

MotionID Software Library

MotionID Software Library Documentation

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Modules

Here is a list of all modules:

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▼ MIDDLEWARES

▼ MOTION_ID

[MOTION_ID_Exported_Types](#)

[MOTION_ID_Exported_Functions](#)

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MIDDLEWARES

Modules

MOTION_ID

Detailed Description

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Modules

MOTION_ID


MIDDLEWARES

Modules

MOTION_ID_Exported_Types

MOTION_ID_Exported_Functions

Detailed Description

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MOTION_ID_Exported_Types

[MIDDLEWARES](#) » [MOTION_ID](#)

Data Structures

```
struct MID_input_t
```

Enumerations

```
enum MID_output_t {  
    MID_ON_DESK = 0x00, MID_BED_COUCH_PILLOW =  
    0x01, MID_LIGHT_MOVEMENTS = 0x02, MID_BIKING =  
    0x03,  
    MID_TYPING_WRITING = 0x04,  
    MID_HI_TYPING__SLOW_WALKING = 0x05,  
    MID_WASHING_HANDS_WALKING = 0x06,  
    MID_FWALKING = 0x07,  
    MID_FWALKING_JOGGING = 0x08,  
    MID_FJOGGING_BRUSHING = 0x09, MID_SPRINTING =  
    0x0A  
}
```

Detailed Description

Enumeration Type Documentation

enum MID_output_t

Enumerator	
MID_ON_DESK	
MID_BED_COUCH_PILLOW	
MID_LIGHT_MOVEMENTS	
MID_BIKING	
MID_TYPING_WRITING	
MID_HI_TYPING__SLOW_WALKING	
MID_WASHING_HANDS_WALKING	
MID_FWALKING	
MID_FWALKING_JOGGING	
MID_FJOGGING_BRUSHING	
MID_SPRINTING	

Definition at line **69** of file **motion_id.h**.

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[Data Fields](#)

MID_input_t Struct Reference

[MIDDLEWARES](#) » [MOTION_ID](#) »
[MOTION_ID_Exported_Types](#)

```
#include <motion_id.h>
```

Data Fields

float **AccX**

float **AccY**

float **AccZ**

Detailed Description

Definition at line **62** of file **motion_id.h**.

Field Documentation

float AccX

Definition at line **64** of file [motion_id.h](#).

float AccY

Definition at line **65** of file [motion_id.h](#).

float AccZ

Definition at line **66** of file [motion_id.h](#).

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

- [algorithms/Middlewares/ST/STM32_MotionID_Library/Inc/motion_id.h](#)

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MOTION_ID_Exported_Functions

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Functions

void **MotionID_Initialize** (void)
Initialize the MotionID engine. [More...](#)

void **MotionID_Update** (**MID_input_t** *data_in, **MID_output_t** *data_out)
Run Intensity Detection algorithm. [More...](#)

void **MotionID_ResetLib** (void)
Reset Libray. [More...](#)

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

Detailed Description

Function Documentation

uint8_t MotionID_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

void MotionID_Initialize (void)

Initialize the MotionID engine.

Parameters

None

Return values

None

void MotionID_ResetLib (void)

Reset Libray.

Parameters

None

Return values

None

```
void MotionID_Update ( MID_input_t * data_in,  
                      MID_output_t * data_out  
                      )
```

Run Intensity Detection algorithm.

Parameters

data_in Structure containing input data

data_out Intensity Detection algorithm result

Return values

None

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Data Structures

Here are the data structures with brief descriptions:

MID_input_t	
-----------------------------	--

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M

M

[MID_input_t](#)

M

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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 : [MID_input_t](#)
- AccY : [MID_input_t](#)
- AccZ : [MID_input_t](#)

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All	Variables			

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

MotionID Software Library







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File List

Here is a list of all files with brief descriptions:

[detail level 1 2 3 4 5 6]

▼  algorithms	
▼  Middlewareas	
▼  ST	
▼  STM32_MotionID_Library	
▼  Inc	
 motion_id.h	Header for motion_id module

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[algorithms](#) >

algorithms Directory Reference

Directories

directory **Middleware**s

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[Middlewares](#)

Middlewares Directory Reference

Directories

directory **ST**

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[ST](#)

ST Directory Reference

Directories

directory **STM32_MotionID_Library**

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STM32_MotionID_Library Directory Reference

Directories

directory **Inc**

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Inc Directory Reference

Files

file [motion_id.h](#) [code]
Header for motion_id module.

MotionID Software Library

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algorithms	Middlewares	ST	STM32_MotionID_Library	Inc

[Data Structures](#) | [Enumerations](#) | [Functions](#)

motion_id.h File Reference

Header for motion_id module. [More...](#)

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

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

Data Structures

```
struct MID_input_t
```

Enumerations

```
enum MID_output_t {  
    MID_ON_DESK = 0x00, MID_BED_COUCH_PILLOW =  
    0x01, MID_LIGHT_MOVEMENTS = 0x02, MID_BIKING =  
    0x03,  
    MID_TYPING_WRITING = 0x04,  
    MID_HI_TYPING__SLOW_WALKING = 0x05,  
    MID_WASHING_HANDS_WALKING = 0x06,  
    MID_FWALKING = 0x07,  
    MID_FWALKING_JOGGING = 0x08,  
    MID_FJOGGING_BRUSHING = 0x09, MID_SPRINTING =  
    0x0A  
}
```

Functions

void **MotionID_Initialize** (void)
Initialize the MotionID engine. [More...](#)

void **MotionID_Update** (**MID_input_t** *data_in, **MID_output_t** *data_out)
Run Intensity Detection algorithm. [More...](#)

void **MotionID_ResetLib** (void)
Reset Libray. [More...](#)

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

Detailed Description

Header for motion_id module.

Author

MEMS Application Team

Version

V2.0.0

Date

01-May-2017

Attention

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Definition in file [motion_id.h](#).

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

- MID_BED_COUCH_PILLOW : [motion_id.h](#)
- MID_BIKING : [motion_id.h](#)
- MID_FJOGGING_BRUSHING : [motion_id.h](#)
- MID_FWALKING : [motion_id.h](#)
- MID_FWALKING_JOGGING : [motion_id.h](#)
- MID_HI_TYPING__SLOW_WALKING : [motion_id.h](#)
- MID_LIGHT_MOVEMENTS : [motion_id.h](#)
- MID_ON_DESK : [motion_id.h](#)
- MID_output_t : [motion_id.h](#)
- MID_SPRINTING : [motion_id.h](#)
- MID_TYPING_WRITING : [motion_id.h](#)
- MID_WASHING_HANDS_WALKING : [motion_id.h](#)
- MotionID_GetLibVersion() : [motion_id.h](#)
- MotionID_Initialize() : [motion_id.h](#)
- MotionID_ResetLib() : [motion_id.h](#)
- MotionID_Update() : [motion_id.h](#)

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- [MotionID_GetLibVersion\(\)](#) : [motion_id.h](#)
- [MotionID_Initialize\(\)](#) : [motion_id.h](#)
- [MotionID_ResetLib\(\)](#) : [motion_id.h](#)
- [MotionID_Update\(\)](#) : [motion_id.h](#)

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- MID_output_t : [motion_id.h](#)

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- MID_BED_COUCH_PILLOW : [motion_id.h](#)
- MID_BIKING : [motion_id.h](#)
- MID_FJOGGING_BRUSHING : [motion_id.h](#)
- MID_FWALKING : [motion_id.h](#)
- MID_FWALKING_JOGGING : [motion_id.h](#)
- MID_HI_TYPING_SLOW_WALKING : [motion_id.h](#)
- MID_LIGHT_MOVEMENTS : [motion_id.h](#)
- MID_ON_DESK : [motion_id.h](#)
- MID_SPRINTING : [motion_id.h](#)
- MID_TYPING_WRITING : [motion_id.h](#)
- MID_WASHING_HANDS_WALKING : [motion_id.h](#)

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		Inc	

motion_id.h

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

```
1
38 /* Define to prevent recursive inclusion ---
   ----- */
39 #ifndef _MOTION_ID_H_
40 #define _MOTION_ID_H_
41
42 #ifdef __cplusplus
43 extern "C"
44 {
45 #endif
46
47 /* Includes -----
   ----- */
48 #include <stdint.h>
49
61 /* Exported types -----
   ----- */
62 typedef struct
63 {
64     float AccX; /* Acceleration in X axis in
   [g] */
65     float AccY; /* Acceleration in Y axis in
   [g] */
66     float AccZ; /* Acceleration in Z axis in
   [g] */
```

```

67 } MID_input_t;
68
69 typedef enum
70 {
71     MID_ON_DESK                = 0x00,
72     MID_BED_COUCH_PILLOW      = 0x01,
73     MID_LIGHT_MOVEMENTS      = 0x02,
74     MID_BIKING                 = 0x03,
75     MID_TYPING_WRITING        = 0x04,
76     MID_HI_TYPING__SLOW_WALKING = 0x05,
77     MID_WASHING_HANDS_WALKING = 0x06,
78     MID_FWALKING              = 0x07,
79     MID_FWALKING_JOGGING      = 0x08,
80     MID_FJOGGING_BRUSHING     = 0x09,
81     MID_SPRINTING             = 0x0A
82 } MID_output_t;
83
88 /* Exported constants -----
----- */
89 /* Exported variables -----
----- */
90 /* Exported macro -----
----- */
91
96 /* Exported functions -----
----- */
97
103 void MotionID_Initialize(void);
104
111 void MotionID_Update(MID_input_t *data_in,
MID_output_t *data_out);
112
118 void MotionID_ResetLib(void);
119
125 uint8_t MotionID_GetLibVersion(char
*version);
126

```

```
139 #ifdef __cplusplus
140 }
141 #endif
142
143 #endif /* _MOTION_ID_H_ */
144
145 /***** (C) COPYRIGHT
    STMicroelectronics *****/
```

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