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With the ability to handle virtually all your documents, regardless of shape, size or condition, the **Kodak i1440** Scanner brings awesome productivity, flexibility, ease of use and enhanced Perfect Page image quality to your tabletop business scanning.

### Features:

- Able to handle all kinds of input, even extremely long documents, ranging from cardstock to onionskin in just about any condition, up to 863 mm (34 in.) long, with speeds up to 75 ppm/150 ipm at 200 dpi
- Outstanding image quality with an expanded array of the latest Perfect Page image processing features, including photo extraction, trainable electronic color dropout, segmented black-and-white output, improved color accuracy and much more
- Easy connectivity and fast image transfer with USB 2.0 interface
- Smart touch feature allows you to easily scan to file, email, publishing or other desktop applications with just one click
- Five output options: black-and-white, grayscale or color, plus dual stream simultaneous output—color and black-and-white or grayscale and black-and-white
- **KODAK** Service & Support keeps you up and running

Your value-added reseller or systems integrator can help you select the scanner and software combination that delivers the quality and performance that are right for you.



As an ENERGY STAR® Partner, Eastman Kodak Company has determined that these products meet ENERGY STAR® guidelines for energy efficiency.

**Kodak** Service & Support

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For more information, call your Authorized Reseller of Kodak Document Imaging Products or log onto [Kodak.com/go/docimaging](http://Kodak.com/go/docimaging).

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# Get the Big Picture on Quality.



## A few handy imaging and image quality terms.

**Contrast**—the difference between light and dark in an image

**Detail**—the ability to discern small features in an image

**Curve optimization**—how smoothly rounded characters are displayed

**Edge definition**—the difference between data and background

**Illumination**—evenness lighting from side to side without bleed through

**Resolution**—how many dots per inch the image sensor detects

**Bitonal**—black and white imaging

**Grayscale**—16 to 256 steps between black and white

**Color**—multiple values of red, green, and blue

**Artifacts**—“noise” or stray dots appearing in a scanned image that weren’t in the original

## How to select the right scanner for a smooth-running document imaging system.

### Get your document imaging applications off to a great start.

When you convert paper documents into digital images, you’re able to manage them with a point and a click. Most customers experience cost savings and productivity increases. Increased efficiency can also give you competitive advantages in customer service. But first you have to capture the images with a scanner, your on-ramp to document imaging. You want traffic to flow through your capture process quickly and without incident.

### Your imaging chain is as strong as the quality of its links.

There’s more to it than just running paper through a scanner. Image capture is about making images as legible as possible for humans as well as data extraction software. There are many factors involved. Let’s begin with the basics. Image capture steps typically include:

- Document preparation—removing staples, sorting by type or condition if necessary
- Document transport—feeding originals, moving them past the camera (see below), and stacking them when done
- Imaging—performed by a camera consisting of a light source, optics, a sensor, and electronics
- Image processing—adjusting exposure, removing skew, removing borders, image compression
- Quality assurance—checking to make sure scanning and processing are correct
- Indexing—creating a database of the imaged documents so they can be retrieved later

Image quality variables are generally centered on scanning and image processing. However, anything you can do to improve performance at any one of the steps noted here can help make your overall business process more efficient. As you weigh your scanner options, it’s important to look at how the many combinations of features, speed, and cost impact the process and its output, including reliability and your total cost of operation.



### Quality—its beauty is in the eye of the beholder.

Evaluating image quality takes equal parts subjective and objective judgment. Remember, the goal of document imaging is to capture and share information visually.

A quick search on imaging standards posted on the web by U.S. and foreign government agencies and educational institutions tells the tale. Consider this from the Inland Revenue Authority of Singapore: "All information contained in the document (be it graphical, textual, handwritten, or otherwise) must be capable of being captured in its entirety and with a level of accuracy that ensures that no information that can reasonably be expected to form part of any subsequent business process is lost or altered in any way."

To put it another way, what you get is what you see. The image on the computer screen contains all of the relevant information that appears on the original document. No more, no less.

### Putting the scanner to the test.

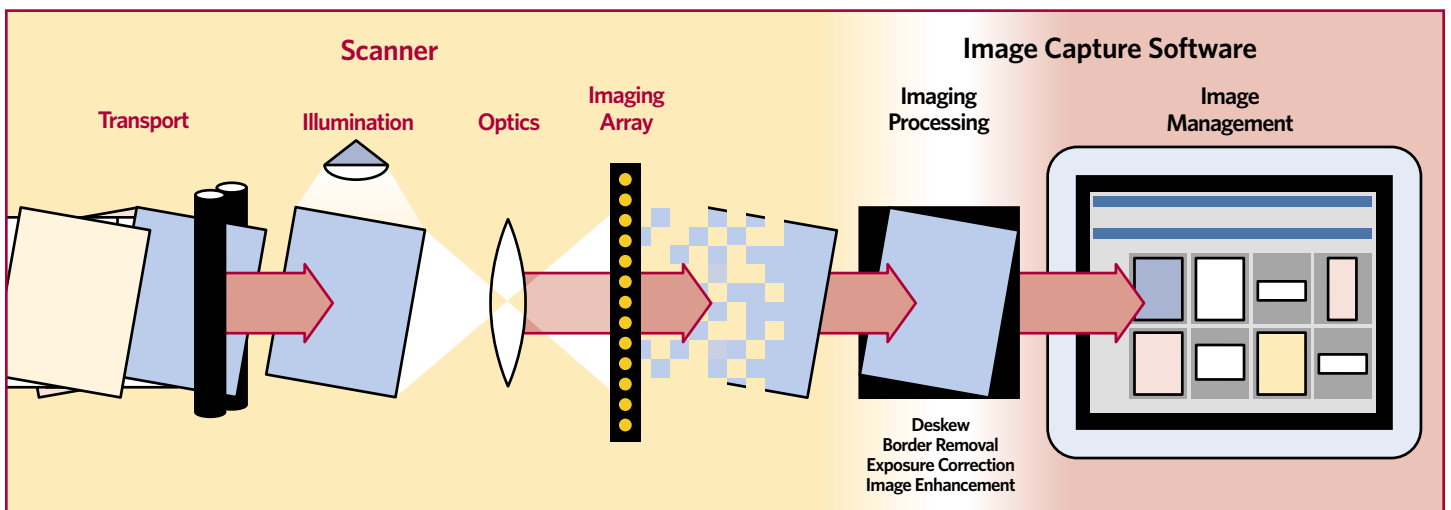
Some imaging qualities can be measured. Engineers can evaluate a scanning system's ability to image areas of a standard test target without distortion or loss of detail. Straight lines should remain straight—left to right and up and down. Areas of fine detail should not fill in. Optical character recognition (OCR) performance is another measure. If errors rates are high, it's a sign that the imaging process is deficient.

### You be the judge.

Any scanner design incorporates decisions made by engineers about optical performance and how the raw digital stream of ones and zeros is converted into an image. Because only you can decide if these choices are right for your application, the best way to evaluate a specific scanner is to test it with your documents. Set the capture parameters according to the vendor's recommendations for your application. These might be different, depending on whether your mix includes photographs, multipart flimsies, bar codes, handwritten notations, diagrams, color content, or consists mainly of printed forms.

Virtually every scanner is able to scan at multiple resolutions, which are measured in dots per inch (dpi). The higher the number, the more data transferred from the page. But higher resolution generally means a slower scan rate and larger image files for a given page. You want to achieve the highest speed for the lowest resolution that sufficiently captures the information that's important to you.

### The inside story on image capture.



## Plan for a productive process.

When it comes to operational goals for an image capture system, you want the system to do as much of the work as possible. Most particularly, you want to avoid the need to rescan documents and reinsert them into an image workflow. If we look at different aspects of the imaging chain, it's easy to see what matters.

### Minimize paper handling.

The right choice will allow you to spend your time on tasks that are more worthwhile than sorting paper. Here are some capabilities to watch for:

- A scanner that feeds mixed document types and sizes means you'll spend less time presorting.
- A duplex scanner will capture the fronts and backs of documents in a single pass.
- Technology that examines images and auto rotates them to the correct orientation saves on sorting or post-scan editing.
- A scanner that prevents and/or detects overlapping documents saves you the nuisance of removing and rescanning individual documents.
- By detecting photographic content within the batch and on individual documents, a capture system can handle a mix of text and images in a single scan.
- If the scanner delivers documents face down in original order in the output tray, it's easier to prepare them for archiving.

### Maximize image quality automatically.

An image capture system that adjusts exposure (also known as thresholding) and performs image processing helps your process in several ways.

- By handling "exception" images automatically, the capture system can further limit the need for time-consuming manual rescans.
- By setting its white balance automatically, a scanner can minimize variations among images.
- Color management and color balancing technology help assure consistent imaging among scanners and between batches.
- Consistent imaging performance reduces the need to check every image in your quality assurance step.
- By straightening images (deskew), autocropping images, and deleting blank pages, the system can virtually eliminate the need for manual image editing.
- Background color smoothing produces cleaner-looking, sharper images.

### Optimize operator involvement.

By limiting paper handling and automating image processes, your scanning system can minimize the time and labor required to get images into your system. Here are some other points to consider:

- An easy-to-operate image capture system will reduce the need for specialized training or dedicated operators.
- A capture system that can detect color pages within a batch can select the imaging mode that best suits the document.
- Depending on your application, you may want the capture system to time- and date-stamp documents, perform indexing by bar codes or OCR fields, or perform automatic data entry via OCR. "Trainable" electronic color dropout capabilities handle more colors and variations in colors.
- Simplified routine scanner cleaning and maintenance will enable an operator to safeguard system performance.



### Find the right balance of features to minimize your total cost of ownership.

No discussion of quality would be complete without a word or two about cost. There's more to it than the purchase price of a scanner and imaging software. Be certain you take into account the ongoing expense of labor, consumables such as lamps and feeder modules, service, and software upgrades. Look at any scanner's design in terms of durability and ergonomics. A good guarantee and a strong service contract can be a worthwhile investment.