

## How to reset or clear a USB-QUAD08 Encoder Channel

The example program below demonstrates (using C++) how to configure and clear a USB-QUAD08 channel for quadrature encoder input. To use the cbCClear function, you must read the counter input asynchronously using cbCIn32.

At the bottom of this article you will find a Zip file that contains the Visual Studio 2008 project.

```
// VC_2008_USB_QUAD08_AsynchronousReadClear.cpp : Defines the entry point for the console application.
```

```
//
```

```
#include "stdafx.h"
```

```
/* Include files */
```

```
#include <windows.h>
```

```
#include <stdio.h>
```

```
#include <conio.h>
```

```
#include <string.h>
```

```
#include "cbw.h"
```

```
#define MAXNUMDEVS 100
```

```
void main ()
```

```
{
```

```
/* Variable Declarations */
```

```
int i=0;
```

```
int ULStat = 0;
```

```
int numberOfDevices = MAXNUMDEVS;
```

```
DaqDeviceDescriptor inventory[MAXNUMDEVS];
```

```
DaqDeviceDescriptor DeviceDescriptor;
```

```
int BoardNum = -1;
```

```
float Rev = (float)CURRENTREVNUM;
```

```
ULStat = cbDeclareRevision(&Rev);
```

```
cbErrHandling(PRINTALL, STOPALL);
```

```
printf ("Demonstration of cbConfigScan() in BACKGROUND mode\n\n");
```

```
//Ignore InstaCal device discovery
```

```
cbIgnoreInstaCal();
```

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```
//locate USB devices
ULStat = cbGetDaqDeviceInventory(USB_IFC, inventory, &numberOfDevices);
for( i = 0; i < numberOfDevices; i++)
{
DeviceDescriptor = inventory[i];

//Product ID for USB-QUAD08 = 0xCA
//Product IDs can be found in ULProps.txt located in
// C:\Program Files (x86)\Measurement Computing\DAQ
if(DeviceDescriptor.ProductID == 0xCA)
{
BoardNum = i;
ULStat = cbCreateDaqDevice(BoardNum, DeviceDescriptor);
printf("Device Name: %s\n", DeviceDescriptor.ProductName);
break;
}
}

if(BoardNum < 0)
{
printf("USB device not found...press any key to exit\n");
getch();
return;
}

ULStat = cbCConfigScan(BoardNum,
0,
ENCODER|ENCODER_MODE_X1|ENCODER_MODE_BIT_32,
CTR_DEBOUNCE500ns,
CTR_TRIGGER_AFTER_STABLE,
CTR_RISING_EDGE,
CTR_TICK208PT3ns,
0);
if(ULStat != 0)
printf("Error Code %d\n",ULStat);
unsigned long encoderValue;
int clearCounter = 0;
while(!_kbhit())
{
```

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```
//this loop reads the low half of the buffer then the upper half continuously.  
//it uses a NextReadUpper flag so that each half of the buffer is read once  
  
ULStat = cbCIn32(BoardNum,0,&encoderValue);  
printf("%d\n",encoderValue);  
  
Sleep(100);  
  
//test clear counter input every 10 seconds  
clearCounter++;  
if(clearCounter >100)  
{  
    clearCounter = 0;  
    cbCClear(BoardNum,0);  
}  
}  
  
cbReleaseDaqDevice(BoardNum);  
  
printf("Completed...press any key to exit\n");  
getch();  
}
```

Measurement Computing Data Acquisition Knowledgebase  
<https://kb.mccdaq.com/KnowledgebaseArticle50792.aspx>