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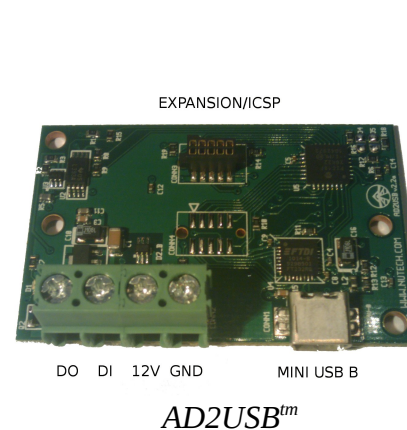
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                AD2USB/AD2SERIAL
     Ademco Vista Alarm to Computer interface board

                Installation Guide
                      v2.3
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See also the full color quick start guide and other guides at
http://www.nutech.com/forums/ad2usbstart.html

Before you start...

Please take a moment and read this manual before you install the AD2USB to your alarm panel. Rushing into the install of devices like this can result in damage to the device or accidental activation of your alarm and alerting of your alarm company.

Please use caution when using this device. It's easy to press the wrong keyboard character and have the alarm panel issue a silent alarm to your alarm company. You should have your alarm in testing mode prior to installing this device or when testing with this device.

DB9 Female

EXPANSION/ICSP

DO   DI   12V GND   MINI USB B   DO   DI   12V GND

*AD2USB*tm   *AD2SERIAL*tm

* provided case not shown.   ** provided locking screws and case not shown*

Introduction

Thanks for purchasing the AD2USB Ademco to Computer interface board. The AD2USB device was designed to work with a wide range of Ademco Vista alarm panels. The AD2USB device only consumes ~7mA. You can use this value to calculate the total number of devices your panel will support.

The device presents itself to your computer as a virtual serial port running at 115200,8,N,1[1]. Drivers for your operating system are required.

[1]*The AD2SERIAL Adapter operates at a different baud rate (19200,8,N,1)*

New Video Tutorials!
AD2USB To Panel: http://tinyurl.com/cy9nre7
AD2USB To PC: http://tinyurl.com/blpu8vv
AD2USB To MAC: http://tinyurl.com/d6wk3c7

Drivers

If you are running windows you can get the Virtual COM port drivers from FTDI http://www.ftdichip.com/Drivers/VCP.htm. Install version 2.08.08 or newer. With windows Vista after you install the driver you need to select the device under device manager and select its properties. Then advanced tab and enable the VCP driver. In many cases your computer may already have this driver if you have ever used an FTDI based USB2Serial device as many of them are based upon FTDI chips.

If you are running Linux you can use the ftdi_sio driver. This should automatically load when you connect the device if you are using a relatively new distribution of Linux. For OSX and many other operating systems the drivers can be found at http://www.ftdichip.com/FTDrivers.htm

Alarm Panel Programming

If you have an older SE based panel then addressing is not used and it is not necessary to change any panel programming for the AD2USB to operate.

With all other panels You will need to configure the alarm panel with the address of the AD2USB as a new keypad device. For example, the default keypad address for a Vista 15P is 16. The AD2USB is factory configured for device address 18 if this is already used on your panel see "Configuration your AD2USB" section on how to change this.

If your alarm panel does not have a spare keypad configured, you will have to configure it for one. In this case, you can 1) call your security monitoring company and ask them to add in a new keypad - (ask them what address they configured it to); or 2) if you know the Installer Code, you can program it in yourself. You should reference the Programming Guide and Installation and Setup Guide for your unit. (I found these at www.aesecurity.com/manuals.html)

Connecting The AD2USB/AD2SERIAL To The Panel and Computer

Connect the 12v,GND,DI(GREEN),DO(YELLOW) on the panel to the 12v,GND,DI,DO on your AD2USB. Do not cross the DO/DI lines. The DO on the panel connects to the DO on the AD2USB. The device gets power from the alarm to operate. We suggest you perform this connection while the alarm panel is powered down and the battery is disconnected.

When power is connected to the AD2USB it should have a steady LED heartbeat indicating the devices is looking for messages from the panel.

Connect the AD2USB to a computer. You should see it install some new hardware or give some indication that a new devices was installed in a log file. It will be a COM port. You can see this COM port under your device manager on windows or using the dmesg command under Linux, OSX or other Unix based operating systems.

Try to communicate with the device directly with a serial terminal program. The program I have used for years and trust is Putty. http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html. Under Linux you can use **minicom** using the **-o** option to prevent any modem initialization being done. On OSX you can use the **screen** command.

Pick the COM port that was added, say COM3, using **115200,8,N,1[1].** You should now see some text spewed at you. You can press the = character in your terminal program to reset the device and verify you can send data to the AD2USB correctly. Depending on your terminal software You may need to press ENTER to instruct the terminal program send it to the AD2USB. If your terminal program operates in character mode the enter is not necessary.

[1]*The AD2SERIAL Adapter operates at a different baud rate (19200,8,N,1)*

Configuring Your AD2USB

You may need to set the devices address on your AD2USB. For example the default keypad address for a Vista 15P is 16. As with a normal keypad you have to tell the AD2USB what address it is configured for. By default the AD2USB device is factory configured for address 18. If you already have a device at 18 you will need to change the AD2USB devices address.

To do this just press **!** in your terminal program to configure the AD2USB and set the address. If you have an SE panel you must set this to 31 or you will not see any messages from the panel. Never have two devices share the same address except for the SE panels where addressing is not used. You can leave the panel code blank or 0's as this is currently not used and press ENTER through any configuration options you a don't want to change.

If you now press ***** into your terminal program your panel should respond as if you hit the same key on your alarms keypad.

If it appears to take a long time for the send... operation, this probably means that the alarm panel is not recognizing the AD2USB or a device conflict exists. Check the programming of the alarm panel and the AD2USB configuration have the same address. Also make sure no other devices exist at the same address as the AD2USB.

The AD2USB should see all messages from the alarm panel regardless of programming of the panel. If you are not seeing messages after connecting the AD2USB to your panel you either have a wiring issue or you have an SE panel and you have not set your AD2USB to address 31.

Post installation

Sample code and programs are available in the forums on our site here http://www.nutech.com/forums/contribute.html

API and Configuration documentation can be found here http://www.nutech.com/forums/ad2usbapi.html

The free virtual keypad software called AD2USBGUI that runs on many operating systems is here http://www.nutech.com/forums/ad2usbgui.html. It is written in C#/Mono and will require Gtk# and (Microsoft® .NET 2.0 or Mono) to run. You can get Gtk# from http://www.go-mono.com/mono-downloads/download.html

We also now have available to purchase an alarm panel unlocker module for AD2USBGUI. This program when used with this device will determine the master installer code and any other codes on the alarm panel.

For questions and support email ad2usb@support.nutech.com. We try to respond to emails in the same day that we get them.