IO-Power Outdoor PTP MESH Wireless AP
EL-N-1/ EL-N-2 / EL-N-3
5 Steps Quick Installation Guide V1

Step 1: System login (wireless device default IP is 192.168.1.1)

■ First set the computer's IP address of the area, set to 192.168.1.X fixed IP (Example: 192.168.1.100)

Special reminder: computer and wireless equipment, IP network segment shall be same, in order to connect each other setting.
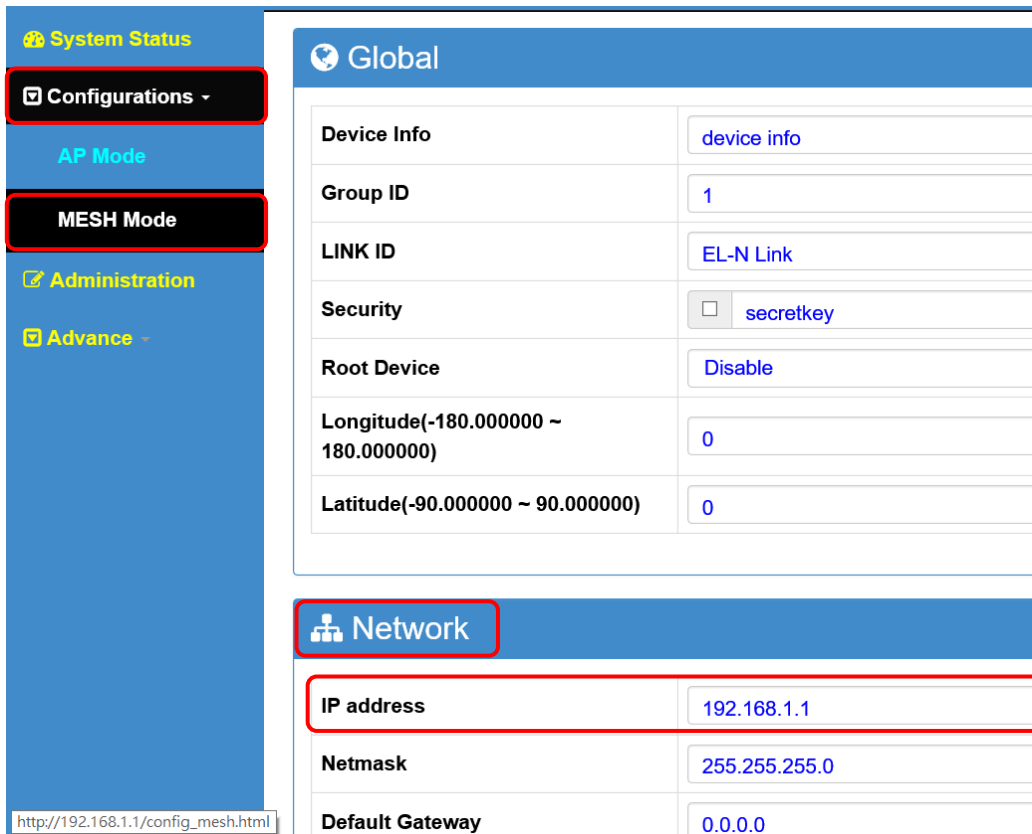
■ Enter http://192.168.1.1 in the web browser

■ Press Login to enter the account number and password, enter the system settings (Default account: admin, default password: admin)

Step 2: Change the wireless device default IP address

- Operation setting / MESH mode / Network Setting IP Address of the Wireless Device.
- It is recommended that you change the original 192.168.1.1 network segment to avoid conflicts with IP of other network devices, for example to 100 network segments of 192.168.100.11.
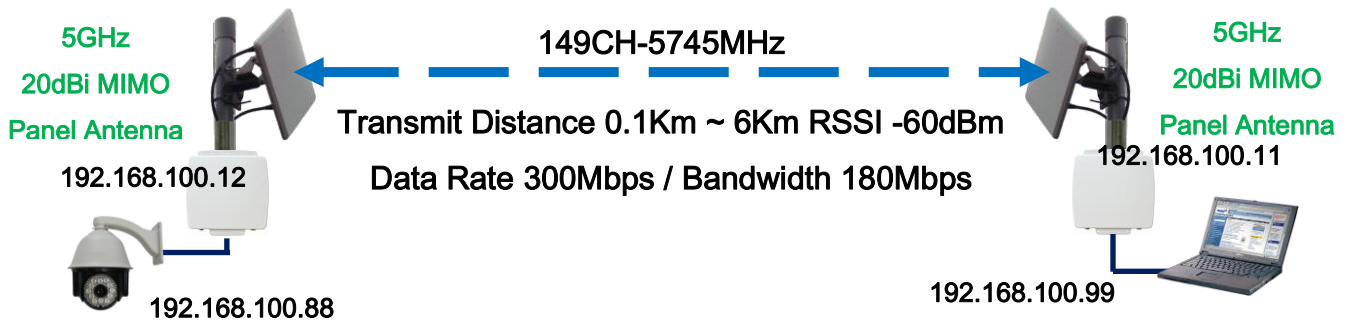

Special reminder: When the wireless device has been changed to a new IP network segment (such as 192.168.100.11), be sure to remember the computer IP network segment also changed to the same 100 network segment (such as 192.168.100.99), in order to mutual connection settings.

PTP MESH Wireless Network System Settings

5GHz
20dBi MIMO
Panel Antenna

149CH-5745MHz

5GHz
20dBi MIMO
Panel Antenna

192.168.100.12

Transmit Distance 0.1Km ~ 6Km RSSI -60dBm

192.168.100.11

Data Rate 300Mbps / Bandwidth 180Mbps

192.168.100.88

192.168.100.99

Step 3: Set the PTP MESH Wireless ODU "Global" Setting

■ 192.168.100.11 & 192.168.100.12 should be set the same

Global	
Device Info	device info
Group ID	1 — Group ID should be set the same; the default is OK.
LINK ID	EL-N Link — The Link ID must be set the same; the default is OK
Security	☐ secretkey — Security encryption must be set to the same; tick or default is OK.
Root Device	Enable — The entire PTP MESH system requires at least one root device setting, usually set in the Control Room
Longitude(-180.000000 ~ 180.000000)	0
Latitude(-90.000000 ~ 90.000000)	0

System Status
Configurations
Administration
Advance

Description: The red frame option is required to be selected with the set item. Other options, set by default, do not need to be changed.

■ Security encryption: Does not check, check the default password encryption secret key is "secretkey", check the password after you can set encryption password, such as 991neciopower.

■ Root device: The entire PTP MESH system requires at least one root device, usually set up in the "central control room" of the wireless device; if both ends are set as the root device, the wireless system software will determine the definition of the main root equipment.

Step 4: Set the broadcast packet group operation -- IGMP snooping

🖧 Network

IP address	192.168.1.1
Netmask	255.255.255.0
Default Gateway	0.0.0.0
Management VLAN ID	0
IGMP Snooping	Enable · IGMP Select to Enable, can solve the problem caused by broadcast packets.
Ethernet Extra Cost	0

■IGMP Snooping: Select enable to solve the network storm caused by broadcast packets and other issues.

Step 5: Set up the radio frequency network card module

..ıl Radio 1

Radio	MESH · RF card Please select MESH mode
Parameters	40 MHz, 2x2 MIMO, 400ns GI · Please select default 40MHz 2X2 MIMO 400ns GI
Tx Power Level	Maximum · The output power level is selected by the evaluation result; the default is OK.
Frequency(MHz)	5745 · Channel frequency (MHz) is determined by environmental scan results **(Frequency Range: 4920 ~ 5150 ~ 5850 ~ 6080)**
Distance(km)	1 · According to the point-to-point transmission distance fill, less than 1Km are fill 1 parameter value.
Extra Cost	0

💾 Submit · ↺ Cancel

Description: The red frame option is required to be selected with the set item. Other options, set by default, do not need to be changed.

- RF Radio Card: Select MESH mode in operation setting.

- Parameters: Select the suitable wireless parameters according to the bandwidth and distance you need. It is recommended to default setting.

- Output Power Level: Transmission distance of less than 100 meters, should pay attention to the wireless reception signal is too strong problem; recommended wireless signal strength should be -40dBm ~ -60dBm better.

- Channel Frequency: It is recommended to site survey as channel scan first, then modify the channel frequency; site survey the channel in the "advanced function"

constituency.

- Distance Parameters: According to the actual distance (km) between the point-to-point wireless devices, enter the distance parameter; less than 1 km distance define as 1 km parameter value.

Both ends of the wireless device to complete steps 1 to 5 after the operation, PTP MESH wireless transmission system can be connected to each other success!!

Test whether the wireless devices at both ends of the PTP MESH are linked

■ Confirm whether or not to connect in a continuous ping mode

■ See the "Dashboard" to define the TX Rate / RX Rate transmission rate status weather have change in real time or the status of the Radio RF card showing the Port Status

➢ Product Appearance and Antenna N-type Connector Number

■ Product Appearance：

Product Model:　　EL-N-1　　EL-N-2　　EL-N-3

■ MIMO 2X2 Antenna Connector Number

RF1-P　　RF1-S

RF2-P　　RF3-P　　RF3-S　　RF2-S

■ MIMO 2X2 Antenna Connector and Network Port - PoE Power Supply Hole

Extended Spare

RF1-P　　Network PoE Power Supply　　RF1-S

RF2-P　　RF2-S

RF3-P　　RF3-S
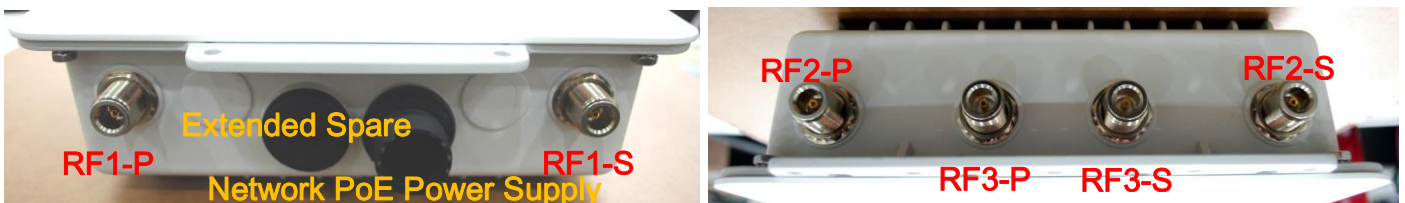
➢ Wireless Antenna Installation & Power Supply

■Wireless product system erection：

5GHz 20dBi MIMO Dual Polarization Antenna
PtP transmission distance of **0.05 ~ 5Km**
Bandwidth traffic up to **150-200Mbps**

EL-N-1 OR ML-N-1
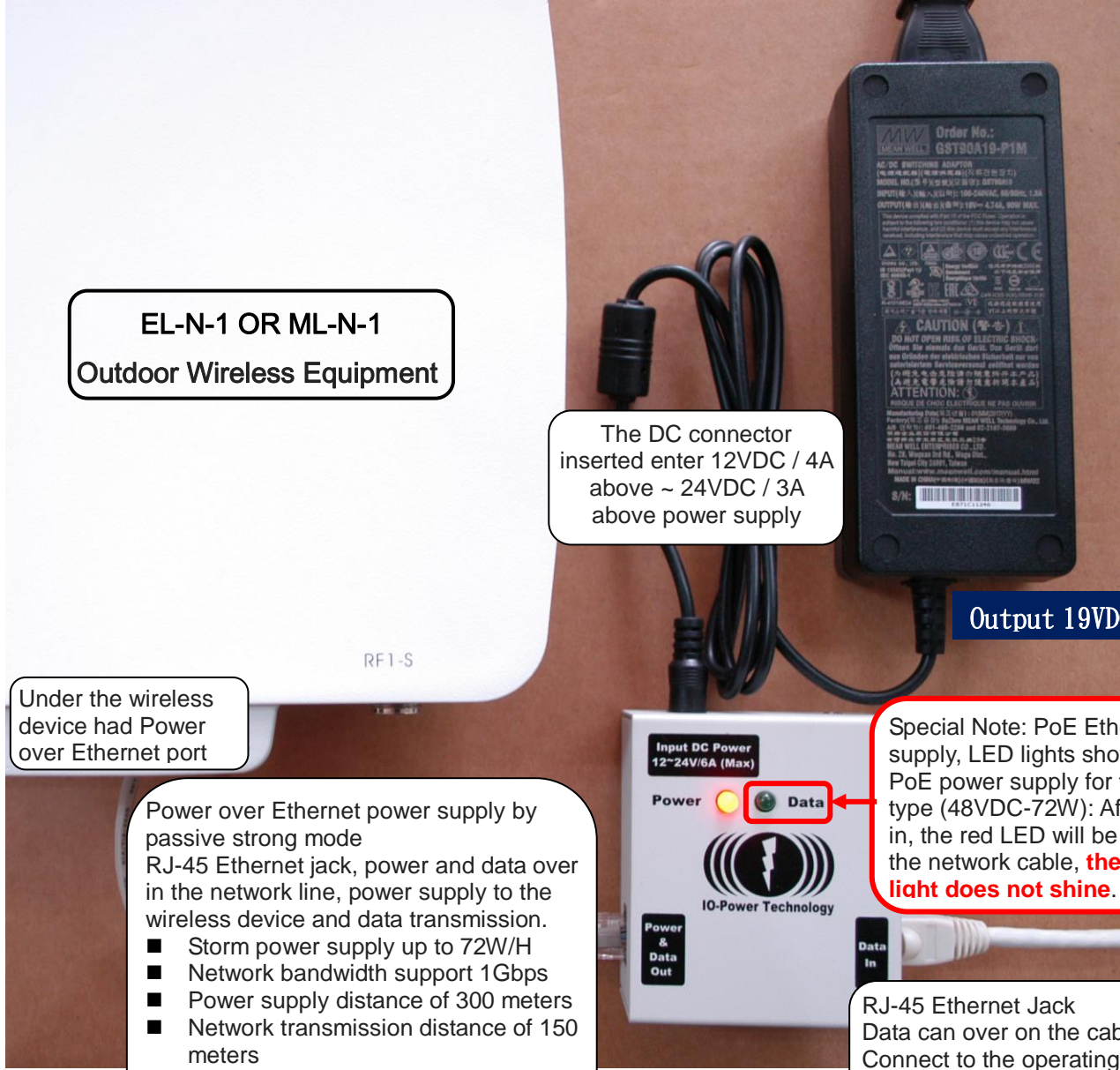
Outdoor Wireless Equipment
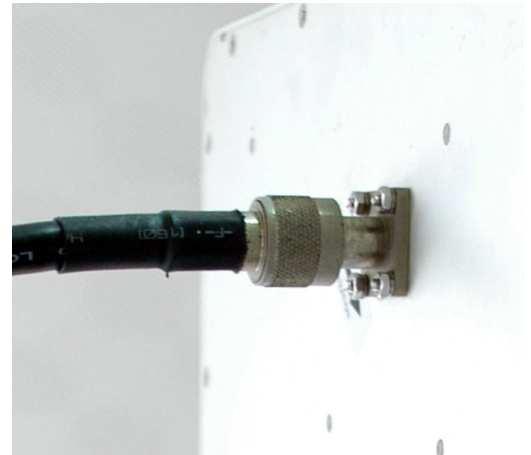
CFD-400 N-to-N Type

1.5 m Antenna Extension Cable

PoE-PSE

Ethernet Power Supply Cable

➢ Accessories PoE through Ethernet Power Supply:

Input 100-240VAC / 1A

EL-N-1 OR ML-N-1

Outdoor Wireless Equipment

The DC connector inserted enter 12VDC / 4A above ~ 24VDC / 3A above power supply

Output 19VDC / 4.74A

Under the wireless device had Power over Ethernet port

Power over Ethernet power supply by passive strong mode
RJ-45 Ethernet jack, power and data over in the network line, power supply to the wireless device and data transmission.
- Storm power supply up to 72W/H
- Network bandwidth support 1Gbps
- Power supply distance of 300 meters
- Network transmission distance of 150 meters
Please use the Cate 5e network to support with 1Gbps bandwidth.

Input DC Power 12~24V/6A (Max)

Power   Data

IO-Power Technology

Power & Data Out

Data In

Special Note: PoE Ethernet power supply, LED lights show:
PoE power supply for the passive type (48VDC-72W): After plugging in, the red LED will be bright, plug the network cable, **the green light does not shine**.

RJ-45 Ethernet Jack
Data can over on the cable line Connect to the operating computer (Or LAN or Camera or ADSL or in series with other wireless devices ...)

Special Note: PoE power supply, LED lights show:
➢ PoE Ethernet power supply strong passive mode (48VDC-72W): After plugging in, the red LED will light, plug the network cable, the green light does not shine.
➢ PoE Ethernet power supply standard mode (48VDC-32W): After the plugs, the red LED will be light, plug the cable, the green light will be bright.

- EL-N-1: basic operation power consumption 6W / H, 100Mbps full speed transmission 8W / H maximum, start the maximum power consumption 12W
- EL-N-2: basic operation power consumption 8W / H, 100Mbps full speed transmission 10W / H maximum, start the maximum power consumption 16W
- EL-N-3: basic operation power consumption 10W / H, 100Mbps full speed transmission 12W / H maximum, start the maximum power consumption 20W