CCS
CREATING CUSTOMER SATISFACTION

Machine Vision Solution EXPO 2023 YOKOHAMA in 横浜

Special 3 days for your vision solutions

2023
12/6 (Wed) ~ 8 (Fri)
10:00 am ~ 5:00 pm * Last entry: 4:00 PM

Yokohama Shintoshi Building 9th floor Shintoshi Hall

Yokohama Shintoshi Building, (Sogo Yokohama) 9F,
2-18-1, Takashima, Nishi-ku, Yokohama, Kanagawa, 220-0011, Japan

・5 minutes walk from Yokohama Station
(JR Line, Keikyu Line, Tokyu Toyoko Line, Yokohama Municipal Subway, Minatomirai Line)
・20 minutes walk from Pacifico Yokohama

Just a short walk
from the east exit of Yokohama Station

Solution Exhibition

We will exhibit a record high of over 40 image processing-related solutions!

Partner Company Exhibition

More than 10 partner companies will exhibit booths to show the various problems they have worked on along with CCS.

LIGHTING SOLUTION
CCS Inc.

Please see inside page
for details of exhibition contents

Machine Vision Solution EXPO 2023 in 横浜

Solution Exhibition

About 40 booths on site!
Check out the latest of CCS with your own eyes!

Pick Up 01

Simultaneously observing multiple different inspection items such as contamination and scratches

NEW

Multiple inspection solution using monochrome line scan camera

Line light
LNSP2 Series + Coaxial Unit CU-LNSP2-GL

By switching the RGB line dome illumination and coaxial illumination on and off at high speed, multiple types of images can be acquired at a single transport
Color images can also be generated by using a monochrome line scan camera and RGB line dome light.

RGB line dome light
(custom-order product)

■Imaging Example : Visual inspection of the PCB

RGB Generated Image

Obtain an image that shows color information such as dirt on the resist and silk printing.

Coaxial Light (Exposure time 30μs)

Obtain images that show irregularities on the PCB surface and patterns of circuit on the PCB.

Coaxial Light (Exposure time 10μs)

Obtain a clear image of the engraved text on the mounted metal element.

Pick Up 02

Lights that make coating presence or uneven thickness on thin films visible. Automation with AI appearance inspection

NEW

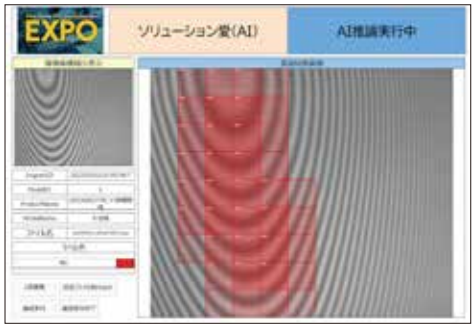
Lights for Interference Fringe Inspection

LDF-NB Series

By using lights for interference fringe inspection, the existence and unevenness of thin films can be visualized, which was not possible with conventional LED lighting in the past, and the resulting images can be judged by AI visual inspection.

We will introduce a case study combined with "Solution AI", which enables the construction of a system for AI inference through intuitive operation.

■Example of “Solution AI” inspection screen: Uneven glass lamination



Pick Up 03

Easy setup of camera and lighting reduces setting time required to build inspection systems

NEW

Basler SLP Controller

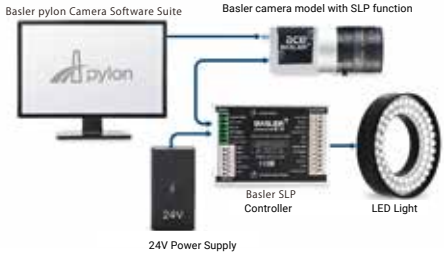
BASLER powered by CCS

A lighting controller that communicates with a Basler cameras with SLP functionality with a single cable and can be easily connected to our CCS lightings.
Lighting dimming and strobe light settings can be easily configured from the same software (pylon Camera Software Suite) as Basler cameras.
*Models with SLP function: Basler ace U / ace L / ace 2 / boost series

■Features

- ◆Communication between camera and lighting is possible with a single cable
- ◆Easy setup with pylon Camera Software Suite
- ◆Automatic synchronization of the camera and lighting
- ◆Shared power supply for camera and lighting reduces the number of devices needed to build a system
- ◆Switching between strobe and overdrive

■Connection Example



Reservation required

Simple work experiment corner by lighting consultants

Feel free to bring your work piece at our booth. We will perform a simple imaging experiment.
Feel free to try a casual experiment!

Our full-time lighting consultants will help you select the best testing environment Lighting, Camera, and Lens to provide you with a total proposal for the optimal testing environment.

*Simple work experiments above are available by appointment only. Please contact us for details.

*Exhibition contents are subject to change.

Solution Exhibition

"I can see it!", "I can try it!", and "I can solve it!"

We offer a variety of solutions

The state of the art, superb bright high output light source PFBR-2400SW NEW

Introducing the ultra-high-power light source unit with approximately 4 times the light output of the PFBR-600SW. It can replace the 40W xenon light source unit and significantly reduce maintenance costs.

Identification solution using multi-band illumination (NIR)

By acquiring images at multiple infrared wavelengths and performing image processing, this system can detect minute foreign objects that would be difficult to detect with conventional single wavelengths.

Collimated Lighting Lens-integrated Parallelism-variable Coaxial Lights NEW

We will have an imaging demonstration using coaxial illumination with a wide field of view that can easily change the parallelism of the irradiated light and is suitable for extracting minute scratches, dents, and indentations will be exhibited.

Multi-stage ring lighting for multiple inspections NEW

High/middle/low 3-stage ring lighting.
The lighting combination can be easily changed and switched according to the inspection item, enabling space-saving design for multiple inspection items.

Flat lighting with adsorption NEW

Custom case study of a flat lighting diffuser combined with an adsorption function. By adsorbing the workpiece, transport and inspection can be performed simultaneously, making it possible to construct a space-saving and efficient system.

Illuminance distribution uniform lens + spot lighting NEW

Highly uniform illumination of the inspection field of view is realized by combining the "Micro Fly-eye Lens" that enables rectangular and uniform illumination with the spot illumination HLV3.

Outstanding bright line lighting NEW

In house optical design and adjustment mechanism enables a high illumination even at irradiation distances of 50 to 1,000 mm.

New Compact Type DC Input Power Supply NEW

A single unit provides PWM/variable voltage/strobe (overdrive) lighting control.
Supports a wide variety of interfaces: Ethernet, parallel, RS-232C, USB, and trigger input/output external control functions.

New product introduction NEW

We will introduce new flat dome and ring lighting models that will be available in the near future.

High-speed tracking autofocus system

We will introduce an image acquisition system that enables automatic focusing by combining this telecentric lens type system with an XY stage, which provides a greater working distance than microscope lenses and allows selection of the appropriate illumination for image capture.

High-speed imaging compatible autofocus system

We introduce a system that combines a line scan camera and a high-speed tracking autofocus system to enable acquisition of high-definition images at a high-speed transfer rate of 200 mm/sec.

Hyperspectral Imaging Inspection NEW

By analyzing wavelength data obtained with a hyperspectral camera and dedicated illumination, we are able to detect the thickness of coating and thin film, and differences of materials as well.

Line verification machine

A complete line scan camera and line light verification system in a compact, portable size. The system is capable of handling noise-resistant differential signals, which can enable on-site verification of workpieces that are difficult to take out of the factory.

Surveillance Camera System

A single surveillance camera can monitor and output alarms for intrusion into restricted areas, items stuck on conveyors, lost items, etc.
This system can solve minor on-site problems.

Phase Shift Line Scan

A line scan camera captures images of the glossy workpiece being conveyed, and phase-shift illumination enables highly sensitive detection of surface irregularity information.

High-sensitivity pupil-dividing polarizing imaging

By using a unique polarizing element, it enables to detect even the most gentle inclination and nano-level unevenness of mirror surface workpieces, which are difficult to detect with conventional imaging methods.
A "birefringent pupil interferometer" capable of detecting scratches and steps with high sensitivity will also be exhibited.

Backlight illumination with rotating mechanism NEW

Introducing a unit that can inspect the inner and outer circumference of cylindrical workpieces while rotating them. The unit is designed to be free from restrictions during rotation, contributing to a reduction in the number of workloads required for equipment design.

Spectroscopic Camera + Robot to define color discrimination solution NEW

A spectroscopic camera is connected to the tip of the robot to perform color difference discrimination on three-dimensional objects. By utilizing a robot, automatic inspection can be performed on each inspection surface of a three-dimensional object, eliminating the need for transport.

The latest applications and products, check them all out!

AI implementation support by Inhouse AI Lab + Defective Image Generation AI + "Solution AI"

NEW

By utilizing the "Anomaly Generator" by DataGrid, we can facilitate PoC from image capturing in AI Lab to AI for visual inspection of each company.

Line photometric stereo + Hutzper AI

NEW

Introducing a simple inspection system that irradiates from four directions on a single stage to eliminate patterns on packaging workpieces and acquire images that easily capture wrinkles and unevenness using a line camera, which is then judged by Hutzper's AI.

Refview + "Solution AI"

NEW

Using a photo refraction visualization system, the unevenness of glossy or transparent objects can be visualized, "Solution Ai" makes a pass/fail judgment based on the obtained images.

Pattern lighting + "Solution AI"

Pattern lighting is used to visualize the unevenness of a diffused object, and "Solution AI" makes a pass/fail judgment based on the obtained image.

Color HDR with monochrome line scan camera

NEW

HDR (High Dynamic Range) images are acquired with a monochrome camera by controlling the RGB lighting with high-speed lighting switching and dimming in accordance with line camera scans.

Line irradiation system compatible with both vertical and horizontal scratches

NEW

Vertical scratches in the transport direction, which are difficult to detect with general line lighting, can be detected at the same time as horizontal scratches. We will introduce a line irradiation system using the mirror observation method using red and blue patterns.

Line photometric stereo with High-speed image processing

NEW

Using a line scan camera, the system synchronously captures images of lighting with four different illumination directions and processes the images at high speed that can easily capture wrinkles and unevenness by erasing patterns and other features on the surface of the workpiece.

2D+3D measurement unit

NEW

By capturing images while moving the workpiece in the height direction, a focused luminance image and depth image are acquired to measure the size in the XYZ direction.

3D shape measurement

NEW

The dimensions and flatness of the XYZ axis of the workpiece are captured in a single scan by the optical cutting sensor, and the measured values of each item can be displayed simultaneously.

Camera solution

NEW

We will introduce inspection solutions that utilize cameras with distinctive functions and specifications, such as ToF cameras, multispectral compatible cameras, and ultraviolet cameras.

Drive recorders for factory use

NEW

Introduction of drive recorders for manufacturing sites, such as ultra-compact S-mount compatible cameras and high pixel 20M-class cameras, which can be easily retrofitted according to the application. These cameras monitor conditions in real time and are useful for understanding conditions at the time of trouble.

Remote monitoring & remote control using sensing lighting

NEW

The venue (Shintoshi Hall) and the International Technical Exhibition on Image Technology and Equipment (Pacifico Yokohama) will be linked by the industry's only sensing LED lighting. The demonstration will include remote monitoring and operation by IoT The demonstration of remote monitoring and operation by IoT will be held. Don't miss it out!!

FASTUS

Sensor solution

We will introduce predictive maintenance systems such as monitoring of LED lighting and UV lighting for image inspection, and monitoring of vibrations, etc. of moving parts within equipment.

FASTUS

High-power LED lighting for wide-field inspection and long-distance irradiation

NEW

EFFILUX LED lighting solutions for robotic applications, logistics, automotive, packaging, and more.

effiLux Efficient Led Lighting

Image processing lighting controller for high output and high speed strobes

NEW

We will present an imaging demonstration of a high-speed moving workpiece using GARDASOFT VISION LIMITED's lighting controller for image processing and a high-speed lighting switching system.

GARDASOFT Industrial LED technology

UV curing solution

Introduction of actual UV-LED irradiators and equipment for UV curing and lightfastness evaluation. We have solutions in proposals for the replacement of UV lamps with UV-LEDs and the introduction of new UV-LED irradiators.

Visual inspection improvement solution

Based on our know-how of visual inspection improvement, we propose lighting proposals suited to the work environment, combined with guidance on how to improve inspectors' eye usage and inspection behavior, to increase productivity by reducing missed defects and fatigue.

Exhibition contents are subject to change.

Partner company exhibition

Come and experience the latest vision solutions

Exhibiting the latest visual inspection solutions from partner companies

SKN Co., Ltd.

▶Simultaneous imaging unit for the inner and outer diameters of cylindrical workpieces using a line scan camera

A single line scan camera simultaneously images the inner and outer diameters of cylindrical workpieces. We offer high-resolution, high-precision imaging to improve inspection accuracy and reduce costs.

Company introduction | We have achieved high performances in a broad range of industries such as automotive parts, food, and industrial equipment. We propose solutions to our customers' problems through image processing technology.

N-tech Co., Ltd.

Company introduction | Having leading companies such as the beverage, container, food, and medical industries as our main customers, we develop transportation, packaging, and inspection systems that meet the needs of increasingly sophisticated customer production processes (high speed, automation, and high quality). Since we handle everything from equipment development and design to manufacturing inhouse, we are able to provide custom-made proposals tailored to customer needs.

Ovit Co., Ltd.

▶Visual inspection equipment for front and back sides of small parts "Garami-chan"

Achieves high-speed inspection of both front and back sides without a reversal mechanism, increasing inspection efficiency by more than 4 times. It is compatible with all kinds of metal and resin parts, and can be installed in a narrow space of 65x75cm.

Company introduction | We have been together with our customers for 24 years and have achieved installing 1,500 machines. By doing so we make visual inspection of faster speed and greater accuracy possible.

Sanyu Industries Co., Ltd.

▶Simultaneous inspection of scratches and dirt using ClearShot

Rising Star-AI, which specializes in visual inspection, uses technology that simultaneously captures an image for detecting scratches and an image for detecting dirt at the same time , revealing uneven defects that were previously invisible. It also makes visual inspection possible with AI (artificial intelligence) judgment technology.

Company introduction | Sanyu Industries combines "imaging technology, judgment technology, and equipment technology" to create highly complete inspection equipment that can be used at production sites.

JE International Corporation

▶Exhibition of demo test equipment and video introduction

Company introduction | We are an optical inspection equipment manufacturer that designs and develops mechatronics, electronics, and software in-house to meet customer needs. We specialize in fine and minute patterns, and will further improve the level of perfection of our optical system inspection equipment to realize defect detection and productivity improvements.

Hu-brain Co., Ltd.

▶Exhibition of introduction video for image processing software “Hu-Dra”

We have installed many of our products in the electronic parts industry, food container and lithium ion battery industries, and can propose the most suitable equipment and systems.

Company introduction | We are a manufacturer specializing in visual inspection and have the highly versatile original image processing software “Hu-Dra”. We also design and manufacture custom-made mechanical transport devices using advanced technology.

Hokuryo Denko Co., Ltd.

▶Free design machine vision imaging system Hdeep Inspector development support

We deliver an imaging system using your desired camera and lighting, complete with a development environment including code. AI inspection function also available as an option.

Company introduction | We are a trading and system integration company based mainly in Hokuriku with business targeted for small and medium-sized manufacturing companies. We have numerous results in systems using PC image processing libraries as well as achievements in developing custom systems in collaboration with vision-related manufacturers such as CCS.

MicroTechnica Co., Ltd.

▶Human error prevention support system “Line Watcher”

Company introduction | We provide board products, industrial cameras, and 3D solutions, with a focus on inspection systems that utilize image processing technology. In particular, we have long years of high performance in the printing and pharmaceutical industries, and by leveraging our own image processing boards and extensive know-how specializing in image processing technology, we offer total proposals, including the construction of optimal inspection systems.

Miwa Electric Industrial Corporation

▶Proposing cutting-edge systems using the image processing library “HALCON”

Company introduction | As an image processing system integrator, we are a company that can do TOTAL ENGINEERING, from testing cameras, lenses, and lighting conditions to proposing equipment-based systems. By utilizing deep learning functions, we propose advanced image solutions that "substitute human senses" without relying on rule bases.

Mitsutec Co., Ltd.

▶Omnidirectional visual inspection device “Arm n'Eye”

Equipped with an easy teaching tool (R2T2) based on 3D-CAD data, and the "Visual Inspection Platform: MAR Robot" makes it easy to image (inspect) threedimensional objects and various types of objects!

Company introduction | At Mitsutec, we combine the technologies we have cultivated in our automation equipment business and visual inspection equipment business to a high level to solve various problems in visual inspection automation.

Nippon Electro-Sensory Device Co., Ltd.

Company introduction | We contribute to automated inspection at manufacturing sites with camera and image processing solutions.

*Exhibition contents are subject to change.

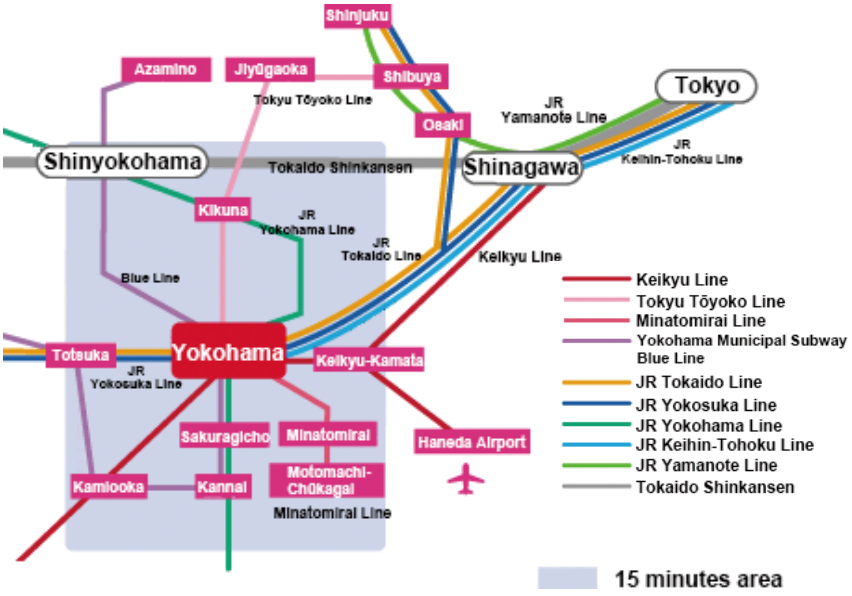
Pre-registration is required

The maximum number of reservations is limited.
If you would like to participate, please contact your sales representative as soon as possible.

<Venue>
Shintoshi Hall, 9th floor of Yokohama Shintoshi Building

<Access>

- Directly connected to Yokohama Station
  5 minutes walk from the east exit
- From Pacifico Yokohama
  - 20 minutes by train
    Pacifico Yokohama→Minatomirai St.
    13 minutes walk
    Minatomirai St.→Yokohama St.
    2 minutes by train
    Yokohama St.→Shintoshi Hall
    5 minutes walk
  - 8 minutes by car
  - 20 minutes walk



<Transportation Information>

By train

- JR Lines (Tokaido Main Line •Yokosuka Line• Keihin Tohoku Line •Yokohama Line)
- Keikyu Line •Tokyu Toyoko Line •Sagami Railway Line
- Yokohama Municipal Subway Line •Minato Mirai Line

By Shinkansen

- 25 minutes from Tokyo Station via JR Tokaido Line
- 17 minutes from Shinagawa Station via Keikyu Line
- 11 minutes from Shin-Yokohama St. via Yokohama Line/Yokohama Municipal Subway

From Haneda Airport

- 21 minutes from Haneda Airport by Keikyu Line

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