

[^ Prev Thread](#)[Next Thread v](#)

Code Configurator PIC24F - GPIO Interrupt on Change

Author**Essentials Only**[Full Version](#)[Post](#) **therisod** [Friday, March 20, 2015 6:32 PM](#) ([permalink](#))

New Member



Total Posts : 4

Reward points : 0

Joined: 3/19/2015

Location: 0

Status: **offline**

Code Configurator PIC24F - GPIO Interrupt on Change

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Hi,

When configuring the GPIOs I'm not able to select the options to generate an interrupt when there is a transition change on the input (also output) PINs.

I'm missing something or there is a bug/feature in the code configurator?

Stefano

#1

10 Replies • Related Threads

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therisod **Code Configurator PIC24F - Timers Callback Function Rate** • [Friday, March 20, 2015 6:39 PM](#) ([permalink](#))

New Member



Total Posts : 4

Reward points : 0

Hi,

the maximum value I can set for the Call Function Rate is 256.

Shouldn't be this number written in the register PRx and be a 16bit number?

Any clue?

Thank you,

Stefano

0

#2

Joined: 3/19/2015

Location: 0

Status: **offline**

ns.mchp



Moderator



Total Posts : 88

Reward points : 0

Joined: 10/22/2013

Location: 0

Status: **offline**

Re: Code Configurator PIC24F - GPIO Interrupt on Change • [Saturday, March 21, 2015 0:06 PM](#) (permalink)

Interrupt on Change or Change Notification feature will be implemented in the future releases of MCC it is currently unavailable.

3 (1)

#3

pr.mchp



Starting Member



Total Posts : 43

Reward points : 0

Joined: 3/23/2015

Location: 0

Status: **offline**

Re: Code Configurator PIC24F - Timers Callback Function Rate • [Monday, March 23, 2015 3:30 PM](#) (permalink)

The PR register decides the time period for the TIMER which the user has selected. This is the 16 bit value.

In case of interrupt mode, there is an option of call back whose maximum value is 0xFF. The control enters the the ISR depending on the selected PR value as expected but inside that ISR there is a user Call back routine(For user application).

This call back routine is called depending on the value entered in the Call back option.

eg: Assume the PR is set to give 1second time delay and the call back value is 5. The control enters ISR every 1second but the Call back routine in the ISR is called for every (1s*5).

If the user doesnt want to use the call back, he can keep its default value as 0x01.

0

#4

therisod



New Member



Total Posts : 4

Reward points : 0

Joined: 3/19/2015

Location: 0

Status: **offline**

Re: Code Configurator PIC24F - Timers Callback Function Rate • [Monday, March 23, 2015 6:21 PM](#) (permalink)

Thank you for your help and clarification.

Stefano

0

#5

Alexmouse



New Member



Total Posts : 21

Reward points : 0

Joined: 7/6/2009

Location: UK

Status: **offline**

👍 Re: Code Configurator PIC24F - Timers Callback Function Rate • [Monday, October 23, 2017 4:50 PM](#) (permalink)

"Interrupt on Change or Change Notification feature will be implemented in the future releases of MCC it is currently unavailable." - I still can't see it?

0

Update - yes, I think I've found it, just need to look in the right place.

✎ post edited by Alexmouse - Monday, October 23, 2017 4:56 PM

#6

SJFreeland



Starting Member



Total Posts : 62

Reward points : 0

Joined: 5/6/2017

Location: 0

Status: **offline**

📄 Re: Code Configurator PIC24F - GPIO Interrupt on Change • [Sunday, September 01, 2019 8:23 PM](#) (permalink)

I hope someone will see this reply. The original post was 4 years ago while a "recent" reply was 2 years ago.

0

Current versions:

MPLAB X IDE: 4.20

MCC: 3.85.1

I am trying to implement a negative edge interrupt on RD6, pin 83 of a PIC24FJ256GB410. I set the IOC properties of RD6 in Pin Module of MCC to NEGATIVE with WPU checked. In the System Module, the Pin Module properties are:

Interrupt: CNI

Description: CN - Change Notification Interrupt

Vector: 19

Enabled: Checked

Priority: 1 (ALL priorities are 1)

After the merge is complete, I see that the following NEW code has been added to pin_manager.c:

```
/* Interrupt service routine for the CNI interrupt. */
void __attribute__((interrupt, no_auto_psv)) _CNIInterrupt ( void )
{
    if(IFS1bits.CNIF == 1)
    {
        // Clear the flag
        IFS1bits.CNIF = 0;
        // interrupt on change for group IOCFD
        if(IOCFDbits.IOCFD6 == 1)
        {
            IOCFDbits.IOCFD6 = 0;
            // Add handler code here for Pin - RD6
        }
    }
}
```

```

    }
}
}

```

Clearly I did not add this code. So, something in the IDE tried to implement the IOC interrupt, but it does not work. Just to see if the routine is ever called, I added `printf("$");` just inside the first bracket. I see no \$ characters when I pull RD6 low. I have successfully verified another WORKING interrupt this same way:

```

void __attribute__ ( ( interrupt, no_auto_psv ) ) _T1Interrupt ( )
{
    printf("$");
    /* Check if the Timer Interrupt/Status is set */
    /***User Area Begin

```

The screen fills with \$ characters VERY quickly. A search for `_CNInterrupt` finds nothing in the project. If I misspell `_CNInterrupt` as `_CNInterFrupt` I get a compiler error:

```

mcc_generated_files/pin_manager.c:202:1: warning: Invalid interrupt vector names for
device '24FJ256GB410' are:
_CNInterFrupt

```

So somewhere the IDE knows that `_CNInterrupt` is the correct symbol. For the record, the same thing happens with `_T1Interrupt` (which is working).

I am confused by Forum comments on this subject. Does MCC do IOC interrupts? If so, what am I missing? Is there a document describing MCC implementation of interrupts, more specifically, IOC interrupts?

#7

mpgmike



Super Member



Total Posts : 732

Reward points : 0

Joined: 1/24/2014

Location: NJ

Status: **offline**

Re: Code Configurator PIC24F - GPIO Interrupt on Change • [Sunday, September 01, 2019 11:20 PM](#) (permalink)

A common issue is having the TRISD register set up with your PORTD.6 as an Input. Check that. Also, if you have PORTD.6 set up as Analog, you won't get an interrupt. Beyond that, we may have to see more of your code, or perhaps even a schematic. Timer 1 in internal. IOC is external where hardware matters.

0

I don't need the world to know my name, but I want to live a life so all my great-grandchildren proudly remember me.

#8

katela

Re: Code Configurator PIC24F - GPIO Interrupt on Change • [Monday, September 02, 2019 1:12 AM](#) (permalink)

Why not start your own thread? This is an old thread.

0



Super Member



Total Posts : 2009
Reward points : 0
Joined: 6/11/2013
Location: South Africa
Status: **offline**

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#9

SJFreeland



Starting Member



Total Posts : 62
Reward points : 0
Joined: 5/6/2017
Location: 0
Status: **offline**

Re: Code Configurator PIC24F - GPIO Interrupt on Change • Monday, September 02, 2019 2:02 AM (permalink)

The reason for continuing this thread: I have seen complaints from Forum monitors to NOT start a new thread if one exists. In fact the title of this thread is perfect, "Code Configurator PIC24F - GPIO Interrupt on Change." Are you saying the chance to be noticed will improve with a new thread? Starting a new thread in any case sounds fine to me.

0

#10

ric



Super Member



Total Posts : 35061
Reward points : 0
Joined: 11/7/2003
Location: Australia,
Melbourne
Status: **offline**

Re: Code Configurator PIC24F - GPIO Interrupt on Change • Monday, September 02, 2019 2:39 AM (permalink)

“

SJFreeland

The reason for continuing this thread: I have seen complaints from Forum monitors to NOT start a new thread if one exists.

”

5 (1)

Really? Could you point us to one of these?

The complaints I have seen is where a person starts lots of new threads, which are all variations on the same theme, and you have to remember what they had already said in their previous threads to understand their problem.

“

In fact the title of this thread is perfect, "Code Configurator PIC24F - GPIO Interrupt on Change." Are you saying the chance to be noticed will improve with a new thread?

”

Old hands will suspect you are a clueless student who just wants a homework answer if you resurrect an ancient topic...

The temptation is for them to post "I have the same problem too", when in fact their own problem is nothing like that described in the post they hijack, and they don't bother telling you what THEY tried, or what symptoms THEY observed.

✎ post edited by ric - Monday, September 02, 2019 2:40 AM

I also post at: [PicForum](#)

To get a useful answer, always state which PIC you are using!

#11

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