**ADLINK Technical Document**

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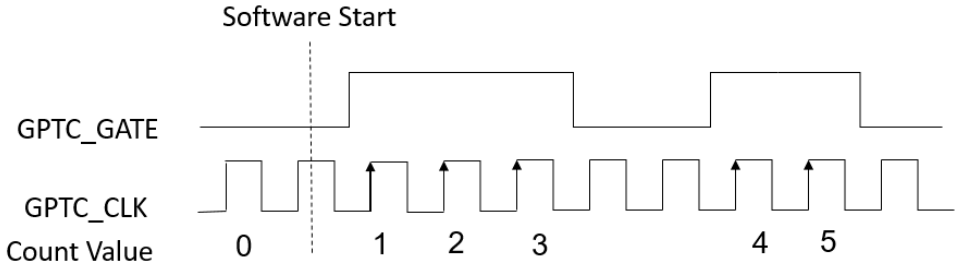
|---|---|---|---|
| **Abstract** | How to Use Simple Gated Event Counting | | |
| **OS** | Windows | | |
| **Keyword** | GPTC | | |
| **Related Products** | USB-1210, USB-1901, USB1902, USB-1903 | | |
| **Date** | 2021-11-11 | **No.** | ? |

- Issue Details:

This document outlines how to use simple Gated Event Counting, one of the several GPTC functions available to users.

- More information:

Simple Gated Event Counting calculates the number of pulses from GPTC_CLK signal after software start and the counter is controlled by the GPTC_GATE signal. When GPTC_GATE is active, the DAQ will start to calculate when the software starts and retains the current value until GPTC_GATE is inactive or the software stops.



- Solution:

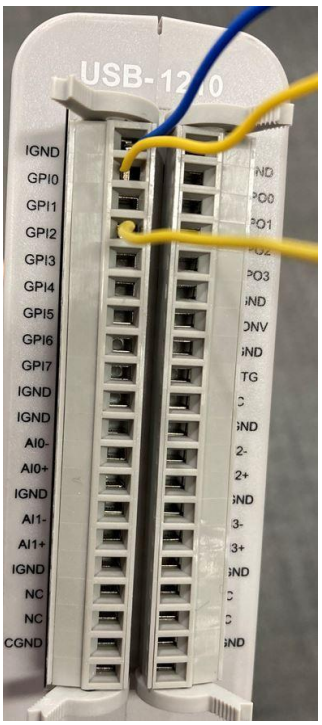
**Step 1: Identify pins**

Refer to the user manual and check the pin definitions to find the **GPTC_CLK** and **GPTC_GATE** pin numbers. For the USB-1210, the GPTC_CLK is pin 19 and the GPTC_GATE is pin 17.

| | Pin | Pin | |
|---|---|---|---|
| IGND | 20 | 40 | IGND |
| GPTC_CLK | 19 | 39 | GPTC_OUT0 |
| GPTC_UD0 | 18 | 38 | GPTC_OUT1 |
| GPTC_GATE0 | 17 | 37 | GPTC_OUT2 |
| GPTC_AUX0 | 16 | 36 | GPTC_OUT3 |
| GPTC_CLK2 | 15 | 35 | IGND |
| GPTC_UD2 | 14 | 34 | N/C* |
| GPTC_GATE2 | 13 | 33 | N/C* |
| GPTC_AUX2 | 12 | 32 | N/C* |
| IGND | 11 | 31 | N/C* |

**Step 2: Connect pins**

Connect the clock source to GPTC_CLK (pin 19) and the gate signal to GPTC_GATE (pin 17).

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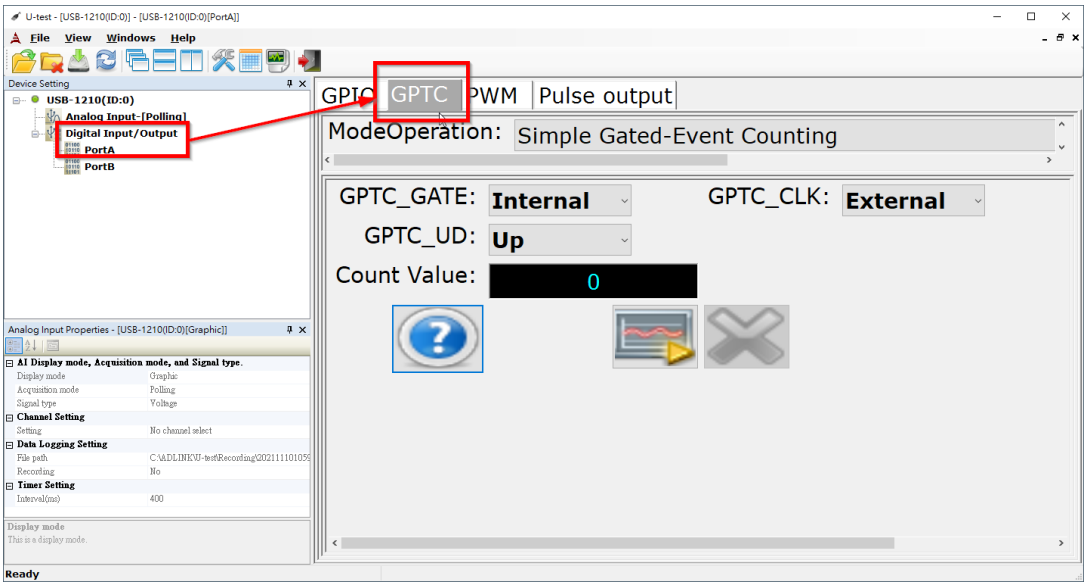
**Step 3: Install U-Test**

Download and install the U-Test utility from the ADLINK website.

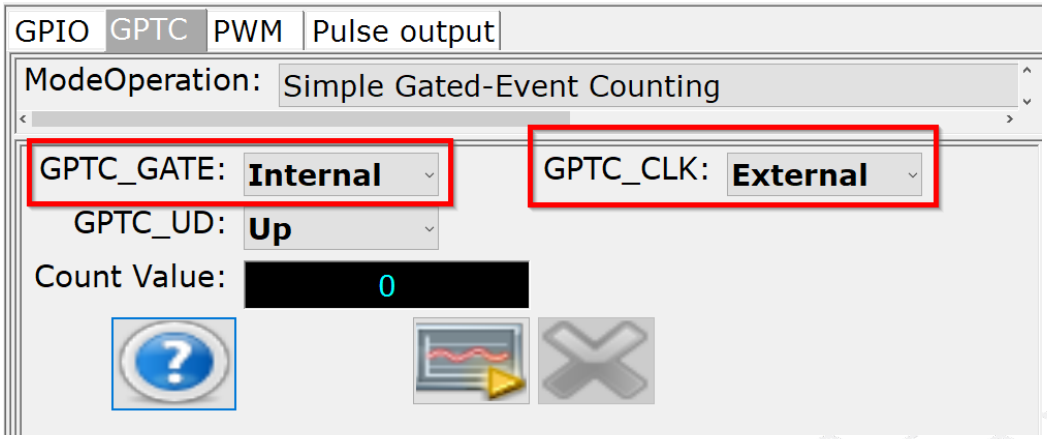
**Step 4: Launch sample program**

1. Launch U-Test
2. Click **Digital Input/Output** in the left pane
3. Select the **GPTC** tab in the right pane
4. Under **ModeOperation**, select **Simple Gate-Event Counting**




**Step 5: Set gate and clock**

Set **GPTC_GATE** to Internal and **GPTC_CLK** to External. This setting removes the manual activation and deactivation of the gate signal.



**Step 6: Run**

Press the run button (highlighted below) and the DAQ card will start to count the pulse value until the program is stopped.