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## *iSensor*® ADIS16240 Evaluation Tool Overview



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*iSensor*<sup>®</sup> *The Simple Solution for Sensor Integration* Evaluation Tool Overview

- 1. Evaluation/Interface Board (ADIS16240/PCBZ) for simpler connection to an existing processor/system PCB.
  - These boards provide a simple connector translation that enables user to bypass BGA soldering. The 2mm pitch connectors are easy to interface with 1mm ribbon cable or solder to.
  - Part number for ordering: ADIS16240/PCBZ
- 2. Evaluation System (ADISUSBZ) for those that prefer a simple PC interface
  - This system provides a simple USB interface, along with a simple Graphical User Interface (GUI) package, for evaluating most of the ADIS16240 functions and performance.
  - Supports approximately 150-200SPS sample rate.
  - This system is not a development kit that comes with PC development tools, source code and software support.
  - Part number for ordering: ADISUSBZ







## *i***Sensor**<sup>®</sup> *The Simple Solution for Sensor Integration* Hooking up to the ADIS16240/PCBZ



The ADIS16240 demonstration software can be found at <u>www.analog.com/isensor-evaluation</u>

- 1. Click on "Evaluation Software Downloads"
- 2. Click on 240ES.zip and save it to a temporary directory
- 3. Open it and double click on setup.exe.







#### ADiS16240\_Eval\_Rev\_1 - Choose Program Group Installation Steps (continued) Setup will add items to the group shown in the Program Group box. You can enter a new group name or select one from the Existing 6. Click Continue Groups list. Program Group: Analog Devices iSensors 7. If this message comes up, Existing Groups: click on "No" Accessories ADIS16130\_Evaluation\_Rev\_2 Analog Devices iSensors 8. Click OK Giveio Infotriever Version Conflict palmOne PowerDesk Pro 5.0 SpamBaves A file being copied is not newer than the file currently on you Startup system. It is recommended that you keep your existing file. WinRAR File name: 'C:\Program Files\Analog Devices iSensors ADiS16350 Eval\_Rev\_9\CommPort.cfg' Continue Cancel Description: ADiS16240 Eval\_Rev\_1 Setup ADiS16240\_Eval\_Rev\_1 Setup was completed successfully. Int to keep this file OK Yes No No to All



### Installation Steps (continued)

- 9. Open the newly created directory and double-click onto "giveio.exe"
- 10. Click "Install," then " IAgree"



### Installation Steps (continued)

11. Click "yes" •

12. Giveio Driver complete

Giveio
Install Giveio driver for window NT and 2000 system
Yes
No





## *i***Sensor**<sup>®</sup> The Simple Solution for Sensor Integration ADIS16240 Installation on ADISUSBZ











- 1. Click on "Interface" and select USB, then OK when the pop-up window shows the USB device is connected.
- 2. Click to enable different accelerometer axes (x,y,z)
- 3. Device configuration options. Turn on peak tracking (MSC\_CTRL option), adjust sample rate, etc.
- 4. Start on-screen log
- 5. Sync ADIS16240's time to the current PC time.
- 6. Capture, Click on Config button and see next page



| ADiS Capture Configuration  | ×                                  |
|---|------------------------------------|
| ADIS16240 Event Trigger Configuration   |                                    |
| Step #1 - Configure Capture Parameters (CAPT_CFG) 0023 Pre-Trigger Length Equals  | Update                             |
| This Value Times 1/16 of Capt_Buff Length<br>Capt. Buff. Length   | CAPT_CFG<br>Register               |
| 2 128 -   |                                    |
| Step #2 - Set Trigger Source (ALM_CTRL)       3230         Data Source - Buffer #1       Data Source - Buffer #2         OutPut Disabled           V Acc  |                                    |
| C Trigger #1 (TRIG_MAG1) C Trigger #2 (TRIG_MAG2)<br>C Both Triggers<br>Enabled C Trigger Disabled C Trigger Disabled   | Update<br>ALM_CTRL<br>Register     |
| Step #3 - Set Trigger Levels and Polarity (TRIG_MAG)       804E       804E         ALM_MAG1 Polarity       ALM_MAG1 Trigger Level       ALM_MAG2 Polarity       ALM_MAG2 Trigger Level         Greater Than        4.0092       Greater Than       4.0092           | Update<br>TRIG_MAG1/2<br>Registers |
| Trigger Configuration Example:<br>Step 1 - Set Pre-trigger to zero then set Capt_Buff Length to 1024 and<br>press the update Capt_CFG Register button   |                                    |
| <ul> <li>Step 2 - Set Data Source #1 to Xacc and select Trigger #1 button,<br/>Press the Update ALM_CTRL Register button</li> <li>Step 3 - Set Trigger Level to 12 then set Polarity to greater than.<br/>Press the Update TRIG_MAG 1/2 Registers button</li> </ul> | Update Flash                       |
|   |                                    |

- 1. Set number of captures vs. capture length and pre-capture length. Remember to click on the update button!
- 2. Set trigger source. Suggest both triggers. Remember to click on the Update button!
- 3. Set trigger levels and polarity, then hit the Update button.
- 4. Updating the flash makes the changes non-volatile.
- 5. Click on the red X to close and return to the main menu









- 1. Place the mouse pointer over different spikes to see the Event header in the upper right hand corner change.
- 2. Slider bar in lower left hand corner will move event log as desired.





## **MORE INFORMATION:**

- www.analog.com/isensor
- New Brochure: *i*Sensor Motion Sensor Products
  - BR067755-2.5-4/08(A)
- CD's with Product Info and Eval SW





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#### Как с нами связаться

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