CC32xx Watchdog System 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.

Application details

This application is to showcases the usage of Watch dog timer (WDT) in a complete system with MCU and networking subsystem. The objective of this application is to showcase the watchdog timer functionality to recover the full system, including the network subsystem whenever the system fails. Here, the watchdog is not acknowledged after sending 20 UDP packets, which essentially simulates the condition of system failure.

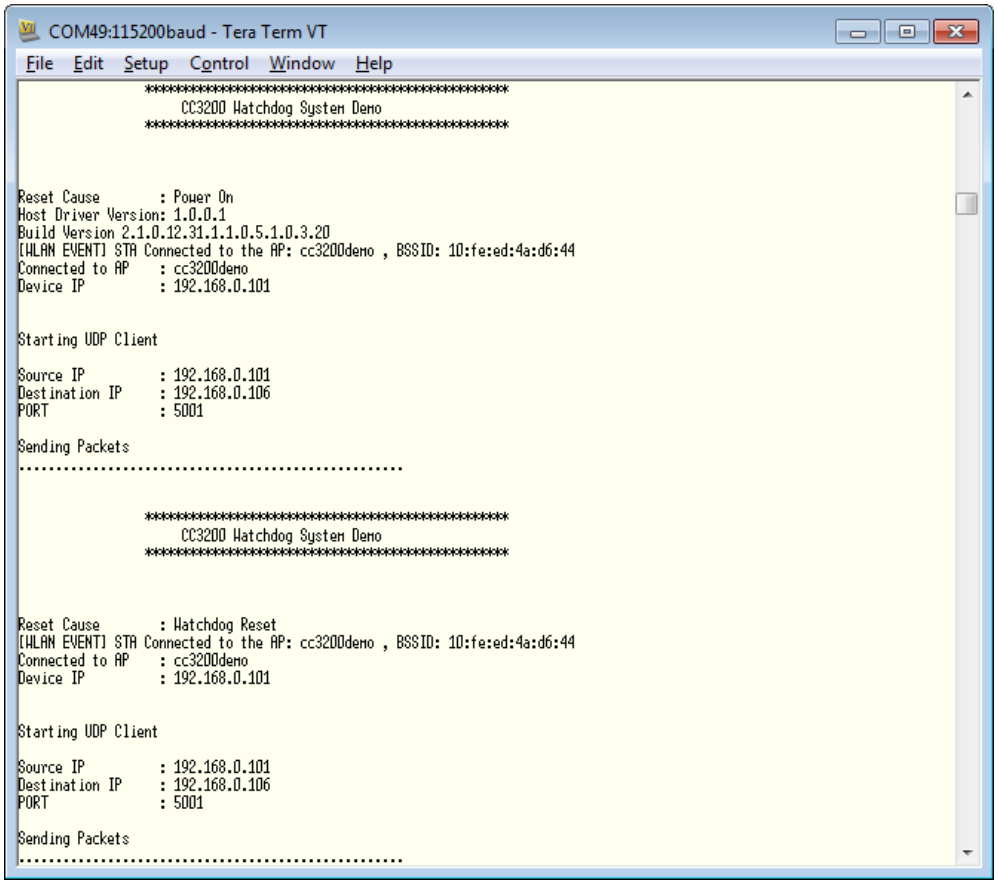
On exit from watchdog reset, the system immediately requests hibernate for a short duration and resume its full functionality only after returning from hibernate. This ensure for recovery from any complex stuck-at scenario that involves networking subsystem.

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. **pinmux** - Pinmux configurations as required by the application.
3. **uart_if** - Common UART interface APIs
4. **udma_if** - Common uDMA interface APIs
5. **wdt_if** - Common watchdog interface APIs

Usage

1. Setup a serial communication application (HyperTerminal/TeraTerm). For detail info visit CC31xx & CC32xx Terminal Setting
   On the host PC, open a hyperterminal, with the following settings
   - **Port:** Enumerated COM port
   - **Baud rate:** 115200
   - **Data:** 8 bit
   - **Parity:** None
   - **Stop:** 1 bit
   - **Flow control:** None
2. Run the reference application (Flash the bin).
3. Observe the UART terminal to understand the sequence of operations performed by the application.



Limitations/Known Issues

None.

Article Sources and Contributors

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