Annex A

Image File Description Examples

A.1 Uncompressed RGB File

Table 32 Uncompressed RGB File Description Sample Contents

Primary Image	
Pixels	640 (W) x 480 (H)
Image Title	Exif_TIFF_RGB
Image Input Equipment Manufacturer	DSCompany
Image Input Equipment Model Name	Example
Orientation	Normal
Strips	96
Lines per Strip	5
Bytes per Strip	9600
Image Resolution	72 dpi (Width), 72 dpi (Length)
Image Data Arrangement	Chunky
File Change Date and Time	1997:09:01 12:00:00.000
Copyright	Copyright, ABCDE,1997
Exif-specific Information	
Version	Ver. 2.0
Date and Time of Original Image Creation	1997:09:01 12:00:00.000
Date and Time of File Creation	1997:09:01 12:00:00.000
Thumbnail	
Pixels	80 (W) x 60 (H)
Orientation	Normal
Strips	1
Lines per Strip	60
Bytes per Strip	14400
Image Resolution	72 dpi (Width), 72 dpi (Length)

Table 33 Uncompressed RGB File Description Sample

	Offset	Name			Data		
	(Hex)				or "ASCII")		
Header	0000 0002	Byte Order 42		404	D ("MM") 002A		
	0002	0th IFD Offset		00	002A 000008		
	Offset	our ii D Oliset				_	
	(Hex)	Name		interoper	ability Number (Hex)		
	8000	Number of Interoperability			0014		
	Offset (Hex)	Name	Tag ID (Hex)	Type (Hex)	Count (Hex)	ValueOffset (Hex or "ASCII")	
	000A	ImageWidth	0100	0004	0000001	00000280	
	0016	ImageLength	0101	0004	0000001	000001E0	
	0022	BitsPerSample	0102	0003	0000003	000000FE	
	002E	Compression	0103	0003	0000001	00010000	
	003A	PhotometricInterpretation	0106	0003	0000001	00020000	
	0046	ImageDescription	010E	0002	000000E	00000104	
	0052	Make	010F	0002	00000009	00000112	
	005E	Model	0110	0002	80000008	0000011C	
0th IFD	006A	StripOffsets	0111	0004	00000060	00000124	
	0076	Orientation	0112	0003	0000001	00010000	
	0082	SamplesPerPixel	0	0003	0000001	00030000	
	008E	RowsPerStrip	0116	0004	0000001	00000005	
	009A	StripByteCounts	0117	0004	00000060	000002A4	
	00A6	XResolution	011A	0005	0000001	00000424	
	00B2	YResolution	011B	0005	0000001	0000042C	
	00BE	PlanarConfiguration	011C	0003	0000001	00010000	
	00CA	ResolutionUnit	0128	0003	0000001	00020000	
	00D6	DateTime	0132	0002	00000014	00000434	
	00E2	Copyright	8298	0002	00000015	00000484	
	00EE	Exif IFD Pointer	8769	0004	0000001	0000045E	
	Offset (Hex)	Name			Offset (Hex)		
	00FA	Next IFD Offset		00	0004EC		
	Offset (Hex)	Name		(Hex	Data or "ASCII")		
	00FE	BitPerSample Value		3000	00080008		
	0104		"Exif_TIFF_RGB"00				
Value		ImageDescription Value		"Exif_T			
longer than	0112	ImageDescription Value Make Value		_			
		,		"DSC	TFF_RGB"00		
4byte of 0th	0112	Make Value		"DSC "Ex	TFF_RGB"00 ompany"00	et95	
IFD	0112 011C 0124 02A4	Make Value Model Value		"DSC "Ex offset0,offset	IFF_RGB"00 ompany"00 ample"00		
	0112 011C 0124	Make Value Model Value StripOffsets Value		"DSC "Ex offset0,offset count0, count	IFF_RGB"00 ompany"00 ample"00 1,offset2offse		
	0112 011C 0124 02A4 0424 042C	Make Value Model Value StripOffsets Value StripByteCounts Value XResolution Value YResolution Value		"DSC "Ex offset0,offset count0, count 000000	IFF_RGB"00 ompany"00 ample"00 1,offset2offs 1, count2cou 04800000001	nt95	
	0112 011C 0124 02A4 0424 042C 0434	Make Value Model Value StripOffsets Value StripByteCounts Value XResolution Value YResolution Value DateTime Value		"DSC "Ex offset0,offset count0, count 000000 000000 "1997:09	IFF_RGB"00 ompany"00 ample"00 1,offset2offset 1, count2cou 04800000001 04800000001	nt95	
	0112 011C 0124 02A4 0424 042C	Make Value Model Value StripOffsets Value StripByteCounts Value XResolution Value YResolution Value		"DSC "Ex offset0,offset count0, count 000000 000000 "1997:09	IFF_RGB"00 ompany"00 ample"00 1,offset2offs 1, count2cou 04800000001	nt95	
	0112 011C 0124 02A4 0424 042C 0434	Make Value Model Value StripOffsets Value StripByteCounts Value XResolution Value YResolution Value DateTime Value		"DSC "Ex offset0,offset count0, count 000000 000000 "1997:09: "Copyright,A	IFF_RGB"00 ompany"00 ample"00 1,offset2offset 1, count2cou 04800000001 04800000001	nt95 000	
	0112 011C 0124 02A4 0424 042C 0434 0448	Make Value Model Value StripOffsets Value StripByteCounts Value XResolution Value YResolution Value DateTime Value Copyright Value (Last Byte is Padded)		"DSC "Ex offset0,offset count0, count 000000 000000 "1997:09: "Copyright,A	IFF_RGB"00 ompany"00 ample"00 1,offset2offset 1, count2cou 0480000001 04800000001 01 12:00:00"00 0BCDE,1997"00	nt95 000	
	0112 011C 0124 02A4 0424 042C 0434 0448 Offset (Hex)	Make Value Model Value StripOffsets Value StripByteCounts Value XResolution Value YResolution Value DateTime Value Copyright Value (Last Byte is Padded)		"DSC "Ex offset0,offset count0, count 000000 000000 "1997:09: "Copyright,A	IFF_RGB"00 ompany"00 ample"00 1,offset2offsi 1, count2cou 0480000001 0480000001 01 12:00:00"00 ABCDE,1997"00 (Hex)	nt95 000	
IFD	0112 011C 0124 02A4 0424 042C 0434 0448 Offset (Hex) 045E	Make Value Model Value StripOffsets Value StripByteCounts Value XResolution Value YResolution Value DateTime Value Copyright Value (Last Byte is Padded) Name Exif IFD Number	Tag ID	"DSC "Ex offset0,offset count0, count 000000 "1997:09: "Copyright,A Interoper	IFF_RGB"00 ompany"00 ample"00 1,offset2offset 1, count2cou 04800000001 01 12:00:00"00 ABCDE,1997"00 ability Number (Hex)	nt95	
IFD	0112 011C 0124 02A4 0424 042C 0434 0448 Offset (Hex) 045E Offset (Hex)	Make Value Model Value StripOffsets Value StripByteCounts Value XResolution Value YResolution Value DateTime Value Copyright Value (Last Byte is Padded) Name Exif IFD Number Name	Tag ID (Hex)	"DSC "Ex offset0,offset count0, count 000000 000000 "1997:09: "Copyright,A Interoper Type (Hex)	IFF_RGB"00 ompany"00 ample"00 1,offset2offset 1, count2cou 0480000001 01 12:00:00"00 0BCDE,1997"00 ability Number (Hex) 0008 Count (Hex)	nt95 000 r ValueOffset (Hex or "ASCII")	
IFD	0112 011C 0124 02A4 0424 042C 0434 0448 Offset (Hex) 045E Offset (Hex)	Make Value Model Value StripOffsets Value StripByteCounts Value XResolution Value YResolution Value DateTime Value Copyright Value (Last Byte is Padded) Name Exif IFD Number Name ExifVersion	Tag ID (Hex)	"DSC "Ex offset0,offset count0, count 000000 000000 "1997:09: "Copyright,A Interoper Type (Hex) 0007	IFF_RGB"00 ompany"00 ample"00 1,offset2offsi 1, count2cou 0480000001 0480000001 01 12:00:00"00 0BCDE,1997"00 ability Number (Hex) 0008 Count (Hex) 00000004	ValueOffset (Hex or "ASCII") "0200"	
IFD	0112 011C 0124 02A4 0424 042C 0434 0448 Offset (Hex) 045E Offset (Hex) 0460 046C	Make Value Model Value StripOffsets Value StripByteCounts Value XResolution Value YResolution Value DateTime Value Copyright Value (Last Byte is Padded) Name Exif IFD Number Name ExifVersion DateTimeOriginal	Tag ID (Hex) 9000 9003	"DSC "Ex offset0,offset count0, count 000000 000000 "1997:09: "Copyright,A Interoper Type (Hex) 0007 0002	IFF_RGB"00 ompany"00 ample"00 1,offset2offset 1, count2cou 0480000001 0480000001 01 12:00:00"00 ABCDE,1997"00 ability Number (Hex) 0008 Count (Hex) 00000004 000000014	ValueOffset (Hex or "ASCII") "0200" 000004C4	
IFD	0112 011C 0124 02A4 0424 042C 0434 0448 Offset (Hex) 045E Offset (Hex) 0460 046C 0478	Make Value Model Value StripOffsets Value StripByteCounts Value XResolution Value YResolution Value DateTime Value Copyright Value (Last Byte is Padded) Name Exif IFD Number Name ExifVersion DateTimeOriginal DateTimeDigitized	Tag ID (Hex) 9000 9003 9004	"DSC "Ex offset0,offset count0, count 000000 000000 "1997:09: "Copyright,A Interoper Type (Hex) 0007 0002 0002	IFF_RGB"00 ompany"00 ample"00 1,offset2offset 1, count2cou 0480000001 0480000001 01 12:00:00"00 ABCDE,1997"00 ability Number (Hex) 0008 Count (Hex) 0000004 00000014	ValueOffset (Hex or "ASCII") "0200" 000004C4 000004D8	
IFD	0112 011C 0124 02A4 0424 042C 0434 0448 Offset (Hex) 045E Offset (Hex) 046C 0478 0484	Make Value Model Value StripOffsets Value StripByteCounts Value XResolution Value YResolution Value DateTime Value Copyright Value (Last Byte is Padded) Name Exif IFD Number Name ExifVersion DateTimeOriginal DateTimeDigitized SubSecTime	Tag ID (Hex) 9000 9003 9004 9290	"DSC "Ex offset0,offset count0, count 000000 "1997:09: "Copyright,A Interoper (Hex) 0007 0002 0002 0002	IFF_RGB"00 ompany"00 ample"00 1,offset2offset 1, count2cou)4800000001 01 12:00:00"00 ABCDE,1997"00 ability Number (Hex) 0008 Count (Hex) 0000004 00000014 00000014	ValueOffset (Hex or "ASCII") "0200" 000004C4 000004D8 "000"00	

	04B4	Colorspace	A001	0003	0000001	0001
	Offset (Hex)	Name			Offset (Hex)	
	04C0	Next IFD Offset		00	0000000	
Value longer than	Offset (Hex)	Name		Data (Hex or "ASCII")		
4byte of Exif IFD	04C4	SubSecTimeOriginal Value		"1997:09:	:01 12:00:00"00	
5	04D8	SubSecTimeDigitized Value	"1997:09:01 12:00:00"00			
	Offset (Hex)	Name	Interoperability Number (Hex)			
	04EC	Number Of Interoperability			000D	
	Offset (Hex)	Name	Tag ID (Hex)	Type (Hex)	Count (Hex)	ValueOffset (Hex)
	04EE	ImageWidth	0100	0004	0000001	00000050
	04FA	ImageLength	0101	0004	0000001	0000003C
	0506	BitsPerSample	0102	0003	0000003	0000058E
	0512	Compression	0103	0003	0000001	00010000
	051E	PhotometricInterpretation	0106	0003	00000001	00020000
1st IFD	052A	StripOffsets	0111	0004	0000001	000005A4
	0536	SamplesPerPixel	011	0003	0000001	00030000
	0542	RowsPerStrip	0116	0004	0000001	0000003C
	054E	StripByteCounts	0117	0004	0000001	00003840
	055A	XResolution	011A	0005	0000001	00000594
	0566	YResolution	011B	0005	0000001	0000059C
	0572	PlanarConfiguration	011C	0003	0000001	00010000
	057E	ResolutionUnit	0128	0003	00000001	00020000
	Offset (Hex)	Name		Offset (Hex)		
	058A	Next IFD Offset		00	0000000	
Value	Offset (Hex)	Name		(Hex	Data or "ASCII")	
longer than	058E	BitPerSample Value			800080008	
4byte of 1st IFD	0594	XResolution Value		000000	04800000001	
IFD	059C	YResolution Value		000000	04800000001	
	05A4	Thumbnail Image Data Strip			:	
	Offset (Hex)	Name		(Hex	Data or "ASCII")	
	3DE4	Primary Image Data Strip0			:	
Primary Image	6364	Primary Image Data Strip1			:	
	:	:			:	
	:	:			:	
	0E2864	Primary Image Data Strip95			:	

A.2 Uncompressed YCbCr File

Table 34 Uncompressed YCbCr File Description Sample Contents

640 (W) x 480 (H)			
Exif_TIFF_YCC			
DSCompany			
Example			
Normal			
69			
7			
8960			
72 dpi (Width), 72 dpi (Length)			
Chunky			
1997:09:01 12:00:00			
Subsampling = 4:2:2			
Chrominance Subsampling point matches luminance point			
Copyright, ABCDE,1997			
Ver. 2.0			
1997:09:01 12:00:00			
1997:09:01 12:00:00			
59/10 (equivalent to 1/60 sec.)			
50/10 (equivalent to F:5.6)			
80/10			
0/0			
200/10			
20/10			
MultiSpot			
Daylight			
ON			
Ver. 2.0			
North Latitude 35 deg. 48 min. 8 sec., East Longitude 139 deg. 34 min. 55 sec.			
30.48 meters above sea level			
0:00:00			
Moving at 1km/h at 0 deg. true direction			
0 deg. true direction			
TOKYO			
80 (W) x 60 (H)			
Normal			
1			
60			
9600			
72 dpi (Width), 72 dpi (Length)			

Table 35 Uncompressed YCbCr File Description Sample

	Offset	Name			Data		
	(Hex)				(Hex or "ASCII")		
Header	0000	Byte Order	4D4D ("II") 2A00				
	0002	42	08000000				
	0004	0th IFD Offset	08000000				
	Offset (Hex)	Name		Int	eroperability Numbe (Hex)	er	
	8000	Number of Interoperability			1700		
	Offset (Hex)	Name	Tag ID (Hex)	Type (Hex)	Count (Hex)	ValueOffset (Hex or "ASCII")	
	000A	ImageWidth	0001	0400	01000000	80020000	
	0016	ImageLength	0101	0400	01000000	E0010000	
	0022	BitsPerSample	0201	0300	03000000	22010000	
	002E	Compression	0301	0300	01000000	01000000	
	003A	PhotometricInterpretation	0601	0300	01000000	06000000	
	0046	ImageDescription	0E01	0200	0E000000	28010000	
	0052	Make	0F01	0200	09000000	36010000	
	005E	Model	1001	0200	08000000	40010000	
	006A	StripOffsets	1101	0400	45000000	48010000	
0th IFD	0076	Orientation	1201	0300	01000000	01000000	
טנוו ורט	0082	SamplesPerPixel	1501	0300	01000000	03000000	
	008E	RowsPerStrip	1601	0400	01000000	07000000	
	009A	StripByteCounts	1701	0400	45000000	5C020000	
	00A6	XResolution	1A01	0500	01000000	70030000	
	00B2	YResolution	1B01	0500	01000000	78030000	
	00BE	PlanarConfiguration	1C01	0300	01000000	01000000	
	00CA	ResolutionUnit	2801	0300	01000000	02000000	
	00D6	DateTime	3201	0200	14000000	80030000	
	00E2	YCbCrSubSampling	1202	0300	02000000	02000100	
	00EE	YCbCrPositioning	1302	0300	01000000	02000000	
	00FA	Copyright	9882	0200	15000000	94030000	
	0106	Exif IFD Pointer	6987	0400	01000000	AA030000	
	0112	GPS IFD Offset	2588	0400	01000000	10050000	
	Offset (Hex)	Name			Offset (Hex)		
	011E	Next IFD Offset			7E060000		
	Offset (Hex)	Name			Data (Hex or "ASCII")		
	0122	BitPerSample Value			080008000800		
	0128	ImageDescription Value			"Exif_TIFF_YCC"00		
Walasa	0136	Make Value			"DSCompany"00		
Value longer than	0140	Model Value			"Example"00		
4byte of	0148	StripOffsets Value		(offset0	one, offset1, offset2offs	set95)	
0th IFD	025C	StripByteCounts Value		(count0	, count1, count2co	unt95)	
	0370	XResolution Value			480000001000000		
	037C	YResolution Value			480000001000000		
	0380	DateTime Value		"19	997:09:01 12:00:00"0	0	
	0394	Copyright Value (Last Byte is Padded)		"Сор	yright,ABCDE,1997"0	000	
Exif IFD	Offset (Hex)	Name		Int	eroperability Number	er	
	03AA	Exif IFD Number			1400		
	Offset (Hex)	Name	Tag ID (Hex)	Type (Hex)	Count (Hex)	ValueOffset (Hex or "ASCII")	
	03AC	ExposureTime	9A82	0500	01000000	A0040000	
	03AC 03B8	FNumber	9D82	0500	01000000	A8040000	
	03C4	ExifVersion	0090	0700	0400000	"0200"	
	03D0	DateTimeOriginal	0390	0200	14000000	B0040000	
			1				

JEITA CP-3451						
	03DC	DateTimeDigitized	0490	0200	14000000	C4040000
	03E8	ShutterSpeedValue	0192	0A00	01000000	D8040000
	03F4	ApertureValue	0292	0500	01000000	E0040000
	0400	BrightnessValue	0392	0A00	01000000	E8040000
	040C	ExposureBiasValue	0492	0A00	01000000	F0040000
	0418	MaxApertureRatioValue	0592	0500	01000000	F8040000
	0424	SubjectDistance	0692	0500	01000000	00050000
	0430	MeteringMode	0792	0300	01000000	01000000
	043C	LightSource	0892	0300	01000000	01000000
	0448	Flash	0992	0300	01000000	01000000
	0454	FocalLength	0A92	0500	01000000	08050000
	0460	SubSecTime	9092	0200	04000000	"000"00
	046C	SubSecTimeOriginal	9192	0200	04000000	"000"00
	0478	SubSecTimeDigitized	9292	0200	04000000	"000"00
	0484	FlashpixVersion	A000	0700	04000000	"0100"
	0490	ColorSpace	A001	0300	01000000	01000000
	Offset	Союгорасс	7,001	0000	Offset	0100000
	(Hex)	Name			(Hex)	
	049C	Next IFD Offset			00000000	
	Offset (Hex)	Name			Data (Hex or "ASCII")	
	04A0	ExposureTime Value			010000003C000000	
	04A8	FNumber Value			040000001000000	
	04B0	DateTimeOriginal Value		"1	997:09:01 12:00:00"00)
Value	04C4	DateTimeDigitized Value		"1	997:09:01 12:00:00"00)
longer than	04D8	ShutterSpeed Value			0600000001000000	
4 Bytes of Exif IFD	04E0	ApertureValue Value			040000001000000	
EXII II B	04E8	BrightnessValue Value			0000000001000000	
	04F0	ExposureBiasValue Value			0000000001000000	
	04F8	MaxApertureRatio Value			0100000001000000	
	0500	SubjectDistance Value			0F0000000A000000	
	0508	FocalLength Value			3200000001000000	
	Offset			Int	teroperability Numbe	r
	(Hex)	Name			(Hex)	-
	0510	GPS IFD Number			0013	
	Offset (Hex)	Name	Tag ID (Hex)	Type (Hex)	Count (Hex)	ValueOffset (Hex or "ASCII")
	Offset			Type (Hex) 0100		
	Offset (Hex)	Name	(Hex)	(Hex)	(Hex)	(Hex or "ASCII")
	Offset (Hex) 0512	Name GPSVersionIF	(Hex) 0000	(Hex)	(Hex) 04000000	(Hex or "ASCII") 02000000
	Offset (Hex) 0512 051E	Name GPSVersionIF GPSLatitudeRef	0000 0100	0100 0200	(Hex) 04000000 02000000 03000000 02000000	(Hex or "ASCII") 02000000 "N"000000
	Offset (Hex) 0512 051E 052A	Name GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef GPSLongitude	0000 0100 0200	0100 0200 0500	(Hex) 04000000 02000000 03000000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000 12060000
	Offset (Hex) 0512 051E 052A 0536	Name GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef	0000 0100 0200 0300	0100 0200 0500 0200	(Hex) 04000000 02000000 03000000 02000000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000
	Offset (Hex) 0512 051E 052A 0536 0542	Name GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef GPSLongitude	(Hex) 0000 0100 0200 0300 0400	0100 0200 0500 0200 0500	(Hex) 0400000 0200000 0300000 0200000 03000000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000 12060000
	Offset (Hex) 0512 051E 052A 0536 0542 054E	Name GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef GPSLongitude GPSAltitudeRef	(Hex) 0000 0100 0200 0300 0400 0500	0100 0200 0500 0200 0500 0500 0100	(Hex) 0400000 0200000 0300000 0200000 0300000 01000000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000 12060000 000000000
GPS IFD	Offset (Hex) 0512 051E 052A 0536 0542 054E 055A	Name GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef GPSLongitude GPSAltitudeRef GPSAltitudeRef	(Hex) 0000 0100 0200 0300 0400 0500 0600	0100 0200 0500 0200 0500 0100 0500	(Hex) 0400000 0200000 0300000 0200000 0300000 01000000 01000000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000 12060000 000000000 2A060000
GPS IFD	Offset (Hex) 0512 051E 052A 0536 0542 054E 055A 0566	Name GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef GPSLongitude GPSAltitudeRef GPSAltitudeRef GPSAltitude GPSTimeStamp	(Hex) 0000 0100 0200 0300 0400 0500 0600 0700	0100 0200 0500 0200 0500 0100 0500 0500	(Hex) 04000000 02000000 03000000 02000000 03000000 01000000 01000000 03000000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000 12060000 000000000 2A060000 320600000
GPS IFD	Offset (Hex) 0512 051E 052A 0536 0542 054E 055A 0566 0572	Name GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef GPSLongitude GPSAltitudeRef GPSAltitudeRef GPSAltitude GPSTimeStamp GPSSatellites	(Hex) 0000 0100 0200 0300 0400 0500 0600 0700 0800	0100 0200 0500 0200 0500 0100 0500 0500	(Hex) 04000000 02000000 03000000 02000000 03000000 01000000 03000000 03000000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000 12060000 00000000 2A060000 32060000 4A060000
GPS IFD	Offset (Hex) 0512 051E 052A 0536 0542 054E 055A 0566 0572 057E	Name GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef GPSLongitude GPSAltitudeRef GPSAltitudeRef GPSAltitude GPSTimeStamp GPSSatellites GPSStatus	(Hex) 0000 0100 0200 0300 0400 0500 0600 0700 0800 0900	0100 0200 0500 0500 0100 0500 0100 0500 05	(Hex) 0400000 0200000 0300000 0200000 0300000 0100000 0100000 0300000 0D00000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000 12060000 00000000 2A060000 32060000 4A060000 "A"000000
GPS IFD	Offset (Hex) 0512 051E 052A 0536 0542 054E 055A 0566 0572 057E 058A	Rame GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef GPSLongitude GPSAltitudeRef GPSAltitudeRef GPSAltitude GPSTimeStamp GPSSatellites GPSStatus GPSMeasureMode	(Hex) 0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 0A00	0100 0200 0500 0500 0100 0500 0100 0500 05	(Hex) 0400000 0200000 0300000 0200000 0300000 0100000 0100000 0300000 0D00000 0200000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000 12060000 00000000 2A060000 32060000 4A060000 "A"000000 "2"000000
GPS IFD	Offset (Hex) 0512 051E 052A 0536 0542 054E 055A 0566 0572 057E 058A 0596	Rame GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef GPSLongitude GPSAltitudeRef GPSAltitudeRef GPSAltitude GPSTimeStamp GPSSatellites GPSStatus GPSMeasureMode GPSDOP	(Hex) 0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 0A00 0B00	0100 0200 0500 0500 0100 0500 0500 0500	(Hex) 04000000 02000000 03000000 02000000 01000000 01000000 02000000 02000000 01000000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000 12060000 00000000 2A060000 32060000 4A060000 "A"000000 "2"000000 58060000
GPS IFD	Offset (Hex) 0512 051E 052A 0536 0542 054E 055A 0566 0572 057E 058A 0596 05A2	Rame GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef GPSLongitude GPSAltitudeRef GPSAltitudeRef GPSAltitude GPSTimeStamp GPSSatellites GPSStatus GPSMeasureMode GPSDOP GPSSpeedRef	(Hex) 0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 0A00 0B00 0C00	0100 0200 0500 0500 0100 0500 0500 0500	(Hex) 04000000 02000000 03000000 02000000 01000000 03000000 01000000 02000000 02000000 02000000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000 12060000 2A060000 32060000 4A060000 "A"000000 "2"000000 58060000 "K"000000
GPS IFD	Offset (Hex) 0512 051E 052A 0536 0542 054E 055A 0566 0572 057E 058A 0596 05A2 05AE	Rame GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef GPSLongitude GPSAltitudeRef GPSAltitudeRef GPSAltitude GPSTimeStamp GPSSatellites GPSStatus GPSMeasureMode GPSDOP GPSSpeedRef GPSSpeed	(Hex) 0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 0A00 0B00 0C00 0D00	0100 0200 0500 0500 0100 0500 0500 0500	(Hex) 04000000 02000000 03000000 03000000 01000000 01000000 02000000 02000000 01000000 02000000 01000000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000 12060000 2A060000 32060000 4A060000 "A"000000 "2"000000 58060000 "K"000000 60060000
GPS IFD	Offset (Hex) 0512 051E 052A 0536 0542 054E 055A 0566 0572 057E 058A 0596 05A2 05AE	Rame GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef GPSLongitude GPSAltitudeRef GPSAltitudeRef GPSAltitude GPSTimeStamp GPSSatellites GPSStatus GPSMeasureMode GPSDOP GPSSpeedRef GPSSpeed GPSTrackRef	(Hex) 0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 0A00 0B00 0C00 0D00 0E00	0100 0200 0500 0500 0100 0500 0500 0500	(Hex) 04000000 02000000 03000000 03000000 01000000 01000000 02000000 02000000 01000000 01000000 02000000 01000000 02000000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000 12060000 2A060000 32060000 4A060000 "A"000000 "2"000000 58060000 "K"000000 "K"000000 "T"000000
GPS IFD	Offset (Hex) 0512 051E 052A 0536 0542 054E 055A 0566 0572 057E 058A 0596 05A2 05AE 05BA	Rame GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef GPSLongitude GPSAltitudeRef GPSAltitudeRef GPSAltitude GPSAltitude GPSTimeStamp GPSSatellites GPSStatus GPSMeasureMode GPSDOP GPSSpeedRef GPSSpeed GPSTrackRef	(Hex) 0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 0A00 0B00 0C00 0D00 0E00 0F00	0100 0200 0500 0500 0100 0500 0500 0500	(Hex) 04000000 02000000 03000000 03000000 01000000 01000000 02000000 02000000 01000000 01000000 02000000 01000000 02000000 01000000 01000000 01000000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000 12060000 00000000 2A060000 32060000 4A060000 "A"000000 "2"000000 58060000 "K"000000 60060000 "T"000000
GPS IFD	Offset (Hex) 0512 051E 052A 0536 0542 054E 055A 0566 0572 057E 058A 0596 05A2 05A2 05AE 05A2	Rame GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef GPSLongitude GPSLongitude GPSAltitudeRef GPSAltitudeRef GPSAltitude GPSTimeStamp GPSSatellites GPSStatus GPSMeasureMode GPSDOP GPSSpeedRef GPSSpeed GPSTrackRef GPSTrack GPSImgDirectionRef	(Hex) 0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 0A00 0B00 0C00 0D00 0E00 0F00 1000	(Hex) 0100 0200 0500 0500 0100 0500 0500 0200 02	(Hex) 04000000 02000000 03000000 03000000 01000000 01000000 02000000 02000000 01000000 01000000 02000000 01000000 01000000 02000000 01000000 02000000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000 12060000 2A060000 32060000 4A060000 "A"000000 "2"000000 58060000 "K"000000 60060000 "T"000000 68060000 "T"000000
GPS IFD	Offset (Hex) 0512 051E 052A 0536 0542 054E 055A 0566 0572 057E 058A 0596 05A2 05AE 05AE 05BA 05C6 05D2 05DE 05EA Offset	Rame GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef GPSLongitude GPSLongitude GPSAltitudeRef GPSAltitude GPSAltitude GPSTimeStamp GPSSatellites GPSStatus GPSMeasureMode GPSDOP GPSSpeedRef GPSSpeed GPSTrackRef GPSTrack GPSImgDirectionRef GPSImgDirection	(Hex) 0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 0A00 0B00 0C00 0D00 0E00 0F00 1000 1100	(Hex) 0100 0200 0500 0500 0100 0500 0500 0200 02	(Hex) 04000000 02000000 03000000 03000000 01000000 01000000 02000000 02000000 01000000 02000000 01000000 02000000 01000000 02000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000 12060000 2A060000 32060000 4A060000 "A"000000 "2"000000 58060000 "K"000000 60060000 "T"000000 68060000 "T"000000
GPS IFD	Offset (Hex) 0512 051E 052A 0536 0542 054E 055A 0566 0572 057E 058A 0596 05A2 05AE 05BA 05C6 05D2	Rame GPSVersionIF GPSLatitudeRef GPSLatitude GPSLongitudeRef GPSLongitude GPSLongitude GPSAltitudeRef GPSAltitudeRef GPSAltitude GPSTimeStamp GPSSatellites GPSStatus GPSMeasureMode GPSDOP GPSSpeedRef GPSSpeed GPSTrackRef GPSTrack GPSImgDirectionRef GPSImgDirection GPSMapDatum	(Hex) 0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 0A00 0B00 0C00 0D00 0E00 0F00 1000 1100	(Hex) 0100 0200 0500 0500 0100 0500 0500 0200 02	(Hex) 04000000 02000000 03000000 03000000 03000000 01000000 03000000 02000000 02000000 01000000 02000000 01000000 02000000 01000000 02000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 02000000 "N"000000 FA050000 "E"000000 12060000 2A060000 32060000 4A060000 "A"000000 "2"000000 58060000 "K"000000 60060000 "T"000000 68060000 "T"000000

	Offset	M			Data	JEHA CP-34	
	(Hex)	Name			(Hex or "ASCII")		
	05FA	GPSLatitude Value	23000	000001000000	30000000010000000	80000001000000	
	0612	GPSLongitude Value	8B000	000001000000	22000000010000003	70000001000000	
Value	062A	GPSAltitude Value	E80B000064000000				
longer than	0632	GPSTimeStamp Value	00000	000001000000	00000000010000000	00000001000000	
4 Bytes of GPS IFD	064A	GPSSatellites Value (Last Byte is padded)			"2,7,14,15,16"0000	2,7,14,15,16"0000	
	0658	GPSDOP Value			010000001000000		
	0660	GPSSpeed Value			000000001000000		
	0668	GPSTrack Value			000000001000000		
	0670	GPSImgDirection Value	000000001000000				
	0678	GPSMapDatum Value			"TOKYO"00		
	Offset (Hex)	Name		Int	teroperability Numbe (Hex)	er	
Ì	067E	Number Of Interoperability			0F00		
	Offset (Hex)	Name	Tag ID (Hex)	Type (Hex)	Count (Hex)	ValueOffset (Hex or "ASCII")	
	0680	ImageWidth	0001	0400	01000000	5000000	
	068C	ImageLength	0101	0400	01000000	3C000000	
	0698	BitsPerSample	0201	0300	03000000	38070000	
	06A4	Compression	0301	0300	01000000	01000000	
	06B0	PhotometricInterpretation	0601	0300	01000000	06000000	
	06BC	StripOffsets	1101	0400	01000000	4E070000	
1st IFD	06C8	SamplesPerPixel	1501	0300	01000000	03000000	
	06D4	RowsPerStrip	1601	0400	01000000	3C000000	
	06E0	StripByteCounts	1701	0400	01000000	80250000	
	06EC	XResolution	1A01	0500	01000000	3E070000	
	06F8	YResolution	1B01	0500	01000000	46070000	
	0704	PlanarConfiguration	1C01	0300	01000000	01000000	
	0710	ResolutionUnit	2801	0300	01000000	02000000	
	071C	YCbCrSubSampling	1202	0300	02000000	02000100	
	0728	YCbCrPositioning	1302	0300	01000000	02000000	
	Offset (Hex)	Name			Offset (Hex)		
Ì	0734	Next IFD Offset			00000000		
Value	Offset (Hex)	Name			Data (Hex or "ASCII")		
longer than	0738	BitPerSample Value			080008000800		
4byte of	073E	XResolution Value			480000001000000		
1st IFD	0746	YResolution Value			480000001000000		
	074E	(Thumbnail Image Data Strip)					
	Offset (Hex)	Name			Data (Hex or "ASCII")		
l	2CCE	Image Data Strip0			:		
Primary Image Data	4FCE	Image Data Strip1			:		
Dala	:	:			:		
	:	:			:		
	0978CE	Image Data Strip68			:		

A.3 JPEG Compressed (4:2:2) File

Table 36 JPEG Compressed (4:2:2) File Description Sample Contents

Primary Image	
Recording Format	JPEG
Subsampling	YCC 4:2:2
Restart Markers	Inserted
Quantization Tables	3
Pixels	640 (W) x 480 (H)
Image Title	Exif_JPEG_422
Image Input Equipment Manufacturer	DS Company
Image Input Equipment Model Name	Example
Orientation	Normal
Image Resolution	72 dpi (Width), 72 dpi (Length)
File Change Date and Time	1997:09:01 12:00:00
Copyright	Copyright, ABCDE,1997
Exif-specific Information	
Version	Ver. 2.0
Date and Time of Original Image Creation	1997:09:01 12:00:00
Date and Time of File Creation	1997:09:01 12:00:00
Components	Y,Cb,Cr
Image Compression Mode	2bit/pel
Shutter Speed	59/10 (equivalent to 1/60 sec.)
Aperture	50/10 (equivalent to F:5.6)
Brightness	80/10
Exposure Bias	0/0
Maximum Lens Aperture	200/10
Subject Distance	20/10
Metering Mode	MultiSpot
Light Source	Daylight
Flash ON/OFF	ON
Thumbnails	
Recording Format	JPEG
Subsampling	YCC 4:2:2
Pixels	80 (W) x 60 (H)
Image Resolution	72 dpi (Width), 72 dpi (Length)

Table 37 JPEG Compressed (4:2:2) File JPEG Stream Description Sample

Offset (Hex)	Maker Segment	Name	Code (Hex)	Comment
0000	SOI	SOI Marker	FFD8	Start of Image
0002		APP1 Marker	FFE1	
0004		APP1 Length	291C	
0006	APP1	Identifier	"Exif"00	
000B		Pad	00	
000C		APP1 Body		See Next Table
0E39		DQT Marker	FFDB	Define Quantization Table
0E3B		DQT Length	00C5	
0E3D		Pq, Tq	00	
0E3E	DQT	table elements	100B0C0E	64 Bytes of Data
0E7E	DQT	Pq,Tq	01	
0E7F		table elements	0F101016	64 Bytes of Data
0EBF		Pq,Tq	02	
0EC0		table elements	0F101016	64 Bytes of Data

				J⊑H
0F00		DHT Marker	FFC4	
0F02		DHT Length	01A2	
0F04		Th	00	Table 0 for DC
0F05		Li	00010501	
0F15		Vij	00010203	
0F21		Th	10	Table 0 for AC
0F22		Li	00020103	10010 0 101710
0F32	DHT	Vij	01020300	
0FD4		Th	01020300	Table 1 for DC
0FD5		Li	00030101	Table 1 to DC
0FE5			00030101	
		Vij		Table 1 for AC
0FF1		Th	11	Table 1 for AC
0FF2		Li Ve:	00020102	
1002		Vij	00010203	
10A4		DRI Marker	FFDD	
10A6	DRI	DRI Length	0004	
10A8		Ri	0004	
10AA	-	SOF0 Marker	FFC0	
10AC		SOF0 Length	0011	
10AE		Р	08	
10AF		Y	01E0	
10B1		×	0280	
10B3		Nf	03	
10B4		C1	01	
10B5	SOF0	H1,V1	21	
10B6		Tq1	00	
10B7		C2	02	
10B8		H2,V2	11	
10B9		Tq2	01	
10BA		C3	03	
10BR		H3,V3	11	
10BC		Tq3	02	
10BC		SOS Marker	FFDA	
10BF		SOS Length	000C	
10C1		Ns Co1	03	
10C2		Cs1	01	
10C3		Td1,Ta1	00	
10C4	sos	Cs2	02	
10C5		Td2,Ta2	11	
10C6		Cs3	03	
10C7		Td3,Ta3	11	
10C8		Ss	00	
10C9		Se	3F	
10CA		Ah,Al	00	
10CB	Image Data		F36A	Compressed Data
111C4	EOI		FFD9	

Table 38 JPEG Compressed (4:2:2) File APP1 Description Sample

	Offset (Hex)	Name		(He	Data ex or "ASCII")		
Header	0000	Byte Order			4D4D ("II")		
	0002	42			2A00		
	0004	0th IFD Offset			08000000		
	Offset (Hex)	Name	Interoperability Number (Hex)			er	
	0008	Number of Interoperability			0B00		
	Offset (Hex)	Name	Tag ID (Hex)	Type (Hex)	Count (Hex)	ValueOffset (Hex or "ASCII")	
	000A	ImageDescription	0E01	0200	0E000000	92000000	
	0016	Make	0F01	0200	09000000	A0000000	
	0022	Model	1001	0200	08000000	AA000000	
	002E	Orientation	1201	0300	01000000	01000000	
0th IFD	003A	XResolution	1A01	0500	01000000	B2000000	
	0046	YResolution	1B01	0500	01000000	BA000000	
	0052	ResolutionUnit	2801	0300	01000000	02000000	
	005E	DateTime	3201	0200	14000000	C2000000	
	006A	YCbCrPositioning	1302	0300	01000000	02000000	
	0076	CopyRight	9882	0200	15000000	D6000000	
	0082	Exif IFD Pointer	6987	0400	01000000	EC000000	
	Offset (Hex)	Name			Offset (Hex)		
	008E	Next IFD Offset			C402		
	Offset (Hex)	Name		(He	Data ex or "ASCII")		
	0092	ImageDescription Value					
Value	00A0	Make Value		"DSCompany"00			
Value longer than	00AA	Model Value	"Example"00				
4byte of 0th IFD	00B2	XResolution Value			0000001000000		
	00BA	YResolution Value			0000001000000		
	00C2	DateTime Value			09:01 12:00:00"00	n	
	00D6	Copyright Value (Last Byte is Padded)			t,ABCDE,1997"0		
Exif IFD	Offset	Name	Interoperability Number			er	
	(Hex)				(Hex)		
	(Hex) 00EC	Exif IFD Number			1900		
	00EC Offset	Exif IFD Number Name	Tag ID (Hex)	Type (Hex)	1900 Count	ValueOffset (Hex or "ASCII")	
	00EC Offset (Hex)	Name	(Hex)	(Hex)	1900 Count (Hex)	(Hex or "ASCII")	
	00EC Offset (Hex) 00EE	Name ExposureTime	(Hex) 9A82	(Hex) 0500	1900 Count (Hex) 01000000	(Hex or "ASCII") 1E020000	
	00EC Offset (Hex) 00EE 00FA	Name ExposureTime FNumber	9A82 9D82	0500 0500	1900 Count (Hex) 01000000 01000000	(Hex or "ASCII") 1E020000 26020000	
	00EC Offset (Hex) 00EE 00FA 0106	Name ExposureTime FNumber ExifVersion	9A82 9D82 0090	0500 0500 0700	1900 Count (Hex) 01000000 01000000 04000000	(Hex or "ASCII") 1E020000 26020000 "0200"	
	00EC Offset (Hex) 00EE 00FA 0106 0112	Name ExposureTime FNumber ExifVersion DateTimeOriginal	9A82 9D82 0090 0390	0500 0500 0700 0200	1900 Count (Hex) 01000000 01000000 04000000 14000000	(Hex or "ASCII") 1E020000 26020000 "0200" 2E020000	
	00EC Offset (Hex) 00EE 00FA 0106 0112 011E	Name ExposureTime FNumber ExifVersion DateTimeOriginal DateTimeDigitized	9A82 9D82 0090 0390 0490	0500 0500 0700 0200 0200	1900 Count (Hex) 01000000 01000000 04000000 14000000 14000000	(Hex or "ASCII") 1E020000 26020000 "0200" 2E020000 42020000	
	00EC Offset (Hex) 00EE 00FA 0106 0112 011E 012A	Name ExposureTime FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration	9A82 9D82 0090 0390 0490 0191	0500 0500 0700 0200 0200 0200 0700	1900 Count (Hex) 01000000 01000000 04000000 14000000 14000000 04000000	(Hex or "ASCII") 1E020000 26020000 "0200" 2E020000 42020000 01020000	
	00EC Offset (Hex) 00EE 00FA 0106 0112 011E 012A 0136	Name ExposureTime FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel	9A82 9D82 0090 0390 0490 0191 0292	0500 0500 0700 0700 0200 0200 0700 0500	1900 Count (Hex) 01000000 01000000 04000000 14000000 04000000 01000000	(Hex or "ASCII") 1E020000 26020000 "0200" 2E020000 42020000 01020000 56020000	
	00EC Offset (Hex) 00EE 00FA 0106 0112 011E 012A 0136 0142	Name ExposureTime FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue	9A82 9D82 0090 0390 0490 0191 0292 0192	0500 0500 0700 0200 0200 0700 0500 0A00	1900 Count (Hex) 01000000 01000000 04000000 14000000 04000000 01000000 01000000	(Hex or "ASCII") 1E020000 26020000 "0200" 2E020000 42020000 01020000 56020000 5E020000	
	00EC Offset (Hex) 00EE 00FA 0106 0112 011E 012A 0136 0142 014E	Name ExposureTime FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue	9A82 9D82 0090 0390 0490 0191 0292 0192 0292	0500 0500 0700 0200 0200 0700 0500 0A00 0500	1900 Count (Hex) 01000000 01000000 04000000 14000000 04000000 01000000 01000000 01000000	(Hex or "ASCII") 1E020000 26020000 "0200" 2E020000 42020000 01020000 56020000 5E020000	
	00EC Offset (Hex) 00EE 00FA 0106 0112 011E 012A 0136 0142 014E 015A	Name ExposureTime FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue BrightnessValue	9A82 9D82 0090 0390 0490 0191 0292 0192 0292 0392	0500 0500 0700 0200 0200 0700 0500 0A00 0500 0A00	1900 Count (Hex) 01000000 01000000 04000000 14000000 04000000 01000000 01000000 01000000	(Hex or "ASCII") 1E020000 26020000 "0200" 2E020000 42020000 01020000 56020000 5E020000 66020000	
	00EC Offset (Hex) 00EE 00FA 0106 0112 011E 012A 0136 0142 014E 015A 0166	Name ExposureTime FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue BrightnessValue ExposureBiasValue	9A82 9D82 0090 0390 0490 0191 0292 0192 0292 0392 0492	0500 0500 0700 0200 0200 0700 0500 0A00 0500 0A00 0A00	1900 Count (Hex) 01000000 01000000 04000000 14000000 04000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 1E020000 26020000 "0200" 2E020000 42020000 01020000 56020000 5E020000 66020000 6E020000 76020000	
	00EC Offset (Hex) 00EE 00FA 0106 0112 011E 012A 0136 0142 014E 015A 0166 0172	Name ExposureTime FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue BrightnessValue ExposureBiasValue MaxApertureRatioValue	9A82 9D82 0090 0390 0490 0191 0292 0192 0292 0392 0492 0592	0500 0500 0700 0200 0200 0700 0500 0A00 0A00 0A00 0A00	1900 Count (Hex) 01000000 01000000 04000000 14000000 04000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 1E020000 26020000 "0200" 2E020000 42020000 56020000 56020000 66020000 6E020000 76020000	
	00EC Offset (Hex) 00EE 00FA 0106 0112 011E 012A 0136 0142 014E 015A 0166 0172 017E	Name ExposureTime FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue BrightnessValue ExposureBiasValue MaxApertureRatioValue SubjectDistance	9A82 9D82 0090 0390 0490 0191 0292 0192 0292 0392 0492 0592 0692	0500 0500 0700 0200 0200 0700 0500 0A00 0500 0A00 0500 0500	1900 Count (Hex) 01000000 01000000 04000000 14000000 04000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 1E020000 26020000 "0200" 2E020000 42020000 01020000 56020000 66020000 66020000 76020000 76020000 86020000	
	00EC Offset (Hex) 00EE 00FA 0106 0112 011E 012A 0136 0142 014E 015A 0166 0172 017E 018A	Name ExposureTime FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue BrightnessValue ExposureBiasValue MaxApertureRatioValue SubjectDistance MeteringMode	9A82 9D82 0090 0390 0490 0191 0292 0192 0292 0392 0492 0592 0692 0792	(Hex) 0500 0500 0700 0200 0200 0700 0500 0A00 0A00 0A00 0500 0500 0500 0500 0500 0500	1900 Count (Hex) 01000000 01000000 04000000 14000000 04000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 1E020000 26020000 "0200" 2E020000 42020000 56020000 56020000 66020000 6E020000 7E020000 7E020000 86020000 01000000	
	00EC Offset (Hex) 00EE 00FA 0106 0112 011E 012A 0136 0142 014E 015A 0166 0172 017E 018A 0196	Name ExposureTime FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue BrightnessValue ExposureBiasValue MaxApertureRatioValue SubjectDistance MeteringMode LightSource	9A82 9D82 0090 0390 0490 0191 0292 0192 0292 0392 0492 0592 0692 0792 0892	(Hex) 0500 0500 0700 0200 0200 0700 0500 0A00 0A00 0A00 0500 0A00 0500 0300 0300	1900 Count (Hex) 01000000 01000000 04000000 14000000 04000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 1E020000 26020000 "0200" 2E020000 42020000 56020000 56020000 66020000 6E020000 76020000 76020000 86020000 01000000 01000000	
	00EC Offset (Hex) 00EE 00FA 0106 0112 011E 012A 0136 0142 014E 015A 0166 0172 017E 018A 0196 01A2	ExposureTime FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue BrightnessValue ExposureBiasValue MaxApertureRatioValue SubjectDistance MeteringMode LightSource Flash	9A82 9D82 0090 0390 0490 0191 0292 0192 0292 0392 0492 0592 0692 0792 0892 0992	(Hex) 0500 0500 0700 0200 0200 0700 0500 0A00 0A00 0A00 0500 0500 0300 0300 0300	1900 Count (Hex) 01000000 01000000 04000000 14000000 04000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 1E020000 26020000 "0200" 2E020000 42020000 56020000 5E020000 6E020000 7E020000 7E020000 86020000 01000000 010000000	
	00EC Offset (Hex) 00EE 00FA 0106 0112 011E 012A 0136 0142 014E 015A 0166 0172 017E 018A 0196	Name ExposureTime FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue BrightnessValue ExposureBiasValue MaxApertureRatioValue SubjectDistance MeteringMode LightSource	9A82 9D82 0090 0390 0490 0191 0292 0192 0292 0392 0492 0592 0692 0792 0892	(Hex) 0500 0500 0700 0200 0200 0700 0500 0A00 0A00 0A00 0500 0A00 0500 0300 0300	1900 Count (Hex) 01000000 01000000 04000000 14000000 04000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 1E020000 26020000 "0200" 2E020000 42020000 56020000 56020000 66020000 6E020000 76020000 76020000 86020000 01000000 01000000	

	,					JEITA CP-
	01D2	SubSecTimeOriginal	9192	0200	04000000	"000"00
	01DE	SubSecTimeDigitized	9292	0200	04000000	"000"00
	01EA	FlashpixVersion	A000	0700	04000000	"0100"
	01F6	Colorspace	A001	0300	01000000	01000000
	0202	Pixel X Dimension	A002	0400	01000000	80020000
	020E	Pixel Y Dimension	A003	0400	01000000	E0010000
	Offset (Hex)	Name			Offset (Hex)	
	021A	Next IFD Offset			00000000	
	Offset (Hex)	Name		(H	Data ex or "ASCII")	
	021E	ExposureTime Value		0100	000003C000000	
	0226	FNumber Value		040	0000001000000	
	022E	DateTimeOriginal Value		"1997:	09:01 12:00:00"0	0
	0242	DateTimeDigitized Value		"1997:	09:01 12:00:00"0	0
Value	0256	CompressedBitsPerPixel Value		020	0000001000000	
longer than 4 Bytes of	025E	ShutterSpeedValue Value		060	0000001000000	
Exif IFD	0266	ApertureValue Value		040	0000001000000	
	026E	BrightnessValue Value	000000001000000			
	0276	ExposureBiasValue Value	000000001000000			
	027E	MaxApertureRatioValue Value	010000001000000			
	0286	SubjectDistance Value	0F000000A000000			
	028E	FocalLength Value	320000001000000			
	0296	UserComment Value (46 Bytes)	4A49530000000000			
	Offset (Hex)	Name		Intero	perability Numbe (Hex)	er
	02C4	Number Of Interoperability			0700	
	Offset (Hex)	Name	Tag ID (Hex)	Type (Hex)	Count (Hex)	ValueOffset (Hex or "ASCII")
	02C6	Compression	0301	0300	01000000	01000000
	02D2	XResolution	1A01	0500	01000000	1E030000
1st IFD	02DE	YResolution	1B01	0500	01000000	26030000
	02EA	ResolutionUnit	2801	0300	01000000	02000000
	02F6	JPEGInterchangeFormat	0102	0400	01000000	2D0E0000
	0302	JPEGInterchangeFormatLength	0202	0400	01000000	FF0A0000
	030E	YCbCrPositioning	1302	0300	01000000	02000000
	Offset (Hex)	Name			Offset (Hex)	
	031A	Next IFD Offset			00000000	
Value longer than	Offset (Hex)	Data (Hex or "ASCII")			Name	
	031E	480000001000000		XR	esolution Value	
4byte of 1st IFD		40000000400000		YR	esolution Value	
4byte of 1st IFD	0326	480000001000000	<u> </u>			
Thumbnail Image Data	0326 Offset (Hex)	Name			Data	

A.4 JPEG Compressed (4:2:0) File

Table 39 JPEG Compressed (4:2:0) File Description Sample Contents

Primary Image	
Recording Format	JPEG
Subsampling	YCC 4:2:0
Restart Markers	Inserted
Quantization Tables	2
Pixels	620 (W) x 475 (H)
Image Title	620x475
SOF Recorded Pixels	640x475
DCT Data	640x480
Image Title	Exif_JPEG_420
Image Input Equipment Manufacturer	DSCompany
Image Input Equipment Model Name	Example
Orientation	Normal
Image Resolution	72 dpi (Width), 72 dpi (Length)
File Change Date and Time	1997:09:01 12:00:00
Copyright	Copyright, ABCDE,1997
Exif-specific Information	
Version	Ver. 2.0
Date and Time of Original Image Creation	1997:09:01 12:00:00
Date and Time of File Creation	1997:09:01 12:00:00
Components	Y,Cb,Cr
Image Compression Mode	2bit/pel
Shutter Speed	59/10 (equivalent to 1/60 sec.)
Aperture	50/10 (equivalent to F:5.6)
Brightness	80/10
Exposure Bias	0/0
Maximum Lens Aperture	200/10
Subject Distance	20/10
Metering Mode	MultiSpot
Light Source	Daylight
Flash ON/OFF	ON
Thumbnails	
Recording Format	TIFF
Subsampling	YCC 4:2:0
Pixels	80x60
Image Resolution	72 dpi (Width), 72 dpi (Length)

Table 40 JPEG Compressed (4:2:0) File JPEG Stream Description Sample

Offset (Hex)	Maker Segment	Name	Code (Hex)	Comment
0000	SOI	SOI Marker	FFD8	Start of Image
0002		APP1 Marker	FFE1	
0004		APP1 Length	1FBC	
0006	APP1	Identifier	"Exif"00	
000B		Pad	00	
000C		APP1 Body		See Next Table
1FC0	DQT	DQT Marker	FFDB	Define Quantization Table
1FC2		DQT Length	0084	
1FC4		Pq, Tq	00	
1FC5		table elements	08060607	64 Bytes of Data
2005		Pq,Tq	01	

2006		table elements	0909090C	64 Bytes of Data
2046		DHT Marker	FFC4	
2048		DHT Length	01A2	
204A		Th	00	Table 0 for DC
204B		Li	00010501	
205B		Vij	00010203	
2067		Th	10	Table 0 for AC
2068		Li	00020103	
2078	DHT	Vij	01020300	
211A		Th	01	Table 1 for DC
211B		Li	00030101	10010 1 101 20
212B		Vij	00010203	
2137		Th	11	Table 1 for AC
2138		Li	00020102	Table 1 to Ao
2148		Vij	00020102	
-		-	FFDD	
21EA	DRI	DR Marker		
21EC	DRI	DRI Length	0004	
21EE		Ri	0004	
21F0		SOF0 Marker	FFC0	
21F2		SOF0 Lentth	0011	
21F4		Р	08	
21F5		Y	01DB	
21F7		X	0280	
21F9		Nf	03	
21FA		C1	01	
21FB	SOF0	H1,V1	22	
21FC		Tq1	00	
21FD		C2	02	
21FE		H2,V2	11	
21FF		Tq2	01	
2200		C3	03	
2201		H3,V3	11	
2202		Tq3	01	
2203		SOS Marker	FFDA	
2205		SOS Length	000C	
2207		Ns	03	
2208		Cs1	01	
2209		Td1,Ta1	00	
220A		Cs2	02	
220B	SOS	Td2,Ta2	11	
220C		Cs3	03	
220D		Td3,Ta3	11	
220E		Ss	00	
220F		Se	3F	
2210		Ah,Al	00	
2211	Image Data		F9FE	Compressed Data
13BA4	EOI		FFD9	

Table 41 JPEG Compressed (4:2:0) File APP1 Description Sample

	Offset (Hex)	Name		(H	Data lex or "ASCII")		
Header	0000	Byte Order			4D4D ("II")		
	0002	42	2A00				
	0004	0th IFD Offset	08000000				
	Offset (Hex)	Name		Interd	perability Numb (Hex)	er	
	0008	Number of Interoperability			0B00		
	Offset (Hex)	Name	Tag ID (Hex)	Type (Hex)	Count (Hex)	ValueOffset (Hex or "ASCII")	
	000A	ImageDescription	0E01	0200	0E000000	92000000	
	0016	Make	0F01	0200	09000000	A0000000	
	0022	Model	1001	0200	08000000	AA000000	
	002E	Orientation	1201	0300	01000000	01000000	
0th IFD	003A	XResolution	1A01	0500	01000000	B2000000	
	0046	YResolution	1B01	0500	01000000	BA000000	
	0052	ResolutionUnit	2801	0300	01000000	02000000	
	005E	DateTime	3201	0200	14000000	C2000000	
	006A	YCbCrPositioning	1302	0300	01000000	02000000	
	0076	Copyright	9882	0200	15000000	D6000000	
	0082	Exif IFD Pointer	6987	0400	01000000	EC000000	
	Offset (Hex)	Name			Offset (Hex)		
	008E	Next IFD Offset			C402		
	Offset				Data		
	(Hex)	Name			lex or "ASCII")		
Value	0092	ImageDescription Value			if_JPEG_420"00		
Value longer than	00A0	Make Value		"[SCompany"00		
4byte of 0th	00AA	Model Value			"Example"00		
IFD	00B2	XResolution Value	480000001000000				
	00BA	YResolution Value	480000001000000				
	00C2	DateTime Value			:09:01 12:00:00"0		
	00D6	Copyright Value (Last Byte is Padded)		"Copyrig	ht,ABCDE,1997"(0000	
Exif IFD	Offset (Hex)	Name	Interoperability Number (Hex)				
	00EC	Exif IFD Number			1900		
	Offset (Hex)	Name	Tag ID (Hex)	Type (Hex)	Count (Hex)	ValueOffset (Hex or "ASCII")	
	00EE	ExposureTime	0400	0500	01000000	1E020000	
			9A82	0000			
	00FA	FNumber	9A62 9D82	0500	01000000	26020000	
	00FA 0106				01000000 04000000	26020000 "0200"	
		FNumber	9D82	0500			
	0106	FNumber ExifVersion	9D82 0090	0500 0700	04000000	"0200"	
	0106 0112	FNumber ExifVersion DateTimeOriginal	9D82 0090 0390	0500 0700 0200	0400000 1400000	"0200" 2E020000	
	0106 0112 011E	FNumber ExifVersion DateTimeOriginal DateTimeDigitized	9D82 0090 0390 0490 0191	0500 0700 0200 0200 0700	0400000 1400000 1400000	"0200" 2E020000 42020000	
	0106 0112 011E 012A	FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration	9D82 0090 0390 0490	0500 0700 0200 0200	0400000 1400000 1400000 0400000	"0200" 2E020000 42020000 01020300	
	0106 0112 011E 012A 0136	FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel	9D82 0090 0390 0490 0191 0292	0500 0700 0200 0200 0700 0500	0400000 1400000 1400000 0400000 01000000	"0200" 2E020000 42020000 01020300 56020000	
	0106 0112 011E 012A 0136 0142	FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue	9D82 0090 0390 0490 0191 0292 0192	0500 0700 0200 0200 0700 0500 0A00	0400000 1400000 1400000 0400000 01000000	"0200" 2E020000 42020000 01020300 56020000 5E020000	
	0106 0112 011E 012A 0136 0142 014E	FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue	9D82 0090 0390 0490 0191 0292 0192 0292	0500 0700 0200 0200 0700 0500 0A00 0500	0400000 1400000 1400000 0400000 0100000 0100000	"0200" 2E020000 42020000 01020300 56020000 5E020000	
	0106 0112 011E 012A 0136 0142 014E 015A	FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue BrightnessValue	9D82 0090 0390 0490 0191 0292 0192 0292 0392	0500 0700 0200 0200 0700 0500 0A00 0500 0A00	0400000 1400000 1400000 0400000 0100000 0100000 0100000	"0200" 2E020000 42020000 01020300 56020000 5E020000 66020000	
	0106 0112 011E 012A 0136 0142 014E 015A 0166 0172	FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue BrightnessValue ExposureBiasValue	9D82 0090 0390 0490 0191 0292 0192 0292 0392 0492	0500 0700 0200 0200 0700 0500 0A00 0A00 0A00 0A00	0400000 1400000 1400000 0400000 0100000 0100000 0100000 0100000	"0200" 2E020000 42020000 01020300 56020000 5E020000 66020000 6E020000 76020000	
	0106 0112 011E 012A 0136 0142 014E 015A 0166	FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue BrightnessValue ExposureBiasValue MaxApertureRatioValue SubjectDistance	9D82 0090 0390 0490 0191 0292 0192 0292 0392 0492 0592 0692	0500 0700 0200 0200 0700 0500 0A00 0500 0A00 0500 0500	0400000 1400000 1400000 0400000 0100000 0100000 0100000 0100000 0100000 0100000	"0200" 2E020000 42020000 01020300 56020000 5E020000 66020000 76020000 7E020000 86020000	
	0106 0112 011E 012A 0136 0142 014E 015A 0166 0172 017E 018A	FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue BrightnessValue ExposureBiasValue MaxApertureRatioValue SubjectDistance MeteringMode	9D82 0090 0390 0490 0191 0292 0192 0292 0392 0492 0592 0692 0792	0500 0700 0200 0200 0700 0500 0A00 0500 0A00 0500 0500 05	0400000 1400000 1400000 0400000 0100000 0100000 0100000 0100000 0100000 0100000 0100000	"0200" 2E020000 42020000 01020300 56020000 6E020000 6E020000 76020000 7E020000 86020000 010000000	
	0106 0112 011E 012A 0136 0142 014E 015A 0166 0172 017E 018A 0196	FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue BrightnessValue ExposureBiasValue MaxApertureRatioValue SubjectDistance MeteringMode LightSource	9D82 0090 0390 0490 0191 0292 0192 0292 0392 0492 0592 0692 0792 0892	0500 0700 0200 0200 0700 0500 0A00 0500 0A00 0500 0500 05	04000000 14000000 14000000 04000000 01000000 01000000 01000000 01000000	"0200" 2E020000 42020000 01020300 56020000 5E020000 66020000 76020000 7E020000 86020000 01000000	
	0106 0112 011E 012A 0136 0142 014E 015A 0166 0172 017E 018A 0196 01A2	FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue BrightnessValue ExposureBiasValue MaxApertureRatioValue SubjectDistance MeteringMode LightSource Flash	9D82 0090 0390 0490 0191 0292 0192 0292 0392 0492 0592 0692 0792 0892	0500 0700 0200 0200 0700 0500 0A00 0500 0A00 0500 0500 0300 03	04000000 14000000 14000000 04000000 01000000 01000000 01000000 01000000	"0200" 2E020000 42020000 01020300 56020000 5E020000 66020000 76020000 7E020000 86020000 01000000 01000000	
	0106 0112 011E 012A 0136 0142 014E 015A 0166 0172 017E 018A 0196	FNumber ExifVersion DateTimeOriginal DateTimeDigitized ComponentsConfiguration CompressedBitsPerPixel ShutterSpeedValue ApertureValue BrightnessValue ExposureBiasValue MaxApertureRatioValue SubjectDistance MeteringMode LightSource	9D82 0090 0390 0490 0191 0292 0192 0292 0392 0492 0592 0692 0792 0892	0500 0700 0200 0200 0700 0500 0A00 0500 0A00 0500 0500 05	04000000 14000000 14000000 04000000 01000000 01000000 01000000 01000000	"0200" 2E020000 42020000 01020300 56020000 5E020000 66020000 76020000 7E020000 86020000 01000000	

	i		i.			JEITA CP-34	
	01D2	SubSecTimeOriginal	9192	0200	04000000	"000"00	
	01DE	SubSecTimeDigitized	9292	0200	04000000	"000"00	
	01EA	FlashpixVersion	A000	0700	04000000	"0100"	
	01F6	ColorSpace	A001	0300	01000000	01000000	
	0202	Pixel X Dimension	A002	0400	01000000	6C020000	
	020E	Pixel Y Dimension	A003	0400	01000000	DB010000	
	Offset (Hex)	Name			Offset (Hex)		
	021A	Next IFD Offset			00000000		
	Offset (Hex)	Name	Data (Hex or "ASCII")				
	021E	ExposureTime Value		010	000003C000000		
	0226	FNumber Value	040000001000000				
	022E	DateTimeOriginal Value		"1997:09:01 12:00:00"00			
	0242	DateTimeDigitized Value		"1997	:09:01 12:00:00"0	0	
Value	0256	CompressedBitsPerPixel Value		020	0000001000000		
longer than 4 Bytes of	025E	ShutterSpeedValue Value		060	0000001000000		
Exif IFD	0266	ApertureValue Value		040	0000001000000		
	026E	BrightnessValue Value		000	0000001000000		
	0276	ExposureBiasValue Value		000	0000001000000		
	027E	MaxApertureRatioValue Value		010	0000001000000		
	0286	SubjectDistance Value		0F0	000000A000000		
	028E	FocalLength Value			0000001000000		
	0296	UserComment Value (46 Bytes)			95300000000000	<u>.</u>	
	Offset (Hex)	Name		Interoperability Number (Hex)			
	02C4	Number Of Interoperability	0F00				
	Offset		Tag ID	Туре	Count	ValueOffset	
	(Hex)	Name	(Hex)	(Hex)	(Hex)	(Hex or "ASCII")	
	(Hex)	ImageWidth	(Hex)	(Hex)	(Hex)	(Hex or "ASCII")	
	(Hex) 02C6		(Hex) 0001	(Hex) 0400	(Hex) 01000000	(Hex or "ASCII") 50000000	
,	02C6 02D2	ImageWidth ImageLength	(Hex) 0001 0101	0400 0400	(Hex) 01000000 01000000	(Hex or "ASCII") 50000000 3C000000	
	(Hex) 02C6 02D2 02DE 02EA	ImageWidth ImageLength BitsPerSample Compression	0001 0101 0201 0301	0400 0400 0300 0300	(Hex) 01000000 01000000 03000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000	
	02C6 02D2 02DE 02EA 02F6	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation	0001 0101 0201 0301 0601	0400 0400 0400 0300 0300 0300	(Hex) 01000000 01000000 03000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000	
1st IFD	(Hex) 02C6 02D2 02DE 02EA	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets	0001 0101 0201 0301	0400 0400 0300 0300	(Hex) 01000000 01000000 03000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 060000000	
1st IFD	02C6 02D2 02DE 02EA 02F6 0302 030E	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets SamplesPerPixel	0001 0101 0201 0301 0601 1101 1501	0400 0400 0300 0300 0300 0300 0400 0300	(Hex) 01000000 01000000 03000000 01000000 01000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 06000000 94030000 03000000	
1st IFD	02C6 02D2 02DE 02EA 02F6 0302 030E 031A	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets SamplesPerPixel RowsPerStrip	0001 0101 0201 0301 0601 1101 1501 1601	0400 0400 0300 0300 0300 0400 0300 0400	(Hex) 01000000 01000000 03000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 06000000 94030000 03000000 3C0000000	
1st IFD	02C6 02D2 02DE 02EA 02F6 0302 030E 031A 0326	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets SamplesPerPixel RowsPerStrip StripByteCounts	0001 0101 0201 0301 0601 1101 1501 1601 1701	0400 0400 0300 0300 0300 0400 0300 0400 0400	(Hex) 01000000 01000000 03000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 06000000 94030000 03000000 3C0000000 201C00000	
1st IFD	02C6 02D2 02DE 02EA 02F6 0302 030E 031A	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets SamplesPerPixel RowsPerStrip	(Hex) 0001 0101 0201 0301 0601 1101 1501 1601 1701 1A01	0400 0400 0300 0300 0300 0400 0300 0400 0400 0500	(Hex) 01000000 01000000 03000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 06000000 94030000 03000000 3C000000 201C00000 84030000	
1st IFD	02C6 02D2 02DE 02EA 02F6 0302 030E 031A 0326 0332 033E	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets SamplesPerPixel RowsPerStrip StripByteCounts XResolution YResolution	(Hex) 0001 0101 0201 0301 0601 1101 1501 1601 1701 1A01 1B01	0400 0400 0300 0300 0300 0400 0400 0400	(Hex) 01000000 01000000 03000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 06000000 94030000 3C000000 3C000000 201C0000 84030000	
1st IFD	02C6 02D2 02DE 02EA 02F6 0302 030E 031A 0326 0332 033E 034A	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets SamplesPerPixel RowsPerStrip StripByteCounts XResolution YResolution PlanarConfiguration	0001 0101 0201 0301 0601 1101 1501 1601 1701 1A01 1B01 1C01	0400 0400 0300 0300 0300 0400 0400 0400	(Hex) 01000000 01000000 03000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 94030000 93000000 3C000000 201C0000 84030000 8C0300000 010000000	
1st IFD	02C6 02D2 02DE 02EA 02F6 0302 030E 031A 0326 0332 033E 034A 0356	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets SamplesPerPixel RowsPerStrip StripByteCounts XResolution YResolution PlanarConfiguration ResolutionUnit	(Hex) 0001 0101 0201 0301 0601 1101 1501 1601 1701 1A01 1B01 1C01 2801	0400 0400 0300 0300 0300 0300 0400 0400	(Hex) 01000000 01000000 03000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 94030000 94030000 3C000000 201C0000 84030000 8C030000 01000000 02000000	
1st IFD	02C6 02D2 02DE 02EA 02F6 0302 030E 031A 0326 0332 033E 034A	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets SamplesPerPixel RowsPerStrip StripByteCounts XResolution YResolution PlanarConfiguration ResolutionUnit YCbCrSubSampling	(Hex) 0001 0101 0201 0301 0601 1101 1501 1601 1701 1A01 1B01 1C01 2801 1202	0400 0400 0300 0300 0300 0300 0400 0400	(Hex) 01000000 01000000 03000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 94030000 94030000 3C000000 201C0000 84030000 8C030000 01000000 02000000 02000000	
1st IFD	(Hex) 02C6 02D2 02DE 02EA 02F6 0302 030E 031A 0326 0332 033E 034A 0356 0362 036E	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets SamplesPerPixel RowsPerStrip StripByteCounts XResolution YResolution PlanarConfiguration ResolutionUnit YCbCrSubSampling YCbCrPositioning	(Hex) 0001 0101 0201 0301 0601 1101 1501 1601 1701 1A01 1B01 1C01 2801	0400 0400 0300 0300 0300 0300 0400 0400	(Hex) 01000000 01000000 03000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 94030000 94030000 3C000000 201C0000 84030000 8C030000 01000000 02000000	
1st IFD	(Hex) 02C6 02D2 02DE 02EA 02F6 0302 030E 031A 0326 0332 033E 034A 0356 0362 036E Offset (Hex)	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets SamplesPerPixel RowsPerStrip StripByteCounts XResolution YResolution PlanarConfiguration ResolutionUnit YCbCrSubSampling YCbCrPositioning	(Hex) 0001 0101 0201 0301 0601 1101 1501 1601 1701 1A01 1B01 1C01 2801 1202	0400 0400 0300 0300 0300 0300 0400 0400	(Hex) 01000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 94030000 94030000 3C000000 201C0000 84030000 8C030000 01000000 02000000	
1st IFD	(Hex) 02C6 02D2 02DE 02EA 02F6 0302 030E 031A 0326 0332 033E 034A 0356 0362 036E Offset (Hex) 037A	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets SamplesPerPixel RowsPerStrip StripByteCounts XResolution YResolution PlanarConfiguration ResolutionUnit YCbCrSubSampling YCbCrPositioning	(Hex) 0001 0101 0201 0301 0601 1101 1501 1601 1701 1A01 1B01 1C01 2801 1202	0400 0400 0300 0300 0300 0300 0400 0400	(Hex) 01000000 01000000 01000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 94030000 94030000 3C000000 201C0000 84030000 8C030000 01000000 02000000	
Value	(Hex) 02C6 02D2 02DE 02EA 02F6 0302 030E 031A 0326 0332 033E 034A 0356 0362 036E Offset (Hex) Offset (Hex)	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets SamplesPerPixel RowsPerStrip StripByteCounts XResolution YResolution PlanarConfiguration ResolutionUnit YCbCrSubSampling YCbCrPositioning Name Next IFD Offset Name	(Hex) 0001 0101 0201 0301 0601 1101 1501 1601 1701 1A01 1B01 1C01 2801 1202	(Hex) 0400 0400 0300 0300 0300 0400 0400 0400 0500 0500 0300 0300 0300 0300	(Hex) 01000000 01000000 01000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 94030000 94030000 3C000000 201C0000 84030000 8C030000 01000000 02000000	
	(Hex) 02C6 02D2 02DE 02EA 02F6 0302 030E 031A 0326 0332 033E 034A 0356 0362 036E Offset (Hex) 037A Offset (Hex) 037E	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets SamplesPerPixel RowsPerStrip StripByteCounts XResolution YResolution PlanarConfiguration ResolutionUnit YCbCrSubSampling YCbCrPositioning Name Next IFD Offset	(Hex) 0001 0101 0201 0301 0601 1101 1501 1601 1701 1A01 1B01 1C01 2801 1202	(Hex) 0400 0400 0300 0300 0300 0400 0400 0500 0500 0300 0300 0300 0300 0300	(Hex) 01000000 01000000 03000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 94030000 94030000 3C000000 201C0000 84030000 8C030000 01000000 02000000 02000000	
Value longer than	(Hex) 02C6 02D2 02DE 02EA 02F6 0302 030E 031A 0326 0332 033E 034A 0356 0362 036E Offset (Hex) 037A Offset (Hex) 037E 0384	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets SamplesPerPixel RowsPerStrip StripByteCounts XResolution YResolution PlanarConfiguration ResolutionUnit YCbCrSubSampling YCbCrPositioning Name Next IFD Offset Name BitsPerSample Value XResolution Value	(Hex) 0001 0101 0201 0301 0601 1101 1501 1601 1701 1A01 1B01 1C01 2801 1202	(Hex) 0400 0400 0300 0300 0300 0400 0400 0400 0500 0500 0300 0300 0300 0300 0400	(Hex) 01000000 01000000 01000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 94030000 94030000 3C000000 201C0000 84030000 8C030000 01000000 02000000	
Value longer than 4byte of 1st	(Hex) 02C6 02D2 02DE 02EA 02F6 0302 030E 031A 0326 0332 033E 034A 0356 0362 036E Offset (Hex) 037A Offset (Hex) 037E	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets SamplesPerPixel RowsPerStrip StripByteCounts XResolution YResolution PlanarConfiguration ResolutionUnit YCbCrSubSampling YCbCrPositioning Name Next IFD Offset Name BitsPerSample Value	(Hex) 0001 0101 0201 0301 0601 1101 1501 1601 1701 1A01 1B01 1C01 2801 1202	(Hex) 0400 0400 0300 0300 0300 0400 0400 0400 0500 0500 0300 0300 0300 0300 0400	(Hex) 01000000 01000000 03000000 01000000 01000000 01000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 94030000 94030000 3C000000 201C0000 84030000 8C030000 01000000 02000000	
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Value longer than 4byte of 1st IFD	(Hex) 02C6 02D2 02DE 02EA 02F6 0302 030E 031A 0326 0332 033E 034A 0356 0362 036E Offset (Hex) 037A Offset (Hex) 037E 0384 038C Offset	ImageWidth ImageLength BitsPerSample Compression PhotometricInterpretation StripOffsets SamplesPerPixel RowsPerStrip StripByteCounts XResolution YResolution PlanarConfiguration ResolutionUnit YCbCrSubSampling YCbCrPositioning Name Next IFD Offset Name BitsPerSample Value XResolution Value YResolution Value	(Hex) 0001 0101 0201 0301 0601 1101 1501 1601 1701 1A01 1B01 1C01 2801 1202	(Hex) 0400 0400 0300 0300 0300 0400 0400 0400 0500 0500 0300 0300 0300 0300 0400 (Hex)	(Hex) 01000000 01000000 01000000 01000000	(Hex or "ASCII") 50000000 3C000000 7E030000 01000000 94030000 94030000 3C000000 201C0000 84030000 8C030000 01000000 02000000	