

DH-MV-L5023MG51E

Line Scan Camera



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. As the core component of the machine vision system industrial camera requires high image quality, high transmission rate, standard interface and reliable and stable performance. Dahua as the world top security product supplier is able to provide serialized products with excellent image, high frame rate and related software support. Due to provide high image resolution and the speed demanding data rates makes line scan camera be the best choice for inspecting rolls and continuous materials. L5023MG51E line scan camera with general standard GigE interface enables customers to make a flexible integration.

Functions

CMOS sensor

Dahua L5023MG51E line scan product designed with 2K resolution CMOS sensor that can satisfy most of your needs. L5023MG51E line scan cameras can support up to 51K line rate and 162 (LSB/(nJ/cm²)) response via advanced Line-CMOS sensor and R&D capability. Meanwhile combined with the advantage of the world's leading image processing technology we can effectively overcome the noise issue and output excellent picture.

GigE vision

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

- 1Gbps Ethernet interface , max 100m transmission
- 256MB on-board frame buffer
- Supports software trigger /external trigger/mixed mode / free run mode
- Supports a several image data formats output /ROI /binning functions
- Supports flat field correction for multiple user groups and the parameters can be saved
- Conforms to GigE vision V2.0 protocol and GenICam standard



Multi trigger mode

In the application of the machine vision for getting a picture with our industrial camera you can select the fixed exposure frequency set on the SDK and a trigger signal comes from external software or hardware to take a exposure. Delays in data digest, trouble with network transfer (high externally induced network load, high machine vision processing times) will not affect the timing of the trigger.

High capacity buffer

For the best match camera is based on the imaging speed include sensor speed and camera speed. The speed of the sensor means the maximum speed you can read the data from the sensor with optimum camera electronics. The max of internal imaging speed is resulting from the teamwork of sensor speed and speed of writing into the camera's internal memory. By the 256MB on-board frame buffer hardware design and software on the host computer enable the camera outputs higher imaging framrates.

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.

Wide-range power supply

The camera supports DC 12-24V wide-range power supply makes it suits even the most unstable power supply conditions.

Several image formats output

All the industrial cameras output the raw data with wide spectral range. Our cameras support multi-mode picture such as mono8, BayerRG8 and RGB8 packed etc output. Different kinds of format have corresponding data capacity that can suit different application.

Camera

Specification	Model	L5023MG51E
Lens Interface		M42x1,Optical distance 12.00mm;M42 to c;M42 to F
Sensor		E2V
Sensor Spec		CMOS
Resolution		2K 2048(H)x1(V)
Line rate		51K
Pixel Size		10X10
Interface		GigE
Mono/Color		Mono
S/N Ratio		>45db
WDR		73db
Response(LSB/(nJ/cm ²))		162
GPIO Interface		6-pin Hirose connector for external power supply;12-pin Hirose external trigger connector;2 channels for RS422/singleEnded input 2channels for RS422/singleEnded output,1 channel for RS422/singleEnded is able to configure input/output,and 1 channel for GPIO
Trigger Input		RS422
Image Format		Mono:Mono8/10/10 Packed/12/12Packed
Exposure time		8μs~1s
User Set		Supports two sets of user-defined configurations
Flat Field Correction		Supports the import/export of correction result
Power Supply		DC power supply by Hirose connector , with voltage range from 12V to 24V
Power Consumption		12V≈4.5w
Dimension		62mmx62mmx35mm(Not including the lens mount and the rear case connectors)
Net Weight		230g(0.5lb)
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
L5023MG51E GigE Cameras	DH-MV-L5023MG51E	2K Megapixel Mono 51K line rate GigE line Scan Camera

Dimensions (mm)

