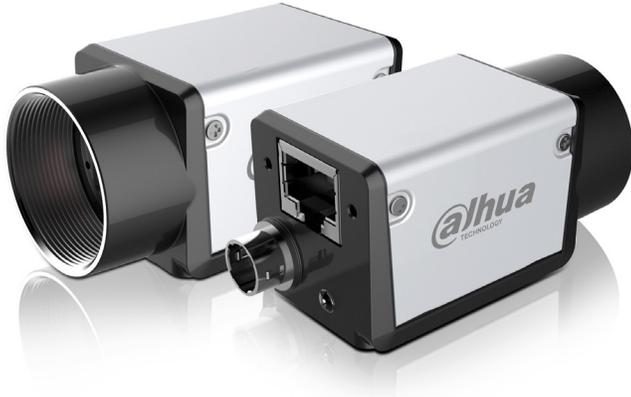


DH-MV-A3051M/CG000E Area Scan Cameras



- Resolution:0.5MP
- Sensor:PYTHON 480,Mono/Color image,Max 120fps
- Interface:GigE interface of 1Gbps bandwidth
- 128MB on-board cache
- Automatic exposure control,LUT and Gamma correction
- Multiple trigger modes
- Mechanical dimension:29x29x42(mm)
- Power supply:Approx 2.8w and PoE supported
- Compatible with GigE vision V2.0 and GenICam vision
- CE&FCC



System Overview

As we all know machine vision is a mature technology widely used in condition monitoring and product inspection. It not only provides more consistent and reliable consequents resulting in improved product quality but also higher yields and lower production cost. As the core component of the machine vision system, industrial camera requires high image quality, high transmission rate, standard interface and reliable & stable performance. As one of the worlds' best security product suppliers, Dahua is able to provide serialized industrial cameras with excellent image, high frame rate and related software. Our area scan cameras portfolio includes matrix cameras in color and monochrome versions as well as with 0.5 megapixel resolution, which enables customers to flexibly integrate the camera with general standard interfaces with GigE vision.

Functions

CMOS sensor

Dahua A3051M/CG000E area scan camera embeds 0.5MP global shutter and 4.8X4.8 pixel size CMOS sensor that can provide high quality and original image. Every pixel in CMOS sensor has its own amplifier and there are multiple A/D converters so each picture element can be read out individually, which means that pixels can be randomly addressed and accessed with AOI (automated optical inspection) and realize lower power dissipation than the CCD cameras. Combined with the advantage of the words' leading image processing technology we can effectively overcome the noise issue and output excellent picture equivalent to CCD camera.

GigE vision

GigE vision is a camera interface standard which is developed based on Gigabit Ethernet communication protocol that provides secure and cost-effective transmission of image data. In the field of industrial application, GigE vision supports high quality image fast transmission for up to 100m with general Ethernet cable (CAT-5 or higher grade). And with this kind of port the camera can work compatibly with various hardware and software from different manufacturers.

Global Shutter

An imaging sensor is consisting of lots of pixels. For knowing the whole image all of them have to be readout via A/D conversion by the ADC in once shutter. By global shutter mode all of the pixels will be readout simultaneously instead of in parallel. This difference makes the output from a industrial camera with global shutter sensor will not change with the fluctuating environmental brightness and capture the high speed moving object easily.

Multi trigger modes

In the application field of the machine vision, Dahua industrial camera is capable of capturing image via signal trigger and exposure frequency set on SDK. Besides, image capture will not be affected in case of induced network load and processing time of machine vision system.

High capacity buffer

With the stable 128MB on-board frame buffer, the camera leaves more time for the host computer to process pictures and realizes no frame loss. 128MB buffer is able to store different number of pictures according to specific sensor.

Rich SDK functions

Embedded with industry leading SDK software programming and debugging capability, original pictures can still be clearly captured even in harsh and low light industrial environment by adjusting the sharpness /noise reduction/ gamma correction /LUT (look-up-table: make adjustments to the picture within the camera)/black level correction/brightness/contrast and other ISP functions which are set in the SDK.

POE and wide-range power supply

The camera supports DC 6-26V wide-range power supply makes it suits even the most unstable power supply conditions. Meanwhile power over Ethernet (POE) technology can ensure the safe operation of the existing network without another power cable to reduce the total cost.

Several image formats output

Dahua industrial cameras output raw data with wide spectral range such as mono, color and RGB8 packed etc. Different types of format is equipped with corresponding data capacity which makes it suit various application scenarios.

Camera

Specification	Model	A3051MG000E	A3051CG000E
Lens Interface		C-mount	
Sensor		Onsemi PYTHON 480	
Sensor Spec		CMOS 1/3.6" Global shutter	
Resolution		0.5MP 800(H)x600(V)	
Framerate		120fps	
Pixel depth		8/10bit	
Pixel Size		4.8X4.8	
Interface		GigE,POE	
Mono/Color		Mono	Color
S/N Ratio		>38db	
WDR		60db	
GPIO Interface		6-pin Hirose connector,Optocoupler isolated:1ch input;1ch output	
Image Format		Mono:Mono8/10/10 Packed	Color:Mono8,BayerRG8/10/10Packed,BayerGB8/10/10Packed,RGB8Packed,YUV422Packed
Gain		0db ~ 18db	
Gamma		Range:0~4,Supports LUT	
Exposure time		16μs~1s	
Image Buffer		Supports 64MB	
User Set		Support two sets of user-defined configurations	
Dimension		29mmx29mmx42mm(Not including the lens mount and the rear case connectors)	
Net Weight		88g(0.19lb)	
Power Supply		POE/DC power supply by Hirose connector , with voltage range from 6V to 26V	
Power Consumption		12V=2.8w	
Operating Conditions		-30° C ~ +50° C (-22° F ~ +122° F) / Less than 95% RH	
Storage Conditions		-30° C ~ +80° C (-22° F ~ +176° F) / Less than 95% RH	

Ordering Information

Type	Part Number	Description
A3051M/CG000E GigE Cameras	DH-MV-A3051MG000E	0.5Megapixel Mono 120 framerate GigE Area Scan Camera
	DH-MV-A3051CG000E	0.5Megapixel Color 120 framerate GigE Area Scan Camera

Dimensions (mm)

