

FACT SHEET



DISCOVERY SMARTPQ

Automatic Fast 100% Print Quality Inspection with Comprehensive HD Web Viewing.

PRODUCT OVERVIEW

Discovery SMARTPQ is a comprehensive print quality inspection system for monitoring 100% of the web using high performance line scan imaging, high definition web viewing and sophisticated defect detection technology for web print, labels and packaging applications.

Comprehensive HD Web Monitoring & Viewing

Discovery SMARTPQ is a high performance, upgrade to traditional web viewing technology with automated defect detection and live sensitivity controls for complete inspection control. Operators can view the entire web in high definition, and select critical areas to view in real time, even at web speeds up to 350 m/min (1150 ft./min).

Reliable detection of Random & Repeating defects

Discovery SMARTPQ ensures real-time print defect detection of randomly occurring and recurring print defects on web-fed printing presses. Print defects such as misregistration, die-cut variations, matrix residues, smudges, streaks, creases, wrinkles and colour variation† are automatically detected. The Operator is alerted when repeating defects are detected, or the size of a defect reaches an unacceptable level.

Intuitive Design – Quick Set-up & Adaptive Learning

System setup is quick and easy. An intelligent, master image training mode is used to generate the golden image (master), which is compared against the live image during production. Multi-zone inspection, with different detection sensitivity levels, can be set-up to allow SMARTPQ to handle each area with varying inspection requirements.

Fast Identification, Position & Reviewing of Defects

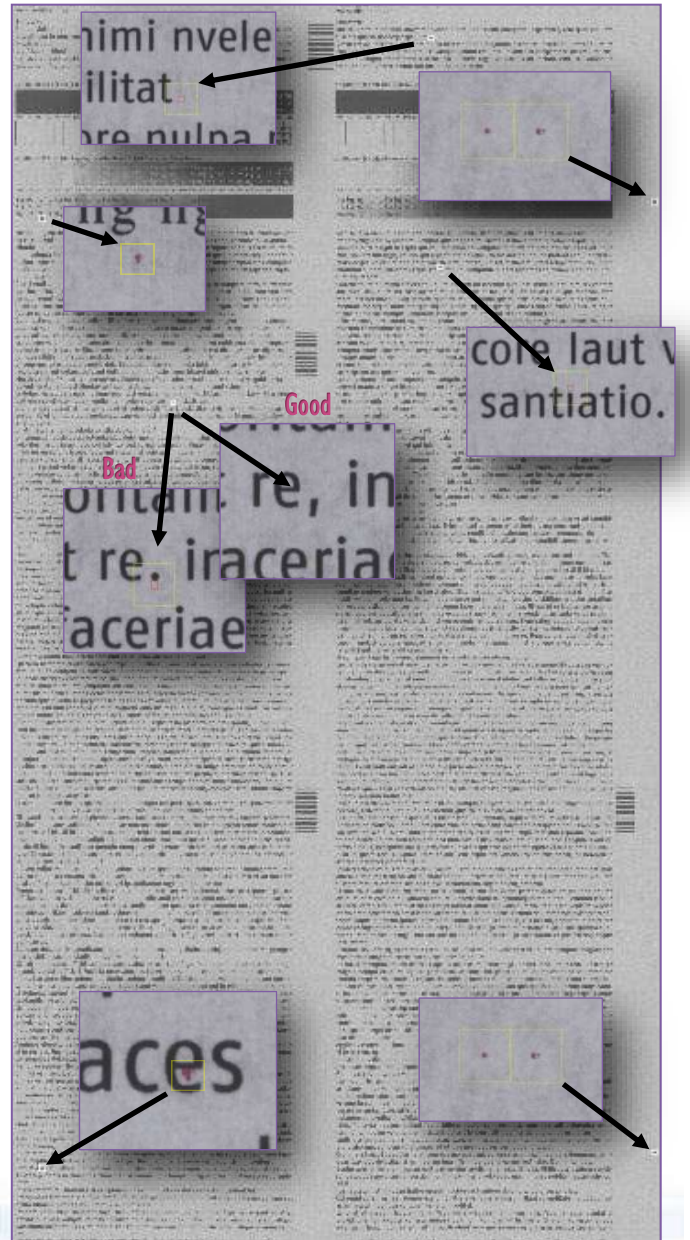
The SMARTPQ system tracks repeating defects and colour codes them on the main display. The details of each defect (type, location, severity) are automatically logged and the associated image is stored in a database for viewing during or after the print run.

Fast, Flexible & Scalable

The Discovery SMARTPQ is a scalable, flexible and robust solution for 100% inspection of every printed repeat for web widths up to 1500mm (60"). The 64bit Windows 10™ software platform ensures the system is fast, responsive and able to read and process large images, even at press speeds of up to 350 m/min (1150 ft./min).

Affordable, configurable & expandable solution

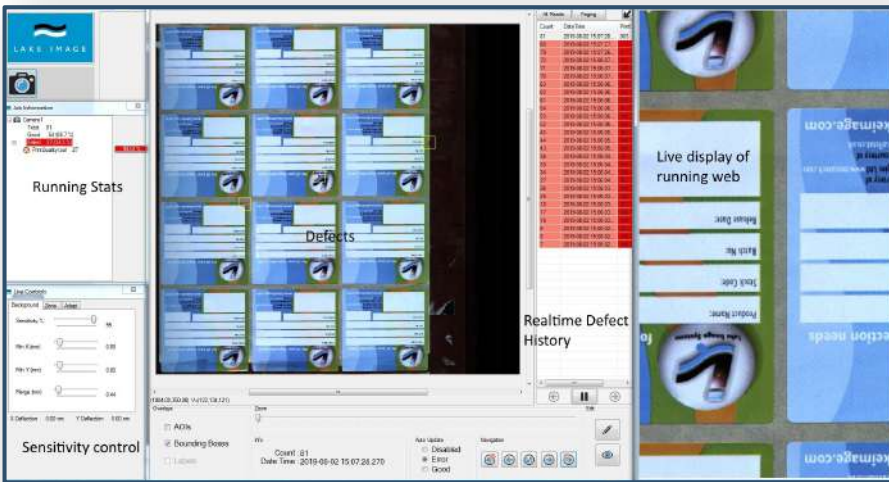
The Discovery SMARTPQ is available as a competitively priced, configurable solution, including: software licences, camera, PC, monitor, installation and support contracts. A wide range of linescan cameras (up to 16K) are available to support every detection requirement, web speeds and width. The DISCOVERY platform modular design enables clients to purchase the base SMARTPQ system, which can be easily upgraded with sophisticated, customisable detection, measurement and integrity software tools for complex defect detection, full variable data inspection and job integrity requirements.



Print Errors Detected on Pharmaceutical Medication Leaflet



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FEATURES

Web Viewing

- Uninterrupted operation for 100% full web inspection
- Full HD quality, multi display options: View multiple areas of web at different magnifications
- Colour coded view of each defect

Defect Inspection

- Streaks, creases, smears, ink spots & voids
- Missing, filled-in or broken text & images
- Label matrix residue & die-cut / positional variations
- Print mis-registration & Colour verification (Optional)

Easily Set-up

- An intelligent, fast master image auto training
- Advanced detection sensitivity controls
- Define print areas with different sensitivity setting
- Smart scan set-up for multi-lane label replication
- PDF Compare for master image setup[‡]

Control

- Operator Light & Audible Alarms/Warnings
- Rewinder Jog/Stop (where possible)
- Marking & flagging device - Optional

Defect History / Reporting

- Log of all print defects
- Image Archive - Optional
- Roll Mapping - Optional

[‡] PDF Compare requires the post RIP'd Raster file

WEB APPLICATIONS

- Offset & Digital print
- Labels, Cards & Tickets
- Paper, Clear Films, Foils, Packaging & Cartons

SYSTEMS

- Input Devices
- Colour Line Scan Cameras: (2K, 4K, 8K & 16K)
- Resolution: 150 to 1200 DPI
- Triggering: High resolution encoders
- Lighting: Long life L.E.D. Optional back-light

Processor / Interface

- OS: Windows™ 10 (64bit)
- Chassis: Industrial Rack
- Power: 110-230VAC
- Approvals: CE Certified
- Interface: Touch Screen Monitor, keyboard & mouse

Performance

- Min. defect sizes: sub 0.05mm^{2†} (0.002inch²)
- Press Speeds: up to 350 meters/min (1150 ft./min)
- Web widths: up to 1500mm (60")

Installation / Integration

- On Press: Standard press mounting kits
- Rewinders: Web stability frame, web guide and path rollers available if necessary
- Remote technical support and training

[†] Dependent on absolute resolution available.

ADVANTAGES

- **Machine independent** - Can be retro-fitted to most existing printing and finishing equipment
- **Reliable** - 100% web HD viewing & defect reporting. Uninterrupted detection of defects
- **Flexible** - Ability to deploy broad a set of analysis options to capture a variety of defects
- **User-Friendly** - Faster set-up & logical GUI layout
- **Upgradable** - Upgrade to Discovery PQ, providing sophisticated, customisable tools for complex defect detection and variable data inspection
- **Supported** - Comprehensive maintenance contracts featuring remote diagnostics.

BENEFITS

- **Lower Costs** - Automatically capture defects before reaching unacceptable levels. Prevents costly reprints
- **Improved Productivity** - Automate labour intensive print quality inspection processes
- **Increased Customer Satisfaction** - Inspection meets requirements of large, demanding customers
- **Less Scrap / Less Waste** - Immediately prevent costly scrapping of large runs of defect print
- **Mitigate risks** - Ensure all jobs comply to industry and government regulations.

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