# LP-5ai 123 Manual on how to configure in PTP and MTP Mode.

SLANPRO

LP5ai\_M123\_ENF01W



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#### The following Instruction Manual will guide you on how to configure the LP-5ai in PTP and MTP Mode.

1)

We recommend you to first draw a detailed diagram of your equipment configuration. We have developed a typical diagram shown in figure 1 in which three (3) equipment will be configured in a Multi-Point configuration and that will serve as a guide for you to setup yours. We remind you that each one of the equipment has a unique MAC address which you will need in the setup.



Figure 1

#### 2

Once the Setup 123 Manual, document: **LP5AI\_M123\_ ENDO1w.pdf**, has been executed, proceed to configure it by first connecting the UTP cable that comes from the LP-5ai to the **To Odu** port of the PoE Injector furnished with the radio as shown in figure 2.



3

Connect an UTP cable from the **To Ethernet** port of the PoE injector to the Switch or PC as shown in figure 3.



Figure 3

4

6

Connect electric power to the PoE injector as shown in figure 4.





5

Please go to your network card properties window and select: **Internet Protocol**, then select: **Properties**, as shown in figure 5.

ieneral Advanc	bec			
Connect using:				
Intel(R) P	R0/1000 MT M	obile Conne	Co	nfigure
This connection	uses the followi	ing items:		
S NWLin	k NetBIOS k IPX/SPX/Net I Protocol (TCP/	BIOS Comp	atible Trans	port Prot
<				
Instal	0/	instal	Pro	perties
Description				
Transmission wide area nel across divers	Control Protocol work protocol the interconnected	Minternet Pr nat provides dinetworks.	otocol. The communica	default tion
Show icon in	notification are	a when con	nected	

In the window shown in figure 6, select: **Use the following IP address** and input an IP address in the range of IP set by default of the LP-5ai. In this example, we have selected address: 192.168.1.201, the LP-5ai has a default address of 192.168.1.1, input 255.255.255.0 in: **Subnet Mask**, in: **Default gateway** input the destination router address, in: **Preferred DNS Server** you must input the DNS address of your service provider or the IP address of your destination router, the one that provides the Internet Service, this is will route any corresponding queries to the router of the destination network.

Lucal Area Connection Properties	Internet Protocol (TCP/IP) P	roperfies		
General Advanced	General			
Connect using	You can get IP settings assigned this capability. Otherwise, you ne the appropriate IP settings.	f automatically if your network supports ed to ask your network administrator for		
This connection uses the following Aems:	Obtain an IP address auton	iatically		
Service Revealed Street	O Use the following ₽ address	· protection ·		
* * Internet Protocol (TCP/AP)	IP address:	192 168 1 201		
- manufacture and the	Subret mark:	255 . 255 . 255 . 0		
hend   Diama   Pro-	Delauit galeway:	192.160.1.1		
Description	Convertinity server and est	automatically.		
Transmission Control Protocol/Internet Photocol. The d	Use the following DNS server addresses:			
actions diverse interconnected networks.	Preferred DNS server:	192.168.1.1		
Show icon in notification area when connected	Alternale DNS server			
Notify me when this convection has limited or no conv or no convection.		Advanced.		
1 01 11	1	OK Carcel		

Figure 5

Please open your preferred browser and input the default address: 192.168.1.1, please see figure 7.



In the certificate validation window shown in figure 7, please accept by selecting: **Continue to this website (not recommended).** 

90	@ http://192.168.1.1/	👻 😚 🗶 🕒 ling			
🚖 Favorites	Certificate Error: Nevigation Bloched	0 · 0 · 0 ·			
1	There is a problem with this website's security cert	ificate.			
	The security certificate presented by this website was not issued by a trusted certificate authority. The security certificate presented by this website was issued for a different website's address.				
	Security certificate problems may indicate an attempt to fool you server.	or intercept any data you send to the			
	We recommend that you close this webpage and do not continue to this website.				
	Glick here to dose this webpage.				
<	Continue to this website (not recommended).				
	More information				



9

In the window shown in figure 9, input the word **admin** in: **Name** and the word: **password** in: **Password** and then select: **Login now**.

	802.11a <sup>54<i>Mbps</i></sup>
Name	admin
Password	•••••

In the window shown in figure 10, in the menu: **Wireless Setup**, proceed to select: **Basic Settings**, in: **Operation Mode**, select: **Wireless Bridge** and select: **Apply**, remember to verify the operating frequency of all of the equipment set.

802.11a	Wireless LAN	
SAMbpa Ngi Spec Attes Part   • Loper	Wireless LAN Settings Operating Node Thereas Mode	( <u>Decenter linear</u> ) 802 11a m)
Status	Channel / Pressency	36 / ≜ 180QHz ≥ 2
a Information	Cata Halls	Dest 🔗
a Connections	Output Forwar	M Y
a Statistica	Station Mode Flow Control	
System Setup a Basic Setungs	Control by AP Upden Speed Linst (1-1527)	Szatle Disatle
· P Settings		Accity Cancel
RADIUS Settings		Contraction of Contra
BITTP Redirect		
a Frewall Settings		
Virtual Server		
. Load Balance		
Wireless Setup		
a Basic Settings		
» VARIVLAN Settings	1	

Figure 10

# 11

In the window shown in figure 11, in the menu: **Wireless setup**, proceed to select: **WDS Settings**, input in: **Remote Mac Address** the MAC addresses of the destination equipment shown in figure 1. It is important to input the MAC addresses in a correct way because any error will impede the communication between them. Once finished, select: **Apply**.

[ = Logout]	Direct Remote AP MAC Address Barunity
Status	Local MAC Address 000 27 11 01 06 17
a Information	Remote BAC Address 1 (20 27 11 01 11 15
» Connections	Uption Torent Limit 1 (1-1587) 1447 + 64Ktpp: + 105.437548bps
a Statistics	Remote MAC Address 2 (05 27 13 01 11 10)
System Setup	Uptwit Speed Limit 2 (1-1687) 1487 + 64/3ps + 105,437583bps
Basic Settings	Remote UAC Address 3
#IP Settings	Uprint Speed Limit 3 (1-1587) 1407 + 54Abra + 105.437588bps
#RADIUS Settings	Remote UAC Address 4
# HTTP Redirect	Uptink Speed Limit 4 (1-1587) 1467 + 54kbps - 105.437588pps
Firewall Settings	Remote 184C Address t
Virtual Server	Uplant Speed Limit 5 (1-1587) 1461 + 545 tos - 105 437548008
s Lood Balance	Remote UAC Address 6
Wireless Setup	Opport Speed Limit # (1-1587) 1487 + 6400pp + 105.437588pps
n Basic Settings	Remote UAC Address 7
a VAP/VLAN Settings	Upton Speed Limit 7 (1-1987) 1411 + 6 (200 - 100 43754000)
a Access Control	Remote MAC Address &
WDS Settings	United Taxand Land B / L. MET   1 ChT   Annual And Antonio
» Advanced Settings	General Mills
Tools	WDS Service Group ID
a Site Survey	In Research Miller Address
a Link Test	HAL MEDDIE AF MAL MALEE
Management	(Apply) Cancel

Figure 11

#### 12

In the window shown in figure 12, you can establish the security of the WDS connections. To do this, in the menu: **Wireless Setup**, select: **VAP/VLAN Settings**, select: **wds\_profile** and then select: **Edit**.

Status	The second se				
a latermation					
a Contecture	Becarg Profe	es Pot Yoya, Stations Aslayter, WDS and tone	Building mode		
+ Tabata		Profile Name	140	Security	Euros
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	or poly	Therese	Deer Solers	
System Setup	100000000	W, Police	(feature)	Daver Bjachers	
· Besic Settings	10000	AF Protect	domining.	Cores Bysilers	
a IP Settings	10000024	of Postal	This area	Career Burnary	
· BACKUS Settings	10000000	M_Polet	(CONTRACT)	Caret Dataset	1000
a HTTP Redrect	11001154	W.Fallet	Towners.	Open System	
a fermul Sollings		Without	Noveman .	Dave Bistern	
a Virtual Server	1	# Point	Withold .	Caren Business	
a Load Balance	A DESCRIPTION OF	en pole	(Walkes	Daren Bankern	
Wireless Setup	0	add, proba			
a Basic Settings	A DESCRIPTION OF	adedualing profile			
O VAPULAN Settraph	Contraction of the local division of the loc		1.60		

In this example, the keys that will be used will be generated and the encryption mode will be established. In order to do this, in the window shown in figure 13, in: **Data Encryption**, select: **WEP 64 Bits**, and input a passphrase and select: **Generate Keys**. The keys will then be generated in the LP-5ai. Once done, we proceed to select Key number 1 and enable them by selecting: **Enable** and then: **Apply**.

[ = Logout Status	Security Profile fo	r WDS Configuration
a Connections	Network Authoritication	Clarer System (10)
a Statistica	Data Encryption	( 64 bes WEP
System Settup = Desc Settings = IP Settings = RADUS Settings = RTTP Redevect = Evenuel Settings = Virtual Server = Load Balance	Panantana 0123414782 Nay (***) 1138254347 Nay 2 *** 8379782922 Nay 3 ***********************************	Generale Keye
Winsless Setup + Basic Settings + VAPIVLAN Settings + Access Control = WDS Settings		Back Appy Cancel

Figure 13



In this case , a message shown in figure 14 will be prompted indicating that the keys apply to all the security profiles, then select:  $\mathbf{Ok}$ .

Message	from webpage	×
2	NOTE: All the profiles share the same set of lays(hey1-key4), except the default key index respective profiles.	can be different in
	OK Carcel	

Figure 14

## 15

As shown in figure 1, we will proceed to connect the second LP-5ai by repeating steps 7 to 14 of this manual, and taking in account the MAC addresses shown in figure 1. Remember to input the MAC addresses of all the equipment that will be communicated, additionally, you will have to change the IP Address as per the figure 1 diagram. In order to do this, please refer to figure 15, in the menu: **System Setup**, select: **IP Settings**, change the IP and select: **Apply**. The equipment will reboot and in order to access it again you will have to use this new IP. Please do this before establishing the communication between them.

Figure 15

OUZ, IId		
G	ontigure AP as a	
Tells These victors have	Bridge with State P. 🔫	
[ = Logout]	Router	
Status	<b>Epanning Tree</b>	· Enable · Disable
a Information	VLAVA(802.10)	C Enable C Disable
» Connections	Stanagement VLAN ID	A
a Statistics	IP Address	192 168 1.2
System Setup	IP Subnet Mask	255 255 255 0
e Basic Settings	Default Galeway	8008
a P Settings	Prenary DND Server	0000
RADIUS Settings	Secondary D1/5 Server	0000
#HTTP Redrect		
#Firewall Settings		Apply Cancel Reteat
a Virtual Server		

#### 16

We will now proceed to connect the third (3rd.) LP-5ai by repeating steps 7 to 14 of this manual, and taking in mind the MAC Addresses shown in figure 1. Remember to input the MAC addresses of the equipment you wish to communicate to. Additionally, you must change the IP address as per the diagram of figure 1. In order to do this, in the same window shown in figure 15, in the menu: **System Setup**, select: **IP Settings**, change the IP of the third one and select: **Apply**, the equipment will reboot and in order to be able to acces it you will have to use this new IP, do this before establishing communication between them.

Wait for 30 seconds and verify the connectivity of the equipment, you can do this by:



Sending a PIN to any of the destination equipmen involved, please see figure 17 a.

C:>>piny 192,168,1,1 -t	
Pinging 192.168.1.1 with 32 bytes of data:	
Reply from 192.168.1.1: bytes=32 time=2ns TTL=255 Reply from 192.168.1.1: bytes=32 time=1ns TTL=255 Reply from 192.168.1.1: bytes=32 time=1ns TTL=255 Reply from 192.168.1.1: bytes=32 time=2ns TTL=255 Reply from 192.168.1.1: bytes=32 time=2ns TTL=255 Reply from 192.168.1.1: bytes=32 time=2ns TTL=255 Reply from 192.168.1.1: bytes=32 time=1ns TTL=255 Reply from 192.168.1.1: bytes=32 time=1ns TTL=255 Reply from 192.168.1.1: bytes=32 time=2ns TTL=255 Reply	

Enter in the LP-5ai and in the window shown in figure 17 b, verify the option: **Connections** that the LP-5ai are b connected.

	Status	Connecti	ons			
	a Connections a Statistics	Bridge ID 1	ELAC Address C0:27:11:01:31:55 D0:27:11:01:11:50	P Address 192.168.1.1	RSSI (dDm) -19	Status ACTIVE
Figure 17 b	system Setup setings			Refresh		
In the window shown in figure 1 <b>Test</b> and verify the status of the	.7 c, input in: <b>Link</b> connection. <b>Figure 17 c</b>	Status - stroctustes - consultants - consultants - basenices Bysiens Sertup - final: Sertups - stocks Sertups - stocks Sertups - stocks Sertups - stocks Sertups - stock Sertups	Link Test	n Tarani Rafai 1 da	Load familiant	Beech Repel Load 1999-1 1979 - 1989-1 1979
18 If there any of the equipment doe	sn't connect, verify	the follow	ving:			
The M	IAC Addresses are	e correct.				
b The e	ncryption Keys are	correct.				
c That a	all the equipment ar	e on the s	ame channel or f	frequency.		

In the window shown in figure 19, proceed to change the administration password of the equipment. Even though it is not mandatory, we highly recommend that you change the administration password of your equipment, we must remind you to store it in a safe place to which you can have access in the event that you forget it. If you lose it, you must reset the equipment to factory values and lose any setup you have made. Please use for this the 123 manual on how to reset to factory values, document: **LP5ai\_M123\_ENC01W**.

In order to change the password, please select option: **Change Password**, located in the menu: **Management** as shown in the figure 19.

Figure 19

System Setup	*
Basic Settings	Change Password
#IP Settings	
RADIUS Settings	Construction of the second sec
HTTP Redirect	Current Password
Firewall Settings	New Password
Virtual Server	Repeat New Password
Load Balance	Restore Default Pasaword O Yes O No
Wireless Setup	
a Basic Settings	Cancer 1
a VAP/VLAN Settings	
» Access Control	
. WDS Settings	
p Advanced Settings	
Tools	
» Site Survey	
a Link Test	
Management Change Password	

20)

In the window shown in figure 20, input in: **Current Password** the old password, in: **New Password**, the new password you want to use, in the field: **Repeat New Password**, do as indicated and the select: **Apply**.

System Setup		Constant and the	N COMPANY OF THE OWNER			
Basic Settings	Ch	Change Password				
# IP Settings						
RADIUS Settings	2000	2003/02/02				
HTTP Redirect	Current	New Password New Password Repeat New Password				
EFrewall Settings	New Pa					
Wirtual Server	Repeat					
Load Balance	Restore	Default Passwor	O Yes ONo			
Wireless Setup		Annh	Cancal			
a Basic Settings		- And And	Cancer			
a VAP/VLAN Settings						
a Access Control						
n WDS Settings						
a Advanced Settings						
Tools						
Site Survey						
a Link Test						
Management						
Change Password						