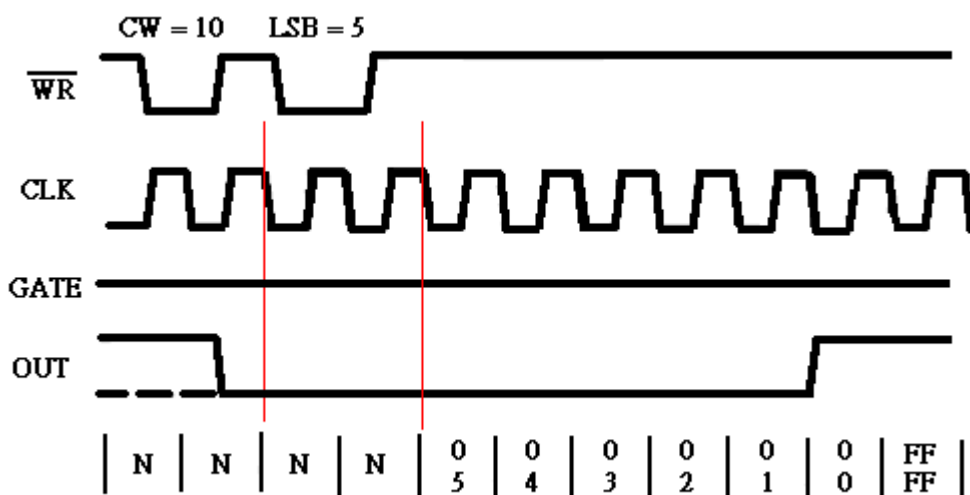


Q. 為什麼計時計數器在選擇模式後會讀取到不正確的數值或者是計時計數器沒有動作?

Ans: 這是由於 8254 本身的規範所造成，不管你選擇何種模式的功能，您都必需先產生二個 Clock 去初始化計時器，這樣才能讓計時器啟動，下圖以 Mode 0 為例，如圖所示，前二個 Clock 並不會促使計時器產生動作，其目的用於初始化計時器的狀態，等二個 Clock 結束後才會開始倒數。



Mode 0

PCI-TMC12A 可自動產生二個 Clock 來初始化 8254 計時計數器，您可以參考下面的範例程式：

注意：請先將 J28 調至 TMC-12A

Example : 使用 UniDAQ Driver

```

wRtn=Ixud_DriverInit(&wTotalBoards);

printf("The Total number of Boards is %d\n",wTotalBoards);

wRtn=Ixud_GetCardInfo(i,&DevInfo,&CardInfo,szModelName);

wBoardNo = 0;
wChannel = 1; //設定計時器的通道為第 1 個計時器
wMode = 0; //設定計時器模式為第 0 模式-倒數完後就中斷
dwValue = 20000; //設定計時器的 Downcount 值為 20000
wRtn = Ixud_SetCounter(wBoardNo,wChannel,wMode, dwValue);

    //產生 Clock 來初始化計時計數器
wRtn = Ixud_WritePort(DevInfo.dwBAR[2]+0x18,16,0<<wChannel);
wRtn = Ixud_WritePort(DevInfo.dwBAR[2]+0x18,16,1<<wChannel);

wRtn = Ixud_WritePort(DevInfo.dwBAR[2]+0x18,16,0<<wChannel);
wRtn = Ixud_WritePort(DevInfo.dwBAR[2]+0x18,16,1<<wChannel);

wRtn = Ixud_WritePort(DevInfo.dwBAR[2]+0x18,16,0<<wChannel);

for(;;)
{
    wRtn = Ixud_ReadCounter(wBoardNo,wChannel, &dwValue); //取得計時器的 DownCount 值

    wRtn = Ixud_WritePort(DevInfo.dwBAR[2]+0x18,16,1<<wChannel);
    wRtn = Ixud_WritePort(DevInfo.dwBAR[2]+0x18,16,0<<wChannel);
}

wRtne=Ixud_DriverClose();

```

Example : 使用 Classic Driver

```

wRtn=PTMC12_DriverInit();

wTotalBoards=PTMC12_DetectBoards();

wBoardNo = 0;
wChannel = 1; //設定計時器的通道為第 1 個計時器
wMode = 0; //設定計時器模式為第 0 模式-倒數完後就中斷
dwValue = 20000; //設定計時器的 Downcount 值為 20000

wRtn=PTMC12_OpenBoard(wBoardNo,0);

wRtn=PTMC12_WriteCounter(wBoardNo,wChannel,wMode,dwValue);

//產生 Clock 來初始化計時計數器
wRtn = PTMC12_WriteWord(wBoard,0x18,0<<wChannel);
wRtn = PTMC12_WriteWord(wBoard,0x18,1<<wChannel);

wRtn = PTMC12_WriteWord(wBoard,0x18,0<<wChannel);
wRtn = PTMC12_WriteWord(wBoard,0x18,1<<wChannel);

wRtn = PTMC12_WriteWord(wBoard,0x18,0<<wChannel);

for(;;)
{
    wRtn = PTMC12_ReadCounter(wBoardNo,wChannel, ReadValue); //取得計時器的 DownCount 值

    wRtn = PTMC12_WriteWord(wBoard,0x18,1<<wChannel);
    wRtn = PTMC12_WriteWord(wBoard,0x18,0<<wChannel);

}

wRtn=PTMC12_CloseBoard(wBoardNo);

wRtn=PTMC12_CloseAll();

```

更多有關 8254 詳細資料和規範可以參考下列網址
<http://ftp.utcluj.ro/pub/users/calcing/PMP/231164.pdf>