

TIFF – Tagged Image File Format

The following options are supported when reading TIFF format:

Compression:

- Uncompressed
- FAX MH (modified Huffman RLE)
- FAX T4 (Group3 Fax/ (T.4))
- FAX T6 (Group4 Fax/ (T.6))
- LZW (Lempel-Ziv & Welch)
- JPEG (version 6)
- JPEG (version 6+)
- Flate (Deflate compression)
- JBIG FX BW (TIFF-F/FX standard (RFC2301) T.82, T.85 (JBIG BW))
- JBIG FX CLR (TIFF-F/FX standard (RFC2301) T.82, T.43 (JBIG on color))
- Packbits (Macintosh RLE)
- JBIG (ISO JBIG)

Sample format:

Can be unsigned integer, signed integer data & IEEE floating point

Bits per Sample & Samples per Pixel:

All combinations of these tags are supported.

Bits per Sample from 1 to 32. Samples per Pixel from 1 to 5.

Striped and tiled TIFF files are supported.

LSB and MSB bytes successions are supported.

Alpha channel and ICC color profiles are supported.

Reading of metadata in EXIF and IPTC formats is supported.

Multipage TIFF files are supported. The number of pages is not limited

TIFF orientation tag and EXIF orientation tag are supported.

Embedded thumbnail reading is supported.

Photometric Interpretation:

- Grayscale, including Monochrome
- RGB
- Palette
- Separated (CMYK)
- YCbCr
- LogL
- LogLuv
- ITU Lab
- ICC Lab
- CIE Lab

TIFF – Tagged Image File Format (continued)

The following options are supported when writing into TIFF format:

Photometric Interpretation & Bits per Sample & Samples per Pixel:

- True color, RGB+ Alpha channel, 64 bits per pixel
- True color, RGB, 48 bits per pixel
- True color, RGB+ Alpha channel, 32 bits per pixel
- CMYK, 32 bits per pixel
- True color, RGB, 24 bits per pixel
- Indexed, 8 bits per pixel
- Indexed, 4 bits per pixel
- Mono, 1 bits per pixel

Compression:

- Uncompressed
- LZW with or without predictor
- FAX MH
- FAX T.4
- FAX T.6
- Flate with or without predictor as well as 9 compression levels
- JPEG v6 with specifying quality from 1 to 100% and setting jpeg subsample
- JPEG v6+ with specifying quality from 1 to 100% and setting jpeg subsample
- JBIG
- PackBits

Saving TIFF files with LSB and MSB bytes succession is supported.

Saving stripped, single striped & tiled TIFF files is supported.

Thumbnail creation is supported.

Multipage TIFF files can be saved:

- as a multipage TIFF file
- additional pages to the existing multipage TIFF file
- pages can be saved as different files

Writing metadata in EXIF & IPTC formats is supported.

JPEG - Joint Photographic Experts Group File Format

The following options are supported when reading JPEG format:

CCITT T.81 modes:

- Baseline Sequential, grayscale & color
- Extended Sequential, grayscale & color, 8 and 12 bits per sample
- Progressive, grayscale & color
- Lossless Sequential, grayscale & color, alpha channel, from 2 to 16 bits per sample

Supports reading files with the following color space:

- Grayscale
- RGB
- RGB+ Alpha channel (Lossless Sequential only)
- Lab (T.24)
- CMYK
- YCbCr
- YCbCrK

Reading embedded thumbnails from JFIF and EXIF is supported.

ICC color profiles are supported.

Reading metadata in EXIF and IPTC is supported.

Orientation tag in EXIF is supported.

The following options are supported when writing to JPEG format:

Color space & bits:

- Baseline Sequential
 - True color, YCbCrK, 32 bits per pixel
 - True color, YCbCr, 24 bits per pixel
 - Grayscale, 8 bits per pixel
- Extended Sequential & Progressive
 - True color, YCbCrK, 48 bits per pixel
 - True color, YCbCrK, 32 bits per pixel
 - True color, YCbCr, 36 bits per pixel
 - True color, YCbCr, 24 bits per pixel
 - True color, CMYK, 32 bits per pixel
 - True color, RGB, 32 bits per pixel
 - True color, RGB, 24 bits per pixel
 - Grayscale, 12 bits per pixel
 - Grayscale, 8 bits per pixel

Specifying quality from 25% to 100% is supported.

Thumbnail creation is supported.

Subsample creation is supported for all modes except Lossless Sequential.

It is possible to specify predictor parameter for Lossless Sequential mode.

Setting restart interval parameter is supported.

Writing to JPEG with interleaved and non-interleaved color channel succession is supported.

Writing to JPEG with optimized Hoffman table is supported; this allows reducing file size.

Writing metadata in EXIF & IPTC formats is supported.

BMP - Windows Bitmap

The following options are supported when reading BMP format:

Reading all standard Windows BMP and BMP OS/2 is supported, including RLE4 and RLE8 compressions.
Additional support for nonstandard DXT1/DXT2/DXT3/DXT4 compressions

The following options are supported when saving images to BMP format:

Color space & bits:

- True color, RGB+ Alpha channel, 32 bits per pixel
- True color, RGB, 32 bits per pixel
- True color, RGB, 24 bits per pixel
- High color, RGB+ Transparent, 16 (5:5:5:1) bits per pixel
- High color, RGB, 16 (5:5:5:1) bits per pixel
- High color, RGB, 16 (5:6:5) bits per pixel
- Indexed, 8, bits per pixel
- Indexed, 4, bits per pixel
- Indexed, 1, bits per pixel

Writing BMP files with bottom-up and top-down row order is supported.

GIF - Compuserve GIF

The following options are supported when reading GIF format:

Standard one- and multipage as well as animated multipage GIF files (GIF87a and GIF89a versions).

The following options are supported when saving to GIF format:

Writing GIF in interlaced and serial modes is supported.

Lossless and lossy writing optimization modes for GIF are supported to reduce size of the resulting file.

Transparency is supported

Supports saving multipage GIF files to

- multipage GIF
- adding pages to the existing GIF
- saving pages as separate files

PCX - ZSoft Paintbrush

The following options are supported when reading PCX format:

All variants of PCX format

The following options are supported when saving images to PCX format:

Color space & bits:

- True color, RGB, 24 bits per pixel
- Indexed, 8, bits per pixel
- Indexed, 4, bits per pixel
- Indexed, 1, bits per pixel
- DCX - Multipage PCX

The following options are supported when reading DCX format:
All variants of DCX format.
Multipage DCX files are supported.

TGA - Truevision Targa

The following options are supported when reading TGA format:

All existing versions of TGA standard.
Reading alpha channel and transparency is supported.

The following options are supported when reading TGAformat:

Color space & bits:

- True color, RGB + Alpha channel, 32 bits per pixel
- True color, RGB, 24 bits per pixel
- Hi color with transparency, RGB, 16 bits per pixel
- Hi color, RGB, 15 bits per pixel
- Indexed, 8 bits per pixel

Uncompressed and RLE-compressed TGA files are supported.

DDS - Direct Draw Surface

The following options are supported when reading DDS format:

All existing DDS file versions are supported.

The following options are supported when saving images in DDS format:

Color space & bits:

- 24 bits per pixel, R:8, G:8, B:8
- 16 bits per pixel, R:5, G:6, B:5
- 32 bits per pixel, A:8, R:8, G:8, B:8
- 32 bits per pixel, A:8, B:8, G:8, R:8
- 32 bits per pixel, A:x, R:8, G:8, B:8
- 32 bits per pixel, A:x, B:8, G:8, R:8
- 16 bits per pixel, A:1, R:5, G:5, B:5
- 16 bits per pixel, A:x, R:5, G:5, B:5
- 8 bits pr pixel, luminance:8
- 16 bits per pixel, A:8, L:8
- DXT1 compressed, 1-bit alpha
- DXT2 compressed, 4-bit premultiplied alpha
- DXT3 compressed, 4-bit nonpremultiplied alpha
- DXT4 compressed, interpolated premultiplied alpha
- DXT5 compressed, interpolated nonpremultiplied alpha
- Hi color, RGB, 15 bits per pixel
- Indexed, 8 bits per pixel

Mipmaps generation is supported.

PNG - Portable Network Graphic

The following options are supported when reading PNG format:

Reading PNG format is supported according to the latest format specification (W3C Recommendation 10 November 2003). All existing features of the standard are supported alpha channel, transparency, index colors, gamma correction, 16 color channel.

The following options are supported when saving images to PNG format:

Color space & bits:

- True color, RGB + Alpha channel, 64 bits per pixel
- True color, RGB, 48
- True color, RGB + Alpha channel, 32 transparent bits per pixel
- True color, RGB, 24 bits per pixel
- Indexed, 8 bits per pixel
- Indexed, 4 bits per pixel
- Mono, 1 bits per pixel

The ability to specify PNG compression level is supported.

The ability of writing transparent pixels when selecting index save mode is supported.

EPS - Adobe Encapsulated Post Script

Reading of EPS format is not supported

When saving images to EPS format only raster variants of EPS format are supported.

EXR – Open EXR

The following options are supported when reading EXR format:

All variants of EXR format are supported. The image is loaded in True Color RGB 24 bits per pixel

The following options are supported when saving images in EXR format:

The ability to select compression type is supported:

RLE, ZIPS, ZIP, PIZ, PXR24

PDF - Adobe Acrobat Document

The following options are supported when reading PDF format:

Reading of PDF format is supported according to the specification (version 1.7).

The following options are supported when saving images in PDF format:

Writing is performed according to PDF (version 1.7) or PDF/A standards.

Writing is performed in raster mode.

Color space & bits:

- True color, RGB, 24 bits per pixel
- Indexed, 8 bits per pixel
- Indexed, 4 bits per pixel
- Mono, 1 bits per pixel

Ability to choose compression type is supported:

- LZW,
- Flate,
- Fax,
- Group 4

Supports saving PDF files into:

- multipage PDF
- adding pages to the existing PDF file
- saving pages as separate files

PSD - Adobe Photoshop

The following options are supported when reading PSD format:

Reading of merged data area is supported

The following options are supported when saving to PSD format:

Color space & bits:

- True color, RGB + Alpha channel, 64 bits per pixel
- True color, RGB, 48 bits per pixel
- True color, RGB + Alpha channel, 32 bits per pixel
- True color, RGB, 24 bits per pixel

Uncompressed and RLE-compressed PSD files are supported.

MNG - Multiple Network Graphic

The following options are supported when reading MNG format:

Only VLC (Very Low Complexity) MNG files are supported.

The following options are supported when saving to MNG format:

Color space & bits:

- True color, RGB + Alpha channel, 64 bits per pixel
- True color, RGB, 48
- True color, RGB + Alpha channel, 32 transparent bits per pixel
- True color, RGB, 24 bits per pixel
- Indexed, 8 bits per pixel
- Indexed, 4 bits per pixel
- Mono, 1 bits per pixel

Ability to specify MNG compression level is supported.

Supports saving multipage MNG files to

- multipage MNG
- supports adding pages to the existing MNG
- saving pages as separate files

Photo RAW

Supports reading Photo RAW images from the following camera models:

Canon:

- PowerShot 600
- PowerShot A5
- PowerShot A5 Zoom
- PowerShot G1
- PowerShot G2
- PowerShot G3
- PowerShot G5
- PowerShot G6
- PowerShot Pro1
- PowerShot Pro70
- PowerShot S30
- PowerShot S40
- PowerShot S45
- PowerShot S50
- PowerShot S60
- PowerShot S70
- EOS-10
- EOS-10D
- EOS-300D
- EOS-D30
- EOS-D60
- EOS-1D
- EOS-1DS
- EOS-1DS Mark II
- EOS-1DS Mark III
- EOS-1D Mark II
- EOS-1D Mark III
- EOS-1D Mark IIN
- EOS-20D
- EOS-30D
- EOS-40D
- EOS-50D
- EOS-60D
- EOS-40D sRAW
- EOS-5D
- EOS-5D Mark II
- EOS-7D
- EOS DIGITAL REBEL
- EOS DIGITAL REBEL XT
- EOS DIGITAL REBEL Xti
- EOS DIGITAL REBEL Xsi
- EOS DIGITAL REBEL Xsi
- EOS 350D DIGITAL
- EOS 400D DIGITAL
- EOS 450D DIGITAL
- EOS 500D DIGITAL

- EOS REBEL T1i
- EOS 550D DIGITAL
- EOS 1000D DIGITAL
- EOS DIGITAL REBEL XS
- EOS-D2000
- PowerShot G9
- PowerShot G10
- PowerShot G11
- PowerShot G12
- PowerShot S90
- PowerShot S95
- PowerShot SX1IS

Fujifilm:

- FinePix E550
- FinePix E900
- FinePix F700
- FinePix F810
- FinePix Hs10
- FinePix S2Pro
- FinePix S20Pro
- FinePix S3Pro
- FinePix S5Pro
- FinePix S5000
- FinePix S5100
- FinePix S5200
- FinePix S5500
- FinePix S5600
- FinePix S6500
- FinePix S7000
- FinePix S9000
- FinePix S9500

Hasselblad:

- Hasselblad CFV

Kodak:

- Kodak Dc20
- Kodak Dc25
- Kodak Dc40
- Kodak Dc50
- Kodak Dc120
- Kodak P850
- Kodak DCS 660C
- Kodak DCS Pro SLR/c
- Kodak DCS Pro SLR/n
- Kodak DCS Pro 14N

- Kodak DCS Pro 14nx
- Kodak DCS460D
- Kodak EASYSHARE Z1015 IS

Creo:

- LeafValeoL

Mamiya:

- Mamiya ZD

Minolta:

- DiMAGE 5
- DiMAGE 7
- DiMAGE 7i
- DiMAGE 7Hi
- DiMAGE A1
- DiMAGE A2
- DiMAGE A200
- DiMAGE G400
- DiMAGE G500
- DiMAGE G600
- DiMAGE Z2
- Dynax 5D
- Maxxum 5D
- Alpha/ Dynax/ Maxxum 7D

Index B

RAW

Photo RAW (continued)

Nikon:

- Nikon D1
- Nikon D1H
- Nikon D1X
- Nikon D100
- Nikon D200
- Nikon D300
- Nikon D700
- Nikon D2H
- Nikon D2Hs
- Nikon D2X
- Nikon D2Xs
- Nikon D200
- Nikon D3
- Nikon D3x
- Nikon D300
- Nikon D40
- Nikon D40X
- Nikon D50
- Nikon D60
- Nikon D70
- Nikon D70s
- Nikon D80
- Nikon D90
- Nikon E2500
- Nikon E5000
- Nikon E5400
- Nikon E5700
- Nikon E8400
- Nikon E8700
- Nikon E8800

Olympus:

- C5050Z
- C5060WZ
- C70Z,C7000Z
- C7070Z
- C7070WZ
- C740UZ
- C770UZ
- C8080WZ
- E-1
- E-3
- E-10
- E-20
- E-30
- E-300

- E-330

- E-400

- E-410

- E-450

- E-500

- E-510

- E-520

- Sp310

- Sp350

- SP500UZ

- SP510UZ

- SP550UZ

Panasonic:

- DMC-FX150

- DMC-FX180

- DMC-FZ8

- DMC-FZ18

- DMC-FZ28

- DMC-FZ30

- DMC-FZ35

- DMC-FZ38

- DMC-FZ45

- DMC-FZ50

- DMC-FZ1000

- DMC-G1

- DMC-G2

- DMC-G10

- DMC-GF1

- DMC-GF2

- DMC-GH1

- DMC-GH2

- DMC-L1

- DMC-L10

- DMC-LC1

- DMC-LX1

- DMC-LX2

- DMC-LX3

- DMC-LX5

Pentax:

- Pentax *ist D

- Pentax *ist DL

- Pentax *ist DS

- Pentax K10D

- Pentax K7

- Pentax K10D

- Pentax K20D

- Pentax K100D

- Pentax K200D

- Pentax Optio S

- Pentax Optio S4

- K-m

PhaseOne:

- P25

- P30

- P45

Samsung:

- Ex1

- GX-1L

- GX-1S

- Nx10

- Nx100

- Wb2000

Photo RAW (continued)

Sony:

- DSC-F828
- DSC-NEX3
- DSC-NEX5
- DSC-R1
- DSC-SLT-A33
- DSC-SLT-A55
- DSC-v3
- DSLR-A100
- DSLR-A200
- DSLR-A230
- DSLR-A300
- DSLR-A330
- DSLR-A350
- DSLR-A390
- DSLR-A450
- DSLR-A500
- DSLR-A550
- DSLR-A700
- DSLR-A850
- DSLR-A900

Logitech:

- Logitech Fotoman Pictura

Epson:

- R-D1

Leica:

- D-Lux3
- D-Lux4
- Digilux2
- V-Lux1

Supports reading DNG format files according to the standard.

CALS - CALS Raster

Supports reading CALS files of CALS I and CALS II type.

DCM - DICOM medical image

Supports reading DICOM format files complying with 3.0 standard.
Supports multipage and imitated multipage files.

Other supported formats

MS Windows Icon
MS Windows Vista Icon
MS Windows Cursor
MS Windows Animated Cursor
Kodak Photo CD
Portable AnyMap
Portable PixMap
Portable BitMap
Portable GreyMap
Portable Float Map
Wireless Bitmap (Level 0)
Aldus Placeable metafiles
Enhanced metafiles
Windows GDI+ dual metafile
Windows GDI+ metafile
Word Perfect Grasphic, Raster
Word Perfect Grasphic, Vector
GEM Bit Image
Amiga Interchange File
SUN Raster
Silicon Graphics Image
X-Windows bitmap
X-Windows pixmap
Compuserve RLE
Utah RLE raster
Macintosh picture
Paint Shop Pro File Format
FlashPix Format
JPEG-2000 Codestream
JPEG-2000 JP2 File Format
JPEG Network Graphic
Windows Clipboard
Dr. Halo
OTA Nokia Logo Bitmap
JBIG2
JBIG
Alias/Wavefront PIX
Wavefront RLA
Dicom medical image
Microsoft Paint
MacDraw
VICAR Video Image Communication
and Retrieval
KOALA Paint
XWD X Windows system window
dump
Palm Pilot Image File
CALs type 1
CALs type2
SFF Structure Fax Format
Microsoft Access snapshot file
WinFax files
Group3 Fax File
Group4 Fax File
Cineon Image File Format
Computer Graphics Metafile
Softimage PIC
AT&T / Multigen ICN
Direct Draw Surface
WB1 Webshots Image
WBD Webshots Image
WBZ Webshots downloaded
image
WBC Webshots Image Collection
HDR Radiance
Scitex SCT
Pixar picture
Biorad confocal image
MTV Raytracer
Psion series 3 bitmap
PVR NEC PowerVR texture
IOCA (MO:DCA)
EMZ Gzipped EMF