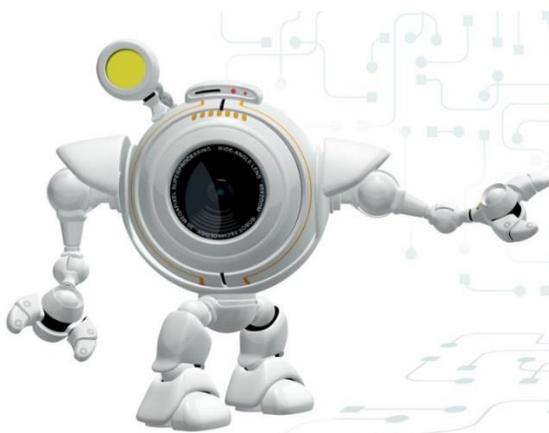


aiUltimate: All in One Inspection System

Grayscale – Color – 3-D



Comprehensive Solution for:

- Color Inspection
- Surface Inspection
- 3D Web Inspection
- Height Profile Measurement
- Micron Defect Detection
- Dimension Measurement
- Tolerance Verification

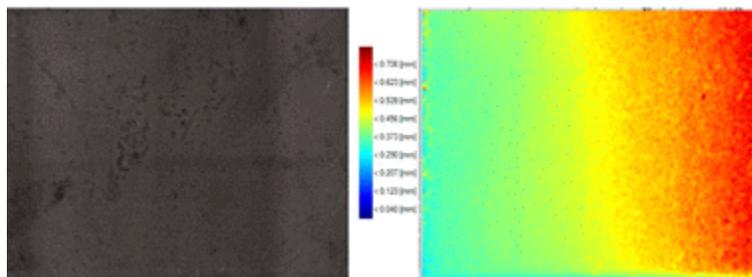
- 100% Inspection System for Coils, Sheets, and Parts
- Inspects Metal, Paper, Nonwoven, Film, and Plastics
- Perform Color Inspection of Printed Surfaces
- Turnkey Systems
- Custom Vision Applications

Build Using Chromasens 3DPIXA 3-D Cameras



Chromasens 3DPIXA Cameras acquire 2D Color and 3D imagery at previously unimagined rates. Previous approaches required multiple cameras and complex lighting setups to achieve the same results. The 3DPIXA camera product line includes cameras optimized for high resolutions or large surface areas.

Camera Features	
Sensor Type	True Color Trilinear Line Scan for High Color Fidelity
Resolutions	Up to 7K Horizontal Resolution
Line Rate	Up to 21.2 kHz
2D Resolution	5 μm – 70 μm
3D Resolution	1 μm – 14 μm
Number of Cameras	Up to 4 Cameras in Each View
Views	One Sided or Two Sided Inspection



Turnkey System Components

- Cameras Assembly (Cameras, Lenses, Mounts, Power Supplies, & Cables)
- Lights and Light Controllers
- Encoders, Digital I/O, and Alarms
- Operator Console and Enclosures
- Image Processor, and Database Server
- Complete Ready to Use Software

Applications



2-D and 3-D Inspection of Coils and Sheets

Detect scratches, holes, dirt, oils, stains, streaks, repeating defects, spots, contamination, and more.



Color/Print Inspection

Detect missing ink, flooded ink, print on print registration issues, discoloration, incorrect hues, and more.



Parts

Detect missing material, excess material, scratches, pitting, fractures, uneven surfaces, and more.



Metrology

Measure position, straightness, flatness circularity, angularity, parallelism, concentricity, and more.

aiUltimate Software Suite

- System Configurator
- Real-time Inspector
- Reviewer – Offline Review Application
- Database Management Tools

Key Software Features

Video Acquisition & Display: Live video display, recording, & playback

Defect Detection: Multiple application specific defect detection algorithms

Metrology: Special tools for metrology and dimensional measurements

Classification: Multilevel learning base classifier

Repeating Defect Detection

Defect Density Analysis

Configurable Item, Lane, and Tile Grading

Automatic Edge Tracking

Plant Data Integration

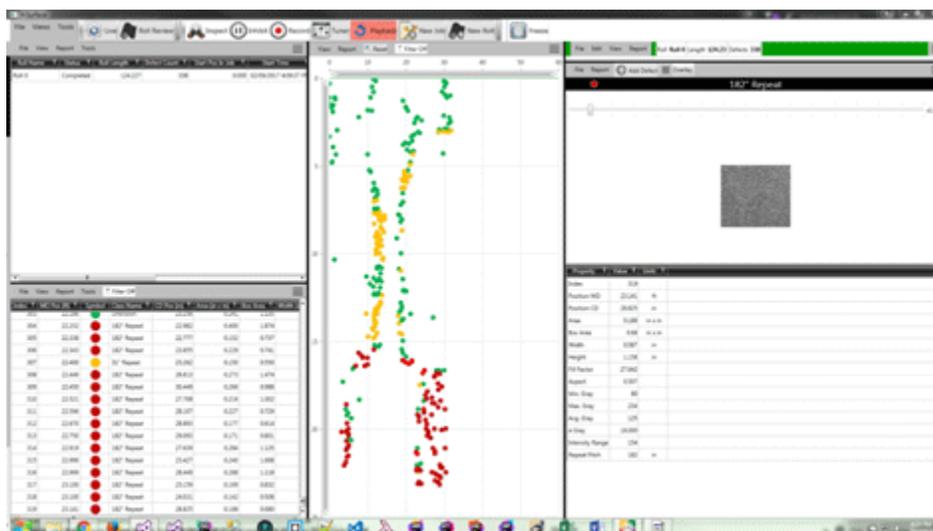
Multiple Configurable Digital Inputs and Outputs

Support for Alarms and Markers/Taggers

User Management

PDF, HTML, and XML Reports

Industry Standard Database to Store Inspection Results



Application Features



Easy to use Apps

The key to success with industrial applications is the interaction with the operator. AI designs its Apps to be used by touch screen, mouse, or keyboard. The focus is on ease of use and real time feedback. All apps are driven by distinct shortcuts to all key screens. Operators become experts after one shift of use.



Post Production Analysis

Enables single touch recording. At any time, an operator can record the complete web. The data can be replayed back through the inspection system for tuning, or for process analysis. Recordings can also be archived for later use. This is an invaluable tool for process engineers.



Multi-Monitor Workflow

Enables dual monitor support. The operator can display the complete web or sheet while using the second monitor for defect analysis and system operation. Video Plex offers the operator different display options such as the last defect, or to operate a patrol of selected regions, or simple a view of the complete web or sheet.



Recipes

Flexible product inspection comes in the form of recipes. There is no limit to the number that can be stored so specialized quality settings may be applied according to product, job, order, or substrate. These are applied on a job by job basis using AI's scheduler.



Provides the operator with a familiar interface to adjust the system in real time. The interface provides real time feedback to the user and enables the operator to tune the system to allow normal process variations while targeting real defects.



Reports

Available according to job. All relevant information including defect images are stored in easy to access XML or CSV file formats. These can then be analyzed with Microsoft Excel or a data mining package. AI interfaces to many common manufacturing intelligence packages, enabling compliance reporting and OEE monitoring.



Actions

Alarms, flagging, machine control and waste removal are supported by AI's action matrix. When a serious class of defect occurs, the operator can see the defect on the screen and a designated action sequence is activated such as driving a downstream device to reject. A flag may be attached for roll to roll processes. AI also supports interfaces to enable smart coding for automated removal at slitting or doctor machines.



AI 365

Provides direct access to AI's online support system. The operator can access a knowledge base, flash videos on how to use the software and lots more. With AI's Apps, the operator is only one click away from an expert.

Working with AI

Lower Cost

AI empowers its clients by supplying self-install kits using commercial off-the-shelf components, software, and technical services that are required to implement a complete inspection solution.

AI provides a detailed bill of material with part numbers and supplier information. This allows customers to purchase spare parts and upgrade hardware directly at a fraction of the cost.

By working in this collaborative manner, AI can lower the cost of ownership of high performance vision systems.



Increased Performance

There are no hidden parts in each vision system. It is clear what is purchased. The purpose and performance of each component understood and the step cost between proposed solutions is transparent.

If you have a fixed budget, you can optimize the configuration and components to match your application. Future upgrades to the system can be planned for and budgeted ahead of time.



Better Support

AI's core product is software. These Apps are constantly enhanced and available as upgrades free of charge for the first twelve months.

AI's clients can access our online case management system 365 days per year, which includes a variety of training tools. The customer's IT department and maintenance personnel are enabled to support the equipment without waiting for expensive 3rd party experts to arrive on site.

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