

Release Notes

Spectrum24 802.11b version 3.9.3 client drivers and tools

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Package Contents

Your custom product package includes a CAB file for installing the Spectrum24 802.11b client driver and associated tools that make connecting to your wireless networks easy and simple. The following files are included in the package:

- Spectrum24_CE500.ARMV4I.CAB – Installation CAB file
- Spectrum24_CE500.TestReport.pdf – Test Report
- CPRReleaseNotes.pdf – Release Notes

Installing the CAB file onto your hand held computer

Installing the Spectrum24 software onto your handheld is easy. Follow these steps to successfully install the Spectrum24 client drivers and tools:

1. Copy the included CAB file into the hand held computer's \Temp folder.
2. Close any applications running on the hand held computer.
3. Open the \Temp folder on the hand held computer and double click the CAB file.
4. When the CAB file executes, it automatically selects the correct directory to install the package contents. Simply click OK when the file dialog appears.
5. The software will automatically install all components onto the hand held computer and assign all necessary registry entries.
6. At the conclusion of the CAB installation process, you will be prompted to reboot the hand held computer. Select "Yes" to reboot the computer and complete the installation.
7. After the system is finished rebooting, the Spectrum24 system will automatically discover any wireless networks that broadcast their SSID in the WLAN 802.11 beacons and display's those networks to the user on the hand held computer. Select the "Connect" button to create a profile for each network you want to connect to. See Creating a Mobile Companion Profile that supports WPA or Creating a Mobile Companion Profile that supports 802.1x / EAP Authentication below for more details.

Creating a Mobile Companion Profile that supports WPA

If your wireless network supports WPA (or TKIP) with Shared Key authentication and you want to create a profile to connect to your Wireless Network follow these simple steps:

1. From the Mobile Companion WLAN Profiles window, tap New to create a new profile or select the profile for the Wireless network that you wish to connect to and tap Edit to modify an existing profile. Alternatively, you can open the Find WLANs window, select the Access Point you wish to connect to and tap Connect.

2. Select the Authentication Tab. Make sure the Authentication is set to None.
3. Select the Encryption Tab. Pull down the Encryption type combo box and select TKIP (WPA) from the drop down list. The screen will display 16 data entry fields. Enter the TKIP (WPA) Shared Key that the client shares with the Access Points for the Wireless Network. This key must match that programmed into the Access Points on your network.
4. Select the IP Config Tab. Select DHCP if your client will automatically request a DHCP address from the network, or Select Static and enter the IP information for your network manually.
5. Click OK to save the profile. The profile will automatically be selected and the Spectrum24 driver will attempt to connect to the wireless network.
6. If you can't get connected, there's a good chance your shared key is not correct. Verify that the shared key you entered is correct for your network, and that your Access Points are configured to support WPA and have the proper shared key also.

Creating a Mobile Companion Profile that supports 802.1x / EAP Authentication

Connecting to a Wireless Network that supports 802.1x EAP/TLS authentication requires that you have the following:

1. A properly configured EAP Authentication Server (AS) and have knowledge of how to administer services on the AS. The following notes assume that you have knowledge of how to execute services on the AS.
2. An Open System, WPA, or WEP enabled network connected to the Authentication Server so you can generate a User Certificate over the network. This is referred to as the Alternate Wireless Network in the steps below.

If your wireless network supports 802.1x authentication with EAP/TLS and you want to create a profile to connect to your Wireless Network follow these simple steps:

1. Ensure the date and time on both the hand held computer and Authentication Server are reasonably synchronized within a minute or two of each other.
2. Generate a Root Certificate on your Authentication Server.
3. Copy the Root Certificate onto your hand held computer into the \My Documents folder.
4. From the Mobile Companion WLAN Profiles window, tap New to create a new profile or select the profile for the Wireless network that you wish to connect to and tap Edit to modify an existing profile. Alternatively, you can open the Find WLANs window, select the Access Point you wish to connect to and tap Connect.
5. Select the Authentication Tab. Make sure the Authentication is set to EAP-TLS. At the bottom of the Authentication Tab press the Install/View Certificates button to open the Certificate Manager.
6. If your certificate is not listed, press the "Root (server)" button and select Browse. Select the Root certificate that you copied to the \My Documents folder on your hand held.
7. Once you've selected the Root certificate from \My Documents, click "Install Certificate" to validate and install the certificate. The certificate will now appear in the list in the Certificate Manager. You have just successfully installed the "Root" certificate.

8. Before you can connect to the EAP/TLS secure network, you still need to generate and download a User Certificate onto your hand held computer. Connect your hand held computer to the “Alternate Wireless Network” and make sure you have a good connection to the Authentication Server. Usually you can ping your hand held computer from the AS to determine you’ve got good IP connectivity.
9. While connected to the Alternate Wireless Network, open the WLAN Profile, click the Install / View Certificates button from the Authentication tab as you did in the previous steps. However, instead of selecting “Root (server)” you’re going to select “User (client)” button. The system will prompt you for a “User”, “Password” and “Server” for which to build and create the user certificate.
 - a. For the User field you must type in the AS domain name \ user name for the user account on the AS. For example: eapas1.net\Administrator
 - b. For the password field you must supply the user’s password as it’s configured on the AS. For example: “admin” without the quotes if the password for the Administrator account is “admin”.
 - c. For the server, put the IP Address of the AS. Example: 192.100.1.100
 - d. Click “Retrieve”. The user certificate will be generated and installed automatically if you have entered the information correctly. Progress can be seen in the Certificate Manager window.
 - e. Click OK to close the User certificate window once the certificate has been successfully retrieved.
10. You have now successfully installed a User certificate that can be used as a credential when authenticating using EAP/TLS to your Authentication Server.
11. Return to the WLAN profile that you will use for 802.1x and EAP authentication. Select the Encryption Tab. Pull down the Encryption type combo box and select WEP from the drop down list. The screen will display 6 data entry fields, key length radio buttons, and key index radio buttons. However, since you’ve selected EAP-TLS in the Authentication tab, these fields are unavailable or “grayed out”. This is the correct behavior and by design.
12. Select the IP Config Tab. Select DHCP if your client will automatically request a DHCP address from the network, or Select Static and enter the IP information for your network manually.
13. Click OK to save the profile. The profile will automatically be selected and the Spectrum24 driver will attempt to connect to the EAP enabled wireless network.
14. The driver will recognize that the network is requesting EAP authentication and automatically launch the Windows Zero Configuration utility (WZC). You will be prompted to logon to the network by providing your User ID and Password you used when creating the User Certificate. You will be prompted for “User Name”, “Password”, and “Domain”. You must enter the information into the dialog as follows to successfully log onto the network.
 - a. For the User Name enter [username@domain](#) such as [Administrator@eapas1.net](#)
 - b. For the password field you must supply the user’s password as it’s configured on the AS. For example: “admin” without the quotes if the password for the Administrator account is “admin”.
 - c. Leave the Domain field blank.

- d. Check the “save password” checkbox if you do not require the password to be re-entered every time the client needs to be re-authenticated with the AS. Leaving this checkbox unchecked requires that the user re-enter the password each time the hand held is warm booted, suspended / resumed, or if the hand held roams to another Access Point on the same EAP enabled WLAN. Requiring the user to re-enter their credentials upon each AP roam can be quite tedious to the user and interrupt IP layer communications such as FTP. The preferred configuration is to check the “save password” checkbox so the client automatically re-authenticates as necessary.
 - e. Click OK.
15. The client will be authenticated by the AS and a session WEP key will be automatically generated and securely sent to the client using 802.1x and EAP.
16. Once authenticated the client has full access to the services of the WLAN.

End of Release Notes