

# Adobe Texture Format

ATF		
Field	Type	Comment
Signature	U8[3]	Always 'ATF'.
Reserved	U32	Reserved for future use. Currently set to 0x000000FF.
Version	U8	Version of ATF file format.
Length	U32	Size of ATF file in bytes, does not include signature, reserved, version bytes, and this length field.
Cubemap	UB[1]	0 = normal texture 1 = cube map texture
Format	UB[7]	0 = RGB888 1 = RGBA88888 2 = Compressed 3 = RAW Compressed 4 = Compressed With Alpha 5 = RAW Compressed With Alpha 12=ATFCOMPRESSEDLOSSY 13=ATFALPHACOMPRESSEDLOSSY
Log2Width	U8	Width of texture expressed as $2^{\text{Log2Width}}$ . Maximum value allowed is 12.
Log2Height	U8	Height of texture expressed as $2^{\text{Log2Height}}$ . Maximum value allowed is 12.
Count	U8	Total number of textures encoded per face. Maximum value allowed is 13.

TextureData	<pre> If Cubemap == 0 {   If Format == 0     ATFRGB888[Count]   If Format == 1     ATFRGBA8888[Count]   If Format == 2     ATFCOMPRESSED[Count]   If Format == 3     ATFRAWCOMPRESSED[Count]   If Format == 4     ATFCOMPRESSEDALPHA[Count]   If Format == 5     ATFRAWCOMPRESSEDALPHA[Count]   If Format== 0x0C     ATFCOMPRESSEDLOSSY[6][Count]   If Format== 0x0D     ATFALPHACOMPRESSEDLOSSY[6][Count] } ifCubemap==1{   If Format == 0     ATFRGB888[6][Count]   IfFormat==1     ATFRGBA8888[6][Count]   If Format ==2     ATFCOMPRESSED[6][Count]   If Format ==3     ATFRAWCOMPRESSED[6][Count]   If Format == 4     ATFCOMPRESSEDALPHA[6][Count]   If Format ==5     ATFRAWCOMPRESSEDALPHA[6][Count]   If Format== 0x0C     ATFCOMPRESSEDLOSSY[6][Count]   If Format== 0x0D     ATFALPHACOMPRESSEDLOSSY[6][Count] } </pre>	<p>The first image encoded is the main texture image encoded at the size specified above. Each consecutive image encoded contains the next mip map level of that main image.</p> <p>Cube maps contain 6 faces. They are placed in the following order: [-X, +X, -Y, +Y, -Z, +Z], i.e. [Left, Right, Bottom, Top, Back, Front]</p>
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ATFRGB888		
Field	Type	Comment
Length	U32	Length of payload data in bytes
Data	U8[Length]	JPEG-XR data (JXRC_FMT_24bppRGB)

ATFRGBA8888		
Field	Type	Comment
Length	U32	Length of payload data in bytes
Data	U8[Length]	JPEG-XR data (JXRC_FMT_32bppBGRA)

ATFRAWCOMPRESSED		
Field	Type	Comment
DXT1ImageDataLength	U32	Length of DXT1 image data in bytes
DXT1ImageData	U8[DXT1ImageDataLength]	RAW DXT1 data
PVRTCImageDataLength	U32	Length of PVRTC4bpp image data in bytes
PVRTCImageData	U8[PVRTCImageDataLength]	RAW PVRTC data
ETC1ImageDataLength	U32	Length of ETC1 image data in bytes
ETC1ImageData	U8[ETC1ImageDataLength]	RAW ETC1 data
ETC2RgbImageDataLength	U32	Length of ETC2Rgb image data in bytes
ETC2RgbImageData	U8[ETC2RgbImageDataLength]	RAW ETC2Rgb data

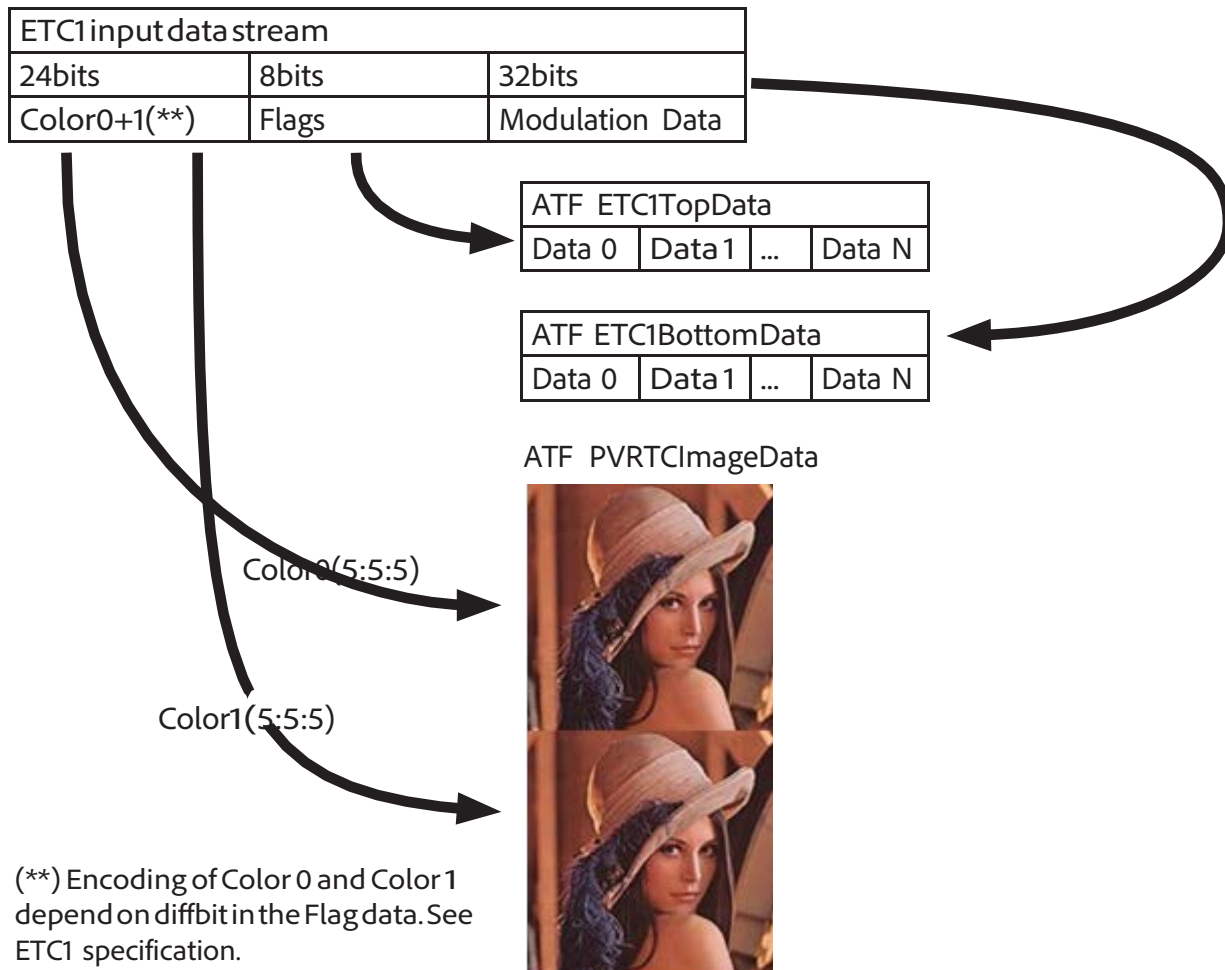
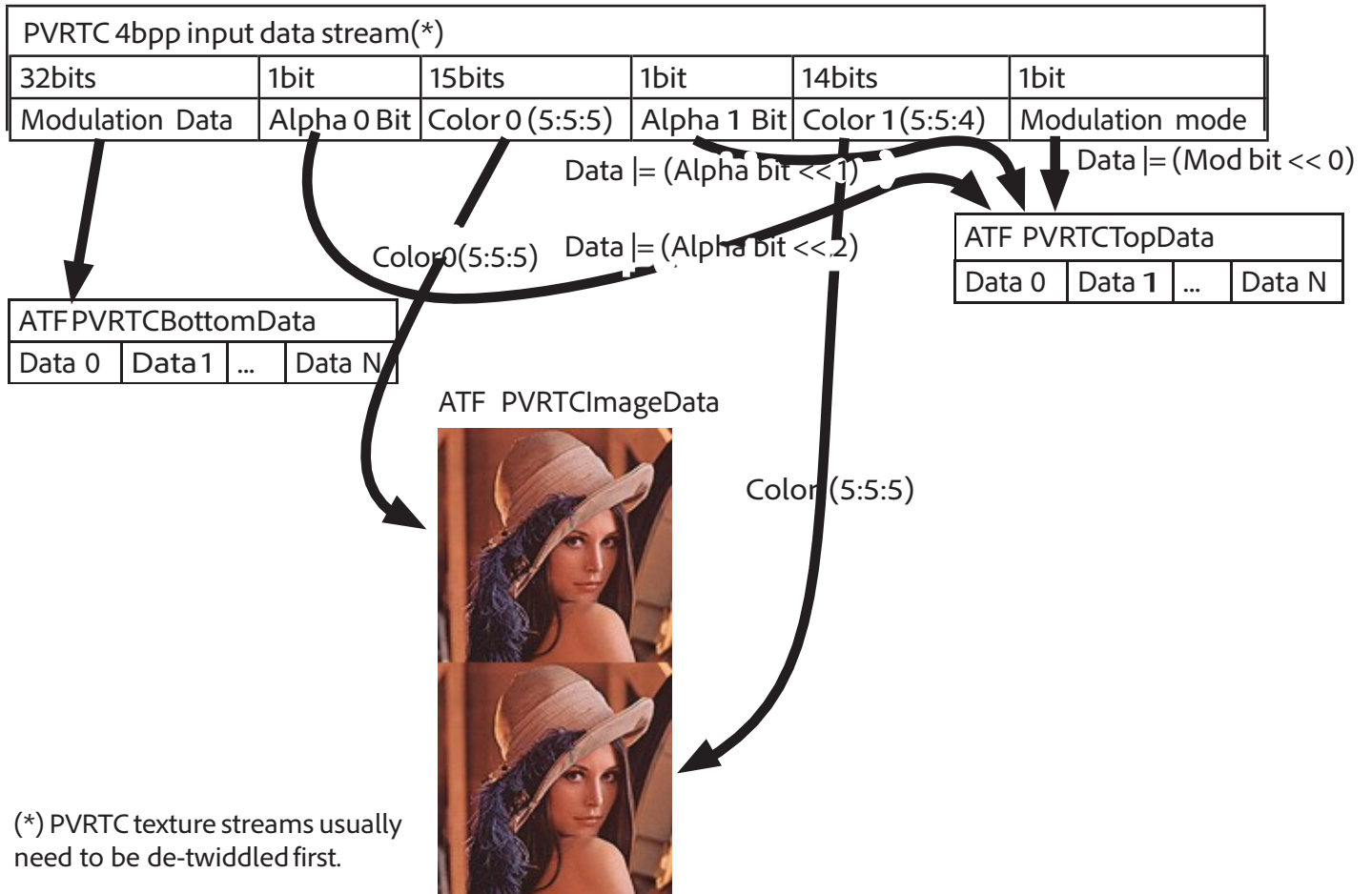
ATFRAWCOMPRESSEDALPHA		
Field	Type	Comment
DXT5ImageDataLength	U32	Length of DXT5 image data in bytes
DXT5ImageData	U8[DXT5ImageDataLength]	RAW DXT5 data
PVRTCImageDataLength	U32	Length of PVRTC4bpp image data in bytes
PVRTCImageData	U8[PVRTCImageDataLength]	RAW PVRTC data
ETC1ImageDataLength	U32	Length of ETC1 image data in bytes
ETC1ImageData	U8[ETC1ImageDataLength/2]	RAW ETC1 data
ETC1AlphaImageData	U8[ETC1ImageDataLength/2]	RAW ETC1 data
ETC2RgbaImageDataLength	U32	Length of ETC2Rgba image data in bytes
ETC2RgbaImageData	U8[ETC2RgbaImageDataLength]	RAW ETC2Rgba data

ATFCOMPRESSED		
Field	Type	Comment
DXT1DataLength	U32	Length of DXT1 data in bytes
DXT1Data	U8[DXT1DataLength]	LZMA compressed DXT1 data
DXT1ImageDataLength	U32	Length of DXT1 image data in bytes
DXT1ImageData	U8[DXT1ImageDataLength]	JPEG-XR data (JXRC_FMT_16bppBGR565)
PVRTCTopDataLength	U32	Length of PVRTC4bpp top data in bytes
PVRTCTopData	U8[PVRTCTopDataLength]	LZMA compressed PVRTC top data
PVRTCBottomDataLength	U32	Length of PVRTC4bpp bottom data in bytes
PVRTCBottomData	U8[PVRTCBottomDataLength]	LZMA compressed PVRTC bottom data

PVRTCImageDataLength	U32	Length of PVRTC4bpp image data in bytes
PVRTCImageData	U8[PVRTCImageDataLength]	JPEG-XR data (JXRC_FMT_16bppBGR555)
ETC1TopDataLength	U32	Length of ETC1 top data in bytes
ETC1TopData	U8[ETC1TopDataLength]	LZMA compressed ETC1 top data
ETC1BottomDataLength	U32	Length of ETC1 bottom data in bytes
ETC1BottomData	U8[ETC1BottomDataLength]	LZMA compressed ETC1 bottom data
ETC1ImageDataLength	U32	Length of ETC1 image data in bytes
ETC1ImageData	U8[ETC1ImageDataLength]	JPEG-XR data (JXRC_FMT_16bppBGR555)
ETC2RgbTopDataLength	U32	Length of ETC2Rgb top data in bytes
ETC2RgbTopData	U8[ETC2RgbTopDataLength]	LZMA compressed ETC2Rgb top data
ETC2RgbBottomDataLength	U32	Length of ETC2Rgb bottom data in bytes
ETC2RgbBottomData	U8[ETC2RgbBottomDataLength]	LZMA compressed ETC2Rgb bottom data
ETC2RgbImageDataLength	U32	Length of ETC2Rgb image data in bytes
ETC2RgbImageData	U8[ETC2RgbImageDataLength]	JPEG-XR data (JXRC_FMT_24bppBGR)

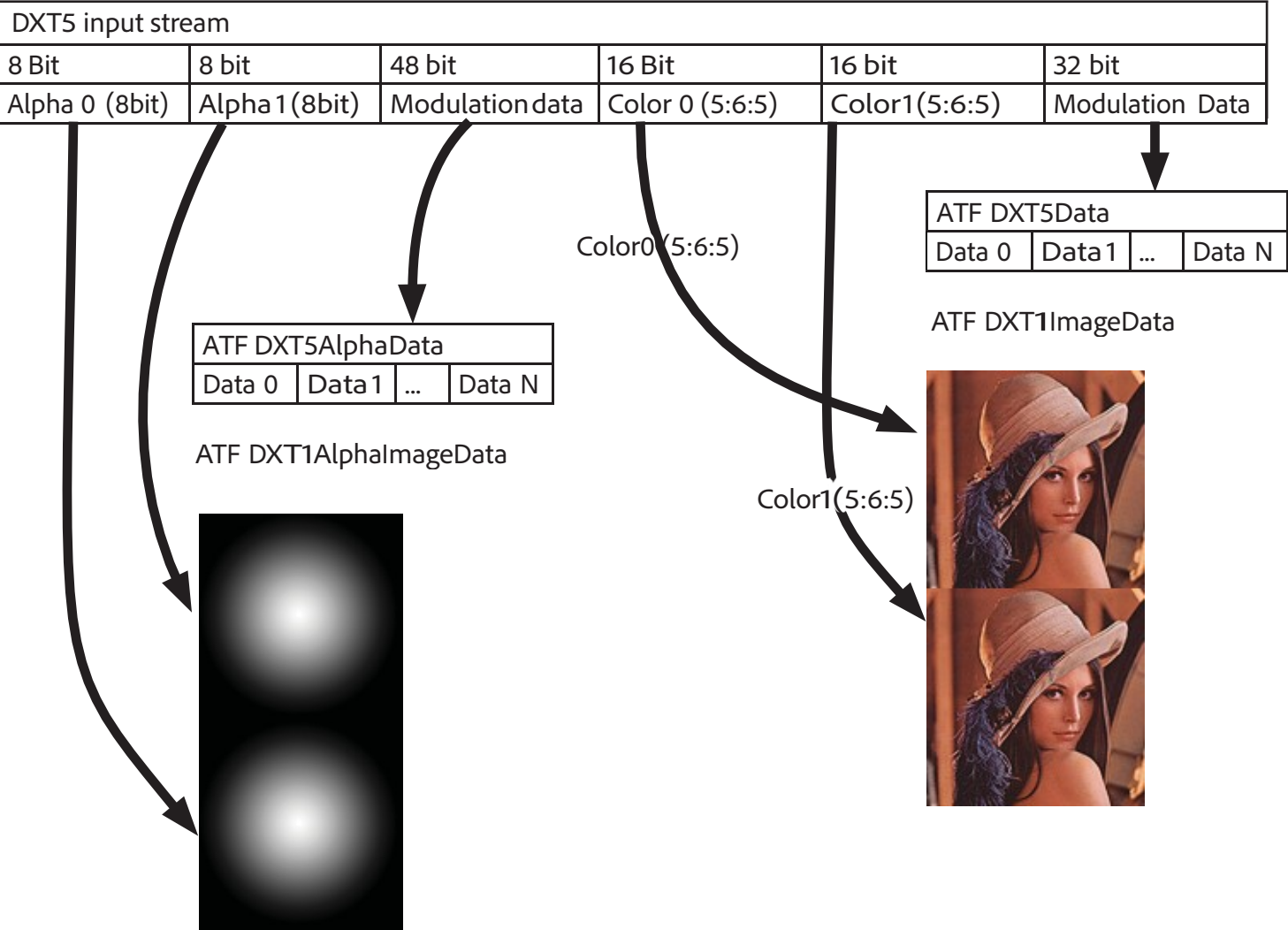
### Splitting source texture streams into ATF data streams:





ATFALPHACOMPRESSED		
Field	Type	Comment
DXT5AlphaDataLength	U32	Length of DXT5 alpha data in bytes
DXT5AlphaData	U8[DXT5AlphaDataLength]	LZMA compressed DXT1 data
DXT5AlphaImgDataLength	U32	Length of DXT5 alpha image data in bytes
DXT5AlphaImageData	U8[DXT5AlphaImgDataLength]	JPEG-XR data (JXRC_FMT_8bppGray)
DXT5DataLength	U32	Length of DXT5 data in bytes
DXT5Data	U8[DXT5DataLength]	LZMA compressed DXT5 data
DXT5ImageDataLength	U32	Length of DXT5 image data in bytes
DXT5ImageData	U8[DXT5ImageDataLength]	JPEG-XR data (JXRC_FMT_16bppBGR565)
PVRTCTopDataLength	U32	Length of PVRTC4bpp top data in bytes
PVRTCTopData	U8[PVRTCTopDataLength]	LZMA compressed PVRTC top data
PVRTCBottomDataLength	U32	Length of PVRTC4bpp bottom data in bytes
PVRTCBottomData	U8[PVRTCBottomDataLength]	LZMA compressed PVRTC bottom data
PVRTCImageDataLength	U32	Length of PVRTC4bpp image data in bytes
PVRTCImageData	U8[PVRTCImageDataLength]	JPEG-XR data (JXRC_FMT_16bppBGR555)
ETC1TopDataLength	U32	Length of ETC1 top data in bytes
ETC1TopData	U8[ETC1TopDataLength]	LZMA compressed ETC1 top data
ETC1BottomDataLength	U32	Length of ETC1 bottom data in bytes
ETC1BottomData	U8[ETC1BottomDataLength]	LZMA compressed ETC1 bottom data
ETC1ImageDataLength	U32	Length of ETC1 image data in bytes
ETC1ImageData	U8[ETC1ImageDataLength]	JPEG-XR data (JXRC_FMT_16bppBGR555)
ETC2RgbaAlphaTopDataLe	U32	Length of ETC2RGBA alpha top data in
ETC2RgbaAlphaTopData	U8[ETC2RgbaAlphaTopDataLen	LZMA compressed ETC2Rgba alpha top
ETC2RgbaAlphaBottomDat	U32	Length of ETC2Rgba alpha bottom data in
ETC2RgbaAlphaBottomDat	U8[ETC2RgbaAlphaTopDataLen	LZMA compressed ETC2Rgba alpha
ETC2RgbaAlphaImgDataLe	U32	Length of ETC2Rgba alpha image data in
ETC2RgbaAlphaImageData	U8[ETC2RgbaAlphaTopDataLen	JPEG-XR data (JXRC_FMT_8bppGray)
ETC2RgbaTopDataLength	U32	Length of ETC2Rgba top data in bytes
ETC2RgbaTopData	U8[ETC2RgbaAlphaTopDataLen	LZMA compressed ETC2Rgba top data
ETC2RgbaBottomDataLeng	U32	Length of ETC2Rgba bottom data in bytes
ETC2RgbaBottomData	U8[ETC2RgbaAlphaTopDataLen	LZMA compressed ETC2Rgba bottom data
ETC2RgbaImageDataLengt	U32	Length of ETC2Rgba image data in bytes
ETC2RgbaImageData	U8[ETC2RgbaAlphaTopDataLen	JPEG-XR data (JXRC_FMT_24bppBGR)

Splitting source texture streams into ATF data streams:





## ATFCOMPRESSEDLOSSY

ATFCOMPRESSEDLOSSY		
Field	Type	Comment
DXT1DataLength	U32	Length of DXT1 data in bytes
DXT1Data	U8[DXT1DataLength]	LZMA compressed DXT1 data
DXT1ImageDataLength	U32	Length of DXT1 image data in bytes
DXT1ImageData	U8[DXT1ImageDataLength]	JPEG-XR data (JXRC_FMT_16bppBGR565)
PVRTCTopDataLength	U32	Length of PVRTC4bpp top data in bytes
PVRTCTopData	U8[PVRTCTopDataLength]	LZMA compressed PVRTC top data
PVRTCBottomDataLength	U32	Length of PVRTC4bpp bottom data in bytes
PVRTCBottomData	U8[PVRTCBottomDataLength]	LZMA compressed PVRTC bottom data
PVRTCImageDataLength	U32	Length of PVRTC4bpp image data in bytes
PVRTCImageData	U8[PVRTCImageDataLength]	JPEG-XR data (JXRC_FMT_16bppBGR555)
ETC1TopDataLength	U32	Length of ETC1 top data in bytes
ETC1TopData	U8[ETC1TopDataLength]	LZMA compressed ETC1 top data
ETC1BottomDataLength	U32	Length of ETC1 bottom data in bytes
ETC1BottomData	U8[ETC1BottomDataLength]	LZMA compressed ETC1 bottom data
ETC1ImageDataLength	U32	Length of ETC1 image data in bytes
ETC1ImageData	U8[ETC1ImageDataLength]	JPEG-XR data (JXRC_FMT_16bppBGR555)
ETC2RgbTopDataLength	U32	Length of ETC2Rgb top data in bytes
ETC2RgbTopData	U8[ETC2RgbTopDataLength]	LZMA compressed ETC2Rgb top data
ETC2RgbModeDataLength	U32	Length of ETC2Rgb mode data in bytes
ETC2RgbModeData	U8[ETC2RgbModeDataLength]	LZMA compressed ETC2Rgb mode data
ETC2RgbBottomDataLength	U32	Length of ETC2Rgb bottom data in bytes
ETC2RgbBottomData	U8[ETC2RgbBottomDataLength]	LZMA compressed ETC2Rgb bottom data
ETC2RgbImageDataLength	U32	Length of ETC2Rgb image data in bytes
ETC2RgbImageData	U8[ETC2RgbImageDataLength]	JPEG-XR data (JXRC_FMT_24bppBGR)

ATFALPHACOMPRESSEDLOSSY		
Field	Type	Comment
DXT5AlphaDataLength	U32	Length of DXT5 alpha data in bytes
DXT5AlphaData	U8[DXT5AlphaDataLength]	LZMA compressed DXT1 data
DXT5AlphaImgDataLength	U32	Length of DXT5 alpha image data in bytes
DXT5AlphaImageData	U8[DXT5AlphaImgDataLength]	JPEG-XR data (JXRC_FMT_8bppGray)
DXT5DataLength	U32	Length of DXT5 data in bytes
DXT5Data	U8[DXT5DataLength]	LZMA compressed DXT5 data
DXT5ImageDataLength	U32	Length of DXT5 image data in bytes
DXT5ImageData	U8[DXT5ImageDataLength]	JPEG-XR data (JXRC_FMT_16bppBGR565)
PVRTCTopDataLength	U32	Length of PVRTC4bpp top data in bytes
PVRTCTopData	U8[PVRTCTopDataLength]	LZMA compressed PVRTC top data
PVRTCBottomDataLength	U32	Length of PVRTC4bpp bottom data in bytes
PVRTCBottomData	U8[PVRTCBottomDataLength]	LZMA compressed PVRTC bottom data
PVRTCImageDataLength	U32	Length of PVRTC4bpp image data in bytes
PVRTCImageData	U8[PVRTCImageDataLength]	JPEG-XR data (JXRC_FMT_16bppBGR555)
ETC1TopDataLength	U32	Length of ETC1 top data in bytes



ETC1TopData	U8[ETC1TopDataLength]	LZMA compressed ETC1 top data
ETC1BottomDataLength	U32	Length of ETC1 bottom data in bytes
ETC1BottomData	U8[ETC1BottomDataLength]	LZMA compressed ETC1 bottom data
ETC1ImageDataLength	U32	Length of ETC1 image data in bytes
ETC1ImageData	U8[ETC1ImageDataLength]	JPEG-XR data (JXRC_FMT_16bppBGR555)
ETC2RgbaAlphaTopDataLength	U32	Length of ETC2RGBA alpha top data in bytes
ETC2RgbaAlphaTopData	U8[ETC2RgbaAlphaTopDataLength]	LZMA compressed ETC2Rgba alpha top data
ETC2RgbaAlphaBottomDataLength	U32	Length of ETC2Rgba alpha bottom data in bytes
ETC2RgbaAlphaBottomData	U8[ETC2RgbaAlphaBottomDataLength]	LZMA compressed ETC2Rgba alpha bottom data
ETC2RgbaAlphaImgDataLength	U32	Length of ETC2Rgba alpha image data in bytes
ETC2RgbaAlphaImageData	U8[ETC2RgbaAlphaImgDataLength]	JPEG-XR data (JXRC_FMT_8bppGray)
ETC2RgbaTopDataLength	U32	Length of ETC2Rgba top data in bytes
ETC2RgbaTopData	U8[ETC2RgbaTopDataLength]	LZMA compressed ETC2Rgba top data
ETC2RgbaModeDataLength	U32	Length of ETC2Rgba mode data in bytes
ETC2RgbaModeData	U8[ETC2RgbaModeDataLength]	LZMA compressed ETC2Rgba mode data
ETC2RgbaBottomDataLength	U32	Length of ETC2Rgba bottom data in bytes
ETC2RgbaBottomData	U8[ETC2RgbaBottomDataLength]	LZMA compressed ETC2Rgba bottom data
ETC2RgbaImageDataLength	U32	Length of ETC2Rgba image data in bytes
ETC2RgbaImageData	U8[ETC2RgbaImageDataLength]	JPEG-XR data (JXRC_FMT_24bppBGR)

## ETC2 RGB Format

ETC2 RGB input data stream Individual Mode And Differential Mode		
24bits	8bits	32bits
Color0+1 and block mode identifier data --> ATF ETC2Rgb JPEG-XR color data and block mode identifier data (32 bits)	Flags --> ATF ETC2Rgb Top Data (8 bits)	Modulation Data --> ATF ETC2Rgb Bottom Data(32 bits)
ETC2 RGB input data stream T Mode		
28bits	4bits	32bits
Color0+1 and block mode identifier data --> ATF ETC2Rgb JPEG-XR color data and block mode identifier data (32 bits)	Color0+1 and block mode identifier data --> ATF ETC2Rgb JPEG-XR color data and block mode identifier data (32 bits)	Color0+1 and block mode identifier data --> ATF ETC2Rgb JPEG-XR color data and block mode identifier data (32 bits)

ETC2 RGB input data stream H Mode		
29bits	3bits	32bits
Color0+1 and block mode identifier data --> ATF ETC2Rgb JPEG-XR color data and block mode identifier data (32 bits)	Flags --> ATF ETC2Rgb Top Data (8 bits)	Modulation Data --> ATF ETC2Rgb Bottom Data(32 bits)
ETC2 RGB input data stream Planar Mode		
25bits	7bits	32bits
ColorO and block mode identifier data --> ATF ETC2Rgb JPEG-XR color data and block mode identifier data (32 bits)	Flag and Color H Data --> ATF ETC2Rgb Top Data (8 bits)	Color H,V Data --> ATF ETC2Rgb Bottom Data(32 bits)

## ETC2 RGBA Format

ETC2 RGBA alpha input data stream (Most significant 64 bits contain the alpha data)		
8bits	8bits	48bits
Alpha data --> ATF ETC2Rgba Alpha JPEG-XR data (8 bits)	Flags --> ATF ETC2Rgba Alpha Top Data (8 bits)	Modulation Data --> ATF ETC2Rgba Alpha Bottom Data(64 bits)

ETC2 RGBA color input data stream (Least significant 64 bits contain the color data)		
Same as ETC2 RGB input data stream		