

# X9Utilities: Your x9.37 development tool

## X9Utilities

- Command line
- Access to data
- Access to images
- Summary totals

## Environments

- Windows
- Linux

## Read/Write

- Item level interface
- Easy to implement

## Export/Import

- All x9 records
- All x9 fields

## x9 File Validate

- Set x9 rules
- Create errors file

## Other tools

- Merge
- Image Pull
- Find / Replace

## x9 Formats

- x9.37
- x9.100-187
- x9.100-187+UCD
- x9.100-180
- CPA 015

## File Types

- ICL
- ICLR

## Licensing

- Subscription
- Initial License
- Annual renewal

Do you have more complex needs? Please consider our SDK which will perform any x9 related task.

**X9Utilities** provides high level functionality for x9 users who need to read and write x9 files but do not require the more extensive capabilities and complexities that are typically associated with using a full blown SDK. Why acquire an x9 solution that requires you to write to a complex API when a utility program can provide all of the tools than you really need? If your requirements are to perform command read and write functions, then X9Utilities should be considered for its simplicity and overall ease of implementation within your environment

**X9Utilities** is targeted for those organizations who need access to the X9 data (both records and tiff images) that are embedded within x9 files. X9Utilities provides the power you need to both read and write X9 files using your existing programming languages such as VB, C++, Java, PERL, RUBY, Python, or similar tools. Anything that can read and write CSV files can work with **X9Utilities**. And yes, you can just use Excel if that fits your need. This provides compatibility with your existing application environment and easy integration into your current work flow.

**X9Utilities** will do all of the heavy lifting for you. It uses our SDK and assumes all responsibility for field alignment and padding based on each x9 field definition, per the x9 standards. File totals are automatically calculated. X9Utilities is full function, easy to use, includes standard X9Ware support, leverages our SDK, and is very competitively priced when compared to other alternatives within the x9 marketplace.

**X9Utilities** is designed to process both ICL and ICLR files. It supports a wide variety of more complex x9 record types including credits, addendums and type 68 user records.

**X9Utilities** is offered for both the Windows and Linux environments and includes compiled programs that can be invoked directly from user applications, scripts, batch files, or from the command line. There is no requirement for a Java JVM to be installed on your system.

**Write** creates x9.37 files from generic items which are presented in a standard CSV format (one row per item). The CSV format requires that your capture process has extracted and can provide the item MICR line, the amount, and the front/back images in TIFF format. Reformatting is targeted to a specific institution using a "HeaderXml" definition, which consists of 100+ parameters which control x9.37 output file generation.

The common CSV format is used to send items to any financial institution; only the HeaderXml definition is changed. Our writer can generate all popular x9.37 file formats (including the Canadian CPA015), populates all totals in the various trailer records, controls bundle size, optionally insert an ICL deposit ticket when needed to offset the items (when required by your financial institution), and has options which control how the credit is accumulated into the trailer records, etc.

**Translate** is the opposite of write and converts an input x9.37 file into the CSV format used by write. Translate can be used as a testing aid during writer development.

**Validate** applies our standard x9.37 validation tools, exactly as utilized by our X9Assist desktop product. Validate reads an x9 file and applies x9 validations as defined by a specification that is identified on the command line. Validate supports all common industry specifications including DSTU, x9.100-187, x9.100-180, and CPA-015. TIFF images

The logo for X9Ware LLC, featuring the text "X9Ware" in a large, bold, sans-serif font, with "LLC" in a smaller, all-caps font to the right.

are validated using x9.100-181. Files are analyzed with errors written to an output CSV errors file. File totals can be written to XML or TXT files.

**Export/Import** are tools that are similar in nature to Read/Write, but instead operate at the x9 record and field level. Export reads an x9 file and creates output CSV and XML files in a variety of formats, and also gives you direct access to all images. This approach can provide an exact content of your x9 files, or a formatted layout that is designed for easy access by your research tools. The Export/Import tools are designed for more complex applications that require full control of their x9 data. They still allow you to work at a very high level, since you do not need to be concerned with field alignment and variable length records.

**Merge** allows multiple x9 files to be merged into a new x9 file that contains all of the items and images that are present on the input files. Merge is extremely useful when you have multiple x9 files which were created independently and must now be consolidated into a single file.

**Image Pull** is a high performance tool that supports image archive scenarios where specific images are to be pulled from thousands of x9 files. Input parameters are used to define the attributes of the items to be pulled (dates, item sequence numbers, routing numbers, account numbers, etc).

Please visit our website at [x9ware.com](http://x9ware.com), or send inquiries to [sales@x9ware.com](mailto:sales@x9ware.com). We have the x9 and ach experience to meet your specific business needs.