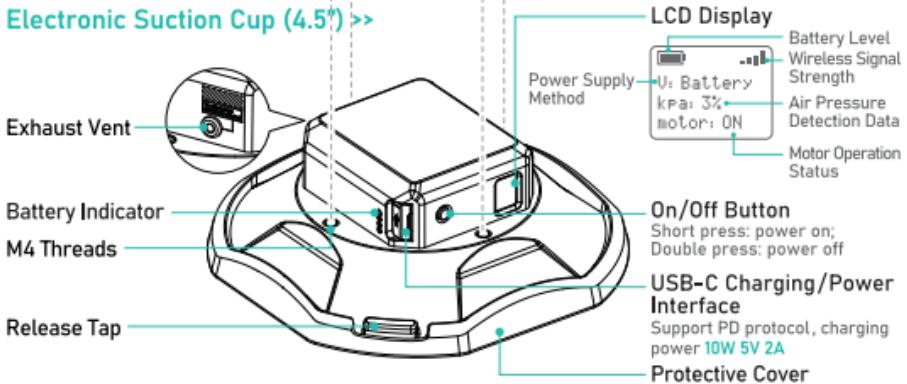
Users who purchase any of the three packages will receive the suction cup body and expansion module in two packages, which need to be combined before they can be used.

10 [FUNCTION INTRODUCTION]

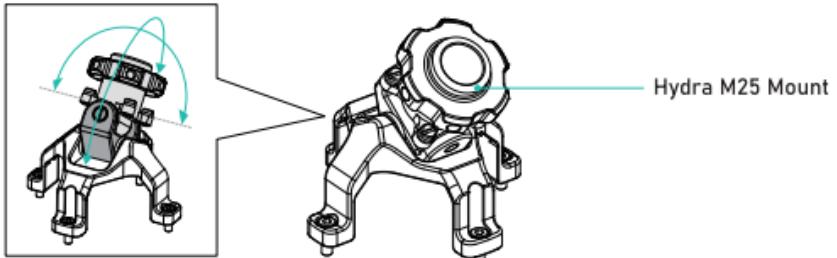
Multi-Functional Mounting Bracket >>



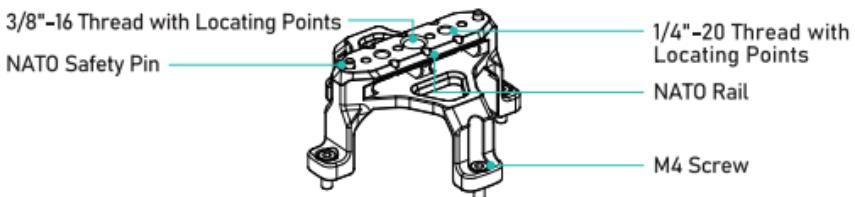
Electronic Suction Cup (4.5") >>



Hydra M25 Mounting Bracket >>



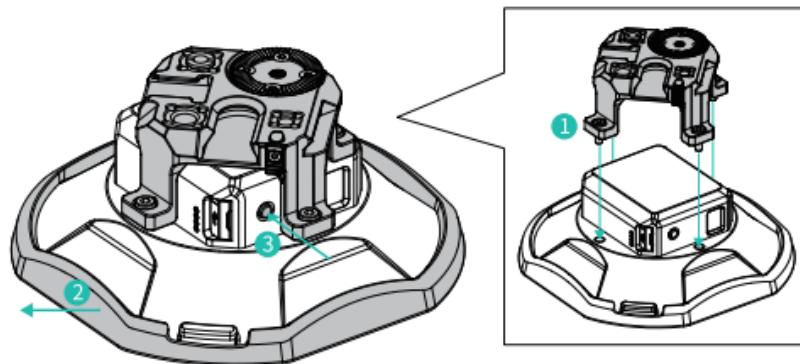
NATO Expansion Module >>



11 [INTRODUCTION TO USE]

Take the Multi-Functional Mounting Bracket as an example, installation is as follows:

1. Install the bracket to the M4 threaded hole of the suction cup through M4 screws ①, and tighten the screws to complete the assembly.
2. Remove the suction cup protective cover ②, and place the suction cup on a flat, clean surface.
3. Turn on the power ③, activate the suction cup; manually press the top of the suction cup to ensure it attaches to the suction surface. Wait until the motor fully attaches the suction cup and stops running, indicating that the suction process is complete.



⚠

- Suction cup body contains a **3.7V 2000MAH** lithium battery, supports USB-C external power supply.
- The suction cup is charged to about **75%** at the time of shipment, ready for use.
- **1000** air pressure checks per second, automatic device status recognition, auto-suction in case of a leak, constantly maintaining the suction cup's suction.
- It is normal for the exhaust vent to expel liquid when the suction cup is used on wet surfaces.

IC CAUTION

- English:

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

To maintain compliance with RSS-102 RF Exposure guidelines, This equipment should be installed and operated with minimum 20cm distance between the radiator and your body: Use only the supplied antenna.

- French:

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement. Pour être conforme aux lignes directrices d'exposition RF RSS-102, cet équipement doit être installé et exploité à une distance minimale de 20cm entre le radiateur et votre corps: n'utilisez que l'antenne fournie.

FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum 20cm distance between the radiator and your body: Use only the supplied antenna.