



## E-Vision Binocular Stereo Camera

EVDC360SA-GE60ST Introduction



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## § 1 General Introduction

### 1. 1 Simple Introduction of Camera

The camera uses two eye-cameras to capture stereo image, each eye-camera with complete resolution (752 x480) rate of 60 fps (low resolution up to 200 fps), 8 sampling bit. And the camera have near infrared sensitivity (when 850nm, >40% QE), auto-gain(gain) and auto-exposure control. Using global shutter control, at the same time of achieving high dynamic range, whether in the bright light, or in the dark environment It can capture useful information.

### 1. 2 Introduction of Microview Binocular Stereo Camera

Capture form	Binocular Stereo
Range of FOV	70mm, 150mm, 300mm (Center of optical axis distance)
transport mode	Giga Ethernet (no Hub, 100m)
size	752*480
sampling BIT	8bit
Highest frame rate	60fps
dynamic range	>80dB-100dB(high dynamic mode)
Piexl size	6.0 μ m*6.0 μ m
Bining	2x2 和 4x4
Capture type	Continuous capture, asynchronous reset
Shutter mode	Electronic shutter
Shutter speed	30 μ s-15ms
Lens interface	C/CS
CPU using	<1%
type	monochrome/color
Power supply mode	alone+12V supply
Expand fuction	Two flashlights control output, one external trigger input, one field synchronous output
Application field	Automobile electronic、unmanned monitor、machine vision and so on.

### 1. 3 spectral curve

图 1 spectral respond curve

## 1. 4 Definition of Interface

There are two interfaces on back board of the camera, one is GIGA Ethenet interface, the other is power controlling interface.

- a) To GIGA Ethenet interface, require CAT5e;
- b) Form of definition of power and control interface:

Table 1 definition of camera pin

pin	definition	input/output type	description
1	RET	PWR	Power GND
2	VIN	PWR	power (12V)
3	TTL IN 1I	TTL	external trigger input 1 (3.3V) LOW VALID
4	TTL OUT 1O	TTL	Flashlight output 1 (3.3V) high VALID
5	DGND	PWR	Digital signal GND
6	TTL IN 2I	LVTTL	external trigger input 2 (3.3V) LOW VALID
7	TTL OUT 2O	LVTTL	field synchronous output (3.3V) high VALID
8	TTL IN 3I	LVTTL	external trigger input 3 (3.3V) LOW VALID
9	TTL OUT 3O	LVTTL	Flashlight output 2 (3.3V) high VALID
10	TTL IN 4I	LVTTL	external trigger input 4 (3.3V) LOW VALID
11	NC		
12	NC		

图 2 管脚示意图

## 1. 5 work mode

The camera has two kinds work mode, one is continuous capture mode (Free\_Run) , the other is asynchronous replacement mode(Snapshot).on continuous capture mode, the highest frame rate for full format of each camera can be 60fps. On asynchronous replacement mode,used edge trigger mode, the camera begin to exposure after it receive valid trigger signals, then read the data.

Time sequence as follows:

(1) Free\_Run:

picture 3 continuous mode work time sequence (exposure time < 1 field )

(2) Snapshot:

picture 5 asynchronous replacement mode work time sequence

On asynchronous reset placement work mode,when the camera receives an external trigger signal, you can programme inner trigger signal. From the trailing edge

picture 4 continuous mode work time sequence (exposure time > 1 field )

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of external trigger signal, and taking a period of T1 time, it will generate inner trigger signal. external trigger signal, T2 is flashlight output delay, T3 is exposure time, T4, T5 separately is strobe light keep on low level. Each of T1, T2, T3, T4, T5 can be set up by user with application soft.