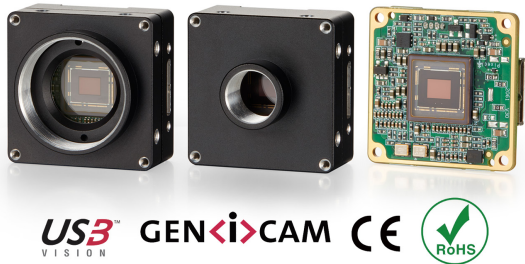


# VENUS SERIES

## VEN-161-61U3M/C



- Light and low power consumption
- 1/2.9" Global Shutter CMOS sensor
- Compatible with GenICam™ and USB3 Vision®
- USB3.0 Interface
- 1.6 Megapixels
- 1 input, 1 GPIO
- Various lens mounts

The VENUS series (VEN-U3) camera is DAHENG IMAGING' s board level industrial digital camera. The VEN-U3 series camera is a good choice for users who have requirements for space, weight, consumption and heat.

The VEN-161-61U3M/C is a monochrome/color USB3 Vision camera with Sony IMX296 CMOS sensors. The VEN-161-61U3M/C provides three lens mount options: CS mount with housing, S mount with housing, and No mount (bare board). Thanks to the extremely compact housing of 35mm × 35mm × 15.8mm, and various mount options, the VEN-161-61U3M /C is more flexible in demanding space.

The VEN-161-61U3M/C is especially suitable for machine vision applications such as industrial inspection, medical, scientific research, education, security and so on.

### Features

- USB3.0 interface with 10-bit or 8-bit Mono/Bayer output
- Programmable ROI, increased frame rate with partial scan
- Gain, exposure and white balance programmable (white balance only for color models)
- Support auto gain, auto exposure and auto white balance (auto white balance only for color models)
- VEN-161-61U3C supports light source preset function
- Three acquisition controls: Continuous acquisition/ Software trigger acquisition/ External trigger acquisition
- Storable user sets
- Support Reverse X/Y (horizontal and vertical mirroring)
- Support hardware trigger and software trigger
- 16KB data storage area for saving algorithm coefficients, parameter configuration, and so on
- Optimized software package for 32/64bit Windows, and support Linux, Android, ARMv7 and ARMv8
- Compatible with GenICam™ and USB3 Vision®, can be used in a wide range of 3rd-party software such as HALCON, MERLIC and LabVIEW
- Multiple samples and easy-to-integrate SDKs for various programming tools
- Regulations: CE, RoHS, GenICam, USB3 Vision

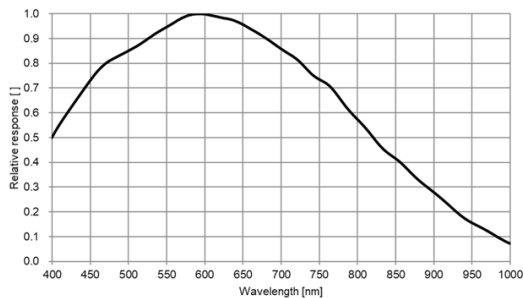
### Performance Specifications

Model	VEN-161-61U3M/C
Interface	USB3.0
Resolution	1440 (H) × 1080 (V)
Frame rate	61.2 fps @ 1440 × 1080
Sensor	1/2.9", Global Shutter Sony IMX296 CMOS
Pixel size	3.45 μm × 3.45 μm
Pixel Bit Depth	8bit, 10bit
Spectrum	Monochrome / Color
Exposure time	20μs~1s

### Optical Specifications

Lens mount	Camera model
CS mount	VEN-161-61U3M/C-M01
S mount	VEN-161-61U3M/C-M05
No mount	VEN-161-61U3M/C-M06

### Spectral Response



VEN-161-61U3M

### Electrical Specifications

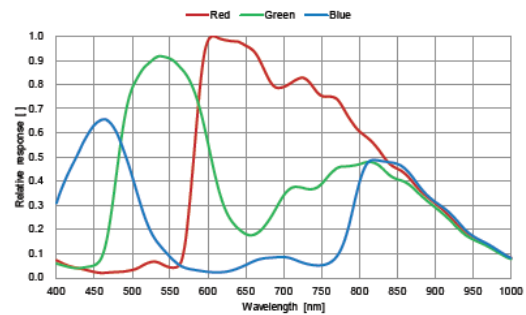
Power requirement	5 VDC via USB cable
I/Os	1 input, 1 GPIOs
Data interface	USB3.0 Micro B
Power consumption	<2.7W @5V DC

### Environmental Specifications

Operating temp.	0°C ~ +45°C
Storage temp.	-20°C ~ +70°C
Operating humidity	10% ~ 80%

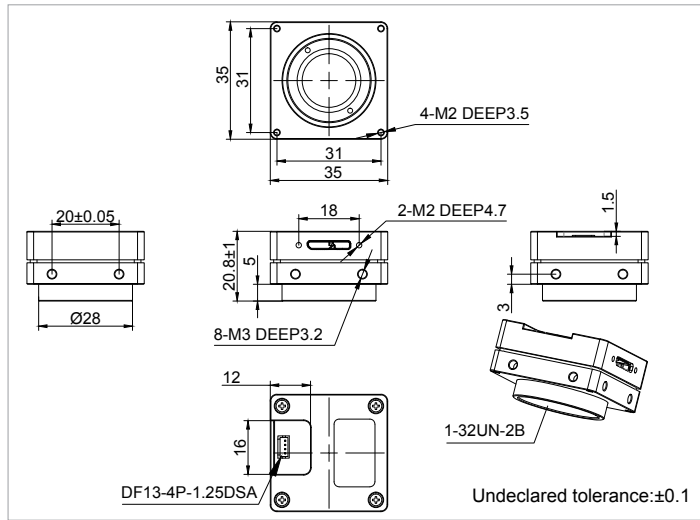
### Mechanical Specifications

Weight	31g (CS mount), 32g (S mount), 7g (bare board)
Dimensions	35(W) × 35(H) × 15.8(L) mm (without CS lens mount), 35(W) × 35(H) × 15.1(L) mm (without S lens mount), 32.5(W) × 32.5(H) × 8.1(L) mm (bare board, the PCB thickness is 1.6mm)

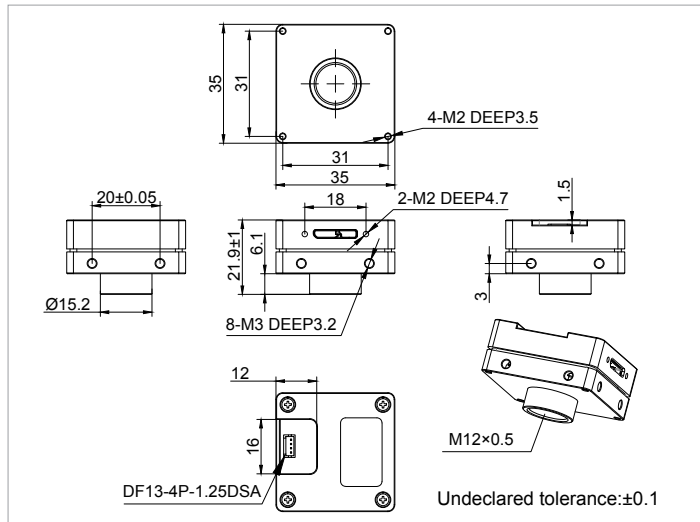


VEN-161-61U3C

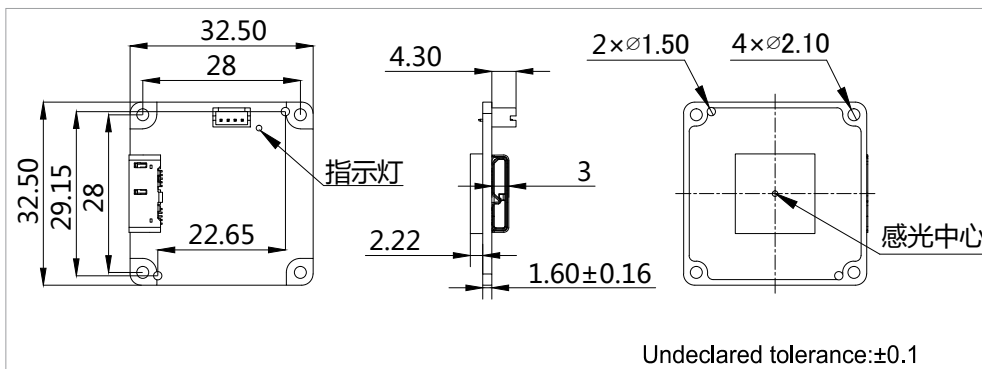
Technical Drawing



VEN-161-61U3M/C-M01



VEN-161-61U3M/C-M05



VEN-161-61U3M/C-M06

Units: mm

China Daheng Group, Inc. Beijing Image Vision Technology Branch

12F Daheng Science & Technology Tower, No.3 Suzhou Street, Haidian District,  
Beijing China, 100080

Tel: +86 10 82828878

E-mail: isales@daheng-imaging.com

For more information please visit : [www.daheng-imaging.com/en](http://www.daheng-imaging.com/en)

Specifications are subject to change without prior notice.

Copyright © 2021 China Daheng Group, Inc. Beijing Image Vision Technology Branch. All rights reserved.

Sep 09, 2021