

JPEG File Interchange Format

Version 1.02

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Why a File Interchange Format

Standard color space

The color space to be used is YCbCr as defined by CCIR 601 (256 levels). The RGB components calculated by linear conversion from YCbCr shall not be gamma corrected (gamma = 1.0). If only one component is used, that component shall be Y.

APP0 marker used to identify JPEG FIF

The APP0 marker is used to identify a JPEG FIF file. The JPEG FIF APP0 marker is mandatory right after the SOI marker.

The JFIF APP0 marker is identified by a zero terminated string: "JFIF". The APP0 can be used for any other purpose by the application provided it can be distinguished from the JFIF APP0.

The JFIF APP0 marker provides information which is missing from the JPEG stream: version number, X and Y pixel density (dots per inch or dots per cm), pixel aspect ratio (derived from X and Y pixel density), thumbnail.

APP0 marker used to specify JFIF extensions

Additional APP0 marker segment(s) can optionally be used to specify JFIF extensions. If used, these segment(s) 1f 1 Tfauishentensions. If

Spatial Relationship of Components

Specification of the spatial positioning of pixel samples within components relative to the samples of other components is necessary for proper image post processing and accurate image presentation. In JFIF files, the position of the pixels in subsampled components are defined with respect to the highest resolution component. Since components must be sampled orthogonally (along rows and columns), the spatial position of the samples in a

JFIF Extension: Thumbnail stored using one byte per pixel

This extension supports thumbnails stored using one byte per pixel and a color palette in the extension_data field. The syntax of extension_data is:

Xthumbnail	(1 byte)	Thumbnail horizontal pixel count
Ythumbnail	(1 byte)	Thumbnail vertical pixel count
palette	(768 bytes)	24-bit RGB pixel values for the color palette.

