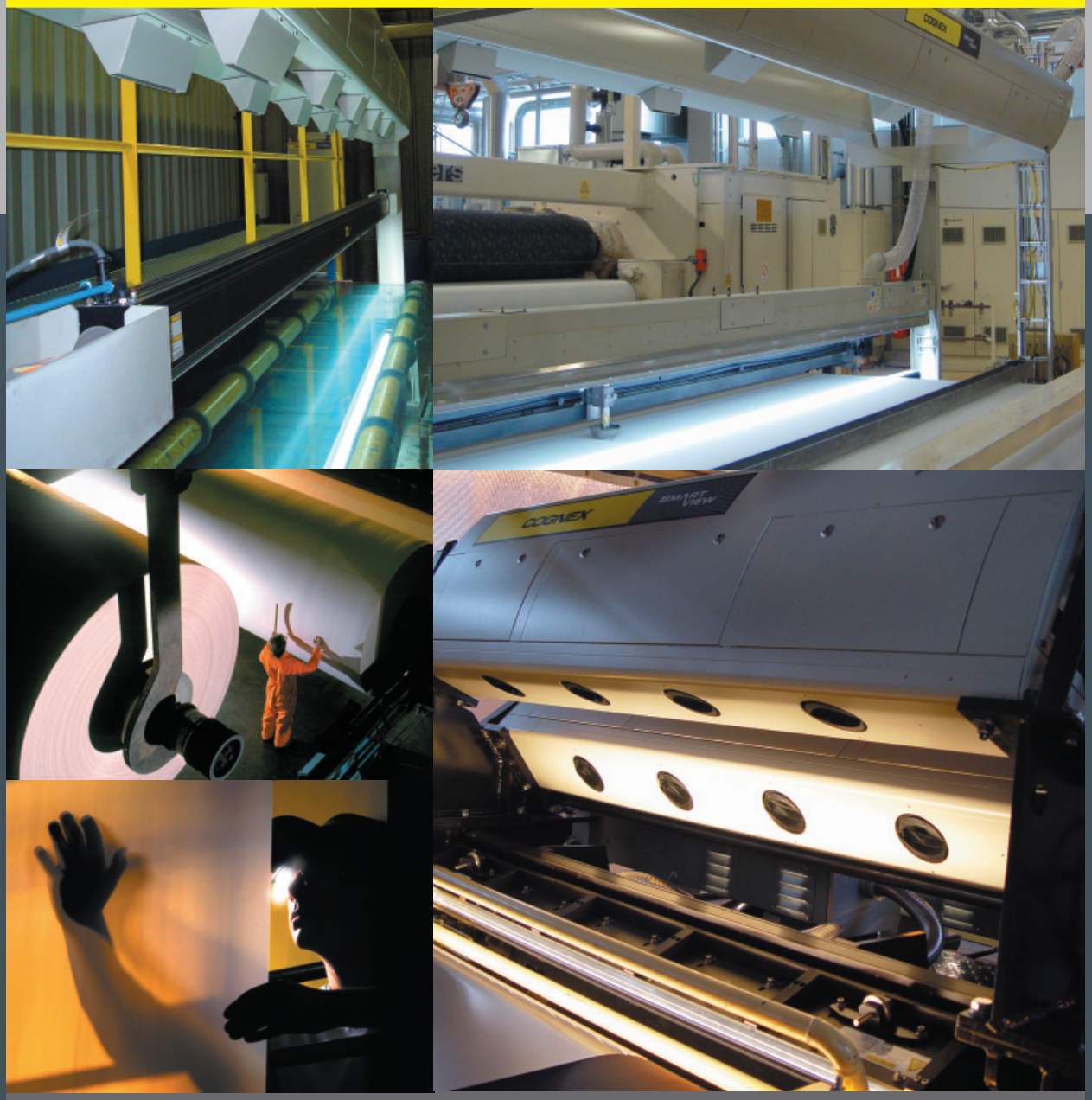
COGNEX

SURFACE INSPECTION SYSTEMS DIVISION



SMART VIEW®

GLASS • METALS • NONWOVENS • PAPER • PLASTIC

The Surface and Web Inspection Leader That All Industries Rely On

High-quality producers of Glass, Metals, Nonwovens, Paper, and Plastic Film need to find defects in their products before defective material is sent to their customers or added-value downstream processes. To ensure cost efficiency, successful high-quality producers need to detect and identify defects in real time before large quantities of material are produced. Having installed over 1000 SmartView automatic optical inspection systems used for material, web, and surface inspection, we deliver proven technology, application expertise, and worldwide support needed by today's high-quality manufacturers.

Our tradition of application know-how, innovation, and state-of-the-art technology goes back a long way. In fact, we did not enter the surface inspection market, we invented it by introducing the first digital camera–based inspection system over 20 years ago. And we have been the innovation leader ever since. Our long list of firsts include automatic optical inspection based on digital grayscale images, synchronized brightfield / darkfield defect detection and classification, multi-step classification, learning classification, automatic defect library creation, and surface quality analysis. Still, today most of these features are available only in SmartView, the most advanced and successful automatic optical inspection system ever.

In addition to its advanced inspection features, SmartView provides industry-leading data analysis and connectivity tools. Our technology is based on the expertise from all possible applications of automated surface and web inspection. Building that expertise started with a team that invented digital camera–based inspection technology in Silicon Valley, California, and proved its value in metals surface inspection applications. Soon thereafter, the group was expanded with teams from Canada and Finland specializing in plastics, nonwoven, and paper web inspection applications. SmartView combines this know-how into an inspection system platform that can solve any inspection problem on flat products. We continually leverage all this experience and volume across all applicable industries.

While we leverage on our worldwide team to develop our products, the core team is still based in Silicon Valley, California, where we convert 21st century technology into automatic optical inspection solutions for the world.

Our products are only the beginning of our expertise. Over the years we have also built a worldwide team of inspection experts, application engineers, and project engineers. In fact we are the only inspection systems provider with a presence in all geographies from Japan to South America. This team is highly skilled and experienced in finding and delivering cost-efficient solutions for all automated inspection needs.



Cognex Corporation
Web and Surface Facility
Alameda, California



Cognex Corporation
European Manufacturing Facility
Kuopio, Finland

The Most Advanced Surface and Web Inspection Technology

Cognex invests heavily in research and development to ensure that our customers always benefit from the latest advances in inspection technology. Over 50% of our employees are engineers with one-third having advanced degrees.

First introduced in 2000, the SmartView surface inspection platform has become the core of a family of the world's most trusted inspection systems for various industries. With more installations on more lines, SmartView is relied upon by manufacturers around the world for automated web and surface inspection. For many of them, SmartView is the recognized standard for on-line defect detection, identification, and imaging.

Because the system is constantly upgraded with the latest technology, SmartView is the most powerful web and surface inspection system available today. It is also the most supportable platform ever with easy upgradability from the first release in 2000 to today's latest version.

SmartView Metals



The SmartView Metals system detects irregularities or defects on the surface of the metal strip and then identifies each defect using our patented SmartLearn® multi-step classifier. All information and images are available in real time and can be stored in our database for future use. Reports can be created and formatted to fit the needs of every mill.

SmartView Paper



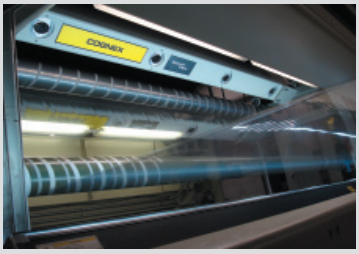
SmartView Paper systems are trusted by virtually every major paper company worldwide. Combined with the SmartView Advanced Winder Advisor for re-reeler optimization and the advanced Cutter Control Advisor for sheeting operations, SmartView can monitor the entire papermaking process from the paper machine to the stacking and packaging of sheets.

SmartView Nonwovens



The SmartView Nonwovens system detects, identifies, and displays the irregularities or defects in nonwoven webs made with any process. Finding holes, thin spots, clumps, and other defects allows maximum yield. Finding defects in real time helps avoid adding value to defective material in downstream processes.

SmartView Plastic



We have been successfully inspecting various grades of plastic and film for more than a decade. In fact, Cognex systems inspect millions of square meters of plastic film and sheet every day. We have vast experience in applications ranging from clear films to opaque sheets and foils. Our SmartView® Plastics inspection system can help you to reduce overall operational costs and optimize processes.

SmartView Glass



Only SmartView Glass provides advanced inspection technology ensuring superior real-time detection of all glass defects, while our special inspection software can easily be configured to provide unparalleled, automatic identification and visualization of your defects. Real-time inspection enables faster process correction and better yield optimization.

SmartView for Other Materials



SmartView can be configured to provide superior real-time detection of defects in any material. Employing a combination of advanced inspection tools for setting up the inspection and our patented learning classifier ensures quick system commissioning. Real-time inspection enables faster process correction and better yield optimization.

Local Support with a Global Reach

Our local experts can determine what hardware configuration and software features are required to solve your inspection problems most cost efficiently. Once you decide on a SmartView system, we provide world-class customer support and training. We have technical support centers for SmartView inspection systems located in the United States, Germany, Japan, and China. These support centers provide application guidance, technical information, and system support services to SmartView customers around the world. Our support staff, including project managers and application engineers, is located in countries throughout the Americas, Europe, and Asia, including Japan and China. They are dispatched from the technical support centers to customer sites for installation, start-up, and on-site service, when required.

We also offer SmartView training programs at two locations in the United States, as well as in our facilities in Japan (Tokyo), China (Shanghai), and Germany (Karlsruhe).

This global presence allows us to provide an unmatched level of constant, high quality, direct service, and support – wherever and whenever needed.

"Our SmartView surface inspection system gives us added confidence that the products we supply to our customers meet their exact requirements. The SmartView system has added value to our operations and delivers benefits to our customers. There are other inspection systems available, but SmartView was the right choice for Corus. Cognex not only installed a first-class quality system, but they continue to work closely with us as part of a team that puts the customer and quality first."

Mr. Stephen J George
Works Manager
Corus Strip Products



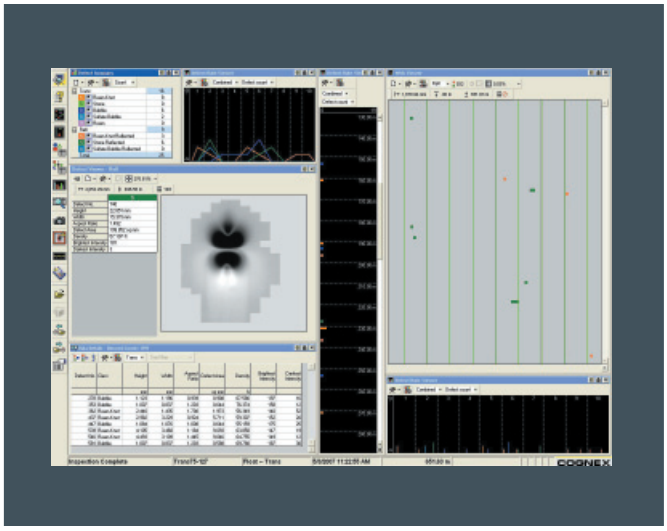
"Cognex offers a comprehensive solution for each of the very diverse and demanding inspection tasks we evaluated. The linescan technology utilized in SmartView software offers superior performance, especially in demanding applications, such as in galvanized steel, where we must meet the extremely high-quality standards of automotive manufacturers."

Mr. Chih-Chung Wu
Assistant General Manager
China Steel's Kaohsiung Plant

Real-World Success

SmartView has become the most trusted automatic web and surface inspection system ever for many reasons. Our experience, our customer focus, and our industry knowledge are all a large part of that success. But it is our advanced inspection technology providing solutions to each industry that sets SmartView apart.

From our superior detection algorithms and our array of available classification capabilities to our data handling and our management of downstream processes, SmartView leads the way. The others follow.



"We are very pleased with our new Hot Mill inspection system. We recently installed a SmartView system with streaming video capability. We are even more impressed with the people of Cognex and the support we have received. We look forward to a long-standing relationship with Cognex. MANY THANKS!!!"

Mr. Neil Brown
Hot Mill Metallurgist
Nucor Steel

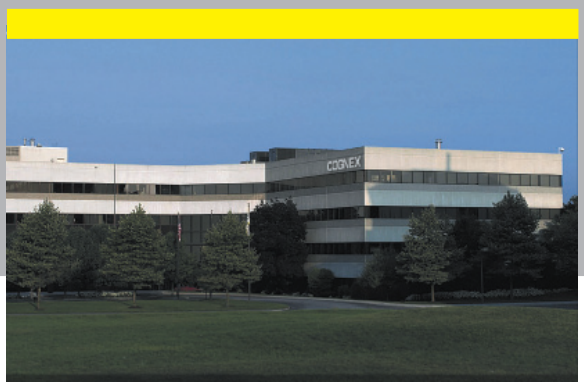


"The Cognex system is very reliable, and the support from Cognex has been excellent. The LED light sources have performed very well, and I am very pleased with their extremely low maintenance. The software is user-friendly compared with our old inspection systems, and we are now finding defects that the old systems missed. SmartView also seems to classify defects better than the systems we replaced.

Mr. Jeff Franklin
Plant Systems Technician
Pliant Corporation

COGNEX

SURFACE INSPECTION SYSTEMS DIVISION



ABOUT COGNEX

Cognex Corporation is the world's leading provider of vision systems, vision software, vision sensors, and surface inspection systems used in manufacturing automation. Cognex is also a leader in industrial ID readers.

Cognex vision helps companies improve product quality, eliminate production errors, lower manufacturing costs, and exceed consumer expectations for high quality products at an affordable price.

Typical applications for machine vision include detecting defects; monitoring production lines; guiding assembly robots; and tracking, sorting, and identifying parts.

Cognex serves an international customer base from offices located throughout North America, Latin America, Europe and Asia including Japan and China. The company is headquartered close to Boston in Natick, Massachusetts, USA.

Cognex is publicly traded on the NASDAQ stock market under the symbol CGNX.

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