
Nearly-infinite combination to fit any production scenes

The FHV7 Smart Camera provides several options for components, allowing you to freely combine the lens and light with the camera and easily adjust the optical conditions to specific products. The footprint of the camera is not affected by module replacement. Even if a sudden change occurs in the product specification, the system can be ready after minimum rearrangement.

An all-in-one models with lens modules and light modules are also available.



[Please click image to enlarge \(open in a new window\).](#)

IP67 structure

Maintains IP67 waterproof structure even after module replacement, allowing use in wet conditions.



Captive screws

Captive screws are used in the modules.
The screws do not drop on products.



Easy addition of external lights

By connecting the lighting controller, you can, from FHV7's setting window, easily adjust the light emission intensity and set light emissions to synchronize with the release of the shutter.



Easy filter replacement

The light cover and optical filter are replaceable, so you don't need to prepare a protection cover against dirt.



Dirty cover filters can be removed separately for replacement

Single camera for inspecting various products

Multi-color Light Accommodates color variations

Multi-color light provides a quick solution to the issue of measuring different colors. For example, objects with variously colored packages on a production line are properly measured with the light that changes its illumination color to fit each object. When the product design is changed or a new model is added, you can simply change a parameter instead of replacing or fine-tuning lights. The production line is always ready for a wider variety of product.



When inspecting products of different colors

As a product has more color options, some of the colors may cause low contrast under a single color illumination. The multi-color illumination allows switching colors for different product color options, ensuring stable inspections.



Autofocus Lens Accommodates size variations

The autofocus lens covers a focal length range from 59 mm to 2,000 mm*1. Even when products in different sizes are produced, the focus range can be changed easily by parameters. *2 This feature eliminates mechanical operation for changeover during product replacement, leading to a simpler system with higher productivity.

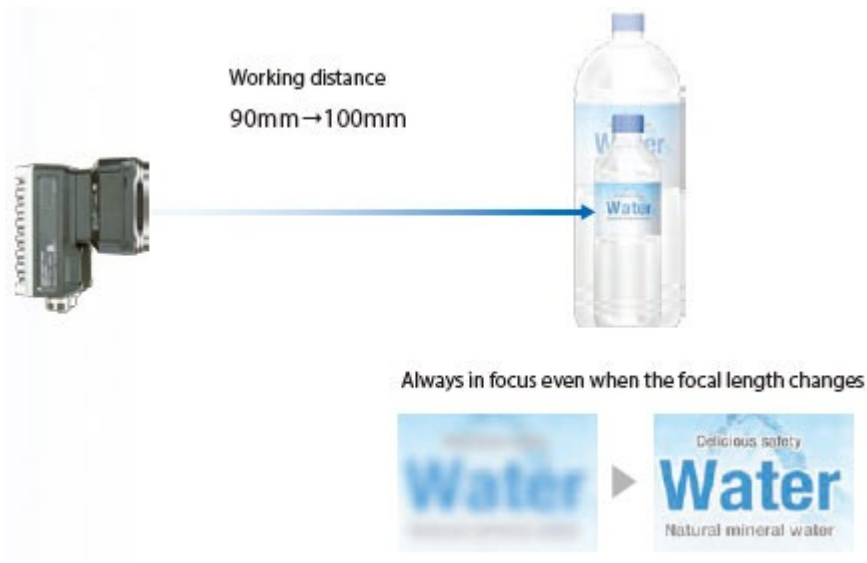
*1. Differs depending on the lens type. See the optical chart on Catalog for details.

*2. Set focuses for different product heights in advance and switch between them when you perform a changeover.



When inspecting products of different sizes

When inspecting products such as plastic bottles that come in different sizes, you can perform a changeover only by switching the setting of the autofocus lens. The autofocus lens does not need the mechanism for moving the camera.



Best-in-class resolution*3: 12 megapixels

Location variation

The image sensor with a 12 megapixels enables highprecision inspections for wider areas. This eliminates the need for installing multiple cameras or a mechanism to move a camera to capture different inspection points on different models on the same production line.

*3. Based on Omron investigation in October 2018.



Expanding the range of parts inspection

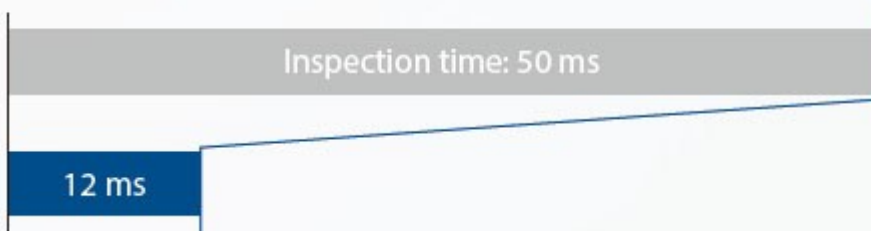
Accurate and extensive inspection of parts mounting points on different automobile models is enabled without moving cameras.



Raising production quality without sacrificing cycle time

Inspection time reduced to 1/4 *1

Time required for external inspection of cans **



The inspection time can be reduced to 1/4 *1 of that required for existing sensors. You can carry out more precise, detailed quality inspection while keeping the same cycle time.

Best-in-class speed *2

Image capture: Maximum speed 2.3 ms



Distributed processing across 2 cores



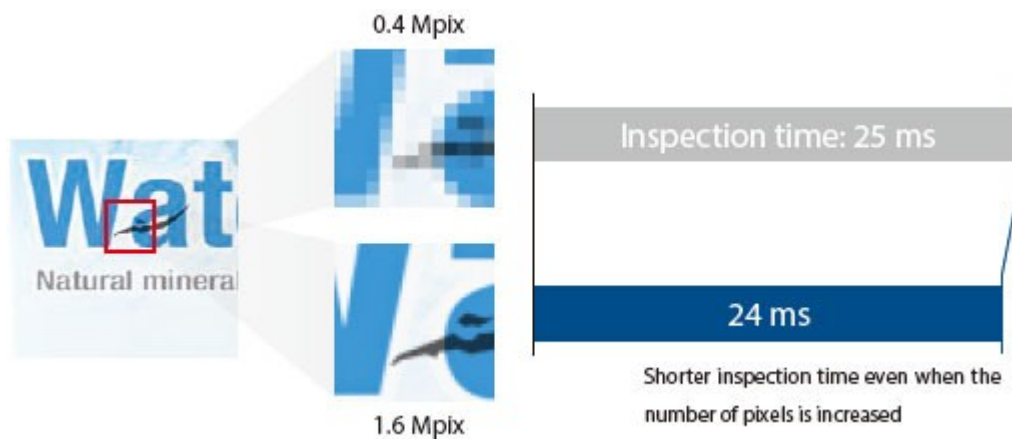
High-speed algorithm

*1. Sample comparison to inspection time using vision sensors installed in customer's machine. Based on Omron investigation in October 2018

*2. Based on Omron investigation in October 2018.

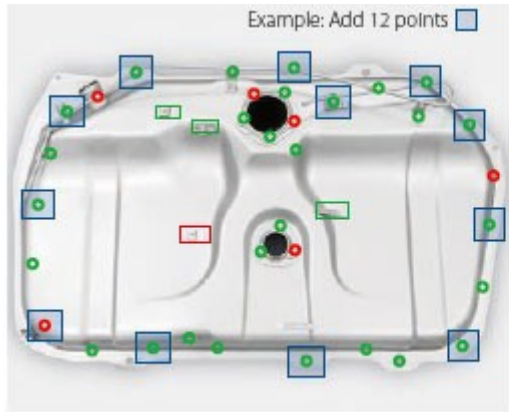
Clear images facilitate inspection

Precise inspection with high-resolution images is possible while keeping the same cycle time as before. The FHV7 Smart Camera raises production quality with its ability to detect tiny tears or scratches on labels, which could not be previously detected.

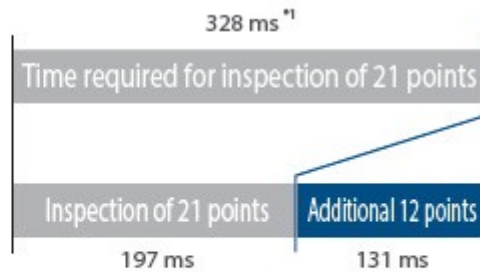


More inspection points

The FHV7 Smart Camera provides an optimal solution for a problem of longer cycle times caused by inspection points added to raise production quality. You don't need to divide the field of view into several parts and assign them to multiple cameras or install a high-speed vision system.



Green: Inspection passed, Red: Inspection failed



Settings can be adjusted with zero downtime

Measured values may change gradually due to workpiece variation or changes in external circumstance. Even in such cases, distributed processing across 2 cores allows you to perform cause analysis and setting adjustments as you make measurements. You can eliminate downtime and visual inspection of uninspected items.

