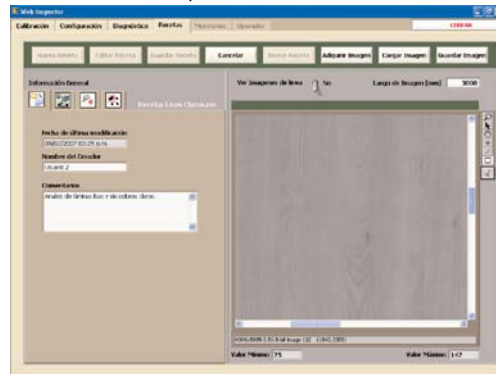


# Inspect 100% of Web and Parts in Real-Time

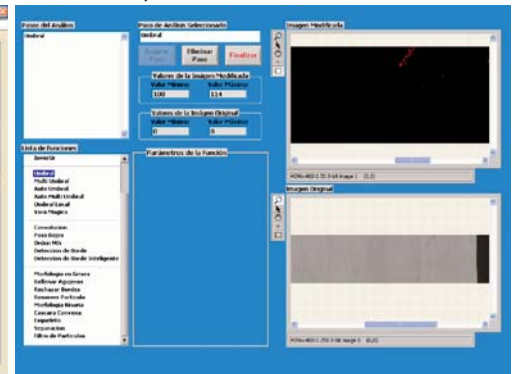
# WebInspector

## Automatic Web and Parts Inspection System

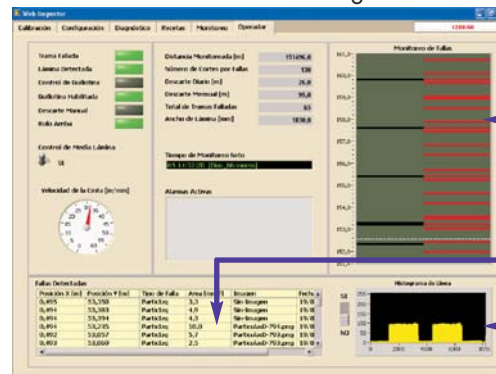
Recipe Generator



Analysis and Filter Generator



Process Monitoring



Defect layout

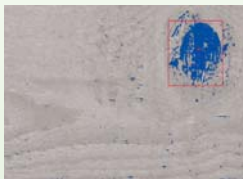
Report of detected defects

Line profile



### Type of Defects:

- Stains
- Points
- Scratches
- Holes
- Edges
- Brightness differences
- Density defect analysis
- Delaminations
- Pattern matching
- Cracks



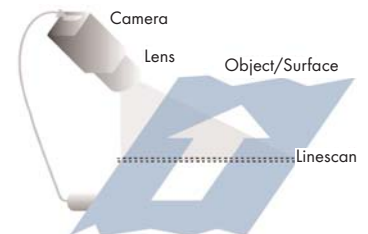
### Measurement Types:

- Angles
- Diameters
- Distances
- Particle's geometry
- Thickness
- Barcode reading
- OCR
- Color matching
- Pattern matching



## Benefits of the Continuous Web and Parts Inspection

- Reduce costs with less scrap
- Increase process and product quality
- Increase competitiveness and customer's trust
- Reduce labor costs
- Eliminate error-prone human inspection



## WebInspector

WebInspector is a high-performance inspection system based on linescan cameras, designed to provide a complete solution to optical inspection of webs and continuous processes. This is achieved combining high-speed, accurate image acquisition to provide a complete, real-time inspection of surfaces and parts. This allows an accurate and economical manner of securing fast detection of defects. Possible applications include inspection of materials such as: plastics, paper, metal, wovens and films where the difference in contrast between the good and the defective material is minimal. WebInspector can detect minute variations in the optical characteristics of materials, such as: stains, spots, scratches, bands and holes. Previously stored patterns can also be compared in order to check for geometric and color matching. High-speed measurements on moving parts can also be made with the WebInspector. Full customization to meet user's needs is also possible as well as connectivity with factory automation devices such as PLCs, cutters and others.

# WebInspector

## Automatic Web and Parts Inspection System



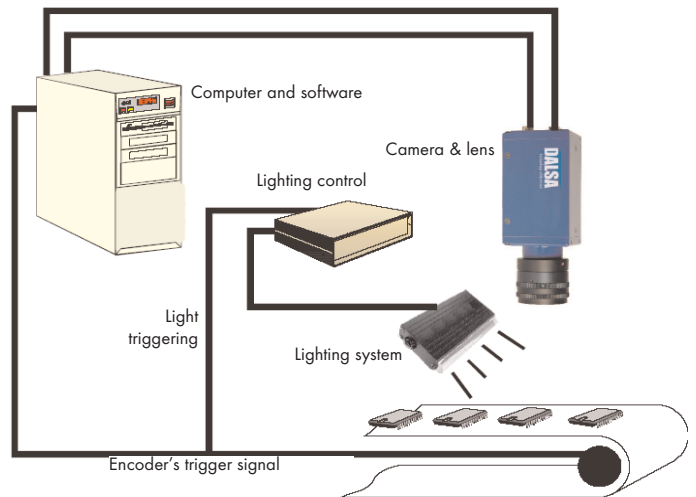
LEDs light



Linescan camera

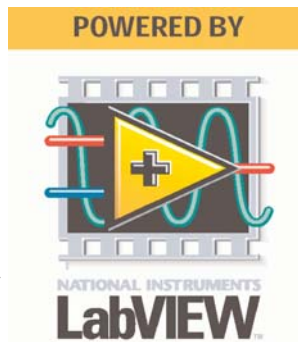


Encoder



### Software's Characteristics

- Real-time defect image display
- Simple and intuitive HMI
- Monochromatic or simulated-color images
- Easy configuration and operation
- Accurate calibration
- Remote operation (optional)
- Password protection
- Automatic report generation via MS Excel or MS Word
- Pan and zoom capability
- Edge detection
- Web follow-up
- Defect windows
- SQL database compatible
- Defect density analysis
- Trends among inspections, optional
- Data export
- Performance analysis, optional
- Entirely made with LabVIEW 8.2 and NI Vision 8 Development Module
- Industrial device control by means of analog and digital I/O
- Full user customization, optional
- In-situ or remote maintenance
- Statistical process control (SPC), optional
- User-defined recipe generator includes advanced image analysis and display



### Hardware's Characteristics

#### CAMERA & OPTICS

- Type of cameras: 2x30 MHz linescan
- Connectivity: CameraLink
- Number of cameras: 1 to 4
- Maximum resolution: 500 $\mu$  in a 2 m (40") width, greater/lower resolution and width also available
- Maximum web speed: 7 m/s at 500 $\mu$ , greater/lower speed also available
- Operational temperature range: 10 to 50 °C
- Lens: telecentric
- Filter: 635 nm red bandpass

#### LIGHTING

- Lighting type: high-brightness red LED bar
- Intensity: 5.000 lux
- Quantity: 1 or 2 bars, according to the web surface
- Maximum coverage width: 2,134 mm (40"), other widths also available with stepped bars.

#### DAQ HARDWARE

- Frame grabber: National Instruments PCIe-1430, 2 simultaneous cameras
- Computer: desktop with double core processor
- Analog & digital I/O: National Instruments PCI boards

#### TRIGGER SYSTEM

- Incremental rotary encoder

#### ENCLOSURE

- Pressurized, dust-proof, washable, IP67