



Snowbound Supported File Formats

This document describes the file type number, descriptions, and read/write capabilities of all supported file formats. We have provided two tables of information, one sorted by [file format name](#), and the other by the [file type number](#).

RasterMaster and VirtualViewer® HTML5 are powerful conversion tools that can transform your documents and images into many different formats. Some format types are limited in the amount of color (bit-depth) they support in an image. Some file formats read and write only black and white (1-bit deep) and other file formats support only color images (8+ bits deep).

For many of these cases, the product automatically converts the pixel depth to the appropriate value, based on the output format specified. The chart below will help you determine whether your black and white or color document will be able to convert straight to the desired output format with no additional processing.

When saving to a format, if the error returned is `PIXEL_DEPTH_UNSUPPORTED (-21)`, the output format does not support the current bits per pixel of the image you are trying to save. The chart below will help you identify formats with compatible bit depths.

FILE FORMAT KEY

File Format	Description
1-bit	Black and white or monochrome images.
4-bit, 8-bit, 16-bit	Grayscale images, that may appear to be black and white, but contain much more information and are much larger than 1-bit.
8-bit, 16-bit, 24-bit, 32-bit	Full color images.

Please note that the higher the bit depth (bits per pixel), then the larger the size of the image on the disk or in memory. The higher bit depth may offer more quality, but the performance may suffer because there is a lot more image data to process. Many users may have images that appear to be black and white, however, they are stored in 24-bit color. Converting these documents to a 1-bit file format will decrease the size of the file and improve performance with no perceivable loss in quality.

If you have any questions about what format to select you may contact Snowbound Technical support on the web at <http://support.snowbound.com>. We do our best to support product and document specifications and to work in common platform environments, however there are always exceptions. If you find an exception, please contact Snowbound Support to let us know about it.

SUPPORTED FILE FORMAT DESCRIPTIONS (JAVA READ/WRITE)

File Format	Description
B	Base
D	In Development
O	Optional format/Additional charges may apply. Note: Optional formats are not available for UNIX.

EXCEPTIONS TO SUPPORTED FILE FORMATS AND PLATFORMS

We do our best to support product and document specifications and to work in common platform environments, however there are always exceptions. If you discover an exception or issue, please contact Snowbound Support at support.snowbound.com to let us know about it.

Supported file formats and descriptions

File Format	Description	File type Number	Input Bit Depth	Output Bit Depth	Common File Ext.	Java Read	Java Write	Supports Text Search
ABIC (reading)	IBM image compression for scanned checks. Note: Not yet supported with RasterMaster .NET x64 or RasterMaster DLL x64	46	1	1	-	O	-	No
AFP (MO:DCA)	Advanced Function Presentation™ IBM format which uses CITT G3, G4, and IBM MMR formats. 1-bit only. This is a multi-page file format.	74	1, 24	1, 24	.afp	O	O	Yes
ASCII	Snowbound reads ASCII text files and converts them to a bitmap.	38	1	No	.txt	B	-	Yes
BMP_COMPRESSED	Originated by Microsoft, BMP supports 1, 4, 5, and 24-bit images.	12	4, 8	8	.bmp	B	-	No
BMP_UNCOMPRESSED	Originated by Microsoft, BMP supports 1, 4, 5, and 24-bit images.	12	1, 4, 8, 16, 24	1, 8, 24	.bmp	B	-	No
BROOK_TROUT	Brooktrout FAX format.	29	1	1	.brk	-	-	No
CALS	Government specified format.	18	1	1	.cal	B	B	No
CCITT_G3	Group 3 compression for bitonal (1-bit) image data.	33	1	1	.tif	B	-	No
CCITT_G3_FO	Group 3 compression for bitonal (1-bit) image data.	53	1	1	.tif	B	-	No
CCITT_G4	Group 4 compression for bitonal (1-bit) image data.	34	1	1	.tif	B	B	No
CCITT_G4_FO	Group 4 compression for bitonal (1-bit) image data.	52	1	1	.tif	B	B	No
CFF	Compact Font Format is a lossless compaction of the Type 1 format using Type 2 charstrings. It is designed to use less storage space than Type 1 fonts by using operators with multiple arguments, various pre-defined default values, more efficient allotment of encoding values, and shared subroutines with a FontSet (family of fonts).	83	1, 8, 24	1, 8, 24	.cff	O	-	No
CIFF	Camera Image File Format is a raw format designed by Canon.	81	1, 8, 24	1, 8, 24	.cif	O	-	No

File Format	Description	File type Number	Input Bit Depth	Output Bit Depth	Common File Ext.	Java Read	Java Write	Supports Text Search
CIMS (ABIC)	Check Image Management System developed by Carreker. Same as ABIC. Note: Not yet supposed with RasterMaster .NET x64 or RasterMaster DLL x64.	80	1	No	-	O	-	No
CLIP	Microsoft Windows clipboard format.	27	1, 4, 8, 24	1, 8, 24	.cip	-	-	No
COD	Liberty IMS black and white format.	72	1	No	.cod	-	-	No
CSV	Comma separated value list (a text spreadsheet).	99	1, 2, 4	No	.csv	O	-	No
CUT	Cut images are only 8 bits per pixel and the palette is stored in a separate file. Originated by Media Cybernetics.	31	8	No	.cut	-	-	No
DSC	the DCS format is a standard Quark Express Format. Each plane is stored as an EPS record.	62	32	32	.dcs	-	-	No
DCX	Intel created this format as a multi-page .PCX format. Each page is a .PCX file in whole which can be 1, 4, 8, and 24-bit.	11	1, 4, 8, 24	1, 8, 24	.dcx	-	-	No
DIB	Standard Windows Device Independent Bitmap. Supports 1, 4, 8, and 24-bits. This is a multi-page format.	48	1, 4, 8, 24	1, 8, 24	.dib	B	B	No
DICOM	Medical image format supporting 1, 12, 16, and 24 pixel images. Limited support.	55	8, 16, 24	No	.dcm	B	-	No
DOC	Microsoft Word format. Supports Microsoft Word 97, version 8 or later. Supports 1-bit images. Cannot decompress (view) document while open in MS Word. The following features have not yet been implemented: right-to-left text flow, underlined URLs, section and paragraph borders and shading, text boxes, multi-column paragraph, Windows Meta Files (WMF) clip art, autoshapes, and embedded OLE objects. Inconsistencies exist between MS Word and the Word plugin with regards to character and line spacing. Reading support only. This is a multi-page file format.	86	1, 8, 24, 32	No	.doc	O	-	Yes
DOCX	The .docx format is part of a family of open office XML-based formats developed by Microsoft. It is the default	93	1, 8, 24, 32	No	.docx	O	-	Yes

File Format	Description	File type Number	Input Bit Depth	Output Bit Depth	Common File Ext.	Java Read	Java Write	Supports Text Search
	document format for saving DOCX applications in Microsoft Word starting with Office 2007. It is based on XML rather than Microsoft's .doc format. Reading support only. This is a multi-page file format.							
DWG	Autodesk® AutoCAD® format. Used for computer aided design (CAD) DWG data and metadata. The DWG format can be read in the VirtualViewer .NET Content Server.	90	0	24	.dwg	-	-	No
DXF	Autodesk® AutoCAD® format. Used for computer aided design (CAD) data and metadata. See the following, for the full specification: http://usa.autodesk.com/adsk/servlet/it em?siteID=123112&id=8446698 . The DWG format can be read in the VirtualViewer .NET Content Server.	91	0	24	.dxf	-	-	No
EMAIL	E-mail message created with MS Outlook	89	1	-	.msg	O	-	No
EML	A MIME RFC 822 standard format that is used by many email clients including Microsoft Outlook Express, Lotus Notes, Windows Live Mail, Mozilla Thunderbird, and Postbox.	103	1	-	.eml	O	-	No
EPS (preview)	Encapsulated Postscript originated by Adobe. Postscript is an interpreted language. Snowbound does not support full Postscript but will extract an embedded .TIF file in the image. Sometimes called a bitmap representation file.	14	1, 4, 8, 24	1, 8, 24	.eps	B	B	No
EPS_BITMAP	EPS Compressed bitmap format. It is an Adobe encapsulated Postscript file with either G4 or JPEG data embedded.	63	8, 24, 32	1, 8, 24	.eps	B	B	No
EPS_BITMAP_G4	EPS Compressed bitmap format. It is an Adobe encapsulated Postscript file with either G4 or JPEG data embedded.	64	No	1, 8, 24	.eps	-	B	No
EPS_BITMAP_LZW	EPS Compressed bitmap format. It is an Adobe encapsulated Postscript LZW file with either G4 or JPEG data embedded.	69	No	1, 8, 24	.eps	-	B	No

File Format	Description	File type Number	Input Bit Depth	Output Bit Depth	Common File Ext.	Java Read	Java Write	Supports Text Search
FileNet	FileNet Image format developed by FileNET Corporation for viewing documents.	78	1	1	-	B	-	No
FLASHPIX	FLASHPIX 24-bit tiled JPEG format that includes multiple resolution images.	54	8, 24	No	.fpx	-	-	No
GIF	Created by CompuServe for compressing 2, 3, 4, 5, 6, 7, and 8-bit palette images. Uses the LZW algorithm.	4	2, 3, 4, 5, 6, 7, 8	8	.gif	B	B	No
GIF_INTERLACE D	Same as GIF except stores the raster in an interlaced order.	44	1, 2, 3, 4, 5, 6, 7, 8	8	.gif	B	-	No
GX2	Originated by Brightbill Roberts for ShowPartner DOS applications. Supports 4 and 8-bit images. Simple run length encoding technique.	22	4, 8	No	.gx2	-	-	No
HTML	Hyperlink Text Markup Language (HTML) is a tag-based language used to create documents for the Web. HTML forms are often used to capture information from web sites. Full HTML, Javascript and CSS support.	82	0	24	.htm, .html	O	-	Yes
ICONTYPE	Microsoft icon format. Contains a standard device independent bitmap. Supports 1 and 4 bits uncompressed.	25	1, 4	No	.ico	-	-	No
IFF_ILBM	Used on the Commodore Amiga computers for native bitmap format. Uses a run length format for 1, 4, 8, 24 and 8-bit palette images.	26	1, 4, 8, 24	1, 8, 24	.iff	-	-	No
IMG	Originated by Digital Research for storing 1-bit images.	28	1	No	.img	-	-	No
IMNET	IMNET G4 compressed format.	42	1	No	-	B	-	No
IOCA (MO:DCA)	Image Object Content Architecture. IBM format which uses CCITT G3, (MO:DCA) G4, and IBM MMR formats. 1-bit only. This is a multi-page file format.	24	1, 24	1	.ico	O	O	No
JBIG	Joint bi-level Image Experts Group. This is a highly compressed format which is stored in a TIFF header. It supports 1 or 8-bit gray scale images.	71	1	1 (with plugin)	.jbg	B	-	No
JBIG2	JBIG2 is a highly-compressed black and white image format that uses symbol recognition and substitution for very	77	1	1 (with	.jbg	B	-	No

File Format	Description	File type Number	Input Bit Depth	Output Bit Depth	Common File Ext.	Java Read	Java Write	Supports Text Search
	dramatic compression results. Snowbound's viewers and conversion programs can be used to directly view JBIG2 documents or convert those documents to a variety of output formats.			plugin)				
JEDMICS	US Military CCITT G4 tiled image format for storing Government documents and drawings. Supports 1-bit per pixel.	56	1	1	.jed	B	-	No
JPEG	Joint Photographics Experts Group. This was a group spearheaded by Kodak for 24, 32, and 8-bit grayscale lossy compression. Lossless JPEG not supported.	13	8, 24, 32	8, 24	.jpg	B	B	No
JPEG2000	JPEG 2000 specification. This is similar to JPEG but produces much better compression with better quality. It is supported as a separate plugin. An option exists to set the compression level for saving.	70	8, 24	No	.jpg2	O	-	No
KOFAX	Kofax Format	23	1	No	-	-	-	No
LASER_DATA	Compression for documents originated by LaserData Corp. 1-bit images only.	19	1	No	-	-	-	No
LINE_DATA	Presents data for each variable on a single line.	75	1	1	-	-	-	No
MACPAINT	Original Apple bitmap file format. All MacPaint images are 720 x 576 pixels 1 bit.	21	1	No	-	-	-	No
MAG	Mag Format.	61	1	No	.mag	-	-	No
MO:DCA	Mixed Object: Document Content Architecture. IBM format which uses MO:DCA CCITT G3, G4, and IBM MMR formats. 1-bit only. This is a multi-page file format.	49	1, 24	1	.mca	O	O	Yes
MSP	Microsoft Paint program bitmap file format. Supports 1-bit images. Uses a type of RLE compression found also in compressed .BMP files.	30	1	No	.msp	-	-	No
NCR	A simple header with CCITT group 4 data.	65	1	No	.ncr	B	-	No
ODF	Open Document Format is an XML-based file format for representing ODF	98	No	No	.odf	O	-	No

File Format	Description	File type Number	Input Bit Depth	Output Bit Depth	Common File Ext.	Java Read	Java Write	Supports Text Search
	electronic documents such as spreadsheets, charts, presentations and word processing documents.							
ODP	ODP Open Document Format for presentations.	101	No	No	.odp	O	-	Yes
ODS	Open Document Format for spreadsheets.	97	1, 24	No	.ods	O	-	Yes
ODT	ODT Open Document Format for word processing (text) documents.	96	1, 24	No	.odt	O	-	Yes
OOXML	Office Open Extended Markup Language or Office Open XML (also informally known as OOXML or OpenXML) is a zipped, XML-based file format developed 94 by Microsoft for representing spreadsheets, charts, presentations and word processing documents that is intended for use with the 2007 and later versions of the Microsoft Office suite.	94	1, 8, 24	No	-	O	-	Yes
PCL_1 (with plugin)	Hewlett Packard printer file format. Support for color and grayscale output. Supported as a separate plugin. This is a multi-page file format.	57	1, 24	1	.pcl	O	B	Yes
PCL_1 (without plugin)	Hewlett Packard printer file format. Support for color and grayscale output. Supported as a separate plugin. This is a multi-page file format.	57	No	1	.pcl	O	B	Yes
PCL_5	Hewlett Packard printer file format. Support for color and grayscale output. This is a multi-page file format.	76	No	1	.pcl	O	B	Yes
PCX	Zsoft bitmap file format. Similar to pack bits compression. Supports 1, 4, 8, and 24-bit images.	2	1, 4, 8, 24	1, 8, 24	.pcx	B	-	No
PDF (with plugin)	Portable Document Format. File format developed by Adobe to capture formatting information from a variety of desktop publishing applications. It allows the user to send formatted documents and have them appear on the recipient's monitor or printer as they were intended. Compatible with the PDF/A specification and conforms to PDF v1.4. Does not currently support JPEG2000 in PDF for Java. Supports some types of Adobe specified PDF	59	1, 2, 4, 8, 16, 24, 32	1, 24	.pdf	O	B	Yes

File Format	Description	File type Number	Input Bit Depth	Output Bit Depth	Common File Ext.	Java Read	Java Write	Supports Text Search
	annotations, however does not support XFA annotations. Does not support corrupt PDF documents. Snowbound Software requires that the fonts needed be available on the system. This is a multi-page file format.							
PDF (without plugin)	Portable Document Format. File format developed by Adobe to capture formatting information from a variety of desktop publishing applications. It allows the user to send formatted documents and have them appear on the recipient's monitor or printer as they were intended. Compatible with the PDF/A specification and conforms to PDF v1.4. Does not currently support JPEG2000 in PDF for Java. Supports some types of Adobe specified PDF annotations, however does not support XFA annotations. Does not support corrupt PDF documents. Snowbound Software requires that the fonts needed be available on the system. This is a multi-page file format.	59	No	1, 24	.pdf	O	B	Yes
PDF_15	Portable Document Format. File format developed by Adobe to capture formatting information from a variety of desktop publishing applications. It allows the user to send formatted documents and have them appear on the recipient's monitor or printer as they were intended. Compatible with the PDF/A specification and conforms to PDF v1.4. Does not currently support JPEG2000 in PDF for Java Supports some types of Adobe specified PDF annotations, however does not support XFA annotations. Does not support corrupt PDF documents. Snowbound Software requires that the fonts needed be available on the system. This is a multi-page file format. **Note** : Only supported with RasterMaster .NET or RasterMaster DLL. This format is not yet supported in RasterMaster Java.	79	No	1, 24	.pdf	O	B	Yes
PDF_16	Portable Document Format. File format developed by Adobe to capture formatting information from a variety of desktop publishing applications. It allows the user to send formatted documents and have them appear on the recipient's monitor or printer as	92	No	1, 24	.pdf	O	B	Yes

File Format	Description	File type Number	Input Bit Depth	Output Bit Depth	Common File Ext.	Java Read	Java Write	Supports Text Search
	they were intended. Compatible with the PDF/A specification and conforms to PDF v1.4. Does not currently support JPEG2000 in PDF for Java. Supports some types of Adobe specified PDF annotations, however does not support XFA annotations. Does not support corrupt PDF documents. Snowbound Software requires that the fonts needed be available on the system. This is a multi-page file format. **Note** : Only supported with RasterMaster .NET or RasterMaster DLL. This format is not yet supported in Rastermaster Java.							
PDF_LZW	Portable Document Format. File format developed by Adobe to capture formatting information from a variety of desktop publishing applications. It allows the user to send formatted documents and have them appear on the recipient's monitor or printer as they were intended. Compatible with the PDF/A specification and conforms to PDF v1.4. Does not currently support JPEG2000 in PDF for Java. Supports some types of Adobe specified PDF annotations, however does not support XFA annotations. Does not support corrupt PDF documents. Snowbound Software requires that the fonts needed be available on the system. This is a multi-page file format.	88	No	1, 24	.pdf	O	B	Yes
PHOTOCD	Kodak photo CD format. Supports only 24-bit images. This format contains at least 5 images. Get these images as you would a multi-page file format. Page 0 - 768 x 512 ; Page 1 - 384 x 256 ; Page 2 - 192 x 128 ; Page 3 - 1536 x 1024 ; Page 4 - 3072 x 2048; Images are uncompressed until the 1536 x 1024 images or greater. All images are stored as YCC data which is luminance then blue and red chrominance channels. The large image must be built from the smaller images by interpolation then adding the residual data stored by Huffman encoding.	39	24	No	.pcd	-	-	No
PHOTOSHOP	Adobe Photoshop format for storing 1, 4, 8, 16, 24, and 32-bit images. Can be compressed or uncompressed. Images	41	1, 4, 8, 24, 32	1, 8, 24	.psd	-	-	No

File Format	Description	File type Number	Input Bit Depth	Output Bit Depth	Common File Ext.	Java Read	Java Write	Supports Text Search
	may also be stored as CMYK data or RGB.							
PICT	Apple Macintosh bitmap file format. These images may contain vector information such as lines and circles. Only the bitmap portion of data is decompressed. Uses pack bits compression. Supports 1, 2, 3, 4, 8, 16, 24, and 32-bit images.	15	1, 2, 4, 8, 16, 24, 32	1, 8, 24	.pct	-	-	No
PNG (optional)	Originated by CompuServe to replace the .GIF file format. Uses the Huffman encoding variant. Supports 1, 4, 8, 15, 16, 24, and 32-bit images. Also supports interlaced and transparency.	43	1, 4, 8, 24, 32	1, 8, 16	.png	B	B	No
PPT	Microsoft PowerPoint Binary File Format which is the binary file format used by Microsoft PowerPoint 97, Microsoft PowerPoint 2000, Microsoft PowerPoint 2002, and Microsoft Office PowerPoint 2003. Reading support only. This is a multi-page file format.	85	1, 8, 24, 32	No	.ppt	O	-	Yes
PPTX	The .pptx format is part of a family of open office XML-based formats developed by Microsoft. It is the default document format for saving applications in Microsoft PowerPoint starting with Office 2007. It is based on XML rather than Microsoft's .ppt format. Reading support only. This is a multi-page file format. Supported on Java 7.	100	1, 8, 24, 32	No	.pptx	O	-	Yes
RAST	Sun raster format. Supports 1, 8, 24, 1, 8, and 32-bits. Run length encoded format.	37	1, 8, 24	1, 8, 24	.ras	-	-	No
RTF	The Rich Text Format is a method of encoding formatted text and graphics for easy transfer between applications.	87	1, 8, 24, 32	No	.rtf	O	-	Yes
SCITEX	The SCITEX format is a proprietary format originated from SCITEX Corporation. Gray scale color and CMYK color images. Usually compressed.	60	24, 32	24	.sct	-	-	No
SEARCHABLE_PDF	Searchable PDF, also known as "vector PDF" is a regular PDF file that contains searchable text content vs rasterized text.	69	No	No	.pdf	O	B	Yes

File Format	Description	File type Number	Input Bit Depth	Output Bit Depth	Common File Ext.	Java Read	Java Write	Supports Text Search
SVG	Scalable Vector Graphics is an XML-based vector image format for two-dimensional graphics with support for interactivity and animation. SVG allows three types of graphic objects: vector graphics, raster graphics, and text. It is a known issue that Internet SVG Explorer has an issue rendering an image in SVG. If you have an issue rendering an image in IE, we recommend that you turn off SVG support for that format. You can turn off SVG support by either adding the format to the `svgExclusions` list in web.xml or disable SVG in config.js for all formats by setting `enableSVGSupport` to false.	102	No	24	.svg	-	B	No
TARGA	The SCITEX format is a proprietary format originated from SCITEX Corporation.	32	16	24	.tga	-	-	No
TARGA16	The SCITEX format is a proprietary format originated from SCITEX Corporation.	32	16	24	.tga	-	-	No
TIFF_2D	Tagged image file format. Created by an independent group and was supported by Aldus. .TIF files can be any number of bits per pixel, planes and several compression algorithms. The byte order may be Intel or Motorola format. The bytes may also be filled from right to left or left to right. Compression may be uncompressed, pack bits, LZW, modified Huffman, CCITT G4, CCITT G3, CCITT G3-2D or JPEG. Please note that the CCITT G4 file format only saves to black and white. This is a multipage file format.	17	1	No	.tif	B	-	No
TIFF_ABIC	TIFF file with Arithmetic Binary encoding. Requires a special version of our tools. Very popular for check imaging. BW is used for 1-bit bi-level and TIFF_ABIC is for 4-bit gray scale images. This is a multi-page file format.	46	4, 8	No	.tif	O	-	No
TIFF_ABIC_BW	TIFF file with Arithmetic Binary encoding. Requires a special ABIC version of our tools. Very popular for check imaging. BW is used for 1-bit bi-level and TIFF_ABIC is for 4-bit gray scale images. This is a multi-page file format.	47	1	No	.tif	O	-	No

File Format	Description	File type Number	Input Bit Depth	Output Bit Depth	Common File Ext.	Java Read	Java Write	Supports Text Search
TIFF_G3_FAX	ANSI baseline Group 3 or Group 4 compression embedded in a TIFF. This is a multi-page file format.	8	1	1	.tif	B	B	No
TIFF_G4_FAX	ANSI baseline Group 3 or Group 4 compression embedded in a TIFF. This is a multi-page file format.	10	1	1	.tif	B	B	No
TIFF_G4_FAX_F O	ANSI baseline Group 3 or Group 4 compression embedded in a TIFF. This is a multi-page file format.	51	1	1	.tif	B	B	No
TIFF_G4_FAX_S TRIP	ANSI baseline Group 3 or Group 4 compression embedded in a TIFF. This is a multi-page file format.	67	No	1	.tif	B	-	No
TIFF_HUFFMAN	TIFF file compressed using the Huffman compression algorithm. This is a multi-page file format.	7	1	1	.tif	B	-	No
TIFF_JBIG	Standard ansi baseline JBIG compression embedded in a TIFF. This is a multi-page file format.	66	1	1	.tif	B	B	No
TIFF_JPEG	Standard ansi baseline JPEG compression embedded in a TIFF. This is a multi-page file format.	40	8, 24	8, 24	.tif	B	B	No
TIFF_JPEG7	Black and white gray scale format. This is a multi-page file format.	73	1, 8	1, 8	.tif	B	B	No
TIFF_LZW	TIFF file compressed using the LZW compression algorithm. The LZW algorithm includes the look-up table of codes as part of the compressed file. This is a multi-page file format.	9	1, 4, 8, 24, 32	1, 4, 8, 16, 24, 32	.tif	B	B	No
TIFF_PACK	Simple run length encoding algorithm. This is a multi-page file format.	16	1, 4, 8, 16, 24, 32	1, 8	.tif	B	B	No
TIFF_UNCOMPRESSED	Uncompressed raw binary data. This is a multi-page file format.	0	1, 4, 8, 16, 24, 32	1, 8, 24	.tif	B	B	No
UTF-8	UTF-8 is a text format. It is a variable width encoding for the Unicode character set. It may start with the Byte Order Mark of 0xFF FE.	38	1	No	.txt	B	-	No
UTF-16	UTF-16 is a text format. It is a variable width encoding for the Unicode	87	1, 8, 24, 32	No	.txt	B	-	No

File Format	Description	File type Number	Input Bit Depth	Output Bit Depth	Common File Ext.	Java Read	Java Write	Supports Text Search
	character set. It may start with the Byte Order Mark of 0xFE FF.							
WBMP	Windows file format for wireless devices.	68	1	1	.wbmp	-	-	No
WINFAX	A simple header with CCITT group 3 compression.	58	1	No	-	-	-	No
WMF	Microsoft Windows Metafile format. These may contain vector information such as lines and circles. Only the bitmap data is extracted. This is in the form of a standard windows DIB. May be 1, 4, 8, and 24-bit. The 4 and 8-bit images may be compressed using Microsoft RLE compression as in .bmp files.	6	1, 4, 8, 24	1, 8, 24	.wmf	B	-	No
WPG	WordPerfect's metafile format. This is similar to the WMF file format in WPG that it may contain vector information. Supports 1, 4, 8, and 24-bit images. Only the bitmap data is extracted.	5	1, 4, 8, 24	1, 8	.wpg	-	-	No
XBM	Xwindows file format which encodes XBM each pixel as an ASCII byte. Only supports 8-bits per pixel.	20	1	1	.xbm	-	-	No
XEROX_EPS	Encapsulated Postscript for Xerox.	45	1	No	-	-	-	No
XLS	Excel Spreadsheet format for structuring and analyzing data. This is the binary file format used by Microsoft Excel 97, Microsoft Excel 2000, Microsoft Excel 2002, and Microsoft Office Excel 2003. Reading support only. This is a multi-page file format.	84	1, 8, 24, 32	No	.xls	O	-	Yes
XLSX	The .xlsx format is part of a family of open office XML-based formats developed by Microsoft. It is the default document format for saving applications in Microsoft Excel starting with Office 2007. It is based on XML rather than Microsoft's .xls format. Reading support only. This is a multi-page file format.	95	1, 8, 24, 32	No	.xlsx	O	-	Yes
XPM	Xwindows bitmap file format stored 1, 4, XPM as ASCII data. Each pixel is stored as an ASCII byte.	35	1, 4, 8	8	.xpm	-	-	No

Supported file formats listed numerically

File type number	File format
0	TIFF_UNCOMPRESSED
1	BMP_UNCOMPRESSED
2	PCX
4	GIF
5	WPG
6	WMF
7	TIFF_HUFFMAN
8	TIFF_G3_FAX
9	TIFF_LZW
10	TIFF_G4_FAX
11	DCX
12	BMP_COMPRESSED
13	JPEG
14	EPS (preview)
15	PICT
16	TIFF_PACK
17	TIFF_2D
18	CALS
19	LASER_DATA
20	XBM
21	MACPAINT
22	GX2
23	KOFAX
24	IOCA (MO:DCA)
25	ICONTYPE

File type number	File format
26	IFF_ILBM
27	CLIP
28	IMG
29	BROOK_TROUT
30	MSP
31	CUT
32	TARGA
32	TARGA16
33	CCITT_G3
34	CCITT_G4
35	XPM
37	RAST
38	ASCII
38	UTF-8
39	PHOTCD
40	TIFF_JPEG
41	PHOTOSHOP
42	IMNET
43	PNG (optional)
44	GIF_INTERLACED
45	XEROX_EPS
46	ABIC (reading)
46	TIFF_ABIC
47	TIFF_ABIC_BW
48	DIB
49	MO:DCA

File type number	File format
51	TIFF_G4_FAX_FO
52	CCITT_G4_FO
53	CCITT_G3_FO
54	FLASHPIX
55	DICOM
56	JEDMICS
57	PCL_1 (with plugin)
57	PCL_1 (without plugin)
58	WINFAX
59	PDF (with plugin)
59	PDF (without plugin)
60	SCITEX
61	MAG
62	DSC
63	EPS_BITMAP
64	EPS_BITMAP_G4
65	NCR
66	TIFF_JBIG
67	TIFF_G4_FAX_STRIP
68	WBMP
69	EPS_BITMAP_LZW
69	SEARCHABLE_PDF
70	JPEG2000
71	JBIG
72	COD
73	TIFF_JPEG7

File type number	File format
74	AFP (MO:DCA)
75	LINE_DATA
76	PCL_5
77	JBIG2
78	FileNet
79	PDF_15
80	CIMS (ABIC)
81	CIFF
82	HTML
83	CFF
84	XLS
85	PPT
86	DOC
87	RTF
87	UTF-16
88	PDF_LZW
89	EMAIL
90	DWG
91	DXF
92	PDF_16
93	DOCX
94	OOXML
95	XLSX
96	ODT
97	ODS
98	ODF

File type number	File format
99	CSV
100	PPTX
101	ODP
102	SVG
103	EML