

Windows CE Application Deployment from Visual Studio to the Vortex86-6082:

Configuring and connecting the Vortex86-6082 WiFi Card:

- 1) Get Wireless card connected to your wireless network by executing the following steps under Windows CE on the 6082.
- 2) Go to Start -> Settings -> Network and Dial-Up Connections
- 3) You should see a PCI-VNWLC51 adapter. This is your PCI Wireless Card. You should also see a PCI-RTL81391 card. This is your Ethernet card.
- 4) Right click on the PCI-VNWLC51, and select 'Properties'.
- 5) Make sure 'Obtain an IP address via DHCP' is selected on the 'IP Address' tab, and you can leave everything blank under the 'Name Server' tab.
- 6) Close the Properties dialog box
- 7) In the lower right hand task bar, you should see an icon of two Computer screens with a red X in front. Double click this icon
- 8) This will bring up the PCI/VNWLC51 configuration dialog.
- 9) Go to 'Wireless Information' tab, and select 'Add New'. A 'Wireless Network Properties' dialog will appear
- 10) Enter the name of your network (SSID) (e.g. 'linksys')
- 11) Configure the Wireless Network Key per your routers configuration. We use WEP, Shared, and a network key
- 12) Don't worry about the 'IEEE 802.1X authentication' since it isn't used
- 13) Select Okay
- 14) Click the 'Start' button in the lower left of the screen, then hit 'Suspend'. The screen will go blank, because it's saving the configurations you just made.
- 15) Press a key, and the screen will come back
- 16) Go to Start -> Settings -> Network and Dial-Up Connections again, and right click the PCI-VNWLC51 icon, and select 'Disable'. Wait about 15 seconds.
- 17) Select the PCI-VNWLC51 icon again, and select 'Enable'
- 18) Double click the two computer icon in the lower right task bar, which will, again, bring up the PCI/VNWLC51 configuration dialog.
- 19) Highlight the network adapter you just added (e.g. linksys (preferred)), and select the 'Connect' button.
- 20) Your 6082 should connect with your wireless router. If not, you'll have to double check your security settings, password, etc. Make sure to note the IP address, as it will be used in subsequent steps.

Configuring the direct Ethernet connection:

- 21) Plug in an Ethernet cable to the Ethernet jack/dongle on the 6082 (make sure it's connected to your router as well).
- 22) Go to Start -> Settings -> Network and Dial-Up Connections
- 23) You should see a PCI-RTL81391 card.
- 24) Right click on the PCI-RTL81391, and select 'Properties'.
- 25) Make sure 'Obtain an IP address via DHCP' is selected on the 'IP Address' tab, and you can leave everything blank under the 'Name Server' tab.
- 26) Close the Properties dialog box
- 27) In the lower right hand task bar, you should see an icon of three lines with a red X in front. Double click this icon
- 28) This will bring up the PCI/RTL81291 configuration dialog.
- 29) Click the 'Renew' button
- 30) You should soon see the IP Address, Subnet Mask, and Default Gateway filled in with DHCP'd information provided by the router. The icon in the lower right hand task bar should now show a yellow box/node between the lines, indicating that you have a successful network connection. Write the IP Address down, since we'll need it in subsequent steps.
- 31) Select Okay
- 32) Click the 'Start' button in the lower left of the screen, then hit 'Suspend'. The screen will go blank, because it's saving the configurations you just made.
- 33) Press a key, and the screen will come back

Configuring Visual Studio:

- 34) Start Visual Studio 2005
- 35) Create a new Windows CE Smart Device Application, call it 'Test1'
- 36) When the project opens, drag a label to the middle of the form, and change the text (in the properties window - lower right) to 'Hello World!!!'.
- 37) In the menu bar (right hand side), select 'Windows CE 5.0 Device' in the drop down list of targets to build for
- 38) Build the solution
- 39) Two icons over from the drop down target list box, you'll see the 'Device Options' icon. Double click it
- 40) Under the 'Device Tools' node, click on the 'General' node. Make sure that the 'Default Device' is set to 'Windows CE 5.0 Device'.
- 41) Now, highlight the Windows CE 5.0 Device selection, and click 'Properties'
- 42) Click 'Configure' next to the TCP Connect Transport text box.
- 43) This brings up a 'Configure TCP/IP Transport' Dialog.
- 44) Click on 'Use specific IP Address', and enter the IP address of the Vortex86-6082 device (which you can obtain under WinCE command prompt by typing 'ipconfig /all').

Back under Windows CE (on 6082)

- 45) Double click on 'My Device' on the desktop
- 46) Go to the 'Windows' folder
- 47) Go to 'View' menu, and select 'Options'. Uncheck all boxes, so that the hidden files will show
- 48) Locate ConmanClient2.exe and CMAccept.exe
- 49) Double click ConmanClient2.exe. This will start a connection process (to connect to visual studio) in the background. You won't really see anything happen
- 50) Double click CMAccept.exe

Back under Visual Studio

- 51) To the right of the drop down target list box, you'll see what looks like a PDA w/ a plug. Double click it.
- 52) Visual Studio should connect to the Vortex86-6082, and a dialog should say 'Connection succeeded'
- 53) Click the run icon (or press F5), and the Visual Studio will prompt you for the device for which to deploy the application to. Select the 'Windows CE 5.0 Device'
- 54) It will take a minute or so to deploy, since Visual Studio has to upload all of the cab files, etc.
- 55) If Visual Studio cannot connect, make sure your 6082 is connected to the network, that you have the right IP address, and that you ran the 'ConmanClient2.exe' (under WinCE0, then the 'CMAccept.exe' programs (under WinCE), then retry.

Back under Windows CE (on 6082)

- 56) You should see your application running on the Windows CE desktop
- 57) Exit out of the app by clicking the 'X'
- 58) Double click on 'My Device' icon on the desktop
- 59) Navigate to 'Program Files'
- 60) You should see a 'Test1' folder.
- 61) Go into the 'Test1' folder, where you should see the 'Test1.exe' file
- 62) That's your executable. :) You can now double click it and run it w/o Visual Studio!

HOW TO MAKE YOUR PROGRAM SURVIVE A REBOOT:

Once you have deployed your application, and see it in the folder (mentioned above), copy the folder and entire contents to 'My Device\Hard Disk'. If you change the application and re-deploy it, you'll have to re-copy over to the non-volatile 'My Device\Hard Disk' folder again.