osxMotionAR Software Library

osxMotionAR Software Library Documentation

Modules

Here is a list of all modules:

[detail level 1 2 3]

- MIDDLEWARES
  - OSX_MOTION_AR
    - OSX_MOTION_AR_Exported_Types
    - OSX_MOTION_AR_Exported_Functions

MIDDLEWARES

Modules

OSX_MOTION_AR

Detailed Description

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OSX_MOTION_AR

MIDDLEWARES

Modules

OSX_MOTION_AR_Exported_Types

OSX_MOTION_AR_Exported_Functions

Detailed Description

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OSX_MOTION_AR_Exported_Types

Data Structures

struct **osx_MAR_input_t**

Enumerations

enum **osx_MAR_output_t** {
OSX_MAR_NOACTIVITY = 0x00,
OSX_MAR_STATIONARY = 0x01, **OSX_MAR_WALKING** = 0x02, **OSX_MAR_FASTWALKING** = 0x03,
OSX_MAR_JOGGING = 0x04, **OSX_MAR_BIKING** = 0x05,
OSX_MAR_DRIVING = 0x06
}

Detailed Description

Enumeration Type Documentation

enum osx_MAR_output_t

Enumerator	
OSX_MAR_NOACTIVITY	
OSX_MAR_STATIONARY	
OSX_MAR_WALKING	
OSX_MAR_FASTWALKING	
OSX_MAR_JOGGING	
OSX_MAR_BIKING	
OSX_MAR_DRIVING	

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

Data Fields

osx_MAR_input_t Struct Reference

MIDDLEWARES » OSX_MOTION_AR » OSX_MOTION_AR_Exported_Types

```
#include <osx_motion_ar.h>
```

Data Fields

float **AccX**

float **AccY**

float **AccZ**

Detailed Description

Definition at line **68** of file **osx_motion_ar.h**.

Field Documentation

float AccX

Definition at line **70** of file **osx_motion_ar.h**.

float AccY

Definition at line **71** of file **osx_motion_ar.h**.

float AccZ

Definition at line **72** of file **osx_motion_ar.h**.

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

- Middlewares/ST/STM32_OSX_MotionAR_Library/Inc/**osx_motion_**

OSX_MOTION_AR_Exported_Functions

Functions

uint8_t	**osx_MotionAR_Initialize** (void) Initialize the MotionAR engine. More...
void	**osx_MotionAR_SetOrientation_Acc** (const char *acc_orientation) Set the MotionAR Accelerometer data orientation. More...
osx_MAR_output_t	**osx_MotionAR_Update** (**osx_MAR_input_t** *data_in) Run Activity Recognition Algorithm. More...
uint8_t	**osx_MotionAR_GetLibVersion** (char *version) Get the library version. More...

Detailed Description

Function Documentation

uint8_t osx_MotionAR_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_MotionAR_Initialize (void)

Initialize the MotionAR engine.

Parameters

None

Return values

1 in case of success, 0 otherwise

void osx_MotionAR_SetOrientation_Acc (const char * acc_orientation

Set the MotionAR 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_MAR_output_t
osx_MotionAR_Update **(** **osx_MAR_input_t** ***** **data_in** **)**

Run Activity Recognition Algorithm.

Parameters

data_in pointer to the **osx_MAR_input_t** structure

Return values

activity index

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Data Structures

Here are the data structures with brief descriptions:

osx_MAR_input_t

osxMotionAR Software Library

osxMotionAR Software Library Documentation

Data Structure Index

O

o

osx_MAR_input_t

O

osxMotionAR Software Library

osxMotionAR Software Library Documentation

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

- AccX : **osx_MAR_input_t**
- AccY : **osx_MAR_input_t**
- AccZ : **osx_MAR_input_t**

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- AccX : **osx_MAR_input_t**
- AccY : **osx_MAR_input_t**
- AccZ : **osx_MAR_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_MotionAR_Library	
Inc	
osx_motion_ar.h	Header for osx_motion_ar module

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Middlewares Directory Reference

Directories

directory **ST**

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ST Directory Reference

Directories

directory **STM32_OSX_MotionAR_Library**

STM32_OSX_MotionAR_Library Directory Reference

Directories

directory **Inc**

Inc Directory Reference

Files

file **osx_motion_ar.h** [code]
Header for osx_motion_ar module.

osx_motion_ar.h File Reference

Header for osx_motion_ar module. More...

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

Go to the source code of this file.

Data Structures

struct **osx_MAR_input_t**

Enumerations

enum **osx_MAR_output_t** {
OSX_MAR_NOACTIVITY = 0x00,
OSX_MAR_STATIONARY = 0x01, **OSX_MAR_WALKING** = 0x02, **OSX_MAR_FASTWALKING** = 0x03,
OSX_MAR_JOGGING = 0x04, **OSX_MAR_BIKING** = 0x05,
OSX_MAR_DRIVING = 0x06
}

Functions

uint8_t	**osx_MotionAR_Initialize** (void) Initialize the MotionAR engine. More...
void	**osx_MotionAR_SetOrientation_Acc** (const char *acc_orientation) Set the MotionAR Accelerometer data orientation. More...
osx_MAR_output_t	**osx_MotionAR_Update** (**osx_MAR_input_t** *data_in) Run Activity Recognition Algorithm. More...
uint8_t	**osx_MotionAR_GetLibVersion** (char *version) Get the library version. More...

Detailed Description

Header for osx_motion_ar module.

Author
Central Lab

Version
V1.2.0

Date
4-April-2016

Attention

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```
..\OpenSoftwareX_LLA_evaluation_5Nov2014.pdf
```

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Definition in file **osx_motion_ar.h**.

osxMotionAR Software Library

osxMotionAR Software Library Documentation

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

- OSX_MAR_BIKING : **osx_motion_ar.h**
- OSX_MAR_DRIVING : **osx_motion_ar.h**
- OSX_MAR_FASTWALKING : **osx_motion_ar.h**
- OSX_MAR_JOGGING : **osx_motion_ar.h**
- OSX_MAR_NOACTIVITY : **osx_motion_ar.h**
- osx_MAR_output_t : **osx_motion_ar.h**
- OSX_MAR_STATIONARY : **osx_motion_ar.h**
- OSX_MAR_WALKING : **osx_motion_ar.h**
- osx_MotionAR_GetLibVersion() : **osx_motion_ar.h**
- osx_MotionAR_Initialize() : **osx_motion_ar.h**
- osx_MotionAR_SetOrientation_Acc() : **osx_motion_ar.h**
- osx_MotionAR_Update() : **osx_motion_ar.h**

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- osx_MotionAR_GetLibVersion() : **osx_motion_ar.h**
- osx_MotionAR_Initialize() : **osx_motion_ar.h**
- osx_MotionAR_SetOrientation_Acc() : **osx_motion_ar.h**
- osx_MotionAR_Update() : **osx_motion_ar.h**

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- osx_MAR_output_t : **osx_motion_ar.h**

osxMotionAR Software Library

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- OSX_MAR_BIKING : **osx_motion_ar.h**
- OSX_MAR_DRIVING : **osx_motion_ar.h**
- OSX_MAR_FASTWALKING : **osx_motion_ar.h**
- OSX_MAR_JOGGING : **osx_motion_ar.h**
- OSX_MAR_NOACTIVITY : **osx_motion_ar.h**
- OSX_MAR_STATIONARY : **osx_motion_ar.h**
- OSX_MAR_WALKING : **osx_motion_ar.h**

osx_motion_ar.h

Go to the documentation of this file.

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

```
  72   float AccZ;            /*  acc z axes [g]
    */
  73 } osx_MAR_input_t;
  74
  75 typedef enum
  76 {
  77     OSX_MAR_NOACTIVITY          = 0x00,
  78     OSX_MAR_STATIONARY          = 0x01,
  79     OSX_MAR_WALKING             = 0x02,
  80     OSX_MAR_FASTWALKING         = 0x03,
  81     OSX_MAR_JOGGING             = 0x04,
  82     OSX_MAR_BIKING              = 0x05,
  83     OSX_MAR_DRIVING             = 0x06
  84 } osx_MAR_output_t;
  85
  90 /* Exported constants ----------------------
    ----------------------------------*/
  91 /* Exported variables ----------------------
    ----------------------------------*/
  92 /* Exported macro --------------------------
    ----------------------------------*/
  93
  98 /* Exported functions ----------------------
    ---------------------------------- */
  99
 100
 106 uint8_t  osx_MotionAR_Initialize(void);
 107
 108
 114 void osx_MotionAR_SetOrientation_Acc(const
    char *acc_orientation);
 115
 116
 122 osx_MAR_output_t
    osx_MotionAR_Update(osx_MAR_input_t *data_in);
 123
 129 uint8_t osx_MotionAR_GetLibVersion(char
```

```
   *version);
130
131
144 #ifdef __cplusplus
145 }
146 #endif
147
148 #endif /* _OSX_MOTION_AR_H_ */
149
150 /************************ (C) COPYRIGHT
   STMicroelectronics *****END OF FILE****/
```