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iSensor® Demo/Evaluation Tips for the ADIS16300



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iSensor[®] *The Simple Solution for Sensor Integration* Evaluation Tool Overview

1. Interface Connector for those that need to integrate this on a new PCB

- The ADIS16300AMLZ uses the SFMC-112-02 series of connectors from Samtec. <u>http://www.samtec.com/SFMC</u>
- Mating connector options can be found at: <u>http://www.samtec.com/SFMC</u>
- Acquire mating connector from Samtec, not ADI. <u>www.samtec.com/samples</u>

2. Evaluation/Interface Board for simpler connection to an existing processor/system PCB.

- This provides an ADIS16300AMLZ part plus a simple flex interface which enables connection to the ADISUSBZ or PCB.
 NOTE: Flex PCB not sold separately.
- Part number for ordering: ADIS16300/PCBZ



3. Evaluation System (ADISUSBZ) for those that prefer a simple PC interface

- This system provides a simple USB interface, along with software for simple data collection and evaluating most of the ADIS16300 functions and performance.
 NOTE: The ADISUSBZ is sold separately from the ADIS16300AMLZ
- Supports approximately 150-200SPS sample rate.
- CAUTION: This system DOES NOT provide an appropriate framework for developing a system around the ADIS16300AMLZ. NO source code or code development support is included with this kit.
- Part number for ordering: ADISUSBZ



ADISUSBZ & ADIS16300/PCBZ Shown Here (Sold separately)



iSensor[®] *The Simple Solution for Sensor Integration* ADIS16300 Connection Options





iSensor[®] *The Simple Solution for Sensor Integration* ADISUSBZ-based Evaluation

The ADIS16300 is supported by the ADIS16350 Evaluation software. The ADIS16350 installation package will load the appropriate drivers and prepare a PC to evaluate the ADIS16300.

1. Download 350ES.zip into a temporary directory and unpack its contents. http://www.analog.com/static/imported-files/eval_boards/350ES.zip

OR GO TO:

www.analog.com/isensor-evaluation,

then click on EVALUATION SOFTWARE DOWNLOADS

then click on 350ES.zip option

2. Double-click on "setup.exe"





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Installation Steps (continued)

- 3. Click OK on next screen
- 4. Click here to start installation

ADiS16350_Eval_Rev_9 Setup

OK



Exit Setup

_{ADiS16}	50_Eval_Rev_9 Setup	
Begin the	installation by clicking the button below.	
	Click this button to install ADiS 16350_Eval_Re destination directory.	ev_9 software to the specified
Directory:		d
C: (Program	m Files (Analog Devices	Change Directory
	E <u>x</u> it Setup	



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Installation Steps (continued)

- 5. Click Continue
- 6. If this message comes up, click on "No"

Version Conflict	×
A file being copied is not newer than the file currently on your system. It is recommended that you keep your existing file.	
File name: 'C:\Program Files\Analog Devices iSensors\ADiS16350_Eval_Re1_9\CommPort.cfg'	
Description: "	
Your version: "	
Do you want to keep this file?	
Yes No to All	

ADiS16350_Eval_Rev_9 - Choose Program Group 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 Groups list. Program Group: Analog Devices iSensors Existing Groups: Accessories ADIS16130_Evaluation_Rev_2 Analog Devices iSensors Infotriever palmOne PowerDesk Pro 5.0 SpamBayes Startup WinRAR Continue Cancel





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Installation Steps (continued)

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



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Installation Steps (continued)

- 9. Click "yes" -
- **10. Giveio Driver complete**

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







*i***Sensor**[®] The Simple Solution for Sensor Integration ADIS16300/ADISUSBZ Initial Setup - Parts

11. Install ADIS16300 on the ADISUSBZ





*i***Sensor**[®] The Simple Solution for Sensor Integration ADIS16300/ADISUSBZ Initial Setup – First connection

11. Install ADIS16300 on the ADISUSBZ (continued)



Move the ADIS16300AMLZ over the ADISUSBZ's holes for the ADIS1635x products and use (1) 2x10mm machine screw to attach the product. A 2mm washer may help with attachment strength as well.



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Install Samtec Flex Assembly to the ADISUSBZ first, then install it on the ADIS16300AMLZ second. Bend the flex with care.



CAUTION:

Flex can tear, handle with care. Make sure that the pins in the flex are properly aligned and seated correctly before plugging the USB Cable into the ADISUSBZ.

12. When this is complete, connect the assembly to the PC using the USB cable



Make sure JP1 is set to +5V



*i***Sensor[®]** The Simple Solution for Sensor Integration MCP USB Driver Installation

Found New Hardware Wizard

Installation Steps (continued) Welcome to the Found New 13. USB Driver screen will pop-up Hardware Wizard Click "Next" to start this process This wizard helps you install software for: MCP USB EVAL 14. Then click on "Continue Anyway" If your hardware came with an installation CD or floppy disk, insert it now. Hardware Installation What do you want the wizard to do? Install the software automatically (Recommended) The software you are installing for this hardware: Install from a list or specific location (Advanced) MCP USB EVAL Click Next to contin has not passed Windows Logo testing to verify its compatibility. with Windows XP. (Tell me why this testing is important.) < Back Next > Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has This process may repeat. Just follow the passed Windows Logo testing. instructions and allow it to go through one more time. After completing this, then the devices is ready for test. Continue Anyway STOP Installation



Cancel

*i***Sensor**[®] The Simple Solution for Sensor Integration ADIS16350 Evaluation Software Installation

- 1. Un-zip the 350ES(9).zip file into a temporary directory.
- 2. Double click on setup.exe.
- 3. Go into newly created directory: C:\ProgramFiles\Analog Devices iSensors\ADIS16350...
- 4. Double-click on giveio.exe and follow the prompts to install this driver.
- 5. Connect the ADISUSBZ to the PC using the A-to-B USB cable.
- 6. The MCP USB driver installation window will popup. Follow the prompts to install the driver. The process may request a repeat. Follow the prompts again, it will complete after the second time through.
- Double-click on program executable to launch program: ADIS16350*.exe





*i***Sensor**[®] The Simple Solution for Sensor Integration ADIS16350 Evaluation Software Operation

Analog Devices - ADiS 16300 / 10	350 / 16354 / 16355 / 16360 / 1	6364 / 16365 Evaluation Software -	Rev 9
Interface Device Configuration Datalog	Registers Exit		
Interface Device Configuration Datalog Outpu 16300 16350 Graph Power 16354 4.94 Graph X_ 16355 -0.70 ✓ ■ 16364 0.00 □ 16364 0.00 □ Y_ 16365 0.00 □ × Accl (g) 0.00 □ Y_Accl (g) 0.02 ✓ ■ 2_Accl (g) -5.76 □ X_Temp (degC) 26.63 Y Templ (deqC) 25.14 1	Registers Exit Data Plot Device = 16365 350 350 Rate deg / sec 0 . value 0 sample 0		
Z_Temp (degC) 24.05 Aux_ADC 1.14 Loop 🗸 Loop Delay msec 5 Read	10 Accel. g 0 value 6 sample 23		
Power Supply Low OK Power Supply High OK Control Write Flag OK SPI Write Flag OK Alarm1 Set OK Alarm2 Set OK	-IU I O Sample Number Self Test Self-Test O OFF Self-Test O OFF	I I 85 175 Perdown et Elapsed 0 sec Run 0.0 sec	l I 260 350

1. Select ADIS16300 in the Device drop-down menu



*i***Sensor**[®] The Simple Solution for Sensor Integration ADIS16350 Evaluation Software Operation (ADIS16300)



*i***Sensor**[®] The Simple Solution for Sensor Integration ADIS16350 Evaluation Software Operation, Calibration

Calibration				Đ
Automatic Features	<u>8</u>			
Restore Factory Cali	bration		Bun	
Precision Auto Null	In Progr	ess 29	Run	
Auto Null			Run	
Manual Calibration	Adjustme	<u>ent</u>		Register Contents
X-Axis Offset	0.3663	deg / sec	Update	0x14
Y-Axis Offset	0	deg / sec	Update	0x0
Z-Axis Offset	0	deg / sec	Update	0x0
Accelerometers				
X-Axis Offset	0	g	Update	0x0
Y-Axis Offset	0	g	Update	0x0
Z-Axis Offset	0	g	Update	0x0
	Clos	e Window	Flash Regist	Memory er Update

- 1. Use Precision Auto Null button to execute this feature in the ADIS16300. Notice the countdown from approximately 32 seconds. Use Flash Memory Update button to make sure the new bias correction factor is stored in non-volatile flash memory.
- 2. Datalog Menu provides some convenient options for gathering data from the ADIS16300

FILE SETUP	DATA SELECTION	
Samples per File 1000	Power Supply	
Sample Delay msec 0 Files per Session 1	🔽 🗙 Буго	
FILE INFORMATION		
Directory C:\Program Files\Analog Devic	☐ × Accel	
File Name DATALOG	T Y Accel	
File Number 1 .csv	T Accel	
	Temperature 🕅	
Start Datalog		
	Aux Adc	





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