COFF (Common Object File Format) Parser Library

Host API Guide

Table of Contents

COFF (Common Object File Format) Parser Library

1 Symbol Reference

Files

File	Description
CoffExp.h (⌧ see page 10)	Copyright 2005 MangoDSP, Inc., all rights reserved. Software and information contained herein is confidential and proprietary to MangoDSP, and any unauthorized copying, dissemination, or use is strictly prohibited. FILENAME: GENERAL DESCRIPTION: DATE CREATED AUTHOR

Functions

Function	Description
Coff_file2writes (⌧ see page 5)	Translates a coff-formatted file
Coff_Get_Version (⌧ see page 6)	Gets MANGOBIOS_version_t

Types

Type	Description
Coff_Write_t (⌧ see page 8)	typedef for structure Coff_Write_s (⌧ see page 3)

Structs, Records, Enums

Struct, Record, Enum	Description
Coff_Write_s (⌧ see page 3)	structure used for coff-formatted file parsing

1.1 Structs, Records, Enums

Structs

Struct	Description
Coff_Write_s (⧉ see page 3)	structure used for coff-formatted file parsing

1.1.1 Coff_Write_s

```
struct Coff_Write_s {
  unsigned int src_offset;
  int dest_adr;
  int run_adr;
  unsigned int bytes;
};
```

File

CoffExp.h (⊡ see page 10)

Members

Members	Description
unsigned int src_offset;	offset from beginning of file to perform write from
int dest_adr;	address on target to write to
int run_adr;	run address of this code (useful if code is to be relocated by a boot loader)
unsigned int bytes;	number of bytes to write

Description

structure used for coff-formatted file parsing

1.2 Functions

Functions

Function	Description
Coff_file2writes (⧉ see page 5)	Translates a coff-formatted file
Coff_Get_Version (⧉ see page 6)	Gets MANGOBIOS_version_t

1.2.1 Coff_file2writes

Translates a coff-formatted file

```
MANGOERROR_error_t Coff_file2writes(FILE * fp, Coff_Write_t * writes, unsigned int *
num_writes);
```

File

CoffExp.h (☐ see page 10)

Parameters

Parameters	Description
`FILE * fp`	Pointer to open file which is ready for parsing
`Coff_Write_t * writes`	Pointer to first element of an array of Coff_Write_s (☐ see page 3) structures, or NULL (see Remarks)
`unsigned int * num_writes`	Pointer to the number of writes required for this file

Returns

Status

Return Values

Return Values	Description
`MANGOERROR_SUCCESS`	Success
`MANGOERROR_INVALID_PARAMETERS`	'fp' is NULL
`MANGOERROR_COFF_FORMAT_ERROR`	'fread', 'fseek', 'fsetpos', 'fgetpos', return an error 'optional_header_size' in coff-formatted file's header is nonzero and not 28
`MANGOERROR_INVALID_CONFIGURATION`	The coff-formatted file is not for the c6000 dsp The coff-formatted file is not marked as an executable

Description

Translates a coff-formatted file into a series of Coff_Write_s (☐ see page 3) structures

Remarks

To get the needed size to be allocated for the writes array, you should call Coff_file2writes once with a NULL writes pointer. It will then return the maximum possible number of writes for this coff file. On the next call, with an appropriately allocated writes pointer, it will fill the writes pointer, and return the actual number of writes filled in the array.

Example

```
int num_writes, errorCode;
Coff_Write_t * writes;
if((errorCode = Coff_file2writes(
 fp,
 NULL,
 &num_writes
 )) != MANGOERROR_SUCCESS)
  return errorCode;
writes = malloc(
 sizeof(Coff_Write_t) * num_writes
 );
if((errorCode = Coff_file2writes(
 fp,
 writes,
 &num_writes
 )) != MANGOERROR_SUCCESS)
  return errorCode;
//parsing and writing of writes array free(writes);
```

1.2.2 Coff_Get_Version

Gets MANGOBIOS_version_t

```
MANGOERROR_error_t Coff_Get_Version(MANGOBIOS_version_t * version);
```

File

CoffExp.h (▨ see page 10)

Returns

Status

Return Values

Return Values	Description
MANGOERROR_SUCCESS	Success

Description

Gets version information for Coff Library

Remarks

None

Example

```
int errorCode;
MANGOBIOS_version_t version;

errorCode = Coff_Get_Version(
 &version
 );
```

1.3 Types

Types

Type	Description
Coff_Write_t (⊠ see page 8)	typedef for structure Coff_Write_s (⊠ see page 3)

1.3.1 Coff_Write_t

```
typedef struct Coff_Write_s Coff_Write_t;
```

File

CoffExp.h (⊡ see page 10)

Description

typedef for structure Coff_Write_s (⊡ see page 3)

1.4 Files

Files

File	Description
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1.4.1 CoffExp.h

FILENAME:

GENERAL DESCRIPTION:

DATE CREATED AUTHOR

Functions

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