

Lumenera Provides Imaging Solution for Agriculture Sorting Equipment

ORAKA Technologies Offers an Advanced System for Asparagus Grading
ORAKA Technologies are specialists in machine vision and manufacturers of agricultural sorting equipment. Based in Cambridge, New Zealand, ORAKA has been offering advanced asparagus grading systems for the past 20 years.

With extensive experience in industrial robotics design and development, ORAKA only utilizes the best technology in the cameras, computers, and related equipment on their grading systems to ensure consistent and accurate results.

ORAKA Required a High Performance Imaging Solution at a Reasonable Price

ORAKA's main product line is electronic graders and sorters for the asparagus industry. This unique system required an imaging component with a CCD sensor capable of high frame rates per second and sensitive enough to pick out fine details on asparagus spears.

High definition cameras take snapshot images of asparagus spears as they pass under the camera station on the system line. An image of the butt end of the spear is taken with one camera and an image of the tip end is taken with a second camera. These pictures are taken at a rate of approximately 12 frames per second.

The images produced by the camera station on the Asparagus Grader are processed by ORAKA software. This analysis and measures the asparagus for diameter, colour, shape and maturity. The software also checks for various defects and abnormalities on the asparagus spears. When processing is complete the software will automatically sort the spears on the line by length and thickness and push them into the appropriate chute. A standard



ORAKA's electronic asparagus grader and sorter featuring Lumenera LU075 camera

Highlights

- ORAKA has been offering advanced asparagus grading systems for the past 25 years.
- This Asparagus Grader required an imaging component with a CCD sensor, fast frame rates and enough sensitivity to pick out fine details on asparagus.
- ORAKA chose Lumenera's LU075 USB2.0 color and monochrome cameras to use on the Asparagus Grader systems.
- Lumenera's imaging solutions were chosen by ORAKA for the outstanding image quality offered in a USB 2.0 camera at a fair price.



machine has 64 chutes that a spear may be directed to.

This detailed process requires clear images that accurately display the asparagus details to be produced at a quick rate.

LU075 Chosen as Imaging Component on Asparagus Grader

ORAKA chose Lumenera's LU075 USB2.0 color and monochrome cameras to use on their Asparagus Grader systems.

With two LU075 digital cameras on each machine, ORAKA benefits from the speed of capture and high resolution offered by a Global electronic shutter and CCD sensor. Also the organization is able to leverage the simplicity of USB 2.0 by powering the cameras with a single USB cable.

ORAKA was in the unique situation of using a Linux operating system and needed to develop their own drivers. By selecting Lumenera they were able to utilize a dedicated Technical Assistance Center to help in this process and ensure the integration cycle was smooth and straightforward.

Due to both organizations commitment to innovation and developing technology, ORAKA is able to offer a system that accurately measures asparagus diameter to within 1mm and bunch weights to within 5%. This allows agriculture organizations to be confident the product they are offering is consistent and of the utmost quality.

Outcome

Lumenera's imaging solutions were chosen by ORAKA for the outstanding image quality offered in a USB 2.0 camera at a fair price. With a global shutter the LU075 used on the Asparagus Grader is capable of the fast frame rates ORAKA needed.

"In 2004 Oraka upgraded our Asparagus Grader with new LU075 cameras and new software. The upgrade has been a great success giving us even better accuracy and less down time." said Chris Kitchen, Owner, Kitchen Garden Produce in Lincolnshire UK. "We at Kitchen Garden Produce have never had a problem with these cameras and have no hesitation in saying that we are very pleased with them."

By implementing these innovative cameras ORAKA was able to stay ahead of the competition and provide its customers with a time and cost saving system.

About Lumenera

Lumenera Corporation, a division of Roper Industries, headquartered in Ottawa, Canada, is a leading developer and manufacturer of high performance digital cameras and custom imaging solutions. Lumenera cameras are used worldwide in a diverse range of industrial, scientific and security applications.

Lumenera solutions provide unique combinations of speed, resolution and sensitivity in order to satisfy the most demanding digital imaging requirements. Lumenera customers achieve the benefit of superior price to performance ratios and faster time to market with the company's commitment to high quality, cost effective product solutions.

For further information about Lumenera, please visit www.lumenera.com or call 613-736-4077. To receive Lumenera press releases as they are issued, contact us at marketing@lumenera.com.

