UltraWare
product configuration notes
About This Guide

This guide was developed for those who want to design, plan, implement, support, and use an information management or print-on-demand solution built on the UltraWare Application Suite.

This reference assumes knowledge of the fundamentals of the Microsoft Windows family of operating systems including Windows XP/Vista/7/8/10 and Windows 2003/2008/2012 Server.

Notational Conventions

- Characters or commands that you type appear in bold lowercase type.
- Placeholders for variable information appear in italic.
- Acronyms appear in all uppercase.

Monospace type represents code samples, examples of screen text, or entries you type at a command prompt.

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Product Configuration

This guide provides essential information about installation and use requirements for Alto Imaging Technologies' UltraWare suite. Requirements and recommendations are listed for each product, as are dependencies for combining the applications into more complete solutions. The core UltraWare Suite includes:

**Image Arranger™** - A proven image capture application with many editing and “make-ready” capabilities at both the page and document level.

**UltraPrint™** - A flexible multi-document print job setup and management application with powerful layout features, internet/intranet printing (**UltraPrintWeb™**) and an open printing architecture supporting virtually any printers you choose.

**UltraDoc™** - A SQL-Server based digital document library that is configurable and scalable to meet your needs.

**UltraWeb™** - Active Server and XML modules providing secure internet/intranet access for printing and viewing existing content as well as updating or adding to the content of the **UltraDoc** database.

**UltraCopy™** - An easy-to-learn digital copier application that combines scanners and high-speed printers into powerful digital duplicator systems.

In addition, there are several specialized applications built on the core UltraWare products. These include:

**Alto Digital Publishing (ADP)** - Alto’s custom publishing solution which facilitates building custom books such as coursepacks or training guides. ADP includes automated copyright management for coursepacks and other published products requiring reprint permission.

**Alto Case Management (ACM)** - A case management and litigation support application.

**Alto Internet Transaction Server (AITS)** - An interactive job submission system with graphical job ticket, cost estimating, document preview and status tracking.
System Recommendations

Successfully deploying the UltraWare applications is dependent on using the right hardware and operating system platforms. There are two configurations we recommend, depending on the application(s):

RECOMMENDED SPECIFICATIONS
FOR IMAGE ARRANGER OR ULTRAPRINT

These specifications represent the minimum suggested system requirements. Some requirements may be dependent on specific workflow environments.

OPERATING SYSTEMS
- 32-bit Operating Systems
  - Microsoft Windows® 7/8/10 Professional
- 64-bit Operating Systems
  - Microsoft Windows® 7/8/10 Professional (Recommended)

SOFTWARE COMPONENTS
- Web Browser Software (server and clients)
  - Internet Explorer 6 or later
- Net Framework 4.0 or later
- Microsoft Core XML Services (MSXML) 6.0

MINIMUM HARDWARE REQUIREMENTS
- Processor: 2.53 GHz+ dual core processor or quad core processor
- RAM: 4 GB (32-bit OS) or 12-16 GB (64-bit OS) (latter recommended)
- Hard drive/controller: SATA 3 Gb/s, 64 MB Cache, 7200 RPM; 2nd drive for data recommended
- Available Hard Drive Space: 250 GB+; 1TB recommended
- Optical Drive: DVD-ROM drive; DVD +/- RW recommended
- Video: DirectX 9 compatible graphics processor with 256 MB+ Video RAM
- Display Resolution: 1280x1024 or higher
- NIC: 10/100/1000 BaseT

IMAGE CAPTURE (OPTIONAL)
- TWAIN compliant Image Capture devices

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1Care should be exercised in the choice of scanner since there is a wide variation in the quality of the TWAIN drivers for these scanners. See About Scanning in the following sections.
Recommended Specifications for RAID Server for UltraDoc/UltraWeb, ADP, AITS and/or ACM

These specifications represent the minimum suggested system requirements. Some requirements may be dependent on specific workflow environments.

**OPERATING SYSTEM**
- Microsoft Windows® Server 2008 R2 Standard or Enterprise 64-Bit SP2 or later - Recommended

**SERVER COMPONENTS**
- Internet Information Server (IIS) 6.0 or later
  - World Wide Web Service
  - Active Server Pages (ASP)
  - FTP Publishing Service
  - Message Queuing Service (required for AITS only)
- Microsoft SQL Server 2008 or later Standard, or Enterprise² or later
  - SQL Server Management Studio

**SOFTWARE COMPONENTS**
- Web Browser Software (server and clients)
  - Internet Explorer 8 or later
  - Firefox 3.5.8 or later (clients)
  - .Net Framework 4.0 or later is required

**MINIMUM HARDWARE SERVER REQUIREMENTS**
- Processor: 2.53 GHz+ dual processor
- RAM: Minimum 8 GB; Recommended 12-16GB
- Hard drive: 250 GB+ available hard disk space³
- Optical Drive: DVD-ROM drive; DVD +/-RW Recommended
- Display Resolution: 1024x768 or higher
- NIC: 10/100/1000 BaseT

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² Mixed mode authentication required
³ RAID, SANS, NAS, or other high-capacity, fault-tolerant network storage configuration recommended
Image Arranger

CONFIGURATION NOTES
Image Arranger is a powerful application developed to convert paper and film-based information to digital format. It combines multiple document and image views with convenient drag and drop, image editing, conversion and impositioning options. Arranger allows captured information to be arranged and edited, as well as combined with other existing imaged documents. Various editable, printable, and displayable formats are provided for storing the captured information, making it easy to match file format to content characteristics. Built-in Optical Character Recognition (OCR) based on ScanSoft’s TextBridge OEM libraries, provides a convenient way to convert scanned documents to a standard editable format. Once conversion is complete Image Arranger provides sophisticated output options in a variety of file formats to the Windows file system or links to UltraDoc document database for storage and retrieval.

Support for a family of industry-leading scanners and other capture devices is based on high performance Windows drivers using a TWAIN source-manager/image-source model and open-platform, high-speed interfaces such as SCSI and USB. Unfortunately, the scanner manufacturers are slow to release true 64-bit scanner drivers and 64-bit applications cannot use 32-bit drivers. In these instances, both the 32 and 64-bit versions of Arranger can be loaded on the same PC. See our blog for more information on 64-bit Twain.

Printing from Arranger is submitted through normal Windows printer drivers or high-performance Custom Print interfaces. Utility drivers are also provided for tasks such as file conversion, shared network printer submission, and the use of Custom Print capability from non-UltraWare applications.

CLIENT/SERVER CONFIGURATION

- Server (Scan Station) – Fully functional version including scanning support. And all document building and make-ready features. If Arranger is used with a directly attached scanner, or in conjunction with the scanning capability of a digital copier/multifunction device, then the Server license is required.

- Client (Workstation) – All document building and make-ready features are supported in the Client version of Arranger. It is useful for situations where one or more PC’s will be used for editing and reuse of image documents previously captured. You can install one or more licenses of the Client version at any site where there is at least one Server version installed.

ADVANCED RESOURCE MANAGEMENT (ARM)
ARM allows Arranger to work with unlimited size documents. It does this by way of a memory-mapped file containing the image document. As a result, its performance is directly dependent on the performance of the system disk drive where the ARM file is written. We recommend a 10K RPM SCSI HD for this purpose—actually we have several customers using the newer 15K RPM drives with blazingly fast performance.

For smaller documents that fit in the available physical memory, you can disable ARM and achieve best performance in a “memory-only” mode. This is obviously not going to work where large
documents are scanned at 600 dpi since the document size can easily exceed Windows’ ability to map the required memory. A practical limit for the non-ARM mode is about 400 pages @ 600 dpi in a 2GB system. For larger documents and/or smaller amounts of memory, you must use ARM.

**INTEGRATION WITH UltraDoc**

Image Arranger operates as a standalone application using the Windows file system like any other Windows application. It has the usual Open, Save and Save As… file I/O capabilities. In addition, whenever the UltraDoc database is installed, Arranger’s Database menu becomes active, providing the user direct access to the database for retrieving documents already stored in the database, adding new documents and replacing existing documents.

**ABOUT SCANNING**

Image Arranger (Server version) works with a scanner or digital multifunction device that uses a TWAIN driver for the scan function. Arranger is also capable of working with scanning systems that send the captured documents to an accessible location on the network. In the latter case, the documents are accessed using Arranger’s “File-Open” menu. With a TWAIN device, Arranger controls the image acquisition process through the TWAIN user-interface provided by the manufacturer of the scanning device.

**WHAT TO ORDER FROM ALTO IMAGING:**

- Include one Server License for each PC connected to a scanner or multifunction device.
- Include one Client License per non-scanning workstation.
- All other necessary Alto Imaging drivers and utilities will be included.
UltraCopy

CONFIGURATION NOTES
This is a very useful application for easing the transition from using optical/analog copiers to using a digital scanner/printer combination. UltraCopy, which normally does not display either the TWAIN UI or the printer driver controls, synthesizes the main scan and print controls into one common user interface. Because of this, UltraCopy requires a TWAIN device whose source driver permits hiding the UI. This is TWAIN feature referred to in the TWAIN spec as “Suppress UI.” There are some TWAIN drivers that do not implement this feature and the associated scanning devices will not operate with UltraCopy. Scanners that are known to work correctly with UltraCopy include:

- Canon 3020, 5020/5080
- Fujitsu M4097D and most other models
- Ricoh 420, 450DE
- Panasonic 6045, 6055, 2055
- Heidelberg 665
- Xerox 620S
- imageRunner 330, 400, 5000, 8500, 105

There are many additional scanning devices that will also work with UltraCopy. Please contact Alto Imaging if you are not sure or need information regarding a scanner’s capabilities.

Unlike Image Arranger, UltraCopy requires a TWAIN device and therefore will not operate with a scanner or digital multifunction device that sends the captured documents to an accessible location on the network.

ULTRACOPY AS A CLIENT TO ULTRADOC
UltraCopy operates as a standalone application, taking input from a scanner and sending its output to a variety of normal Windows destinations such as a file, a printer, a fax server, email, etc. In addition, whenever the UltraDoc database is installed, the UltraDoc destination becomes active, providing the user direct access to the database for storing the scanned document in the database. This can be very useful, for example, in mailroom applications or for easing the capture process in a large backfile storage project.

WHAT TO ORDER FROM ALTO IMAGING:
- Include one UltraCopy License for each PC connected to a TWAIN image source (scanner or multifunction device).
- All other necessary Alto Imaging drivers and utilities will be included.
UltraPrint

CONFIGURATION NOTES

UltraPrint Client/Server provides an advanced print-on-demand management system designed for high-volume document production. UltraPrint provides a sophisticated, yet cost effective solution capable of driving single or clustered print engines ranging in speed from 40 to 300+ impressions per minute.

The UltraPrint user interface is an easy-to-use tool for building complex documents from one or more source files of similar or mixed file types. A tree-like view allows user’s of any skill-level to quickly create and organize print collections. UltraPrint also provides a portal to the UltraDoc document management system.

UltraPrint’s page description language (PDL) interpreter accepts Adobe Portable Document Format (PDF), PostScript, HP-PCL, and most common image file formats providing high-speed Raster Image Processing (RIP) services to monochrome and full-color output devices.

The Custom Print Interface built into UltraPrint provides optimized direct printing support for the industries leading production print manufactures and printer families are being added in response to market requirements. The Custom Print Common feature provides similar document and page-level control over most other printers on the market today. Advanced image controls include n-up printing, booklet making, variable text overlay, and other imposition/layout options.

In addition to job and queue control, printing services provided by UltraPrint include full-featured job ticketing for controlling the production process. Viewing services allow for previewing or modification at the local or remote host.

UltraPrint consists of the following system components:

- **ULTRAPRINT SERVER** - provides centralized job acceptance and RIP services for PCL, postscript and PDF files. UltraPrint Server can be used to RIP for multiple printers. If run on a high-end PC (see recommended specs earlier in this guide), it can service the needs of several production class printers or multi-function devices. If required, additional UltraPrint Servers can be installed to provide parallel job processing for multiple printers.

- **ULTRAPRINT CLIENT** - Provides the same interface as the Server version for print job building, queue control, job status information, advanced print functions and the custom print features. However, the client version does not have the RIP services of UltraPrint Server, and is therefore limited to working with TIFF print-ready files. The client is useful for situations where multiple workstations will be used for managing the printing process. You can install one or more licenses of the Client version at any site where there is at least one Server version installed.

- **ULTRAPRINTWEB** - UltraPrint’s built-in Web Server that permits print job submission directly into UltraPrint’s job queue using Internet Explorer. It requires both the web server and the ftp server in Microsoft’s IIS.

Utility print drivers are also provided for tasks such as file conversion, shared network printer submission, and use of Custom Print capability from non-UltraWare applications.
WHAT TO ORDER FROM ALTO IMAGING:

- Include one or more UltraPrint Server License(s), depending on the number and size of print systems to be supported. Typically, one Server is all that is needed.

- Include additional UltraPrint Client Licenses for any workstation that will be creating or managing print jobs. Normally there will be one client per operator/PC in the print shop and one or more wherever administrative/IT support for the print shop is located.

- All other necessary Alto Imaging drivers and utilities will be included.

OTHER REQUIRED ITEMS:

- Microsoft Internet Information Server (IIS) 6.0+ for UltraPrintWeb
**UltraDoc/UltraWeb**

Configuration Notes

UltraDoc and UltraWeb Servers provide an enterprise-level, information management platform ideal for collaboration and distribution of electronic documents. UltraDoc is a front-end application providing an interface to a Relational Database Management System (RDBMS) built on Microsoft’s powerful SQL Server engine. UltraDoc allows users to manage documents in electronic information stores through an easy-to-use client. Distributed architecture provides interoperability through ODBC middleware with other applications and platforms. Support for mass storage devices like RAID, SAN, NAS and Multi-disk optical systems is included.

UltraWeb Server leverages Microsoft’s ActiveX, and Active Server Page (ASP) technologies giving remote users the ability to view, print, and modify database objects. UltraWeb Server pages can easily be merged with an existing company web site running on Microsoft’s Internet Information Server. The Web pages are easily modified with custom logos, new backgrounds and personalized messages.

Both UltraDoc and UltraWeb take advantage of Windows and SQL Server security utilizing user-level access control lists (ACL). A tiered access model with definable users, groups and document-level access provides a very flexible security framework.

Alto Imaging Technologies powerful family of collaboration and content management solutions effectively meets the needs of users across a broad range of application requirements.

**UltraDoc consists of the following system components:**

- **ULTRADOC CLIENT** — Provides user interface for database configuration, search and retrieval. Runs as a client application that accesses the UltraDoc server components installed in the SQL-Server environment. Also included is a “thin-client” which can be installed on any PC at the site to extend UltraDoc’s capabilities for storage and retrieval to all of Microsoft’s Office applications – Word, Excel Powerpoint and Outlook.

- **ULTRADOC SERVER** — SQL-Server components that define and implement the database architecture, including:
  - SQL Scripts & Tables – Used to implement the primary database schema for storage, indexing and retrieval.
  - SQL STORED PROCEDURES — Structured Query Language (SQL) procedures providing storage, indexing, and retrieval calls to the RDBMS.
ULTRA WEB CONSISTS OF THE FOLLOWING SYSTEM COMPONENTS:

- ACTIVE SERVER MODULES — Hypertext Markup Language (HTML) web pages with ASP components. ActiveX controls are included to provide viewing and upload helpers to Microsoft Internet Explorer.

WHAT TO ORDER FROM ALTO IMAGING:

- Include one or more UltraDoc/Web Server License(s), depending on the database architecture and number of concurrent users expected. Typically, one Server is all that is needed. One UltraDoc Client License is included with each Server License.

- Include additional UltraDoc Client Licenses for any workstation that will be managing the database. Normally there will be one UltraDoc client per workstation used for administrative/IT support for the database.

- Include sufficient client access licenses for UltraWeb to handle the maximum number of concurrent users accessing UltraWeb via Internet Explorer.

- All other necessary Alto Imaging drivers and utilities will be included.

OTHER REQUIRED ITEMS:

- Microsoft Internet Information Server (IIS) 6.0+ for UltraWeb.


- Microsoft SQL Server Client Access Licenses—the number required depends on the number of users who will make connections to the database, either from one of the UltraWare clients (Image Arranger, UltraCopy, UltraDoc or UltraPrint) or from Internet Explorer (the Web client for the database). At this time, Microsoft offers per-device access licenses for SQL-Server, not concurrent licenses. They also offer a per-processor license which does not require individual per-device access licenses. Please check with Microsoft’s SQL-Server website for their current licensing information.
Special Solutions Based on UltraDoc/Web Content Management

Alto Imaging offers several vertical market solutions that are built on the UltraWare applications. All of them use the content management power of UltraDoc and UltraWeb, but provide specific interfaces and workflow for the markets they serve. Each of these is discussed below.

CASE MANAGEMENT & LITIGATION SUPPORT (ACM)

Specialized database structures and user interface allow managing all the information associated with any number of cases and clients. ACM along with other UltraWare components provides mailroom services, internet/intranet secure access to the case/client documents, automatic Bates numbering, local and remote printing of documents and sets of documents and a framework for building a law firm’s entire digital document repository.

WHAT TO ORDER FROM ALTO IMAGING:

- Include one Alto Case Management Server License.
- Include one license of UltraDoc/Web Server as described earlier in this document.
- Include licenses of Image Arranger, UltraCopy and UltraPrint as required to implement the overall solution.
- All other necessary Alto Imaging drivers and utilities will be included.

COURSEPACK PUBLISHING AND OTHER CUSTOM PUBLISHING (ADP)

Preparing and publishing custom courseware materials for university classes calls for several special capabilities. In addition to a large document capture requirement feeding into a bibliographically organized, reusable document library, there is a significant copyright management need. Our copyright management component tracks all the information associated with the document and generates permission letters using a large publisher database. There is also a link to the Copyright Clearance Center for filing automated permission requests and updating the permission information in the ADP database. The document capture and printing processes are integrated with the copyright management module, eliminating often-duplicated activity between the production and copyright functions.

WHAT TO ORDER FROM ALTO IMAGING:

- Include one Alto Digital Publishing Server License.
- Include one license of UltraDoc/Web Server as described earlier in this document.
- Include one license of UltraPrint Server as described earlier in this document.
- Include licenses of Image Arranger, UltraCopy and UltraPrint Client as required to implement the overall solution.
- All other necessary Alto Imaging drivers and utilities will be included.
IN-PLANT OR COMMERCIAL PRINT CENTERS — ALTO INTERNET TRANSACTION SERVER (AITS)

Whether printing from paper masters or electronically submitted jobs, the UltraWare suite is ideal for any type of digital print-on-demand operation. The Alto Internet Transaction Server (AITS) implements a full-featured web job submission solution for any type of centralized printing operation. Users login to their own account and view status of any existing jobs, submit new print jobs with interactive job cost estimating and previewing.

Two version of AITS are available Ultimate and Express. Ultimate allows for the online conversion of over 300 supported formats from virtually any PC application. This means the central print facility does require the submitted application to process the job. In the Express version, files are typically submitted through a driver and/or uploaded in a print-ready format such as .pdf, .ps, or .tif..

WHAT TO ORDER FROM ALTO IMAGING:
- Include one Alto Internet Transaction Server License.
- Include one license of UltraDoc/Web Server as described earlier in this document.
- Include one license of UltraPrint Server as described earlier in this document.
- Include licenses of Image Arranger, UltraCopy and UltraPrint Client as required to implement the overall solution.
- All other necessary Alto Imaging drivers and utilities will be included.

HOSPITAL AND OTHER FORMS MANAGEMENT APPLICATIONS

Based on a library of approved forms, this system allows local printing anywhere in the hospital from a simple web page interface. From the same interface you can view, print locally or order packs of forms from the print center. Selected forms can be used to print an admissions pack with required patient information extracted from the patient database and overlaid on the forms as they are printed.

WHAT TO ORDER FROM ALTO IMAGING:
- Include one license of UltraDoc/Web Server as described earlier in this document.
- Include one license of UltraPrint Server as described earlier in this document.
- Include licenses of Image Arranger, UltraCopy and UltraPrint Client as required to implement the overall solution.
- All other necessary Alto Imaging drivers and utilities will be included.

NOTE: Since these special market segment solutions invariably involve a great deal of system design and integration with existing infrastructures and workflow, we are available to assist in developing pre-sales proposals, as well as in the post-sales installation and training process.
Software Updates and Annual Maintenance Program

This guide primarily describes the licensing requirements for each product or combination of products in the UltraWare suite. In addition to these configuration details, each initial installation is required to include at least the first year of software maintenance, and multiple years are recommended if the purchase is part of a multi-year contract. The purpose of the software maintenance fee is to help offset the cost of continued development of improvements to the software products. What this fee buys is unlimited access to new releases of the products during the term of the software maintenance coverage. Some software companies provide occasional updates for little or no charge but require that you purchase a new license when a new version (e.g., 6.X -> 7.X) is released. The MSRP for software maintenance is 18.45% per year of the MSRP for the associated licenses. Based on that rate, it takes 5 years to equal buying a new license. During that time frame, we release multiple updates per version and occasional entirely new versions of the software. Overall, we think this is a good value for the cost.

As most of you know, we have a strong "customer-driven" mindset toward how we spend our development resources. Most every feature and capability we add comes from addressing specific needs brought to our attention by one or more actual customers. We could sit in a room and dream up "cool" things to do in our software, but it might not mean a thing to the actual users. What this translates into is a regular series of releases that incorporate new and improved features that frequently have utility even to those who didn't ask for them. Each release includes the changes which came before so that it is not necessary to install every release to get the benefit of our ongoing development efforts. Generally if you update your sites about once a year, you will remain on the continuous improvement curve.

One final point regarding software maintenance relates to our warranty. As in the case of most software providers, we warrant our software to work as described in our documentation for 90 days. After this period, there is no warranty. Should a problem arise that we have corrected in a newer release, then any customer with up-to-date software maintenance would automatically be able to install it to address their problem. Customers who are under software maintenance coverage will also have priority consideration given to any problems or feature requests they bring to our attention.
Getting Help

There are many sources of support available to ensure your experience with Alto Imaging Technologies UltraWare Software Suite is an enjoyable one. Here are several ways to obtain the help you need.

**Microsoft Windows Documentation**
Refer to the documentation provided by the computer manufacturer or with the operating system.

**Scanner Documentation**
Your scanner documentation provides complete information about the hardware.

**Alto Imaging Technologies Resellers**
Your local reseller (the one that helped you choose your UltraWare system) may be best equipped to help you. Your vendor has specially trained service technicians available to answer questions, and the equipment to analyze your problems.

**Internet**
The Alto World Wide Web server provides access to technical reports, new product announcements, a trade show schedule, and other general information about Alto Imaging Technologies and our products.

If you have access to the World Wide Web, you can view the Alto Imaging Technologies web pages at [http://www.altoimaging.com/](http://www.altoimaging.com/)

We have several web-based services for helping you get answers when you need them. If you have a persistent question or problem you need our help with, you can access the following support links:

- [Alto Knowledge Base](#) – Answers to frequently asked questions
- [Alto Blog](#) – Answers, tips and other useful information
- [Alto Support Request](#) – Web form to submit a technical or operational question
- [Downloadable Product Manuals](#) – Current versions of all product manuals

**Alto Customer Response Center (CRC)**
The Alto Customer Response Center (CRC) is available Monday through Friday, 8:00 am to 5:00 pm, Central Time (GMT-6). You can reach us by telephone at +1 (251) 343-9339 (US).
If you do call for assistance, have the following information ready so our Customer Support Representatives can help you more quickly.

- Your phone number, fax number, email and shipping addresses
- A description of the problem
- The version of the Alto Imaging application you’re using (from the Help menu choose the About command)
- The printer, scanner, and computer models
- The type and version of operating system you’re using
- The amount of memory installed on your PC and printer
- The printer interface and emulation (PDL) you are using
- Your printer type and any firmware version information you have