

ET-9-USB-1

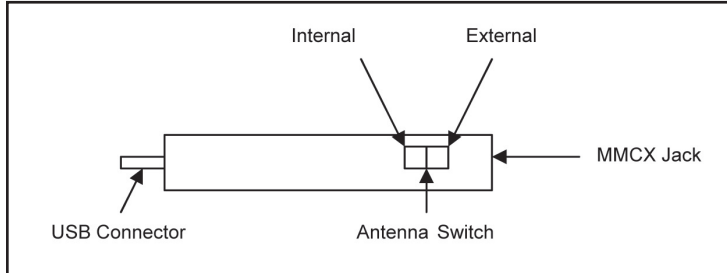
USB Micro Reader Developer's Kit



User Guide

Secura Key ET-9-USB-1 USB Micro Reader Developer's Kit - User Guide

The Secura Key USB Micro Reader (Model ET9-USB-1) can read and write to 13.56MHz RFID transponders that meet the ISO 15693, 14443A and 14443B standards. The USB Micro Reader is designed to plug into a USB port on a PC running Windows XP or Vista. The reader is powered by the USB Port, and communicates with the PC via a Virtual COM Port.



The ET9-USB reader is available in three model variations

- ET9-USB-1 – switchable for internal or external antenna
- ET9-USB-1E – external antenna only; no switch
- ET9-USB-1I – internal antenna only; no switch, no MMCX jack

The USB Micro Reader has a USB plug on one end and an MMCX mini-coaxial jack on the other end. The MMCX connector allows the 1 x 4" external antenna to be plugged into the reader.

A recessed sliding switch on the side of the reader body allows you to switch between the internal and external antennas. If you slide the switch toward the USB jack, the internal antenna is connected, and if you slide the switch toward the MMCX jack, the external antenna is connected.

Typically, the internal antenna will provide about 1" of read distance using a CR80-sized RFID card, and the external antenna will provide 3-4" of read range.

Secura Key USB Micro Reader Developers Kit Contents:

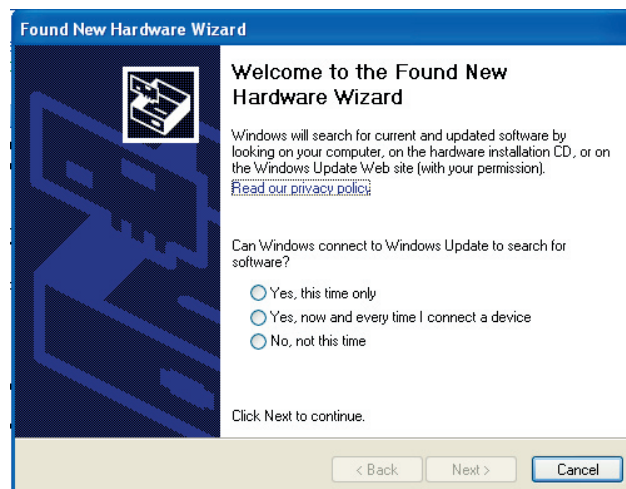
- USB Micro Reader
- 1" x 4" printed circuit antenna with MMCX cable
- CD-ROM with Windows Drivers and documentation.

On the following pages, this guide explains:

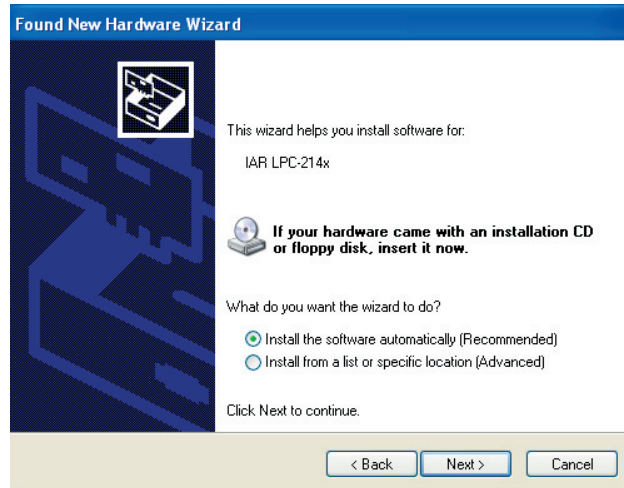
- How to install the USB Micro Reader on your PC
- How to use the USB Micro Reader with HyperTerminal
- How to use the USB Micro Reader with e*Tag® Host

Installing the USB Micro Reader on your PC

1. Install the Secura Key driver disk in your PC's CD Drive.
2. Plug the USB Micro Reader into a USB Port.
3. The PC will display the message: New Hardware Found and then the New Hardware Wizard will start.

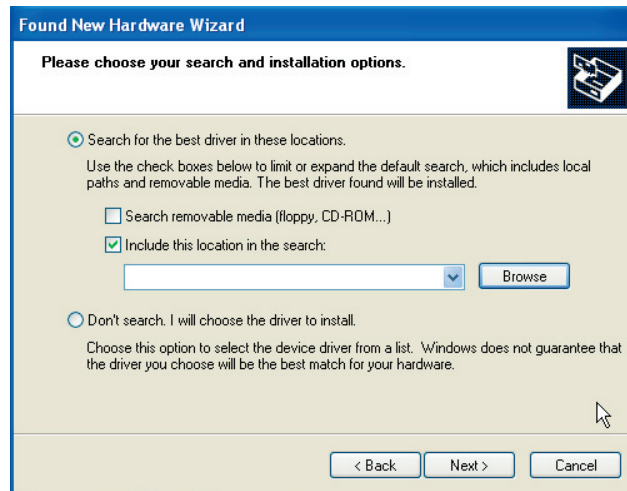


4. Click on the radio button labeled **No, not this time**, and then click **Next**. You are then prompted to select an installation method.
5. Click on **Install from a list or specific location**.



You will be prompted to choose your search and installation options. Click on **Include this location in the search** and then click **Browse**, and look for the file on the driver disk.

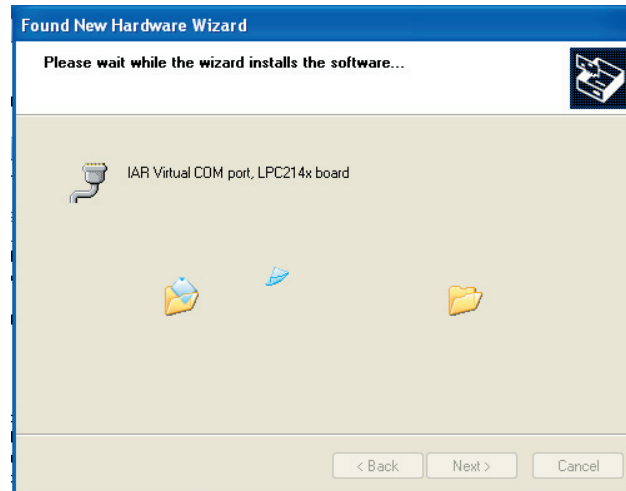
For XP Machines, select: drivers\XP\iarvircomport.inf
 For Vista Machines, select: drivers\Vista\iarvirportVista.inf
 Then click **Next**



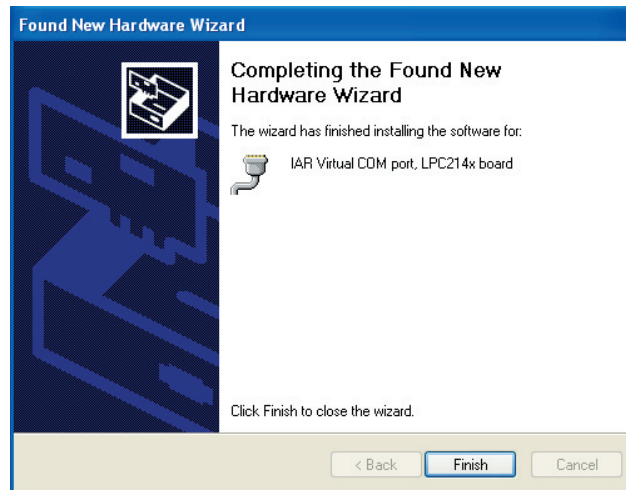
6. If you are running XP, your computer will display the following message about Windows Logo Testing – click **Continue Anyway**.



The Wizard will install the software.

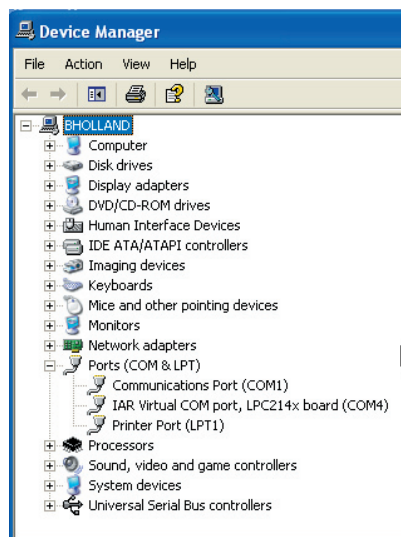


Click **Finish** to close the wizard, and your PC will display the prompt: **Found New Hardware – ready to use**



To determine which COM port Windows has assigned to your USB Micro Reader, use the following procedure:

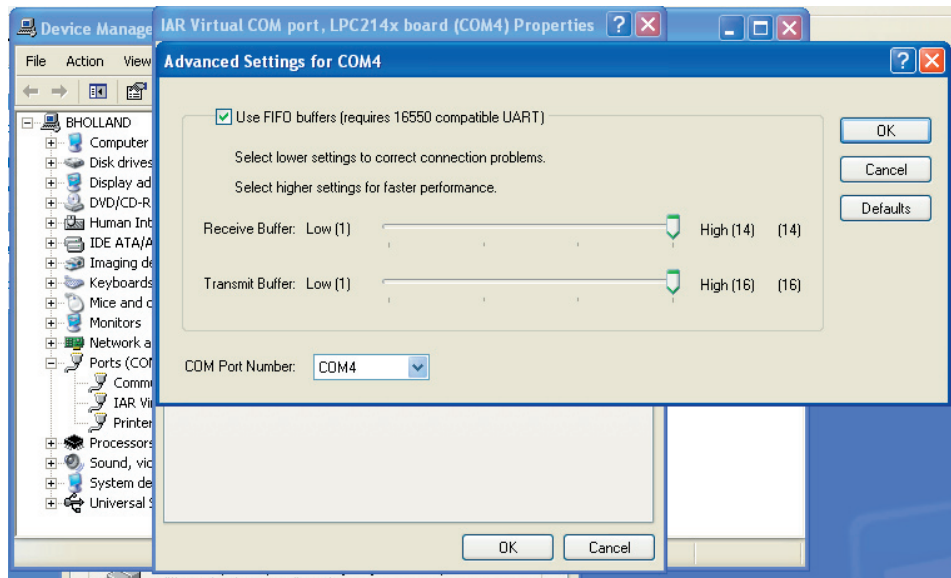
7. Click **Start, Control Panel**, and then select the **System** icon. (On some PCs with XP, select **Performance and Maintenance**, then the **System** icon).
8. Then select the **Hardware** tab and press the **Device Manager** button. Your PC will display the screen shown below.
9. To view where the USB reader has been assigned, click on **Ports**, and look for IAR Virtual COM Port. In the example, the reader is assigned to COM4.



Changing the COM port assigned to the Reader

Windows will normally select a virtual COM port when the reader is installed. If you need to change or manually select the virtual COM port used by the reader, use the following procedure:

1. Click on **Start, Control Panel, System**. (On some PCs with XP, select **Performance and Maintenance**, then the **System** icon).
2. Select the **Hardware** tab, then click on the **Device Manager** button.
3. On the **Device Manager** tree, click on **Ports**, and then double click on **IAR Virtual Port** to display its properties.
4. Click on the **Port Settings** tab, and then click on the **Advanced** button. Change the COM Port Number setting by selecting a new port from the drop down box and then click **OK, OK**, and exit.



Using the Reader with HyperTerminal

Once the reader has been installed on your PC, you can use it with HyperTerminal, which is a Windows Accessory, already installed on your PC as part of Windows XP or Windows Vista.

To configure HyperTerminal for your USB Micro Reader:

Click on **Start, All Programs, Accessories, Communications, then HyperTerminal**.

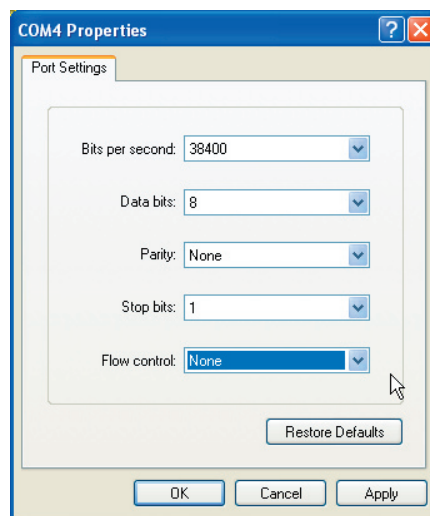
The Connection Description screen is displayed. Type in **COMx_38400**, using the COM port previously selected by Windows (x represents the COM port number - COM4 was selected in our example), then click **OK**.



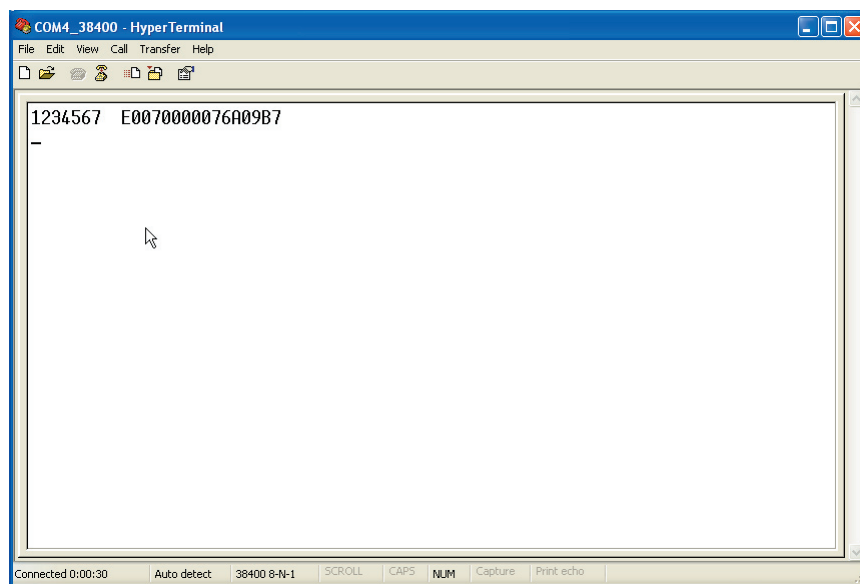
The Connect To screen is displayed. Select the assigned COM port using the dropdown box and click **OK**.



Use the next screen to define COMx Properties as shown, then click **OK**.



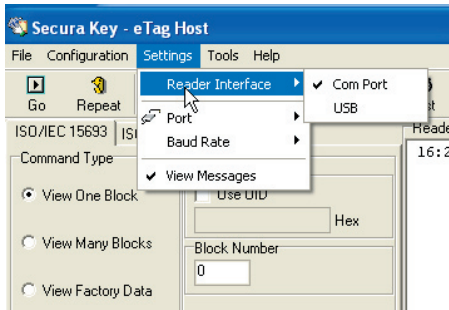
Then, present a tag to the reader, and the UID will display on the screen.



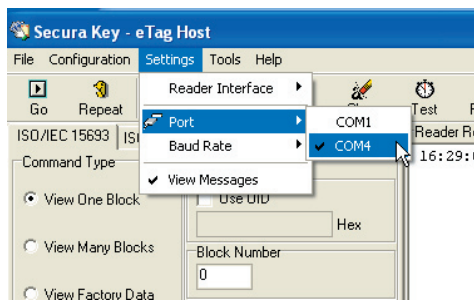
Using the Reader with e*Tag® Host

The reader can also be used with e*Tag Host, which is a Windows test application for e*Tag® readers developed by Secura Key. To configure the reader for communications with e*Tag® Host:

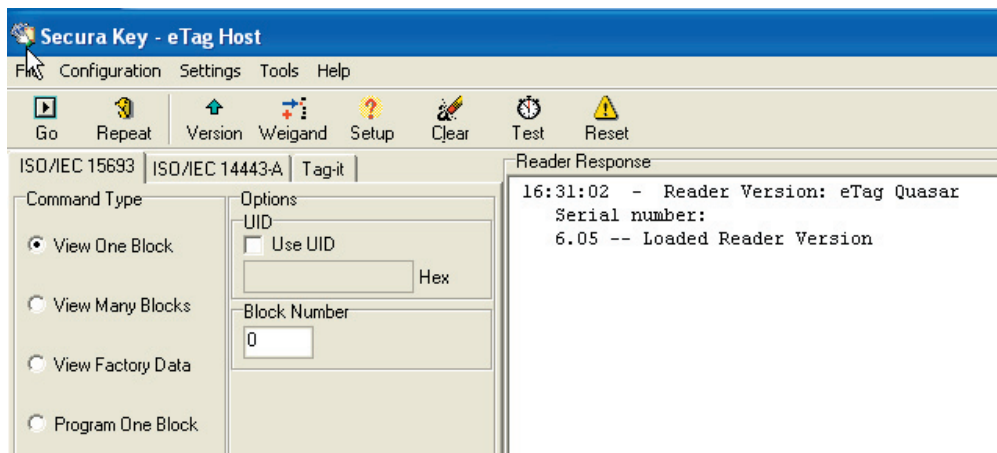
1. Select **Settings**, **Reader Interface**, and click on **COM Port**.



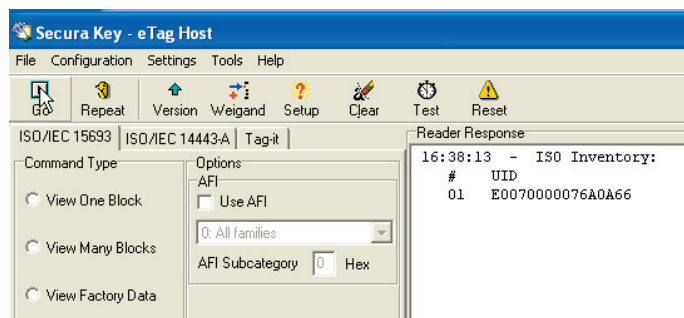
2. Select **Settings**, **Port**, and click on **COMx**. (x represents the selected port – COM4 in our example)



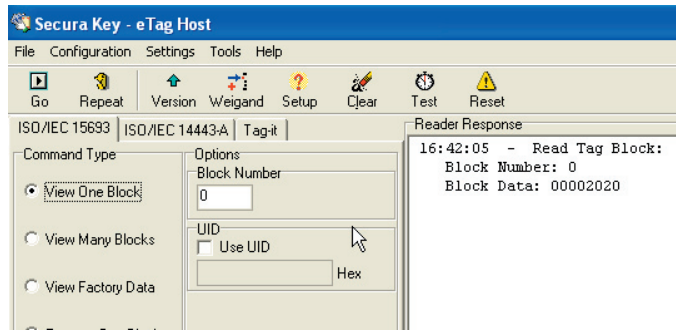
3. To verify communications, click on **Version** in the icon menu at the top of the screen, and the reader version should display in the Reader Response dialog box.



4. To send the inventory command, click on the **Inventory** radio button in the left-hand column, place an e*Tag® card near the reader antenna, and then click on **Go** in the icon menu. The reader will read the tag and display UID data in the Reader Response dialog box.



- To view one data block, click the **View One Block** radio button in the left-hand column, place an e*Tag® card near the reader, then click on **Go** in the icon menu and one data block will be displayed in the Reader Response dialog box.



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