

# Smart Camera



## VC Series CATALOG

**For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.**

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

### Features

- Various inspection functions
- Inspection simulator function
- Set up to 64 separate work group (32 inspection points per work group)
- Save data to FTP servers
- Support smart camera software (atVision)
  - Inspection simulator function, manage parameters and work group, inspection results monitoring, send data to FTP, multilingual support, etc.
- IP67 protection structure (IEC standard)
- C-Mount type
- Gigabit Ethernet communication

### Product Components

- Product
- Instruction manual
- Ethernet connector Cap (screw plug - waterproof) × 1

### Software

Download the installation file and the manuals from the Autonics website.

#### ■ atVision

The program allows setting of smart camera parameters and management of monitoring data such as inspection status and status information.

Item	Minimum requirements
CPU	Intel i3, Ryzen 3 or above
OS	Microsoft Windows 7 (×64) or higher
RAM	6 GB or higher
Storage <sup>(01)</sup>	at least 10 GB of available HDD space
Resolution <sup>(02)</sup>	1280×800 or higher (1920×1080 recommended)
Others	RJ45 Ethernet port, GigE network interface card

01) Additional HDD space may be required depending on the number of inspections.

02) This software is optimized for 1920×1080 resolution and 100% magnification.

### atVision

For more detail, refer to atVision software manual.



#### ■ Basic setting

- Camera setting
- Network setting
- I/O setting
- Advanced setting

#### ■ Inspection function

Function	Descriptions
Alignment	Calibrates position and rotation based on selected object.
Bar Code	Read bar code.
Matrix	Read data matrix code.
QR Code	Read QR code.
Extract Text	Separate text from background.
Read Text	Read separated text from background.
Area	Inspect the object area.
Angle	Inspect the angle between two edges.
Brightness	Inspect the object average brightness.
Contrast	Inspect the object average contrast.
Diameter	Inspect the diameter of the circle.
Length	Inspect the distance between two edges.
Edge	Inspect the existence of edges.
Object Counting	Inspect the object count.
Shape Compare	Inspect the edge loss rate.
Shape Multi Compare (Edge)	Inspect the multi shape with object edge shape.
Shape Single Compare (Edge)	Inspect the single shape with object edge shape.
Shape Multi Compare (Pixel)	Inspect the multi shape with object pixel shape.
Shape Single Compare (Pixel)	Inspect the single shape with object pixel shape.

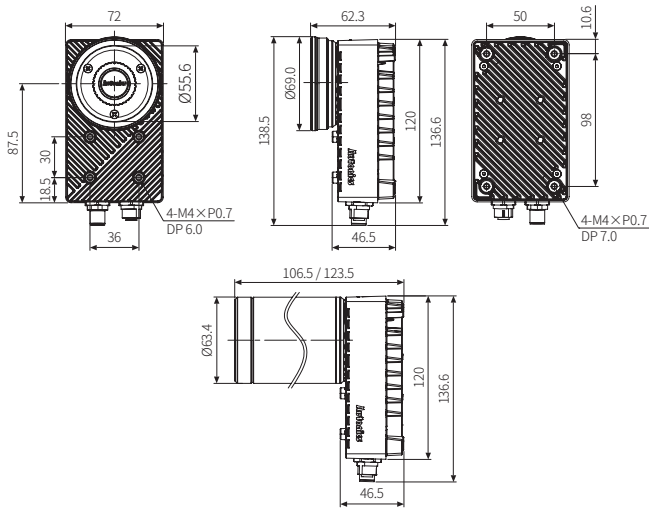
## Specifications

<b>Model</b>	<b>VC-M50T-CE</b>
<b>Image element</b>	1 inch mono CMOS
<b>Resolution</b>	5 MP (2,560 × 2,048)
<b>Frame per second</b>	16 fps
<b>Bit Depth</b>	8 bit (256 gray level)
<b>Shutter</b>	Global shutter
<b>Exposure time</b>	3 μs to 3 sec
<b>Lens type</b>	C-Mount
<b>eMMC</b>	8 GB
<b>DDR4</b>	2 GB (LPDDR4), 512 MB (DDR4)
<b>Inspection work group</b>	64 (simultaneous inspection: 32)
<b>Trigger mode</b>	Continuous, External Trigger, Manual, Ethernet, RS232
<b>Communication</b>	Ethernet (TCP/IP & Modbus, 10/100/1000Base-T), RS232C
<b>FTP trans. output</b>	YES
<b>Indicator</b>	Power, LINK, DATA, USER 1, USER 2
<b>Approval</b>	 
<b>Unit weight (packaged)</b>	≈ 600 g (≈ 780 g)

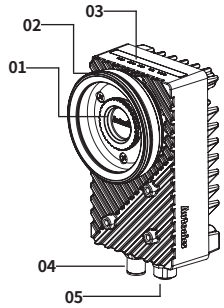
<b>Power supply</b>	24 VDC ≒ ±10%
<b>Current consumption</b>	≤ 1 A
<b>Rated input signal</b>	24 VDC ≒ ±10%
<b>Output signal</b>	NPN-PNP open collector output setting (software)
<b>HS OUT 0</b>	Strobe OUT
<b>HS OUT 1</b>	Inspection complete, Inspection result output (PASS / FAIL), Alarm, Camera work
<b>Load voltage</b>	24 VDC ≒
<b>Load current</b>	≤ 100 mA
<b>Residual voltage</b>	≤ 2.5 VDC ≒
<b>Protection circuit</b>	Output short overcurrent protection circuit, reverse voltage polarity protection circuit
<b>Vibration</b>	1.5 mm double amplitude at frequency 10 to 55 Hz (for 1 minute) in each X, Y, Z direction for 2 hours
<b>Shock</b>	300 m/s <sup>2</sup> (≈ 30 G) in each X, Y, Z direction for 3 times
<b>Ambient temp.</b>	0 to 45 °C, storage: -30 to 80 °C (no freezing or condensation)
<b>Ambient humi.</b>	0 to 95%RH, storage: 0 to 95%RH (no freezing or condensation)
<b>Protection structure</b>	IP67 (IEC standard / When mounting waterproof lens cover)
<b>Connection</b>	Connector type
<b>Connector spec.</b>	Power I/O: M12 8-pin, Ethernet: M12 8-pin / RJ45 (cable tightening torque: 0.4 N m)
<b>Material</b>	Die-cast Aluminum Housing
<b>Components</b>	Ethernet connector Cap (screw plug - waterproof) × 1 (tightening torque: 0.4 N m)

## Dimensions

• Unit: mm, For the detailed drawings, follow the Autonics website.



## Unit Descriptions



- 01. Sensor protective cap**
- 02. Housing bushing cover**
- 03. Status LED indicator**
- 04. Power I/O connector**
- 05. Ethernet connector**

## Indicator

Indicator	Name	Function
POWER	Power indicator (green)	Turns ON when power is supplied.
LINK	Ethernet connection indicator (green)	Turns ON when vision sensor is connected with PC (Ethernet communication).
DATA	Data transmit indicator (green)	Flashes when data is transmitted between smart camera and PC.
USER 1	User setting indicator (green / red)	Turns ON or flashes in operation of inspection complete, inspection result (PASS, FAIL), alarm, camera work
USER 2		

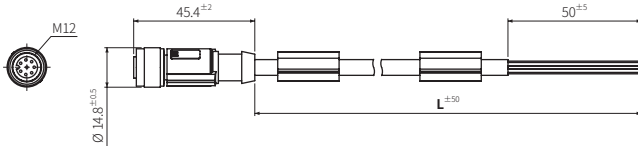
## Sold Separately

- Power I/O cable: CIDM8-□-A (I type), CLDM8-□-A (L type)
- Ethernet cable: C1(M)8-□PR-A (I type), C4(M)8-□PR-A (L type)
- Waterproof lens cover: HL-□-VC

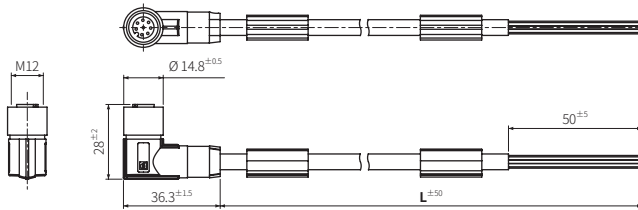
## Sold Separately: Power I/O Cable

- Unit: mm, For the detailed drawings, follow the Autonics web site.

### ■ CIDM8-□-A



### ■ CLDM8-□-A

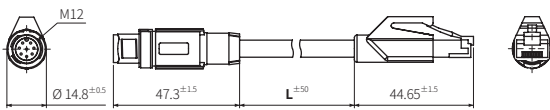


- Power I/O cable is drag chain type.
- □ of model name is 2, 5, 10 which indicates the cable length.  
E.g.) CIDM8-10-A: Drag chain type 10 m power I/O cable
- The cable tightening torque is 0.4 N m.

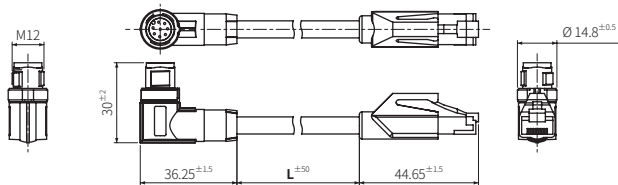
## Sold Separately: Ethernet Cable

- Unit: mm, For the detailed drawings, follow the Autonics web site.

### ■ C1(M)8-□PR-A



### ■ C4(M)8-□PR-A



- □ of model name is 2, 5, 10 which indicates the cable length.  
(M) indicates the drag chain type cable, no mark indicates the fixed type cable.  
E.g.) C1M8-10PR-A: Drag chain type 10 m Ethernet cable
- The cable tightening torque is 0.4 N m.

## Sold Separately: Waterproof Lens Cover

- Unit: mm, For the detailed drawings, follow the Autonics web site.

