contex
WHEN IMAGING MATTERS

Technical Overview

Wide Format Scanners - Product Features

Web: http://www.contex.com

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1. About this Technical Overview

Contex maintains its leading position in the wide-format scanner market by offering continued product development, which is instrumental in maintaining a technological edge in all Contex scanners and software. A strong emphasis on continued research and development ensures Contex clients of state-of-the-art capabilities.

In this document, we will describe the key features and technological strategies integrated into Contex scanners and software.

The goal of this document is to provide our current and future customers with a complete understanding of the technological advantages integrated into Contex scanners and to show how these can be used to make working with wide format scanning easier.

Most of the features described in this technical overview are standard on all scanner models while only a few are model dependent. Please refer to the scanner brochures or the contex.com website for specifications and features that apply to current specific scanner models.

2. Key Features - Fulfilling User Needs

2.1 General Product Features

2.1.1 Upgradeable through the Smart Card

A Contex scanner BASE model can be upgraded to its related PLUS model*****. After upgrading, users immediately gain the higher speeds and maximum resolutions of the high-end model. Upgrading from low-end to high-end models is facilitated though an Upgrade Kit that contains an upgrade smart card. Upgrade Kits are available from Contex scanner dealers.
***NOTE:** Some scanners do not come in the two BASE/PLUS model versions and are not upgradeable.

With upgradeable scanners, Contex gives users the option to purchase a scanner on the low price end and if necessary, get features they may find they are missing at a later stage without suffering the heavy cost of a whole new scanner. With upgradeable scanners, smaller companies get a chance to enjoy wide format document scanning at a low budget risk while keeping their options open.

2.1.2 Easy installation – The WIDEsystem TOOLS CD

The WIDEsystem Tools CD-ROM is supplied with each new scanner. The CD contains all users need in order to get the scanner up and running plus the utilities for Scanner Maintenance.

As a minimum, the WIDEsystem TOOLS CD-ROM will contain:

- The scanner drivers (in WIDEsystem)
- Scanner Maintenance software
- Scanner Operators Guide

2.1.3 Interfaces – FireWire, USB and LAN

Interface types can vary between the scanner models. For flexibility, most scanners support at least two types.
The Interface types and their advantages are described below.

About FireWire
FireWire can accommodate 400 megabits (around 50 megabytes) per second, which is more than adequate for high volume scanning of large formats. FireWire is a plug-and-play (PnP) specification. FireWire usage requires a FireWire Card and Port installed on the computer. FireWire support is rapidly becoming a standard installation on new PC's.

About USB
USB is a connectivity specification that allows computer peripherals to be attached to a computer and eliminates the need to open the computer and install cards into dedicated slots. USB is a plug-n-play (PnP) specification that does not require configuration of switches or jumpers as with SCSI. USB, is supported on Windows 2000 and Windows XP and later versions. USB has become a standard and PCs and laptops come equipped with a USB port.
The Hi-Speed USB supports a data transfer speed of 480 megabits making it one of the industry's most effective interface options. Older computers with slower USB ports will function with the Hi-Speed USB (scanner) device but at slower speeds.
The iJET copy scanners support also a USB output port for direct connection between scanner and printer (Hi Speed USB on latest scanner models).

About LAN (on iJET copy scanners)
The LAN (Local Area Network) as a scanner interface means you can connect your scanner directly to a local network socket through an Ethernet cable. The scanner can then be used in combination with printers and/or PCs on the LAN, with operation of the scanner either from the scanner device itself or remotely from PCs on the network. Scanning to PCs will require that WIDEsystem is installed on the PCs. Scanning from the PCs will additionally require compatible scan/copy software. Throughput speed depends on local network factors. You can also attach a printer with LAN support directly to the scanner (twisted LAN cable required) to configure a stand-alone copy machine. A complete list of iJET supported printers can be viewed on http://support.contex.com

2.1.4 Operating Systems

Windows

Contex scanners and software are continuously tested and developed to support the most current active Microsoft Windows version OS systems. Contex scanners, interface and software support in relation to specific Windows versions will follow the Microsoft Support Lifecycle Policy.

The compatibility specifications listed below can therefore change accordingly.

The most current OS compatibility and support specifications will be updated and posted on www.contex.com

See http://support.microsoft.com/default.aspx?pr=lifecycle for current information on Windows systems support from Microsoft.

Macintosh

The Contex WIDEcapture scanning plug-in for Adobe Photoshop, enables users to run Contex scanners in a Macintosh environment. The latest version of WIDEcapture™ for Photoshop can be downloaded from http://support.contex.com. Please check specifications regarding compatibly issues for your scanner.

The Contex Scanner Maintenance program including color and basic calibration is available for Macintosh users. The latest version of Scanner Maintenance for Macintosh can be downloaded from http://support.contex.com. Please check specifications regarding compatibly issues for your scanner.

The most current OS compatibility and support specifications in relation to Macintosh OS versions will be posted on http://support.contex.com

OS compatibility is dependent on the scanner's available interfaces. The table below shows scanner interface types and their OS compatibility factors.

Interface Type	Operating systems
Hi-Speed USB	Windows 2000, XP, Windows 2003 Server
FireWire	Windows 2000, XP, Windows 2003 Server Power Macintosh 10.2.8, 10.3
LAN interfacing – no OS requirements for scanner.	Network PCs accessing the scanner must fulfill the **driver-software's (WIDEsystem)** OS compatibility requirements.

2.1.5 STI (Still Image Interface)

Contex scanners retain their position as reliable long-term investments with support for STI (Still Image Interface) ensuring problem-free compatibility with current and future versions of Windows operating systems.

2.1.6 WIA (Windows Image Acquisition)

Windows Image Acquisition (WIA) enables imaging software programs, to communicate with imaging devices such as digital cameras and scanners. WIA was developed by Microsoft to promote the integration of imaging devices into Microsoft operating systems.

Contex has added WIA compatibility into its scanner driver software WIDEsystem. With WIDEsystem installed under a WIA supported operating system with a WIA supported imaging application, users can scan with a Contex scanner without the need for other special scan or copy software. Users will be able to set a number of the most common scan options such as scan mode, dpi and lightness settings. WIA compatibility strengthens Contex' position as the provider of the market's large format scanner standard.

WIA also enables TWAIN interfacing (see below)

NOTE: WIA is supported on Windows XP.

2.1.7 TWAIN

TWAIN is a universal public standard which links applications (scan/imaging software) and image acquisition devices such as scanners. Contex provides a TWAIN driver enabling you to use your large format scanner with the wide range of popular imaging applications that support the TWAIN standard. There are two ways to enjoy TWAIN support with Contex scanners:

1. **Simple TWAIN support through WIA – Windows XP**
   On Windows XP, communication between the scanner and TWAIN supportive applications can take place through WIA (Windows Image Acquisition). When the scanner is contacted from the application, users will be able to set a number of the most basic and common scan options such as scan mode, dpi and lightness settings.

2. **Advanced TWAIN support with WIDEimage installed**
   Contex has developed TWAIN compatibility for scanning with the full range of advanced scanning options. This TWAIN support method can run with all currently supported Windows operating systems including Windows 2000 and XP. Users must first install the Contex WIDEimage scan software. After that, TWAIN supportive applications such as Photoshop can call up an advanced scan option interface based on WIDEimage and let the user exploit the full range of scanner device features directly from the imaging application.

2.2 Features for High Scanning Quality

2.2.1 Sensors

Four-linear CCD's
The majority of Contex scanners support four-linear CCD's with three lines for standard RGB scanning and a special panchromatic line for superior monochrome/graytone scanning. The 25" scanner models use a tri-linear color CCD.

High Optical Resolution
Optical resolutions range from 200 to 600 dpi depending on the scanner model.

Extended capture
All Contex scanners capture colors at 48 bits for maximum color precision, passing the best 24 bits to the computer. Graytones are captured at 16 bits passing the best 8 to the computer.

2.2.2 Scan modes

All Color models support:

24-bit color

8 bit indexed color

8 bit Feature Extraction

All models support:

8-bit graytone

Copy modes with grayshades

B/W Dual 2D-Adaptive mode

1 bit black-and-white

2.2.3 Digital Image Processing

Advanced digital image processing features in the scanner ensure high capture precision of details, small type in maps and drawings, as well as the clear and reliable capture of continuous subtle color changes. The following Digital Image Processing features are supported on all the Contex wide format scanner models:

2D Adaptive Thresholding
The threshold adapts to darker or lighter areas in the original. This processing method is suitable for scanning all kinds of line drawings including difficult blueprints, brown transparencies (sepias), etc. A stained or faded original can be renewed, as good sections are retained and bad ones clarified.

Dual 2D-Adaptive Gray Copy
A special B/W copy mode for creating clear and enhanced printed output from old and faded originals. The Dual 2D-Adaptive Gray copy mode sends 8-bit graytone data to the ink-jet printer for further processing. Optimal results are obtained by taking full advantage of the high resolutions supported on the ink-jet printer.

Dual 2D-Adaptive Enhancement
Processing modes for monochrome scanning in which an original type's best built-in enhancement features are combined. The combinations are incorporated in special copy modes for normal drawings, sepias, blueprints and photos. Image processing is applied simultaneously but independently on the foreground and background aspects of the drawing. This is a highly effective enhancement feature for creating high quality printouts of old originals.

ADL+ Error Diffusion Halftoning
The hardware-embedded Digital Image Processing (DIP) performs fast image enhancement in real time. With the unique Area Diffusion Logic processing - ADL+ Error Diffusion halftoning, Contex scanners can scan and print even the most demanding B/W and graytone documents with subtle differences between shades of gray maintained in the printed copy.

2D -Sharpening and Softening/2D - Blur filter
Active for both color and monochrome scanning. 2D-Sharpening, 2D-Softening and 2D-Blur color filters can be activated and combined for enhancing image quality.

Color feature extraction
For color scanning - Embedded on-the-fly color feature extraction provides fast and easy classification and reduction of scanned colors to match those containing information in the scanned original.

Color Adjustment
For color scanning **-** Users have full control over color parameters including independent RGB tone curves (Gamma), independent black-and-white point setting, 3x3 matrix multiplier, contrast, brightness, and tonal adjustment.

2.2.4 Accuracy Lens Enhancement Technology (ALE)

The ALE technology enhancement is one of Contex' many patents used to develop world-class scanners that meet the harsh demands for accuracy in the GIS community and in other specialized vertical markets involved in Quality Assurance and Verification.

Accuracy Lens Enhancement (ALE) is an electronic correction of spherical errors in CCD based camera-scanning systems. Pixels across the image range of a camera can be more elliptical at the outer edges of the lens and more round in the middle of the lens. This anomaly is known as a spherical lens error. Most scanner manufactures typically state a +-0.1% accuracy of the scanner between two end-points of the scan line. However, when measuring between two points that do not fall across the entire scan line it is not unusual to see variation much higher than +- 0.1%.
This is not acceptable in an environment that requires precision in its scanned images. For example, GIS professionals will require stability in the scanned image with a well-defined maximum error of 0.1% or less. Contex has developed the process to electronically correct spherical errors and maintain a stable maximum error of less than 0.1% ± 1 pixel across **any two points** in the scan line.

2.3 Maintenance Tools for Continuous Problem-free Scanning

Scanner maintenance uses the **3C Auto-Maintenance System**, which is basically an automatic process as described in the next three sections.

2.3.1 The importance of Scanner Maintenance

Regular scanner maintenance ensures your scanner and its cameras always deliver optimal image quality. The three routine maintenance procedures **cleaning**, **camera alignment** and **calibration** are closely entwined and they should all be performed in a single maintenance session, starting with cleaning the scan area and ending with calibration. The reason for this is simple. If you clean the glass or adjust the cameras then you will have changed conditions in the scanning area and will need to calibrate in order to readjust black and white. This works the other way as well – scanner calibration must always be preceded by cleaning and camera alignment to get reliable calibration results.

Because of the importance of scanner maintenance, Contex scanners are designed with easy to use maintenance procedures implemented in the scanner system. Camera alignment and calibration is an automatic process in which the scanner adjusts itself. The maintenance tools include a single maintenance sheet for inserting in the scanner and a special cleaning cloth. The WIDEsystem TOOLS CD-ROM that comes with every scanner, contains software with wizard directed routines that check the scanner and guides users through the steps for perfect scanner camera alignment, stitching and calibration.

2.3.2 Fully Automatic Camera Alignment – Built into the Scanner

Wide format scanners can use up to 4 cameras to capture the full wide format scan width. The cameras will periodically need to be realigned to always ensure perfect seams along camera range borderlines. On competitor scanners, this is a manual process performed by technicians.
On Contex scanners, Camera Alignment is fully automatic. Users only need to insert the single pass Scanner Maintenance sheet, activate the process through the maintenance wizard and let the rest take care of itself. The Scanner Maintenance software and the scanner hardware work together to evaluate camera alignment on your scanner and make the corrections necessary for perfect alignment (height and stitching) on your cameras. Camera alignment correction is performed to a fraction of a pixel giving the market's highest wide format image precision.

2.3.3 Fully Automatic Camera Calibration

After Camera alignment, the program continues on its own to Basic (black and white point) and Color Calibration. The Maintenance program detects the scanner model and makes all the necessary calculations. Easy and fast scanner calibration means that your scanner never suffers degradation, as is the case with other scanner devices with complicated or missing calibration support. The scanner's Precision Color system lets you calibrate on the field at any time ensuring stabile and predictable color output. Contex scanners can be calibrated by using an ANSI IT8 calibration target. On many models, calibration is to both sRGB and NTSC color spaces. Other models calibrate only to sRGB. See the scanner's brochure or specifications on www.contex.com for details.

2.3.4 Auto Monitoring and Correction

Once the scanner has been fine-tuned, it performs a number of basic tasks on its own, removing those tedious chores required with other scanner systems. Using patented Contex technology, camera stitching and black-white-points are constantly monitored and corrected while your scanner is running. Contex scanners are designed to let you concentrate on your work and take optimal scanner performance for granted.

2.3.5 Fast and Easy Replacement of Vital Scanner parts

Users can perform quick and easy replacement of vital scanner parts. After long-term use, renewing parts such as the glass plate, lamp, filters and white background will refresh the scanner and ensure optimal scanning results. Replacement of vital parts is a tool-free process.
Your scanner's driver monitors the life-length of vital parts and your system will output a message when it's time to consider a replacement.
Part-replacement was once an expensive technician-only task but now users can save time and money on technical service and keep their business up and running without costly delays. The scanner's open design lets users protect their investment by protecting their scanner from degradation. Replaceable parts can be ordered through scanner distributors.

2.3.6 Scanner Validation

The Scanner Validation wizard is an option accessible through the Scanner Maintenance wizard interface. You can use the Scanner Validation wizard to control that the scan area and calibration sheet are adequately clean before starting the calibration process. The validation wizard can also be run to troubleshoot unsatisfactory results or reported errors after running Scanner Maintenance.

There are two main validation steps:

1. Check if the scan area is clean

Correct scanner calibration (and operation) requires that your scan area is adequately clean. Before calibrating, users are always asked to clean the scanner glass-plate, white-background-platen and insertion area (the top flat surface in front of the insertion slot).

After cleaning, the Scan Area validation can determine if the scan area is adequately clean and if not, the wizard will point out critical areas that require additional cleaning.

2. Check the Calibration Sheet's quality

A Scanner Maintenance calibration sheet is supplied with every scanner. The calibration sheet contains an IT8 color chart and camera alignment markings. The quality of calibration sheets can degrade over time with new being sheets obtainable through the scanner's dealer.

The Calibration Sheet validation function will determine if the current calibration sheet should be replaced with a fresh one for ensuring optimal scanner calibration and scan results.

2.3.7 Advanced Diagnostics Reporting

Most Contex scanners* contain a range of special sensors for advanced diagnostics control giving users even more accurate information on scanner trouble-shooting. Among other important items, the scanners will immediately report lamp failure, lamp sensor failure and fan failure.

NOTE*: The feature - *Advanced Diagnostics Reporting* is model dependent.

2.4 Usability Features

2.4.1 Advanced Power Management

Running with the right internal temperature is of utmost importance when doing high quality scanning through sensitive CCDs. Contex scanners support **Advanced Power Management** that rapidly brings the scanner to its optimal working temperature, after which the temperature is monitored and held at a minimum level ensuring low CCD noise. The Advanced Power Management system contains advanced features with control through WIDEsystem. Users can leave the scanner in low-power *Sleep* mode and program it to *Wake up* automatically at specific (clock) times before arriving at work so the scanner is ready to scan right away. The scanner's low-power (*Sleep*) mode meets ENERGY STAR® criteria (see next section).

2.4.2 ENERGY STAR®

ENERGY STAR® is a USA government-backed program helping businesses and individuals protect the environment through superior energy efficiency. ENERGY STAR® qualified scanners automatically enter a low-power "sleep" mode after a period of inactivity. Spending a large portion of time in the low-power *sleep* mode not only saves energy but helps scanner equipment run cooler and last longer. Many countries, markets and businesses look for ENERGY STAR® compliant brands when investing in their next office device.

Contex' scanner's automatic power down function now supports low power values that meet the strict ENERGY STAR® criteria. In addition to the standard clock setting feature already supported, the power down timer can now be set in WIDEsystem as an idle time period value. ENERGY STAR® is supported on all current production scanners. View your scanner's specifications on http://support.contex.com to determine if your model is ENERGY STAR® compliant.

2.4.3 One Touch Scanning – Scan, Copy, E-mail

Contex scanners* incorporate an operator's panel with convenient action buttons. Each button immediately activates a scan and opens the scanned image in an appropriate application as described below:

NOTE*: These buttons are not found on the copy scanners which support one-touch-scanning through the advanced iJET panel with direct copy/scan functionality though a menu/display.

Email Application

This button can activate WIDEmail™, a convenient application for sending scanned images via E-mail. When you press the Email Application button, you trigger a scan of the document currently loaded in the scanner and the result is then compressed into a JPEG file for effective transmission. On your PC, a window pops up with an email item and your scanned image attached. You just fill in the email address and click the send button.

Scan Application

This button can activate the WIDEimage™ scanning application if it is installed on your PC. When you press the Scan Application button, you trigger a scan of the document currently loaded in the scanner and the result is then loaded into the WIDEimage™ viewer for further processing and saving.

Copy Application

This button can activate the JETimage™ copy application if it is installed on your PC. When you press the Copy Application button, you trigger a preview scan of the document currently loaded in the scanner and the result is then loaded into the JETimage™ viewer for further processing.
The action button behavior is set up per default upon installation of the WIDEsystem scanner driver. The action buttons can be reprogrammed to carry out other functions. This procedure is described in the WIDEsystem documentation that is included with the program.

2.4.4 Document feeding mechanism - Care for your original

The Contex feeding systems are designed to ensure the highest standards for scanners that care for your original and for your scan results.

All-Wheel-Drive technology with precision rollers ensures a perfectly straight scanning path without using unnecessary force so you avoid both image distortion and damage to your customer's fragile originals. The axels are designed with synchronized roller movement to ensure a straight and stable scan path. Broad soft rollers ensure a firm grip on even very large originals.

The feeding systems use dual shared axels and contour adjustment so both paper thin and thick, stiff originals feed smoothly on a straight path. Suspension components apply pressure evenly across the whole width of the document for an optimal yet gentle hold.

The flatbed scanners do not involve an insertion slot or rollers that grip and move the original pass the cameras. With flatbed loading, the document remains static while the camera does the moving. This makes the flatbed scanner the optimal device for digitizing very old and fragile originals.

2.4.5 Thick originals

With Contex scanners, users do not have to limit themselves to working with paper-thin and flexible originals. In many cases, graphics and drawings are mounted on stiff and thick media that cannot be inserted into normal devices. With Contex scanners, users can extend there scanning possibilities to include posters and maps mounted on foamboards, gatorboards and other stiff/thick media.

Some scanner models support ATAC (Automatic Thickness Adjustment Control) that lets you use an operator panel button to raise and then sink the guide plate that automatically stops at the optimal height position and grip on the media. Sensors inside the scanner detect when the rollers are applying the right pressure and automatically stop the plate at that point. With ATAC technology, you are always ensured a perfect and even grip on any kind of original placed in the scanner. The ATAC models can scan documents of up to 0.6-inch (15mm.) thick.
On the flatbed scanner, you can scan originals up to 1,5" (38) mm thick with the lid closed. There are no limitations on thickness with the flatbed scanner if you scan with the lid open.

2.4.6 Versatile scanner through software support

Contex scanners are compatible with the market's best software packages. A very wide variety of third party software applications will run with Contex scanners and take advantage of the advanced built-in processing features. Some of the world's finest CAD, GIS, Archive and RIP applications are used with Contex Scanners all over the world. See the Contex website third party software area at http://www.contex.com/thirdpartysw/ for information on specific applications. Contex scanners are also compatible with many third party software applications through TWAIN and WIA as described earlier in this technical overview.

Contex also makes its own software applications and for many users, these applications represent perfect solutions. For example, JETimage™ still astounds the market with extremely good color results through a very simple and straightforward interface. Here is a list of the Contex applications.

- **WIDEimage^{NET}** – Sophisticated scanning software for CAD, GIS and Reprographics. Lets users select from over 50 different image-file formats for the scanned image. Includes scan-to-PDF with option for quality settings. Many special scan modes with optimal image processing for any original type. Compatible with WIDEsystem^{NET} (see below) for network scanning.
- **JETimage^{NET}** – Copy software for color and monochrome copying. Supports color matching to printer and print media. Includes templates for typical original types and color matching profiles for the most common printers. Gives very high quality color copy results. Includes also advanced cleanup/enhancement modes for monochrome copying. Supports scan-to-print, scan-to-file and (batch) print-from-file. Compatible with WIDEsystem^{NET} (see below) for network scanning and copying.
- **WIDEcapture™ for Photoshop** – Scanning plug-in that works with Photoshop on WINDOWS and Macintosh Operating systems. Scans large format images directly into the Photoshop user interface.
- **WIDEcapture™ for AutoCAD** – Scan plug-in that works with AutoCAD giving AutoCAD users a wide-format-scanning interface with all the features supported in the WIDEimage Scan Screen. This handy

software brings the scanned image directly into the AutoCAD workspace, saving the time and trouble it costs to load the image from a file.

- **WIDEmail** – This is a convenient application for sending large format scanned images via E-mail. The program can be activated from the scanner panel or from the computer screen. With WIDEmail you trigger a scan of the document currently loaded in the scanner and the result is then compressed into a JPEG file for effective email transmission. A window pops up with an email item and your scanned image attached.
- **Scanner Maintenance** – A software tool designed to make scanner maintenance an easy and automatic process. Quality scans and copies are only created on a clean and calibrated scanner. Regular maintenance should be a habit and the Scanner Maintenance software is supplied with every new scanner to help it become one.
- **WIDEsystem^{NET}** – A program designed to integrate the wide format scanner with the overall system. It contains the actual drivers that bring the scanner together with Windows. In addition, WIDEsystem^{NET} contains a scanner control interface that lets users monitor functions on the wide format-scanning device directly from the Windows interface system tray. WIDEsystem^{NET} sets up and controls Scan2Net features (see below). WIDEsystem also enables communication through WIA and TWAIN (see next bullet)
- **WIA and TWAIN application support**– Contex scanners can be run through WIA and TWAIN supported applications. This means that users, who only need to run simple scanning tasks with only the basic option settings, can choose not to purchase and install special scan/copy software. This however is not supported on all Windows operating systems. For advanced scanning with TWAIN support on a larger range of Windows operating systems, WIDEimage must also be installed. See the section on “Operating Systems” in this technical overview for more details.

2.4.7 Scan-to-Net Architecture – Shared Scanner and Designated Folder

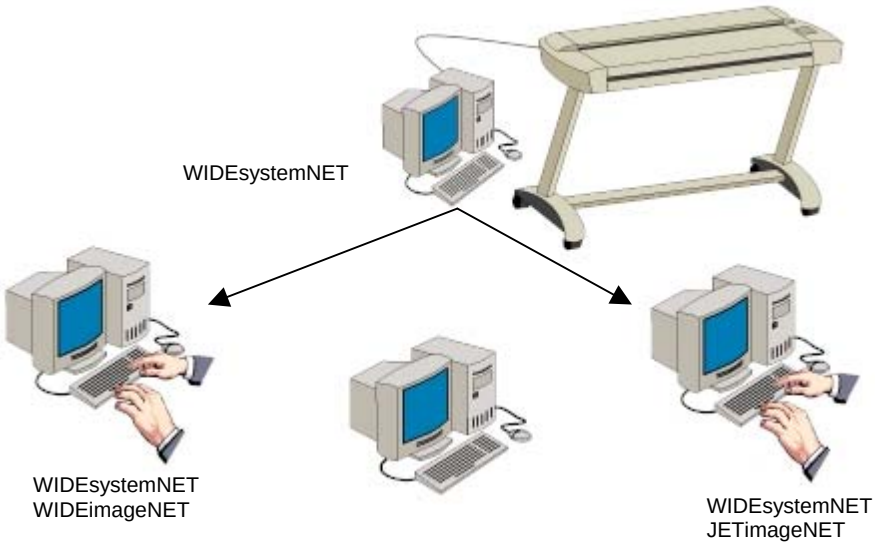
Scan-to-Net is the group of functions inside the WIDEsystem software that enable PCs to perform scanning operations across the LAN or across the internet. WIDEsystem's Scan-to-Net options are designed to increase usability of one or more scanners in a business by enabling scanner access from any user workstation in a network.

WIDEsystem offers two types of network scanning solutions, *Shared Scanner* and *Designated Folder*, each covering different workplace configurations and needs.

IMPORTANT NOTE: This section applies to scanners that interface the LAN through a PC. Scan-to-net with *Shared Scanner* and *Designated Folder* are also supported with direct LAN interfacing from the iJET Copy Scanners (no PC is connected to the scanner). Operation, functionality and configuration possibilities in relation to Scan-to-Net with these scanners are described in section 3 of this technical overview - “*Copy Scanners*”.

Using a shared scanner on the network - Local PCs use a scanner that is attached to another PC on the network. The local PC's do not have a scanner attached but they do have scan/copy software installed. The local PCs run their own installed scan/copy applications to activate and use a scanner attached to another PC. The scanner can be controlled as if it were connected directly to the local PC.

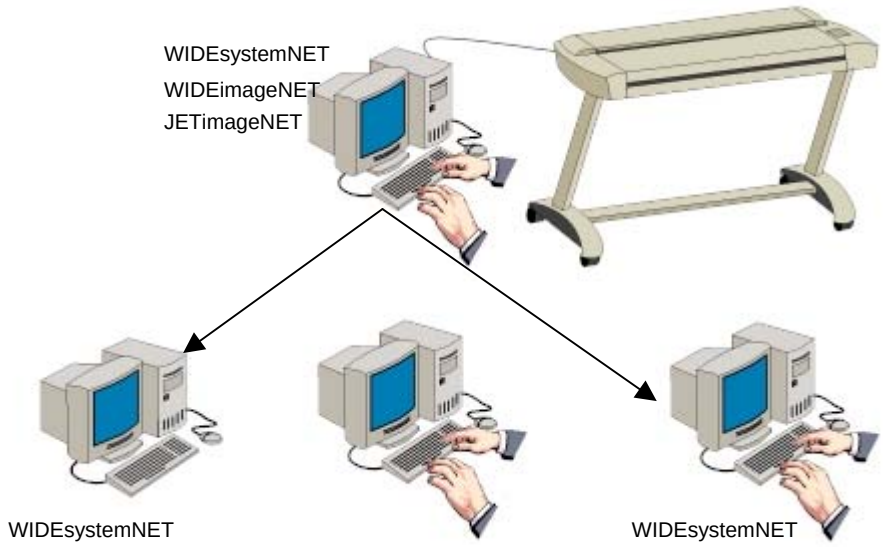
A company can configure a range of PCs on the network installed with scan or copy software. A scanner is then set for sharing (through WIDEsystem) on the scanner's connected PC. The scanner can be placed in a corridor or a separate room. The scanner's PC is connected to the local network as are the PCs who will access it.



Above: *Sharing a scanner - A shared scanner can be placed in a large open office and used by all its occupants.*

Scanning to a designated scan folder on another computer - Scanning is performed from the PC interfacing the scanner (host) but files are saved on other PCs on the network that typically do not have a scanner attached. The scanner's PC is on the network and is installed with scan/copy applications to operate the scanner. The scan files are created on the scanner PC (host) and saved to secure designated scan folders on other PCs. Designated scan folders are only accessible by the scanner host as opposed to normal network folder sharing.

A company can configure a PC with scan/copy software and connect it with a scanner. The scanner is then setup in WIDEsystem with enabled scanning to a designated folder on another computer. The target-PCs on the network are configured through WIDEsystem to receive scan data from the host. The scanner-PC and scanner can be placed in the corridor or a separate room. The scanner-PC, like most of the company's machines are connected to the local network.



Above: Designated folder - Users work from the scanner PC to scan to any user PC on the network.

2.4.8 RoHS and WEEE Compliancy - Scanners for a Better Environment

Contex scanners continuously meet environmental restrictions and directives from all over the world.

The RoHS directive is “The restriction of the use of certain hazardous substances in electrical and electronic equipment”. The directive lists certain substances that must either be removed, or limited, in any products containing electrical or electronic components.

The Waste Electrical and Electronics Equipment (WEEE) directive was created to reduce environmental problems related to waste by setting collection, recycling and recovery targets for all types of electrical goods.

The RoHS and WEEE directives currently apply for all electrical and electronic products manufactured or sold in the European market and the rest of the world is expected to follow suite in the near future.

RoHS and WEEE compliancy is incorporated in all current production models.

3. The iJET Copy Scanners

3.1 About iJET Copy Scanners

The iJET copy scanners can be recognized by their iJET panel with its menu display window as shown in the image below. Integrated copy/scan functionality (iJET technology) and LAN interfacing make these scanners unique and powerful players on the market for wide format copy/scan solutions. Users will get a device that can be setup as a stand-alone copier, a shared network scanner, a copy input source for any network printer or a combination of all.

The 18" A2 scanner model fulfills the market's demand for easy-to-use and document friendly flatbed scanners for wide formats. With flatbed scanners, you can digitize materials and three-dimensional objects *other* than paper, such as a piece of fabric, a picture mounted in a frame or a TV remote control. Basically, if you've ever made copies of something on a copy machine, you can scan it with a flatbed. Flatbed scanners mean users don't have to worry about material that is too stiff (such as your passport) or too small (such as your passport) or too fragile (such as your birth certificate). With a flatbed scanner, originals of almost any thickness can be scanned just as easy as scanning thin paper.

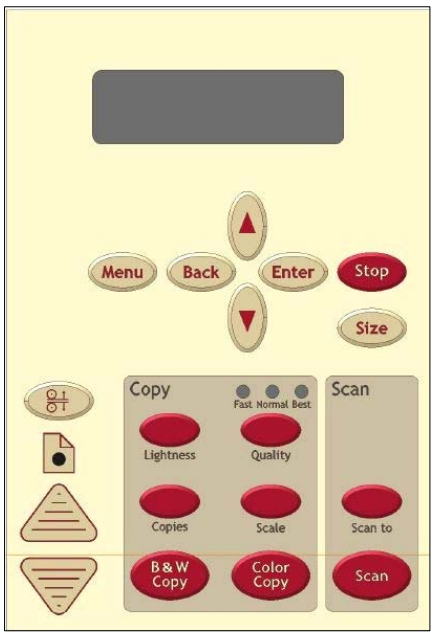
3.2 iJET Technology and iJET Panel

The copy scanners support hardware integrated copy/scan processing that enables users to perform advanced copy and scan-to-file jobs straight from the scanner **without PC or software to control and setup the scanner**. We call this **"iJET Technology"** and it is controlled through the **iJET Panel** on the scanner's topside. Activation of Scan-to-print from the iJET Panel will send the image directly to a local or network printer and with scan-to-file you can save the image data to any local or network PC that is setup to be recognized by the scanner.

The iJET Panel contains a small display window that provides users with an extended menu system for full control of copy and scan jobs. Additional control buttons allow quick setting of the most common copy parameters such as lightness, quality and scaling.
From the panel, users can set input and output paper sizes, determine the copy type, set quality parameters, set up a network printer, select a network PC as a scan-to-file target, set scan to file parameters, calibrate the scanner and much more. After applying copy/scan parameters, a single push of a button will send the job to a local or network printer (*Color Copy, B&W Copy* buttons) or a network PC (*Scan to* button).

From the iJET Panel you can…

- Send a Copy (BW or Color) with a single touch.
- Send a Scan-to-file job with a single touch.
- Make quick settings for Copying – *Scale, print Quality, no. of Copies and Lightness.*
- Make advanced copy settings through the *Menu* button.
- Apply scanner and printer setup options through the *Menu* button.
- Apply personal and local preferences through the *Menu* button.
- Select a scan-to-file target through the *Scan to* button.
- Make scan-to-file settings through the *Scan to* button
- Scan-to-file settings are saved for each scan target and recalled when a user again selects the target.
- Create media profiles.
- The display window contains the current selections as you make them and useful messages from the scanner regarding maintenance and operation.



The iJET Panel – Panel for scanners with ATAC

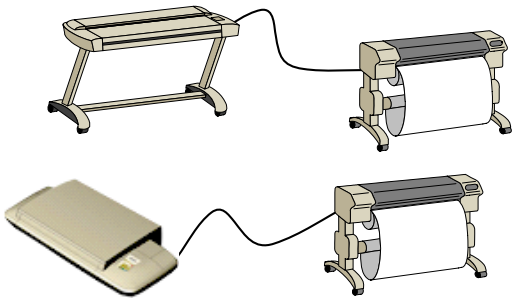
3.3 Connection and Configuration Solutions

Copy scanners can be used in different configuration solutions:

1. Stand Alone Copier Configuration.
2. Network Scan/Copy Device.
3. Scan/Copy Station on Local PC.
4. Combinations of the above for Multiple Functionality.

Stand Alone Copier

Connect the scanner directly to a printer through the special USB host (output) port or LAN connection and thus create a large format copy solution with a scanner, printer and iJET Panel as your copy/scan operation controller. The scanner hardware contains its own processor, driver and memory so there is no need for a PC or scan/copy software with such a configuration. If you wish to connect the printer directly to the scanner, it is recommended to use the USB out interface in order to keep the LAN port free and maintain the option for connecting the scanner to the network (see topic *Combined Configurations* below). Note that you can also choose to maintain access to both printer and scanner by connecting both devices to the LAN as described below under *Network Scan/Copy device.*

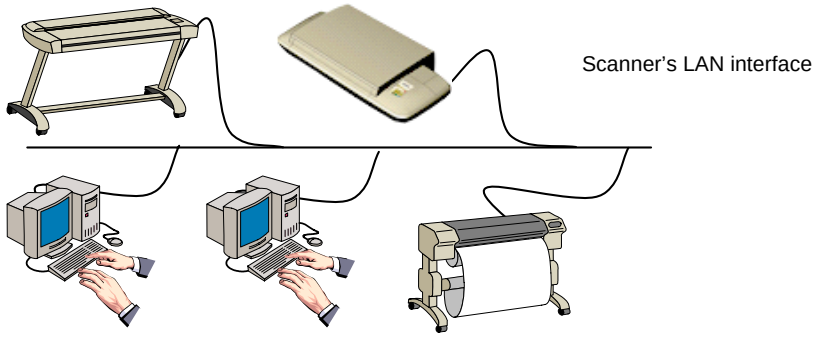


Network Scan/Copy Device

Connect the scanner directly to the LAN and enter it as a network device that can use and be used by other network resources.

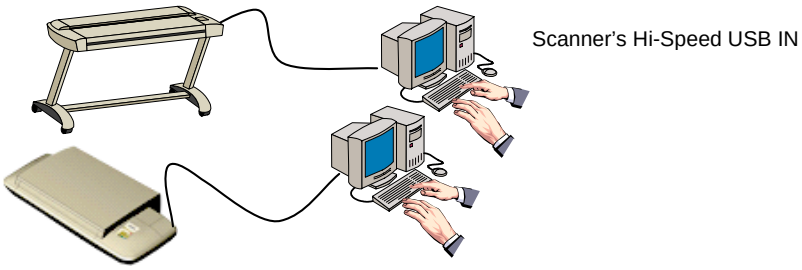
When you connect the scanner to the network through the LAN port:

- You can send copy jobs to printers on the network using only the iJET Panel.
- You can send scan-to-file jobs to PCs on the network using only the iJET Panel (Designated Folder).
- Users can share the scanner – the scanner can be used with scan/copy software from PC workstations on the LAN.



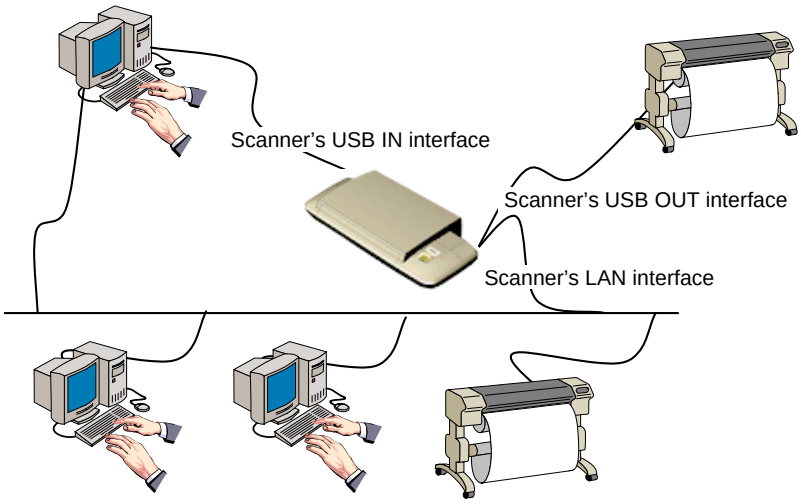
Scan/Copy Station on Local PC

You can connect the scanner to a PC through Hi-Speed USB interfacing. This is the conventional scan/copy setup for controlling the scanner through scan/copy software on the PC. For copying, the configuration must be extended with a printer connected directly to the PC (local printer) or the PC can be connected to the network with access to network printers.



Combined configurations

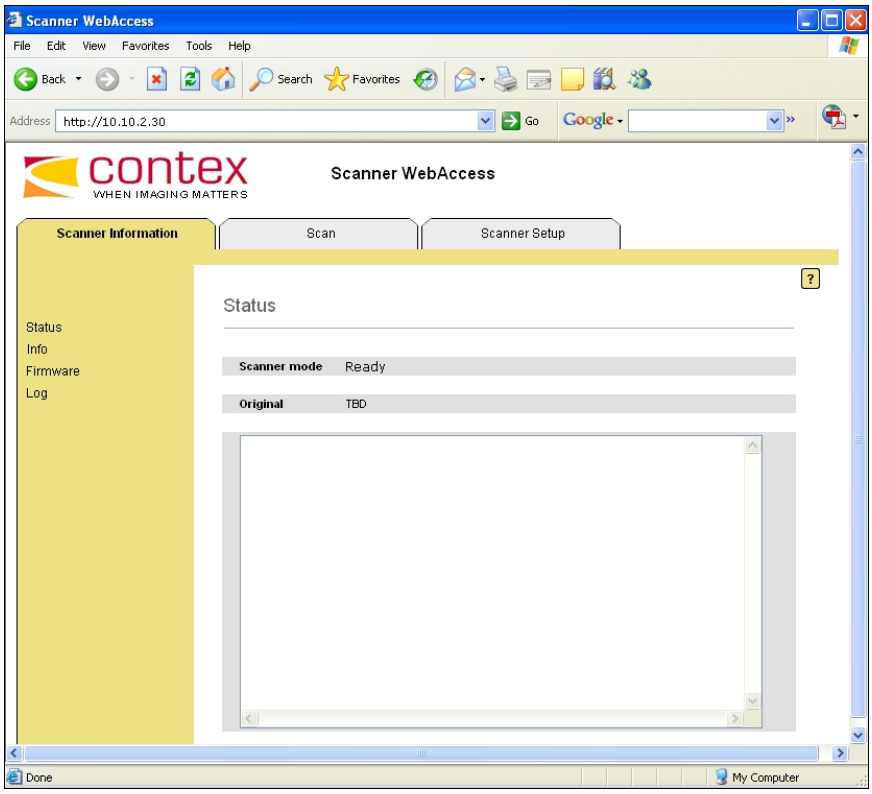
The three configurations: Stand alone copier, Scan/ Copy device on a network and Scan/ Copy station on local PC can be combined so they provide multiple functions. For most companies, a combined solution would be recommended to get the most out of the scanner device.



In the example illustrated above, we have connected both a printer and a PC directly to the scanner and both the scanner and the PC are separately attached to the network. This means that the configuration can be used as a stand alone copier, a stand alone scan-to-file station, a device for saving scans to network PCs and a shared device that can be controlled and used by network PCs. The scanner can use both the local printer and printers on the network. Both scan-to-file and copying can be performed either through the iJET Panel or through scan/copy software.

3.4 Scanner WebAccess Interface

The Scanner WebAccess Interface runs with the iJET copy scanners* and enables users to access the scanner from any PC on the LAN. The iJET scanners contain a server that enables the scanner to be contacted via its LAN IP address.
*NOTE: The WebAccess Interface is model dependent and is supported on later models only. See your scanner's specifications in the brochure or on www.contex.com for details.



Through the Scanner WebAccess Interface you can:

- Configure the scanner – determine setup options.
- Monitor the scanner's status and read error messages
- Scan to file to the scanner's internal storage unit with option to download it onto your PC.

Users can choose to make the many setup and configuration settings on screen through a normal browser rather than through the iJET panels menus and buttons.

The Scanner WebAccess Interface bypasses the need for special scan software or compatible operating systems for making simple scans.

The Scanner WebAccess Interface resides in the scanner on delivery and it can be activated from any PC that is connected to the same LAN as the scanner. Just start the browser and enter the scanner's IP address to access. Security settings with password protection can be applied to the whole interface or to specific interface option dialogs.