

Stylitis-10+ WiFi Setup

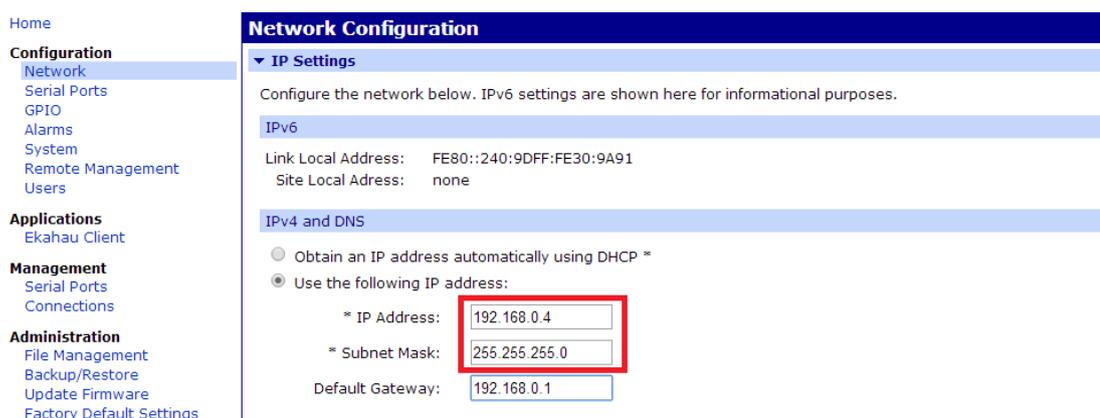
In order for **Stylitis-10+WiFi** to operate, it must be connected to an access point. The WiFi module has a default IP: 169.254.228.4. In order for it to be in the same sub-network as the access point, we may have preset it for you on demand. In this case, follow steps 1-11. If not, you must only follow the instructions of step 0.

The access point may be:

- a) Your company's **wireless network**
- b) A **separate access point**, such as *Turbo-X AP150*, which will be used as an example, which, when connected to your LAN, will create a new sub-network.
- c) Finally, you may also use an **access point which runs independently** from your LAN and create a sub-network with passwords, keys, etc, exclusively for the data loggers. In this case, its setup may be done only locally.

In order to avoid changing keys, passwords, etc in your network, the second or the third method is recommended. However, if you use the first one, omit steps 1-4.

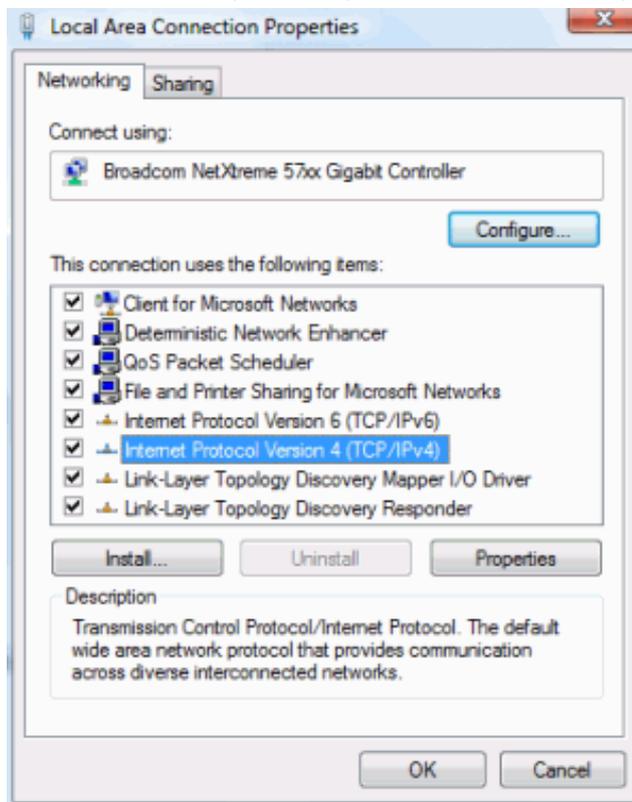
0. The WiFi module has a default IP: 169.254.228.4, with no authentication or encryption. Therefore, follow step 3, by setting your access point's IP within the same sub-network (eg 169.254.228.88). Follow steps 5 and 6 as well to ensure that the access point has no authentication or encryption. Then, follow steps 1 and 2, by setting your PC's IP within the same sub-network (eg 169.254.228.100). Open the *Digi Device Discovery* software from Opton ('*Find Logger in LAN*' command). Stylitis-10 will appear in the devices list. Double-click it to enter the module's web interface. Type the default user name (root) and password (dbps) to login. Select *Network* from the upper left part and open the '*IP Settings*' section. Set an IP within the access point's sub-network (eg 192.168.0.4, if the access point's IP will be 192.168.0.254), with the appropriate Subnet mask.



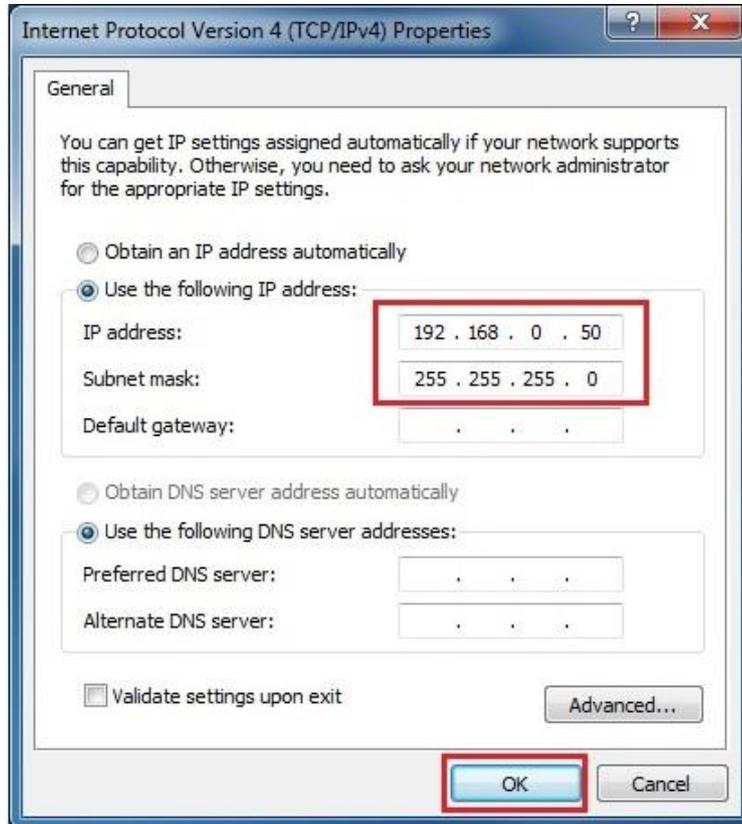
The screenshot shows the 'Network Configuration' web interface. On the left is a navigation menu with categories: Configuration (Network, Serial Ports, GPIO, Alarms, System, Remote Management, Users), Applications (Ekahau Client), Management (Serial Ports, Connections), and Administration (File Management, Backup/Restore, Update Firmware, Factory Default Settings). The main content area is titled 'Network Configuration' and has a sub-section 'IP Settings'. Below this, it says 'Configure the network below. IPv6 settings are shown here for informational purposes.' There are two sections: 'IPv6' and 'IPv4 and DNS'. Under 'IPv4 and DNS', there are two radio buttons: 'Obtain an IP address automatically using DHCP *' (unselected) and 'Use the following IP address:' (selected). Below the selected option, there are three input fields: '* IP Address:' with the value '192.168.0.4', '* Subnet Mask:' with the value '255.255.255.0', and 'Default Gateway:' with the value '192.168.0.1'. The IP Address and Subnet Mask fields are highlighted with a red rectangle.

Then, restore the access point's IP (in our example set it to 192.168.0.254, by following step 3). Finally, set your PC's IP in the same sub-network (steps 1 and 2), eg 192.168.0.100. If you wish to set an authentication method (to both the access point and the WiFi module), follow steps 7-11. In any case, now you will be able to manage the logger as if it were **Stylitis-10+Ethernet**.

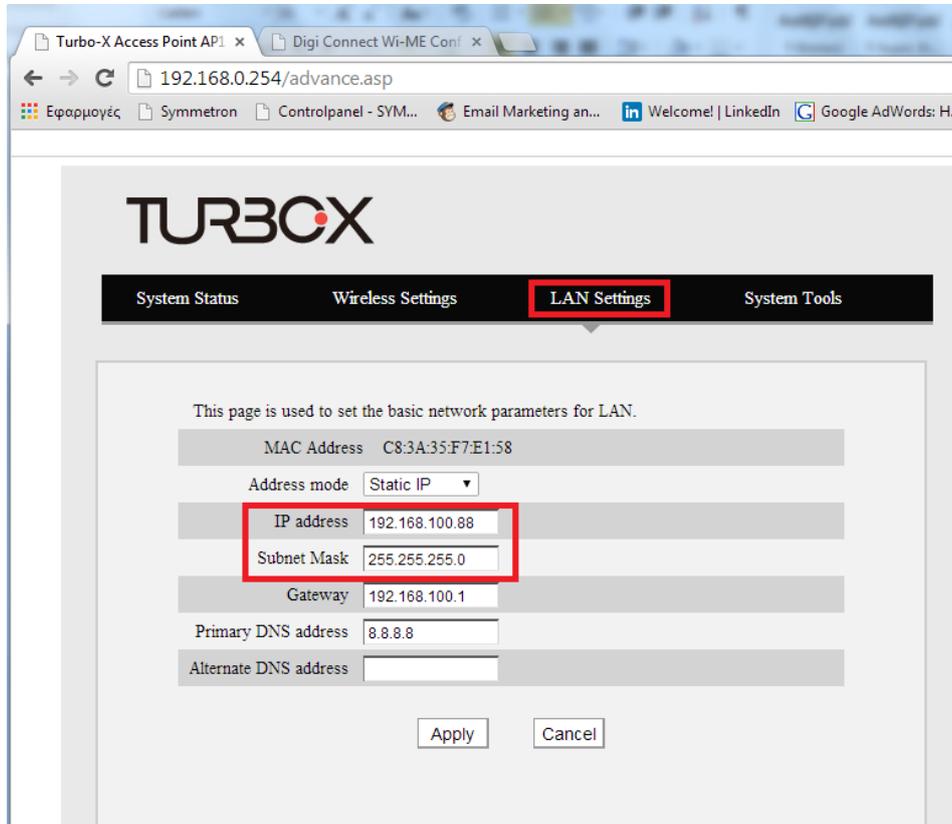
1. Connect the access point directly to your PC, via an Ethernet cable. Open the *Network Connections* from the Control Panel. Double-click (or single click and then select Properties- for Windows 7) the Local Connection. Double-click the '*Internet Protocol Version 4 (TCP/IPv4)*' or '*Internet Protocol (TCP/IP)*' for Windows XP.



2. In the properties, change the PC's IP address, within the same sub-network of your access point's default IP, along with the appropriate subnet mask. The remaining settings do not matter. For instance, if the access point has a default IP: 192.168.0.254, with Subnet mask 255.255.255.0, then set for the PC, eg, IP: 192.168.0.50.



3. Via a browser, open your access point's web interface, by typing its default IP (in our example 192.168.0.254). Via the interface, change the access point's IP and set an IP within your LAN. For instance, if the PCs in your LAN obtain IP addresses 192.268.100.xxx, set its IP: 192.168.100.88, and the appropriate Subnet mask.



Above, you can see a web interface example, of the **Turbo-X AP150** access point, with the IP change, by clicking the *LAN Settings* section. After the change, click *Apply*.

NOTES: a. If you are using an **access point which runs independently** from your LAN, the IPs of the sub-network do not matter, but the WiFi module must be in the same one. You may as well leave the access point's default IP.

b. At the login via the browser, in the AP150, a password is initially requested, which is 'admin'. Then, an 8-character security key is requested, regardless if your network or the access point is secured or not. Do not click OK (do not type anything) because you will be forced to set a specific key, which you must deactivate or change afterwards. Click 'Advanced Settings', in order to access the settings immediately.

TURBOX

Wireless Security Settings

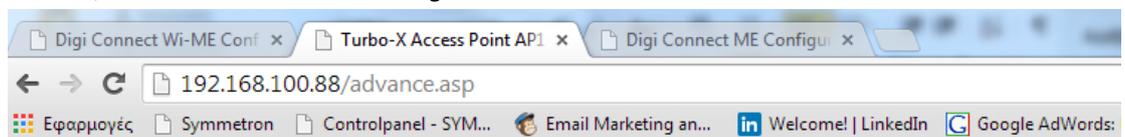
Security Key: (Default Security Key:12345678)

For more or advanced settings, click "[Advanced Settings](#)"

OK

Cancel

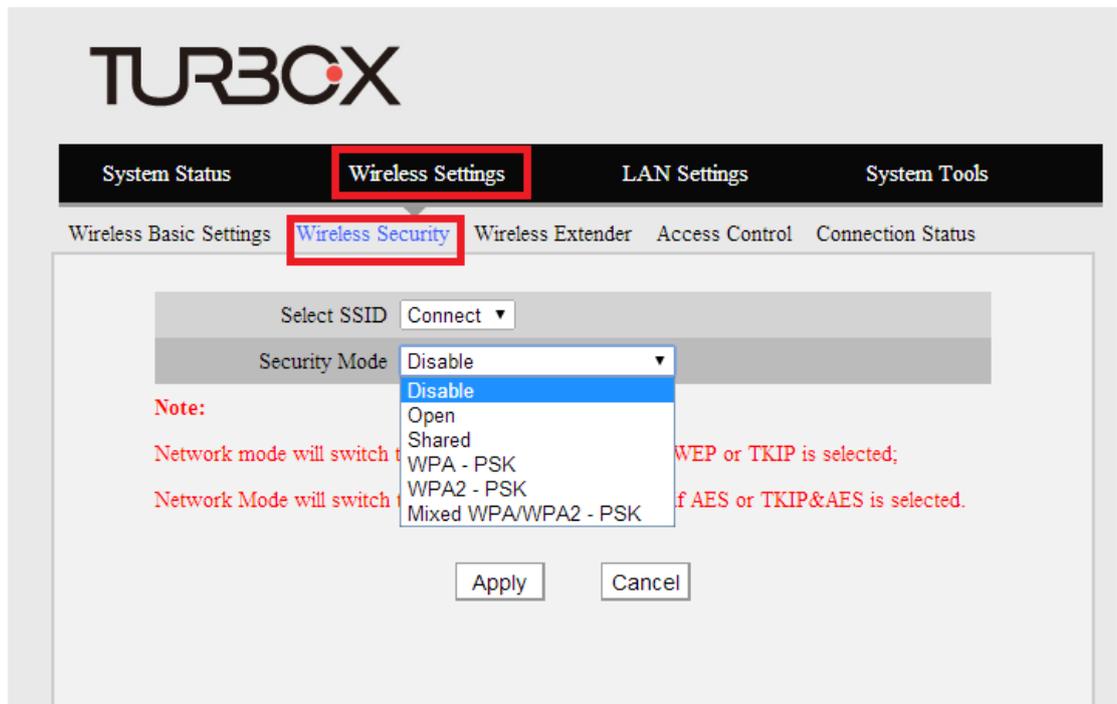
- (If you are using an **access point which runs independently** from your LAN, omit this step) Restore your computer's IP, ie set the IP it had within your LAN or set it to get its IP automatically via the DHCP server, and connect the access point and the PC to your LAN. Now, you will be able to set the access point via your LAN, by typing its new IP (eg 192.168.100.88 in the example) via the browser.
- In order for Stylitis-10's WiFi module to match the access point (which may be your wireless network), they must use the same authentication, while they must have been set with the following settings: The SSID name must be 'Connect' and the access point must run in *B mode* or in *mixed mode (b/g, b/g/n)*. Set these parameters, via the από το του access point's web interface, by typing in the browser its IP address (If the access point **runs in your LAN**, the IP will be in the LAN). In case of the AP150, these parameters are located in the *Wireless Settings* section, in the *Wireless Basic Settings* subsection.

A screenshot of the TURBOX web interface. The main header shows 'TURBOX' in large black letters. Below it is a navigation bar with four tabs: 'System Status', 'Wireless Settings', 'LAN Settings', and 'System Tools'. The 'Wireless Settings' tab is selected and highlighted with a red box. Underneath, there is a sub-navigation bar with five options: 'Wireless Basic Settings', 'Wireless Security', 'Wireless Extender', 'Access Control', and 'Connection Status'. The 'Wireless Basic Settings' option is also highlighted with a red box. The main content area shows a form with several settings:

- 'Enable wireless' with a checked checkbox.
- 'Network Mode' dropdown menu set to '11b/g/n mixed', highlighted with a green box.
- 'Primary SSID' text input field containing 'Connect', highlighted with a green box.
- 'Secondary SSID' empty text input field.
- 'Broadcast SSID' radio buttons: 'Enable' is selected.
- 'AP Isolation' radio buttons: 'Disable' is selected.
- 'Channel' dropdown menu set to 'AutoSelect'.
- 'Channel Bandwidth' radio buttons: '20/40' is selected.
- 'Extension Channel' dropdown menu set to 'Auto Select'.
- 'WMM Capable' radio buttons: 'Enable' is selected.
- 'APSD Capable' radio buttons: 'Disable' is selected.

At the bottom of the form are two buttons: 'Apply' and 'Cancel'.

By default, the WiFi module does not have authentication (Open). Therefore, make sure that the access point has no authentication initially. In case of AP150, this is set in the *Wireless Settings* section, in the *Wireless Security* subsection. Note that the correct option for AP150 is *Disable* and not *Open*!



6. After you set the access point, you may also set the same parameters in the WiFi module as well. When both of them are using the same authentication, only then they may match with each other. That is, this case is equivalent to if they were connected with each other via an Ethernet cable (or if they were connected to a wired LAN). This is indicated via the WiFi module's yellow led. If it is permanently lit, it is matched with the access point, while if it flashes, it is not matched. By default, they will be matched, with no authentication.
7. Open the *Digi Device Discovery* software from Opton ('*Find Logger in LAN*' command). Since they are matched, Stylitis-10 will appear. If it does not appear, an additional reboot may be needed. Open the WiFi module's web interface, by double-clicking the device in *Digi Device Discovery*.

8. Select *Network* on the upper left part and open the *Wireless Security Settings* section. Select the authentication method you wish to use. In any case, the corresponding key/passphrase, etc will be activated to be typed. For instance, in the most widely used one (WPA-PSK) the corresponding field is activated (passphrase), in which you will type the pre-shared key.

The screenshot displays the 'Network Configuration' page for a Turbo-X Access Point. The left sidebar contains a navigation menu with categories: Configuration (Network, Serial Ports, GPIO, Alarms, System, Remote Management, Users), Applications (Ekahau Client), Management (Serial Ports, Connections), Administration (File Management, Backup/Restore, Update Firmware, Factory Default Settings, System Information, Reboot), and Logout. The main content area is titled 'Network Configuration' and includes sections for IP Settings, Wireless LAN Settings, and Wireless Security Settings. Under 'Wireless Security Settings', the 'Network Authentication' section has 'Use the following selected method(s):' selected, with 'WPA with pre-shared key (WPA-PSK)' checked. The 'Data Encryption' section has 'Use the following selected method(s):' selected, with 'Open System (no encryption)', 'WEP', 'TKIP', and 'CCMP' checked. The 'WEP Keys' section shows 'Transmit key:' set to 1 and four 'Encryption Keys' fields, with the first containing asterisks. The 'WPA PSK' section includes a note and a 'Passphrase' field (highlighted with a red box) and a 'Confirm' field. The 'Username/Password' section has a note and a 'Username' field.

9. Now the WiFi does not match with the access point (you will notice that the yellow led is flashing). In order for it to match, the access point must use the same authentication. In case of WPA-PSK and of Turbo-X AP150, the settings are shown below (type the key in the *Security Key* field)

TURBO-X

System Status **Wireless Settings** LAN Settings System Tools

Wireless Basic Settings **Wireless Security** Wireless Extender Access Control Connection Status

Select SSID ▼

Security Mode ▼

WPA Encryption Type AES TKIP TKIP&AES

Security Key

Key Renewal Interval Seconds

Note:

Network mode will switch to 11b/g mixed automatically if WEP or TKIP is selected;

Network Mode will switch to 11b/g/n mixed automatically if AES or TKIP&AES is selected.

10. Now, the WiFi is matching with the access point (you will notice that the yellow led is permanently lit), therefore you will be able to view the data logger in *Digi Device Discovery*. If you do not see it, although the yellow led is permanently lit, reboot again the data logger.
11. Now, you can manage the data logger as if it were **Stylitis-10+Ethernet**.