123 Manual, LP-288ai V2.0 TURBO OFDM Compact Outdoor Radio with Throughput Booster. INSTALLATION IN AP MODE WITH FIRMWARE V2.0.3B5P0T2E1

LP288aiV23B5\_M123\_ENB01W



123 Manual, LP-288ai V2.0 TURBO OFDM Compact Outdoor Radio With Throughput Booster. INSTALLATION IN AP MODE WITH FIRMWARE V2.0.3B5P0T2E1



**Important information**: For the LP-288ai V2.0 equipment with firmware V2.0.2B5P1 it is only possible to connect other equipment with identical firmware. If you want to connect other equipment different from the LP-288ai V2.0 AP with firmware V2.0.2B5P1, you shall replace the firmware by the version V2.0.1B2P4 **OR DISABLE PWL MODE ACCORDING TO THE DOCUMENT LP288aiV23B5\_M123\_ENFO1W**.

1

Check the content of the box, as shown in Figure 1.



2

3

Prepare the cable with the connector, as shown in Figures 2-1, 2-2 and 2-3.





Figure 2-1



Figure 2-2

Figure 2-3

Connect the cable, as shown in Figure 3.





Connect the LP-288ai to the POE, as shown in Figure 4.



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Connect your PC or switch to the POE of your LP-288ai, as shown in  $\ensuremath{\mbox{Figure 5}}$  .



Figure 5

Figure 4

6

Connect to electric power, as it is shown in Figure 6.



Go to the properties of your network card and select Internet **Protocol (TCP/IP)** and then select **Properties**, as shown in **Figure 7**.

| Connect using:   |   |
|--|---|
| Intel(R) PR0/1000 MT Mobile Conne  | Configure,  |
| This connection uses the following items:  |   |
| ST NWLink NetBIOS  | 1 1   |
| ST NWLink IPX/SPX/NetBIOS Compatible   | e Transport Pro   |
| Internet Protocol (TCP/IP)   |   |
| <  | 1-12  |
| Install.   | Properties  |
|  |   |
| Description  |   |
| Description<br>Transmission Control Protocol/Internet Protor<br>wide area network protocol that provides cor<br>across diverse interconnected networks.  | col. The default<br>nmunication                             |
| Description<br>Transmission Control Protocol/Internet Protor<br>wide area network protocol that provides cor<br>across diverse interconnected networks.<br>Show icon in notification area when connec  | col. The default<br>nmunication<br>ted                      |
| Description<br>Transmission Control Protocol/Internet Protor<br>wide area network protocol that provides cor<br>across diverse interconnected networks.<br>Show icon in notification area when connec<br>Notify me when this connection has limited of | col. The default<br>nmunication<br>ted<br>ir no connectivit |

8

Select **Use the following IP address** and type an IP address in the LP-288ai IP range by default; for this example we have selected the 192.168.1.201 address. The LP-288ai has the 192.168.1.2 address by default. In **Subnet mask** type 255.255.255.0 and in **Default gateway** enter the address of the destination router. In the **DNS** you shall enter the DNS server, so the corresponding queries will be sent to the same DNS in the web, as shown in **Figure 8**.

Once you have finished, select **OK** twice.

Figure 8



9

Open the web browser of your preference and type the default address **192.168.1.2**, as shown in **Figure 9**.

| lnternet Explorer cannot display the webpage - Windows Internet Explorer |      |      |              |          |      |          |
|--|------|------|--------------|----------|------|----------|
| 0  | 0.   | -    | http://192.1 | 168.1.2/ |      | ~        |
| File   | Edit | View | Favorites    | Tools    | Help |          |
|  |      |      |              |          |      | Figure 0 |

Figure 7

The equipment will request a user and a password. The LP-288ai has two user levels, one with all the privileges, which is **super** by default with **super** as password, and another one with fewer privileges with **admin** as user and **admin** as password. Type **super** in user and password and select **Ok**, as shown in **Figure 10**.



# 11

Select **Basic/Operation Mode**. Select **Master**, enter the name of your wireless network in **SSID** field. Uncheck **Suppress SSID** option if you want the AP not to be hidden. Select the channel in **Radio frequency** field (See Appendix 1), adjust the link distance in **Distance** (See Appendix 2), and select **Update**, as shown in **Figure 11**.



| <b>EANPRO</b> with Throughput Boo                                | Manual - LP-288<br>oster - Installatio   | 8ai V2.0 TURBO OFDM Compact Outdoor Rac<br>on in AP mode with firmware V2.0.3B5P0T2  | lic<br>E 1 |
|--|--|--|------------|
|  |  |  |            |
| 12   |  |  |            |
| The equipment will save the changes, but they won't              | G 🕘 💌 🖻 herpri/192.169.1.2/nd  | des tes  |            |
| become effective until the equipment be rebooted. To do so       | File Lot view Pavorites 100is  |  |            |
| soloct <b>Deboot</b> as shown in <b>Figure 12</b>                | Customes Customer 1210   |  | _          |
| select <b>Rebuot</b> , as shown in <b>Figure 12</b> .            | SLANPRO  | Basic ->Djuratuui Hold Lusane  |            |
| Figure 12  | Basic<br>Site Survey<br>Administration<br>IP Configuration<br>Operation fielde<br>Remote Uaster List<br>Statistics | Operation Mode: © Haster C Slave<br>SSID: [LanPro_LP-208ai Suppress SSID: [<br>RF Bandwidth: [20MHz ]<br>Wineless Node: [SGHz 54Mbps (802.11a)<br>Radio Frequency: [S260MHz (Channel S2) ] |            |
| 13<br>Next, a screen to indicate that the equipment is rebooting | 🔐 Favorites 🖉 http://192.166.1.2/m   | index. Nov   |            |
| will be displayed, as shown in Figure 13.                        | SLANPRO  |  |            |
|  |  |  |            |

Select Advanced / Security Setting. In Security Mode select the encryption mode. For security reasons we suggest WPA2 PSK mode as shown in Figure 14. Remember that for this firmware it is only accepted the connection of another LP288ai. Please check the Important information on pages 2 or 10.





#### Important suggestion (optional):

Proceed to change the password of the users **admin** and **super** of your equipment.

To change the password of the user **admin**, select **Basic/Administration** and type the new password in the **password** box, then select **Update**, as shown in **Figure 18**.

| onites 🔏 http://192.168.1.2/   | 10.00                                     |        |
|--|---|--------|
| SLANPRO  | Basic ->Administration                    | Reboot |
| Basic<br>State Survey<br>Administration<br>IP Confliguration<br>Operation Mode<br>Remote Manter List<br>Statistica                       | Device flame:<br>User flame:<br>Possword: |        |
| Advanced<br>Radio Sottling<br>Sociatify Sotting<br>MAC Addr Centrol<br>Protocol Filler<br>Misscallaneous<br>doe Sottling<br>Vian Sotting |   |        |



22

23

Proceed to change the password of the user **super**. Remember you have to be authenticated as user **super** to make this change. Select **Super User/Super User** option and type the new password, select **Update**, as shown in **Figure 21**.



To make the changes effective, you must select **Reboot** as shown in **Figure 22**.

| eboot as 🛛 | 🍃 Favorites 🛛 🌈 http://192.168.1.2, | i                 |  |        |
|------------|-------------------------------------|-------------------|--|--------|
|            | SLANPRO                             | Super User ->Supe | r User Update Reminder: Please reboot for changes to t | Reboot |
|            | Basic                               |                   |  |        |
|            | Site Survey                         |                   |  |        |
|            | Administration                      | User Name:        | super  |        |
|            | IP Configuration                    | Password:         |  |        |
|            | Operation Mode                      |                   | A  |        |
|            | Remote Master List                  |                   |  |        |
|            | Statistics                          |                   |  |        |
|            | SNTP Setting                        |                   |  |        |
|            | Advanced                            |                   |  |        |
|            | Radio Setting                       |                   |  |        |
|            | Security Setting                    |                   |  |        |
|            | MAC Addr Control                    |                   |  |        |
| Figure 22  | Protocol Filter                     |                   |  |        |
|            | SNMP Configuration                  |                   |  |        |
|            | Miscellaneous                       |                   |  |        |
|            | Qos Setting                         |                   |  |        |
|            | Vian Setting                        |                   |  |        |
|            | System Log                          |                   |  |        |

You may see the equipment is rebooting on the screen, as shown in **Figure 23**.



The equipment will request your user and password once again. Enter the value you changed and select **OK**, as shown in **Figure 24**.

| vord once<br>as shown | Connect to 192.                                       | 168.1.2  |
|-----------------------|---|--|
|                       | 7   | 45   |
|                       | The server 192.1<br>and password.<br>Warning: This se | .68.1.2 at Secure Realm requires a username<br>rver is requesting that your username and |
|                       | without a secure                                      | connection).   |
| Figure 24             | User name:  | 🖸 super 💌  |
|                       | Password:   | •••••  |
|                       |   | Remember my password   |
|                       |   | OK Cancel  |

#### IMPORTANT NOTE:

For the V2.03B5P0T2E1 firmware version, the clients can only be LP-288ai of this firmware version, unless the PWL is disabled according to the document LP288aiV23B5\_M123\_ENF01W.PDF.

If you want other type of clients to connect to this AP, you shall use the previous firmware version V2.0.3B2P1 or disable the PWL according to the document LP288aiV23B5\_M123\_ENF01W.PDF.

**Appendix 1**: Consider that the correct selection of the frequency channel is a vital factor for your wireless network performance. The LP-288ai equipment operates in the ISM 5 GHz frequency band and it has more frequency channels which do NOT overlap each other (because of the spacing in frequency among channels). However, there is the possibility that where you are installing your wireless network other transmission sources in the 5 GHz band exist. As a consequence, the signal of your wireless network can be interfered by other devices if they operate in the same frequency channel in the 5 GHz band. To avoid this, you can make a network survey through the **Site Survey** option and detect which frequency channels are being used in the site. The idea is to select or configure your LP-288ai in the frequency channel that you see clear or not used. In the unlikely event that all the channels are busy, it is recommended to use the frequency channel which transmission power is the lowest in the site.

**Appendix 2:** In step 11, **Advanced Settings** / **Operation Mode**, there are several options for the **Distance** parameter. This one allows the user to select the approximate distance between the *AP* device and the *Slave* device (or between *AP* devices). In case you select the proper distance, the LP-288ai will handle the latency on a long distance path. This allows to reduce the error rate and increase the transmission speed.