

Edge-side recognition algorithm,  
accurate and fast settlement

# AI Smart Vending Machine kit

- Edge side recognition
- More stable and faster



The AI vending machine kit is a highly compatible, flexible, accurate, and reliable retrofit solution designed for the intelligent upgrade of traditional vending machines. The kit includes the industrial control device AE510, which boasts 14 TOPS AI computing power and a maximum main frequency of 2.7 GHz, providing strong computing capabilities and a stable operating environment.

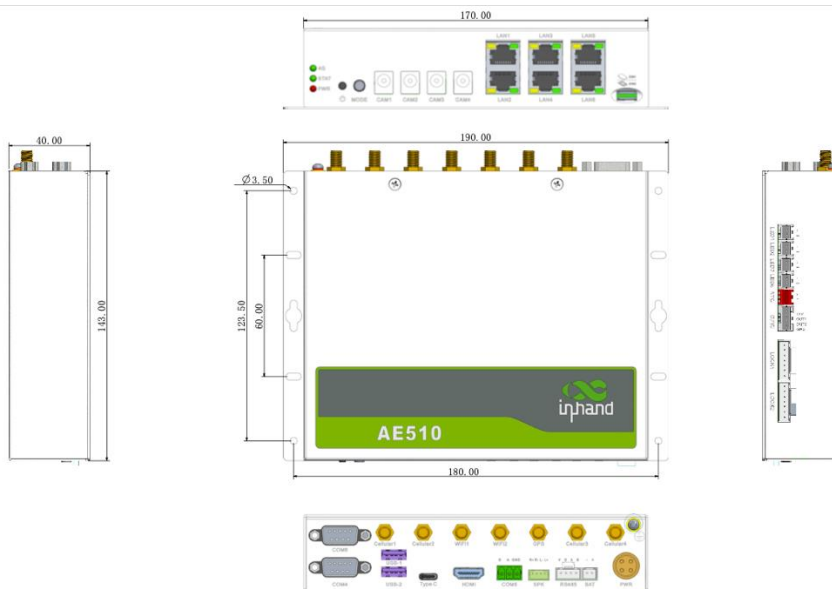
Equipped with four cameras utilizing advanced image recognition technology, the kit can accurately capture and identify items taken by customers, significantly enhancing the convenience of shopping. Additionally, an intelligent door lock ensures the security of the vending cabinet, and the kit comes with a backup battery and a voice speaker

## Solution



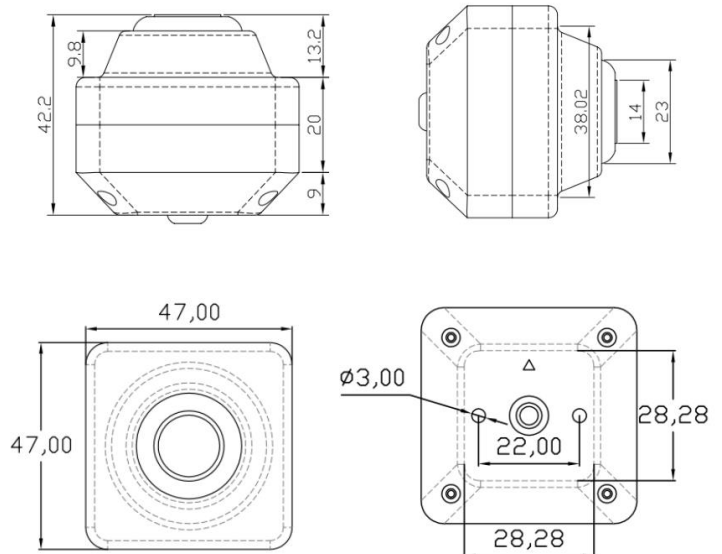
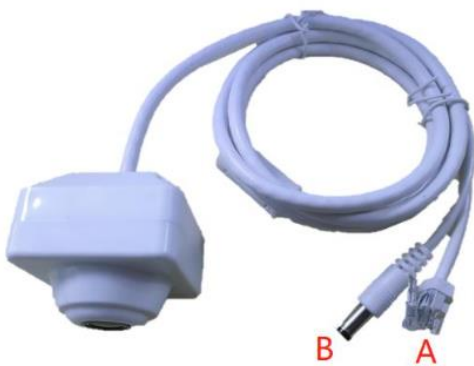
# AE510

| AE510 Specification |                               |  |  |
|---------------------|-------------------------------|--|--|
| Hardware platform   | CPU                           | Octa-core processor, maximum frequency 2.7GHz  |  |
|                     | Comprehensive computing power |  | 14TOPS   |
|                     | RAM                           | 8GB  | FLASH 128GB  |
| Interface           | SIM                           | 2x Nano SIM Slot   |  |
|                     | Power                         | 12V DC-input *1  |  |
|                     | Antenna                       | 4G: SMA x 2、 WiFi: RP-SMA x 2  |  |
|                     | Serial Port                   | 2x RS-232, , DB9<br>2x RS-485, One is for 4-pin with power supply, and the other is for 3-pin industrial terminal; |  |
|                     | Ethernet Port                 | 6x 10/100Mbps , LAN/WAN  |  |
|                     | Indicator                     | 1x power indicator, 1x status indicator, 1x 3G/4G indicator  |  |
|                     | HDMI                          | 1x HDMI;   |  |
|                     | Camera power supply           | 4x white round interface, 5521, 5W   |  |
|                     | LED                           | 4x LED   |  |
|                     | BAT                           | 1x Backup battery interface  |  |
|                     | LOCK                          | 2 x HX25035-7Y   |  |
|                     | SPK                           | 1x SPK , Support 5W speakers   |  |
|                     | Button                        | 1x Power Button ; 1x Mode Button   |  |
| Mechanical Feature  | Protection Rating             | IP40   | Cooling Fanless  |
|                     | Housing                       | Metal  | Dimensions 190x 143x 40mm (Including installation parts) |
| Environment         | Working Temperature           | -10~ 60°C  | Ambient Humidity 5 ~ 95% (non-condensing)                |
|                     | Storage Temperature           | -40~ 85°C  |  |
| Other               | level                         | ESD、 EFT、 Surge: level2  | OS Android12   |



# AI Camera

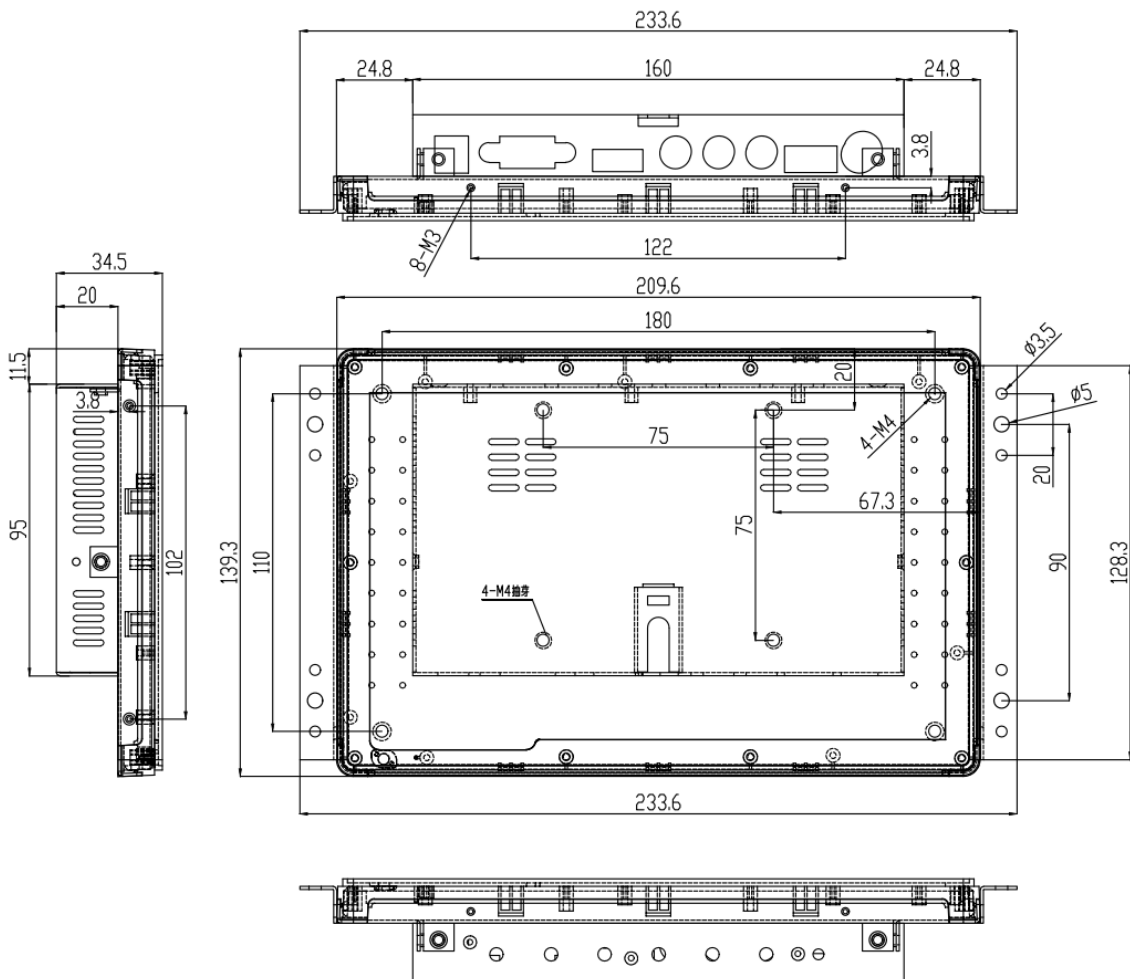
| AI Camera Specifications |                           |   |                    |         |
|--------------------------|---------------------------|---|--------------------|---------|
| Lens                     | Structure                 | 4G+1 RF   |                    |         |
|                          | Relative aperture         | F:2.0   |                    |         |
|                          | FOV                       | D:139°, H:115°, V:78° ±5%   |                    |         |
|                          | Focal length              | 2.8mm   |                    |         |
|                          | Back focal length         | 5mm   |                    |         |
| Image                    | Sensor                    | 1/2.8" CMOS   |                    |         |
|                          | Maximum output resolution | 1920(H) * 1080(V)   | Maximum frame rate | 25fps   |
|                          | Low illumination          | support   | Wide dynamic range | support |
| Video                    | White balance             | auto  | 3D noise reduction | support |
|                          | Image optimization        | ISP processing technology: Optical adaptive technology to reduce ghosting of moving objects |                    |         |
|                          | Encoding format           | H.264   |                    |         |
|                          | Image resolution          | 1080P/720P/360P/D1@25fps  |                    |         |
| Protocol                 | Transmission protocol     | HTTP/RTSP/DHCP/NTP  |                    |         |
| General                  | Power input               | DC 12v; 2.1/5.5mm interface   |                    |         |
|                          | Power                     | Max ≤ 1.8W  |                    |         |
|                          | Operating temperature     | -15°C to +50°C  |                    |         |



# 8-inch touch display (optional)

## 8-inch touch display Specification

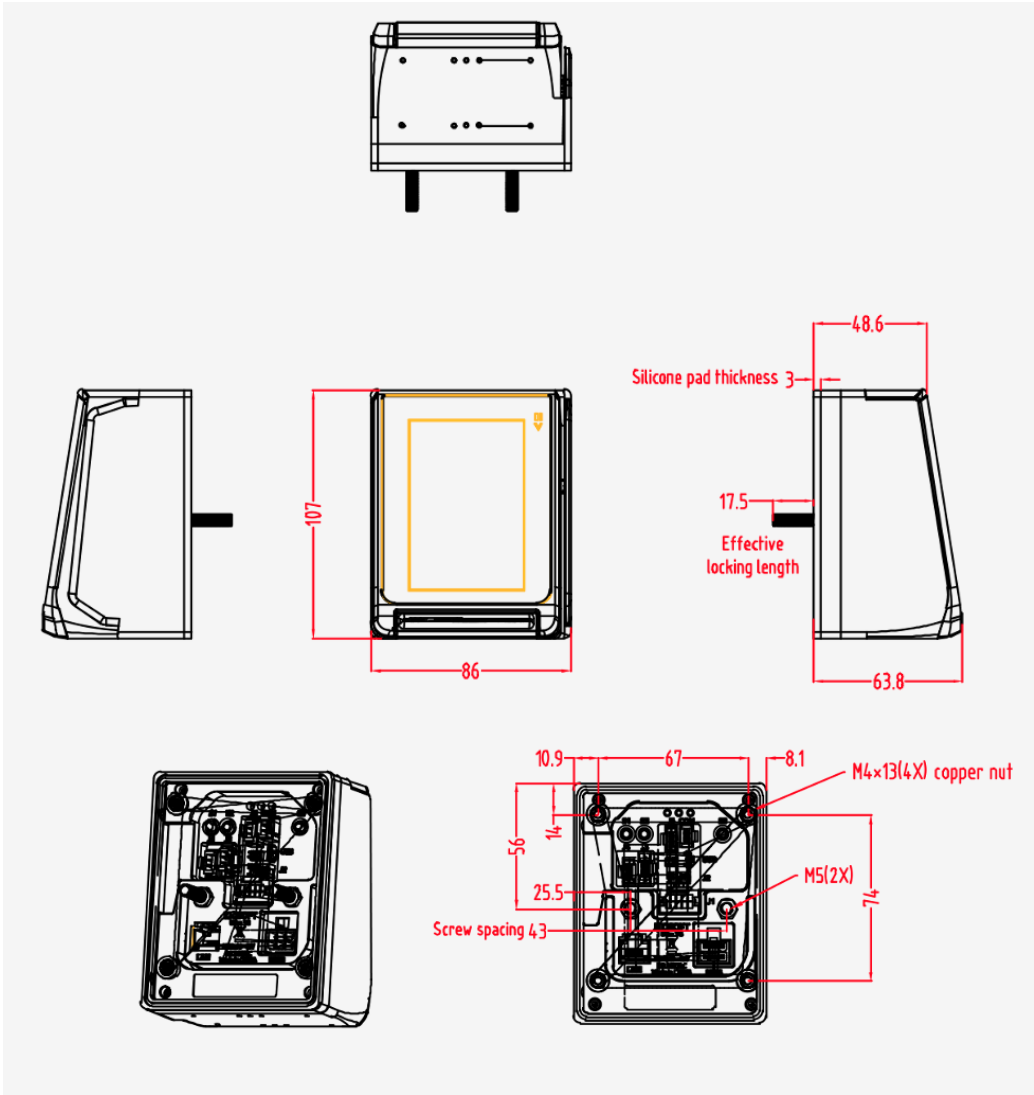
|                |               |                      |
|----------------|---------------|----------------------|
| Specifications | Size          | 8-inch               |
|                | Brightness    | 300cd/m <sup>2</sup> |
|                | Resolution    | 1280*720             |
|                | Scale         | 16:9                 |
|                | Viewing angle | Full viewing angle   |
|                | Touch mode    | Ten-point touch      |
|                | Power supply  | DC12V , 1A           |



# POS (optional)

## POS Specification

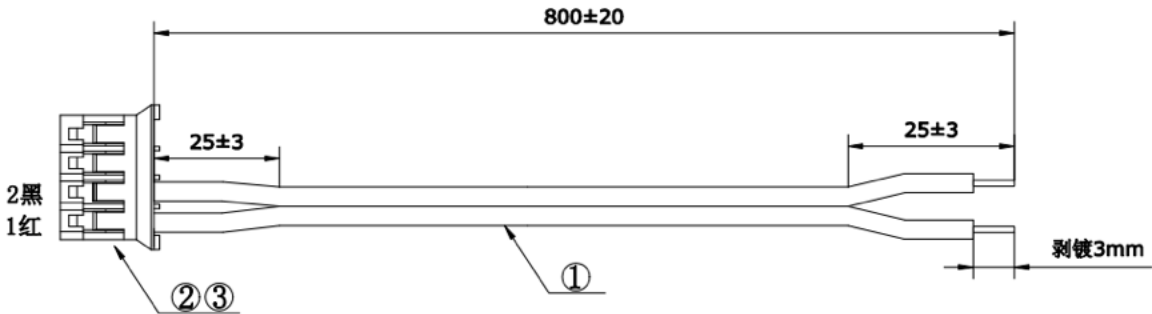
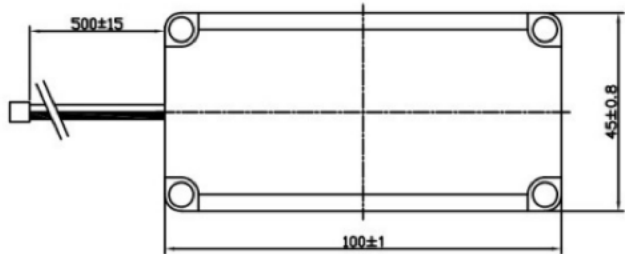
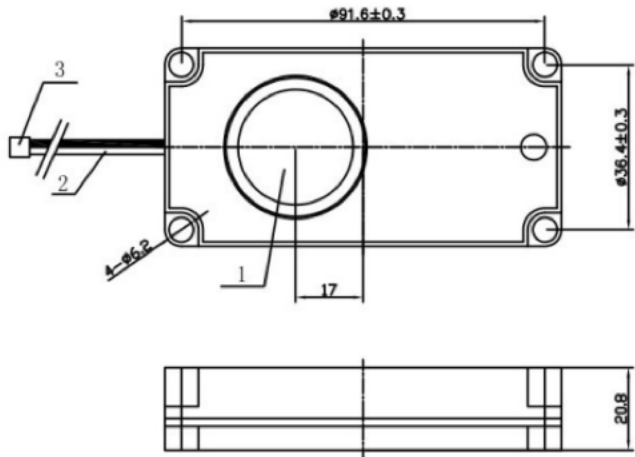
|                       |                        |   |
|-----------------------|------------------------|---|
| <b>Specifications</b> | Display                | 3.5inch full color screen 320*480 IPS, touch  |
|                       | Dimensions             | 107mm(L) x 86mm(W) x 64mm (H)   |
|                       | Power Supply           | 24V   |
|                       | Wireless Communication | WIFI (802.11 b/g/n); Bluetooth 2.1&4.2  |
|                       | Wired Communication    | ETH   |
|                       | Certificate            | PCI 6.X, EMVL1, EMV CL1, EMV L2<br>QuickPass, PayWave, Expresspay, D-PAS, JCB, PayPass, Interac |



# Speaker

## Speaker Specifications

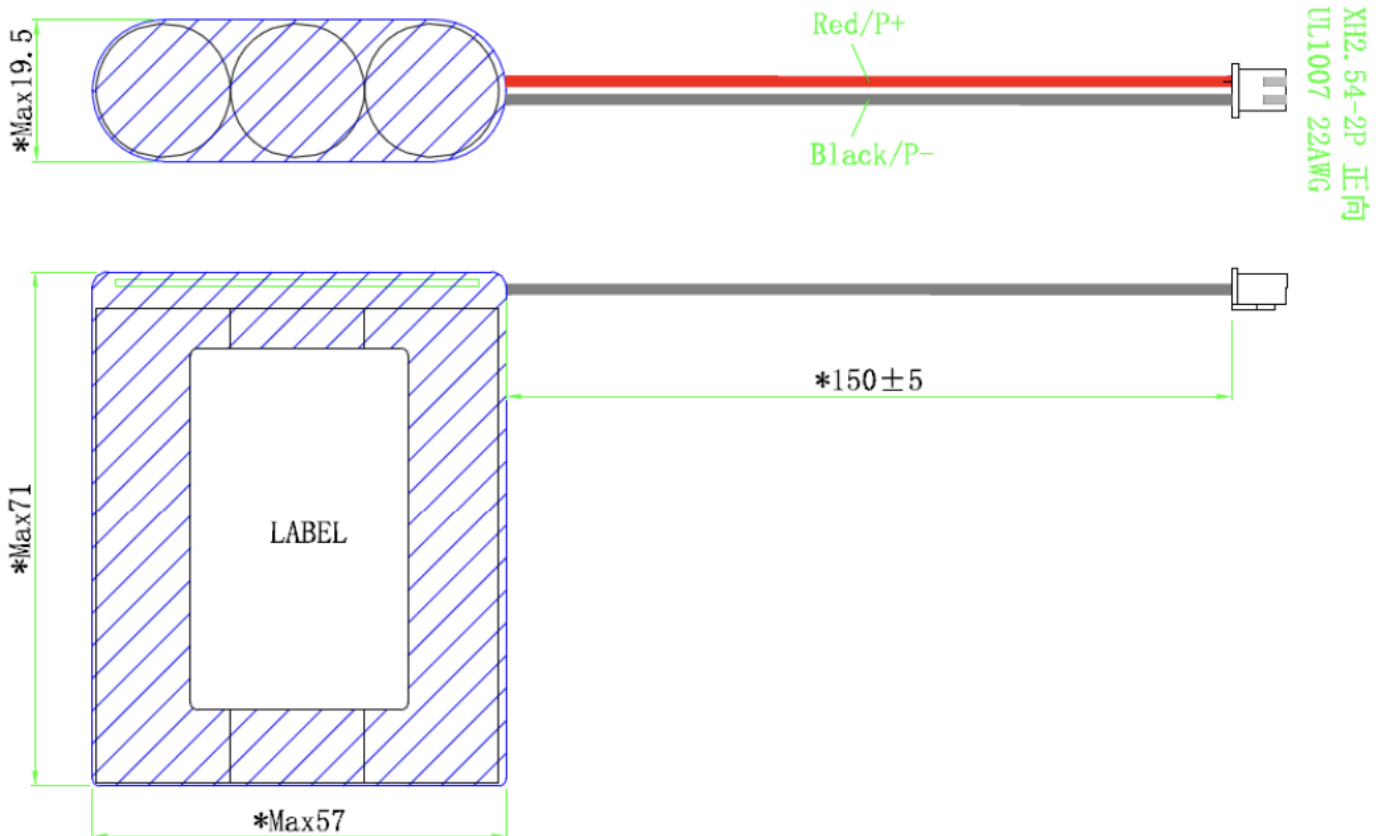
|                |            |                                     |
|----------------|------------|-------------------------------------|
| Specifications | Dimensions | 100 * 45 mm                         |
|                | Magnet     | Φ 12.5 ×4.0 mm Nd-Fe-B              |
|                | Power      | NOM POWER : 3.0 W MAX POWER : 5.0 W |



## Backup Battery

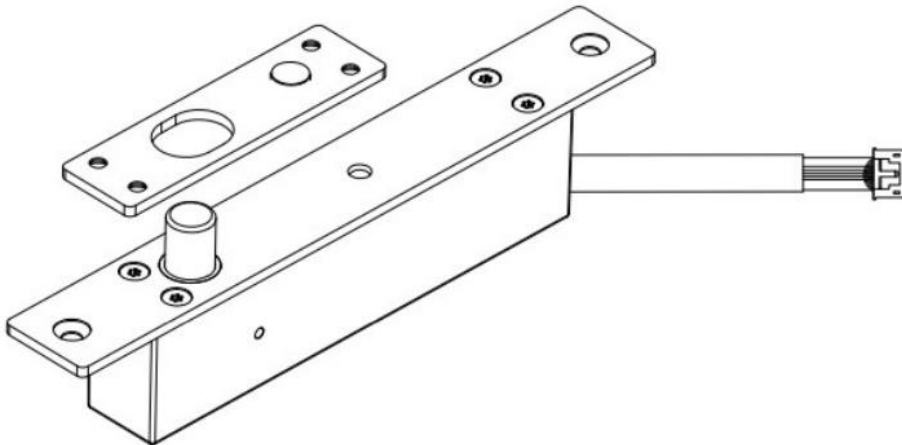
### Backup Battery Specifications

|                                      |  |   |
|--------------------------------------|--|---|
| <b>Parameters and specifications</b> | Dimensions   | 100 * 45 mm                                     |
|                                      | Typical capacity   | 2550mAh   |
|                                      | Operating voltage range  | 10.8V ~ 8.1V                                    |
|                                      | Maximum discharge current  | 2A  |
|                                      | Cycle life   | ≥500 Cycles 80%                                 |
| <b>Environment</b>                   | Operating temperature  | Charging: 0°C ~ 45°C; Discharging: -20°C ~ 60°C |
| <b>Protection function</b>           | Overcharge, overdischarge, overcurrent, short circuit protection and other functions |   |



# Lock

| Lock Specifications |                              |  |
|---------------------|------------------------------|--|
| Parameters          | Working voltage              | DC12V±10%                                |
|                     | Working current              | Start 1.2A; Steady 0.14A                 |
|                     | Panel size                   | L200 * W28 * H3 (mm)                     |
|                     | Panel mounting hole distance | 180mm                                    |
|                     | Magnetic panel size          | L90 * W24 * H30 (mm)                     |
|                     | Lock dimensions              | L200 * W28 * H38 (mm)                    |
|                     | LED light display            | Green light unlocks, red light locks     |
|                     | Mechanical life requirements | At least 300,000 times, failure rate <3% |





## Ordering Guide

| Code       | Model                            | Description   | Other   |
|------------|----------------------------------|---|---|
| GPRO310071 | AE510 version dynamic vision kit | AI Vending Machine single door cabinet, AE510 version dynamic vision kit, local recognition solution, | Includes AE510, AI camera*4, smart lock, speaker, spare battery, etc. |
| SLCD000007 | InTouch-ZXD08                    | 8-inch widescreen display,  | -   |
| SMDM120001 | InPOS-KS01                       | POS Payment module  | Order network cables according to installation length                 |

### About Us

InHand Networks is a leading IoT solutions provider founded in 2001, dedicated to driving digital transformation across industries and empowering customers to unlock their full potential and achieve accelerated growth.

We specialize in delivering industrial-grade connectivity solutions for diverse sectors, such as enterprise networks, industrial and building IoT, digital energy, smart commerce, and mobility. Our comprehensive product portfolio and services cater to various applications worldwide, including smart manufacturing, smart grid, intelligent transportation, smart retail, etc. With a global footprint spanning over 60 countries, we serve customers in China, the United States, France, Germany, the United Kingdom, Italy, and beyond.



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