

AAC

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Chapter 1

Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

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Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

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AAC_BrightnessConverter	Specifies group off classes converting AAC_Image to brightness matrix	8
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AAC_CC_Simple	Simplest possible chunk converter	10
AAC_Chunk	Representation of groups of pixels which are going to be replaced by single char	11
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File Index

3.1 File List

Here is a list of all documented files with brief descriptions:

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AAC.h	Main library header file	20
headers/ enums.h	??
headers/ structs.h	??
sources/ AAC_brightness_converter.cpp	??
sources/ AAC_chunk.cpp	??
sources/ AAC_chunk_converter.cpp	??
sources/ AAC_chunk_generator.cpp	??
sources/ AAC_error.cpp	??
sources/ AAC_image.cpp	??
sources/ AAC_matrix.tpp	??
sources/ AAC_pixel.cpp	??

Chapter 4

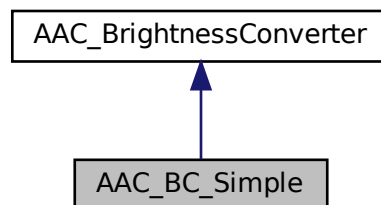
Class Documentation

4.1 AAC_BC_Simple Class Reference

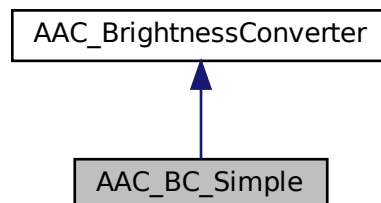
Simplest possible brightness converter.

```
#include <AAC.h>
```

Inheritance diagram for AAC_BC_Simple:



Collaboration diagram for AAC_BC_Simple:



Public Member Functions

- **AAC_BC_Simple** (float red_weight, float green_weight, float blue_weight, uint8_t negate=0)
- std::shared_ptr< [AAC_Matrix](#)< uint8_t > > **convert** ([AAC_Image](#) *img) override

4.1.1 Detailed Description

Simplest possible brightness converter.

Definition at line 363 of file AAC.h.

The documentation for this class was generated from the following files:

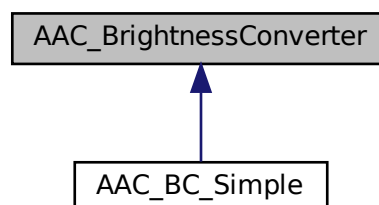
- [AAC.h](#)
- sources/AAC_brightness_converter.cpp

4.2 AAC_BrightnessConverter Class Reference

Specifies group off classes converting [AAC_Image](#) to brightness matrix.

```
#include <AAC.h>
```

Inheritance diagram for AAC_BrightnessConverter:



Public Member Functions

- virtual std::shared_ptr< [AAC_Matrix](#)< uint8_t > > **convert** ([AAC_Image](#) *img)=0

4.2.1 Detailed Description

Specifies group off classes converting [AAC_Image](#) to brightness matrix.

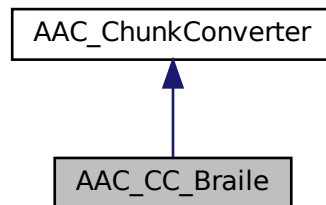
Definition at line 351 of file AAC.h.

The documentation for this class was generated from the following file:

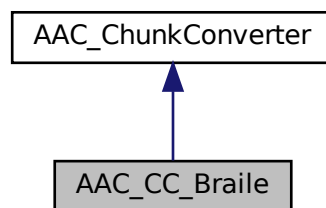
- [AAC.h](#)

4.3 AAC_CC_Braile Class Reference

Inheritance diagram for AAC_CC_Braile:



Collaboration diagram for AAC_CC_Braile:



Public Member Functions

- **AAC_CC_Braile** (uint8_t break_point_brightness)
- std::string **convert** ([AAC_Matrix](#)< [AAC_Chunk](#) > *chunks) override

4.3.1 Detailed Description

Definition at line 408 of file AAC.h.

The documentation for this class was generated from the following files:

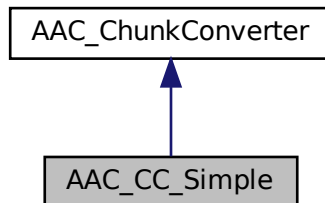
- [AAC.h](#)
- sources/AAC_chunk_converter.cpp

4.4 AAC_CC_Simple Class Reference

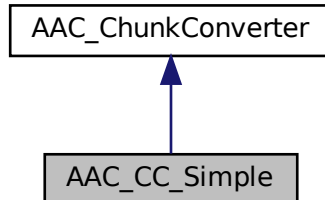
Simplest possible chunk converter.

```
#include <AAC.h>
```

Inheritance diagram for AAC_CC_Simple:



Collaboration diagram for AAC_CC_Simple:



Public Member Functions

- **AAC_CC_Simple** (std::string alphabet)
- std::string **convert** ([AAC_Matrix](#)< [AAC_Chunk](#) > *chunks) override

4.4.1 Detailed Description

Simplest possible chunk converter.

Definition at line 397 of file AAC.h.

The documentation for this class was generated from the following files:

- [AAC.h](#)
- sources/AAC_chunk_converter.cpp

4.5 AAC_Chunk Class Reference

Representation of groups of pixels which are going to be replaced by single char.

```
#include <AAC.h>
```

Public Member Functions

- **AAC_Chunk** (unsigned int X_start_index, unsigned int X_end_index, unsigned int Y_start_index, unsigned int Y_end_index, std::shared_ptr< [AAC_Matrix](#)< uint8_t >> data)
- void **SetChunk** (unsigned int X_start_index, unsigned int X_end_index, unsigned int Y_start_index, unsigned int Y_end_index, std::shared_ptr< [AAC_Matrix](#)< uint8_t >> data)
- std::shared_ptr< [AAC_Matrix](#)< uint8_t >> **GetData** ()
- unsigned int **GetXStart** ()
- unsigned int **GetXEnd** ()
- unsigned int **GetYStart** ()
- unsigned int **GetYEnd** ()

4.5.1 Detailed Description

Representation of groups of pixels which are going to be replaced by single char.

Definition at line 319 of file AAC.h.

The documentation for this class was generated from the following files:

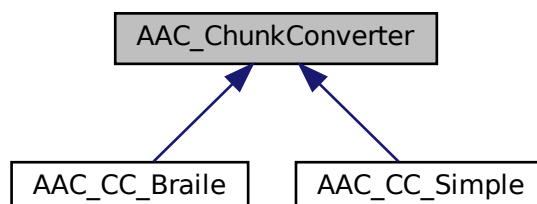
- [AAC.h](#)
- sources/AAC_chunk.cpp

4.6 AAC_ChunkConverter Class Reference

Converts chunks matrix into final string.

```
#include <AAC.h>
```

Inheritance diagram for AAC_ChunkConverter:



Public Member Functions

- virtual std::string **convert** ([AAC_Matrix](#)< [AAC_Chunk](#) > *chunks)=0

4.6.1 Detailed Description

Converts chunks matrix into final string.

Definition at line 385 of file AAC.h.

The documentation for this class was generated from the following file:

- [AAC.h](#)

4.7 AAC_Converter Class Reference

Creates main converter combining all other steps to create art.

```
#include <AAC.h>
```

Public Member Functions

- **AAC_Converter** ([AAC_BrightnessConverter](#) *brightness_conv, [AAC_ChunkConverter](#) *chunk_conv)
- std::string **CreateArt** ([AAC_Image](#) *img, size_t chunk_size)

4.7.1 Detailed Description

Creates main converter combining all other steps to create art.

Definition at line 430 of file AAC.h.

The documentation for this class was generated from the following files:

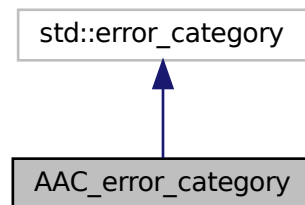
- [AAC.h](#)
- [AAC.cpp](#)
- [sources/AAC_chunk_generator.cpp](#)

4.8 AAC_error_category Class Reference

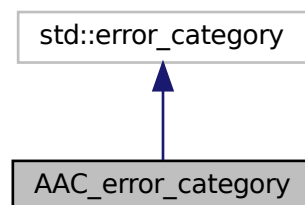
Class provideing error messages for AAC library.

```
#include <AAC.h>
```

Inheritance diagram for AAC_error_category:



Collaboration diagram for AAC_error_category:



Public Member Functions

- virtual const char * **name** () const noexcept override
- virtual std::string **message** (int ec) const override

4.8.1 Detailed Description

Class provideing error messages for AAC library.

Definition at line 40 of file AAC.h.

The documentation for this class was generated from the following file:

- [AAC.h](#)

4.9 AAC_Image Class Reference

Contains full image as pixels matrix.

```
#include <AAC.h>
```

Public Member Functions

- **AAC_Image** (std::string path, unsigned int size_x, unsigned int size_y, unsigned int n, unsigned char *data)
- void * **GetMatrix** ()

Public Attributes

- const AAC_Pixel_Type **pixel_type**
- const unsigned int **size_x**
- const unsigned int **size_y**

4.9.1 Detailed Description

Contains full image as pixels matrix.

Definition at line 279 of file AAC.h.

The documentation for this class was generated from the following files:

- [AAC.h](#)
- sources/AAC_image.cpp

4.10 AAC_Matrix< T > Class Template Reference

Multipurpose matrix class.

```
#include <AAC.h>
```

Public Member Functions

- **AAC_Matrix** (unsigned int size_x, unsigned int size_y)
- const T **GetElement** (unsigned int x, unsigned int y)
- T & **GetElementReference** (unsigned int x, unsigned int y)
- unsigned int **GetXSize** ()
- unsigned int **GetYSize** ()

4.10.1 Detailed Description

```
template<typename T>  
class AAC_Matrix< T >
```

Multipurpose matrix class.

Definition at line 88 of file AAC.h.

The documentation for this class was generated from the following file:

- [AAC.h](#)

4.11 AAC_Pixel< E > Class Template Reference

Pixel class for storing [AAC_Image](#) pixels in more organised way.

```
#include <AAC.h>
```

4.11.1 Detailed Description

```
template<AAC_Pixel_Type E>  
class AAC_Pixel< E >
```

Pixel class for storing [AAC_Image](#) pixels in more organised way.

Definition at line 179 of file AAC.h.

The documentation for this class was generated from the following file:

- [AAC.h](#)

4.12 AAC_Pixel< AAC_Pixel_Type::EMPTY > Class Reference

4.12.1 Detailed Description

Definition at line 260 of file AAC.h.

The documentation for this class was generated from the following files:

- [AAC.h](#)
- [sources/AAC_pixel.cpp](#)

4.13 AAC_Pixel< AAC_Pixel_Type::G > Class Reference

Public Member Functions

- **AAC_Pixel** (uint8_t grey)
- struct [AAC_Pixel_G](#) **GetPixelValues** ()
- void **SetPixelValues** (uint8_t grey)

4.13.1 Detailed Description

Definition at line 188 of file AAC.h.

The documentation for this class was generated from the following files:

- [AAC.h](#)
- sources/AAC_pixel.cpp

4.14 AAC_Pixel< AAC_Pixel_Type::GA > Class Reference

Public Member Functions

- **AAC_Pixel** (uint8_t grey, uint8_t alpha)
- struct [AAC_Pixel_GA](#) **GetPixelValues** ()
- void **SetPixelValues** (uint8_t grey, uint8_t alpha)

4.14.1 Detailed Description

Definition at line 206 of file AAC.h.

The documentation for this class was generated from the following files:

- [AAC.h](#)
- sources/AAC_pixel.cpp

4.15 AAC_Pixel< AAC_Pixel_Type::RGB > Class Reference

Public Member Functions

- **AAC_Pixel** (uint8_t red, uint8_t green, uint8_t blue)
- struct [AAC_Pixel_RGB](#) **GetPixelValues** ()
- void **SetPixelValues** (uint8_t red, uint8_t green, uint8_t blue)

4.15.1 Detailed Description

Definition at line 224 of file AAC.h.

The documentation for this class was generated from the following files:

- [AAC.h](#)
- sources/AAC_pixel.cpp

4.16 AAC_Pixel< AAC_Pixel_Type::RGBA > Class Reference

Public Member Functions

- **AAC_Pixel** (uint8_t red, uint8_t green, uint8_t blue, uint8_t alpha)
- struct [AAC_Pixel_RGBA](#) **GetPixelValues** ()
- void **SetPixelValues** (uint8_t red, uint8_t green, uint8_t blue, uint8_t alpha)

4.16.1 Detailed Description

Definition at line 242 of file AAC.h.

The documentation for this class was generated from the following files:

- [AAC.h](#)
- sources/AAC_pixel.cpp

4.17 AAC_Pixel_EMPTY Struct Reference

4.17.1 Detailed Description

Definition at line 30 of file structs.h.

The documentation for this struct was generated from the following file:

- headers/structs.h

4.18 AAC_Pixel_G Struct Reference

Public Attributes

- uint8_t **grey**

4.18.1 Detailed Description

Definition at line 4 of file structs.h.

The documentation for this struct was generated from the following file:

- headers/structs.h

4.19 AAC_Pixel_GA Struct Reference

Public Attributes

- uint8_t **grey**
- uint8_t **alpha**

4.19.1 Detailed Description

Definition at line 9 of file structs.h.

The documentation for this struct was generated from the following file:

- headers/structs.h

4.20 AAC_Pixel_RGB Struct Reference

Public Attributes

- uint8_t **red**
- uint8_t **green**
- uint8_t **blue**

4.20.1 Detailed Description

Definition at line 15 of file structs.h.

The documentation for this struct was generated from the following file:

- headers/structs.h

4.21 AAC_Pixel_RGBA Struct Reference

Public Attributes

- uint8_t **red**
- uint8_t **green**
- uint8_t **blue**
- uint8_t **alpha**

4.21.1 Detailed Description

Definition at line 22 of file structs.h.

The documentation for this struct was generated from the following file:

- headers/structs.h

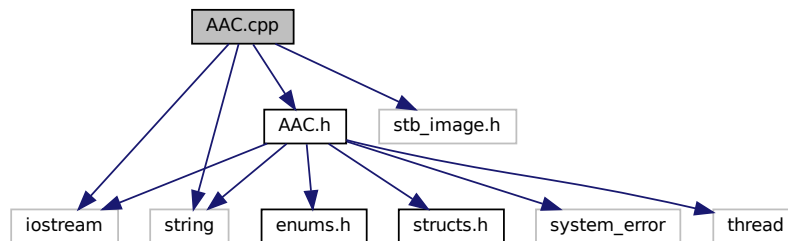
Chapter 5

File Documentation

5.1 AAC.cpp File Reference

This file contains shiet.

```
#include "AAC.h"
#include <iostream>
#include <string>
#include "stb_image.h"
Include dependency graph for AAC.cpp:
```



Functions

- [AAC_Image](#) * [AAC_OpenImage](#) (std::string path)
Global image opener.

5.1.1 Detailed Description

This file contains shiet.

5.1.2 Function Documentation

5.1.2.1 AAC_OpenImage()

```
AAC_Image* AAC_OpenImage (
    std::string path )
```

Global image opener.

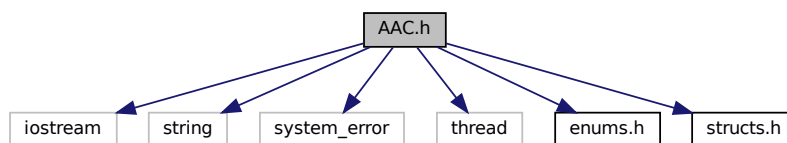
AAC_OpenImage

Definition at line 25 of file AAC.cpp.

5.2 AAC.h File Reference

Main library header file.

```
#include <iostream>
#include <string>
#include <system_error>
#include <thread>
#include "enums.h"
#include "structs.h"
Include dependency graph for AAC.h:
```



This graph shows which files directly or indirectly include this file:



Classes

- class [AAC_error_category](#)
Class provideing error messages for AAC library.
- class [AAC_Matrix< T >](#)
Multipurpose matrix class.
- class [AAC_Pixel< E >](#)
Pixel class for storing [AAC_Image](#) pixels in more organised way.
- class [AAC_Pixel< AAC_Pixel_Type::G >](#)
- class [AAC_Pixel< AAC_Pixel_Type::GA >](#)

- class [AAC_Pixel](#)< [AAC_Pixel_Type::RGB](#) >
- class [AAC_Pixel](#)< [AAC_Pixel_Type::RGBA](#) >
- class [AAC_Pixel](#)< [AAC_Pixel_Type::EMPTY](#) >
- class [AAC_Image](#)
Contains full image as pixels matrix.
- class [AAC_Chunk](#)
Representation of groups of pixels which are going to be replaced by single char.
- class [AAC_BrightnessConverter](#)
Specifies group off classes converting [AAC_Image](#) to brightness matrix.
- class [AAC_BC_Simple](#)
Simplest possible brightness converter.
- class [AAC_ChunkConverter](#)
Converts chunks matrix into final string.
- class [AAC_CC_Simple](#)
Simplest possible chunk converter.
- class [AAC_CC_Braile](#)
- class [AAC_Converter](#)
Creates main converter combining all other steps to create art.

Macros

- `#define MAX_SIZE 4000`

Functions

- `void set_AAC_error_code (std::error_code ec)`
- `std::error_code get_AAC_error_code ()`
- `void clear_AAC_error_code ()`
- `std::error_code make_error_code (AAC_error_codes ec)`
- `AAC_Image * AAC_OpenImage (std::string path)`
Global image opener.

Variables

- `const AAC_error_category AAC_category {}`

5.2.1 Detailed Description

Main library header file.

5.2.2 Function Documentation

5.2.2.1 AAC_OpenImage()

```
AAC\_Image* AAC_OpenImage (
    std::string path )
```

Global image opener.

`AAC_OpenImage`

Definition at line 25 of file AAC.cpp.

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