CC32xx Timer Count Capture Application

Overview

Every GPTM(General purpose timer module) block can be used as two 16-bit timers/counters (referred to as Timer A and Timer B) that can be configured to operate independently as timers or event counters, or concatenated to operate as one 32-bit timer. Timers can also be used to trigger μ DMA transfers.

Following operating modes are supported:

- 1. 16 or 32-bit programmable one-shot timer
- 2. 16 or 32-bit programmable periodic timer
- 3. 16-bit general-purpose timer with an 8-bit prescaler

Application details

This application showcases Timer's count capture feature to measure frequency of an external signal.

Source Files briefly explained

- main.c Display banner and measured frequency
- pinmux.c Generated by Pinmux utility to mux out the CCP signal to chip boundary.
- uart_if.c Generic APIs to initialize and configure UART.
- startup_ewarm.c Implements interrupt vector table when using IAR ewarm tool chain
- startup_ccs.c Implements interrupt vector table when using CC tool chain

Usage

- Setup a serial communication application (HyperTerminal/TeraTerm) with following settings. For detail info visit Terminal setup
- Port: Enumerated COM port

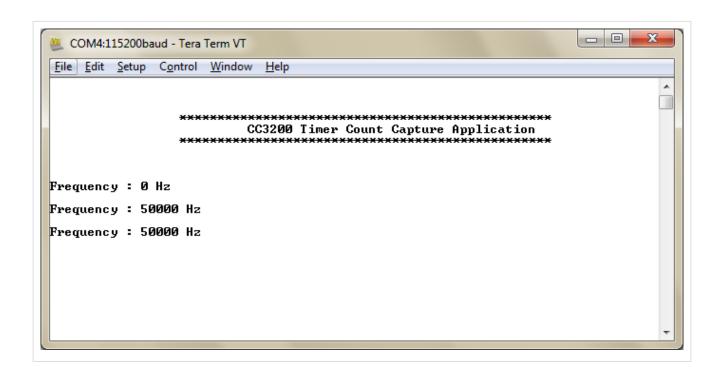
- Baud rate: 115200

- Data: 8 bit- Parity: None- Stop: 1 bit

- Flow control: None

- Run the reference application (Flashing the bin/IAR/CCS).
- Feed an external signal on LP Header at P1.3 (PIN_4)
- Observe the frequency getting printed on the terminal

Terminal snapshot when application runs on device:



Limitations/Known Issues

None.

Article Sources and Contributors

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