Timing Library 0.1.0

Project Overview

Contents

1	Cha	ngelog for the Timing Library	2
2	Bacl	kground	3
3	File	Index	4
	3.1	File List	4
4	File	Documentation	5
	4.1	Changelog.md File Reference	5
	4.2	delay.c File Reference	5
	4.3	delay.h File Reference	5
		4.3.1 Detailed Description	5
		4.3.2 Macro Definition Documentation	5
		4.3.3 Function Documentation	6
	4.4	README.md File Reference	6

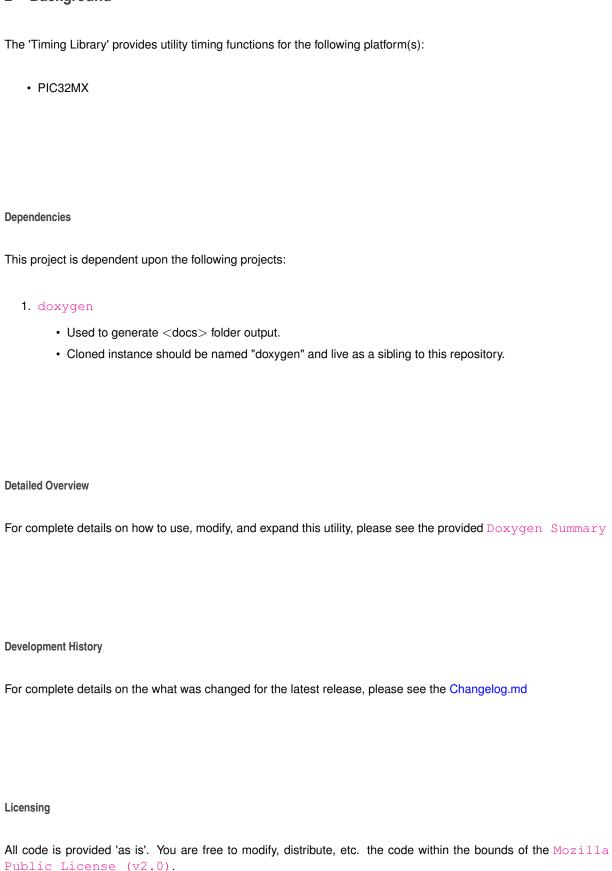
1 Changelog for the Timing Library

Release v0.1.0 - [2018-11-07]

- 1. Initial release of library. Validated to work on:
 - PIC32MX370F512L
 - PIC32MX795F512H
- 2. Developed using Microchip's legacy library on MPLAB 8 and then ported over to MPLAB X.
- 3. Contains support for delay's (micro and milli second support).

2 Background

2 Background



^	- 11	I - I		-1	
-3	ΗШ	е	ın	n	ΔV
u				ч	ᅜᄉ

3.1 File List

Here is a list of all files with brief descriptions:

Implements functions used to abstract away interacting with Wii devices over I2C 5

5

delay.h

Defines public constants and prototypes related to delaying processing

4 File Documentation 5

4 File Documentation

4.1 Changelog.md File Reference

4.2 delay.c File Reference

Implements functions used to abstract away interacting with Wii devices over I2C.

```
#include "delay.h"
Include dependency graph for delay.c:
```

4.3 delay.h File Reference

Defines public constants and prototypes related to delaying processing.

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

Include dependency graph for delay.h: This graph shows which files directly or indirectly include this file:

Macros

• #define MICRO_SECONDS_PER_TICK 1000000

Number of microseconds that will occur within one tick of the system clock.

#define MILLI_SECONDS_PER_TICK 1000

Number of milliseconds that will occur within one tick of the system clock.

Functions

void Delay_Init (uint32_t sysClk)

Initializes internal variable(s) used to determine delay time in system ticks.

void Delay_Us (uint32_t duration)

Delays processing for the given number of microseconds.

• void Delay_Ms (uint32_t duration)

Delays processing for the given number of milliseconds.

4.3.1 Detailed Description

Defines public constants and prototypes related to delaying processing.

4.3.2 Macro Definition Documentation

4.3.2.1 MICRO_SECONDS_PER_TICK

```
#define MICRO_SECONDS_PER_TICK 1000000
```

Number of microseconds that will occur within one tick of the system clock.

4.3.2.2 MILLI_SECONDS_PER_TICK

```
#define MILLI_SECONDS_PER_TICK 1000
```

Number of milliseconds that will occur within one tick of the system clock.

4.3.3 Function Documentation

4.3.3.1 Delay_Init()

Initializes internal variable(s) used to determine delay time in system ticks.

[in] sysClk Current system clock value in Hz (e.g. 80000000).

4.3.3.2 Delay_Ms()

Delays processing for the given number of milliseconds.

Uses the number of core processor ticks to determine the number of ticks to execute a while-loop. This loop effectively delays non-interrupt driven processing. Bare in mind, this is not a precise implementation but will [minimally] provide the delay requested.

[in] duration Number of milliseconds to delay processing.

4.3.3.3 Delay_Us()

Delays processing for the given number of microseconds.

Uses the number of core processor ticks to determine the number of ticks to execute a while-loop. This loop effectively delays non-interrupt driven processing. Bare in mind, this is not a precise implementation but will [minimally] provide the delay requested.

[in] duration Number of microseconds to delay processing.

4.4 README.md File Reference