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 µDMA 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

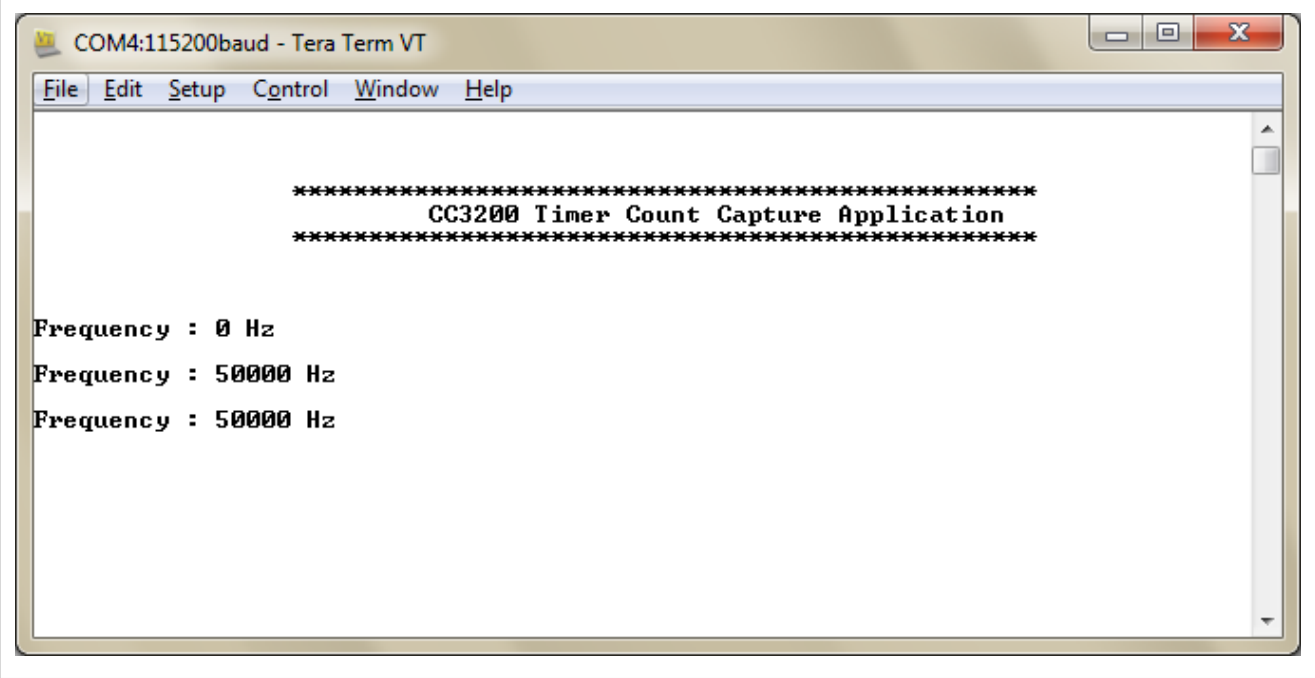
Usage

- 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

CC32xx Timer Count Capture Application *Source*: http://processors.wiki.ti.com/index.php?oldid=178317 *Contributors*: Codycooke, Jitgupta, Malokyle

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