Quantitative Print Analysis System

The IAS-3000P is a print quality analysis system designed specifically for quality sampling in a production environment. At the touch of a button, the system performs objective measurements on labels, cards, or other samples up to about 4" x 6" inches, eliminating the need for subjective visual inspection and manual measurements.

Print quality is measured and analyzed; defects are detected; test data are saved; and quality statistics are generated for design verification, process control, and quality management purposes. The IAS-3000P is an ideal tool for verifying quality in a fast-paced production environment.

The compact desktop design, with a footprint about the size of a notebook PC, comprises a light source, a camera for image capture, and a positioning tray for the sample. QEA's sophisticated IASLab® image analysis software quantifies critical image features, generates real-time pass/fail decisions, archives measurement results and statistics, and generates quality management reports.

The operator initiates the test by placing a sample in the holder and pushing a button. The IASLab software does the rest.

IAS®-3000P

The IAS-3000P toolkit A full array of tools performs analyses including:

- dot (blob), line, and area analysis, fundamental to nearly every print analysis application
- tone reproduction (tone reproduction curve, optical density and Dmax measurements, density consistency and stability)
- color analysis (color accuracy, consistency and stability, gray balance, color gamut)
- sharpness and detail (line and dot quality, dot gain, text and barcode quality, resolution, modulation transfer, spatial frequency response)
- image noise and print defects (color registration, print uniformity including banding, streaking, graininess mottle, wrinkle, missing prints, voids, background, and more)

Place the sample in the holder and let IAS-3000P do the rest
This simplified, lower-cost version of our fully-automated IAS-1000L Automated Label Inspection System is designed for sampling in production environments. The software has all the computing power of the IAS-1000L, but operation of the system is stripped down to the basics, making it the ideal tool for operators working in a production environment.

The operator places the sample in the holder and presses the *MEASURE* button on the monitor. That's all there is to it.

The software performs the analyses, stores the results, and presents a pass/fail indicator for the sample under test.

IAS-3000P: Purpose-driven design

- Programmable for the specific needs of the application.
- Built specifically for production operators sampling prints for quality assurance.
- Compact footprint for economical use of space.
- Standard design measures samples in a broad range of sizes up to about 4" x 6".
- Scalable for larger samples.
- Designed to meet operator requirements in a production environment.

No more guesswork At the touch of a button, the IAS-3000P delivers consistent, reliable, quantitative measurements every time.

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IAS®-3000P

*System Specifications***

Functions and Features

- Automated analyses with IASLab®, the IAS-3000P's advanced image quality analysis software platform
- Analysis of real-time images
- All measurements in calibrated, physical units including spatial dimensions, reflectance, optical density and color
- Numerical results saved to a Microsoft Database (MDB) file and images to bitmaps
- User-selectable results formats; zoom and color channel display

Analysis Tools and Attributes

- Dot (blob) quality analysis (size, shape, x-y locations, dot%, and screen angle)
- Line, edge and text quality analysis (line width, blurriness, raggedness, density, contrast, fill, location, and orientation; line attributes analyzed per ISO-13660 where applicable)
- Solid area attribute measurements (density, reflectance, L*a*b*, tone reproduction, gradient, graininess, mottle and background; area attributes analyzed per ISO-13660 where applicable)
- Graphics quality (size, density, color, uniformity)
- Defect detection (void analysis)
- Barcode reading tool (available as option)
- Barcode verification (Code 128 and 39; available as option)
- OCR available as option
- Real-time pass/fail reporting (determination based on user-specified limits)

Typical Applications

For labels, cards, or other samples produced by digital or other printing technologies:

- Incoming inspection
- Process monitoring and development
- Quality control
- Diagnostics and problem-solving
- Quality management

Sample Dimensions and Processing Time

- Optimized for samples up to about 4" x 6"
- Testing takes just a few seconds. Processing time varies depending on factors such as the size of the sample, the number of measurements per sample, and the complexity of the analyses performed.

System Components (QEA-Supplied)

- IASLab control software
- Enclosure with sample positioning tray, camera, and light source
- Calibration targets
- All necessary cables and connectors

Minimum PC Requirements (Customer-Supplied)

- PC running Windows® 7 to 10, 64-bit (with Microsoft Office Professional® including Excel 2007 or later, recommended)
- RAM: 8GB or more
- One USB 3.0 port

Electrical Requirements

- 110 Vac±10% @ 50/60 Hz or 230 Vac±10% @ 50/60 Hz

Operating Environment

- Temperature: 10 to 32 C (50 to 90 F)
- Relative humidity: 20% to 80% (non-condensing)

Documentation

- Quick Start Guide
- User's Guide

Note on Test Sequences

- There is no limit to the number of test sequences that can be created for an application. However, as the IAS-3000P itself is specially designed for operator use and not for R&D, it does not contain the tools needed for sequence creation. Instead, test sequences are created by engineers using software from one of our IAS-2000-series products. The engineers provide the sequences ready-made to their production colleagues, and the sequences are plugged in to the IAS-3000P for use on the production floor.

*** Specifications subject to change without notice. Rev. 160309*

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