

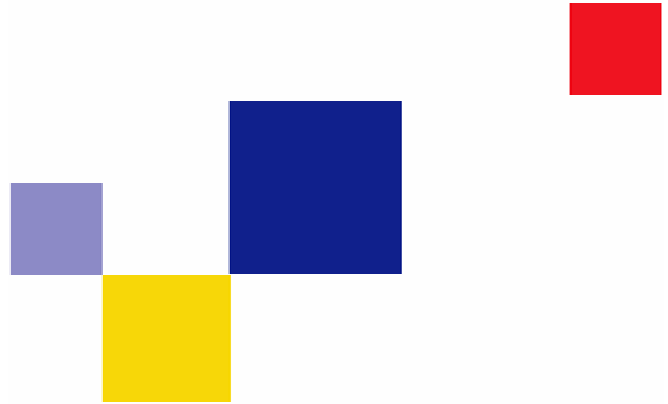
WIDE FORMAT SCANNER

BUYER'S GUIDE



- ✓ Quality
- ✓ Reliability
- ✓ Customer Support
- ✓ Productivity
- ✓ Price
- ✓ Flexibility
- ✓ Technology

VIDAR



Wide Format Scanner Buyer's Guide

Before You Choose a Wide-Format Scanner... Top Seven Factors to Consider

1. Quality
2. Reliability
3. Customer Support
4. Productivity
5. Price
6. Flexibility
7. Technology



Introduction

Congratulations. You are considering purchasing a wide-format scanner to scan to file and/or print full-sized documents. The good news is that today's scanners have come a long way. They're faster, wider, and they deliver better image quality, color capture, and accuracy. They're also more affordable, making it easier for every user to transform large legacy paper documents into an accessible digital archive—or integrate them into a digital workflow. Many come with easy-to-use copy and scanning software to optimize results.

Whether you're digitizing maps, architectural, engineering, and construction drawings, ads, posters, photographs, fine art, or fragile, one-of-a-kind records, there is a scanner for the job. The question is, how do you know which scanner is right for you?

About this guide

Purchasing a wide-format scanner is an important decision. The purpose of this Buyers Guide is to help you select the right scanner for your unique requirements. Whether you're a first time buyer or an experienced user, if you're in the market for a wide-format scanner there are seven key factors you should consider to satisfy current and future needs.

1. Quality
2. Reliability
3. Customer support
4. Productivity
5. Price
6. Flexibility
7. Technology

Define your requirements

In order to choose the right scanner—one with the right imaging technology and the right set of features at the right price—you'll need to figure out how you'll be using it. How will adding a wide-format scanner support your business applications and add value? What documents will you scan? Are they large or small? Old or new? Are you scanning for reproduction or to archive? In black and white or color? What about volume requirements—how many originals will you scan in a given day? Consider this:

- **Scan to file**—when you're scanning to file or archive, resolution is an important consideration. You want to precisely capture fine lines and details in black and white and/or color. The size of scanner you buy depends on the size of your originals, how fast you want to scan them, and your budget. You can run 24" x 36" originals through a 36" scanner in landscape mode faster than a 24" scanner in portrait mode, but the investment may be slightly higher. Quality of originals is a factor too—documents in poor



condition may require special handling or the use of a flatbed scanner, or even editing or image processing software. Accuracy also can be important for some applications; especially for maps and technical drawings. Therefore, the ideal scan accuracy to look for in a scanner is +/- 0.1 +1 pixel across any two points of the scan line. VIDAR delivers a very high grade of precision stability in the scanned image.

- **Scan to print**—if your primary applications will be scan-to-print, quality is paramount. But output quality is closely linked to the printers' capabilities, so you need a scanner that delivers excellent image capture and resolution and a wide format printer that performs equally well. Consider the size of your originals—if they're oversized, you'll need an extra-wide scanner that delivers excellent quality results. For scan-to-print, you'll need a scanner paired with a printer to provide a complete document copier solution. A dedicated printer driver and closed loop calibration for color matching is essential.
- **Color vs. black and white**—decide whether you need support for color or monochrome or both in your scanning requirements. Two considerations will drive this decision—your applications and your budget. Technical documents like blueprints and architectural drawings are typically scanned in black and white. However, with highlight color there is a need for color capability, if only limited. On the other hand, documents like maps, posters, paintings and photographs are usually scanned in color. As for budget, while the price differential continues to shrink, you may pay between 10 and 15 percent more for a color scanner.
- **Volume**—how many jobs will the scanner be required to run each day? Are there peak usage times? How many users will the device support? What do you think your average monthly volume will be? The higher the volume, the faster the scanner you need. If you're scanning large numbers of originals, you'll need batch scanning capabilities. And if many people will use the scanner, it should be very easy to use.

Seven Key Factors to Consider When You Buy a Wide Format Scanner

Once you've considered factors like budget, the nature of your originals, whether you'll be scanning to print or file, and color vs. black and white, you're ready to consider these seven categories—quality, reliability, customer support, productivity, price, flexibility, and technology.

1. Quality

For scanned images, quality is measured against four criteria:

- **Optical resolution** usually ranges from 200 to 600 dots per inch. Some buyers put too much emphasis on resolution—a scanner with lower resolution but superior lens and imaging technology can produce better quality images than another with higher resolution.
- **Bit depth** describes the range of colors a scanner can capture—some color scanners can capture 24-bit color, while others can capture up to 48 bits. (see *Diagram A* below) VIDAR scanners capture color at 48 bits for maximum precision and vibrant color and capture black and white at 16 bits to bring out the detail and depth in any drawing.

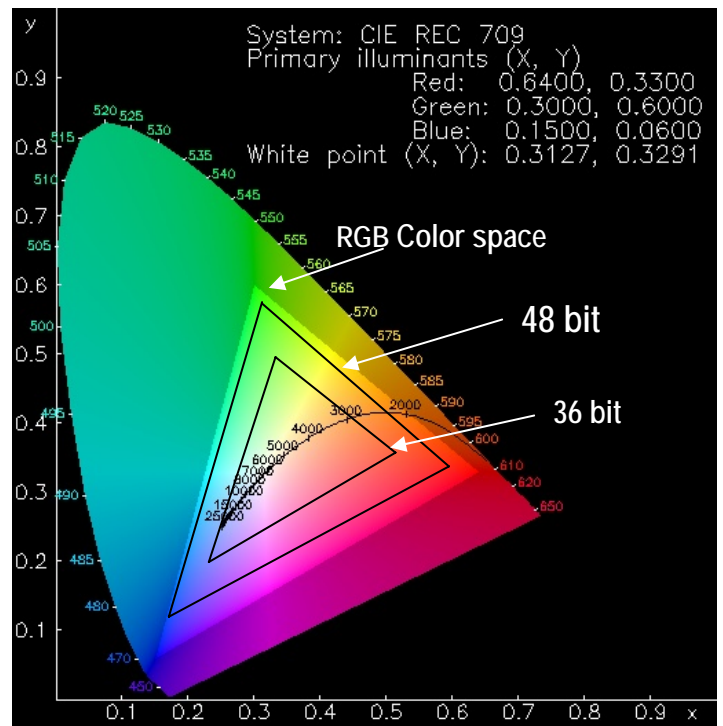


Diagram A

- When evaluating a scanner's spatial accuracy, look for a minimum of $0.1\% \pm 1$ pixel. Many manufacturers will specify a minimum of 0.1% , however they allow a tolerance of \pm several pixels. This is pushing the tolerance far from the original quoted specification. Additionally, it is important to verify that the stated accuracy is between any two points across the scan line, not just between the two outer-most edges. Vidar scanners use a patented technology, Accurate Lens Enhancement ® (ALE) to assure that geometric accuracy measures the spatial accuracy of an image compared to the original.
- Optical density measures how well a scanner can capture black as a true black. With a Vidar scanner, black and white images are captured at 16-bits, bringing out detail and depth in any drawing.

8 Bit Grayscale



16 Bit Grayscale



Clearly, you want a scanner that delivers the best performance in all four areas. However, there are other things to think about before you buy.

Calibration tools—while some manufacturers claim their scanners don't need calibration, calibration tools play an important role in quality—and without them quality suffers. Vidar is the only manufacturer that offers closed loop calibration to easily match colors and change profiles. Vidar scanners automatically self-calibrate regularly, so they never suffer degradation, unlike other scanners that don't have calibration support.

Design, hardware engineering, and quality—how is the scanner designed? Is it a sturdy, quality device built to last? Vidar wide-format scanners feature best-in-class Danish design and are backed by continuing product development. The combination of decades of industry knowledge plus ongoing R&D provide the foundation for an exceptional portfolio of products and a commitment to innovation that has resulted in 11 current patents and a lasting technology platform.



Quality assurance—look for a high-quality scanner built to last. VIDAR is one of the few manufacturers that employs a multi-checkpoint process to ensure that every scanner meets the highest level of quality before it leaves the plant.

ISO-9001 certified and eco-friendly—Vidar scanners are produced in a state-of-the-art ISO-9001:2000 certified manufacturing facility and all products are developed to minimize their impact on the environment. Vidar scanners comply with stringent criteria to promote energy efficiency and reduce pollution. They're also RoHS compliant, which means scanner components and materials are free of hazardous materials like lead, cadmium or mercury.

2. Reliability

Next to quality, you need a scanner that delivers predictable performance. Choose a device engineered for uptime and make sure the components are built to last. Consider these factors ...

Technology—reliability starts with technology. Vidar scanners are based on state-of-the-art technology proven to be very reliable. What's more, user-replaceable parts minimize the scanner downtime securing your low operation cost..

Quality of materials in manufacturing—make sure the scanner uses the highest quality parts and materials. Vidar scanners use the highest grade of electronics, plastics, and metals available, which makes a huge difference in quality.

Messaging system—proactively managing basic maintenance functions is a great way to ensure continuing performance. Choose a scanner that notifies you to replace a part before it is likely to fail. Vidar scanners feature an intelligent messaging system that monitors the life-length of vital parts and alerts the operator when it's time to change a part or perform basic service functions, which saves time and money and keeps business moving without costly delays.

Design—when it comes to design, look for scanners that are ergonomically designed based on years of experience, and customer input. Vidar scanner designs incorporate worldwide customer feedback from the largest installed base in the industry.



3. Customer Support

Before you buy, consider after-sale service and support. This is an absolutely critical factor when considering the long-term cost of ownership. Look for on-site support, qualified dealers and distributors, online tools, and a robust, 24-month parts warranty.

Service and support—does the vendor offer quality service and support? All Vidar scanners are backed by authorized, factory-trained personnel. In addition Vidar offers a 24-month parts warranty for all scanner parts and on-site warranty coverage that may be extended for up to five years. Help desk support is available for immediate answers to software and hardware questions, and optional services such as on-site installation, training, a depot repair facility and additional time and material services are available.

Qualified Distributor/Dealer Channel—purchase your scanner from an authorized distributor or dealer trained to understand your environment, your applications, how to develop a solution tuned to your needs, and scanner features and benefits and how they support your requirements. Make sure you purchase from a professional imaging company and not from what often appears to be the “cheaper” alternative—a mail-order operation.

Web support—look for a scanner/vendor that offers online support. The ability to conveniently download tools, software and firmware upgrades over the web can go a long way toward driving productivity and eliminates the need to order software or schedule a technician visit. The more web-based tools, support and self-help offered with your scanner, the better.

Warranty—make sure your scanner comes with a robust warranty. Vidar 24-month warranties cover all scanner parts and Vidar distributors all provide on-site service and support options for “peace of mind” when investing in wide-format scanner.

Documentation—if you can't use the documentation that comes with your scanner, you'll struggle with getting it up and running. Vidar documentation is presented in nine different languages, with easy-to-use instructions, detailed color graphics, and a web tool to further simplify installation.



4. Productivity

Productivity is an essential factor when assessing and choosing a wide-format scanner. Look for a scanner that strikes the right balance of speed, quality, reliability and ease of use.

Speed—if you want to avoid production bottlenecks, speed is critical. The more originals you have to scan, the faster the scanner should be. Speed is typically measured in inches per second, and with scanner widths ranging from 24 to 54 inches, Vidar offers a full range of speed bands up to 12 inches per second.

Automatic functions—when functions are automated, productivity accelerates. Vidar automatic lens enhancement (the scanner automatically adjusts the lens) and automatic thresholding (automatic scan cleanup) features enable cleaner scans with minimal intervention.

Ease of use—the simpler the device is to use, the higher your productivity. Ease of use means less training, fewer calls to the help desk, less strain on IT resources for problem management. Look for a system with simple operation, an intuitive user interface and easy-to-use online tools.

Feeding mechanism—most people find front feeding faster and easier to handle. If speed is a top requirement, look for the fastest raw speed and front-loading feeding. If your budget permits, get an extra-wide model to run originals through in landscape mode.

High volume batch scanning—many users need to scan several documents at once. If so, take a close look at the system's ability to batch-scan. Look for a device that can process an unlimited number of document scans consecutively without having to stop and scan each document individually.



5. Price

Price is always a key buying criterion. Note that all manufacturers price their scanners a little differently—be sure to compare apples to apples. While it's important to make sure the device is priced competitively, make it a point to look for value, not just the lowest price.

Total Cost of Ownership—it's important to purchase a scanner built with quality parts and materials. Look for devices that use durable plastics and metals to ensure long-term reliability. If you purchase a less expensive device, your total cost of ownership may actually be higher in the long run, due to increased maintenance, repair, and downtime. Customer replaceable consumables help reduce downtime and service costs. Vidar scanners are designed with this in mind and are built to go the distance using the latest manufacturing processes at state-of-the-art facilities in Denmark.

Value—we all have heard phrases like “time is money” or “you get what you pay for” and this applies to large format scanners as well. If you're trying to decide whether to invest a little more and get a more capable scanner with quality, design, and durable materials engineered into it—do it. Look for a vendor that's been in business for several years and regularly invests in R&D. And look for a product line that combines superior technology with quality parts, materials, service and support.

Software tools—what imaging software supports the scanner and what functions does it provide? Vidar **TRUcopy** copy software, designed for scan-to-print applications, is a moderately priced but powerful package that offers lots of tools for managing color and correcting and enhancing images to deliver excellent color-matched output on wide-format printers. Vidar **TRUscan** software is an ideal tool for standard scanning activities, image enhancement and image digitizing in monochrome and color, and lets you send scans directly to specific computers set up to receive the image data.



6. Flexibility

When you're evaluating wide-format scanner vendors and products, consider flexibility. Does the company offer a wide range of products to meet your needs? Your purchase decision should be driven by your application requirements and not the limitations of the technology. Are there several connectivity options? Options for handling different originals? What about software tools?

Connectivity—does the scanner offer multiple connectivity options? Vidar scanners offer two industry-standard plug-and-play interface options—FireWire and USB2. A Still Image Interface (STI) driver ensures problem-free compatibility with current and future versions of Windows. And innovative iJET technology enables easy setup and activation of scan-to-print and scan-to-file options directly from the scanner.

Product range—does the vendor offer a full range of products with varying widths, feeding mechanisms, speeds, models, and sophistication? Vidar offers scanner widths from 25 to 54 inches, traditional feed and a flatbed scanner for fragile originals, base versions and enhanced versions, and systems for scan-to-file and scan-to-print applications.

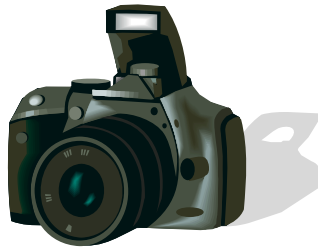
Upgradeability—if you're interested in protecting your capital investment, upgradeability is essential. Can your scanner be easily upgraded? Or will you have to invest in a new scanner when your requirements change? All Vidar base model scanners can be quickly upgraded to higher speeds and maximum resolutions with a simple smart card upgrade, giving you flexibility to start with an entry-level scanner and increase productivity or quality as your needs change. As your PC performance improves, so does your Vidar scanner.

Varieties of originals—choose a vendor that offers scanners to support all types of originals—maps, drawings, blueprints, and thick or fragile originals. Vidar offers scanners that handle black and white and color originals in a variety of sizes, and a large flatbed scanner for delicate originals, and varying thicknesses including gator-board and foam-core. All Vidar scanners can handle thick documents—no need to decide.

7. Technology

One of the leading questions that comes up when buying a large format scanner is whether you should buy a CCD-based device or a CIS device. The answer in most cases is a resounding CCD. Why? Because the technology influences overall operation and quality. However, there's more to technology than optics, so we've broken the decision into three broad categories to help you determine which vendor and technology is best for you.

CCD vs. CIS—CCD (charged coupled device) technology is essentially the same technology used in a digital camera. Photo-sensitive pixels stacked on a semiconductor chip capture and digitize an image that passes through a lens and mirror optical system. CIS (contact image sensor)—adapted from the technology used in fax machines—uses a row of contact array image sensors to capture an image, with illumination provided by a row of LEDs. Vidar scanners use all-digital cameras with advanced point-of-origin capture and onboard digital conversion for maximum quality.



Digital Camera



Analog Facsimile

Software—software that supports the scanner should be robust and comprehensive. As we mentioned, Vidar *TRUcopy* and *TRUscan* software packages provide essential tools for enhancing and correcting images for both scan-to-print and scan-to-file applications.

Patents—the company's commitment to innovation is evidenced in its patents. Is the vendor's technology patented? Does the company protect your investment with regular enhancements and innovations? Vidar, one of the only manufacturers that patents its technology, currently holds 11 patents covering everything from scanning capabilities and its feeding system to how the scanner uses icons on a screen.

Below selected patents are described in detail.



Wide Format Scanner Buyer's Guide

Patent	Description
US 6,295,383 B1 INTENSITY CORRECTION IN AN OPTICAL SCANNER	The ability to correct detected pixel intensities in an optical scanner through an automatic lens enhancement process.
US RE37,282 E OPTICAL SCANNER HAVING A VARIABLE RESOLUTION.	ALE: Automatic lens adjustment. "ALE" make sure that the scanner use the right resolution to fit the size of the document.
6,034,795 & 5,642,207 HIGH PRECISION COLOR SCANNER	To be able to scan in a good/high quality in different resolutions, the RGB color must be on line. This patent makes sure that the speed between R,G &B is automatically adjusted.
5,988,504 OPTICAL SCANNER USING WEIGHTED ADAPTIVE THRESHOLD	This patent ensures that a poor quality document can be scanned with good output results. The technology is able to collect the right information from a bad document
5,117,295 STRUCTURE FOR AND METHOD OF SCANNING WITH MULTIPLEXED LIGHT SENSOR ARRAYS.	The technology automatically adjust the stitching
US 6,262,816 B1 SCANNER START AND STOP	This technology make it possible to back the document and hit the exact same position, this ensure the image data is always correct.
Other patents	5,377,020 - 5,640,465 - 5,926,570



Summary

Deciding What's Right for You

Getting the most value for your investment

Clearly, choosing a wide-format scanner that's right for you means weighing and evaluating several different factors. In summary, it's critical to understand what you want the scanner to do for your end users and how it will add value. It's also critical to know your applications—are you scanning maps, posters, graphic art, drawings, sketches or historical records? Are the originals on paper, Mylar, sepia or heavier substrates like foam-core? Are your documents less than 26 inches wide or more than 40 inches wide?

Finally, understand what's most important to you—speed, productivity, quality, flexibility and whether you need to scan in color, monochrome, grayscale or all three. Determine which considerations are most important, compare products, vendors and decision factors against your requirements and applications and go from there. Consider how the scanner addresses total cost of ownership, and how it will help you achieve your business goals.

Scanner Market Matrix The chart on the following page describes Vidar scanners for specific market segments and applications. However, you should speak with an experienced sales professional to help you narrow the choice of products down to the right solution for your business.

Scanner Market Matrix

Segment	Scanner Width	Scanner Model	Main Benefit (Unique Selling Points)	Where to Buy
Industry				
COPY Shops Reprographics	54"	Latitude 600^e	Flagship model - Handle all media types - increased productivity	<u>Find Distributor</u>
	42"	Spectra 600^e	Superior handling of color and monochrome reproduction	
	Flatbed A2 (18"x24")	Designer 18^e iJET	Large format flatbed with 1 touch copy	
Publishing Graphics Photo	36"	Select 600^e	Ideal for newspaper scanning and OCR processing	<u>Find Distributor</u>
	Flatbed A2 (18"x24")	Designer 18^e iJET	Ideal for scanning of books and media in fragile condition	
Energy	42"	Surveyor 600^e	Handles a wide range of media types relevant for the Energy industry	<u>Find Distributor</u>
	36"	Nova 36^e	High productivity and low maintenance cost	
	25"	Lynx 25^e	Supports unlimited length of originals with minimal footprint minimal	
Government	42"	Surveyor 600^e	Good value for money with high degree of flexibility and reliability	<u>Find Distributor</u>
	42"	Flash 600^e	Superior monochrome image quality with productivity being 2nd to none	
	36"	Nova 36^e	Flexible support of various media types	
Solutions				
GIS/Mapping	54"	Latitude 600^e	Reproduce colors exactly as seen on the original	<u>Find Distributor</u>
	42"	Titan 600^e iJET	1 scanner for all - can be shared between workgroups and departments	
	42"	Spectra 600^e	High scanning speed with accurate color capture	
	42"	Surveyor 600^e	Good value for money with high degree of flexibility and reliability	
	36"	Atlas 600^e	Is well suited in a multi-user environment	
CAD/AEC	42"	Surveyor 600^e	Supports scanning of large engineering drawings in landscape-format	<u>Find Distributor</u>
	42"	Flash 600^e	High speed monochrome with detail accuracy at a cost/performance ratio second to none	
	36"	Select 600^e	Perfect in a multi-user environment with infrequent scanner needs	
	36"	Nova 36^e	Flexible entry-level scanner	
EDM/FM	42"	Surveyor 600^e	Very cost-efficient with high degree of flexibility	<u>Find Distributor</u>
	42"	Flash 600^e	High productivity with a scanning speed of 12" IPS	
	Flatbed A2 (18"x24")	Designer 18^e iJET	Ideal for scanning media in fragile condition	



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