

watchdog-timer-checkpoint-freertos

User Manual



Reference:

TLT-XXX-MAN-watchdog-timer-checkpoint-freertos-watchdog-timer-checkpoint-freertos

Version:

2.1.0

Revision:

XXX

Confidentiality & Intellectual Property

All rights reserved. Information, technical data and tutorials contained in this document are confidential and proprietary under copyright Law of Industrial Smart Software Technology (IS2T S.A.) operating under the brand name MicroEJ®. Without written permission from IS2T S.A., *copying or sending parts of the document or the entire document by any means to third parties is not permitted*. Granted authorizations for using parts of the document or the entire document do not mean IS2T S.A. gives public full access rights.

The information contained herein is not warranted to be error-free. IS2T® and MicroEJ® and all relative logos are trademarks or registered trademarks of IS2T S.A. in France and other Countries.

Java™ is Sun Microsystems' trademark for a technology for developing application software and deploying it in cross-platform, networked environments. When it is used in this documentation without adding the ™ symbol, it includes implementations of the technology by companies other than Sun.

Java™, all Java-based marks and all related logos are trademarks or registered trademarks of Sun Microsystems Inc, in the United States and other Countries.

Other trademarks are proprietary of their authors.

Table of Contents

1. File Documentation	1
1.1. watchdog_timer_freertos.h File Reference	1
1.1.1. Macros	1
1.1.2. Functions	1
1.2. watchdog_timer_freertos_configuration.h File Reference	2
1.2.1. Macros	2
1.3. watchdog_timer_checkpoint_freertos.c File Reference	2
1.3.1. Variables	3
1.3.2. Functions	3

Chapter 1. File Documentation

1.1. watchdog_timer_freertos.h File Reference

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

1.1.1. Macros

- #define CHECKPOINT_FREERTOS_OK 0
Error codes constants.
- #define CHECKPOINT_FREERTOS_ERROR -1

1.1.2. Functions

- int32_t watchdog_timer_freertos_scheduler_checkpoint_start (void)
Starts the FreeRTOS scheduler checkpoint.
- int32_t watchdog_timer_freertos_scheduler_checkpoint_stop (void)
Stops the FreeRTOS scheduler checkpoint.
- void watchdog_timer_freertos_print_tasks_state (void)
Prints the current FreeRTOS tasks state.

Detailed Description

WATCHDOG TIMER FreeRTOS scheduler checkpoint CCO header file.

Author: . MicroEJ Developer Team

Version: . 2.1.0

Date: . 29 April 2022

Definition in file C:/Jenkins/workspace/masterafc844b6/watchdog-timer-checkpoint-freertos/target~/ccomponentWorking/bsp/watchdog-timer/inc/watchdog_timer_freertos.h

1.2. watchdog_timer_freertos_configuration.h File Reference

1.2.1. Macros

- `#define WATCHDOG_TIMER_FREERTOS_CONFIGURATION_VERSION (1)`

Compatibility sanity check value. This define value is checked in the implementation to validate that the version of this configuration is compatible with the implementation.

- `#define FREERTOS_TIMER_PERIOD_MS 15000`

Period (in milliseconds) of the FreeRTOS timer that will attest the FreeRTOS scheduler activity. Warning This value must be lower than the watchdog timeout period.

Detailed Description

WATCHDOG TIMER FreeRTOS CCO configuration file.

Author: . MicroEJ Developer Team

Version: . 2.1.0

Date: . 29 April 2022

Definition in file C:/Jenkins/workspace/masterafc844b6/watchdog-timer-checkpoint-freertos/target~\ccomponentWorking\bsp/watchdog-timer/inc/watchdog_timer_freertos_configuration.h

1.3. watchdog_timer_checkpoint_freertos.c File Reference

```
#include <stdio.h>
```

```
#include <watchdog_timer_freertos.h>
```

```
#include <watchdog_timer_freertos_configuration.h>
```

```
#include "FreeRTOS.h"
```

```
#include "timers.h"
```

```
#include "LLWATCHDOG_TIMER_configuration.h"
```

```
#include "LLWATCHDOG_TIMER_impl.h"
```

1.3.1. Variables

- static xTimerHandle wtd_rtos_timer
- static volatile int32_t checkpoint_id_rtos_scheduler

Id of RTOS scheduler checkpoint.

1.3.2. Functions

- static void watchdog_timer_freertos_check_callback (xTimerHandle pxTimer)

Callback function that refreshes the watchdog timer if freeRTOS scheduler works.

- int32_t watchdog_timer_freertos_scheduler_checkpoint_start (void)

Starts the FreeRTOS scheduler checkpoint.

- int32_t watchdog_timer_freertos_scheduler_checkpoint_stop (void)

Stops the FreeRTOS scheduler checkpoint.

- void watchdog_timer_freertos_print_tasks_state (void)

Prints the current FreeRTOS tasks state.

Detailed Description

WATCHDOG TIMER FreeRTOS CCO implementation file.

Author: . MicroEJ Developer Team

Version: . 2.1.0

Date: . 29 April 2022

Definition in file C:/Jenkins/workspace/masterafc844b6/watchdog-timer-checkpoint-freertos/target~/ccomponentWorking/bsp/watchdog-timer/src/watchdog_timer_checkpoint_freertos.c