

StickC IMU

The IMU automatically selects the model based on the host configuration

| Init()

Function:

Initializes the IMU chip

Syntax:

```
int Init(void)
```

Example:

```
cpp

1  #include <M5StickC.h>
2
3  void setup() {
4      M5.begin();
5      int x = M5.IMU.Init(); //return 0 is ok, return -1 is unknown. If the return value is 0, initialize
6      Serial.println(x);
7  }
8  void loop() {
9  }
```

| getGyroData()

Function:

Gets the three-axis gyroscope data from the IMU chip

Syntax:

```
void getGyroData(float *gx, float *gy, float *gz)
```

Example:

cpp

```
1  #include <M5StickC.h>
2
3  float gyroX, gyroY, gyroZ;
4
5  void setup() {
6      M5.begin();
7      M5.IMU.Init();
8  }
9
10 void loop() {
11     M5.IMU.getGyroData(&gyroX, &gyroY, &gyroZ);
12     M5.Lcd.setCursor(0, 30);
13     M5.Lcd.printf("X:%7.2f/nY:%7.2f/nZ:%7.2f ", gyroX, gyroY, gyroZ);
14     delay(500);
15 }
```

| getAccelData()

Function:

Gets the three-axis accelerometer data from the IMU chip

Syntax:

```
void getAccelData(float *ax, float *ay, float *az)
```

Example:

cpp

```
1  #include <M5StickC.h>
2
3  float accX, accY, accZ;
4
5  void setup() {
6      M5.begin();
7      M5.IMU.Init();
8  }
9
10 void loop() {
11     M5.IMU.getAccelData(&accX, &accY, &accZ);
12     M5.Lcd.setCursor(0, 45);
13     M5.Lcd.printf("X:%5.2f/nY:%5.2f/nZ:%5.2f ", accX, accY, accZ);
14     delay(500);
15 }
```

| getAhrsData()

Function:

Gets the attitude data from the IMU chip

Syntax:

```
void getAccelData(float *pitch, float *roll, float *yaw)
```

Example:

cpp

```
1  #include <M5StickC.h>
2
3  float pitch, roll, yaw;
4
5  void setup() {
6      M5.begin();
7      M5.IMU.Init();
8  }
9  void loop() {
10     M5.IMU.getAhrsData(&pitch, &roll, &yaw);
11     M5.Lcd.setCursor(0, 45);
12     M5.Lcd.printf("X:%5.2f/nY:%5.2f/nZ:%5.2f ", pitch, roll, yaw);
13     delay(500);
14 }
```

| getTempData()

Function:

Gets the temperature data from the IMU chip

Syntax:

```
void getTempData(float *t)
```

Example:

cpp

```
1  #include <M5StickC.h>
2
3  float temp;
4
5  void setup() {
6      M5.begin();
7      M5.IMU.Init();
8  }
9  void loop() {
10     M5.IMU.getTempData(&temp);
11     M5.Lcd.setCursor(0, 45);
12     M5.Lcd.printf("Temperature : %.2f C", temp);
13     delay(500);
14 }
```