**System Specifications**

**Description**
- Advanced software product for objective, automated evaluation of image quality

**Image Sources**
- TWAIN-compliant scanner (for scanner-based option)
- DirectX-compliant camera (for camera-based option)
- Stored file (BMP, JPEG, PDF, etc., and many more)
- QEA’s PIAS™-1000, automated PQ measurement system
- QEA’s PIAS™ II, portable PQ measurement system

**Analysis Tools**
- Dot and halftone
- Line and edge quality analysis
- Area attribute measurement
- Noise Power Spectrum (NPS)
- Banding analysis
- Spatial Frequency Response (SFR)
- Color registration
- Colorant coverage (option)
- OCR, Optical Character Recognition (option)
- Plugins SDK for new tools and functions (option)

**Operating Modes**
- Interactive mode: interactively analyzes a single ROI (region of interest)
- Sequence (automated) mode: automatically analyzes multiple ROIs using a predefined sequence. The software’s Design Mode allows easy creation of sequences for any test target.

**Banding analysis**
- Noise Power Spectrum (NPS)
- Line and edge quality analysis
- Dot and halftone

**Noise Power Spectrum (NPS)**
- Automatic calculation based on statistical analysis

**Line and edge quality analysis**
- Automatic measurement of line and edge quality

**Dot and halftone**
- Automatic measurement of dot and halftone quality

**Applicable Standards**
- ISO-14550 PQ standard for line and area results
- ISO-12233 for SFR analysis
- ISO-13660 PQ standard for line and area results
- ISO-12233 for SFR analysis

**Productivity Tools**
- Automated document feeder (ADF) support
- Double-sided print support (contact QEA for models)
- Automatic adjustment for simple misposition
- OCR for automatic reading of sample labels (option)

**Easy PQ measurements from 1 to 1,000,000**

1. Have a few quick measurements to make? Use Interactive Mode
   - Drag an ROI (region of interest)
   - Click on the desired analysis tool button
   - View instantaneous results on screen

2. Have a lot of measurements to make? Use Automated Mode
   - Load the documents into a scanner with ADF
   - Run an automated sequence that measures as many ROIs as you want
   - Report results from Access or export to Excel or other software

**Quality Engineering Associates, Inc.**
755 Middlesex Turnpike, Unit 3, Billerica, MA 01821 USA
Tel: +1 (978) 528-2034 • Fax: +1 (978) 528-2033
Email: info@qea.com • URL: www.qea.com

**Specifications subject to change without notice.**
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**Summary results are user-customizable**
- Data tables can be copied from IASLab or Access to Excel or other applications
- Graphical overlays are generated for contour boundaries
- Graphs are generated for many analyses - banding, SFR, NPS, etc.
- Images can be saved, with or without graphical overlays

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**Results selection**
- Saving and printing images, summary data, or detailed data
**Basic**

- **Dot Tool**
  - Diameter, position, shape...
  - ISO 13460

- **Line Tool**
  - Width, raggedness, spacing...
  - ISO 13460

- **Area Tool**
  - Density, mottle, graininess...
  - ISO 13460

- **Color Registration**
  - Alignment of colors...

**Advanced**

- **OCR Tool**
  - Can be used for sample ID...

- **NPS Tool**
  - Noise power spectrum...

- **Banding Tool**
  - Including VTF analysis...

- **SFR Tool**
  - Spatial frequency response...

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**WHY DO PQ MEASUREMENTS?!**

PQ measurements are essential during development, manufacturing, and marketing of printing systems. These measurements determine whether the printer and components are working as expected.

**Examples**

1. An inkjet head manufacturer measures a pattern of dots and lines to see if the print head is working properly.
2. An inkjet ink or media manufacturer measures blocks of color and colored lines to check for mottle and bleed.
3. A laser printer manufacturer measures patterns of lines to check laser scanner and paper feeder performance.

We invite you to contact QEA’s application engineers to discuss your PQ measurement needs.
Basic

Dot Tool
Diameter, position, shape...

Line Tool
Width, roughness, spacing...
ISO13460

Area Tool
Density, roughness, graininess...
ISO13460

Color Registration
Alignment of colors...

Advanced

OCR Tool
Can be used for sample ID...

NPS Tool
Noise power spectrum...

Banding Tool
Including VTF analysis...

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Spatial frequency response...

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- Plug-in SDK for new tools and functions (option)

**Operating Modes**
- Interactive mode: interactively analyzes a single ROI (region of interest).
- Sequence (automated) mode: automatically analyzes multiple ROIs using a pre-defined sequence. The software’s Design Mode allows easy creation of sequences for any test target.
- Batch (automated) mode: analyzes a batch of images in automated mode. Analyses can be performed on saved image files or on images captured by an input device (such as a scanner or camera) under software control. Analysis results are displayed instantly. Data is entered in an Access database and can be exported to Excel or other applications.

**Reporting**
- Comprehensive results appear instantaneously
- Summary results are user-customizable
- Automated mode sends data to an Access database or test file; output data is user-selectable
- Data tables can be copied from IASLab or Access to Excel or other applications

**Graphical overlays are generated for contour boundaries**
- Graphs are generated for many analyses - banding, SFR, NPS, etc.
- Images can be saved, with or without graphical overlays

**Applicable Standards**
- ISO-15660 PQ standard for line and area results
- ISO-12233 for SFR analysis

**Productivity Tools**
- Automated document feeder (ADF) support
- Doublesided print support (contact QEA for models)
- Automatic adjustment for sample misposition
- OCR for automatic reading of sample labels (option)

**Other Tools**
- Image and data copying
- Saving and printing images, summary data, or detailed data
- Image manipulation - zoom in and out, flip and rotate
- Color channel selection for display
- Results selection
- Font size selection

**Documentation**
- User’s Guide supplied on CD
- Tutorial supplied on CD
- Sample test target supplied on CD

**Computer Configuration**
- High-performance PC
- RAM: 8 GB or more
- Available USB port
- Microsoft Windows® 7 to 10, 64-bit
- Microsoft Excel® and Access® 2007 or higher
- Scanner-based option: TWAIN-compliant high quality scanner
- Camera-based option: DirectXcompliant digital camera or similar output device

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