GPM32F011xB eCCU6 PWM User's Manual

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1. GPM32F011xB eCCU6 PWM Configuration

1.1. General Description

This user's manual illustrates the configuration of eCCU6 PWM function initialization when PWM_EN = 0. Table 1 describes the case of eCCU6_PWM_CTRL1 = 0x00. User can determine PWM0~5 output status by configuring PWM_OVC_DATA of eCCU6_OVC_CTRL register. If eCCU6_PWM_CTRL1 = 0x3F, please refer to Table 2. The output status of PWM0, 2 and 4 are determined by PWM_OVC_DATA configuration of eCCU6_OVC_CTRL register, while the output status of PWM1, 3 and 5 are determined by eCCU6_PWM_OVRD register.

Table 1. Output Status when PWM_EN=0 and eCCU6_PWM_CTRL1 = 0x00

Output	PWM0, 2, 4	PWM1, 3, 5
OVC_INTF=0	OVC_DATA	OVC_DATA
OVC_INTF≠0	OVC_DATA	OVC_DATA

Table 2. Output Status when PWM_EN=0 and eCCU6_PWM_CTRL1 = 0x3F

Output	PWM0, 2, 4	PWM1, 3, 5
OVC_INTF=0	OVC_DATA	OVRD_DATA
OVC_INTF≠0	OVC_DATA	OVC_DATA

1.2. eCCU6 PWM Initialization Configuration Flow Chart

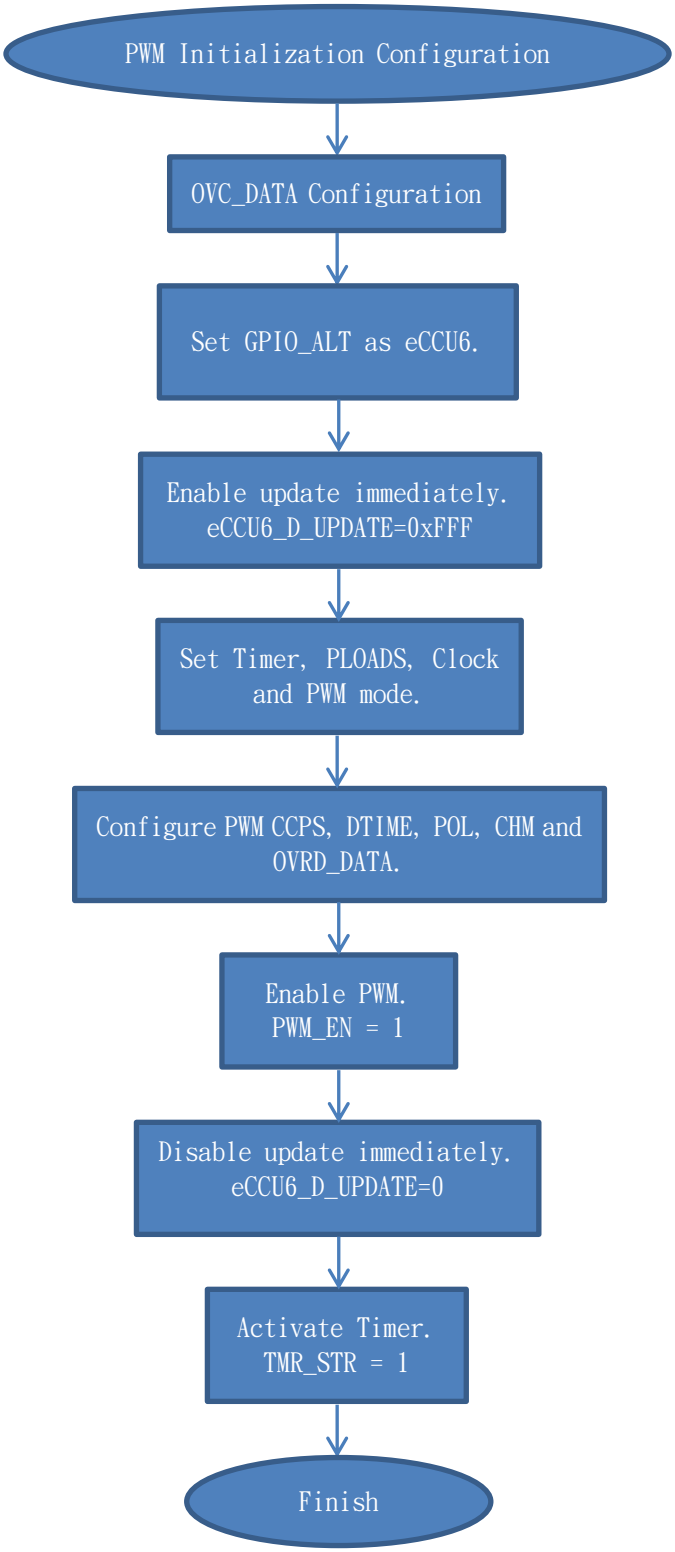


Figure 1.1 PWM Initialization Configuration

1.3. PWM Initialization Configuration Sample Code

```
void eCCU61_PWM_Init(void)
{
  eCCU61->OVC_CTRL = eCCU6_PWM0_OVC_LOW | eCCU6_PWM1_OVC_LOW | eCCU6_PWM2_OVC_LOW |
                     eCCU6_PWM3_OVC_LOW | eCCU6_PWM4_OVC_LOW | eCCU6_PWM5_OVC_LOW;

  GPIO3->ALT0 = GPIO_ALT_P3_00_eCCU6 | GPIO_ALT_P3_01_eCCU6 | GPIO_ALT_P3_02_eCCU6 |
                GPIO_ALT_P3_03_eCCU6 | GPIO_ALT_P3_04_eCCU6 | GPIO_ALT_P3_05_eCCU6;

  eCCU61->D_UPDATE = eCCU6_UPDATE_CCP0_IMMEDIATE | eCCU6_UPDATE_CCP0_IMMEDIATE |
                     eCCU6_UPDATE_CCP0_IMMEDIATE | eCCU6_UPDATE_CCP0_IMMEDIATE |
                     eCCU6_UPDATE_CCP0_IMMEDIATE | eCCU6_UPDATE_CCP0_IMMEDIATE |
                     eCCU6_UPDATE_PLD_IMMEDIATE | eCCU6_UPDATE_ADC_IMMEDIATE |
                     eCCU6_UPDATE_OVRD_IMMEDIATE | eCCU6_UPDATE_REV_IMMEDIATE;

  eCCU61->TMR_PLOADS = 2300;
  eCCU61->TMR_CTRL = eCCU6_TMR_PWM_MODE | eCCU6_TMR_CENTER_ALIGN | eCCU6_TMR_CK_HCLK;

  eCCU61->CCPS0 = 1150;
  eCCU61->CCPS2 = 1150;
  eCCU61->CCPS4 = 1150;

  eCCU61->PWM_DTIME0_b.VALUE0 = 92;
  eCCU61->PWM_DTIME0_b.VALUE1 = 92;
  eCCU61->PWM_DTIME2 = eCCU61->PWM_DTIME0;
  eCCU61->PWM_DTIME4 = eCCU61->PWM_DTIME0;

  eCCU61->PWM_CTRL0 |= eCCU6_PWM0_ACTIVE_HIGH | eCCU6_PWM1_ACTIVE_HIGH |
                       eCCU6_PWM2_ACTIVE_HIGH | eCCU6_PWM3_ACTIVE_HIGH |
                       eCCU6_PWM4_ACTIVE_HIGH | eCCU6_PWM5_ACTIVE_HIGH;

  eCCU61->PWM_CTRL0 |= eCCU6_PWM01_CHM | eCCU6_PWM23_CHM | eCCU6_PWM45_CHM;

  eCCU61->PWM_OVRDS = eCCU6_PWM0_OVRDS_LOW | eCCU6_PWM1_OVRDS_LOW |
                      eCCU6_PWM2_OVRDS_LOW | eCCU6_PWM3_OVRDS_LOW |
                      eCCU6_PWM4_OVRDS_LOW | eCCU6_PWM5_OVRDS_LOW;

  eCCU61->PWM_CTRL0 |= eCCU6_PWM0_EN | eCCU6_PWM1_EN | eCCU6_PWM2_EN |
                       eCCU6_PWM3_EN | eCCU6_PWM4_EN | eCCU6_PWM5_EN;

  eCCU61->D_UPDATE = 0;

  eCCU61->TMR_CTRL |=  eCCU6_TMR_STR;
}
```