

Best Practices for Native File Conversion Using Turbo Imager

Converting native files to images viewable in a review platform or shared with opposing parties is a common practice in eDiscovery. The CloudNine LAW application offers three methods for converting native files imported via Electronic Discovery Loader (ED Loader) or Turbo Import. **Turbo Imager's speed comes from processing supported file types without opening the native application.**

For best results, a common workflow would be as follows:

- Complete a first-pass conversion using Turbo Imager for supported file types without selecting any of the available resizing options.
- Either at the same time or after Turbo Image completes, use Batch TIFF Conversion for files that are not supported by Turbo Imager or where custom placeholders are desired. A TIFF conversion license separate from Turbo Imager is required.
- Populate page data using the Batch Process option **Update Page Data**.
- Query page data fields to identify over- or undersized pages and reconvert as needed using the Turbo Imager resize options, Batch TIFF Conversion, or the manual method.
- Lastly, attempt manual TIFF conversion on problematic files.

A list of file types supported by Turbo Imager can be found here: [Turbo Imager Supported Files](#)

Turbo Imager's speed comes from not having to open the native application to convert supported file types to images.

Turbo Imager Options... (Tools-Batch Process – Options)

Image Output

Turbo Imager options include TIFF or PDF output formats, full color, or black-and-white color reduction. Color images are created using LZW compression, while black-and-white images are created using Group 4 compression. TIFF resolution can be selected, ranging from 300 to 600 DPI. Higher DPI (dots per inch) values improve image quality and increase file size. **Note:** TIFF files created with Turbo Imager have a 4 GB file size limit.

TIFF images can be created as serialized (one image file per page) or multi-page files (one file per document). PDF files are created as multi-page files only. Turbo Image offers

options to reduce oversized images to 8.5 x 11-inch page sizes, enlarge 11-inch or 11 x 17-inch page sizes, and enlarge small images to fill a page or fit on an 8.5 x 11-inch page. These are best selected for a second-pass conversion after the page data has been populated, the **Update Page Data** batch process has been evaluated, and records needing these options have been queried.

Email

Email date settings can be set to use the time zone selected during the initial import of the files, the original time zone in the email file, or a custom time zone.

PowerPoint

File-specific settings for PowerPoint slides are slides only, slides and notes (same page), or slides and notes (full page), meaning slides and their notes will be on separate pages.

Turbo Imager and Excel files

Only visible content in Excel files is used during conversion. Even though it is a supported file type, it is recommended that Excel files be converted to an image using the available options in TIFF Conversion. Alternatively, Excel files can be represented by a placeholder created during TIFF conversion.

Password-Protected Files

When Turbo Imager encounters a password-protected file, it will first check the passwords in the import settings for either Turbo Import or ED Loader settings. If the password is not found, it will check the TIFF Conversion Options Password List.

How Turbo Imager Works

Turbo Imager works using turbo agents through a Windows service installed with the LAW Configuration Utility. A maximum number of agents to use for a particular job can be selected in the Turbo Imager options. A selection of 0 will use all available licensed agents.

Agents do not have to be installed on all workstations. It is best practice to install agents on workstations in your environment that have the most resources. Each agent uses a machine core for processing, so a 4-core workstation can run up to 4 agents simultaneously, each using a Turbo Imager license. It is best to match the number of agent licenses to the number of cores available, rather than installing the turbo service on every workstation in your environment.

Monitoring Turbo Imager Jobs

Turbo Imager jobs can be monitored and prioritized in the LAW Management Console, leaving the workstation free for other LAW functions. See [Using the LMC](#). Suspending a case in Turbo Import will also result in suspension of any active Turbo Imager jobs for the same case.

How Turbo Imager Processes Files

Turbo Imager processes files in this manner:

- PDF files' source files are converted to TIFF output using VintaSoft.
- Email source files are converted to MHTML and then to PDF using Aspose. If TIFF output is desired, the PDF is then converted using VintaSoft.
- All other source file types are opened using Aspose and saved to PDF. If TIFF output is desired, the PDF is then converted using VintaSoft.

If a source PDF is searchable, a searchable PDF will be created by Turbo Imager, and likewise, a non-searchable PDF will be created from other files and non-searchable PDF source files.

The same metadata fields updated by Batch Tiff/PDF Conversion are also updated by Turbo Imager, e.g., Tiff Status, ErrorMessage, PageColor, PageFilename, PageHeight, Page Width, PageSize, and PaperSource.

The Batch Process, Update Page Data populates the PageColor, PageSize, PageWidth, and PageHeight fields for any images in the selected record set that are missing this information.

Resolving Turbo Imager Conversion Errors with TIFF Conversion

For file types not supported or that error in Turbo Imager, or if detailed file-specific formatting is required for native file conversion to images, use Batch Tiff Conversion. Batch TIFF Conversion offers options **not** currently available in Turbo Imager but are available if the native applications are installed. These include Microsoft Office applications of Word, Excel, and Project, as well as settings for images, email, and HTML files. Batch TIFF Conversion is also used when custom placeholders are required.

LAW supports 64-bit MS Office for Batch TIFF Conversion, except for MSG files. If using 64-bit MS Office, set the SourceApp to ShellPrinter for MSG files. ShellPrinter tells LAW to let MS Windows open the file with the application associated with the file extension in the Default Apps settings. Please note that when using ShellPrinter as the SourceApp, file-specific settings selected in Batch TIFF Conversion or Print options are not honored. Also note that ED Loader still requires 32-bit MS Office applications to import files.

For efficiency, Batch TIFF Conversion can be used simultaneously with Turbo Imager on different record queries, ensuring the same record is not queued for both processes.

The manual method is handy for troublesome files that need special attention. Open the file using the native application via the blue hyperlink in the main view of LAW. Select the desired print settings and either the LAW Image Driver or the LAW Image Driver 300-DPI as the printer, then save the resulting images.