

Omron's new smart camera takes vision inspections to another level

— Lyndon Fowler, Omron

Industrial automation solutions provider Omron has released a new FHV7-series smart camera for advanced vision inspections on high-mix production lines.

The FHV7 features the world's first multi-colour light and high-resolution 12-megapixel image sensor – the best in class.

This unique technology is designed to achieve the industry's highest standards of precision.

With consumer quality and safety expectations higher than ever, manufacturers face the need for stricter quality control checks to maintain and improve product quality and safety. With the FHV7 smart camera you can promptly identify the causes of any defects.

Also, the need to produce different products on a single production line is increasing. This requires quality inspections of products in different colours, shapes and sizes.

The FHV7 smart camera provides the ultimate flexibility to help manufacturers meet these inspection needs over wider areas while minimising downtime for product changeover.

Like human eyes, the FHV7 stably measures objects in different colours and sizes on the same production line.

The illuminating colours and lens focuses can be adjusted by parameters, so the mechanism for replacing lights and moving cameras is no longer necessary. This feature



reaches industry-leading speeds, while its camera delivers industry-leading resolution for achieving higher precision in inspections and maintaining quality without slowing production down.

Added to these features is a high-speed image compression algorithm that compresses data at double the typical speed, enabling all image data to be saved while inspecting a second image at the same time.

This facilitates complete traceability in production processes at speed and where quality control is paramount.

FHV7 series models maintain their IP67 waterproof rating even after module replacement, allowing use in wet conditions.

Features

- Multi-colour light – no need to change lighting when product designs are changed, or new products are added to the production mix
- High-resolution image sensor enables high-precision inspections for wider areas of view
- Autofocus lens that covers a focal distance between 59 and 2,000 mm
- Modular structure so users can freely combine the lens and lighting variants
- Dual-core CPU provides the fastest image processing speed among smart cameras (four times faster than the previous generation)
- High-speed image logging enables image inspection to be conducted while image data is being saved

greatly reduces the time required for design and adjustment and the number of machine components.

The new FHV7 can also reduce inspection time to a quarter of that required for existing models. This enables the systems you upgrade to keep to the same cycle time even after you adjust resolution or add inspection points.

As you upgrade systems with the new FHV7, you can reduce costs by eliminating the need for multiple cameras or manual lens adjustments. This not only simplifies a vision installation but also ensures compatibility with wide-ranging inspection criteria on lines producing many different types of products in varying quantities.

To advance production efficiencies further, you can combine a FHV7 Smart Camera with robots for picking and assembling applications.

The smart camera's image processing

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