



WiFi 5 Mil-Spec Outdoor Wireless Access Point IOP-EBLLX-DACXX-XXXX

5 Steps to Complete PTP Mesh Quick Setup Manual TV4

Step 1: System login (Default IP is 192.168.1.1; Account / Password: admin / admin)

A. First set the computer's regional connection IP address to 192.168.1.X fixed IP (for example: 192.168.1.100)

Special reminder: The network IP address segment of the computer and the wireless device must be the same before mutual connection settings can be made.

B. Enter <http://192.168.1.1> in the web browser

C. Press Login to enter the account and password to enter the system settings (Default account: admin, Default password: admin)



勁電科技
IO-Power Technology

Model : EBLL4-DAC2P

Username :

Password :

Language :

©copyright 2022 - 2032, IO-Power Technology Co., Ltd. ALL Rights.

Step 2: Change the default IP address of your wireless device

A. Settings / Network / Global Set the IP address of the wireless base station device.

It is recommended to change the original "1" network segment 192.168.1.1 to avoid conflict with the IP addresses of other network devices.

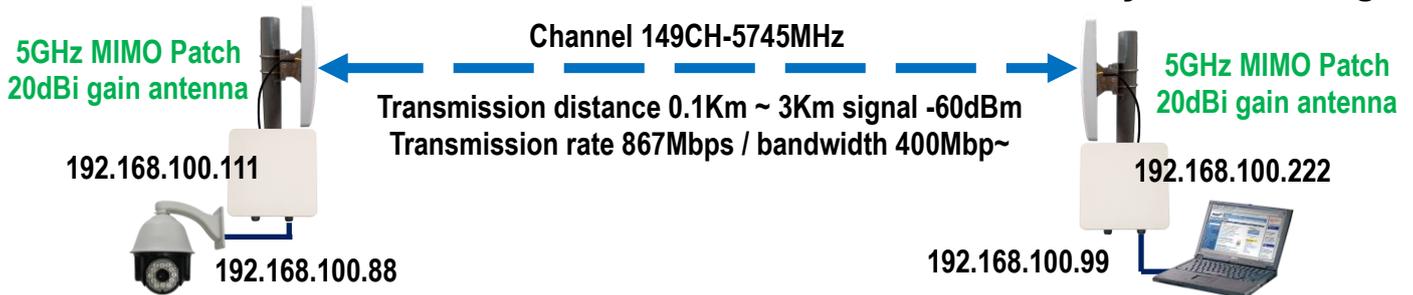
For example, change it to the 100 network segment of 192.168.100.222.

Global	Radio 1	Radio 2
IPv4 address	192.168.100.222	
IPv4 netmask	255.255.255.0	
IPv4 gateway	192.168.100.254	
IPv4 broadcast		
IPv4 DNS		
IGMP Snooping	Enable	
IPv6 ULA-Prefix	fdcd:c16c:f169::/48	
Enable PtPMesh	Disable	

Apply Cancel

Special reminder: When the wireless device has been changed to a new IP address segment (such as 192.168.100.222), be sure to remember to change the computer wired network IP address segment to the same 100 network segment (such as 192.168.100.99) before proceeding, it will be can the mutual connection settings be made.

PTP Mesh PtP wireless network connection transmission system settings



Step 3: Configure PTP Mesh wireless base station "Global" settings

➤ **192.168.100.111 & 192.168.100.222 must be set the same**

Global	Radio 1	Radio 2
IPv4 address	192.168.100.222	
IPv4 netmask	255.255.255.0	
IPv4 gateway	192.168.100.254	
IPv4 broadcast		
IPv4 DNS		
IGMP Snooping	Enable	
IPv6 ULA-Prefix	fdcd:c16c:f169::/48	
Enable PtPMesh	Enable	
Group ID	3	
Root	Enable	
Eth1 Extra Cost	0	
Eth2 Extra Cost	0	

Note: The red frame options are items that must be selected and set. Green is a recommended option to enable!!

- 1.PTP Mesh function: enabled. (Both wireless devices need to be enabled)
2. Connection group ID: 3. (Both wireless devices need to be set with the same ID to transmit wirelessly to each other).

Special reminder: When used with the previous generation EL-N-1 / 2 / 3 wireless products, the connection group ID must be set differently!!

If the connection group IDs are the same (or use the same wireless frequency), "false loop phenomenon will occur", the connection information will be displayed in a red block, and "Bkd 3/29" similar platform and cost data messages will appear! !

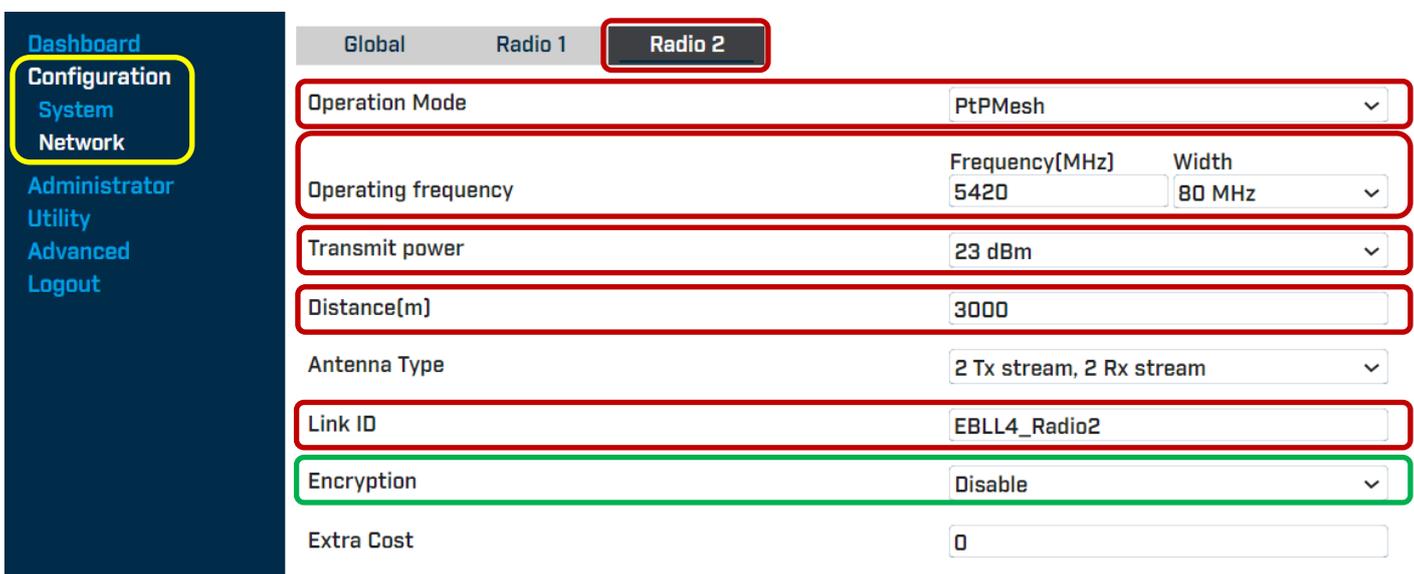
3. Root node function: enabled. (Both wireless devices need to be enabled); **the entire PTP Mesh wireless network system, at least one root node device needs to be enabled.**

You can also enable the root node function for multiple wireless devices, and the software will automatically determine the master node outlet and the slave node outlet, and determine the packet transmission flow and final outlet.

However, if the PTP Mesh loop redundancy repair connection system mechanism is used in the design, the root node function can only be enabled on the main egress and secondary egress equipment, and the Ethernet additional cost can be used to determine the backup connection transmission outlet.

Step 4: Configure the wireless radio module

➤ **192.168.100.111 & 192.168.100.222 must be set the same**



Global	Radio 1	Radio 2
Operation Mode		
PtPMesh		
Operating frequency		
Frequency(MHz)		
5420		
Width		
80 MHz		
Transmit power		
23 dBm		
Distance(m)		
3000		
Antenna Type		
2 Tx stream, 2 Rx stream		
Link ID		
EBLL4_Radio2		
Encryption		
Disable		
Extra Cost		
0		

Note: The red frame options are items that must be selected and set. Green is a recommended option to enable!!

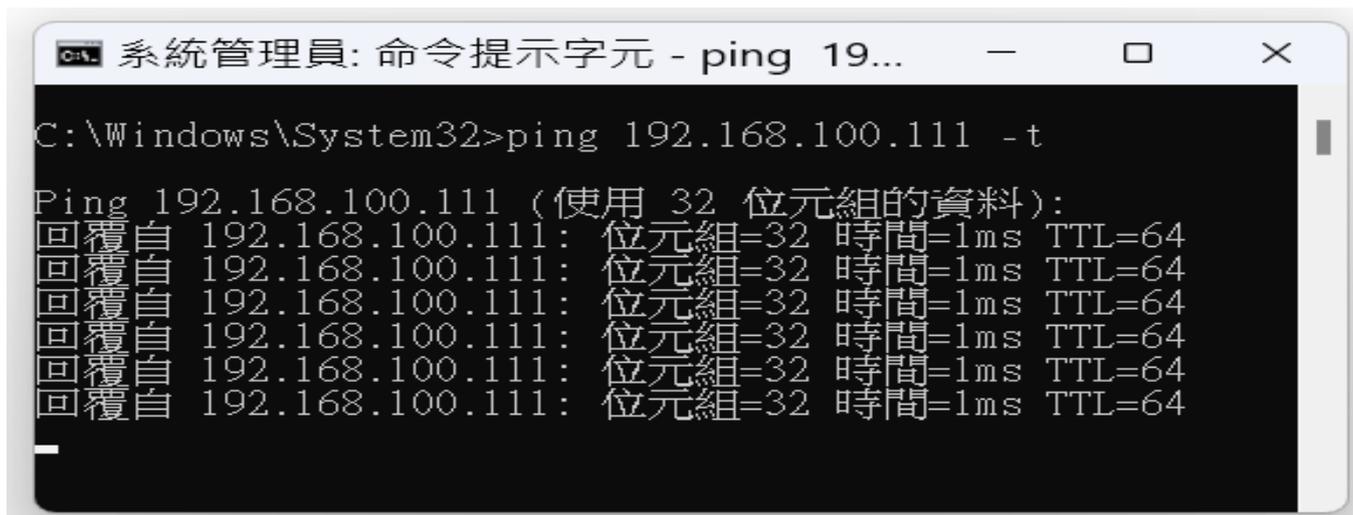
1. RF operation mode: Select PTP Mesh. (Both wireless devices need to select the same operating mode)
2. Operating frequency: frequency (5420MHz) and channel width (80MHz). (Both wireless devices need to be set to the same frequency)
3. Transmit power: 23dBm ~ 27dBm (the built-in wireless module supports 27dBm at high frequency, and the external module supports 23dBm).
4. Distance (meters): 3000 (default is 1000; if it is less than 1000 meters, use 1000; 3000 meters is better when used with an antenna).
5. Connection ID: ELL4_Radio2. (Both wireless devices need to be set with the same connection ID)

Step 5: Test whether the wireless devices on both sides of the PTP MESH are connected

After setting up the wireless devices at both ends [Complete Step 1 ~ 4],

The PTP Mesh wireless transmission systems can successfully connect to each other! !

- Use continuous ping to confirm whether the two wireless devices are connected to each other.



```
系統管理員: 命令提示字元 - ping 19...
C:\Windows\System32>ping 192.168.100.111 -t

Ping 192.168.100.111 (使用 32 位元組的資料):
回覆自 192.168.100.111: 位元組=32 時間=1ms TTL=64
```

Note 1: Illustration of Status column

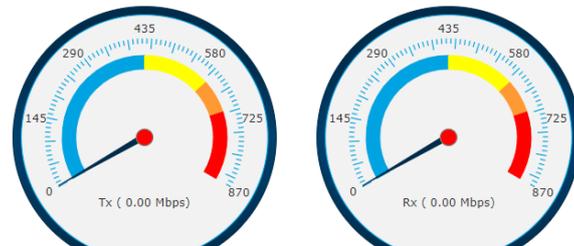
■ The complete login screen of EBL4-DAC2P system is as follows:

Equipment related information
MAC Address: 34:4F:3F:70:00:05
IP V4 Address:192.168.100.22
IP V6 Address:fdebcc527:2bd6::1
T/R B(Pkt): Metering of transmitted / received packets
Link:1000Mbps(Port 1)/(Port 2)
Vender: IO-Power Technology
Product:EBLL4-DAC2P Model
Firmware: Software quantized version
Local Time: Device local time

Equipment start-up time
CPU operation % percentage
MEM memory operation % percentage
Number of packets transmitted per second by PPS

Device status Dashboard **Radio frequency Press the anti-black**

Operation main screen



Channel
84 (5420 MHz)

Tx Rate
866.7 Mbps

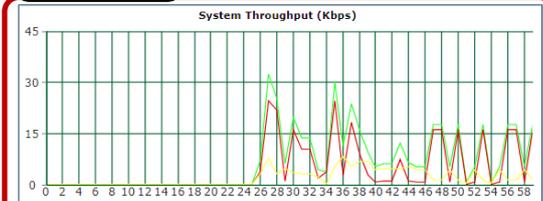
Signal
RSSI -41 dBm

Rx Rate
866.7 Mbps

UP LLV4[2]
0 Days 0:2:26

CPU% MEM% PPS
7.39 23.01 7

MAC : 34:4F:3F:70:00:78
IPv4 : 192.168.100.111/255.255.255.0
IPv6 : fd33:4deb:9045::1/ffff:ffff:ffff:ffff:0:
T/R B(Pkt): 1.89M (1705) / 187.98K (1547)
Link : 1000Mbps (full) / Not Connected
Vender : IO-Power Technology Co., Ltd.
Product : EBL4-DAC2P
Firmware : 1.4.1
Local Time : 2022/02/18 20:31:44



Port Status **Interface status Displays the wired and wireless interface status of wireless devices**

Node Info	Ethernet 1	Ethernet 2	Radio 1	Radio 2	Radio 3
Root(Slave)	Forward	Down	Forward	Fwd[1 2]	Not available

TX transmission bandwidth pointer table
TX (0.00 Mbps)

Radio frequency 2 set channel
84 (5420MHz)

TX Rate transmission data rate
866.7 Mbps

RX receive bandwidth pointer table
RX (0.00 Mbps)

Signal wireless signal reception
RSSI-35 dBm sensitivity

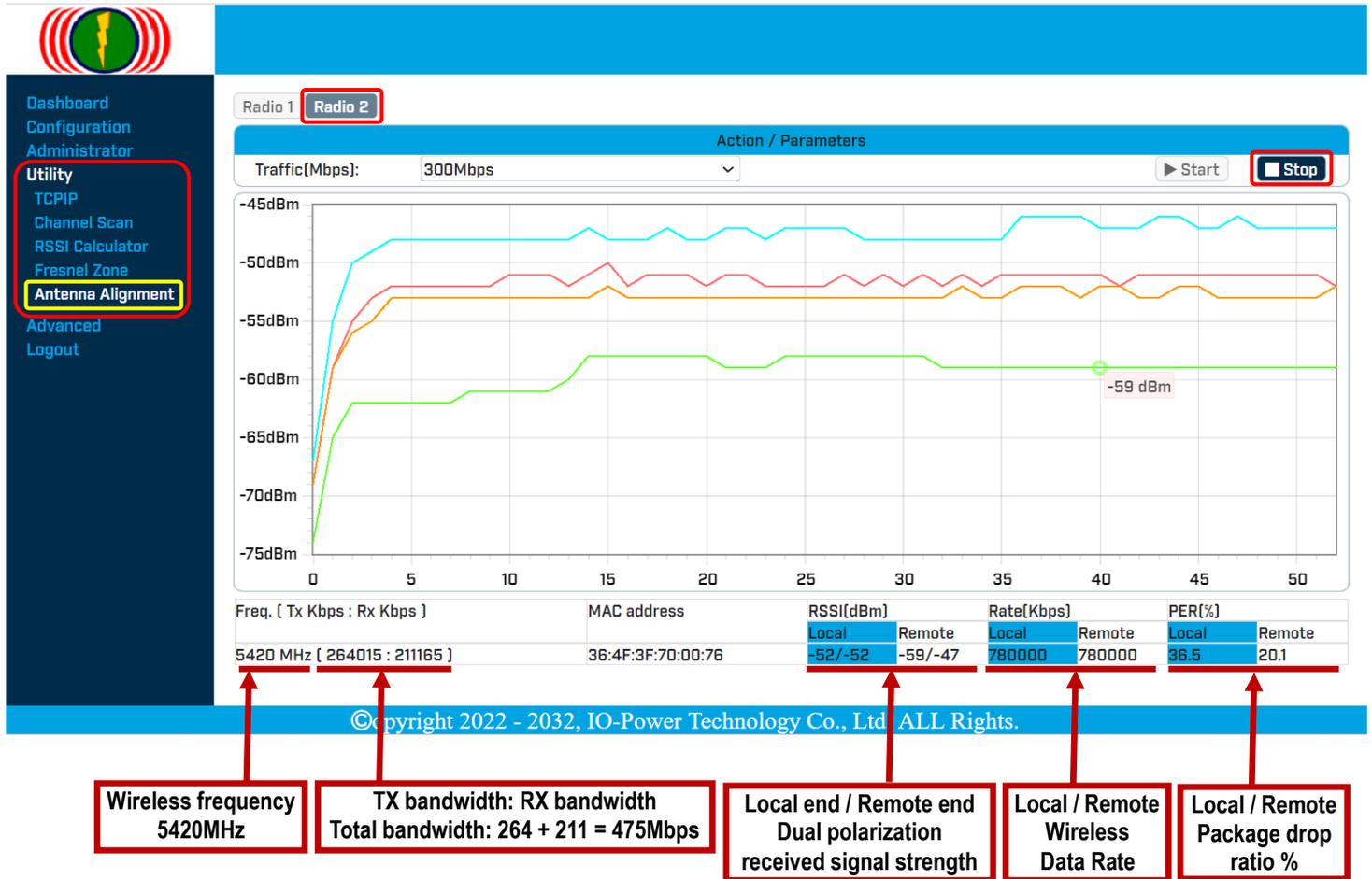
RX Rate Receive data rate
866.7 Mbps

System Throughput (Kbps)

Total system bandwidth traffic
Red line: TX transmission line, transmitting bandwidth traffic
Yellow line: RX receiving line, receiving bandwidth traffic
Green line: TX + RX, transmitting and receiving total bandwidth traffic

Note 2: Antenna Alignment tool

■ Test bandwidth, RSSI signal strength, transmission rate, packet drop rate, ... etc.



■ Instructions for operating steps:

1. Confirm that the wireless devices on both sides have been "successfully connected to each other" and enter the Tools/Antenna Calibration Tool screen.
2. Select the connected radio frequency number and press "Start"; both sides need to press the "Start" button to execute.

(This is software automatic control and optimization of transmission parameters, using TX-75Mbps + RX-75Mbps two-way transmission test)

3. Based on the results of the software's automatic test, decide to conduct the "manual adjustment of TX and RX traffic" transmission test.

(For example: TX-100Mbps + RX-100Mbps totaling 200Mbps bidirectional bandwidth traffic test)

Special reminder: You need to press the "Stop" button first to end the bandwidth traffic test state of the wireless devices on both sides!!

4. According to the "Manual two-way bandwidth test in progress status", start the "horizontal/vertical" antenna adjustment operation!!