ADC-4U12 Quick Start
(for use with Windows XP*, Vista, Windows Server, Windows 7, 8.1, Windows 10 and Windows 11)
*XP requires Service Pack 3

(Step 1) Connect to the Internet. This permits any security or software updates to occur during installation. If you do not have an Internet connection, you may skip this step.
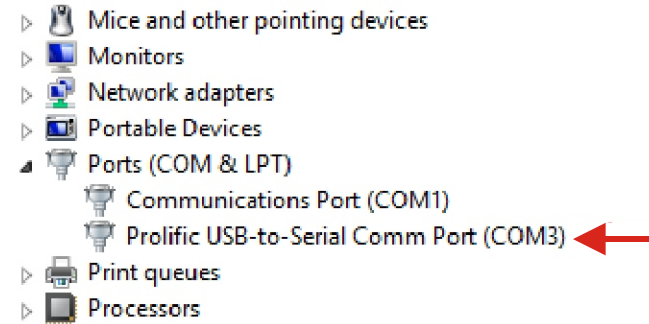
(Step 2) Connect your ADC-4U12 Analog to Digital Converter to any available USB port on your computer using a CC-USBB cable (1 to 15 foot). A high percentage of systems will be up to date and you will not see any activity or a pop-up message (allow up to 30 seconds for any system message). If your USB Com driver is out of date, you may receive a message that your system is being updated or a new driver installed. Allow the update to occur before you move to the next step. If you do not see activity or receive a system message, proceed to step 3.

(Step 3) Insert the installation CD or USB flash drive and wait for the security message (with a USB flash drive, you may need to browse to the drive icon from the My Computer link). OK or click the startup.exe file to start the installer dialog.

(Step 4) Check your USB Com driver by clicking on the "Open Device Manager" button in the installer dialog window and expanding the "Ports (COM & LPT)" category (see the ADC-4U12 Technical Reference if you have difficulty or go directly to Device Manager from Control Panel). If you see a "Prolific USB-to-Serial Comm Port" entry, this is your USB Com driver* and the com port assigned is to the right of the entry. Right click on the entry and select "Properties"

and click the "Driver" tab. Your USB Com driver must be Prolific version 3.4.62.293 or higher (dated 10/17/2013 or later). If your USB Com driver is not up to date, right click on the entry and select "Update Driver Software". If your USB Com driver is up to date then please note the Com port number assigned and jump to step 5.

*verify that this is the com port assigned to the ADC-4U12 by unplugging the ADC-4U12 (not hub) from your USB port and watching the entry in device manager. The entry should disappear and then reappear when you plug the ADC-4U12 back in.

If you do not have an Internet connection or are having problems with the USB Com driver installation, disconnect the ADC-4U12 USB cable from your computer and install the USB Com driver from your CD by clicking on the "Install USB Com Driver" button. Please note that you may have to remove any out of date Prolific Com drivers on your system before the current driver will install correctly. It is important that you use the remove feature on your CD (not the remove feature in Device Manager). The remove feature is shown after clicking the "Install USB Com Driver" button from the installer dialog window (allow up to 30 seconds for the installer to load and appear).

(Step 5) After you have verified or installed the up to date USB Com driver, reconnect (if not already connected*) your ADC-4U12 Analog to Digital Converter to the same USB port and install the ADC-4U12 device driver** by clicking the "Install EECI Device Driver" button from the installer dialog window (if you have auto start disabled, you may browse to the Windows Driver folder and double click on setup.exe). When installing the ADC-4U12 device driver on a Windows XP or Vista computer, double click on setup.exe in the XP-Vista folder.
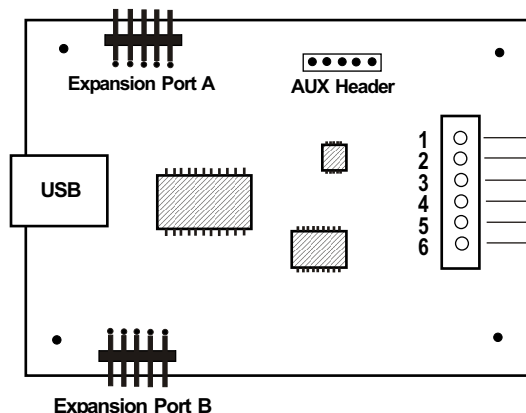*if you reconnect your ADC-4U12 to a different USB port, a different com port may be assigned.

**Please note that the Microsoft .Net Framework must be installed on your system. The .Net Framework is already installed if you have Windows 7 or higher. If the .Net Framework is not installed on your computer, the installation program will attempt to download and install the .Net Framework from the Microsoft Update website through your internet connection. This may take 5 minutes or longer. In order for the .Net Framework to install correctly, your computer must be up to date with Windows Update. This is especially important with Windows XP* and Vista. You may update your computer by clicking on the start button, All Programs, Windows Update and clicking on "Check for updates".   *for XP, Service Pack 3 must be installed.

(Step 6) After the ADC-4U12 device driver is installed, the ADC-4U12 com port should be detected and a pop-up will prompt you for the com port to be used with your ADC-4U12 Analog to Digital Converter (correct com port should be shown).You may edit the com port if incorrect. The ADC-4U12 User Interface will now open and the label just under the COM port indicator should show that Com port open. Please Note: When the ADC-4U12 inputs are floating (no connection) the inputs may show random or changing values from noise picked up by the high impedance inputs.
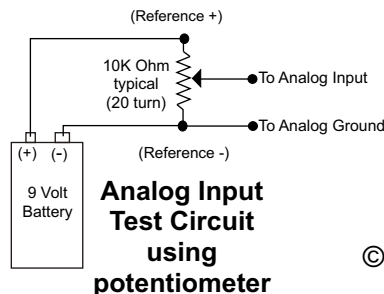
(Step 7) Test your analog inputs by applying a test voltage to each input. The test voltage must be within the selected reference voltage and of the correct polarity (the default reference voltage is 4 volts, providing a voltage input range of 0 to 4.096 volts DC). Single ended inputs (default) will display a number between 0 and 4095 (12 bit resolution/4096 increments). You may use the analog test circuit shown below to provide the test voltage. When using a 9 volt smoke detector battery, use a multimeter to check for the correct voltage since the voltage can go well over the reference voltage if the potentiometer is turned beyond 5K. The input in the ADC-4U12 User Interface should increment from 0 to 4,095 (in 1 unit increments) as the potentiometer is turned from 0 volts to 4.1 volts. Differential inputs may be tested using the same analog test circuit (below) except you will connect the test voltage to inputs 1 and 2 (differential channel 1) or inputs 3 and 4 (differential channel 2). When the ADC-4U12 is set to differential mode, the ADC-4U12 will display a range from -2048 to +2047 as the input voltage swings from -4 volts to +4 volts. The negative side of the signal is generated by reversing the polarity of the test signal (or reversing the battery polarity). The inputs are changed to differential mode by going to the setup window in the ADC-4U12 User Interface.

After testing is complete, you may label your analog inputs, set scale and offsets, set precision and add a suffix (such as °, PSI, mA, etc) by going to the setup window in the ADC-4U12 User Interface and clicking the Analog Setup button. The ADC-4U12 Data Logger may be started by checking the Enable box. The data log entry interval may be set to minutes or seconds (click the M or S button) and entering the desired time interval. The settings will not go into effect until the Apply button is clicked. Click the "Tray" button to place the User Interface in "driver only" mode. You will see a blue 4 icon in your system tray by the clock (bottom right of screen). Click the blue 4 icon to re-open the ADC-4U12 User Interface. Click the "Unload Device Driver" to remove and unload. Please note that by default, the ADC-4U12 device driver is only loaded on demand to conserve system resources. You may install the device driver permanently by checking the "Driver Only" check box under Setup in the User Interface. You will then always see the ADC-4U12 system icon in your system tray along with the other system devices (such as your speaker, printer or display adapter). Please refer to the ADC-4U12 Tech Ref for more info.

Complete Technical Reference is located on your Installation CD
Call (937) 349-6000 or (800) 842-7714 for free technical support

Expansion Port A

AUX Header

USB

1	analog input #1
2	analog input #2
3	analog ground
4	analog input #3
5	analog input #4
6	analog ground

Single-ended Analog Connections
(see technical reference for differential connections)

Expansion Port B

(Reference +)
10K Ohm typical (20 turn)
To Analog Input
To Analog Ground
(+) (-)
(Reference -)
9 Volt Battery

Analog Input Test Circuit using potentiometer

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