CC32xx Watchdog Demo Application

Overview

A watchdog timer generates an interrupt or a reset when a time-out value is reached. The watchdog timer is used to regain control when a system has failed due to a software error or due to the failure of an external device to respond in the expected way.

Watchdog timer has following features:

1. 32-bit down counter with a programmable load register.
2. Programmable interrupt generation logic with interrupt masking.
3. User-enabled stalling when the microcontroller asserts the CPU Halt flag during debug.

Application details

This application is to showcases the usage of Watch dog timer (WDT) DriverLib APIs. The objective of this application is to showcase the watchdog timer functionality to reset the system whenever the system fails. Here, the watchdog interrupt is not cleared after 10 counts, which essentially simulates the condition of system failure.

Whenever the watchdog timer expires, the interrupt is cleared, the LED will indicate the same(blink). After ten such turns, the interrupt will not be cleared and the LED will be in ON state for some time, which indicates the system reset. system reset will lead to the execution of application again.

Source Files briefly explained

1. **main** - Main file that showcases the watchdog functionality with LED blinking for 10 times and then remain in ON state.
2. **gpio_if** - APIs to get pin number from GPIO number and set them.
3. **pinmux** - Pinmux configurations as required by the application.

Usage

1. Run the reference application (Flash the bin).
2. Observe the Red LED to understand the sequence of operations performed by the application.

Limitations/Known Issues

None.

Article Sources and Contributors

CC32xx Watchdog Demo Application *Source*: http://processors.wiki.ti.com/index.php?oldid=178075 *Contributors*: Codycooke, Malokyle