

Automated Card Print Quality Analysis System



This scanner-based system is designed specifically for the card industry. Cards and smart cards of every variety are pervasive in virtually every country in the world, and the complexity of card design increases non-stop.

With ever-increasing card complexity and more and more different technologies called into play, manufacturers at every level of card production—producers of substrates, blank cards, printers and components, inks and other marking materials, overlays, laminates, films, foils, adhesives—have an ever-increasing stake in how their products affect the ultimate print quality of the card.

It is no longer enough to rely on traditional methods of print quality assessment. The IAS-2000C ensures the best results for your product.

With the IAS-2000C you'll take the subjectivity out of card print quality evaluation and get consistent, quantitative, operator-independent measurements every time—quickly, easily, reliably.

IAS[®]-2000C

The tools you need Basic IAS-2000C tools include dot (blob), line, and area analyses, fundamental to nearly every print analysis application. With these and the advanced tools built into the software, you can quantify all the attributes that affect human perception of image quality, including:

- 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, bleed, 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

IAS-2000C tools adhere to international and industry standards wherever appropriate.

Interactive and automated operation Two modes of operation, *Interactive* and *Automated*, make this flexible system ideal for both R&D applications and production environments. Expert users working in interactive mode define the test conditions: regions of interest, analysis settings, and data to report. Results appear instantaneously on the monitor and can be saved to a database or text file. Expert users can develop programmed test sequences of any level of complexity, to be run on any number of samples. These programmed sequences can then be run in automated mode by operators responsible for routine testing on batches of samples.

Repeatable, reliable results Quantitative quality analysis is critical to many facets of card design and production, including R&D, process development, quality control, diagnostics, and quality management. With the IAS-2000C, these functions are no longer opinion-driven and subjective, but data-driven, repeatable and reliable.

**Quality by design.
Do it right the first time.
Now they're a reality.**



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IAS[®]-2000C

System Specifications

FUNCTIONS AND FEATURES

- Automated or interactive analyses with IASLab[®], the IAS-2000C's advanced image quality analysis software platform
- Analysis of real-time or saved images in a wide range of image file formats
- Sequence programming with a graphical user interface
- All measurements in calibrated, physical units including spatial dimensions, reflectance, optical density and color
- Numerical results output to database or text files and images to bitmaps
- Various results formats, zoom and color channel display
- TWAIN scanner interface for image capture
- Single-side or duplex scanning
- 40-card capacity, assuming 30-mil card thickness
- Duplex throughput is a few seconds per card, exact rate depending upon test sequence complexity

ANALYSIS TOOLS AND ATTRIBUTES

- Dot (blob) and halftone quality analysis (size, shape, x-y locations, line screen, 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)
- Noise Power Spectrum (NPS) and Banding (power spectrum with Visual Transfer Function filtering)
- Spatial Frequency Response (SFR or MTF) using the Slant Edge method per ISO-12233
- Barcode tool for reading barcodes
- Histogram, Profile, Coverage and Background tools available in the software
- Point-to-point distance and angle measurements
- OCR and barcode verification available as options

TYPICAL APPLICATIONS

For cards of all types: access control, education, finance, gaming, reward and gift cards, government, healthcare, loyalty, membership, travel and others

- Research and development
- Process development
- Quality control
- Diagnostics and problem-solving
- Quality management
- Customer support and service
- Application engineering
- Forensic analysis

SYSTEM COMPONENTS (QEA-SUPPLIED)

- IASLab control software
- 600 dpi (max) duplex scanner with automatic document feeder
- Card alignment guide affixed to scanner
- Verification target
- Security key

MINIMUM PC REQUIREMENTS (CUSTOMER SUPPLIED)

- PC running Windows[®] 7 32-bit or 64-bit (with Microsoft Office Professional[®] including Excel and Access, recommended)
- RAM: 4GB or more
- CD-ROM drive
- Two USB 2.0 ports

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)

DIMENSIONS AND WEIGHT (MAIN UNIT)

Scanner:

- 11.8" x 25.23" x 17"
- 37.5 lbs

DOCUMENTATION

- Quick Start Guide
- User's Guide

** Specifications subject to change without notice. Rev. 140124



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