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## **Hanshow Visight AICamera Introduction**

**V1.0**

# STATEMENT

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# 1 Overview

## 1.1 Productdescription

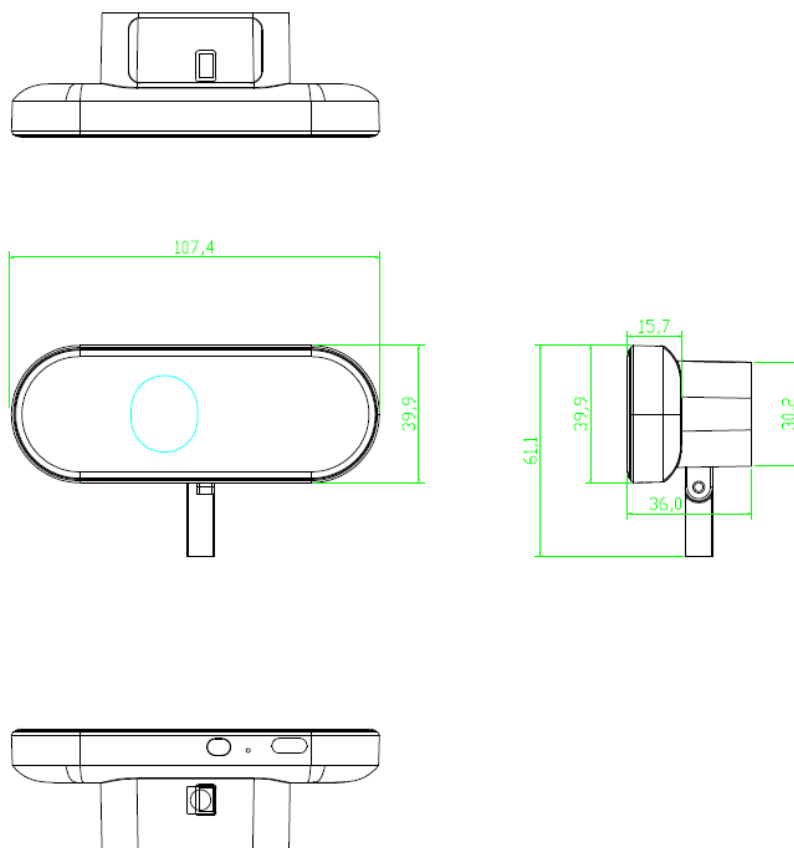
The Visight Camera is an intelligent image capturing and computing device based on the dual-core ARM processor with a neural network processor. With 8 million pixels of high-performance image sensor that provides 4K/1080P and other resolutions of static photo shooting, including 1080P video records. Based on the AI system that can give a variety of image and video algorithms solutions, for different scenes under image recognition, video analysis and other functions.

We built-in camera provides deep neural network computing and supports neural network processors, including the mainstream network GoogLeNet, such having VGG16, Resnet101, mobilenet\_ssd\_V2, MTCNN and other network hardware acceleration. Helping users to run the inference application of neural networks efficiently under the framework of embedded systems. Embedding with the AI edge computing vision chip and integrated with a world-leading deep learning algorithm. The visight camera supports large-scale face detection and tracking with low power consumption.



**Figure 1-1 Visight camera appearance**

Dimensions of visight camera: 107\*40\*35mm. Metal frame with a 2.5D glass mask on the surface, which is aesthetically pleasing and small, suitable for a variety of occasions.



## 2 Camera Component

Visight camera consists of the following:

1. Processor +NPU
2. CMOS image sensor
3. DDR memory and eMMC memory
- 4.WIFI/ Ethernet communication module

## 2.1 Core Processor

Dynamic Range 2GHz ARM cortex-a7, quad-core high performance processor with 512KB L2 cache, SDC integrated dual-core with high-performance of CEVA XM4 neural network processing chip for running various deep learning algorithms.

## 2.2 Imaging sensor

The 5V /2A DC-powered Visight Camera integrated high definition, low illumination, and a wide dynamic range CMOS sensor. To meet the needs of the specific scene, we have made a targeted image adjustment for the retail scenarios.

Note: The main models of Visight Camera adopt 8M sensors. Some UVC models use 2M sensors.

## 2.3 Main memory

1G/2GDDR, 8GB eMMC

## 2.4 Integrated Features

The camera supports WIFI and Ethernet communication. The WIFI communication module is built in. Ethernet communication requires external accessories. For details, contact the sales personnel.

Note: Visight Camera support UVC mode, and may not have WIFI, or Ethernet functions. Please refer to the specification in detail.

# 3 Software Options

Linux system with great performance and system scalability.

# 4 Interfaces Power

5V /2A DC power supply.

## 5 Camera Specification

Table 1-1 shows the basic specification of Visight Camera

**Table 1-1 Visight Camera Specification**

| Item                        | Description                                               |
|-----------------------------|-----------------------------------------------------------|
| Features                    | N2-U1G28F / N2-U1G32F / N2-I1G28A / N2-I1G32A / N2-I1G60A |
| Dimensions                  | 107*40*35mm                                               |
| Weight                      | 105 g                                                     |
| CPU                         | 1.5GHz ARM Cortex-A7                                      |
| AI Performance              | CNN 1.2TOPS                                               |
| Camera resolution           | Total Pixels - 8M                                         |
| Video                       | H.264 1080p/30fps                                         |
| NPU                         | 1GB LPDDR4                                                |
| Power Supply                | POE + DC Power Supply<br>USB/DC                           |
| DDR                         | 1GB LPDDR4                                                |
| Connection                  | USB / Ethernet / WIFI                                     |
| Focal Length                | 2.8mm, 3.2mm, 4.2mm, 6.0 mm                               |
| IMG                         | MP/JPG/MJPEG                                              |
| Dynamic Range               | >60db                                                     |
| Power consumption           | Max: 6 W                                                  |
| Ethernet cable/WIFI/USB 3.0 | Ethernet cable/WIFI/USB 3.0                               |
| Safe Engine                 | ARM TrustZONE, AES en/decryption, DES en/decryption       |
| Work Environment            | Temperature: 0° ~ 40℃, Humidity: < 60%                    |
| SDK                         | Linux                                                     |

## 6 Application Areas

1. Planograms Monitoring.
2. Face detection & Traffic Counting.

## 7 FCCID warning

### 7.1 Warning for nameplate

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.

### 7.2 Warning for product manual

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.
- Increase the separation between the equipment and receiver.
- 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.

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

#### RF Exposure Statement

The distance between user and products should be no less than 20cm.