



osxMotionCP Software Library

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Modules

Here is a list of all modules:

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▼ OSX_MOTION_CP

[OSX_MOTION_CP_Exported_Types](#)

[OSX_MOTION_CP_Exported_Functions](#)

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MIDDLEWARES

Modules

OSX_MOTION_CP

Detailed Description

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OSX_MOTION_CP
MIDDLEWARES

Modules

OSX_MOTION_CP_Exported_Types

OSX_MOTION_CP_Exported_Functions

Detailed Description

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OSX_MOTION_CP_Exported_Types

[MIDDLEWARES](#) » [OSX_MOTION_CP](#)

Data Structures

```
struct osx_MCP_input_t
```

Enumerations

```
enum osx_MCP_output_t {  
    OSX_MCP_UNKNOWN = 0x00, OSX_MCP_ONDESK =  
    0x01, OSX_MCP_INHAND = 0x02, OSX_MCP_NEARHEAD  
    = 0x03,  
    OSX_MCP_SHIRTPOCKET = 0x04,  
    OSX_MCP_TROUSERPOCKET = 0x05,  
    OSX_MCP_ARMSWING = 0x06  
}
```

```
enum osx_lm_result_t { OSX_FAILED = 0x00, OSX_SUCCESS =  
    0x01 }
```

Detailed Description

Enumeration Type Documentation

enum osx_lm_result_t

| Enumerator | |
|-------------|--|
| OSX_FAILED | |
| OSX_SUCCESS | |

Definition at line **86** of file **osx_motion_cp.h**.

enum osx_MCP_output_t

| Enumerator | |
|-----------------------|--|
| OSX_MCP_UNKNOWN | |
| OSX_MCP_ONDESK | |
| OSX_MCP_INHAND | |
| OSX_MCP_NEARHEAD | |
| OSX_MCP_SHIRTPOCKET | |
| OSX_MCP_TROUSERPOCKET | |
| OSX_MCP_ARMSWING | |

Definition at line **75** of file **osx_motion_cp.h**.



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Data Fields

osx_MCP_input_t Struct Reference

[MIDDLEWARES](#) » [OSX_MOTION_CP](#) »
[OSX_MOTION_CP_Exported_Types](#)

```
#include <osx_motion_cp.h>
```

Data Fields

float **AccX**

float **AccY**

float **AccZ**

Detailed Description

Definition at line **67** of file **osx_motion_cp.h**.

Field Documentation

float AccX

Definition at line **69** of file [osx_motion_cp.h](#).

float AccY

Definition at line **70** of file [osx_motion_cp.h](#).

float AccZ

Definition at line **71** of file [osx_motion_cp.h](#).

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

- Middlewares/ST/STM32_OSX_MotionCP_Library/Inc/[osx_motion_](#)



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OSX_MOTION_CP_Exported_Functions

[MIDDLEWARES](#) » [OSX_MOTION_CP](#)

Functions

uint8_t **osx_MotionCP_Initialize** (void)
Initialize the MotionCP engine. [More...](#)

void **osx_MotionCP_SetOrientation_Acc** (const char *acc_orientation)
Set the MotionCP Accelerometer data orientation. [More...](#)

osx_MCP_output_t osx_MotionCP_Update (**osx_MCP_input_t *data_in**)
Run Carry Position Recognition Algorithm. [More...](#)

uint8_t **osx_MotionCP_GetLibVersion** (char *version)
Get the library version. [More...](#)

Detailed Description

Function Documentation

uint8_t osx_MotionCP_GetLibVersion (char * **version)**

Get the library version.

Parameters

version pointer to an array of 35 char

Return values

Number of characters in the version string

uint8_t osx_MotionCP_Initialize (void)

Initialize the MotionCP engine.

Parameters

None

Return values

1 in case of success, 0 otherwise

void

osx_MotionCP_SetOrientation_Acc (const char * **acc_orientation)**

Set the MotionCP Accelerometer data orientation.

Parameters

***acc_orientation** reference system of the Accelerometer raw data (for instance: south west up became "swu", north east up became "ned")

Return values

None

osx_MCP_output_t

osx_MotionCP_Update

(**osx_MCP_input_t** * **data_in**)

Run Carry Position Recognition Algorithm.

Parameters

data_in pointer to the **osx_MCP_input_t** structure

Return values

position index



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Data Structures

Here are the data structures with brief descriptions:

[osx_MCP_input_t](#)



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| All | Variables | | | |

Here is a list of all struct and union fields with links to the structures/unions they belong to:

- AccX : [osx_MCP_input_t](#)
- AccY : [osx_MCP_input_t](#)
- AccZ : [osx_MCP_input_t](#)



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| All | Variables | | | |

- AccX : [osx_MCP_input_t](#)
- AccY : [osx_MCP_input_t](#)
- AccZ : [osx_MCP_input_t](#)



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File List

Here is a list of all files with brief descriptions:

| | |
|-------------------------------|---|
| | [detail level 1 2 3 4 5] |
| ▼ Middlewares | |
| ▼ ST | |
| ▼ STM32_OSX_MotionCP_Library | |
| ▼ Inc | |
| <code>osx_motion_cp.h</code> | |



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Middlewares Directory Reference

Directories

directory **ST**

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ST Directory Reference

Directories

directory **STM32_OSX_MotionCP_Library**

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[STM32_OSX_MotionCP_Library](#)

STM32_OSX_MotionCP_Library Directory Reference

Directories

directory **Inc**

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Inc Directory Reference

Files

file [osx_motion_cp.h](#) [code]

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osx_motion_cp.h File Reference

```
#include <stdint.h>
```

[Go to the source code of this file.](#)

Data Structures

```
struct osx_MCP_input_t
```

Enumerations

```
enum osx_MCP_output_t {  
    OSX_MCP_UNKNOWN = 0x00, OSX_MCP_ONDESK =  
    0x01, OSX_MCP_INHAND = 0x02, OSX_MCP_NEARHEAD  
    = 0x03,  
    OSX_MCP_SHIRTPOCKET = 0x04,  
    OSX_MCP_TROUSERPOCKET = 0x05,  
    OSX_MCP_ARMSWING = 0x06  
}
```

```
enum osx_lm_result_t { OSX_FAILED = 0x00, OSX_SUCCESS =  
    0x01 }
```

Functions

uint8_t **osx_MotionCP_Initialize** (void)
Initialize the MotionCP engine. [More...](#)

void **osx_MotionCP_SetOrientation_Acc** (const
char *acc_orientation)
Set the MotionCP Accelerometer data
orientation. [More...](#)

osx_MCP_output_t osx_MotionCP_Update (**osx_MCP_input_t**
***data_in**)
Run Carry Position Recognition Algorithm.
[More...](#)

uint8_t **osx_MotionCP_GetLibVersion** (char *version)
Get the library version. [More...](#)



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| All | Functions | Enumerations | Enumerator | |

Here is a list of all functions, variables, defines, enums, and typedefs with links to the files they belong to:

- `OSX_FAILED` : [osx_motion_cp.h](#)
- `osx_lm_result_t` : [osx_motion_cp.h](#)
- `OSX_MCP_ARMSWING` : [osx_motion_cp.h](#)
- `OSX_MCP_INHAND` : [osx_motion_cp.h](#)
- `OSX_MCP_NEARHEAD` : [osx_motion_cp.h](#)
- `OSX_MCP_ONDESK` : [osx_motion_cp.h](#)
- `osx_MCP_output_t` : [osx_motion_cp.h](#)
- `OSX_MCP_SHIRTPOCKET` : [osx_motion_cp.h](#)
- `OSX_MCP_TROUSERPOCKET` : [osx_motion_cp.h](#)
- `OSX_MCP_UNKNOWN` : [osx_motion_cp.h](#)
- `osx_MotionCP_GetLibVersion()` : [osx_motion_cp.h](#)
- `osx_MotionCP_Initialize()` : [osx_motion_cp.h](#)
- `osx_MotionCP_SetOrientation_Acc()` : [osx_motion_cp.h](#)
- `osx_MotionCP_Update()` : [osx_motion_cp.h](#)
- `OSX_SUCCESS` : [osx_motion_cp.h](#)



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- [osx_MotionCP_GetLibVersion\(\)](#) : [osx_motion_cp.h](#)
- [osx_MotionCP_Initialize\(\)](#) : [osx_motion_cp.h](#)
- [osx_MotionCP_SetOrientation_Acc\(\)](#) : [osx_motion_cp.h](#)
- [osx_MotionCP_Update\(\)](#) : [osx_motion_cp.h](#)

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- `osx_lm_result_t` : [osx_motion_cp.h](#)
- `osx_MCP_output_t` : [osx_motion_cp.h](#)



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- `OSX_MCP_ARMSWING` : [osx_motion_cp.h](#)
- `OSX_MCP_INHAND` : [osx_motion_cp.h](#)
- `OSX_MCP_NEARHEAD` : [osx_motion_cp.h](#)
- `OSX_MCP_ONDESK` : [osx_motion_cp.h](#)
- `OSX_MCP_SHIRTPOCKET` : [osx_motion_cp.h](#)
- `OSX_MCP_TROUSERPOCKET` : [osx_motion_cp.h](#)
- `OSX_MCP_UNKNOWN` : [osx_motion_cp.h](#)
- `OSX_SUCCESS` : [osx_motion_cp.h](#)



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osx_motion_cp.h

[Go to the documentation of this file.](#)

```
1
44 /* Define to prevent recursive inclusion ---
----- */
45 #ifndef _OSX_MOTION_CP_H_
46 #define _OSX_MOTION_CP_H_
47
48 #ifdef __cplusplus
49 extern "C" {
50 #endif
51
52 /* Includes -----
----- */
53 #include <stdint.h>
54
63 /* Exported types -----
----- */
67 typedef struct
68 {
69     float AccX;          /* acc x axes [g]
*/
70     float AccY;          /* acc y axes [g]
*/
```

```

71 | float AccZ;          /* acc z axes [g]
    | */
72 | } osx_MCP_input_t;
73 |
74 |
75 | typedef enum
76 | {
77 |     OSX_MCP_UNKNOWN          = 0x00,
78 |     OSX_MCP_ONDESK          = 0x01,
79 |     OSX_MCP_INHAND          = 0x02,
80 |     OSX_MCP_NEARHEAD        = 0x03,
81 |     OSX_MCP_SHIRTPOCKET     = 0x04,
82 |     OSX_MCP_TROUSERPOCKET   = 0x05,
83 |     OSX_MCP_ARMSSWING        = 0x06
84 | } osx_MCP_output_t;
85 |
86 | typedef enum
87 | {
88 |     OSX_FAILED = 0x00,      /* License
    | authentication failed */
89 |     OSX_SUCCESS = 0x01     /* License
    | authentication ok */
90 | } osx_lm_result_t;
91 |
96 | /* Exported constants -----
    | ----- */
97 | /* Exported variables -----
    | ----- */
98 | /* Exported macro -----
    | ----- */
99 |
104 | /* Exported functions -----
    | ----- */
105 |
111 | uint8_t osx_MotionCP_Initialize(void);
112 |
113 |

```

```
119 | void osx_MotionCP_SetOrientation_Acc(const
    | char *acc_orientation);
120 |
121 |
127 | osx_MCP_output_t
    | osx_MotionCP_Update(osx_MCP_input_t *data_in);
128 |
134 | uint8_t osx_MotionCP_GetLibVersion(char
    | *version);
135 |
136 |
149 | #ifdef __cplusplus
150 | }
151 | #endif
152 |
153 | #endif /* _OSX_MOTION_CP_H_ */
154 |
155 | /***** (C) COPYRIGHT
    | STMicroelectronics *****/
```