iSentek Library Description

Sample Code

Initial:

```
setDmaEnable(IST_TRUE);              //Double moving average enable
setAngularEnable(IST_TRUE);          //Fusion enable
setAccuracyEnable(IST_TRUE);         //accuracy enable
setBias(float bias[4]);              //set previous bias or the default is 0,0,0
setDynamicCalibration(IST_TRUE);     //always enable calibration function
// setSingleCalibration(IST_TRUE);   //only do once and flag will turn off
```

Process:

```
/*input : mag and acc data, output: calibrated magnetic data*/
IST_Execute(float input[3], float *aData, float *output);
yaw = getAngular();                  //return the angular data
accuracy = getAccuracy();            //return the accuracy no.
```

IST_Execute(float input[3], float *aData, float *output)

Description

Execute the calibration, accuracy and dma function

Arg

input : Magnetometer data
aData : Accelerometer data
output : Calibrated data

void getBias(float bias[4])

Description

Get Bias when calibration is done

Arg

bias[4]: return bias value
0~2: xyz offset
3: radius

void setBias(float bias[4])

Description

Set Bias when calibration is done

Arg

bias[4]: set bias value
0~2: xyz offset
3: radius

ISTBOOL isDmaEnable()

Description

Check if DMA is enable or not

Return

IST_TRUE : Double moving average enable
IST_FALSE : Double moving average disable

void setDmaEnable(ISTBOOL)

Description

Set DMA enable

Arg

IST_TRUE : enable DMA
IST_FALSE : disable DMA

ISTBOOL isAngularEnable()

Description

Check if fusion is enable or not

Return

IST_TRUE : fusion is enable
IST_FALSE : fusion is disable

void setAngularEnable(ISTBOOL)

Description

Set fusion enable

Arg

IST_TRUE : set fusion enable
IST_FALSE : set fusion disable

float getAngular()

Description

Get yaw data

Return

Range : 0~360

int getAngularInt(void)

Description

Get Integer yaw data

Return

Type: Integer
Range : 0~360

int getAngularInt100(void)

Description

Get yaw data * 100

Return

Type: Integer
Range : 0~36000

ISTBOOL isAccuracyEnable()

Description

Check if accuracy function enable

Return

IST_TRUE : Accuracy function enable
IST_FALSE : Accuracy function disable

void setAccuracyEnable(ISTBOOL)

Description

Set accuracy function enable or not
@ setAngularEnable have to set IST_TRUE

Arg

IST_TRUE : set function enable
IST_FALSE : set function disable

int getAccuracy()

Description

Get Accuracy No.

Return

0 : unreliable
1 : low
2 : Premium
3 : Good

setDynamicCalibration(ISTBOOL);

Description

Always enable calibration function
@ setDmaEnable have to set IST_TRUE

Arg

IST_TRUE : always set calibration function enable
IST_FALSE : disable calibration

void setSingleCalibration(ISTBOOL)

Description

Set calibration enable once

Arg

IST_TRUE : set calibration function enable once
IST_FALSE : disable calibration

ISTBOOL isCalibrationEnable()

Description

Check if calibration function enable

Return

IST_TRUE : Calibration enable
IST_FALSE : Calibraion disable